



November 18, 2013

Millennium Bulk Terminals EIS Co-Lead Agencies
c/o ICF INTERNATIONAL
710 Second Ave, Suite 550
Seattle, WA 98104

Subject: Scope of the EIS for proposed coal export terminal in Longview, WA

Dear Co-Lead Agencies:

Please accept these comments from the Washington Department of Natural Resources (DNR) regarding the scope of the Environmental Impact Statement (EIS) for the proposed Millennium Bulk Terminals coal export terminal at Longview, Washington. DNR is the manager of over 3 million acres of state trust lands comprised of forest, range, commercial, and agricultural lands, and 2.6 million acres of state-owned aquatic lands. In addition, DNR administers the state Forest Practices Rules on more than 12.7 million acres of non-federal, public, and private lands.

DNR is committed to sustainably managing the state's resources, relying on sound science, and making transparent decisions in the public's interest and with the public's knowledge throughout the environmental review process. I have directed my staff to provide technical support to the co-lead agencies towards ensuring a robust, science-based, and comprehensive environmental review process.

DNR is regarded as possessing special expertise under Washington state's environmental policy act rules, Chapter 197-11-920, Washington Administrative Code (WAC) related to the following areas: water resources and water quality of state-owned aquatic tidelands, shorelands, harbor areas, and beds of navigable waters; natural resources development; energy production, transmission, and consumption (geothermal, coal, and uranium); land use and management of state-owned or managed lands; recreation; and burning in forests. DNR is also an agency with jurisdiction for this project under Chapter 197-11-714(3), WAC.

The proposed project includes two new docks supporting two new ship loaders, an access trestle, and dredging of a new berthing area. Each of these project components would occur on state-owned owned aquatic lands that are currently leased for an existing dock and related facilities. The proposed project has not been approved by DNR and would require amendment of the existing lease or a new lease from DNR. DNR authorization is also required to conduct geotechnical studies or other pre-construction activities requiring entry onto state-owned aquatic lands. This authorization is what makes DNR an agency with jurisdiction under the State Environmental Policy Act, Ch. 43.21C RCW (SEPA) rules. DNR will consider a lease



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amendment or a new lease for the proposed terminal once potential project impacts have been documented through the environmental review, permitting, and public comment processes.

DNR appreciates the opportunity to submit comments on the scope of the EIS, which are provided in the attachment to this letter. The attachment identifies project alternatives to the proposal that should be considered in the EIS. The comments that follow identify analyses for each element of the environment identified under Chapter 197-11-444, WAC where DNR has identified probable, significant adverse impacts needing analysis in the EIS. For each issue of concern identified in this letter, DNR requests that the EIS identify the potentially affected resources, analyze the probable impacts to those resources, and identify measures to avoid, minimize, and mitigate effects of the proposal. As an agency with expertise and jurisdiction, DNR would appreciate being treated as a consulted agency as defined in WAC 197-11-724 throughout the SEPA process. DNR may submit additional scoping comments as we increase our understanding of the proposal and its impacts.

Should you have any questions regarding this letter, please do not hesitate to contact Megan Duffy, Deputy Supervisor for Aquatics & Geology, at (360) 902-1034.

Sincerely,



Peter Goldmark
Commissioner of Public Lands

Enclosure (1)

c: Megan Duffy, Deputy Supervisor for Aquatics & Geology

IMPACTS IN THE IMMEDIATE PROJECT VICINITY

Natural Environment:

Earth

Sediment and Geomorphic Processes

The EIS should include a detailed analysis of the potential alteration of physical and geomorphological processes in the nearshore zone, focused on sediment transport and riverine processes, fluvial erosion, and deposition, particularly with respect to initial and ongoing dredging requirements. The analysis should include spatially explicit mapping of sediment characteristics, riverine and beach geomorphology, bathymetry, and stability.

Waves and Prop Scour

The EIS should analyze adverse impacts of waves and prop scour generated by large vessels docking at the facility and tugs assisting with docking on sediment transport, bank erosion, and attached aquatic vegetation. How will the change in hydrodynamics from the in-water structures affect scour in the intertidal and shallow subtidal environments not only at the aquatic lease area but also up and down drift of the site? How will waves, currents, and propeller wash change the sediment characteristics and hydrodynamic environment? How will riverine vegetation and habitat for freshwater invertebrates be affected by changes in wave energy, sediment transport, or substrate? What is the likelihood that the project will require shoreline armoring in the future, due to operations, climate change, sea level rise, or other reasons, and how will impacts be mitigated?

