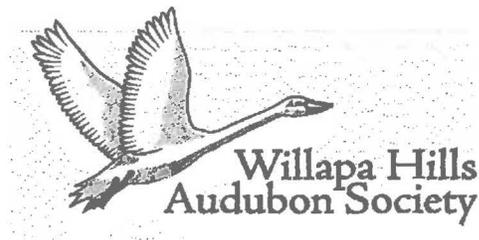


RECEIVED

JUN 13 2016



P.O. Box 399
Longview, WA 98626

June 13, 2016

Millennium Bulk Terminals EIS
c/o ICF International,
710 Second Avenue, Suite 550
Seattle, WA 98104

Re: Draft Environmental Impact Statement for proposed Millennium Bulk Terminals in
Longview, WA

Dear sirs:

Thank you for the opportunity to comment on this project on behalf of Willapa Hills Audubon Society and ten other Washington chapters of the National Audubon Society which have signed onto this letter. Part of Audubon's mission is to protect habitat for all inhabitants of our ecosystem, both wildlife and humans. Willapa Hills Audubon Society's region is in Southwest Washington along both banks of the Columbia River, and includes Cowlitz, Wahkiakum, and Pacific Counties in Washington, and Columbia County in Oregon. Most of our chapter's 200 members live in Longview. Of the 25 Audubon chapters in Washington state, our chapter's region and membership is most directly affected by Millennium's proposed coal export terminal, so we are the lead chapter to research and write comments on the Draft Environmental Impact Statement (DEIS).

One element that is clearly missing from the DEIS is the Health Impact Assessment agreed upon in June 2015. Until that assessment is complete, no final Environmental Impact Statement (EIS) should be published. As mentioned below, the Health Impact Assessment should include new studies that will bring clear evidence of the health effects of coal dust on residents not working directly with coal.

At the DEIS hearing on May 24, 2016, in Longview, WA, Department of Ecology (DOE) officials stated that further studies may be undertaken before a Final EIS is published. We ask that third-party studies or DOE-sponsored studies be completed in six areas:

- effects of coal dust on residents, not coal-industry employees, exposed to coal dust;
- effects of coal dust on birds;

- effects of coal dust and spilled coal on fish and other marine fauna, especially listed species in the Columbia River;
- effects of fish stranding for beaches downstream of Barlow Point for the vast increase in Panamax and Hanamax vessels which cause high wakes;
- the amounts of coal dust emitted by the coal trains at different parts of the BNSF route from the PRB mines to Longview, related to the effectiveness of the loaf-shaped coal loads and coal-suppression spray procedures proposed by BSNF;
- the effectiveness of covers for coal train cars in reducing dusting along the train routes.

DOE has a duty to apply the best available science in its decisions—when science is lacking, DOE should not give the “go-ahead” to this project.

Additional studies should produce clear answers about how dangerous coal dust is to humans and wildlife and how effective loaf-shaped coal loading, surfactant spraying, and closed coal cars might be in reducing coal dusting from trains. In turn this would produce informed decisions about mitigating for these effects or even denying permits for the project.

However, even if these studies result in evidence for minimal harm for humans or wildlife, we explain below many other concerns about the DEIS, especially in the areas of analysis and mitigation. **Because of these inadequacies, we request that the Department of Ecology take the “No Action” alternative for this proposal.**

TRAIN –RELATED EFFECTS ON HUMAN HEALTH

- **Noise from construction and operations at the project site –**

The DEIS states that Millennium will monitor two residences nearest the project for noise exceeding acceptable levels and will modify operations or building insulation if necessary. These measures are vague and should be specified in the final EIS.

- **Noise from trains –**

Noise from trains and traffic has been shown to contribute to adverse health effects, including cardiovascular disease (Mead 2007). The DEIS finds no significant and adverse effect for noise levels for residents living near the project site.

