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

Re: Scoping Comments on Proposed Westway and Imperium Crude-by-Rail Terminals

Greetings:

On April 4, 2014, the City of Hoquiam and Washington Department of Ecology issued a Determination of Significance Scoping Notice for the environmental impact statement to be prepared under the State Environmental Policy Act ("SEPA") for the proposed Westway and Imperium crude-by-rail terminals. The following scoping comments are submitted on behalf of the Quinault Indian Nation to help the decision-makers identify issues that must be addressed during the environmental review process. The Quinault appreciate the opportunity to provide these comments and supporting materials, included on CD submitted with this letter for inclusion in the administrative record.

In these scoping comments, we raise specific issues and impacts that we feel Hoquiam and Ecology must consider. SEPA and RCW 80.50 require a much broader review than the on-the-ground footprints of these proposed facilities. We stress our concern about the geographic scope of the environmental review. While these projects would be physically located at the Port of Grays Harbor, the area of impact is much greater. On the terrestrial side, the rail impacts, including rail traffic, derailment and explosion risks, and diesel emissions, begin in drill sites in North Dakota or Alberta, Canada and extend through communities in Montana, Idaho, and Washington. On the marine side, impacts from crude oil shipping, including ocean-going vessel traffic and emissions, interference with treaty-protected tribal fishing rights, risks of collisions, and impacts to near-shore environments, extend from the dock at Hoquiam through Grays Harbor, and then to the final, undisclosed destinations across open ocean.

Within that geographic scope, the direct, indirect, and cumulative impacts of particular issues should be addressed, including: (1) impacts on federally-guaranteed treaty fishing and gathering rights from increased rail and vessel traffic as well as increased oil spill risk; (2) crude oil spill and explosion risks and impacts along the rail route, at the facility, in Grays Harbor, and in the Pacific Ocean; (3) increased rail and vessel traffic and necessary coordination; (4) impacts to streams, wetlands, salmon, and fishing areas; (5) impacts to terrestrial and aquatic fish,

705 SECOND AVENUE, SUITE 203 SEATTLE, WA 98104-1711
T: 206.343.7340 F: 206.343.1526 E: eajuswa@earthjustice.org W: www.earthjustice.org

wildlife, and plant resources; (6) impacts to air quality and respiratory impacts; (7) seismic and liquefaction risks; (8) rail tank car safety; (9) impacts of the terminal on local businesses and proposed developments; (10) economic impacts and risks borne by Quinault Indian Nation; (11) types of crude oil shipped and their unique properties for health risks, spill clean-up, and climate impacts; (12) impacts on historic and cultural resources; (13) climate-related risks from sea level rise, storm surge, and expected increase in storm and flooding events; and (14) global warming impacts from transportation, refining, and combustion of the oil.

These projects, by themselves, in combination with the third proposed project for the area (U.S. Development), and in combination with other proposed crude oil and coal shipping facilities, will cause significant, harmful impacts to tribal treaty fishing and gathering rights, air, water, marine environment, fish and wildlife, economics, public health, culture, and communities across our region. It will further contribute to global climate change and hinder Washington State's leadership role in addressing causes of climate change. In our view, full evaluation of all direct, indirect, and cumulative impacts of Westway and Imperium is the first step toward a reasoned decision to ultimately reject these proposals.

I. BACKGROUND ON THE WESTWAY AND IMPERIUM PROPOSALS.

Extensive crude-by-rail oil transport systems are a recent phenomenon. Instead of pipelines, which are both expensive to build and subject to greater environmental review and regulation, crude oil is loaded onto rail tank cars for deliveries to shipping terminals or refineries. In 2012, major U.S. railroads transported at least 20 times as many carloads of crude oil as they did in 2008. In Washington State, several proposals—including these—would add marine vessels to this patchwork system: the crude oil would arrive by rail, be pumped into large storage tanks on fragile shorelines, and then pumped into ocean-going barges or tankers to be taken to U.S. refineries or, in certain circumstances, exported. The crude oil would come from domestic or Canadian oil fields.

Westway Terminal Company proposes five new storage tanks of 200,000 barrels each. Westway estimates it will receive 1.25 unit trains per day or 458 train trips (loaded and unloaded) a year. The company estimates that it will add 198-238 oil barge transits through Grays Harbor each year.

Imperium Terminal Services proposes nine new storage tanks of 80,000 barrels each. With a capacity to receive 78,000 barrels per day, Imperium may ship almost 28.5 million barrels of crude oil per year. Imperium estimates that the terminal would add 730 train trips annually, equaling two, 105-car trains (one loaded with oil on the way in, one empty on the way out) per day. The company estimates 400 ship/barge transits through Grays Harbor per year.

U.S. Development Group, while not currently included as an applicant in this EIS, submitted its application to build a third crude-by-rail project at the Port of Grays Harbor in early

April 2014 and must be considered in the cumulative impact review of the first two proposals. It proposes eight storage tanks, each capable of holding over 123,000 barrels of crude oil. The company anticipates receiving one loaded 120 tank car train every two days, and adding 90-120 Panamax-sized vessel transits through Grays Harbor per year.

Last year, Hoquiam and Ecology issued determinations of non-significance for Westway and Imperium, and Hoquiam issued Shorelines Substantial Development Permits for the two projects. Quinault appealed the MDNS and shorelines permits to the Washington State Shorelines Hearings Board, *Quinault Indian Nation et al. v. Hoquiam,* SHB No. 13-012c (Wash. Shorelines Hearings Bd.). On November 12, 2013, the Shorelines Hearings Board issued an order finding the MDNSs invalid and vacating the underlying permits. Order on Summary Judgment, 2013 WL 6062377 (Nov. 12, 2013), *amended* 2013 WL 6637401 (Dec. 9, 2013). The Board held the MDNS invalid for failing to consider the cumulative impacts from the U.S. Development proposal; failing to consider cumulative impacts of the Westway and Imperium proposals; and failing to require rail and marine vessel traffic impact analyses before issuing permits. The Board expressed concern about deficiencies in other areas of analysis: "[i]n particular, the current record for the Board presents troubling questions of the adequacy of the analysis done regarding the potential for individual and cumulative impacts from oil spills, seismic events, greenhouse gas emissions, and impacts to cultural resources prior to making the threshold determination." 2013 WL 6637401, *17. The Board urged the co-leads on remand "to identify potential impacts and then analyze how existing laws will mitigate for those impacts. The SEPA documents themselves should reflect this analysis." *Id.* at *19. "The Board also encourages the inclusion of more analysis in the SEPA documents, so that the public and future reviewing bodies can be confident that the Co-leads analyzed all potential impacts." *Id.* at *18.

II. STATE LAW REQUIRES AGENCIES TO FULLY DISCLOSE AND CONSIDER ALL ENVIRONMENTAL IMPACTS FROM PROPOSED PROJECTS.

A. Washington's State Environmental Policy Act

In adopting the State Environmental Policy Act, 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).

At the heart of SEPA is a requirement to fully analyze the environmental impact of projects that have a significant impact on the environment. RCW 43.21C.031(1). An 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. The purpose of this analysis is not to generate paperwork. Rather, the EIS allows decision-makers to make judgments based on a fully informed appreciation for the environmental impacts of decisions, the available alternatives, and any mitigation that may be appropriate.

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 impacts of the proposal as well as the indirect impacts. WAC 197-11-060(4)(d). For example, when considering a government action, a SEPA document must also consider the effects of private growth that may be encouraged by this government action. *Id.*; *Cheney v. City of Mountlake Terrace,* 87 Wn.2d 338, 344 (1976) (SEPA requires that decision-makers consider more than the "narrow, limited environmental impact" of the current proposal…agency "cannot close its eyes to the ultimate probable environmental consequences" of its current action).

B. Under SEPA, the Responsible Officials Must Evaluate Direct, Indirect, and Cumulative Impacts.

The primary purpose of an environmental impact statement "is to ensure that SEPA's policies are an integral part of the ongoing programs and actions of state and local government." WAC 197-11-400. "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, 552 P.2d 184 (1976).

For cumulative impacts, the Shorelines Hearings Board concluded "that the standard for evaluation of cumulative impacts under SEPA is whether the other project(s) is reasonably foreseeable." *Quinault Indian Nation,* 2013 WL 6637401, *12; *see also id.* at *13 ("'Inevitable,' however, is not the standard."). This conclusion mirrors the federal National Environmental

Policy Act's ("NEPA")[1] definition that stresses that cumulative impacts must be "reasonably foreseeable":

> Cumulative impact is 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 … or person undertakes such other actions.

40 C.F.R. § 1508.7.

Courts applying the "reasonably foreseeable" standard routinely require governmental entities to consider impacts from future actions that are still in the planning stages, provided that enough is known about those future projects for meaningful consideration to be given to their effects. In *W. North Carolina Alliance v. North Carolina Dep't of Transp.*, the district court held that the state agency erred in not taking into account the cumulative impacts of certain future freeway expansion projects when making a finding of no significant impact ("FONSI") under NEPA on a freeway expansion project. *W. N.C. Alliance v. N.C. Dep't of Transp.,* 312 F. Supp. 2d 765, 771-73 (E.D.N.C. 2003). At the time the FONSI was issued, one of the future projects still required the state to acquire rights of way, *id.* at 771, and another of the projects had not yet undergone a feasibility study, *id.* at 771-72. The court concluded that "NEPA's language and focus on considering environmental impacts before acting … undermine [the agency's] position that [it was] not required to consider the cumulative impacts from the other connected projects because they were not fully funded or planned." *Id.* at 773. And in *Quinault Indian Nation,* the Shorelines Hearings Board found the U.S. Development proposal reasonably foreseeable, because:

> The Co-leads know enough about the USD project to make a general discussion of its potential impacts, in combination with the other two pending proposals, meaningful. They know its location on Grays Harbor, which is the same harbor as the other two facilities. They know its purpose, which is the same as the Westway and Imperium expansions, is to receive multiple grades of crude-by-rail, store it in terminals, and transfer it to vessels. They know its maximum capacity of proposed liquid storage, along with the daily maximum capacity of liquids it can handle. They know the number of anticipated rail unit trains and vessels visiting the planned new facility. This information is sufficient to merit its inclusion in the consideration of cumulative impacts from all three projects.

2013 WL 6637401, *13.

[1] NEPA provisions and case law interpreting NEPA are used in Washington to discern the meaning of SEPA and its implementing regulations. *See, e.g., ASARCO v. Air Quality Coal.,* 92 Wn.2d 685, 709 (1979); *Kucera v. State Dep't of Transp.,* 140 Wn.2d 200, 215-16 (2000).

C. SEPA Requires Review of Climate Change Impacts.

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 problems"); WAC 197-11-444 (listing "climate" among elements of the environment that must be considered in SEPA review); *Rech v. San Juan Cnty.*, 2008 WL 5510438 (Wash. Shorelines Hearings Bd. June 12, 2008) at *12 n.8 ("We further note an emerging trend in the case law under the National Environmental Policy Act ("NEPA") and state NEPA analogues in which courts are increasingly requiring agencies to analyze climate change impacts during environmental assessments."). The Washington Supreme Court has ruled that the state should look to NEPA for guidance. "Since much of the language from SEPA is taken verbatim from NEPA (signed into law January 1, 1970), we look when necessary to the federal cases construing and applying provisions of NEPA for guidance." *Eastlake Cmty. Council v. Roanoke Assocs., Inc.*, 82 Wn.2d 475, 488 n.5 (Wash. 1973).

