



EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES  
NORTHWEST ROCKY MOUNTAIN WASHINGTON, DC INTERNATIONAL

Tesoro Savage CBR  
Scoping Comment  
#30946

Docket EF-131590

December 17, 2013

*Via U.S. Mail and Email*

RECEIVED

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ENERGY FACILITY SITE  
EVALUATION COUNCIL

Re: Scoping Comments on Proposed Tesoro-Savage Vancouver Energy Distribution  
Terminal: Application No. 2013-01; Docket No. EF-131590

Dear Mr. Posner:

On October 1, 2013, the Energy Facility Site Evaluation Council ("EFSEC") 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 Tesoro-Savage Vancouver Energy Distribution Terminal. The following scoping comments are submitted on behalf of Columbia Riverkeeper, Friends of Columbia Gorge, Forest Ethics, Spokane Riverkeeper, Sierra Club, Washington Environmental Council, and Climate Solutions to help EFSEC identify issues that must be addressed during the environmental review process.

The commenters are all non-profit organizations dedicated to (1) protecting the environment and natural resources of Washington State and the Pacific Northwest region; (2) ensuring that all citizens of Washington and the Pacific Northwest have clean and healthy air, water, and communities; (3) seeking positive solutions to the challenge of global climate change caused by combustion of fossil fuels; and (4) working across the region to stop the increase in shipments of crude oil through the Pacific Northwest, as well as ensuring that regulations concerning oil transport, oil spill prevention, and oil spill clean-up are as strong as possible. These joint scoping comments supplement any individual comment letters submitted by each signatory group. We appreciate the opportunity to provide these comments and supporting materials, included on CD submitted with this letter.

EFSEC itself has not previously reviewed a proposed crude-by-rail project, but the environmental review path for similar projects is not completely new to Washington. As you no doubt are aware, the U.S. Army Corps of Engineers, Washington State Department of Ecology, and two Washington State counties have initiated environmental reviews for two coal export

terminals proposals in Whatcom and Cowlitz Counties. The Ecology scoping decision for the Whatcom County proposal (Gateway Pacific Terminal at Cherry Point) sets the appropriate requirements for review of environmental impacts, including indirect effects of projects that are of major concern to the public like increase in rail traffic, vessel traffic, additional mining, and greenhouse gas emissions of downstream combustion of exported coal. EFSEC should review a similar scope of impacts for this crude oil shipping terminal, including the same or similar indirect effects of (1) increases in rail traffic across the region, (2) increases in vessel traffic in and out of the Columbia River, (3) increased crude oil spill risk from rail transport, terminal storage, and river/marine transport, (4) additional crude oil extraction in North Dakota and the Alberta tar sands, and (5) greenhouse gas emissions of the transport of the crude oil, as well as the life-cycle impacts on the refining and ultimate combustion of the oil.

Like many citizens in the Northwest and nationally, we are deeply concerned about a decision that will authorize the construction of a huge crude oil shipping terminal on the banks of the Columbia River, one which would allow shipment of an estimated 360,000 barrels of crude oil per day. Either alone or combined with other announced or pending proposals to build additional major crude oil and coal export facilities in Washington and Oregon, the decision to authorize construction at Vancouver will undercut Washington State's considerable efforts to combat climate change and promote sustainable alternatives.

On October 28, 2013, Washington Governor Jay Inslee joined with Oregon Governor John Kitzhaber, California Governor Jerry Brown, and British Columbia Premier Cristy Clark in signing the Pacific Coast Action Plan on Climate and Energy. 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. The Tesoro-Savage project will hurt Washington's ability to meet all these goals.

In these scoping comments, we raise specific issues and impacts that we feel EFSEC must consider. EFSEC may be titled as a "facility site" agency, but its duties under SEPA (and RCW 80.50) are much broader than the on-the-ground footprint of this proposed facility. We stress our concern about the geographic scope of the environmental review, and EFSEC's addition of a public scoping hearing in Spokane, Washington speaks well for the agency's understanding of the true scope of impacts here. While this project's shipping facility might be physically located at the Port of Vancouver, the area of impact is much greater. On the terrestrial side, the rail impacts, including rail traffic and diesel emissions, stem from drill sites in North Dakota or Alberta, Canada through communities in Montana, Idaho, and Washington. On the marine side, impacts from crude oil shipping, including ocean-going vessel traffic and emissions, risks of collisions, and impacts to near-shore environments, extend from the dock at Vancouver 106 miles to the mouth of the Columbia River and then to the final, undisclosed destinations across open ocean.

Within that geographic scope, particular issues should be addressed, including crude oil spill risks and impacts along the rail route, at the facility, in the Columbia River, and in the Pacific Ocean; increased rail and vessel traffic and necessary coordination; impacts to streams, wetlands, salmon, and fishing areas; air quality and respiratory impacts; rail tank car safety; impacts of the terminal on local businesses and proposed developments; types of crude oil shipped and their unique properties for health risks, spill clean-up, and climate impacts; impacts on historic and cultural resources; particular impacts to the Columbia River Gorge National Scenic Area; and global warming impacts from transportation, refining, and combustion of the oil.

This project, by itself or in combination with other proposed crude oil and coal shipping facilities, will cause significant, harmful impacts to the air, water, marine environment, fish and wildlife, economics, public health, culture, and communities across our region. It will further harm global climate change and Washington State's leadership role in addressing causes of climate change. In our view, full evaluation of all direct, indirect, and cumulative impacts of Tesoro-Savage is the first step toward a reasoned decision to ultimately reject this project proposal.

## I. BACKGROUND ON THE TESORO-SAVAGE VANCOUVER PROPOSAL.

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 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 Tesoro-Savage—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 can come from domestic or Canadian oil fields, leading to concern that more Alberta tar sands crude will be traveling by rail and tanker.

Tesoro-Savage Vancouver is the third officially proposed crude-by-rail terminal in Washington State. The Tesoro-Savage proposal would accept crude oil shipped by rail to the Port of Vancouver, Washington, where it would be stored, then loaded onto ships or barges. The oil will come by train from North Dakota and Alberta, Canada. Tesoro-Savage proposes six new storage tanks, each with the capacity to store 380,000 barrels of crude oil. Tesoro-Savage will add two rail lines to the Port's existing loops in order to be able to unload an average of four unit trains of crude per day. The project plans to receive up to 360,000 barrels per day (11,340,000 gallons) at its facility. The project would add 730 ship transits in and out of the Columbia River annually.

Because the current dock at the Port of Vancouver site requires seismic retrofitting, a U.S. Army Corps of Engineers permit for that work will be required. The federal permit will trigger consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service under the Endangered Species Act. The Army Corps must also review environmental impacts and project alternatives under the National Environmental Policy Act; the Army Corps must also consult with affected Native American Tribes pursuant to the National Historic Preservation Act. EFSEC should coordinate its SEPA analysis with these federal environmental and endangered species reviews to ensure the use of the best available science.

## 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, EFSEC 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 federal National Environmental Policy Act’s (“NEPA”) <sup>1</sup> definition stresses that they 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

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<sup>1</sup> 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).

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.

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 problem); 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”).<sup>2</sup> 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.<sup>3</sup> 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.

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<sup>2</sup> Available at <http://www.ecy.wa.gov/pubs/0801025.pdf>.

<sup>3</sup> Available at [http://www.ecy.wa.gov/climatechange/2008CATdocs/IWG/sepa/103008\\_sepaiwg\\_report.pdf](http://www.ecy.wa.gov/climatechange/2008CATdocs/IWG/sepa/103008_sepaiwg_report.pdf).

Ecology first issued draft SEPA guidance for considering greenhouse gas emissions.<sup>4</sup> That Draft Guidance confirms that SEPA is a crucial tool in helping the state and political 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<sub>2</sub> 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.”<sup>5</sup> 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

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<sup>4</sup> Available at <http://www.ecy.wa.gov/climatechange/sepa.htm>.