On the other hand, the DEIS states that noise levels at rail crossings in three Longview neighborhoods will be elevated due to increased horn noise coming from an additional 16 train units transiting per day—at 100 feet, trains have a decibel level of 92 - 110 and can be highly aggravating to community members up to 600 - 1,000 feet (Horn Noise). The DEIS states that Millennium will help create and fund a “Quiet Zone 3” or other measures along the Reynolds Lead. However, Millennium has not applied for a noise permit, so this commitment is not enforceable. The DEIS should require a noise permit from the BSNF for the increase in aggravating train horn noise from 16 additional trains blowing their horns each day.

Furthermore, noise permits and mitigation should extend beyond the three Longview neighborhoods. These should be required for all rail crossings which require train horn blowing on the BSNF main line, and not just in Washington State. This mitigation should extend from the Powder River Basin mines to the new terminal.

- **Coal Dust from trains and operations in Cowlitz County --**

“While the average and maximum deposition of coal dust on the BNSF main line in Cowlitz County was estimated to be above the nuisance thresholds at 50 and 100 feet, respectively, no state or federal standards apply, and this would be an unavoidable but not significant impact.” Since there are no federal or state standards for this kind of pollution, no mitigation is proposed in the DEIS. Dirty coal dust may not be a direct health hazard, but it certainly negatively contributes to aesthetics and enjoyment of one’s home. For residents living near Prince Rupert coal terminal in Canada, the coal terminal company washes down the houses and outside structures (De Page 2011). Our residents should have at least the same service if they complain about coal dust. According to the project map in the DEIS, only one small residential area along the Reynolds railroad spur would be affected, so rectifying this problem would not be a big expense if coal dust will only affect residents at the distances that the DEIS claims. On the other hand, residents one mile from the McDuffie coal terminal in Mobile, Alabama, complain about coal dust deposits on their homes (Weis, Barraza, and Brantley 2016). If it turns out that coal dust is carried further than 100 feet, then Millennium will have more dust to wash off.

Moreover, coal dust may be more than just a nuisance. Coal dust for non-occupational exposure is not regulated at the state and federal levels, but it is well-accepted coal dust is harmful to human health for workers in the coal industry. For example, exposure to coal dust has been linked to increases in chronic bronchitis, emphysema, asthma, COPD, and black lung disease in miners (Coal Mine Dust 2011). Research on the health effects of non-occupational exposure to coal is minimal so that the correlation between non-occupational exposure to coal and cancer or respiratory illness remains inconclusive (Jenkins et al. 2013, Learn 2013). Some additional research on the human health effects of living in close proximity to coal operations is being done. For instance, a 2013 study showed increases in digestive and other cancers, depending on the proximity of the city of residence to Spanish coal mines (Fernandez-Navarro, et.al. 2013). We call on the DOE to fund studies of residents in other parts of the United States who live in areas with coal dust to see whether there are negative effects on their health. If coal dust is found to be detrimental to the health of residents exposed to this pollutant, the Final EIS should recommend regulation at the state level and withhold permits until this regulation is in place.

- **Particulate matter pollution along railroad tracks outside Cowlitz County –**

The DEIS states that there will be no adverse and significant effects from the Millennium project in terms of coal dust pollution along the tracks. The BSNF railroad claims that 85% of coal dust from open coal cars will be reduced by shaping the load into a brick and spraying each load with surfactants. Trains from the Powder River Basin in Montana and Wyoming will be sprayed when they are loaded there and again in Pasco as they enter the state of Washington. However, these claims that the dust from coal trains will be significantly reduced are based only on the industry’s internal studies. The Final EIS should not be issued until third-party studies confirm that the

particulate matter from coal trains will indeed be reduced substantially by the mitigation measures and that they will be sufficient to reduce hazards to human health.

We also request that studies be completed on covers for rail cars loaded with coal since at least five have been developed (Gambrel 2013). The effectiveness of these covers should be measured against the effectiveness of the current system required by the BSNF railroad for cars loaded with coal, i.e., loading the coal in a loaf shape and spraying loaded cars with surfactants. People living and working along the tracks deserve the best possible protection from toxics contained in the coal, whether this protection be from surfactants, rail car covers, or a combination of both.