In recent years, state and federal agencies have made efforts to better define how climate analysis should be performed, and to provide tools to enable agencies to meaningfully assess and mitigate the greenhouse gas contribution of proposed projects. For example, in late 2008, Ecology and the State's Department of Community, Trade and Economic Development ("CTED") issued a "comprehensive plan to address the challenges and opportunities of climate change." ("2008 Climate Plan").[2] That plan recognized the increasing pressure on local governments to better identify climate impacts in their SEPA analyses and noted that SEPA analysis provided an opportunity to evaluate climate impacts of government decisions and to identify changes to proposals to reduce or mitigate those impacts. *Id.* at 50.

Also 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.[3] Notably, those recommendations identified the following categories of greenhouse gas 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 first issued draft SEPA guidance for considering greenhouse gas emissions.[4] That Draft Guidance confirms that SEPA is a crucial tool in helping the state and political

[2] *Available at* http://www.ecy.wa.gov/pubs/0801025.pdf.

[3] *Available at* http://www.ecy.wa.gov/climatechange/2008CATdocs/IWG/sepa/103008_sepa_iwg_report.pdf.

[4] *Available at* http://www.ecy.wa.gov/climatechange/sepa.htm.

subdivisions "address the threats that greenhouse gas emissions and climate changes pose to our health, our economy, and our environment." *Id.* at 2. In fact, the Draft Guidance specifically observes that the failure to evaluate the climate impacts of a proposal "could result in a successful legal challenge regarding the adequacy of an agency's review." *Id.*

Accordingly, the Draft Guidance makes clear that SEPA requires climate to be considered in its environmental analysis. Specifically, agencies should consider "if and how" greenhouse gases will contribute to environmental impacts and "how those impacts could be mitigated." *Id.* at 7-8. The Draft Guidance notes that SEPA's substantive authority "may be used to deny a proposal if the proposal will result in significant environmental impacts identified in a final or supplemental EIS and reasonable mitigation measures are insufficient to mitigate the identified impacts." *Id.* at 10.

Ecology's Draft Guidance makes clear that climate impacts cannot be ignored simply because they are a step removed from the decision under review. It defines "Scope Three" emissions as those that are produced as a consequence of the activities in the proposal, albeit from sources not owned by the proponent or that are not part of the proposal itself. *Id.* at 12. While noting that "Scope Three" emissions may be harder to calculate, the Draft Guidance acknowledged that these emissions "can be critically important to consider when reviewing the overall long-term greenhouse gas emissions associated" with a proposal. *Id.*

The Draft Guidance proposes that the documents consider whether the proposal will "significantly contribute" to greenhouse gas concentrations, "either directly, indirectly, or cumulatively." While it does not propose a particular numerical threshold at which greenhouse gas emissions become "significant," it references the federal NEPA climate guidance, which proposes a significance threshold of 25,000 tons/year of CO_2 equivalent. Projects with emissions above this threshold should be considered in a full EIS if not mitigated. It should be noted that states like California have proposed far lower thresholds under their own state NEPA provisions, and that many national and regional conservation organizations have opposed the proposed CEQ threshold as too high.

Most recently, Ecology re-issued the Draft Guidance in the form of a "working paper."[5] That working paper provides a "table of tools" that can be used to calculate emissions from projects. That table, in turn, lists various sources of emissions from projects, methods to calculate those emissions, and options to mitigate them. Included on that list is the "extraction, processing and transportation" of raw materials and feedstocks, and "emissions from the future combustion of fossil fuels," which is 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; *see also id.* at 3 (including emissions from "combustion of fuels

[5] *Available at* http://www.ecy.wa.gov/climatechange/sepa.htm.

distributed by a proposed facility" as an emission that should be quantified and mitigated in SEPA documents).

While the Washington Courts have not yet had an opportunity to evaluate the obligation to consider indirect climate impacts under SEPA, such questions arise regularly under NEPA and parallel laws in other states. Washington courts regularly turn to federal National Environmental Policy Act ("NEPA") interpretations for guidance on interpreting SEPA. *See, e.g., Gebbers v. Okanogan PUD No. 1,* 144 Wn. App. 371 (2008).

In a landmark 2008 case, the Ninth Circuit Court of Appeals—which has jurisdiction over Washington State—found that a federal agency violated NEPA when it failed to prepare a full EIS on proposed corporate average fuel economy ("CAFÉ") standards for light trucks. *Ctr. for Biological Diversity,* 538 F.3d 1172. There, the Ninth Circuit rejected the argument that individual actions represent too minor of a contribution to the global problem to merit consideration. Even more recently, the Ninth Circuit again emphasized that '"reasonably foreseeable future actions need to be considered [under NEPA] even if they are not specific proposals.'" *N. Plains Res. Council v. Surface Transp. Bd.,* 668 F.3d 1067, 1079 (9th Cir. 2011) (quoting EPA guidance document).

Several cases confirm that NEPA requires evaluation of indirect impacts of projects that facilitate movement of fossil fuels, including GHG emissions. For example, in *Mid-States Coal. for Progress v. Surface Transp. Bd.,* 345 F.3d 520 (8th Cir. 2003), the Eighth Circuit Court of Appeals invalidated an EIS for a rail construction project intended to supply coal from the Powder River basin to power plants because it failed to analyze the emissions of burning the coal that would be transported by the rail project. The Court found that the project was likely to affect the country's long-term demand for coal and hence the impacts of coal burning should have been considered in the EIS. Similarly, in *Border Plant Working Grp. v. Dep't of Energy,* 260 F. Supp. 2d 997 (S.D. Cal. 2003), a federal district court invalidated a decision to approve transmission lines that would connect proposed power plants in Mexico to the U.S. power grid because indirect effects were not considered. The Court found that the decision violated NEPA because decision-makers failed to consider the impacts of the operation of the Mexican power plants—including impacts on air quality and climate—that were closely linked to the transmission lines. The Court found that the operation of the power plants was an "indirect effect" of the transmission line project because the two were causally linked. The Court specifically struck down the agency's decision that the project's impacts were too minimal to require preparation of an EIS. *Id.*

A valid SEPA analysis must also consider the climate and other air emissions resulting from transportation of these huge volumes of oil. Fully loaded tankers use tons of fuel per trip, generating both significant CO_2 emissions as well as a variety of toxic and harmful air emissions, including diesel particulates that are highly damaging to human health. Transportation of oil over long distances via rail also has significant environmental impacts, including the fossil fuel

consumption of moving large volumes of material hundreds or thousands of miles. Moreover, as with the greenhouse gas impacts, this analysis must be viewed in the context of all existing and reasonably foreseeable similar impacts, including pending proposals to build other oil shipping terminals in Washington. These kinds of impacts are "indirect effects" of the decision to authorize the oil shipping facility and should be evaluated in the environmental impact statement.

III. ALL ISSUES AND IMPACTS CAUSED BY CONSTRUCTION AND OPERATION OF THE WESTWAY AND IMPERIUM PROJECTS MUST BE CONSIDERED IN THE ENVIRONMENTAL IMPACT STATEMENT.

Crude-by-rail shipping at the proposed Westway and Imperium projects will affect people and places far beyond the immediate construction zone. Every community located along the rail line between the drill sites and the Port of Grays Harbor will be harmed and exposed to greater risk of endemic or catastrophic crude oil spills and explosion. People outside Washington will be affected by the climate impacts of drilling, transporting, refining, and ultimately burning this crude oil. The EIS must, of course, analyze the impacts of construction and operations at and near the terminal, but it also must analyze the impacts of crude oil trains, crude oil vessels, and oil use on a much broader scale. This includes the direct, indirect, and cumulative impacts of crude oil shipping on public health, public safety, economics, inland, freshwater, and marine health, public investment, and climate change.

A. Transportation and Oil Spill Risks (Inland and Aquatic).

1. Rail transport of crude oil is inherently risky.

Crude oil is a hazardous material as defined by the U.S. Department of Transportation,[6] 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 has been previously considered 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.[7] Bakken crude oil, however, has proven to be highly flammable and explosive, leading to a different set of concerns (discussed below).

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;

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[6] 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.

[7] *See* Exh. 1, BP West Coast Products LLC, "Material Safety Data Sheet—Crude Oil," May 13, 2002. (flash point of 20°-90° F).

and organic compounds like phenols, ketones, and carboxylic acids.[8] Hydraulic fracturing, or "fracking," contributes an additional suite of contaminants, including hydrochloric acid and in some cases hydrogen sulfide.[9] 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.[10] *See generally* Exh. 84, Direct Testimony of Paul Rosenfeld, Ph.D. (Sept. 9, 2013).

Domestic crude oil production is undergoing a major boom, chiefly because of the increase in fracking. U.S. Energy Information Administration ("EIA") Administrator Adam Sieminski recently testified 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 February 2010 and February 2013, primarily because of a rise in productivity from oil-bearing, low-permeability rocks.[11]

This dramatic increase in production has caused a corresponding boom in crude-by-rail. In May 2013, 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.

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[8] *See* Exh. 2, EPA, "Screening-Level Hazard Characterization, Crude Oil Category," Mar. 2011.

[9] *Enbridge Pipelines (North Dakota), LLC,* FERC Docket No. IS13-273-000, 2013. (FERC order granting pipeline operation authority to reject certain Bakken crude oil supplies, due to evidence that hydrogen sulfide levels can rise to dangerous or even lethal levels.). *See also* Exh. 3, Abrams, L., "*Fracking chemicals may be making oil more dangerous,"* Aug. 13, 2013.

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

[11] Exh. 5, *Hearings Before the Committee on Energy and Natural Resources, U. S. Senate*, July 16, 2013 (Statement of EIA Administrator Sieminski at 2).

> 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. Continued large increases are expected in 2013. 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.[12]

As also noted by AAR, "North Dakota, and the Bakken region more generally, have accounted for the vast majority of new crude oil originations." During 2013, crude-by-rail out of North Dakota has fluctuated between 600,000 to 700,000 barrels per day, transporting 61-75% of total Bakken production.[13]

As shown in the data from AAR,[14] 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

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[12] Exh. 6, American Association of Railroads, "Moving Crude Petroleum by Rail," May 2013, at 3-5.

[13] *See* North Dakota Pipeline Authority http://northdakotapipelines.com/directors-cut/Monthly Updates for April 2013-November 2013 (February 2013-September 2013 data); Exh. 8, "How oil is transported from North Dakota's Williston Basin," The Globe and Mail, Dec. 2, 2013.

[14] U.S. Class I railroads (including the U.S. Class I subsidiaries of Canadian railroads) originated 108,605 carloads of crude oil in the second quarter of 2013 (12 percent higher than the 97,135 carloads in the first quarter) and 93,312 carloads in the third quarter. *See* Exh. 9, American Association of Railroads, "AAR Reports Record Second Quarter Crude-by-Rail Data; Decreased Weekly Rail Traffic," Aug. 29, 2013; Exh. 10, "AAR Reports October and Weekly Rail Traffic Gains, 3Q Crude Oil Up Year Over Year," Nov. 7, 2013.

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 have rebounded.[15]

Unit trains are long freight trains composed of at least 50 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 recent 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 further 66 crude oil unloading terminals have been built or are under construction.[16]

Various industry reports indicate that unit trains account for the vast majority of the recent boom in crude-by-rail transportation.

For these projects, the rail lines that will bring oil into the Port run through the city of Aberdeen before entering Hoquiam. An accident at or near the terminal could result in vast environmental damage, horrifying personal damage, including loss of life, and millions of dollars of economic harm. A train derailment and subsequent oil spill is not idle speculation: there have been three local train derailments between April 29, 2014 and May 15, 2014 on the same rails that would carry oil. *See* Exh. 79, http://thedailyworld.com/news/local/trains-stop-running-after-third-derailment.

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. PHMSA incident records underscore these growing risks. The year-over-year numbers of "incidents" involving crude oil transportation by rail are as follows:

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[15] 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.