<sup>5</sup> Available at <http://www.ecy.wa.gov/climatechange/sepa.htm>.

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 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 were 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 of transporting these huge volumes of oil. Fully loaded tankers use tons of fuel per trip, generating both significant CO<sub>2</sub> 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 TESORO-SAVAGE PROJECT MUST BE CONSIDERED IN THE ENVIRONMENTAL IMPACT STATEMENT.

Crude-by-rail shipping at the proposed Tesoro-Savage project 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 Vancouver will be harmed, and communities and places along the Columbia River will be exposed to greater vessel traffic and risk of endemic or catastrophic crude oil spills. 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, marine health, public investment, and climate change.

**To be clear, we believe the EIS must examine the full direct, indirect, and cumulative impacts of the proposed Tesoro-Savage project from the drilling of the oil in North Dakota and Alberta, Canada, the transport of crude by rail, with associated train derailment and oil spill risks, through several states, hundreds of communities, and hundreds of river crossings and banks, the loading and shipping of crude via large ocean-going vessels, including the vessel traffic, accident, and oil spill risk, to the refining and burning of the oil.**

Below we briefly describe the impacts in each category and reference specific documents, reports, and studies that EFSEC should consider as it conducts its analysis. A non-exhaustive collection of documents and reports are included in a CD of materials accompanying this scoping letter for inclusion in the administrative record.

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,<sup>6</sup> and crude has certain properties that make it uniquely dangerous. First, it is a liquid, meaning that it can migrate away from the site of an accident or other release and travel into communities, down waterways, or into groundwater. Crude oil is also generally less flammable than other hazardous liquids (like ethanol and gasoline), meaning that it is more likely to migrate some distance before reaching an ignition source and catching fire.<sup>7</sup>

Second, unlike other liquids transported by rail, unrefined crude oil contains a wide range of contaminants, including sulfur and arsenic; toxic metals like mercury, nickel, and vanadium; and organic compounds like phenols, ketones, and carboxylic acids.<sup>8</sup> Hydraulic fracturing, or “fracking” contributes an additional suite of contaminants, including hydrochloric acid and in some cases hydrogen sulfide.<sup>9</sup> 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.<sup>10</sup>

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:

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<sup>6</sup> 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 **Error! Main Document Only**.C.F.R. § 171.8.

<sup>7</sup> *See* Exh. 1, BP West Coast Products LLC, “Material Safety Data Sheet – Crude Oil,” May 13, 2002. (flash point of **Error! Main Document Only**.20° - 90° F).

<sup>8</sup> *See* Exh. 2, EPA, “Screening-Level Hazard Characterization, Crude Oil Category,” Mar. 2011.

<sup>9</sup> **Error! Main Document Only**.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* **Error! Main Document Only**. Exh. 3, Abrams, L., “Fracking chemicals may be making oil more dangerous,” Aug. 13, 2013.

<sup>10</sup> **Error! Main Document Only**.*See* Exh. 4, Herrmann, T., FRA, Letter to Jack Gerard, American Petroleum Institute, July 29, 2013 at 4.

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.<sup>11</sup>

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.

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

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<sup>11</sup> Exh. 5, **Error! Main Document Only.** *Hearings Before the Committee on Energy and Natural Resources, U. S. Senate*, July 16, 2013 (Statement of EIA Administrator Sieminski at 2).

approximately 7.1 million barrels per day, so the rail share is around 11 percent—up from a negligible percentage a few years ago.<sup>12</sup>

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.<sup>13</sup>

As shown in the data from AAR,<sup>14</sup> crude-by-rail volumes increased rapidly from 2009 into the second quarter of 2013, then dipped for several months as a result of crude pricing that encouraged a shift to pipeline transport. Later in 2013, pricing was again favorable for rail and crude production continues to increase, such that crude-by-rail volumes have rebounded.<sup>15</sup>

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

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<sup>12</sup> Exh. 6, American Association of Railroads, “Moving Crude Petroleum by Rail,” May 2013, at 3-5.

<sup>13</sup> See North Dakota Pipeline Authority [http://northdakotapipelines.com/directors-cut/Monthly Updates for April 2013-November 2013 \(February 2013-September 2013 data\)](http://northdakotapipelines.com/directors-cut/Monthly%20Updates%20for%20April%202013-November%202013%20(Feb%202013-Sept%202013%20data)); Exh. 8, “How oil is transported from North Dakota’s Williston Basin,” The Globe and Mail, Dec. 2, 2013.

<sup>14</sup> 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.

<sup>15</sup> 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.

further 66 crude oil unloading terminals have been built or are under construction.<sup>16</sup>

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

For the Tesoro-Savage project, the rail lines that will bring oil into the Port run through the city of Vancouver east to west along the Columbia River and north to south along the western boundary of the city. 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. In fact, the local International Longshoremen's Union voted to oppose the Tesoro-Savage project because it believes the project poses too great a threat to other commercial river traffic.

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 number of incidents" involving crude oil transportation by rail are as follows:

2009:	0
2010:	9
2011:	34
2012:	86
2013:	85 (partial) <sup>17</sup>

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

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

<sup>17</sup> Data derived from PHMSA incident reports—**Error! Main Document Only**.<http://www.phmsa.dot.gov/hazmat/library/data-stats/incidents>.

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, derailed and dumping 1.6 million gallons of its contents, which caught fire and incinerated dozens of buildings. Forty-seven people were killed.<sup>18</sup>

Information regarding the Lac-Mégantic accident is provided in Exh. 14, “Analysis of the Potential Costs of Accidents/Spills Related to Crude by Rail.”<sup>19</sup> 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.

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.

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).

### *Alabama*

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.<sup>20</sup> No injuries resulted from the accident, but a similar accident in a more populated location would certainly have caused serious risk to public safety.

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<sup>18</sup> 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.

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

<sup>20</sup> Exh. 15, Karlamangla, Soumya, “Train in Alabama oil spill was carrying 2.7 million gallons of crude.” Los Angeles Times, Nov. 9, 2013.

*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”<sup>21</sup> 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 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 goal 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.”<sup>22</sup> Private sector and community preparedness can’t occur if the

<sup>21</sup> Implementing Recommendations of the 9/11 Commission Act of 2007, Pub. L. 110-53; 121 Stat. 266.

<sup>22</sup> [http://community.fema.gov/gf2.ti/f/280514/8233733.1/PDF/-/Presidential\\_Proclamation\\_National\\_Preparedness\\_Month\\_2013.pdf](http://community.fema.gov/gf2.ti/f/280514/8233733.1/PDF/-/Presidential_Proclamation_National_Preparedness_Month_2013.pdf).

federal 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 299,052 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 head 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.”



## 2. *Ships*

The significant increase in barge traffic also increases the risk of barge groundings and spills in the Columbia River. These risks are not theoretical. For example, in 2009 a barge carrying a million gallons of gasoline ran aground in the Columbia River near the City of Hood River. An investigative report by the *Oregonian* uncovered U.S. Coast Guard documents describing a “great deal of confusion” over who was in charge, with agencies responsible for containing a fuel spill left out of the loop for hours after the accident.<sup>23</sup> The Corps must consider the potential adverse impacts of significantly increasing barge traffic on the dynamic Columbia River, and the increased potential for groundings and spills associated with the increased volume of barge traffic. *See generally* Exh. 13, Oil Spills in Washington State (1997).

Similarly, EFSEC must evaluate the increased risk of direct conflicts with existing barge traffic on the Columbia, including the increased risk of catastrophic accidents. On the Mississippi River, which experiences a higher volume of barge traffic than the Columbia, 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.<sup>24</sup> 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 and oil spewed less than 10,000 gallons of Louisiana sweet crude oil into the water.<sup>25</sup> These are just several examples of accidents involving barge traffic.