The EIS should analyze the potential of dock construction or operations (including future maintenance, repair, and replacement) to disturb any contaminated sediments and how this will be mitigated.

Geologic Hazards

DNR has responsibility for obtaining, maintaining and distributing information and technical assistance regarding geologic hazards under the Geological Survey Act, Chapter 43.92, Revised Code of Washington (RCW). In addition to the objectives stated in Chapter 43.92.020 RCW, the geological survey must conduct and maintain an assessment of seismic, landslide, and tsunami hazards in Washington. This assessment must include the identification and mapping of volcanic, seismic, landslide, and tsunami hazards, an estimation of potential consequences, and the likelihood of occurrence. DNR recommends you analyze the potential for geologic hazards at the site using the following methodology:

- a) Identify both shallow and deep-seated landslide hazards using DNR's GIS Statewide Landslide database and then create a site-specific geologic map. In areas with no existing landslide inventory, create a shallow landslide database using historic aerial imagery and other spatial data in a GIS.
- b) Evaluate riverbank sloughing and subaqueous landslide hazards using bathymetry or similar DEM data.

- c) Identify potentially unstable slopes using DNR's Shalstab model or other comparable slope stability modeling program in a GIS.
- d) Identify slope hazards associated with slope modification or vegetation removal at construction areas.
- e) Evaluate earthquake hazards including earthquake-induced ground failures. The proposed project is in a moderate to high liquefaction area and should be thoroughly investigated
- f) If dredging for port access, identify potential hazards to adjacent beaches and bluffs from loss of subaqueous buttressing, and
- g) Identify tsunami inundation hazards from landslides, local faults, a Cascadia subduction zone event, or through subaqueous or terrestrial landslides. Explicitly address increased risk of inundation resulting from climate change and sea level rise.
- h) Because of the proximity to Mount Saint Helens there are volcanic hazards such as ash fall and lahars that should be investigated as part of this proposal. As recent as 1980 significant lahars impacted the Cowlitz and Columbia River and transportation routes

Plants and Animals

Baseline Study

The EIS should include a detailed baseline study of the area's biological resources and analyze potential impacts, including, but not limited to: benthic habitats; shellfish resources (such as native freshwater mussels); littoral vegetation; migration and spawning corridors and behavior for multiple species (such as eulachon, green and white sturgeon, Pacific lamprey, and eight salmonid species); marine mammals (such as Stellar and California sea lions); waterfowl and migratory shorebird communities including nesting, rearing, resting, and feeding habitats along the river banks and islands, as well as and upland species including endangered or threatened species.

The project proponent should coordinate with DNR and WDFW regarding appropriate mapping methods for uplands vegetation, littoral vegetation, shellfish resources, eulachon spawning areas, and benthic and epibenthic invertebrate abundance and distribution. For example, WDFW eulachon spawning surveys have confirmed that eulachon eggs and larvae have been found in this location on more than one occasion. WDFW studies have also documented eulachon spawning in close proximity upstream from the proposed terminal in the Cowlitz and Kalama Rivers.

The Mount Saint Helens Wildlife Area Fisher Island Unit is located in close proximity downstream from the proposed terminal, which is home to various species of waterfowl, shorebirds, the Columbian white-tailed deer, and other wildlife species. This reach is also an area utilized by various aquatic species, including migratory salmon, Pacific lamprey, and eulachon, as documented and monitored by WDFW and the Cowlitz Indian Tribe. Pacific lamprey play a key ecological role in the food web and are considered an indicator species for anthropogenic impacts to aquatic systems. They also have significant cultural and subsistence value for many Native American tribes in the Pacific Northwest. Because their lifestages include a filter-feeding larval stage that drifts downstream, burrows, then remains from 3 to 7 years in the substrate of the mainstem and tributaries of the Columbia river system, they are particularly vulnerable to exposure to contaminants, dredging, channel maintenance, and construction impacts. The EIS should identify and synthesize all available information about these species.

Organization of comments

The following comments are organized into several sections. First, project alternatives to the proposal that should be considered in the EIS are identified. Next, probable significant adverse project impacts in the immediate vicinity of the project area, within the lower Columbia region, and to state-managed lands statewide are identified. Impacts at each of these scales are further organized into the Natural and Built environment categories according to the elements of the environment identified in Chapter 197-11-444, WAC. For each identified issue of concern, DNR requests that the EIS identify the potentially affected resources, analyze the probable impacts to those resources, and identify measures to avoid, minimize, and mitigate effects of the proposal. DNR may submit additional scoping comments as we increase our understanding of the proposal and its impacts.