[16] Fielden, Sandy, RBN Energy, "Crude Loves Rock'n Rail," http://www.rbnenergy.com/154-terminals-operating-bnsf-the-dominant-railroad, May 12, 2013.

2009: 0
2010: 9
2011: 34
2012: 86
2013: 85 (partial)[17]

Unfortunately, the surge of incidents and releases has not been matched by an increase in the resources available to responders and regulators. The same has been true in Canada.

Lac-Mégantic

On July 5, 2013, a train hauling 72 tanker cars loaded with 2.0 million gallons of crude from the Bakken shale oil field in North Dakota slammed into Lac-Mégantic, a town of 6,000 located in Quebec. Owned by an American company—Montreal, Maine and Atlantic Railway—the train had only a single staffer, who abandoned the train in order to sleep in a motel before a replacement crew arrived to complete the train's journey to an oil refinery on Canada's east coast. The brakes on the five-locomotive train malfunctioned, and it began a seven-mile roll toward the small town. Reaching a speed in excess of 60 mph, the train reached a bend in the tracks, derailing and dumping 1.6 million gallons of its contents, which caught fire and incinerated dozens of buildings. Forty-seven people were killed.[18]

Information regarding the Lac-Mégantic accident is provided in Exh. 14, "Analysis of the Potential Costs of Accidents/Spills Related to Crude by Rail."[19] This analysis demonstrates that the costs of crude-by-rail accidents/spills can be very large, and that a major unit train accident/spill could cost $1 billion or more for a single event, in addition to the possibility of loss of life.

As explained in Exh. 14, the Lac-Mégantic rail accident/spill will likely have costs on the order of $500 million to $1 billion excluding any civil or criminal damages. Costs/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 how an accident involving highly flammable light crude (such as the Bakken crude) can have devastating consequences even in a small town in terms of loss of human life and widespread explosion and fire damage to surrounding property.

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[17] Data derived from PHMSA incident reports—http://www.phmsa.dot.gov/hazmat/library/data-stats/incidents.

[18] 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.

[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.

Exhibit 14 also analyzes the spill of tar sands dilbit from Enbridge's Line 6B in Marshall, Michigan: This rupture in 2010 had costs of about $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. Costs/damages for similar incident could have also been substantially higher had it 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).

A Continual Series of Accidents

Unfortunately, the tragic accident at Lac-Mégantic was not a one-time event. The regular occurrence of these accidents underscores the risks to pubic safety in a more populated location like Richmond. On October 19, 2013 in Edmunton, Canada, a fireball erupted as a Bakken unit train derailed, burning several homes to the ground. On November 8, 2013, a 90-car unit train carrying 2.7 million gallons of crude oil derailed and exploded in a rural wetland in western Alabama, spilling crude oil into the surrounding wetlands and igniting a fire that burned for several days.[20] On December 30, 2013, a mushroom-shaped fireball erupted outside of Casselton, North Dakota, followed by heavy plumes of toxic smoke, when 21 cars of a Bakken train derailed and burned. Officials evacuated the town and urged evacuation for everyone in a five-mile radius. On January 7, 2014, in New Brunswick, Canada, 150 people were evacuated when 17 cars derailed including 5 oil cars (likely Alberta tar sands). On January 20, 2014, seven cars of a 101-car train from Chicago derailed on the Schuylkill Arsenal Railroad Bridge over the Schuylkill River in Philadelphia, Pennsylvania. Six were carrying Bakken crude, and one was carrying sand. On February 13, 2014, Nustar's Norfolk Southern Train derailed, crashed, and spewed 7,000 gallons of crude plus propane near homes. On April 30, 2014, train carrying Bakken crude from North Dakota derailed in downtown Lynchburg, Virginia, sending three tanker cars into the James River and shooting flames and black smoke into the air. No one was injured, but the crash prompted an evacuation.

In January 2014, the federal Pipeline and Hazardous Materials Safety Administration issued a safety alert "to notify the general public, emergency responders and shippers and carriers that recent derailments and resulting fires indicate that the type of crude oil being transported from the Bakken region may be more flammable than traditional heavy crude oil."[21]

[20] Exh. 15, Karlamangla, Soumya, "Train in Alabama oil spill was carrying 2.7 million gallons of crude." Los Angeles Times, Nov. 9, 2013.

[21] Exh. 90, PHMSA, Jan. 2, 2014 Alert, *available at* http://phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/1_2_14%20Rail_Safety_Alert.pdf.

Community Emergency Preparedness Response

When a crude oil spill 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.

Congress, recognizing a gap in communication, mandated in the "9/11 Act"[22] that rail companies transporting security sensitive materials, including toxic-by-inhalation materials, but not including crude oil, improve communication with local officials. Rail carriers are now required to identify a point of contact and to provide information to (1) state and/or regional "Fusion Centers" that have been established to coordinate with state, local and tribal officials on security issues and which are located within the area encompassed by the rail carrier's rail system; and (2) state, local, and tribal officials in jurisdictions that may be affected by a rail carrier's routing decisions and who directly contact the railroad to discuss routing decisions. This knowledge enables local communities to have a better understanding of what is being transported near their homes and schools.

According to the mandate of the 9/11 Act, rail carriers transporting security sensitive materials are required to select lower-risk routes, based on an analysis of the safety and security risks presented on various routes, railroad storage facilities and proximity of high-consequence targets along the route. The results of this analysis could dictate the rerouting of the security sensitive materials to other locations.

Crude oil is not currently defined as "security sensitive" so the additional reporting requirement does not apply to rail carriers transporting crude oil, despite its obvious and demonstrated hazards.

The lack of regulatory guidance on communication about the movement of crude oil via rail with local officials, neighbors and local businesses is inconsistent with the Administration's initiatives to improve preparedness. President Obama issued a proclamation on August 30, 2013 stating that September 2013 was National Preparedness Month. In this document, the President also stated that Americans should "refocus our efforts on readying ourselves, our families, our neighborhoods, and our Nation for any crisis we may face." Additionally he directed the Federal Emergency Management Agency to "launch a comprehensive campaign to build and sustain national preparedness with private sector, non-profit, and community leaders and all levels of government."[23] Private sector and community preparedness can't occur if the federal

[22] Implementing Recommendations of the 9/11 Commission Act of 2007, Pub. L. 110-53; 121 Stat. 266.

[23] http://community.fema.gov/gf2.ti/f/280514/8233733.1/PDF/-/Presidential_Proclamation__National_Preparedness_Month_2013.pdf.

government fails to require the disclosure of information that could help communities become more prepared.

Safety Rules Out of Date

When the 9/11 Act was enacted in 2007, just 5,897 carloads of crude petroleum originated on U.S. Class I railroads. Last year, that number grew to 233,819 carloads—a growth of more than 3,865%. Exh. 6. In 2013, that number has grown again, totaling 299,652 through the first 3 quarters (averaging about 100,000 per quarter). Assuming volumes will be similar in the fourth quarter, there will be about 400,000 carloads for all of 2013—a growth of about 6,700% relative to carloads in 2007. Exhs. 9 and 10. This exponential growth in unit shipments of crude-by-rail and associated incidents, as well as the recent Lac-Mégantic disaster, compel the conclusion that unit shipments of crude oil demand enhanced safety standards and should be subjected to the re-routing standards as "security sensitive" materials as set forth in the 9/11 Act.

Additionally, as has been acknowledged by the AAR, the existing fleet of DOT-111 tank cars is simply unsafe for transporting crude oil or other hazardous materials. This is evident from Petition P-1577, in which the AAR calls for higher construction standards for this class of rolling stock. Among many other deficiencies, the heads and shells of DOT-111s are much too thin, and they lack many other vital safety features, such as head shields and protection for top fittings.

Rail tank cars should be able to withstand "rollover" accidents. But when DOT-111s are involved in accidents, even at low speeds, almost all of the tank cars rupture and release their contents. This was documented by the National Transportation Safety Board ("NTSB") in its "Cherry Valley accident report," cited in the ANPR. In that low-speed accident (36 mph), 13 of 15 tank cars ruptured. *Id*. at 76. The NTSB noted that similar disastrous failure rates had been observed in other accidents (New Brighton, PA—12 of 23 cars were breached; Arcadia, OH—28 of 32 were breached). *Id*.

These dangerous deficiencies, and the many lethal consequences thereof, have been the status quo for decades. More than 25 years ago, the NTSB wrote to the U.S. Department of Transportation's ("USDOT's") Research and Special Programs Administration, complaining that the then-existing standards for tank cars were inadequate for transporting hazardous materials. In a 1991 letter, the NTSB noted that in a series of hazmat-by-rail accidents in 1988, 54 percent of DOT-111s were destroyed, twice the percentage of DOT-112s and other models. The NTSB again scolded: "The inadequacy of the protection provided by DOT-111A tank cars has been evident for many years in accidents investigated by the Safety Board."

Indeed, evidence from the most recent accidents suggests that even newer standard tank cars (CPC-1232's) may not be safe for crude oil transport. *See* http://daily.sightline.org/2014/05/01/new-safer-tank-cars-were-involved-in-the-lynchburg-oil-train-fire/. New tank cars

regulations may not be enough: transportation routes and distances may need to be adjusted or prohibited accordingly.

2. Ships

Hoquiam and Ecology must evaluate the increased risk of direct conflicts with existing vessel and barge traffic in Grays Harbor, including the increased risk of catastrophic accidents. *See generally* Exh. 13, Oil Spills in Washington State (1997); Exh. 83, Direct Testimony of Paul S. O'Brien (Sept. 9, 2013). On the Mississippi River, accidents involving barge collisions demonstrate the increased risk to human life and the environment posed by increasing barge traffic. For example, on May 20, 2010, three grain barges sank on the Mississippi River near Baton Rouge following a collision between a barge transporting food products and a barge transporting sulfuric acid.[24] The accident prompted the U.S. Coast Guard to close the shipping channel. In mid-2008, a barge split open in a collision with a tanker, resulting in an oil spill and prompting federal agencies to close 85 miles of the Mississippi River to traffic for almost a week. According to reports, the accident was the result of human error. On February 17, 2012 a tanker barge traveling downriver on the Mississippi rammed a crane barge being pushed upriver about 50 miles from New Orleans. The collision tore a 10-foot by 5-foot gash above the waterline of the double-hulled tanker barge; oil spewed into the water.[25] These are just several examples of accidents involving barge traffic.

Notably, there has been no comprehensive vessel traffic risk analysis done for Grays Harbor as has been undertaken for Puget Sound. *See* Exh. 69, Puget Sound Vessel Traffic Risk Assessment, Final Draft. Given the significant increase in vessel traffic from the proposed projects, Hoquiam and Ecology must undertake a similar analysis for Grays Harbor before granting any permits. Such an analysis must assess the increased risk of tankers and barge accidents and potential threats associated with these accidents, including oil spills and vessels/barges sinking, as well as interference with other vessel traffic like log export ships, other commercial and recreational vessels, and fishing boats. Vessel traffic analysis should consider all impacts to tribal treaty-protected fishing, including access impacts to fishermen from increased vessel traffic, and the potential devastation of the livelihoods of commercial and subsistence tribal fishermen should an oil spill occur. This analysis should use the most recent vessel tracking data for Grays Harbor and include historic levels, existing levels, and any reasonably foreseeable projected increases in vessel traffic. The EIS should also analyze alternative berthing times and seasonal restrictions to ensure that vessel operations do not adversely affect the spawning and migration behavior of salmonids, eulachon, other species that

[24] Exh. 18, *River traffic resumes after barge accident but threats remain,* Louisiana Weekly (June 4, 2011).

[25] Exh. 19, *Barge collision in Mississippi River causes oil spill,* New York Daily News (Feb. 18, 2012).

use the proposed project area. The EIS should also analyze where fueling of vessels will occur. *See* Exh. 78, Washington Department of Natural Resources Scoping Comments on Millennium Coal Terminal Proposal at 1-2, 7, 9.