Notably, there has been no comprehensive vessel traffic risk analysis done for the Columbia River as has been undertaken for Puget Sound. *See* Exh. 80, Puget Sound Vessel Traffic Risk Assessment, Final Draft. Given the significant increase in river traffic from the Tesoro-Savage project, EFSEC must undertake a similar analysis for the Columbia before granting any permits. EFSEC must assess the increased risk of tankers and barge accidents and

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<sup>23</sup> Exh. 17, *New Dawn fuel barge ran aground in the Columbia River, response was confusion, report says*, *Oregonian* (June 20, 2010).

<sup>24</sup> Exh. 18, *River traffic resumes after barge accident but threats remain*, *Louisiana Weekly* (June 4, 2011).

<sup>25</sup> Exh. 19, *Barge collision in Mississippi River causes oil spill*, *New York Daily News* (Feb. 18, 2012).

potential threats associated with these accidents, including oil spills and vessels/barges sinking, as part of its analysis. This analysis should use the most recent vessel tracking data for the Columbia River system 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, sturgeon, and other species that use the proposed project area. The EIS should also analyze where fueling of vessels will occur. See Exh. 89, 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.<sup>26</sup> 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.<sup>27</sup> 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 the Columbia River, its fish populations, and the aquatic ecosystem.<sup>28</sup> EFSEC must review the environmental impacts of different types of crude oil that may be shipped through the Tesoro-Savage facility.

It would not be sufficient for EFSEC 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

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<sup>26</sup> See generally Exh. 20, American Petroleum Institute, *High Production Volume (HPV) Chemical Challenge Program*, Jan. 14, 2011.

<sup>27</sup> 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.

<sup>28</sup> See generally Exh. 23, The Pembina Institute, *Pipelines and Salmon in Northern British Columbia: Potential Impacts*, Oct. 2009.

equipment from response actions for conventional oil spills. These spills can also have different impacts than spills of conventional oil. We recommend that these differences be more fully addressed in the Final EIS, especially as they relate to the fate and transport of the oil and the remediation that will be required.... We recommend that the Final EIS more clearly acknowledge that in the event of a spill to water, it is possible that large portions of dilbit will sink and that submerged oil significantly changes spill response and impacts.<sup>29</sup>

In fact, as of May 2013, there are 180,000 gallons of oil remaining in Kalamazoo River three years after the spill.<sup>30</sup> 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 both significant CO<sub>2</sub> emissions as a variety of toxic and harmful air emissions. Relatedly, the EIS must consider idling ship emissions of cargo vessels at the dock and in transit through the lower Columbia River; such emissions have been a significant source of toxic air pollution in other ports and, given the scale of this project, are of concern here.<sup>31</sup>

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<sup>29</sup> Exh. 24, EPA Letter of April 22, 2013 on Keystone XL DSEIS at 3-4.

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

<sup>31</sup> 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).

1. *The Tesoro-Savage project will cause harmful air impacts.*

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 Vancouver, 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 PM2.5 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 NEPA 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. In addition, 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.<sup>32</sup> Realistic assumptions of these factors need to be included in the analysis. Modeling must take these inputs into account to be realistic.

2. *The Tesoro-Savage project 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

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<sup>32</sup> 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. The agencies 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, which is much smaller, showed nitrogen deposition into the Columbia River many times above the ecological screening level of 5 kg/ha/yr. *See* Exh. 64 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 dredging in the Columbia River to construct the project, but also the cumulative effects of maintenance dredging every few years for the foreseeable future, as well as the cumulative effects of other dredging activities in the lower Columbia. *See* Exh. 67 (Longview Fibre comments).

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 Tesoro-Savage Project.

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). The City of Vancouver submitted scoping comments on the proposed Millennium coal export terminal, Exh. 68, that stressed public safety concerns including blocked road crossings, delay of emergency responders, and train horn noise.

Threats from frequent long trains at rail crossings all along the route from North Dakota or Alberta, Canada drill and near the project area 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. 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).

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. EFSEC 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.

EFSEC 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.”<sup>33</sup> The EIS should analyze the environmental impacts of the project in the event of an earthquake or cascading earthquake. This analysis should account for varying seismic events.<sup>34</sup> *See* Exh. 89 at 3-4.

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<sup>33</sup> Petersen, M.D., Cramer, C.H., and Frankel, A.D. 2002. 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.

<sup>34</sup> *See* Cascade Subduction Zone Earthquakes (2013), [http://www.dnr.wa.gov/publications/ger\\_ic116\\_csz\\_scenario\\_update.pdf](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](http://www.oregonlive.com/environment/index.ssf/2012/08/major_earthquake_in_oregon_cou.html).

Site liquefaction is another important area of review, as Tesoro-Savage concedes in its application at 2-192 to 2-194. Liquefaction is a major threat to all Columbia River ports. In 2012, the State of Oregon released a critical energy infrastructure report that highlights the serious problem the state will have in the event of an earthquake because so much of its infrastructure is located on riverfront properties subject to liquefaction. *See* Exh. 90, Earthquake Risk Study for Oregon's Critical Energy Infrastructure Hub; Exh. 91, Washington Department of Natural Resources, Clark County Liquefaction Map (2004).

D. The Overall Economic Impacts of the Tesoro-Savage Project 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 Vancouver itself, as well as the City of Vancouver. 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.

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 shipping 360,000 barrels of crude oil a day at full build out from the Tesoro-Savage project 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.<sup>35</sup> Based on WSDOT's figures, rail tonnage associated with just the Tesoro-Savage project 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

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<sup>35</sup> WSDOT, Washington State Rail Plan Public Workshop Presentation (Slide 21), Nov. 2012.

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* study (Exh. 39). 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.<sup>36</sup> 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.<sup>37</sup> 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

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<sup>36</sup> 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.

<sup>37</sup> 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 Tesoro-Savage terminal.

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 on the Columbia River. 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.*

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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.<sup>38</sup> A study conducted by the Eastman Company (property valuation experts and consultants) 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

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<sup>38</sup> 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).

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 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 Vancouver, 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 other Port of Vancouver business

Other business opportunities at the Port of Vancouver are likely to be harmed by the Tesoro-Savage project. For example, the Port of Vancouver recently approved three agreements with BHP Billiton to develop a potash export facility at the Port's Terminal 5.<sup>39</sup> At full build-out, BHP plans to move 8 million metric tons of potash through the port annually. According to the Port, construction is expected to begin in 2014, "with operations commencing as early as 2017."<sup>40</sup> The potash will be transported through the city by rail for delivery to the Port.

In October 2009, the City of Vancouver approved the master plan for the Columbia Waterfront Development project which calls for the development of 3,300 residential units and 1 million square feet of commercial space on 32 acres of riverfront property. This site is bordered by the BNSF railroad tracks that would be used to transport the oil to the terminal. On November 4, 2013 the Vancouver City Council approved the Waterfront Park Plan that calls for a 7.3 acre park and trail within the Waterfront Development project. The City of Vancouver has invested \$45 million in transportation improvements to serve the Waterfront Development project. The EIS needs to identify the impacts of the Tesoro Savage project and other reasonably foreseeable projects on the Waterfront Development project.

c. Impacts on economies dependent on the marine environment

There are likely to be significant adverse impacts and major risks posed to the Columbia River 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*:

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<sup>39</sup> See <http://www.portvanusa.com/news-releases/port-commission-signals-confidence-in-bhp-billiton-project/>.

<sup>40</sup> The Columbian, "BHP Signals Commitment to Port of Vancouver Project," Aug. 22, 2013.

*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. 87):

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. 88, Washington State Maritime Cluster Economic Impact Study (Nov. 2013).