PROJECT ALTERNATIVES

Project Location and Design

The project will result in the addition of 233,841 square feet, or 5.37 acres of new overwater structure coverage area. Construction will also include the installation of 628 48-inch steel pilings and 500,000 cubic yards of dredging to create a new 48-acre berthing area. At full capacity, 44 million metric tons of coal will be loaded onto ships from the two new docks per year.

The EIS should include a comprehensive analysis of alternatives to the proposed project design. The analysis should assess the potential adverse impacts and mitigation measures for each alternative. Alternative overwater structure designs should be evaluated to identify designs that avoid and minimize impacts, such as minimizing the number of pilings required, minimizing the coverage area of new overwater structures, using alternative decking materials, and minimizing artificial lighting. Alternative dock configurations should be evaluated to identify alternatives that minimize initial and ongoing dredging requirements, including the use of smaller, shallower-draft vessels than the panamax-sized vessels expected to visit the proposed terminal. Alternative coal transport and ship loading equipment designs should also specifically be evaluated to identify alternatives to the proposed ship loading system that avoid and minimize the risk of coal and coal dust entering the Columbia River.

Each of the alternatives analyses described above should examine both the impacts resulting from the location and design of the structures and equipment, as well as operational considerations and impacts associated with each of the alternatives, including the predicted number of vessels that may be expected to visit the facility under the identified alternatives. The analyses should also consider cumulative impacts resulting from proposed terminal and the current and potential future uses of the existing dock.

Vessel Traffic

The project would generate an additional 1,460 one-way vessel trips annually on the lower Columbia River. A detailed vessel traffic analysis should be conducted using a robust model that relies on the most recent vessel tracking data for the Columbia River system. The analysis should include both existing levels and any projected increases in vessel traffic from this proposal and other sources throughout the Columbia River system, including the proposed Morrow Pacific coal export facility and the current and potential future uses of the existing dock. Based on these

analyses, the EIS should evaluate multiple alternatives for reducing potential conflicts, including routes, operations, and traffic control.

Vessel Operations

The EIS should analyze alternative berthing times and seasonal restrictions to ensure that cargo vessel and tug operations do not adversely affect the spawning and migration behavior of salmon, eulachon, sturgeon, and other species that utilize the proposed project area.

Rail Traffic and Rail Corridor Expansion

The EIS should identify any necessary expansion of rail corridors or infrastructure that may be utilized by the proposed project, as well as projected increases in rail traffic. All of the possible rail routes identified by the applicant should be included in this analysis. If any necessary expansions of rail corridors or infrastructure are identified, alternatives should be identified that avoid and minimize impacts to aquatic habitat and water quality. Alternatives should also be identified that avoid and minimize local and regional impacts from increased rail traffic.

In evaluating alternatives, it is also important to address the impact of bifurcation of state-managed lands due to corridor expansion on DNR's ability to manage these lands and avoid bifurcation to the greatest degree possible. The EIS should identify alternative alignments that could prevent this bifurcation.

Shading

The EIS should analyze the amount of shading at each depth that will be generated by the overwater structure and moorage of vessels, including tugs and vessels that may perform maintenance on the conveyor belt or related to other dock or trestle operations. What are the potential, adverse impacts of shading on riverine resources, including, but not limited to: littoral vegetation (including productivity), benthic habitats, eulachon migration and spawning behavior, and migratory movement of juvenile and adult salmon, green and white sturgeon, and Pacific lamprey, and how will they be avoided? How will shading be monitored over time to detect adverse impacts on riverine vegetation (including rushes, sedges, and other littoral species) or fish species?

Construction

The EIS should analyze adverse impacts during construction of the docks and trestle, and any future maintenance, repair, and replacement, from the presence of barges or other vessels used for construction. How will construction, design, and materials ensure avoidance of impacts to biological, chemical, and physical habitats, including, but not limited to: fish and wildlife, sediment transport, benthic habitats, and riverine vegetation (including rushes, sedges, and other littoral species)? How will barge presence be limited in duration to mitigate adverse impacts, including shading, and noise?