3. Type of crude

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.[26] 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 months after a spill incident.[27] Once permitted, crude could come from the Bakken area of North Dakota or the tar sands region of Alberta, Canada. Alberta tar sands crude—diluted bitumen—is even more difficult to clean up, especially in an aquatic environment, as it is heavier and can sink to the bottom. A spill of crude oil or diluted bitumen would wreak devastating, lasting harm on Grays Harbor, its fish populations, and the aquatic ecosystem.[28] Hoquiam and Ecology must review the environmental impacts, including the toxicity and persistence in both fresh and salt water environments, of different types of crude oil that may be shipped through these facilities.

It would not be sufficient for Hoquiam and Ecology to simply recommend that after-the-fact spill plans address the issue of crude oil type. As the U.S. Environmental Protection Agency noted with respect to the 2010 Enbridge spill 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

[26] *See generally* Exh. 20, American Petroleum Institute, *High Production Volume (HPV) Chemical Challenge Program*, Jan. 14, 2011.

[27] *See* Exh. 21, U.S. Fish and Wildlife Service, *Effects of Oil Spills on Wildlife and Habitat*, Dec. 2004; Exh. 22, *Oil Spills: Severity and Consequences to Our* Ecosystem, Dartmouth Undergraduate Journal of Science, Mar. 11, 2012.

[28] *See generally* Exh. 23, The Pembina Institute, *Pipelines and Salmon in Northern British Columbia: Potential Impacts*, Oct. 2009.

> spill to water, it is possible that large portions of dilbit will sink and that submerged oil significantly changes spill response and impacts.[29]

In fact, as of May 2013, there are 180,000 gallons of oil remaining in Kalamazoo River three years after the spill.[30] *See* Exh. 7, Emerging Risks Task Force Report (2013) at 15-23 (description and case studies of spills/clean-up of Bakken and tar sands crude); Exh. 11, Transporting Alberta's Oil Sands Products: Defining the Issues and Assessing the Risk (Mar. 17, 2013); Exh. 12, Tar Sands Pipeline Safety Risks (Feb. 2011) (cataloging diluted bitmen characteristics and particular risks).

B. The Public Health Issues Raised by This Project Are Significant and Harmful.

The public health issues raised by a project of this size and extent include diesel pollution over different operational lifetime projections for the terminal, soil contamination by crude oil, odor pollution, and increased noise. The EIS should include a specific focus on children, the elderly, and other vulnerable members of the community. It should also consider cumulative and disproportionate impacts on communities already exposed to high levels of air and water pollution, particularly low-income communities and communities of color.

Further, a valid SEPA analysis must consider air pollution impacts that specifically accompany transporting oil. Each trip of a fully loaded tanker will use diesel fuel and generate significant CO_2 emissions as well as a variety of toxic and harmful air pollutants. Relatedly, the EIS must consider idling ship emissions of cargo vessels at the dock and in transit through Grays Harbor; such emissions have been a significant source of toxic air pollution in other ports and are of concern here.[31]

1. The Westway and Imperium projects will cause harmful air impacts.

The transport and multiple transfers of either tar sands or Bakken crude at the proposed terminals will release air toxins, including volatile organic compounds ("VOCs") and benzene, depending on the type of crude. These air toxins are harmful to human health. The risks and

[29] Exh. 24, EPA Letter of April 22, 2013 on Keystone XL DSEIS at 3-4.

[30] Exh. 25, US EPA, Volume Estimate for Submerged Line 6B Oil in the Kalamazoo River (May 1, 2013).

[31] Exh. 26, CRS Report for Congress, *Air Pollution and Greenhouse Gas Emissions from Ships* (Dec. 23, 2009); Exh. 27, *Air Pollution and Greenhouse Gas Emissions from Ocean-going Ships: Impacts, Mitigation Options and Opportunities for Managing Growth;* Exh. 28, Protecting American Health from Global Shipping Pollution, Establishing an Emission Control Area in U.S. Waters (undated).

impacts of these emissions from tank cars and during unloading and loading must be examined in the EIS.

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 will pass to meet the National Ambient Air Quality Standards, which are set to protect public health. No matter which route the trains take to reach the Port of Grays Harbor, they will pass through numerous non-attainment and maintenance areas for the criteria pollutants they will be emitting. For example, if the oil is transported via the Union Pacific rail line, it would pass through the Fort Hall PM-10 Nonattainment Area, the Portneuf Valley (Pocatello) PM-10 Maintenance Area, the N Ada County (Boise) PM-10 Maintenance Area, the Klamath Falls PM-10 Maintenance Area, the Tacoma PM-2.5 Nonattainment area, the Lewis and Clark County and Yellowstone County, and the MT SO2 Nonattainment areas, to name just a few. If the oil is transported via the BNSF rail line, it would pass through at least the Sheridan County PM-10 Nonattainment Area, the Missoula County PM-10 Nonattainment Area, the Sanders County PM-10 Nonattainment Area, the Sandpoint PM-10 Maintenance Plan, and the Spokane PM-10 Maintenance Plan. Therefore, the SEPA analysis should analyze the effect the transportation of oil will have on the air quality of communities through which the trains will pass.

It is also critical in conducting air quality modeling analysis to use reasonably conservative but realistic inputs into the model. For example, it would be easy, but inaccurate, to assume an oil train travels at an average speed for its entire journey. However, the reality is that heavy oil trains travel very slowly at certain points of their journey because of elevation increases or safety restrictions. In addition, additional locomotive engines are needed at certain points of the journey to make it over hills and the engines have to work harder, and thus produce more emissions, at those points. Moreover, trains idle along the way for various reasons like crew changes and train re-configurations. Similarly, it would be easy, but inaccurate to assume that by the time the oil terminal is operating, only ultra-low sulfur diesel will be used in the trains and ships. However, there are exceptions to the diesel regulations such as the provisions for using transmix diesel that has much higher sulfur content.[32] Realistic assumptions of these factors need to be included in the analysis. Modeling must take these inputs into account to be realistic.

2. The Westway and Imperium projects will harm water resources.

The EIS must consider effects to all surface and ground water resources within the project area. The EIS must consider all potential water quality impacts (e.g., increased sediment loads, possible spills, changes to alluvial groundwater quality, degradation of drinking well water) and water quantity impacts (e.g., drawdown of aquifers, diversions or diminutions of

[32] *See, e.g.*, http://www.epa.gov/otaq/fuels/dieselfuels/documents/420f12081.pdf.

surface flow, hydrologic changes affecting seeps and springs, drinking water impacts) of the terminal's construction and operation. Hoquiam and Ecology should ensure that the EIS describes, in detail, the possible sources of all water needed for the railroad and associated drilling activities, including water originating in any over-allocated water source.

The analysis must consider acid deposition into waterways from the trains' and ships' diesel engines. An analysis of the Port of Morrow proposed coal export terminal showed nitrogen deposition into the Columbia River many times above the ecological screening level of 5 kg/ha/yr. *See* Exh. 57 at 25. These impacts crossed state boundaries. These local impacts should be considered in the context of global acidification.

The analysis must assess not just the impacts of maintenance dredging in Grays Harbor to serve these projects, but also the effects of proposed deeper dredging. *See* Exh. 87, FWS Letter Re Grays Harbor Dredging SEIS (Mar. 24, 2014) ("Based on the information available to us, the Service believes that the preferred alternative for the Grays Harbor NIP poses unacceptable risks to fish and wildlife trust resources…. Our contention is that the Corps' and Port's preferred alternative for the Grays Harbor NIP would facilitate, make possible, and promote or encourage selection of Grays Harbor as a destination for additional, future shipping and port operations, including candidate CBR bulk fluid storage and transloading/shipping operations. These foreseeable indirect and cumulative effects raise for us very serious concerns regarding proximity to the Refuge, proximity to vulnerable habitats that support ESA-listed species, and to greater Grays Harbor waterfowl and migratory bird resources in general.").

In addition to water availability considerations, the EIS must examine the project's potential impacts to water quality. Contamination of river and drinking water supplies can occur with diesel emissions and diesel spills both during project construction and during the ongoing operation of the project, which relies on continuous activity of trains. Construction and operation of the railroad may also result in water quality impacts in the way of increased sedimentation and other changes. The EIS must assess these impacts and detail how federal, state, and local water quality standards will be met, monitored, and maintained.

C. Public Safety Will Be Jeopardized by Construction and Operation of the Westway and Imperium Projects.

The impacts to public safety run the gamut from increased train traffic and vehicle accidents, increased derailments and concomitant emergency response, travel time delays at specific intersections (including the economic impacts of those delays, and impacts to/delay of emergency services (fire, police, EMT)).

Threats from frequent long trains at rail crossings all along the route from North Dakota or Alberta, Canada will mean delayed emergency medical service response times; and increased accidents, traumatic injury and death. Each 120-car unit train is approximately a mile-and-a-half

long, and this proposal would significantly increase the daily number of trains along the rail route. These trains will bisect multiple communities along the route, leading to significant traffic delays and potential safety issues at grade-crossings. For example, at 5 miles per hour, it will take at least 20 minutes for a single 1.5 mile unit train to pass a crossing (18 minutes at 12 minutes per mile), blocking neighborhoods, businesses, and traffic. Blockage will be longer if the train is stopped or delayed for any reason. The delay of only a few minutes for an emergency response vehicle can mean the difference between life and death for citizens in these rural communities. In addition, increased rail traffic will lead to increased collisions between passenger vehicles, pedestrians, and trains. *See* Exh. 29, Daniel A. Lashof et al., Natural Resources Defense Council, Coal in a Changing Climate (Feb. 2007).

Preliminary traffic impact studies have been done for several communities along the proposed rail transportation route for the proposed coal export projects in Washington, including:

- Exhibit 30, Coal Train Traffic Impact Study, Parametrix (Nov. 2012).
- Exhibits 31-38, Gibson Traffic Consultants Reports for Bellingham, Burlington, Edmonds, Marysville, Mount Vernon, Seattle, and Stanwood.
- Exhibit 39, Heavy Traffic Ahead, Western Organization of Resource Councils (July 2012).
- Exhibit 88, Heavy Traffic Still Ahead, Western Organization of Resource Councils (Feb. 2014).

In addition to the threat of delay, the EIS must review the threats associated with oil train derailments. There is a serious risk to human health from a huge increase in oil train traffic along the route to and from North Dakota and Alberta drill sites. Hoquiam and Ecology should also evaluate how local agencies will respond to oil spills that involve dangerous chemicals. For example, according to the Washington Department of Ecology, spilled Bakken oil presents a significant risk to first responders as the oil and its diluent may contain elevated levels of benzene. High levels of benzene or other dangerous chemicals may require emergency responders to wear respirators, delaying and complicating initial response to an oil spill. Benzene exposure is a concern with diluted bitumen from the Alberta tar sands as well.

Hoquiam and Ecology must also review geologic hazards. Because of its setting within the Cascadia subduction zone, the coastal region of the Pacific Northwest has a high level of seismic activity. For example, the U.S. Geological Survey estimated that there is an approximate 14% chance that a Great Cascadia subduction earthquake (magnitude 8+) will strike the region in the next 50 years—the length of time regarded as typical design life of a structure or facility in the United States. This probability is characterized as "quite high."[33] The EIS should analyze

[33] Petersen, M.D., Cramer, C.H., and Frankel, *Simulations of seismic hazard for the Pacific Northwest of the United States from earthquakes associated with the Cascadia subduction zone: Pure and Applied Geophysics*, v. 159, p. 2147-68 (2002).

the environmental impacts of the project in the event of an earthquake or cascading earthquake. This analysis should account for varying seismic events.[34] The Shorelines Hearings Board highlighted the need to address seismic risks in its order vacating the permits for these facilities in 2013. *Quinault Indian* Nation, 2013 WL 6637401, *17-19.