All of these economic impacts beg the question whether the overall economic impacts of the project 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 Vancouver and Clark County as part of this EIS. Additionally, the EIS should look at the overall economic impacts of the Tesoro-Savage project on a region-wide basis, particularly in light of the cumulative effects with multiple overlapping impacts.

E. The Tesoro-Savage Project 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 Tesoro-Savage project, through the loading and shipping of the oil through the Columbia estuary, 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. EFSEC 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 the Tesoro-Savage project will harm the ecology of the lower Columbia River.*

Risks to aquatic health in the important Columbia estuary—including potential harm to important Columbia River salmon populations, threatened salmon species, and endangered killer whales—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.

Construction and existence of the dock and pier will impact salmon, lamprey, and other marine life. See Exh. 47, *Minimizing Effects of Over-Water Docks on Federally Listed Fish Stocks in McNary Reservoir: A Literature Review for Criteria*, prepared by the U.S. Geological Survey for the U.S. Army Corps of Engineers (2010) (prepared in support of criteria for siting new docks in the McNary Pool of the Columbia River, this report recommends, among other things: (1) pilings shall not exceed 5 inches in diameter, (2) each over-water structure shall utilize no more than 6 piles for the entire project, and (3) nothing shall be placed on the over-water structure that will reduce natural light penetration through the structure); Exh. 48, *Overwater Structures and Non-structural Piling White Paper*, prepared by Jones & Stokes Associates for the Washington Department of Fish and Wildlife (2006) (summarizes scientific literature documenting the direct, indirect, and cumulative impacts of overwater structures, including industrial docks, to ESA-listed salmonids and other aquatic life); Exh. 49, *Over-water Structures: Freshwater Issues*, prepared by Herrera Environmental Consultants for the Washington Departments of Fish and Wildlife, Ecology, and Transportation (2001) (comprehensive overview of scientific literature, current through late-2000, describing the impact of pilings and docks on aquatic life, including increased predation, decreased habitat quality, and degraded water quality).

The design, construction, and existence of the wharf and trestle will have shading impacts, which in turn affects estuary ecology. For example, juvenile salmon, which use the lower river for migration and rearing, will also be disrupted by the dock system. During terminal operations, noise and artificial light will harm all the fish that use the estuary environment, and vessel berthing will disrupt and harm salmon rearing and migration behavior. In a letter to the Army Corps, the National Marine Fisheries Service expressed significant concern about the

impacts of the much smaller Morrow coal project on ESA-listed species. Exh. 50. Notably, it rejected the Corps efforts to look narrowly at the environmental impacts of the project, demanding additional information before consultation could proceed.

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. As we have previously explained with respect to the Millennium coal export terminal proposal, 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. *See* Exh. 63 (Construction Stormwater Comment 11-30).

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. 64 at 24-26. The EIS should include a similar analysis for Tesoro-Savage.

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.

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2. *Increased shipping traffic caused by the Tesoro-Savage project will harm the lower Columbia River and its already at-risk aquatic species.*

Granting the requested permit would dramatically increase the amount of large-vessel traffic in the Columbia estuary, a sensitive and critically important ecosystem. A study performed for a smaller proposed coal export proposal found it would itself cause an increase of around 7% in vessel traffic on the lower Columbia River. Exh. 51. The proposed action is an oil port many times that size. Each of these ships must navigate the Columbia bar, known to captains as “the graveyard of the Pacific” for its dangers.

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 coal terminals on the Columbia River.

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, endangered southern resident killer whales (which rely on Columbia salmon as a food source), 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.

Federal and state agencies, along with Columbia River Treaty Tribes, have spent decades trying to protect and recover salmon in the Columbia River that are threatened with extinction due to hydropower operations and habitat loss. Indeed, the federal government’s chief response to mortality to salmon caused by dams is to improve habitat, and especially in the Columbia River estuary. Agreements with the states call for spending tens of millions of dollars on estuary habitat restoration to mitigate for hydropower impacts. *See* Exh. 52, Estuary Habitat MOA. These efforts will be undermined by the extensive pollution, habitat loss, and risk of accident that are associated with this project.

It is particularly important for the agencies to evaluate increases in vessel traffic in the context of the cumulative impacts from multiple current and reasonably foreseeable projects—mostly related to other oil shipping proposals, LNG, and coal—in the lower Columbia River. For example, one recent project at Port Westward proposes to dramatically expand vessel traffic downstream in the Columbia for carrying crude oil. Exh. 65. Another project under review involves substantial increases in LNG vessel traffic. Exh. 66. EFSEC must also analyze the increased rates of juvenile salmonid wake stranding caused by Tesoro-Savage’s increase in shipping traffic. As the Columbia River Inter-Tribal Fish Commission wrote with respect to the Millennium coal proposal:

The ships of the Panamax category, proposed for this project, will be massive for the Columbia River. Ships of this size and draft are unique for this area. Studies have shown that large ships cause huge disturbances in the system, including causing wake stranding of outmigrating smolts, bank erosion and disturbance of nearshore habitats. Adding this project to the river will increase ship traffic dramatically and will have significant negative effects on listed salmonids.

Exh. 69 at 2.

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 PAHs rapidly 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 Columbia River would have devastating impacts to fish and wildlife. Exh. 86, Oiled Wildlife; Exh. 81, Altered growth and related physiological responses in juvenile chinook salmon from dietary exposure to polycyclic aromatic hydrocarbons; Exh. 82, Effects of Diesel on Survival, Growth, and Gene Expression in Rainbow Trout Fry; Exh. 83, 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. 70, NMFS Comments on Millennium coal (listing marine species at risk and requesting information for broad Endangered Species Act review).

Tesoro-Savage’s location on the Columbia River makes any oil spill even more devastating. The Columbia River estuary is “a valuable functioning ecosystem that has been identified by scientists and resource managers as a vital link in the lifecycle of most anadromous fish in the Basin. All anadromous species, including those listed under the Endangered Species Act, pass through or rear in the estuary. The fact that habitat around the Port [of Longview] is already degraded makes it imperative that any new development cause as little injury as possible.” Exh. 69, CRITFC comments on Millennium coal.

Any potential spill discussion must include the Washington State coastline. The bar at the mouth of the Columbia River is considered one of the most dangerous crossings out of harbor in the world. 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 river mouth and the Washington State coastline both north and south of the event dependent on wind, waves, and currents. 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 river, at sea, and on shorelands.



F. Columbia River Gorge National Scenic Area

Trains serving the Tesoro-Savage project will pass through the Columbia River Gorge National Scenic Area. The Gorge has long been considered a special area. The Gorge has been occupied by Native American tribes for more than 10,000 years, and the scenic, natural, and cultural resources of the Gorge remain critical to sovereign Native American governments. In 1915, the U.S. Forest Service established Eagle Creek as the first Forest Service Recreation Area in the nation. The following year, the Gorge was proposed as a National Park. In 1986, Congress recognized the national significance of the Columbia River Gorge and created the Columbia River Gorge National Scenic Area to protect and enhance the aesthetic, biological, ecological, historic, and recreational values in the Gorge. *See* Columbia River Gorge National Scenic Area Act (“Scenic Area Act”), 16 U.S.C. §§ 544–544p. The Gorge, under the protection of the Scenic Area Act, offers a stunning array of sensitive resources, including scenic and historic views along the Columbia River, site of the final portion of Lewis and Clark’s journey across the West. Today the Gorge contains hundreds of miles of hiking and bike trails through locales as diverse as misty river canyons and arid grassland plateaus. The Gorge also contains dozens of lakes, parks, campgrounds, and other recreational areas. Some of the most heavily used recreation sites in Washington and Oregon are in the Gorge, often in close proximity to the Columbia River and the likely crude oil transportation route.