The EIS should analyze the amount of noise likely to be generated during construction, future repair, maintenance, and replacement, and how the project will avoid impacts to eulachon, salmon, green and white sturgeon, Pacific lamprey, marine mammals, marbled murrelet, and migratory shorebirds and waterfowl.

Operational Noise

The proposed facility will operate 24 hours per day, 365 days per year. The EIS should analyze the amount of noise that will likely be generated during operations by the loading and offloading of materials, transport through the conveyor system, docking and moorage of ships, and trucks and other machinery at the terminal. What are the individual and cumulative impacts of noise generated from this project on eulachon migratory and spawning behavior, salmon, and other aquatic species during operation of the proposed terminal? How will these impacts be avoided? How will any changes in noise be monitored over time to assure there are no adverse impacts to eulachon and other aquatic species? What options can be instituted to mitigate impacts?

Artificial Lighting

The EIS should analyze impacts of lighting proposed on the overwater structure and within 200 feet of the shoreline on eulachon, salmon, Pacific lamprey, and other aquatic species. A study should be conducted to investigate the potential changes in species abundance and dominance resulting from increased prey access under artificial lighting and address ways to reduce or eliminate any identified impacts. How will any changes in lighting be monitored over time to assure there are no adverse impacts to eulachon or other species? Cumulative impacts should be modeled to determine what potential impacts, if any, two additional docks will have. Multiple options should be evaluated for avoiding or minimizing artificial light impacts, and

recommendations should be included for adaptive management program to reduce long term effects of artificial light impacts.

Aquatic Vegetation

The EIS should analyze any potential for dock construction, operations, and future maintenance, repair, and replacement to scour sediments or disrupt or harm riverine vegetation or other benthic habitats. How will impacts to riverine vegetation damaged during construction or operations through displacement, shading, burial, or scour be avoided?

Biological Resources

The EIS should analyze how vessels, including barges, propose to navigate or dock at the proposed facility, and how adverse impacts of the proposed alignment and vessel operations on eulachon, salmon, marine mammals, riverine vegetation, and other biological resources and species will be mitigated.

Air

The applicant estimates the proposal will generate up to 1,460 one-way vessel trips on the lower Columbia River annually (not including the tugs to support them). These vessels will likely burn fuel that may contribute to localized air pollution or emission of greenhouse gases, both while underway and while docked. This may result in pollutants entering surface waters through atmospheric deposition. The EIS should evaluate measures such as providing shore power to ships while docked to avoid and minimize air quality impacts.

Water

Hydrological Dynamics

The EIS should evaluate existing nearshore hydrological dynamics in the area. What is the potential of the overwater structure to disrupt water flow or other natural riverine hydrological functions?

Point and Non-point Discharges

The EIS should analyze whether any stormwater, treated or untreated, point or nonpoint, or any other pollution sources, may enter the Columbia River as a result of the project. This includes stormwater that may be infiltrated in wetlands and seep to groundwater. How will adverse impacts be mitigated? The EIS should include an estimate of much rain is estimated to run off the docks, trestle, and roadway, and the quality of the runoff. What are the potential, adverse impacts of untreated stormwater, including the roadway, from the wharf and pier on aquatic habitat and how will these impacts be avoided?

The EIS should include a characterization of the source, quality and quantity, and potential impacts of all stormwater runoff generated by the entire project that may enter state waters, whether treated or untreated. The EIS should analyze whether the conveyer belt and other overwater facilities will need to be cleaned or maintained and how any runoff from the conveyor belt will be prevented from entering the Columbia River. The EIS should demonstrate how new point-source discharge

outfalls for stormwater will be designed to avoid or minimize individual and cumulative adverse impacts.

The EIS should analyze the increased risk of oil spills that may occur due to the increase in vessel traffic through the lower Columbia River.

Coal train cars are typically sprayed with surfactants to reduce coal loss. While the surfactant manufacturers claim that they are non-toxic to fish, there could be potential for non-lethal effects on fish-behavioral changes, or for deformities or other effects on fish. No shellfish data are available related to surfactants. Some surfactants, most notably Corexit, the surfactant used in the Gulf Oil spill, have been implicated in subsequent fish and shellfish deformities. The EIS should identify potential impacts of surfactants on fish and wildlife, including shellfish such as freshwater mussels.