Site liquefaction is another important issue that the EIS must review. Liquefaction is a major threat in Grays Harbor. Exh. 86, Direct Testimony of Joseph Wartman, Ph.D. (Sept. 9, 2013). Additionally, global sea level rise, and its impacts to the Port of Grays Harbor, should be considered in the EIS.

D. The Overall Economic Impacts of the Westway and Imperium Projects Are Likely Negative.

The economic impacts of this project must also be reviewed. Issues here include the impact 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 ports and 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. There will be impacts to other types of development in the Port of Grays Harbor itself, as well as the cities of Hoquiam and Aberdeen. On the marine side, there are likely to be significant economic impacts on marine dependent industries such as commercial and tribal fisheries, tourism, and other businesses.

A report by Natural Resources Economics ("NRE"), Potential Socio-Economic Impacts of the Proposed Shipment of Crude Oil from Grays Harbor (Jan. 2014) (Exh. 89), critiqued an economic study commissioned by Westway and Imperium for failing to present a full picture on the economic impacts of crude-by-rail projects. The report presented a number of possible scenarios resulting from the operation of these facilities and found that:

> Each of these scenarios would impose economic costs on and reduce the welfare of affected workers and families, the earnings of affected landowners and businesses, and the productivity of governmental infrastructure and workers. As workers, families, landowners, businesses, and governments incur these costs, they likely would alter their expenditures, and the change in expenditures would have a negative impact on overall sales, jobs, and incomes for affected businesses

[34] *See* Cascade Subduction Zone Earthquakes (2013), http://www.dnr.wa.gov/publications/ger_ic116_csz_scenario_update.pdf; http://www.oregonlive.com/environment/index.ssf/2012/08/major_earthquake_in_oregon_cou.html.

> and workers. For example, if an oil spill were to reduce fish populations or to taint the value of the fish, tribal and non-tribal commercial fishermen would see their incomes fall and they would have less to spend. As a consequence, local businesses would see a reduction in sales, workers would see fewer job opportunities and reduced earnings, and taxpayers would see an impairment of community services and infrastructure. Closure or tainting of the statewide Dungeness crab fishery, alone, would jeopardize the revenue of commercial boats, which have realized ex-vessel sales of $30–50 million per year in recent years. Similarly, an oil spill that taints shellfish or closes related activities in Grays Harbor and adjacent counties would jeopardize income for businesses and workers associated with a large portion of Washington's cultivated shellfish industry, which currently experiences annual sales of about $108 million. Tainting of razor clams or closure of clam harvests on beaches on the south coast would jeopardize annual revenues expected to be about $38 million for local motels, restaurants, and other recreation-related enterprises.

NRE Report at 2. The study outlined areas of necessary investigation and concluded:

> In reality, the shipment of crude oil into and out of Grays Harbor would have negative, unintended economic impacts, as well as the positive, intended impacts examined by ECONorthwest. The actual, overall positive impacts likely would be smaller than estimated, and smaller than the negative impacts for many households, businesses, and communities, especially if those that would be affected by oil spills, explosions, and other harmful events. The public and decision-makers cannot fully understand all of the overall economic impacts of the proposed oil shipments without the completion of further investigation to determine the severity of their potential negative economic effects. Additional investigation also is warranted to determine the distribution of the negative effects among different groups, including the Quinault Indian Nation.

NRE Report at 30.

> *1. The project, individually and in combination with other proposed coal and oil shipping projects, will create massive increases in rail traffic, with major impacts on other rail users and affected communities.*

The increased rail traffic associated with full build out from the Westway and Imperium projects would represent a huge increase in freight rail usage and would likely present significant conflicts with other users of the rail line, including freight and passenger shippers. According to the Washington State Department of Transportation (WSDOT), inbound freight rail traffic totaled 58 million tons in 2010.[35] Based on WSDOT's figures, rail tonnage associated with these

[35] WSDOT, Washington State Rail Plan Public Workshop Presentation (Slide 21), Nov. 2012.

projects at full build out would represent a substantial increase in the inbound rail tonnage on Washington rails. These impacts are even more significant if you take into account the cumulative impacts on a regional perspective. The authors of the *Heavy Traffic Ahead* study, Exh. 39, have estimated that combined rail traffic from the Powder River basin to the proposed northwest coal terminals (including projected growth in British Columbia, Canada) would equal as much as 157 million metric tons per year. This would result in a nearly 200% increase of inbound regional freight rail traffic for just this one commodity. It is critical that the EIS include a full analysis of the cumulative impacts from these proposals, including the capacity of the rail system to handle these increases without significant adverse impacts on other shippers, passenger rail users, and communities.

The most recent analysis of Washington's freight capacity, conducted in 2009 (Exh. 40, Washington State Department of Transportation Freight Rail Plan 2010-2030), indicated 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. 41), and the *Heavy Traffic Ahead* (Exh. 39) and *Heavy Traffic Still Ahead* (Exh. 88) studies. 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).

Unless mitigated with significant capacity additions, the addition of the massive 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 who are critically dependent on timely and affordable access to the rail system. *Heavy Traffic Ahead*, Exh. 39. Existing state studies indicate that coal rail traffic is already having a significant negative impact on the ability of Washington shippers to access markets where coal traffic from the Powder River basin is dominating the rail lines; experts working for the state have concluded that "the high volume of coal trains moving east out of the Powder River basin has made it virtually impossible to route time-sensitive intermodal trains moving from PNW ports to central and southeast gateways such as Kansas City and Memphis through the near continuous flow of slow-moving coal trains. Adjusting to this, BNSF has shifted most intermodal traffic destined to locations south of Chicago to the Ports of Los Angeles and Long Beach." These reports also confirm that the railroad prioritizes unit trains, such as coal or oil trains, over other shippers. The EIS 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.

The EIS must also analyze impacts, mitigation measures, and potential funding relating to the use of passenger rail on these same lines. As Exh. 42 discusses, the Amtrak Cascades Mid-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 EIS must analyze how existing and expanded passenger rail uses will be impacted if freight traffic increases.[36] The EIS 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 EIS fully analyze the past and prospective investments to ensure that public funds are not spent for private purposes.

It will also be necessary to review the need 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 EIS 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.[37] The EIS 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.

2. The project is likely to create very significant impacts relating to rail traffic in dozens of impacted communities.

Numerous studies have confirmed that the massive increases in freight rail traffic for coal export will result in significant adverse impacts on other traffic and freight mobility within affected communities. *See* Exhs. 30, 31-38, 39. Each of these studies concludes that the level and type of coal train traffic associated with this project is likely to cause a number of affected intersections to reach unacceptable levels of service, including many intersections that are projected to reach level of service "D" or "F." These traffic impacts will cause direct economic losses to affected communities and businesses through interruptions of freight mobility, challenges for customers reaching businesses, and lost employee time. Air pollution impacts related to increased idling and congestion may also directly impact growth in affected communities. These studies apply to crude oil trains as well.

Although these studies show the likelihood of significant adverse impacts in a number of communities, it is imperative that the EIS fully analyze these issues in these and all other

[36] 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.

[37] *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/.

communities that are likely to be similarly affected along the entire corridor from drill sites in North Dakota, Montana, or Alberta, Canada to the proposed terminals.

The EIS must also look at necessary mitigation for these traffic and mobility concerns and the question of who will bear the costs of this mitigation. Under federal law, railroads are generally limited to paying no more than 5% of the costs of grade separated crossings where at grade crossings are being eliminated. Typically, the railroad pays far less than that amount. Given that the costs of grade separated crossings to address these traffic issues are in the $10s and $100s of millions, the EIS must analyze any mitigation that is needed to reflect the huge increases in oil train traffic associated with this project to ensure that the public does not pay for private benefits.

Finally, it is particularly critical that the evaluation of rail impacts be placed with the context of cumulative effects from multiple projects, currently under consideration, that will dramatically raise the amount of train traffic in Washington State. There are numerous proposals to ship crude oil and coal that will in part use the same rail lines. The EIS should evaluate the direct, indirect, and cumulative impacts of reasonably foreseeable projects, including crude oil, coal export, and liquefied natural gas terminals. This includes the cumulative impacts associated with rail traffic, vessel traffic, and associated pollution and public health impacts.

3. Other economic impacts and risks associated with the project will be significant.

a. Property valuation

Although large increases in oil train traffic has not yet occurred, recent studies focused on proposed coal train traffic increases have indicated that the massive increases in train traffic may directly result in significant reductions in property values, affecting owners, other taxpayers and affected communities.[38] A study conducted by the Eastman Company (a property valuation consultant company) relevant to the Gateway Pacific Terminal in Whatcom County concludes that property valuation losses are likely to be significant for properties located within 500 feet of the mainline tracks in Whatcom, Skagit, Snohomish, King, and Pierce Counties, due to the impacts related to traffic, safety, vibration, noise, pollution, and stigma and perception issues. For example, the study found that single family residential properties north of Everett could lose values in the range of 5-20%. Other estimates included multi-family properties (5-15%); commercial properties (5-10%); and industrial properties (5-8%). Using a database of assessed

[38] *See* Exh. 43, Increased Coal Train Traffic and Real Estate Values, The Eastman Company (Oct. 30, 2012); Exh. 44, The effect of freight railroad tracks and train activity on residential property values, Robert A. Simons R. & A. El Jaouhari (Summer 2004); Exh. 45, Examining the Spatial Distribution of Externalities: Freight Rail Traffic and Home Values in Los Angeles, Futch, M. (Nov. 11, 2011).

property values in the study area, the Eastman report concluded that even a 1% diminution in property value would result in a loss of approximately $265 million. While we are not yet aware of any comparable study for Hoquiam or the greater Grays Harbor area, it is clear that a substantial increase in rail traffic has important impacts that need to be assessed. The EIS should look at these issues along the entire corridor, using specific estimates of rail traffic associated with the project, as well as the cumulative impacts of proposed coal export facilities and other proposed crude-by-rail projects.

b. Impacts on economies dependent on the marine environment

There are likely to be significant adverse impacts and major risks posed to Grays Harbor and aquatic ecosystems from this project. In addition to the impacts on ecosystems, these issues must be evaluated for the impacts and risks that they pose for marine related businesses and economies, such as commercial, tribal and sports fisheries, tourism, and other related businesses. These businesses cumulatively provide billions of dollars in positive economic impacts to the state and region. Exh. 16, National Wildlife Federation, *The True Cost of Coal: The Coal Industry's Threat to Fish and Communities in the Pacific Northwest* (2012) at 9 (recreational fishing accounts for $2.7 billion a year to the Washington and Oregon economies; commercial fishing in Washington contributed $3.9 billion to economy). Impacts to other forms of recreation, such as boating, fishing, hiking, and birding, should be closely analyzed.

Commercial and recreational fishing form a vital part of Washington State's economy. As Washington Department of Fish and Wildlife found in 2008 (Exh. 76):

> Ultimately, our findings indicate that commercial and recreational fisheries not only contribute employment and personal income, but also contribute in several other significant ways to Washington's economy, as well as to its residents' quality of life.
>
> In terms of economic impacts, commercial and recreational fishing conducted in Washington fisheries directly and indirectly supported an estimated 16,374 jobs and $540 million in personal income in 2006. When viewed in the context of the Washington state economy, these levels of employment and earnings account for about 0.4 percent of total statewide employment and about 0.2 percent of total statewide personal income in 2006.

See also Exh. 77, Washington State Maritime Cluster Economic Impact Study (Nov. 2013).