The National Scenic Area is also a working landscape, sustained economically by agricultural and forest lands and 13 designated urban areas. The urban areas in the National Scenic Area are generally located along the Columbia River and straddle the highway and railroad transportation corridors that run the length of the Gorge in both Washington and Oregon. Increased rail traffic would adversely affect these economic uses by increasing wait times and railroad crossings, increasing noise, generating demand for additional sidings, and worst of all, releasing plumes of coal debris in windy locations.

As discussed above, diesel emissions will harm air quality, and the Gorge in particular will suffer from increased air pollution. Indeed, at the present rate of rail traffic, the Gorge already has smog and visibility impairment up to 95% of the time. The additional train emissions, as well as Tesoro-Savage’s other indirect and cumulative effects on the scenic, natural, cultural and recreation resources of the Columbia River Gorge National Scenic Area must be included in the scope of review.

The EIS should pay particular attention to harmful impacts to the Gorge. Rail lines in the Gorge are currently near capacity. This proposal and other coal export proposals would result in rail infrastructure expansion into sensitive areas in the Gorge, including wetlands, fish and wildlife habitat, rare plant habitat, and cultural resource sites. SEPA requires that the EIS address impacts to sensitive or special areas, such as the Columbia River Gorge, and the degree that the proposal would conflict with state, local, and federal protections for the environment,

such as the Columbia River Gorge National Scenic Area Act. WAC 197-11-330(3)(e)(i), (iii). State law also requires the Governor and all state agencies to carry out their respective functions in accordance with the Columbia River Gorge National Scenic Area Act. RCW 43.97.025. EFSEC and the Governor are required to review projects for their impacts on the Columbia River Gorge and to take actions to avoid those impacts.

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 Tesoro-Savage project, the EIS must consider the option of not constructing the oil shipping facility 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 Tesoro-Savage 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.”).

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).

Tesoro-Savage’s proposal shares 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. The Washington State Department of Ecology, commenting on the Port of Morrow proposal, highlighted the need to review cumulative impacts from all similar proposals, including, at a minimum:

- Increased vessel traffic on the Columbia River, including navigational and maritime safety concerns
- Protection of water quality, including increased risk of spills in the Columbia River
- Emissions of other air pollutants, including diesel particulate and greenhouse gases
- Increased rail traffic, including railroad capacity, increased noise, and delay times for emergency vehicles at rail crossings<sup>41</sup>

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

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<sup>41</sup> Ecology’s Comments on Coyote Island Terminals (May 7, 2012) at 3, *available at* <http://www.coaltrainfacts.org/ecology-requests-cumulative-eis>.

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).<sup>42</sup>

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.<sup>43</sup> The Affiliated Tribes of Northwest Indians called for full environmental review and government-to-government consultation with Indian tribes throughout the region.<sup>44</sup> 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 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

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<sup>42</sup> 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>.

<sup>43</sup> *U.S. v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974).

<sup>44</sup> Available at [http://www.atnitribes.org/sites/default/files/res\\_12\\_53\\_with%20attachment.pdf](http://www.atnitribes.org/sites/default/files/res_12_53_with%20attachment.pdf).

this impact, it needs to be considered as a whole.”<sup>45</sup> The National Park Service similarly called for a cumulative effects EIS.<sup>46</sup>

EFSEC 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, the Bonneville Power Administration’s dam operations, water withdrawals authorized by the U.S. Bureau of Reclamation and logging and grazing approved and permitted by the U.S. Forest Service and Bureau of Land Management, and shipping traffic from existing Columbia River ports. EFSEC must also analyze cumulative impacts from actions carried out by local and private entities.

## VI. TRIBAL GOVERNMENT SOVEREIGNTY MUST BE RESPECTED.

This proposed oil terminal 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. The Tesoro-Savage Project would be built within historic and treaty-protected fishing areas of the Yakama, Warm Springs, Umatilla, and Nez Perce tribes. Under federal court precedent, the tribes are “co-managers” of these resources along with the state. *See U.S. v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974).

These tribes have spoken out against permitting of coal terminals on the lower Columbia. *See* Exh. 53 through 59. 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. 55. 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. 56. 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. 57. CRITFC noted that “the proposed project area is currently used for fishing by tribal members exercising

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<sup>45</sup> Available at <http://www.eisgatewaypacificwa.gov/resources/project-library>.

<sup>46</sup> Available at <http://www.eisgatewaypacificwa.gov/resources/project-library>.

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. 53. The concerns of these Indian nations and tribal members must be taken into account and apply with equal force to Tesoro-Savage 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. 60. 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. 61. 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. 71.

Similarly, many tribes have expressed their concern and opposition to the Millennium coal export terminal, which like Tesoro-Savage, is proposed along the banks of the Columbia River. *See* Exhs. 72-79, 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. 74 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 Tesoro-Savage project.

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. 62. That project was of dramatically smaller scale than the Tesoro-Savage project. 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.”<sup>47</sup> Recognizing that these types of impacts might disproportionately affect different communities or groups of people, President Clinton issued Executive Order 12898 in 1994,<sup>48</sup> directing each federal agency to, among other things:

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<sup>47</sup> 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>.

<sup>48</sup> “Federal actions to address environmental justice in minority populations and low-income populations,” 59 Fed. Reg. 7629 (Executive Order 12898; February 11, 1994).

- “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<sup>49</sup> 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 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.

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<sup>49</sup> 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>.



The EIS must examine the environmental justice impacts, including increased noise, flowing from this project. Several low-income or minority communities, including the nearby Fruit Valley neighborhood, stand to be disproportionately impacted by the oil shipping terminal, the rail transportation of crude, and its drilling/extraction. As discussed above, traditional tribal lands will be affected by the Tesoro-Savage project. Columbia River tribes will be impacted in their treaty-protected fishing, 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.

Very recently, 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 cause global warming. The fifth IPCC report confirms yet again that climate change is being caused by unrestrained carbon pollution from industrial activities. 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."<sup>50</sup>

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

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<sup>50</sup> Available at [http://www.ipcc.ch/news\\_and\\_events/docs/ar5/press\\_release\\_ar5\\_wgi\\_en.pdf](http://www.ipcc.ch/news_and_events/docs/ar5/press_release_ar5_wgi_en.pdf) (emphasis in original). See also Exh. 84, Global Climate Change Impact in the United States (2009).

of Climate Change on Washington's Economy," which found that the cost of climate impacts would reach \$3.8 billion annually by 2020.<sup>51</sup> 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."<sup>52</sup>

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, Washington State's Strategic Response, H. Adelsman and L. Whitely Binder (eds). Washington Department of Ecology, Olympia, Washington.<sup>53</sup>

In November 2012, Governor Christine Gregoire issued an Executive Order<sup>54</sup> 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

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<sup>51</sup> Available at <http://www.ecy.wa.gov/pubs/0701010.pdf>.

<sup>52</sup> Available at <http://www.ecy.wa.gov/pubs/0901006.pdf>.

<sup>53</sup> 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>.

<sup>54</sup> Available at [http://www.governor.wa.gov/execorders/eo\\_12-07.pdf](http://www.governor.wa.gov/execorders/eo_12-07.pdf).

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.<sup>55</sup> 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. 165, 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<sub>2</sub> 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:

[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

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<sup>55</sup> And major economic impacts. See Exh. 85, *An Overview of Potential Economic Costs to Washington of a Business-As-Usual Approach to Climate Change*, Feb. 17, 2009.

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 Fuel 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.<sup>56</sup> In addition, the citizens of Washington passed I-937, mandating 15 percent of all electricity energy to come from renewable energy and energy efficient sources by 2020.

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

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<sup>56</sup> The laws and executive orders are *available at* [www.ecy.wa.gov/climatechange/laws.htm](http://www.ecy.wa.gov/climatechange/laws.htm).

that generate greenhouse gas emissions and mitigate those that cannot be avoided. The proposal to construct a crude oil shipping terminal with massive direct and indirect greenhouse gas emissions needs to be evaluated in light of those statutory and regulatory commitments.