Cumulative Impacts

Stormwater and wastewater discharges can carry heavy metals and other pollutants that may be harmful to fish and wildlife. What is the individual impact, and what are the cumulative impacts of stormwater, other pollutants, and any other wastewater discharges generated by the project, when considering all other stormwater and wastewater discharges in the lower Columbia River system? The EIS should include an ambient water toxicity study, using protocols accepted by Ecology and EPA to evaluate the cumulative effects of existing industrial wastewater and stormwater outfalls and groundwater seeps on riverine species survival and water quality.

Caged freshwater mussel studies and/or harbor seal bioassays may be used as biological indicators of toxicity. Growth rates of caged fresh water mussels have been shown to respond both positively and negatively to different environmental conditions. Bioaccumulation of polycyclic hydrocarbons (PAH), pentachlorophenol (PCP), and heavy metals in caged mussels should also be conducted, and future PAH, PCB, and heavy metal concentrations should be modeled based on the various alternatives being considered.

Vessel Fueling and Pumpouts

The EIS should analyze where fueling of vessels will occur. What are the adverse impacts of any fueling activities? If the need for such a facility is identified in the future, how will potential, adverse impacts of spillage be avoided and mitigated? The EIS should analyze where vessels will pump out sewage and handle gray water. Is a sewage pumpout system proposed for the overwater structure? If so, how will potential spills be mitigated?

Coal Dust and other Commodity Material Drift

The EIS should analyze the amount of coal dust, large coal particles, or other commodity materials that may escape from the conveyor belt, the ship loader, or upland storage facilities, and the impacts of any escaped dust or materials on the aquatic environment. What is the potential for coal dust and other commodity particulates stored on the upland to enter riverine waters indirectly by wind, surface water, or groundwater? What measures are in place to ensure the conveyor belt or

loader does not malfunction, resulting in a spill outside the ship's internal containment facilities and into riverine waters?

The EIS should analyze the potential for commodity materials to change the chemical environment of aquatic lands in the lower Columbia River system, including pH. Some materials, such as inorganic sulfur like that found in coal, can react with chemicals in water to produce sulfuric acid, resulting in acidification. Is that a possibility if coal enters the Columbia River? In addition, coal particles may leach heavy metals into riverine waters and sediments. The highest impacts here would be nearest the terminal. What might be the resultant impacts on fish and wildlife, and sediment quality? Studies have implicated coal in oxygen depletion. What is the potential for commodity materials to contribute to oxygen depletion or have a smothering effect on aquatic or upland habitats? What best management practices will be employed to collect dust and other commodity materials that may land on the facilities or vessels to prevent it from being washed or blown into the water or tracked onto the trestle? The EIS should describe measures to be instituted to prevent escape of coal dust, particles, and other materials into the Columbia River should a vessel collide with the overwater structures or other ships.

Ballast Water

The EIS should characterize all ballast water to be discharged into the riverine environment, the adverse impacts of discharge, and how adverse impacts will be avoided. How will ballast water quality be monitored to assure no adverse impacts to water quality over time? Management of ballast water should be consistent with Washington State Ballast Water Management Act and interstate agreements on Columbia River ballast water management.]

Invasive Species

The EIS should analyze the potential for the project to introduce invasive species to the project site and to the lower Columbia River system and how the potential adverse impacts will be mitigated to prevent introduction. If an invasive species is found to occur on a vessel associated with the project, what actions will be implemented to prevent spread of the species into riverine waters?

Built Environment

Environmental Health

Toxic Chemicals

The EIS should analyze the need for safeguards to prevent potential release of toxic chemicals associated with construction and future maintenance of concrete at the dock and trestle. Will treated wood be used? What materials will be used for fenders? Some fender materials have the potential to leach PAHs or other toxic pollutants; please analyze how potential impacts will be avoided and minimized.

Land and Shoreline Use

Sea Level Rise

The EIS should analyze how many pilings will be installed and the construction methods, design, and materials to be used. How will the structure be designed to function at current and forecast sea levels based on most recent predictions from the 'Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future' (June 2012).

Transportation

Marine Vessels

The EIS should include a detailed vessel traffic analysis and assessment of traffic management needs. The analysis should provide information on vessel drift, ballast water management, frequency of entry, egress, and moorage time anticipated for the different types of vessels and sizes of vessels, and their potential impact on the Columbia River environment (including aquatic natural resources). It should be based on a robust model that relies on the most recent United States Coast Guard vessel tracking system data for the Columbia River system, including existing or projected traffic from adjacent industrial facilities, upstream shipping terminals, and nonindustrial vessels. The scope of the study should include all of the Columbia River system, and not just the site of the proposed terminal. The study should evaluate multiple alternatives for reducing potential incidents.