All of these economic impacts beg the question whether the overall economic impacts of the projects are positive. As Exh. 46 shows, *The Impact of the Development of the Gateway Pacific Terminal on the Whatcom County Economy*, the answer to this question is very likely no. This study, by one of the nation's leading economic consulting firms, evaluated the positive economic impacts from a proposed coal export project in Whatcom County, and then compared

them to a wide range of negative economic tradeoffs and impacts. It concluded that the overall economic impact would very likely be negative, *even in the county with most of the positive economic benefits.* A similar review should be prepared specific to the locally impacted area of Hoquiam and Grays Harbor County as part of this EIS. Additionally, the EIS should look at the overall economic impacts of these projects on a region-wide basis, particularly in light of the cumulative effects with multiple overlapping impacts.

E. The Westway and Imperium Projects Will Increase Harm to Wildlife, Marine, and Aquatic Health.

The EIS must include an analysis of impacts to biological, marine, and aquatic resources on both public and private lands and waters in the affected area, that is, in the area from the drilling of the oil in the middle of the North American continent, through the rail corridor to the Westway and Imperium projects, through the loading and shipping of the oil through the Grays Harbor estuary, past Bowerman Basin National Wildlife Refuge, to its final, and currently unknown, destination and burning. Such resources include marine and terrestrial mammals, game and non-game resident and migratory bird species, raptors, songbirds, amphibians, reptiles, fisheries, aquatic invertebrates, wetlands, and vegetative communities. Hoquiam and Ecology must ensure that up-to-date information on all potentially impacted flora and fauna is made available, so that adequate impact analyses can be completed. Habitat degradation, fragmentation, and loss must all be assessed, along with any resulting impacts to wildlife and marine species.

1. Construction and operation of these projects will harm the ecology of Grays Harbor.

Risks to aquatic health in the important 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. Exh. 82, Direct Testimony of James E. Jorgensen (Sept. 5, 2013); Exh. 85, Testimony of Ervin Joseph Schumacker (Aug. 29, 2013); Exh. 81, Direct Testimony of Brent Finley (Sept. 6, 2013).

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 streams 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. These discharges should be regulated under an individual permit if not prohibited outright.

As noted above, an evaluation of the proposed Morrow coal export facility showed nitrogen deposition from the diesel engines for the trains and ships significantly above the ecological screening level. *See* Exh. 57 at 24-26. The EIS should include a similar analysis for Westway and Imperium.

Increased wildlife mortality from railroad and drilling-related activity (including, but not limited to, increased human conflicts, habitat loss, and increased hunting pressure) must also be discussed. Impacts to wildlife migration corridors must be evaluated.

2. Increased shipping traffic caused by the Westway and Imperium projects will harm Grays Harbor and its already at-risk aquatic species.

Granting the requested permits would dramatically increase the amount of large-vessel traffic in Grays Harbor, a sensitive and critically important ecosystem. *See* Exhs. 81, 82, 84, 85 (Finley, Jorgensen, Rosenfeld, and Shumacker Testimony).

The dramatically increased shipping traffic brings with it an increased risk of collisions, groundings, spills, discharges, and accidents during vessel fueling. Similarly, the potential for introduction of invasive species, including through ballast water, must be assessed, as tens of thousands of cubic meters of ballast water per visit will be discharged by the shipping vessels. Exh. 16, *The True Cost of Coal: The Coal Industry's Threat to Fish and Communities in the Pacific Northwest* at 10. Hull fouling presents a similar danger of invasive species introduction. All of these risks and impacts must be carefully scrutinized, particularly in light of cumulative effects like other proposed oil terminals in Grays Harbor.

This increased quantity of shipping, and the operations of the terminal site, will have effects on threatened, endangered, and candidate species that must be analyzed in the EIS. This includes multiple ESA-listed salmon species and other species. For species protected under the Endangered Species Act, federal agencies must consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service ("NMFS") under § 7 of the Endangered Species Act to determine whether the terminal, the proposed shipping activity and marine shipping routes, any of the proposed railroad routes, and the associated oil drilling and combustion activities will adversely affect these species or their designated critical habitat.

3. A crude oil spill would be devastating to fish and wildlife.

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. PAHs include phenanthrene, anthracene, fluoranthene, pyrene, but, in general, low molecular weight PAHs can be directly toxic to aquatic organisms. 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.

An oil spill in the Chehalis River or Grays Harbor would have devastating impacts to fish and wildlife. The EIS should review oil impacts (from everyday leaks to large spills) on salmonid fishes, non-salmonid fishes (forage base), crabs, and oysters at a minimum. The EIS should include specific information on oil toxicity, human health issues related to fish consumption, and the length of time the environment will be degraded. Exh. 75, Oiled Wildlife; Exh. 70, Altered growth and related physiological responses in juvenile chinook salmon from dietary exposure to polycyclic aromatic hydrocarbons; Exh. 71, Effects of Diesel on Survival, Growth, and Gene Expression in Rainbow Trout Fry; Exh. 72, Leyda Consulting, Ecological Impacts of Proposed Coal Shipping (Oct. 30, 2012) at 14-16 (explaining, with references, harm to salmonids from petroleum products). *See also* Exh. 59, NMFS Comments on Millennium coal (listing marine species at risk and requesting information for broad Endangered Species Act review).

Any potential spill discussion must include the Washington State coastline. The bar at the mouth of Grays Harbor is considered a dangerous crossing. Transporting or towing oil out of this harbor will always face risk and more so during winter storms and large tidal exchanges. Should a spill incident occur in this area, crude oil and components could potentially impact both inside the harbor and the Washington State coastline both north and south of the event dependent on wind, waves, and currents. The 1988 Nestucca spill oiled beaches south into Oregon and north from Grays Harbor well into Canada. *See* http://www.ecy.wa.gov/programs/spills/incidents/Nestucca/NestuccaHistory.pdf . Depending on the time of year, a spill event may be worsened by high-energy storms that could spread its impact widely both in the harbor, at sea, and on shorelands.

IV. THE EIS MUST ANALYZE A REASONABLE RANGE OF ALTERNATIVES, INCLUDING A MEANINGFUL NO-ACTION ALTERNATIVE.

The range of alternatives "is the heart of the environmental impact statement." 40 C.F.R. § 1502.14. It is well understood that "NEPA requires that an agency 'rigorously explore and objectively evaluate all reasonable alternatives.'" *Utahns for Better Transp. v. Dep't of Transp.*, 305 F.3d 1152,1168 (10th Cir. 2002) *quoting* 40 C.F.R. § 1502.14(a), *modified on rehearing Utahns for Better Transp. v. Dep't of Transp.*, 319 F.3d 1207 (2003). The alternatives discussed should provide different choices from which decisionmakers and the public can make an informed choice after considering the environmental effects of the alternatives. *See Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853 (9th Cir. 2004). The range of alternatives should also "include reasonable alternatives not within the jurisdiction of the lead agency," and "include appropriate mitigation measures not already included in the proposed action or alternatives." 40 C.F.R. § 1502.14.

In addition to the need for thorough consideration of the impacts of constructing the Westway and Imperium projects, the EIS must consider the option of not constructing the oil shipping facilities at all. Among the alternatives that must be considered in an EIS is the "no action" alternative. 40 C.F.R. § 1502.14(d). Indeed, "[i]nformed and meaningful consideration of alternatives—including the no action alternative—is ... an integral part of the statutory scheme." *Bob Marshall Alliance v. Hodel,* 852 F.2d 1223, 1228 (9th Cir. 1988). The evaluation of the no action alternative cannot be a meaningless exercise. To satisfy NEPA, the EIS must consider this alternative without prejudgment of the outcome of its analysis. "[F]ull and meaningful consideration of the no-action alternative can be achieved only if all alternatives available … are developed and studied on a clean slate." *Bob Marshall Alliance v. Lujan,* 804 F. Supp. 1292, 1297-98 (D. Mont. 1992).

V. THE CUMULATIVE IMPACTS OF ALL PROPOSED FOSSIL FUEL EXPORT TERMINALS MUST BE CONSIDERED AND ANALYZED.

The Westway and Imperium EIS must include review of the impacts of all other proposed fossil fuel export projects that use the same rail lines and/or use the same waterways. The courts have found that even where several actions were not "connected" or "similar" enough to warrant consideration in a single environmental impact statement, their impacts must still be addressed as cumulative impacts. *Earth Island Inst. v. U.S. Forest Serv.*, 351 F.3d 1291, 1306 (9th Cir. 2003) ("Even if a single, comprehensive EIS is not required, the agency must still adequately analyze the cumulative effects of the projects within each individual EIS."); *see Quinault Indian Nation v. Hoquiam*, 2013 WL 6637401.

Under NEPA, an EIS must analyze and address the cumulative impacts of a proposed project. 40 C.F.R. § 1508.25(c)(3). A cumulative impact is defined as:

> [T]he incremental impacts 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. In other words, cumulative impacts are the result of any past, present, or future actions that are reasonably certain to occur within the action area. Such effects "can result from individually minor but collectively significant actions taking place over a period of time." *Id.* In the coal context, the U.S. Supreme Court has held that, "when several proposals for coal-related actions that will have cumulative or synergistic environmental impacts upon a region are pending concurrently before an agency, their environmental consequences must be considered together. Only through comprehensive consideration of pending proposals can the agency evaluate different courses of action." *Kleppe v. Sierra Club*, 427 U.S. 390, 409-410 (1976).

These proposals share space with proposals for coal export, other oil shipping, and liquefied natural gas export facilities. Each of these proposals cannot be considered in a vacuum, for each will add impacts to an already stressed system. As the Environmental Protection Agency noted, "[a]ll of these projects—and others like them—would have several similar impacts. Consider, for example, the cumulative impacts to human health and the environment from increases in greenhouse gas emissions, rail traffic, mining activity on public lands, and the transport of ozone, particulate matter, and mercury from Asia to the United States." EPA Comment on Port of Morrow project (Apr. 5, 2012) (recommending a "thorough and broadly-scoped" cumulative impacts analysis of all proposed coal export facilities).[39]

Further, the proposed fossil fuel terminals will be sited within the "usual and accustomed" fishing areas of Pacific Northwest Indian tribes, which have a sovereign government-to-government relationship with the U.S. federal government. Under federal court precedent, the tribes are "co-managers" of these resources along with the state and wield considerable influence over decisions that affect fishing resources.[40] The Affiliated Tribes of Northwest Indians called for full environmental review and government-to-government consultation with Indian tribes throughout the region.[41] Seven different tribal organizations—the Lummi Indian Business Council, the Swinomish Indian Tribal Community, the Confederated Tribes and Bands of the Yakama Nation, the Makah Tribal Council, the Tulalip Tribes, the Nisqually Indian Tribe, and the Samish Indian Nation—submitted comments on the Cherry Point Gateway Pacific Terminal calling for full environmental review, government-to-government coordination, and protection for fish, wildlife, air and water quality, human health, and tribal sacred areas.

Other federal agencies have also identified common elements that call for area-wide review. The U.S. Department of Housing and Urban Development, in its scoping comments for the Gateway Pacific Terminal, stated that "HUD suggests the Co-Lead Agencies either include

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[39] EPA reiterated this call for a complete cumulative impacts review in its scoping comments for the Gateway Pacific Terminal, stating that "EPA also recommends that environmental impacts from increases in regional rail traffic and combustion of coal in receiving markets be examined in the context of other proposed export facilities in the Pacific Northwest region, so that reasonably foreseeable cumulative environmental impacts from additional facilities can be understood before a decision is made, as NEPA contemplates. … The cumulative effects analysis would appropriately include increases in regional train traffic and related air quality effects on human health, and the potential for effects to human health and the environment from increases in the long-range transportation of air pollution, including greenhouse gas emissions." *See* http://www.eisgatewaypacificwa.gov/resources/project-library.