In addition, some coal for the terminal will come from Utah and the Powder River Basin by the Union Pacific rail line – the DEIS states that the rail companies will work out what measures will be taken to prevent coal dust deposition from those mines. This is too vague – the final EIS must specify what steps will be taken and how they will be monitored and enforced. While outside the jurisdiction of Washington, the DOE should not issue a permit until other states affected by increased coal transport carry out their own EIS processes, or mitigation measures for all states are listed in the U.S. Corps of Engineers NEPA review.

- **Train crossing delays –**

The DEIS states “In a 24-hour period, trains for the Proposed Action would increase the probability of emergency response vehicles being delayed by 10% at crossings along the Reynolds Lead and BNSF Spur with existing track infrastructure” (p. S-32). With planned improvements to these two lines, the probability of delay decreases considerably. However, for train crossings outside of Cowlitz County, there are no planned improvements, despite “the probability of an increase in emergency response time at all statewide study crossings [due to more frequent blockage by train cars]” (p. S-32). Our emergency response departments pride themselves on reducing response time for a reason—quick responses can mean the difference between minor and severe damages, and even life and death. On page 5.1.23, the DEIS states “BNSF could address capacity issues with capital improvements or operational changes, but it is unknown when these actions would be taken or permitted.” The DEIS states that the train crossing delays are an unavoidable adverse effect, but no mitigation is proposed. Instead, DOE should negotiate agreements with the railroads to lock in the needed upgrades to crossings. In addition, Millennium should be required to mitigate for injuries, deaths, and property destruction caused by emergency vehicle delays at crossings.

- **Train accidents –**

The DEIS model predicts that by itself the Millennium project will increase train accidents in Cowlitz County by .46 per year for loaded coal trains and .5 per year for empty trains—about one accident every two years for loaded and unloaded trains in Cowlitz County. This number of accidents would be increased without promised improvements by the Longview Switching Company for the BSNF Spur and Reynolds Lead. Outside these railroad lines, the DEIS states that the Millennium project alone would increase the number of accidents on train lines within Washington State by 5.16 per year of loaded car trains and 6.23 per year of empty trains. However, the cumulative effects of adding the Millennium project to expected baseline rail

traffic will be an increase of 11.38 accidents per year in Washington State. The DEIS acknowledges that this is a high level of increase in accidents and these are significant adverse effects, but proposes no mitigation by Millennium. Millennium should be required to provide mitigation for the amount of increased accidents that can be attributed to its share of rail traffic, based on actual data, not modeling.

It is not clear from the DEIS how much this increase in accidents can be reduced by upgrading rail tracks and facilities or if other measures will be necessary. The DEIS states that the capacity of segments of the BSNF mainline will be exceeded by 1 to 34 trains per day. The DEIS suggests that the railroad companies will upgrade their tracks and facilities in response to new freight demands, and reminds us that the state of Washington has no direct control over these commercial decisions. However, the rail industry has a recent record of waiting until AFTER rail congestion problems to upgrade lines—even at the Powder River Basin itself (UP, BSNF 2006). The oil train derailment near Mosier on June 3, 2016, after recent routine inspections and minor repairs to the track, is evidence that business as usual will not be sufficient to have safe operations of fossil-fuel-bearing trains. The final EIS should not be issued unless the railroads produce publicly available plans and committed funds for upgrades in anticipation of increases in freight train traffic.

Finally, this analysis of future train accidents is incomplete because it does not calculate the number of accidents that would be caused by increased rail traffic by Millennium on tracks outside Washington State. The Final EIS for Washington should not be issued until a plan can be finalized with other states for the share of mitigation that Millennium should pay for accidents in their jurisdictions.