The EIS should analyze the impacts of the increased vessel traffic, size of the vessels, and proposed vessel routes on fish and wildlife species and their habitats. The impacts of projected vessel traffic generated by the project on the spawning and migration behavior of eulachon, salmonid, sturgeon, and other species should be analyzed. How will vessel operations be conducted during eulachon pre-spawning and spawning season to prevent impacts to eulachon? What are the cumulative impacts of projected vessel traffic generated by the project, and projected traffic for the region, eulachon, salmonid, sturgeon, and other species? What are the impacts to these species due to the increase in noise expected to occur from increased vessel traffic approaching and leaving the facility?

The EIS should analyze the potential for the project's proposed vessel operations to adversely impact or interfere with adjacent industrial operations, including facility access. If a vessel can't access one of the facilities and has to moor temporarily, how might this affect other industrial operations and vessels transiting through the lower Columbia, or the risk of collision?

The greatly increased ship activity has the potential to impact sediment quality. Diesel burning by the ships can create greenhouse gases, PAHs and dioxins, which can contribute to localized ocean acidification as well as contaminate the sediments in the area through atmospheric deposition, especially if diesel fuel is burned while the container ships are idling while at the terminal. The EIS should analyze the cumulative impacts of engine exhaust from the cargo vessels and tugs and upland machinery operations, and the potential for pollutants to the Columbia River from atmospheric deposition, or from vessel machinery, or loading operations.

Historical and Cultural Preservation

The EIS should analyze impacts of construction and operations (including future maintenance, repair, and replacement) on cultural resources and tribal use. This analysis should be completed for the aquatic lands as well as any upland areas affected by the project.

IMPACTS TO STATE-MANAGED LANDS IN THE LOWER COLUMBIA REGION

Natural Environment

Air

The EIS should analyze the adverse impacts of engine exhaust from the cargo vessels and tugs and its potential to enter the Columbia River, including sediment quality, water quality, and localized acidification. It should also include analysis of the additional fossil fuels generated by the additional trains traveling over state-managed lands and identify measures to reduce the project's carbon footprint.

Water

The EIS should evaluate the ways in which coal dust and other particulates may escape the train cars and enter the Columbia River, including wind, stormwater, and spills.

Plants and Animals

The EIS should analyze how the increase in traffic of large vessels may affect fish and wildlife, including their migration, rearing, foraging, and spawning habitat.

The existing rail system is located adjacent to the shoreline along long stretches of the Columbia River. The EIS should analyze whether rail corridors may need to expand onto state-owned aquatic lands in other areas to accommodate the project. If so, how much right-of-way onto state-owned aquatic lands is estimated to be required? What are the potential impacts of increasing the number of tracks on aquatic and uplands habitats managed by the state?

Built Environment

Environmental Health

The EIS should analyze the increased risk of oil and fuel spills that may occur due to the increase in vessel traffic through the lower Columbia River.

The EIS should analyze the potential impacts of increasing the number of tracks on aquatic and uplands habitats managed by the state along the existing rail corridor, or any alternative corridors that may be needed, including, but not limited to: habitat, cultural resources, water quality, and wetlands. The EIS should analyze the impacts to ground and surface water, soil and adjacent wetlands from any necessary expansion, and evaluate mitigation measures that reduce and prevent the potential for short and long term impacts to ground and surface water, soil, and wetlands from cumulative hazardous material buildup. We encourage the proponent to work with DNR to establish these measures to ensure they meet DNR requirements.

Natural Resources

DNR-Managed Uplands and Conservation Lands

DNR manages a statewide system of conservation lands, protecting some of the best remaining natural areas in Washington. These sites contribute to region-wide biodiversity conservation, while serving as baseline reference sites to guide the management of less-pristine lands. The EIS should analyze the potential impact on DNR Natural Resource Conservation Areas (NRCAs) and Natural Area Preserves (NAPS) along the Potential Rail Corridors.

The EIS should analyze impacts of forests, sensitive ecosystems, and plant communities listed as threatened or endangered that may be impacted due to expansion of the rail lines on state-managed lands along the entire length of potential rail corridors.

IMPACTS TO STATE-MANAGED LANDS STATEWIDE

Natural Environment

Earth

Please refer to the comments on geological hazards. Any expansion of rail lines over state-managed lands should provide the recommended geological hazard analysis.