[40] *U.S. v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974).

[41] *Available at* http://www.atnitribes.org/sites/default/files/res_12_53_with%20attachment.pdf.

the cumulative impacts from all three proposed ports in this EIS, or conduct an Areawide EIS that covers all three ports. The train traffic from all three ports could have a significant noise impact on communities on our region and in order to accurately and comprehensively address this impact, it needs to be considered as a whole."[42] The National Park Service similarly called for a cumulative effects EIS.[43]

Hoquiam and Ecology must examine the cumulative effects of other actions and programs of the state and federal government, and fully disclose the combined impact of ongoing and reasonably foreseeable future actions. This includes the effect of Army Corps dredging projects and shipping traffic from existing terminals. Hoquiam and Ecology must also analyze cumulative impacts from actions carried out by local and private entities.

VI. FEDERALLY-GUARANTEED TREATY RIGHTS MUST BE RESPECTED AND PROTECTED.

These proposed oil terminals will be sited within the "usual and accustomed" fishing areas of the Quinault Indian Nation, which, as a sovereign government, has a government-to-government relationship with the U.S. federal government and State of Washington. In fact, the State of Washington and its agencies entered the Centennial Accord with federally-recognized Indian tribes in 1989, by which it recognized the sovereignty of Indian tribes and committed to a government-to-government relationship to resolve issues and disagreements. "Centennial Accord between the Federally Recognized Indian Tribes in Washington State and the State of Washington," August 4, 1989.

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. Treaties impose on the government the "highest responsibility" and create a special fiduciary duty and trust responsibility upon all agencies of the United States and states to protect treaty rights, including fishing rights. *Seminole Nation v. United States*, 316 U.S. 286, 297 (1942). In a landmark court case known as the "Boldt decision," a federal court confirmed that Indian tribes have a right to half of 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). Specific to the Quinault Indian Nation, the Boldt decision affirmed the Quinault usual and accustomed fishing areas include "Grays Harbor and those streams which empty into Grays Harbor." *Id.* at 374. Subsequently-adopted federal regulations establish ocean treaty fishing areas for Quinault to include marine waters between Destruction Island and Point Chehalis. 50 C.F.R. § 660.50.

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[42] *Available at* http://www.eisgatewaypacificwa.gov/resources/project-library.

[43] *Available at* http://www.eisgatewaypacificwa.gov/resources/project-library.

The Quinault have been called the Canoe people because of the primacy of the ocean, bays, estuaries, and rivers to every aspect of tribal life. *See generally* Jacqueline M. Strom, Land of the Quinault (1990). The Quinault Indian Nation's Division of Natural Resources manages all aspects of its many fisheries, both on and off the reservation. Quinault fishermen harvest salmon, sturgeon, steelhead, halibut, cod, crab, oysters, razor clams, and many other species in Grays Harbor.

The Chehalis and the Humptulips Rivers and the Grays Harbor estuary into which they flow provide the freshwater and marine habitat that support natural production for chinook, chum, and coho salmon and steelhead of critical importance to the Quinault Nation's Treaty-protected terminal river fisheries within Grays Harbor, managed jointly by the Quinault Nation and Washington State Department of Fish and Wildlife and governed by seasonal plans and agreements. 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 coast of Washington. Grays Harbor produces numerous species of invertebrates and finfish that provide important prey to species and stocks utilizing the harbor and adjacent marine areas. Many tribal fishers derive their entire economic livelihoods from fishing and shellfishing in these waters. An oil spill would be disastrous to their families. Indeed, it would be disastrous to the culture and spirit of the Quinault people, many of whom rely on fish and shellfish from Grays Harbor and adjacent marine waters for the subsistence. The importance of subsistence fishing and shellfishing to the diet, health, and cultural and spiritual well-being of Quinault members cannot be overstated.[44]

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 Indian culture as it was in the past. *See* K. James and V. Martino, Grays Harbor and Native Americans (1986), prepared for the U.S. Army Corps of Engineers (Contract #DACQ67-85-M-0093).

The Quinault Indian Nation has an obvious interest in protecting the fish and fish habitat that it relies on in Grays Harbor to exercise its federally-guaranteed treaty fishing rights, as well as the traditional areas used for gathering plants for traditional cultural use. The risk of oil spills that may impact these federally-protected treaty resources must be considered and analyzed. Additionally, the Quinault Nation's treaty fishing right includes a right of access to its traditional

[44] *See generally*, Catherine A. O'Neill, *Variable Justice: Environmental Standards, Contaminated Fish, and "Acceptable" Risk to Native People*, 19 Stan. Envtl. L.J. 3, 73-75 (2000); Catherine A. O'Neill, *Fishable Waters*, 1 Am. Indian L. Rev. 181, 255-260 (2013), *available at* http://www.law.seattleu.edu/Documents/ailj/Spring%202013/O'Neill-Fishable%20Waters.pdf.

fishing areas and any impact to that right is an unconstitutional taking of a property right. Increased vessel traffic within the Quinault usual and accustomed fishing areas will impact that right of access and must also be analyzed. The Quinault pursued earlier appeals and litigation over these two proposed crude-by-rail projects and will continue to oppose their permitting. Furthermore, the Quinault Indian Nation has economic interests that are at risk from an oil spill, including its Beach Resort and Casino and marina in Ocean Shores, which must also be considered. Because treaties are the highest law of the land, the Quinault's treaty rights have federal primacy and must be protected.

Many additional tribes have spoken out against permitting of coal terminals on the lower Columbia. *See* Exhs. 47 through 53. In a comment letter to the Corps regarding the Morrow project in Boardman, the Yakama Nation characterized coal export proposals in the Columbia as a "new front … in the war on the Yakama way of life," describing in detail the risks to salmon, the safety of tribal fishermen, human health, water quality, and cultural resources. Exh. 49. The Nez Perce have also commented on the Morrow project, requesting that the Corps perform an EIS and assess cumulative impacts, citing concerns about "Tribal treaty rights, ESA-listed fish and lamprey and their habitat, Tribal traditional use areas along the coal transportation corridor, tribal cultural resources, and Tribal member health arising from coal dust and diesel pollution." Exh. 50. The Columbia River Inter-Tribal Fish Commission ("CRITFC"), which represents four Sovereign Tribal Nations (the Warm Springs, Confederated Tribes of Umatilla Indian Reservation, Yakama Nation, and Nez Perce) with treaty rights to salmon and other fish on the Columbia River, has also expressed opposition to the coal export proposals. In a comment letter on the Morrow Pacific Project, CRITFC stated that it has heard "significant concerns from our member tribes about the project's potential effects on tribal treaty fisheries." Exh. 51. CRITFC noted that "the proposed project area is currently used for fishing by tribal members exercising their treaty fishing rights" and the area "is also within lands designated as Traditional Cultural Property (TCP) and may contain significant cultural resources." The Affiliated Tribes of Northwest Indians have called for full environmental review and government-to-government consultation with Indian tribes throughout the region. Exh. 47. The concerns of these Indian nations and tribal members must be taken into account and apply with equal force to Westway, Imperium, and crude-by-rail.

Indeed, for the Gateway Pacific Terminal in Bellingham, Washington, the Corps wrote to the Washington Department of Archaeology and Historic Preservation seeking concurrence in its decision to define the Area of Potential Effect to include only the areas near the construction site itself. *See* Exh. 54. The Washington State Historic Preservation Officer Allyson Brooks disagreed, stating that the Area of Potential Effect was much greater, and that "the scope of this project, and the associated train traffic, poses unique issues when developing the necessary cultural resource studies." Exh. 55. The letter also notes the need to consider the effects of the "seaward boundary of the [Area of Potential Effect]. The increased vessel traffic, associated wakes, waves, and shoreline erosion of these vessels and the increased risk of accidents, oil spills, and damage all need to be considered." *Id.* at 2. For the Millennium Terminal, the

Department repeated these concerns and added issues of Native American burial sites along the Columbia River, as well as concerns about the impacts of vessel traffic:

> Panamax and Cape-sized dry bulk carriers along the Washington Coast and entering the Columbia River are clearly a reasonable and foreseeable effect of the Project that should create a seaward boundary of the EIS. The increased vessel traffic, associated wakes, waves, and shoreline erosion of these vessels and the increased risk of accidents, oil spills and damage all need to be considered.

Exh. 60.

Similarly, many tribes have expressed their concern and opposition to the Millennium coal export terminal. *See* Exhs. 61-68, Comments of the Coeur d'Alene, Cowlitz, Nez Perce, Nisqually, Umatilla, Warm Springs, Yakama, and Upper Columbia River Tribes. For example, the Nez Perce Tribe outlined its concerns with the impact of the Millennium project on treaty-protected fishing:

> The lower Columbia provides crucial habitat for treaty-protected resources such as salmon, steelhead, lamprey and resident fish. There are several ESA-listed fish in the project corridor including Lower Columbia River Chinook Salmon ESU, Upper Willamette River Chinook Salmon ESU, Snake River Fall Chinook ESU, Columbia River chum salmon ESU, middle Columbia River steelhead DPS, and lower Columbia River steelhead DPS. These species are of critical importance to subsistence and culture of the Tribe. In addition, lamprey, although currently are not a listed species but are culturally significant to the Tribe, are also located in the project
>
> The application contemplates a significant increase in vessel and rail traffic. The analysis must include a thorough evaluation of the impacts of increased vessel traffic on anadromous and resident fish. This analysis should include impacts to aquatic resources caused by ballast intake and wake strandings, as well as threats posed by increased turbidity, noise, lighting, and impacts during operations like coal dust and other toxics. In addition, the increased rail traffic may affect Tribal member access to usual and accustomed fishing places and other traditional use areas as well as interfere with Tribal member use of those places through increased noise disturbances, coal dust, and diesel pollution. For all these reasons the Tribe believes that the increase in vessel and train has the potential to interfere with tribal treaty fisheries.

Exh. 63 at 4-5. These concerns about impacts to native fish populations, fishing access, and vessel and rail traffic apply with equal force to the proposed Gray Harbor projects.

In 2006, the Corps denied a permit for a new dock and terminal site on the Columbia River because it would affect tribal treaty fishing rights. *See* Exh. 56. A similar outcome is warranted here. We ask that tribal sovereignty and treaties be fully respected.

VII. ENVIRONMENTAL JUSTICE CONCERNS

All federal agencies are encouraged to consider environmental justice in their NEPA analysis, evaluate disproportionate impacts, and identify alternative proposals that may mitigate these impacts. The fundamental policy of NEPA is to "encourage productive and enjoyable harmony between man and his environment." In considering how to evaluate progress in reaching these aspirational goals, the Council on Environmental Quality (CEQ) defined effects or impacts to include "ecological...aesthetic, historic, cultural, economic, social or health impacts, whether direct, indirect or cumulative."[45] Recognizing that these types of impacts might disproportionately affect different communities or groups of people, President Clinton issued Executive Order 12898 in 1994,[46] directing each federal agency to, among other things:

- "Make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations,"
- "Identify differential patterns of consumption of natural resources among minority populations and low-income populations,"
- Evaluate differential consumption patterns by identifying "populations with differential patterns of subsistence consumption of fish and wildlife," and
- "Collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence."

CEQ's Guidance for Environmental Justice under NEPA[47] called for agencies to consider specific elements when considering environmental justice issues:

- Agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action, and if so whether there may be disproportionately

[45] CEQ, Environmental Justice: Guidance Under the National Environmental Policy Act, December 10, 1997, *available at* http://ceq.hss.doe.gov/nepa/regs/ej/justice.pdf.

[46] "Federal actions to address environmental justice in minority populations and low-income populations," 59 Fed. Reg. 7629 (Executive Order 12898; February 11, 1994).