IX. EFSEC SHOULD ENSURE THAT ITS EIS INFORMS ITS RECOMMENDATION.

Particularly because the Tesoro-Savage crude-by-rail terminal application is one of first impression for the agency, and because the impacts and risks, discussed above, are of grave concern to the health and environment of the people of Washington, EFSEC should ensure that its environmental review is completed prior to any adjudication. In that way, the analysis and alternatives in the EIS can properly guide EFSEC's ultimate recommendation.

Under WAC 463-47, EFSEC's SEPA rules must be applied when preparing an EIS. These rules establish "[p]olicies and procedures for conditioning or denying permits or other approval." WAC 463-47-110. These policies establish standards to justify a decision to "reject or recommend rejection of the application if reasonable mitigation measures are insufficient to mitigate significant adverse environmental impacts and the proposal is inconsistent with the policies" in WAC 463-47-110(1). WAC 463-47-110(2)(b)(ii). In part, the applicable policies state:

- (a) The overriding policy of the council is to avoid or mitigate adverse environmental impacts which may result from the council's decisions.
- (b) The council shall use all practicable means, consistent with other essential considerations of state policy, to improve and coordinate plans, functions, programs, and resources to the end that the state and its citizens may:
  - (i) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
  - (ii) Assure for all people of Washington safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
  - (iii) Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
  - (iv) Preserve important historic, cultural, and natural aspects of our national heritage;
  - (v) Maintain, wherever possible, an environment which supports diversity and variety of individual choice;
  - (vi) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

- (vii) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.
- (c) The council 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.
- (d) The council shall ensure that presently unquantified environmental amenities and values will be given appropriate consideration in decision making along with economic and technical considerations.


WAC 463-47-110(1). In addition, EFSEC's application standards establish numerous performance criteria, including disclosure of likely impacts to the human and natural environment. For example, the rules require that the application disclose impacts to air quality, odor, climate, climate change, and dust. WAC 463-60-312. The regulations specifically require that "[t]he application shall describe impacts caused by greenhouse gases emissions and the mitigation measures proposed." WAC 463-60-312(4). The application requirements also require disclosure of impacts from the "the sources of supply, locations of use, types, amounts, and availability of energy or resources to be used or consumed during construction and operation of the facility." WAC 463-60-342(2).

EFSEC must ensure that the EIS discloses the likely impacts of the proposed crude export facility that are sufficient to review whether the proposal would be consistent with each of EFSEC's policies, application requirements, and construction/operation standards. *See generally* RCW 80.50.010; WAC 463-14-020.

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Thank you for your consideration of these scoping comments and the supporting materials in the enclosed CD. As you are no doubt aware, there is an extraordinary level of public interest in this process; the harmful impacts caused by the proposed crude oil shipping terminal will occur at the local, regional, and global scale; and the state and federal laws emphasize a thorough, up-front review of all the environmental effects of proposed actions. We reiterate our request for an environmental impact statement that fully addresses the direct, indirect, and cumulative impacts of all proposed fossil fuel export projects in the Pacific Northwest. For the Tesoro-Savage project in particular, we look forward to a Draft EIS that addresses the full direct, indirect, and cumulative impacts of the proposed project from the drilling of the oil, the transport of crude oil by rail through several states and hundreds of communities, the loading and shipping of oil via large ocean vessels, to the ultimate refining and burning of the crude oil.

Sincerely,



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On Behalf Of:  
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Friends of Columbia Gorge  
Forest Ethics  
Spokane Riverkeeper  
Sierra Club  
Washington Environmental Council  
Climate Solutions

SCOPING COMMENTS FROM COLUMBIA RIVERKEEPER, FRIENDS OF COLUMBIA GORGE, FOREST ETHICS, SPOKANE RIVERKEEPER, SIERRA CLUB, WASHINGTON ENVIRONMENTAL COUNCIL, AND CLIMATE SOLUTIONS ON PROPOSED TESORO-SAVAGE CRUDE-BY-RAIL SHIPPING TERMINAL (December 17, 2013)

INDEX OF EXHIBITS

Exhibit No.	Title	Date
1	BP West Coast Products LLC, <i>Material Safety Data Sheet—Crude Oil</i> , (flash point of 20° - 90° F).	May 13, 2002
2	U.S. Environmental Protection Agency, <i>Screening-Level Hazard Characterization, Crude Oil Category</i> , Sponsored Chemical, Crude Oil (CASRN 8002-05-9).	March 2011
3	Abrams, L., <i>Fracking chemicals may be making oil more dangerous</i> , <a href="http://Salon.com">Salon.com</a> .	August 13, 2013
4	Letter from Thomas J. Herrmann, Acting Director, Office of Safety Assurance and Compliance, to Jack Gerard, American Petroleum Institute, regarding review of potential safety issues related to the transportation of crude oil by rail, at 4.	July 29, 2013
5	Statement of Adam Sieminski, Administrator, Energy Information Administration, U.S. Department of Energy, before the Committee on Energy and Natural Resources, U.S. Senate, at 2.	July 16, 2013
6	American Association of Railroads, <i>Moving Crude Oil by Rail</i> , at 3-5.	December 2013
7	Region 10 Regional Response Team and Northwest Area Committee, <i>Emerging Risks Task Force Report—2013, Project Overview</i> .	2013
8	The Globe and Mail, <i>How oil is transported from North Dakota's Williston Basin</i> .	December 2, 2013
9	American Association of Railroads, <i>AAR Reports Record Second Quarter Crude-by-Rail Data; Decreased Weekly Rail Traffic</i> .	August 29, 2013



10	American Association of Railroads, <i>AAR Reports October and Weekly Rail Traffic Gains, 3Q Crude Oil Up Year Over Year.</i>	November 7, 2013
11	A Joint Report by Shanese Crosby, Robin Fay, Colin Groark, Ali Kani, and Jeffrey R. Smith, Terry Sullivan, <i>Transporting Alberta's Oil Sands Products: Defining the Issues and Assessing the Risks.</i>	March 17, 2013
12	A Joint Report by Natural Resources Defense Council, National Wildlife Federation, Pipeline Safety Trust, and Sierra Club, <i>Tar Sands Pipelines Safety Risks.</i>	February 2011
13	Washington State Department of Ecology, Publication No. 97-252, <i>Oil Spills in Washington State: A Historical Analysis.</i>	April 1997 Rev. March 2007
14	A Report, <i>Analysis of the Potential Costs of Accidents/Spills Related to Crude by Rail</i> , prepared by Ian Goodman and Brigid Rowan on behalf of Oil Change International, before the Pipeline and Hazardous Materials Safety Administration.	November 8, 2013
15	Article from Los Angeles Times, <i>Train in Alabama oil spill was carrying 2.7 million gallons of crude</i> , by Soumya Karlamangla.	November 9, 2013
16	National Wildlife Federation Report, <i>The True Cost of Coal: The Coal Industry's Threat to Fish and Communities in the Pacific Northwest.</i>	2012
17	Article from The Oregonian, <i>New Dawn fuel barge ran aground in the Columbia River, response was confusion</i> , report says, by Scott Learn.	June 20, 2010
18	Article from The Louisiana Weekly, <i>River traffic resumes after barge accident but threats remain</i> , by Susan Buchanan.	June 4, 2011
19	Article from the New York Daily News, <i>Barge collision in Mississippi River causes oil spill.</i>	February 18, 2012
20	The American Petroleum Institute, Petroleum HPV Testing Group, Category Assessment Document, <i>High Production Volume (HPV) Chemical Challenge Program</i> , submitted to the U.S. Environmental Protection Agency.	January 14, 2011
21	U.S. Fish and Wildlife Service, <i>Effects of Oil Spills on Wildlife and Habitat, Alaska Region.</i>	December 2004