Plants and Animals

Rail Corridor Expansion

The existing rail system is located directly adjacent to the shoreline along long stretches of the Columbia River and other state-managed rivers. The EIS should analyze how much right-of-way onto state-owned aquatic lands and DNR managed uplands is estimated to be required to accommodate the increase in train traffic. What are the potential impacts of that potential expansion? What expansion of rail corridors is estimated to be needed on state-managed uplands throughout the state? How much right-of-way is estimated to be needed for each area? How will impacts to habitats be minimized and mitigated?

Stream Passage Structures

The EIS should analyze the location and design of bridges and culverts needed or replacement of existing structures for any stream crossing. All structures should meet fish passage and hydraulic code requirements of the WDFW. Structures should be appropriately sized based on hydraulic calculations similar to those in the WDFW manual for 100-year flood plus debris events, regardless of fish presence. The project proponent should consult with WDFW and use appropriately sized round culverts on non-fish bearing streams and open-bottom culverts or bridges for crossings on fish streams.

Habitat Conservation Plan

Washington's Trust Lands Habitat Conservation Plan (HCP) is an ecosystem-based forest management plan developed by DNR to provide habitat for species such as the Northern spotted

owl, marbled murrelet, and riparian-dependent species such as salmon and bull trout. The HCP is a contract with the United States Fish and Wildlife Service (USFWS) and the National Ocean and Atmospheric Administration (NOAA) providing protections for species listed as 'threatened' or 'endangered' under the federal Endangered Species Act (ESA). The HCP applies to 1.8 million acres of forested state trust lands within the range of the Northern Spotted Owl. Under the HCP DNR was issued an Incidental Take Permit (ITP).

The EIS should analyze impacts on lands covered by DNR's HCP to demonstrate and document that the construction of a new facility near DNR-managed lands and site expansion of existing facilities (railroad rights-of-way) on DNR-managed lands will not adversely affect the species protected under this agreement limit DNR's ability to comply with its commitments in the HCP that protect covered species. Additionally, it would be helpful for USFWS Section 10 representatives familiar with the upland HCP to be involved in any discussion with USFWS regarding DNR-managed lands.

Water Quality

The EIS should analyze how much right-of-way onto state-owned aquatic lands is estimated to be required to accommodate the increase in trains. What are the potential impacts to water quality? Where relevant, the EIS should review existing studies from other parts of the country.

Natural Resources

Conservation Lands

The EIS should analyze the potential impact on DNR Natural Resource Conservation Areas and Natural Area Preserves along the rail corridor, including potential indirect effects, of new or expanded rail corridors or infrastructure. For example, within the Columbia River corridor, a direct impact may be on the Washougal Oaks Natural Area that is directly adjacent to the existing rail line. DNR can provide additional information on locations of these areas if necessary.

Biomass and Renewable Energy

Washington's forests have an abundant, renewable supply of woody biomass. Using some of this material for liquid transportation fuel, heating, and electrical power generation will play an important role in Washington's emerging green economy and help to address climate change. DNR's forest biomass initiative is occurring against a backdrop of existing state and federal policy direction, which act as guides to the emerging industry and signal opportunities for future expansion.

The EIS should analyze the socio-economic impact to the Washington state biomass industry development of renewable fuel alternatives. The analysis should consider whether increasing coal exports will delay the Washington state and regional biomass-to-fuel research and infrastructure investments in green technology and jobs, and if a new dry bulk terminal increases opportunities in infrastructure investments in green technology and jobs by providing a terminal to ship bulk dried biomass fuel pellets.

Built Environment

Environmental Health

Please refer to the earlier comment regarding hazardous substances associated with any rail corridor expansions. Any expansion of rail corridors on state-managed lands to support the project should analyze the potential for soil contamination and include mitigation measures that reduce and prevent the potential for short- and long-term impacts to ground and surface water, soil, and wetlands from cumulative hazardous material buildup.

Land and Shoreline Use

How might the additional train and vessel traffic, affect DNR's agricultural and commercial lessees' lands and the ability to get their commodities, such as wheat, grains, potatoes, and timber, to the market? The EIS should include a cumulative impacts analysis of these potential effects. What affect could increase in coal dust have on the health or productivity of forest and crops located on or directly adjacent to DNR-managed lands?