[47] CEQ, Environmental Justice: Guidance Under the National Environmental Policy Act, December 10, 1997, *available at* http://ceq.hss.doe.gov/nepa/regs/ej/justice.pdf.

high and adverse human health or environmental effects on minority populations, low-income populations, or Indian tribes.

- Agencies should consider the potential for multiple or cumulative exposure to human health or environmental hazards in the affected population and historical patterns of exposure to environmental hazards. Agencies should consider these multiple, or cumulative effects, even if certain effects are not within the control or subject to the discretion of the agency proposing the action.
- Agencies should recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed agency action. These factors should include the physical sensitivity of the community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community.
- Agencies should be aware of the diverse constituencies within any particular community. Agencies should seek tribal representation in the process in a manner that is consistent with the government-to-government relationship between the United States and tribal governments, the federal government's trust responsibility to federally-recognized tribes, and any treaty rights.

The EIS must examine the environmental justice impacts, including increased noise, flowing from this project. Several low-income or minority communities stand to be disproportionately impacted by the oil shipping terminals, the rail transportation of crude, and its drilling/extraction. As discussed above, traditional tribal lands will be affected by the Westway and Imperium projects. Tribes along the rail route and in the area of increased drilling will be impacted by the proposed railroad and the increased drilling and extraction associated with this project.

The EIS must include demographic information for all communities at the terminal site and along the rail lines that would ship oil to the port, as well as at the drill sites. Communities closest to the port site, along the rail line, and near the wells—many of which are low income or have high minority populations—will bear a disproportionate impact of the air and water pollution caused by crude oil transportation and export, as described above.

VIII. THE THREAT OF CLIMATE CHANGE HAS SPURRED WASHINGTON'S COMMITMENT TO GREENHOUSE GAS REDUCTION.

United Nations' Intergovernmental Panel on Climate Change ("IPCC") released the fifth version of its frequently cited report reflecting the scientific consensus that unrestrained greenhouse gas emissions are the major cause of global warming. As summarized by the IPCC in an accompanying press release:

> **Warming in the climate system is unequivocal** and since 1950 many changes have been observed throughout the climate system that are unprecedented over decades to millennia. Each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850… Thomas Stocker, the other Co-Chair of Working Group I said: "Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require **substantial and sustained reductions** of greenhouse gas emissions."[48]

Numerous studies predict severe impact from climate change in Washington State, including dramatic reductions in snowpack, declining river flows, increased deaths from temperatures and air pollution, increased risk of wildfires, loss of salmon and shellfish habitat, lost hydropower generation, and flooding. In 2006, Washington commissioned a study "Impacts of Climate Change on Washington's Economy," which found that the cost of climate impacts would reach $3.8 billion annually by 2020.[49] The state Department of Ecology in 2009 summarized recent scientific studies specific to the Pacific Northwest as follows: "Each [of the studies] shows that without additional action to reduce carbon emissions, the severity and duration of the impacts due to climate change will be profound and will negatively affect nearly every part of Washington's economy."[50]

In February 2012, Washington Governor Christine Gregoire convened the Washington State Blue Ribbon Panel on Ocean Acidification to chart a course for addressing the causes and consequences of acidification. The Governor charged the Panel to:

- Review and summarize the current state of scientific knowledge of ocean acidification,
- Identify the research and monitoring needed to increase scientific understanding and improve resource management,
- Develop recommendations to respond to ocean acidification and reduce its harmful causes and effects, and
- Identify opportunities to improve coordination and partnerships and to enhance public awareness and understanding of ocean acidification and how to address it.

The Panel released its report and recommendations in the document Washington State Blue Ribbon Panel on Ocean Acidification (2012): Ocean Acidification: From Knowledge to Action,

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[48] *Available at* http://www.ipcc.ch/news_and_events/docs/ar5/press_release_ar5_wgi_en.pdf (emphasis in original). *See also* Exh. 73, Global Climate Change Impact in the United States (2009).

[49] *Available at* http://www.ecy.wa.gov/pubs/0701010.pdf.

[50] *Available at* http://www.ecy.wa.gov/pubs/0901006.pdf.

Washington State's Strategic Response, H. Adelsman and L. Whitely Binder (eds). Washington Department of Ecology, Olympia, Washington.[51]

In November 2012, Governor Christine Gregoire issued an Executive Order[52] acknowledging the particular harm that ocean acidification, caused by increased emissions of greenhouse gases into the atmosphere, inflicts on Washington. "[I]t is critical to our economic and environmental future that effective and immediate actions be implemented in a well-coordinated way and that we work collaboratively with federal, tribal, state, and local governments, universities, the shellfish industry, businesses, the agricultural sector, and the conservation/environmental community to address this emerging threat. The Executive Order specifically directs "[t]he Office of the Governor and the cabinet agencies that report to the Governor to advocate for reductions in emissions of carbon dioxide at a global, national, and regional level."

This warming threatens major environmental impacts in Washington, the Pacific Northwest, and worldwide.[53] According to the U.S. Global Change Research Program ("GCRP"), climate change could affect the Pacific Northwest, including western Washington, by causing "declining springtime snowpack lead[ing] to reduced summer streamflows, straining water supplies, [and] … increased insect outbreaks, wildfires, and changing species composition in forests [that] will pose challenges for ecosystems and the forest products industry." Exh. 73, U.S. Global Change Research Program, Global Climate Change Impacts in the United States, at 135-38 (Thomas R. Karl et al., eds., 2009). In the northwestern United States, "salmon and other coldwater species will experience additional stresses as a result of rising water temperatures and declining summer streamflows." *Id.* at 136. Global warming also could profoundly affect the health of western fisheries, by "hamper[ing] efforts to restore depleted salmon populations," *id.* at 137.

Concentrations of CO_2 in the atmosphere "are projected to continue increasing unless the major emitters take action to reduce emissions." Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,539 (Dec. 15, 2009). The U.S. Environmental Protection Agency recognized the cumulative nature of both the climate change problem and the strategies needed to combat it:

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[51] *Available at* https://fortress.wa.gov/ecy/publications/SummaryPages/1201015.html. The technical summary (Feely, R.A., T. Klinger, J.A. Newton, and M. Chadsey (2012): Scientific Summary of Ocean Acidification in Washington State Marine Waters. NOAA OAR Special Report) is *available at* https://fortress.wa.gov/ecy/publications/SummaryPages/1201016.html.

[52] *Available at* http://www.governor.wa.gov/execorders/eo_12-07.pdf.

[53] And major economic impacts. *See* Exh. 74, *An Overview of Potential Economic Costs to Washington of a Business-As-Usual Approach to Climate Change,* Feb. 17, 2009.

> [N]o single greenhouse gas source category dominates on the global scale, and many (if not all) individual greenhouse gas source categories could appear small in comparison to the total, when, in fact, they could be very important contributors in terms of both absolute emissions or in comparison to other source categories, globally or within the United States. If the United States and the rest of the world are to combat the risks associated with global climate change, contributors must do their part even if their contributions to the global problem, measured in terms of percentage, are smaller than typically encountered when tackling solely regional or local environmental issues.

Id. at 66,543 (emphasis added). Consistent with this finding, the Ninth Circuit has rejected the argument that individual actions represent too minor of a contribution to the global problem to merit consideration under NEPA: "The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct. Any given rule setting a [vehicle fuel-efficiency] standard might have an 'individually minor' effect on the environment, but these rules are 'collectively significant actions taking place over a period of time.'" *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.,* 538 F.3d 1172, 1217 (9th Cir. 2008) (internal citations omitted).

Both the United States and Washington have sought to meet the challenge of climate change with a variety of statutory and regulatory actions to reduce our reliance on fossil fuels and promote conservation and alternatives. At the federal level, EPA has responded with a formal finding that greenhouse gases endanger the public health and welfare, 74 Fed. Reg. 66496 (Dec. 15, 2009), the first step in comprehensively regulating greenhouse gases under the federal Clean Air Act. EPA has already issued some regulations relating to reducing emissions from both mobile and stationary sources, including the June 2010 "tailoring rule" governing federal Clean Air Act requirements for greenhouse gas emissions from stationary sources, 75 Fed. Reg. 31514 (June 3, 2010), passenger vehicle rules, *see, e.g.*, 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Full Economy Standards, 77 Fed. Reg. 62,624 (Oct. 15, 2012), and proposed rules for power plants, *see* Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources, 77 Fed. Reg. 22,392 (Apr. 13, 2012).

Washington adopted greenhouse gas reduction standards via legislation adopted in 2008. *See* RCW 70.235.070(1)(a). The statute establishes that by 2020, emissions shall be reduced to 1990 levels. By 2035, greenhouse gas emissions are to be 25 percent below 1990 levels and by 2050, they are to be 50 percent below 1990 levels. The state legislature has consistently reinforced its concern for greenhouse gas impacts on Washington's climate and economy, for example: a) by taking measures to triple the number of green jobs by 2020; b) adopting a clean car standard that will reduce greenhouse gas emissions from mobile sources; c) dramatically increasing efficiency requirements for buildings; d) helping communities reduce greenhouse gas emissions by saving energy; e) requiring all state agencies to inventory and reduce emissions;

f) funding planning for climate change mitigation and adaptation; g) creating tax and other financial incentives to support low-carbon alternative energy sources; h) requiring new power plants to meet an "emissions performance standard" for greenhouse gases; and i) requiring new power plants mitigate 20 percent of life-time greenhouse gas emissions from the power plant.

These legislative actions have been supplemented by a number of Executive Orders promoting reduction of greenhouse gas emissions and increasing the availability of energy alternatives.[54] On October 28, 2013, Washington Governor Jay Inslee joined with Oregon Governor John Kitzhaber, California Governor Jerry Brown, and British Columbia Premier Christy Clark in signing the Pacific Coast Action Plan on Climate and Energy. Exh. 92. That accord commits Washington to lead national and international policy on climate change, account for the costs of carbon pollution, and invest in infrastructure that is climate smart. Most recently, on April 29, 2014, Governor Inslee issued Executive Order 14-04, Washington Carbon Pollution Reduction and Clean Energy Action. Exh. 91. This order created a Carbon Emissions Reduction Taskforce directed to "provide recommendations on the design and implementation of a carbon emission limits and market mechanisms program for Washington," as well as directed the Department of Ecology to review and update greenhouse gas emission limits.

In short, both the United States and Washington have made firm and clear commitments to address the causes of climate change and have committed to promote alternatives to projects that generate greenhouse gas emissions and mitigate those that cannot be avoided. The proposal to construct two crude oil shipping terminals with massive direct and indirect greenhouse gas emissions needs to be evaluated in light of those statutory and regulatory commitments.

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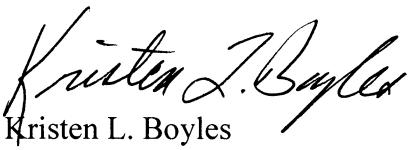
[54] The laws and executive orders are *available at* www.ecy.wa.gov/climatechange/laws.htm.

There is a growing level of public interest in this process; the harmful impacts caused by the proposed crude oil shipping terminal in Grays Harbor will occur at the local, regional, and global scale; our state laws emphasize a thorough, up-front review of all the environmental effects and risks of proposed actions. Because of the devastating harms and risks posed by these projects, the Quinault Indian Nation opposes any permitting of the Westway and Imperium proposals. Thank you for your consideration of these scoping comments and the supporting materials on the enclosed CD.

Sincerely,



Kristen L. Boyles
Matthew R. Baca
Earthjustice
705 Second Avenue, Suite 203
Seattle WA 98104
(206) 343-7340 | Phone
(206) 343-1526 | Fax
kboyles@earthjustice.org
mbaca@earthjustice.org

Attorneys for the Quinault Indian Nation