EFFECTS ON HUMAN HEALTH FROM COAL TERMINAL OPERATIONS

- **Particulate Matter in Longview –**

According to the model used to predict the levels of particulate matter in the DEIS, the Millennium project will not produce particulate matter above the minimum level of U.S. standards. However, Table 8 of the SEPA Air Quality Technical Report shows that the pollution level of PM10 (particulate matter less than 10 micrometers in diameter), will increase from background levels of 23 $\mu\text{g}/\text{m}^3$ for a 24-hour mean to 108 $\mu\text{g}/\text{m}^3$ due to emissions from handling coal, coal storage piles, and mobile source exhaust emissions from the operation and maintenance of the facility. While this model predicts levels of the most damaging size of particulates below the National Ambient Air Quality Standard (NAAQS) of 150 (p. 3-7), it still predicts more than a tripling of the amount of dangerous particulates at the site. In addition, despite being below the NAAQS, there is every reason to believe that residents exposed to this level of particulate matter will still suffer from health effects such as cardiovascular and respiratory diseases. The World Health Organization (WHO) suggested standard for particulate matter is 50 $\mu\text{g}/\text{m}^3$ 24-hour mean (Ambient 2014), and the 108 $\mu\text{g}/\text{m}^3$ created by operations in the terminal is more than double the WHO standard.

- **Other air pollutants in Cowlitz County –**

Many other air pollutants modelled for the DEIS show similar sharp increases as a result of all sources from the terminal, increases that make them closer to the NAAQS ($150 \mu\text{g}/\text{m}^3$), and over the WHO standard ($50 \mu\text{g}/\text{m}^3$). These other sources of pollution are nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and PM_{2.5} (particulate matter less than 2.5 micrometers in diameter). Exposure to these pollutants contributes to a host of health problems.

- **Improved Monitoring and Mitigation of Coal Dust, Particulates, and Other Pollutants in Longview –**

The DEIS's conclusions are based on its modelling. The only way to confidently know if mitigation is needed for these pollutants is to monitor the levels of particulate matter once the project begins operations. Cowlitz County has only one particulate matter sensor, 1.5 miles to the east of the Millennium site, so new monitors will be needed.

According to the DEIS, as part of mitigation Millennium would install one fence-line particulate matter monitor and report pollution levels to the Department of Ecology for five years. This is inadequate for a 23-year project which will not reach full capacity until 2028. Monitoring should take place for the entire period of the project and beyond, after cleanup of the project site. It should also include installing more than one monitor at the fence line, and it should be for all pollutants regulated by federal and state laws, not just particulate matter.

While DEIS's modelling states that particulate pollution will be negligible outside of the 50 foot area immediately surrounding the project site, the only way to find out the true extent of particulate pollution is to install monitors at further distances. Since coal dust is deposited on houses up to one mile away near the McDuffie Terminal in Mobile, Alabama (Weis, Barraza, and Brantley 2016), it is probable that microscopic particulate material will also be deposited at long distances in Longview. Monitors should be installed in neighborhoods 100, 500, 1000 and 3000 feet from the project site, and in all directions, since the terrain is partly hilly and prevailing winds are variable from winter to summer. To protect the health of Longview citizens, we should rely on actual data instead of predictions from models.

In addition, the mitigation measures in the DEIS, if pollution levels do exceed the U.S. minimum standards for particulate matter, are left up to Millennium and the Department of Ecology to decide in the future. The Final EIS must specify what those mitigation measures will be. For example, will residents' homes be bought and payment made for their relocation, or will Millennium pay for their current and future health effects? Perhaps the Millennium project, like other recent coal terminal proposals near populated areas, such as the ones proposed for Coyote Island in Oregon (Flatt 2013) and Oakland, California (La Ganga 2016), should enclose the coal storage pile in a high-roofed or domed building and have completely enclosed transfer systems. The purpose of an EIS is to predict and find solutions to environmental problems before they materialize—the final EIS should include concrete plans for mitigation if actual recorded levels of pollutants are recorded in the future.