22	Article from Dartmouth Undergraduate Journal of Science, <i>Oil Spills: Severity and Consequences to Our Ecosystem.</i>	March 11, 2012
23	<i>Pipelines and Salmon in Northern British Columbia: Potential Impacts</i> , prepared for the Pembina Institute by David A. Levy, Levy Research Services Ltd.	October 2009
24	Letter from Cynthia Giles, U.S. Environmental Protection Agency, to Jose W. Fernandez and Dr. Kerri-Ann Jones, U.S. Department of State, regarding the Keystone XL Project, at 3-4.	April 22, 2013
25	U.S. Environmental Protection Agency Report, <i>Volume Estimate for Submerged Line 6B Oil in the Kalamazoo River</i> , prepared by Thomas P. Graan, Ph.D., Weston Solutions, Inc., and Ronald B. Zelt, Professional Hydrologist, U.S. Geological Survey.	May 1, 2013
26	Congressional Research Service Report for Congress, <i>Air Pollution and Greenhouse Gas Emissions from Ships</i> , prepared by James E. McCarthy, Specialist in Environmental Policy.	December 23, 2009
27	<i>Air Pollution and Greenhouse Gas Emissions from Ocean-going Ships: Impacts, Mitigation Options and Opportunities for Managing Growth</i> , prepared by Axel Friedrich, Falk Heinen, Fatumata Kamakate, and Drew Kodjak.	undated
28	<i>Protecting American Health from Global Shipping Pollution, Establishing an Emission Control Area in U.S. Waters</i> , by Janea Scott and Hilary Sinnamon.	undated
29	Daniel A. Lashof, et al., Natural Resources Defense Council, <i>Coal in a Changing Climate.</i>	February 2007
30	Parametrix PowerPoint, <i>Coal Train Traffic Impact Study.</i>	November 2012
31	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – City of Bellingham.	June 21, 2012
32	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – Burlington.	August 15, 2011
33	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – City of Edmonds.	May 22, 2012

34	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – City of Edmonds supporting documents.	May 22, 2012
35	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – Marysville.	June 15, 2011
36	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – Mt. Vernon.	September 1, 2011
37	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – City of Seattle.	February 13, 2012
38	Gibson Traffic Consultants, Inc. Memorandum re Cherry Point Coal Export Facility Rail Operations – Stanwood.	August 8, 2011
39	<i>Heavy Traffic Ahead, Rail Impacts of Powder River Basin Coal to Asia by Way of Pacific Northwest Terminals</i> , Report prepared for Western Organization of Resource Councils.	July 2012
40	Washington State Department of Transportation, <i>Washington State 2010-2030 Freight Rail Plan</i> .	December 2009
41	Washington State Transportation Commission, <i>Statewide Rail Capacity and System Needs Study</i> , Final Report.	December 2006
42	Washington State Department of Transportation, <i>Washington State, Amtrak Cascades Mid-Range Plan</i> .	December 2008
43	Valuation Consultation Report prepared by The Eastman Company for Climate Solutions regarding Increased Coal Train Traffic and Real Estate Values.	October 30, 2012
44	Article in Entrepreneur, <i>The effect of freight railroad tracks and train activity on residential property values</i> , by Robert A. Simons and Abdellaziz El Jaouhari.	Summer 2004
45	Michael Futch, <i>Examining the Spatial Distribution of Externalities: Freight Rail Traffic and Home Values in Los Angeles</i> .	November 11, 2011
46	<i>The Impact of the Development of the Gateway Pacific Terminal on the Whatcom County Economy</i> , prepared by Public Financial Management, Inc. for Communitywise Bellingham.	March 6, 2012

47	U.S. Army Corps of Engineers, <i>Minimizing Effects of Over-Water Docks on Federally Listed Fish Stocks in McNary Reservoir: A Literature Review for Criteria</i> , Anadromous Fish Evaluation Program Report 2010-W68SBV91602084.	January 2010
48	<i>Overwater Structures and Non-Structural Piling</i> White Paper, prepared by Jones & Stokes Associates, in association with Anchor Environmental, .L.L.C., for the Washington Department of Fish and Wildlife.	December 2006
49	<i>Over-water Structures: Freshwater Issues</i> White Paper, prepared by Jose Carrasquero, Herrera Environmental Consultants, for the Washington Departments of Fish and Wildlife, Ecology, and Transportation.	June 14, 2001
50	Letter from Michael P. Tehan, Assistant Regional Administrator, NOAA, to Shawn Zinszer, Chief, Regulatory Branch, Corps of Engineers, regarding Request for Additional Information to Initiate Endangered Species Act Section 7 Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Coyote Island Terminals Construction of a New Coal Exportation Dock Facility in the Columbia River (6th field HUC 170701010904), Morrow County, Oregon (Corps No.: NWP-2012-56).	December 27, 2012
51	Letter from Paul Sorensen, Principal, BST Associates, to Mark Larsen, Anchor QEA, regarding the conclusions of their analysis and attaching <i>Impact of the Proposed Terminal at Chinook Ventures on the Capacity of the Columbia River System</i> .	September 30, 2010
52	Estuary Habitat MOA, Memorandum of Agreement on Columbia River Estuary Habitat Actions Between the State of Washington, the Bonneville Power Administration, the U.S. Army Corps of Engineers, and the U.S. Bureau of Reclamation.	September 2009
53	Affiliated Tribes of Northwest Indians Resolution No. 12-53.	Sept. 24-27, 2012
54	Press Release: <i>Northwest Tribes say no short-cuts for coal export proposals</i> , distributed in conjunction with the Coast Salish Gathering and Association of Washington Tribes.	September 27, 2012
55	Confederated Tribes and Bands of the Yakama Nation comments on Permit Application NWP-2012-56.	May 3, 2012

56	Nez Perce Tribal Executive Committee comments on Permit Application NWP-2012-56.	May 3, 2012
57	Columbia River Inter-Tribal Fish Commission comments on Permit Application NWP-2012-56.	May 7, 2012
58	Region 10 Regional Tribal Operations Committee comments on Permit Application NWP-2012-56.	May 15, 2012
59	Confederated Tribes of the Umatilla Indian Reservation comments on Permit Application NWP-2012-56.	March 28, 2012
60	Letter from Chris Jenkins, Cultural Resources Program Manager, Department of the Army, to Allyson Brooks, Ph.D., State Historic Preservation Officer, Department of Archaeology and Historic Preservation, regarding NWS-2008-0260 Gateway Pacific Terminal Section 106 Initiation.	July 9, 2013
61	Letter from Allyson Brooks, Ph.D., State Historic Preservation Officer, Department of Archaeology and Historic Preservation, to Chris Jenkins, Cultural Resources Program Manager, Department of the Army, regarding Gateway Pacific Terminal Project.	July 17, 2013
62	Letter from Thomas E. O'Donovan, Department of the Army, Portland District Corps of Engineers, to Tim Wetherall, Port of Arlington, regarding Department of Army Permit Application, attaching Department of the Army Environmental Assessment and Statement of Findings.	Undated
63	Letter from Lauren Goldberg, Staff Attorney, on behalf of Climate Solutions, Columbia Riverkeeper, Sierra Club, and Washington Environmental Council, to Ted Sturdevant, Department of Ecology; Joyce Smith, Department of Ecology; and Sally Toteff, Department of Ecology, regarding Millennium Bulk Logistics Longview Coal Export Terminal; Public Comments on Notice of Intent for a Construction Stormwater General Permit and SEPA Compliance.	November 30, 2010
64	AMI Environmental, <i>AERMOD Modeling of Air Quality Impacts of the Proposed Morrow Pacific Project</i> – Final Report.	October 2012