Natural Resources

The project proponent should analyze or consider potential impacts to urban forests and ongoing restoration activities along the rail corridors. Analysis of impacts should include, but should not be limited to: analyzing effects of permanent removal of urban and fragmented forests for new facilities and additional rail sidings; analyzing rail traffic increases along existing rail feeder tracks that may create fine particulates (dust) from the shipping of bulk dry goods that may coat plant leaf area leading to a reduction of plant photosynthesis and respiration ability resulting in a decrease in urban forest health; analysis of forest health along potential rail routes and opportunities for improvement through restoration and enhancement activities.

Public Services and utilities

The EIS should analyze whether any uses of state-managed lands would need to be increased to accommodate the construction, operation, and any future maintenance activities of rail corridors and infrastructure. This includes but is not limited to: all excavation of material, placement of construction materials and tracks, equipment movement and placement of equipment. The EIS should analyze how state resources, including wetlands and forests within and outside directly affected areas, will be protected. Will the project require re-configuring of existing wetlands?

Fire Risk

The EIS should analyze additional wildlife risk for lands covered by DNR fire suppression responsibilities along existing and any potential new railways that will anticipate increased traffic. It is critical that all fire prevention laws and rules of the state be adhered to by construction contractors during facility clearing or construction, maintenance, or use to prevent unnecessary risk to life and natural resources. Chapter 76.04, RCW and Chapter 332-24, WAC provide contractor requirements regarding landowner and operator responsibilities related to fire prevention and fire hazard abatement. The EIS should identify all reasonable measures to prevent and minimize the

start and spread of fire on to adjacent forested areas. Measures should include ensuring all vehicles carry a fire extinguisher of at least a 5 B/C rating and a serviceable shovel, following construction site safety operating procedures which should include compliance with the substantive requirements of Chapter 332-24-301, WAC (Industrial restrictions) and Chapter 332-24-405, WAC (Spark emitting requirements).

Analysis and proposed mitigation measures should be undertaken that will anticipate increased traffic. Train cars carrying coal are not covered because of spontaneous combustion risks. The EIS should analyze the potential increased risk of explosion and resulting wildfire from the addition train traffic through or adjacent to forest lands.

The trains may be up to 1.5 miles long, which could block street crossings. What is the potential impact of the increase and length of trains on DNR's ability to respond to wildfires?

Management of DNR Lands

What would be the impact of bifurcation of state-managed lands due to rail corridor expansion on DNR's ability to manage these lands? What alternative alignments could prevent this bifurcation?

Historical and Cultural Preservation

The EIS should analyze impacts of construction and operations (including future maintenance, repair, and replacement) on cultural resources and tribal use. This analysis should be completed for the aquatic lands, the uplands areas subject to Forest Practices Permits, and additional uplands easement areas.

Agricultural Crops

DNR manages approximately 1.1 million acres of agriculture land in the state. Commodities from these lands are typical with Washington grown products: tree fruit, grains, row crops, and cattle. In fiscal year 2011, \$13 million in revenue was generated from the leasing of DNR-managed agriculture lands. The lessees of these lands rely on transportation infrastructure such as highways and railways to move commodities to regional destinations or ports bound for international trade. The 2006 Statewide Rail Capacity and System Needs Study commissioned by the Washington State Transportation Commission identified several limiting factors regarding rail use and growth in the state. Specifically, the study highlights capacity issues on existing rail partly due to increases on Class I railroads in long-haul bulk and intermodal trains arriving from or departing to the mid-west and other states. According to the study, long-haul trains tend to be more profitable for rail companies and hence create an economic barrier for Class II short-haul trains that typically transport state-grown agriculture goods and link to Class I railways. The report states: "The railroads are focusing on high-volume and long-haul services, but the state's industrial and agricultural shippers also need low volume and short-haul services".

The EIS should analyze impacts from increases in long-haul or intermodal trains and increases in vessel traffic on the Columbia River to the proposed terminal and to the Washington state agriculture industries. A nalysis should include, but not be limited to: socio-economic impacts to DNR agriculture revenues; potential for reduced crop productivity associated with coal dust

particles; limits on access for purposes of managing DNR lands; reductions in the ability for producers to move goods to international ports due to increased congestion; and, opportunities to improve rail infrastructure. Mitigation measures should be identified.

The EIS should also analyze the impacts of coal dust on forests, agricultural crops, and other commercial uses of state-managed lands throughout all rail corridors that would be used to move commodities going to the marine terminal. Studies have demonstrated significant amounts of coal dust may blow off coal train cars during transit.