- **Populations in Poverty -**

The DEIS states that exposure to this particulate matter pollution is a problem for social justice—Cowlitz County has a large proportion of its population (about 20%) living below the federally defined poverty-line. There is evidence that people in poverty who live in areas polluted by particulate matter are disproportionately affected in terms of their health—hypothesized causes are related to the cumulative health stressors and lower mobility of people in poverty. However, acknowledging this problem is not the same as solving it, and the DEIS proposes no solution nor mitigation. Also, what the DEIS does not mention is the high level of poverty in the Longview neighborhoods closest to the proposed coal terminal site – especially south of Ocean Beach Highway (State Highway 4) and the Highlands neighborhood. Similarly, populations living and working near the tracks carrying open coal cars are likely to be in poverty. The social justice issue posed by this proposed project is higher than acknowledged in the DEIS. Mitigation for all the populations in poverty who will be affected by the coal dust pollution should be acknowledged, monitored, and mitigated.

EFFECTS ON WILDLIFE

- **Habitat for Columbia White-Tailed Deer**

The federally listed Columbia White-Tailed Deer lives on land and islands in the project area. The DEIS states that these deer were seen on the project property—this is consistent with the species' presence and stable population on Puget Island and other habitat with human activities (Azerrad 2016). Although the federal government has proposed that increasing numbers of the deer mean that it can be down-listed from endangered to threatened (Florip 2015), Washington State Department of Fish and Wildlife recommends retaining state designation as endangered, because the number of deer remains relatively low, and the Washington population remains at risk for flooding, disease, and faun predation. One of the main concerns is persistent problems with dispersal due to artificial barriers such as highways and unsuitable habitat (conifers) that surround the species' current habitat. (Azerrad 2016). The DEIS does not address the effects on the ability of the project to further disrupt deer movement through its habitat. Just stating that the deer are present on the project site and proposing no mitigation for disrupting their use of the site is not acceptable. The DEIS also proposes no mitigation for adverse effects on these deer from increased vessel traffic and high vessel wakes, especially on islands already prone to flooding.

- **Habitat for birds**

The DEIS states that the proposed coal export terminal is only 5 miles upstream from Crims Island which supports critical habitat for the federal threatened and state endangered Streaked Horned Lark. As the DEIS also states, Purple Martin nest sites have been documented just 2 miles from the terminal site at Coal Creek Slough, one of two nearby Washington State Birding Trail sites. Suitable nesting and foraging habitat for listed species such as the Bald Eagle, Peregrine Falcon, Vaux's Swift, and several waterfowl species including climate-sensitive Barrow's Goldeneye, exist well within the reach of anticipated coal dust deposits. In particular, Lord Island supports significant numbers of wintering ducks and geese. The DEIS states that

there may be adverse effects on these birds from coal dust deposited from the coal terminal project during operations. The DEIS states “In general, there is a paucity of peer-reviewed scientific literature examining the potential effects of coal dust on wildlife, in particular, on terrestrial wildlife” (SEPA Wildlife Technical Report, p. 3-18). DOE should commission studies on the effects of coal dust on birds before issuing the Final EIS. Also, any mitigation should not depend on models of coal dust deposits but instead should be based on actual measurements of coal dust deposits when the project is operational. This will mean installing detectors for particulate matter on Lord Island, at the least.

The rail and vessel corridors servicing the proposed coal export terminal support habitats of critical importance to a variety of bird species. The Columbia River Estuary represents prime stopover habitat for migratory shorebirds and waterfowl within the Pacific Flyway. The western extent of the estuary is a designated Western Hemisphere Shorebird Reserve Network site (Columbia River Estuary 2009) that supports large numbers of shorebirds during migration. Some of the largest colonies of Caspian Terns and Double-Crested Cormorants in the world nest and roost on islands within the estuary (East Sand Island 2016). Avian species lists for the estuary top 300 species, reflecting the diverse habitats available (River Species 004).

The DEIS states there will be adverse impacts to shoreline vegetation and nearshore fish, specifically forage fish species such as eulachon upon which marine birds and mammals rely. We are also concerned about potential disturbance to birds caused by vessel traffic, including the effects of wake on the birds themselves and impacts to their nesting, roosting and foraging areas. As discussed below, mitigation for impacts to marine wildlife are inadequate.

- **Habitat for marine wildlife**

Construction in the Columbia River – The DEIS acknowledges harmful effects from removing old piles and driving new ones to support the new docks. These include sudden and sustained levels of noise, turbidity of the water, removal of benthic organisms by dredging, and so on. The mitigation proposed for the construction impacts seems adequate since that area of the river is already disturbed by previous industry.