65	Letter from Columbia Riverkeeper, Northwest Environmental Defense Center, and Sierra Club to U.S. Army Corps of Engineers regarding Comments on Cascade Kelly Holdings LLC's Rivers and Harbors Act Section 10 Permit Application (NWP-2007-998).	August 13, 2013
66	Scoping Comments of Columbia Riverkeeper, Sierra Club, Greenpeace, Columbia Pacific Commonsense, Landowners and Citizens for a Safe Community, Wahkiakum Friends of the River, Northwest Property Rights Coalition, Friends of Living Oregon Waters, Forest Grove Oregon Citizens Against the Pipeline, and Food and Water Watch to the Federal Energy Regulatory Commission on the Proposed Oregon LNG Export Project and Washington Expansion Project.	December 21, 2012
67	Letter from Columbia Riverkeeper to U.S. Army Corps of Engineers and Washington Department of Ecology, regarding Public Comment on Longview Fibre Paper and Packaging, Inc.'s Clean Water Act §§ 404 and 401 Permit Application, NWS-2011-00637.	July 29, 2011
68	Comments from Chad Eiken, AICP, Director, City of Vancouver, to MBTL Coal Export Terminal EIS, and Elaine Placido, SEPA Responsible Official, Cowlitz County Department of Building and Planning, regarding SEPA Scoping Comments on Millennium Bulk Terminals Longview LLC Coal Export Terminal.	September 30, 2013
69	Comments from Babtist Paul Lumley, Executive Director, Columbia River Inter-Tribal Fish Commission, to Millennium Bulk Terminals—Longview EIS, regarding Millennium Bulk Terminals LLC, Longview Shipping Facility Project—Scoping Comments.	November 18, 2013
70	Comments from Kim Kratz, Ph.D., Assistant Regional Administrator, NOAA Fisheries West Coast Region, to Millennium Bulk Terminals EIS, regarding Scoping Comments on the Millennium Bulk Terminals—Longview, LLC SEPA/NEPA EIS.	November 18, 2013
71	Comments from Gretchen Kaehler, Assistant State Archaeologist, Department of Archaeology & Historic Preservation, to MBTL Coal Export Terminal, regarding scoping comments for the proposed Millennium Bulk Export Terminal Project, Longview, Cowlitz County, Washington.	November 18, 2013

72	Comments from Chief J. Allan, Chairman, Coeur D'Alene Tribe, to Danette Guy, U.S. Army Corps of Engineers; Mike Wojtowicz, Cowlitz County Department of Building and Planning; and Diane Butorac, Department of Ecology, regarding Comments on Millennium Bulk Terminals, Longview, LLC's Coal Export Terminal at Longview, in Cowlitz County, Washington Proposal.	November 8, 2013
73	Comments from William Iyall, Chairman, Cowlitz Indian Tribe, to Col. Bruce A. Estok, Seattle District Commander, U.S. Army Corps of Engineers, regarding Scoping Comments for Millennium Bulk Terminals – Longview, LLC Project, NEPA/SEPA Environmental Impact Statement.	November 18, 2013
74	Comments from Silas C; Whitman Chairman, Nez Perce Tribal Executive Committee, to Millennium Bulk Terminals – Longview EIS, regarding Scoping Comments on the U.S. Army Corps of Engineers, Washington State Department of Ecology, and Cowlitz County Intent to Prepare an Environmental Impact Statement on the Proposed Millennium Bulk Terminals—Longview Shipping Facility Project.	November 18, 2013
75	Comments from David A. Troutt, Natural Resources Director, Nisqually Indian Tribe, to Millennium Bulk Terminals-Longview EIS, regarding Comments of Scoping Notice, Proposed Millennium Bulk Terminals Longview EIS.	November 18, 2013
76	Comments from Matt Wynne, Chairman, Upper Columbia United Tribes, to Millennium Bulk Terminals-Longview EIS, U.S. Army Corps of Engineers, Washington Department of Ecology, and Cowlitz County Building and Planning, regarding opposing the proposed Millennium Bulk Terminal Coal Transport Facility located in Longview, Washington.	November 14, 2013
77	Comments from Eric Quaempts, Director, Department of Natural Resources, Confederated Tribes of the Umatilla Indian Reservation, to Millennium Bulk Terminals-Longview EIS, regarding Scoping Comments on Proposed Millennium Bulk Terminals Longview Shipping Facility.	November 18, 2013

78	Comments from “Bobby” Bmnoe, General Manager, Branch of Natural Resources, The Confederated Tribes of the Warm Springs Reservation of Oregon, to Washington Department of Ecology, U.S. Army Corps of Engineers, and Cowlitz County Building and Planning, regarding Comments on Scope of EIS for Millennium Bulk Terminals, Longview LLC Coal Export Terminal.	November 18, 2013
79	Comments from Harry Smiskin, Chairman, Confederated Tribes and Bands of the Yakama Nation, to Lt. General Thomas P. Bostick, Brig. General John S. Kem, and Col. Bruce Estok, U.S. Army Corps of Engineers, and Maia Bellon, Washington State Department of Ecology, regarding Comments on the Scope of the NEPA & SEPA EISs for the Proposed Millennium Bulk Terminal at the Port of Longview.	November 18, 2013
80	Johan Rene van Dorp, Jason R.W. Merrick, <i>Vessel Traffic Risk Assessment (VTRA)</i> , Final Report prepared for Puget Sound Partnership.	September 18, 2013
81	Article in Canadian Journal of Fisheries and Aquatic Sciences, <i>Altered growth and related physiological responses in juvenile Chinook salmon (Oncorhynchus tshawytscha) from dietary exposure to polycyclic aromatic hydrocarbons (PAHs)</i> , by J.P. Meador et al.	October 2006
82	Article in Environ. Sci. Technol., <i>Effects of Diesel on Survival, Growth, and Gene Expression in Rainbow Trout (Oncorhynchus mykiss) Fry</i> , by Lizzy Mos, et al.	2008
83	Leyda Consulting, Inc., letter regarding Ecological Impacts of Proposed Coal Shipping on the Columbia River Port of Morrow and Port Westward, Oregon.	October 30, 2012
84	<i>Global Climate Change Impact in the United States</i> , a State of Knowledge Report from the U.S. Global Change Research Program.	2009
85	Report from The Program on Climate Economics, Climate Leadership Initiative, Institute for a Sustainable Environment, and University of Oregon, <i>An Overview of Potential Economic Costs to Washington of a Business-As-Usual Approach to Climate Change</i> , prepared by Ernie Niemi, ECONorthwest.	February 17, 2009



86	Article on Oiled Wildlife Response, published by Northwest Area Committee/Regional Response Team.	January 2013
87	<i>Economic Analysis of the Non-Treaty Commercial and Recreational Fisheries in Washington State</i> , Final Report, prepared for Washington Department of Fish and Wildlife, by TCW Economics, with technical assistance from The Research Group.	December 2008
88	<i>Washington State Maritime Cluster</i> , Economic Impact Study, prepared for Economic Development Council of Seattle and King County and Workforce Development Council of Seattle and King County, by Community Attributes, Inc.	November 2013
89	Comments from Peter Goldmark, Commissioner of Public Lands, Washington State Department of Natural Resources, to Millennium Bulk Terminals EIS Co-Lead Agencies, regarding Scope of the EIS for Proposed Coal Export Terminal in Longview, Washington.	November 18, 2013
90	Oregon Department of Geology and Mineral Industries' <i>Earthquake Risk Study for Oregon's Critical Energy Infrastructure Hub</i> , Final Report to Oregon Department of Energy & Oregon Public Utility Commission, prepared by Yumei Wang, Steven F. Bartlett, and Scott B. Miles.	August 2012
91	Liquefaction Susceptibility Map of Clark County, Washington, prepared by Stephen P. Palmer, Sammantha L. Magsino, James L. Poelstra, and Rebecca A. Niggemann.	September 2004