However, while the project construction window of Sept. 1 to Dec. 1 will prevent harm to most juvenile and spawning “focus” fish such as listed salmon, sturgeon, and eulachon, adult fish migrating through the project area may be harmed by noise. No mitigation is proposed for the harm to these adult fish, and mitigation to protect eulachon is vague—i.e., monitoring and unspecified conservation steps. Specific plans for mitigation must be included in the final EIS.

Coal Dust -- According to the DEIS, during operations the Millennium project will create dust from loading and unloading ships between the docks and loading area, but the amount of deposition will not cause serious adverse effects to marine wildlife. The DEIS bases this conclusion on a review of studies on the effects of coal dust in marine waters by Ahrens and Morrissey (2005). However, Ahrens and Morrissey’s conclusion in their study was that the studies reviewed were inadequate, and more research of higher quality is needed. There is certainly enough evidence to suggest that both physical smothering by coal dust and coal leachates cause harm to flora and fauna, especially juvenile fish and crabs (True Cost 2012).

Until there is more evidence that coal dust is not a problem for marine wildlife, the DEIS conclusion of no adverse effects is premature. No Final EIS should be issued until thorough studies of both physical effects and leachates are concluded, including how coal dust will be taken downstream by the river and dispersed, and how much this dilution may reduce negative effects on living organisms, if at all.

Coal Spills - According to the DEIS, Millennium's loading equipment and docks will be designed to minimize coal spills, and a spill kit will be nearby during operations. However, the DEIS has no estimate of the probability of coal spill accidents, despite the fact that in 2012, Westshore Terminal in Delta, British Columbia, had a large spill from a ship running into a pier (Hamilton and Crawford 2012) and there were also two rail accidents at Westshore Terminals in 2011 and 2012 (CN Rails 2013). After an estimate of the frequency and seriousness of this kind of accident in facilities similar to the proposed Millennium coal terminal is calculated, Millennium should be asked to provide a clean-up bond or other agreement to mitigate for probable future accidents.

Vessel Accidents – According to the DEIS, at full build-out in 2038, the Panamax and Hanamax vessels serving the proposed Millennium terminal will be 27% of the estimated traffic on the Columbia River, and at that point the vessels serving the project will have 20.90 collisions per year (p. 6-57). It is notable that this accident rate is based on those accidents which cause lost cargo—there is no estimate of the danger to humans and wildlife from the effects of any magnitude of accident from fire, explosion, and so on, which do not affect cargo. While the DEIS notes this high level of increase in accidents, it does not propose any mitigation, a serious lack which should be corrected in the Final EIS.

Fish Stranding – According to the DEIS, the increase in deep water vessel wakes will have variable effects, depending on tide level, perhaps the time of year, and the presence of sandy, permeable beaches. One such beach is at Barlow Point, just downstream of the proposed project site. A recent study reported in the DEIS showed that Chinook salmon juveniles were particularly susceptible to stranding at Barlow Point. The DEIS suggests that Millennium coal port vessels will slow down near Barlow Point because they will be near the terminal, and points out that the federal government regulates shipping speeds. However, a clear rule to enforce slow speeds can be included in the U.S. Corps of Engineers NEPA EIS expected this July, and a state final EIS should not be issued until that mitigation is included. In addition, rules should be created for slowdown, avoidance, and passage during high tide for similar downstream beaches--where studies are lacking, they should be conducted before shipping reaches high levels of traffic. The negative pressures on listed fish species are already great—the effects of large numbers of huge tankers should be minimized as much as possible.

Tribal and Other Access to Fish Resources – The DEIS acknowledges that the expected waits at train crossings from increased rail traffic will have an adverse effect on tribal access to traditional fishing locations when all cumulative projects are included. Moreover, the DEIS states that there will be adverse effects on tribal access to fish themselves from collision, noise, oil leaks and fish stranding from the projected cumulative increase in vessel traffic from all projects. By implication, fewer fish for tribes means fewer fish overall—for commercial and recreational fishing and for the survival of listed species. However, the DEIS does not suggest

any mitigation for Millennium's part in these cumulative adverse effects on access for tribal, commercial or recreational fisherman, nor for future generations which may lose these fish species.

GREENHOUSE GAS EFFECTS FROM BURNING COAL IN ASIA

There are two problems with the DEIS proposed mitigation for the increase in greenhouse gases that would be created by permitting the Millennium coal terminal.

- **Modelling –**

First, the model used by the DEIS for estimating greenhouse gas emissions is flawed. The DEIS does not estimate directly the effects of burning the 44 million tons that would be exported to Asia through the Millennium terminal. Instead, it uses the IPM computer model to estimate the effect of the export of 44 million tons of coal on carbon dioxide emissions in the U.S. and China. The goal of the model is to calculate the effect of higher coal prices in the U.S. (resulting in decreased coal use here) and the effect of lower coal prices in China (resulting in an increase in coal use there). The model incorporates many other factors besides coal price to calculate coal use, such as the lower BTU produced by Powder River Basin sub-bituminous coal, the effect on India's markets, and so on. The model uses four scenarios – low and high global coal use scenarios, a scenario based on coal use history through 2014, and a scenario based on changes predicted by the draft 2015 U.S. Energy rule. The forecasts that result from the four scenarios vary widely – two suggest that from exporting 44 million tons of coal to Asia there will be large net decreases in global coal usage, and two suggest small net increases. For proposing mitigation measures, the DEIS uses the smaller of the two net increases, the one predicted by the draft 2015 U.S. Energy rule.

However, the factors that are used in the computer modelling themselves cannot be accurately predicted. The factors come from estimates of future prices of coal, future use of coal of different types in Asia and the U.S., responses of future U.S. and Asian coal markets to regulation by the Paris Accord, and so on. These are simply not knowable. For example, the scenario that was chosen for proposed mitigation measures, the one based on the draft 2015 U.S. Energy rule, is unpredictable because it depends on politics as well as coal markets. Implementation of the rule could be stopped or delayed by a federal administration that denied the effects of climate change, is not convinced that other nations are doing their part to reduce greenhouse gases, or is simply determined to shield American businesses from regulation. Similar problems with very muddy estimates for factors exist for the other three scenarios that were modelled.

When computer models of complex situations are based in large part on unknowable factors, they are not reliable. Instead of depending on modelling, mitigation measures should be based on real effects on U.S. and Asian coal use and greenhouse gas emissions after events unfold. The total increase in global greenhouse gas production from exporting 44 million additional tons to Asia can be calculated from actual data that are measures of the factors that are input into the IPM model, or perhaps other factors that arise. Millennium should be required to pay mitigation based on the increases in global emissions after they are calculated for each past year, not predictions from a flawed model.

- **Mitigation Measures –**

The DEIS proposes that Millennium create measures that will mitigate for 50% of the estimated greenhouse gases that the proposed terminal would create. However, although the DEIS states “the measures must achieve emission reductions that are real, permanent, enforceable, verifiable and additional” (p. S-58), none are specified. The final EIS should describe what the mitigation measures will be. Also, Millennium should pay to mitigate the full 100% of the greenhouse gas emissions, or the Asian importers should pay to make up the difference that Millennium does not pay. Millennium should not be issued permits until that agreement with Asian importers is concluded. Otherwise DOE will be permitting a project that leaves half of the considerable increase in greenhouse emissions with no mitigation.

CONSERVATION AND ENVIRONMENTAL JUSTICE -

There are a number of conservation issues that are outside of the scope of the DEIS but are concerns of environmental groups; the state of Washington can work for these changes, with input from the Department of Ecology.

- **Environmental effects of increased coal mining –**

The Millennium terminal will raise prices for Powder River Basin (PRB) coal in the U.S. This higher price in turn will cover the costs of deeper mining in the mine fields, mining at levels where there is more overhang. Without higher prices, many of the PRB fields will have to be abandoned (Bleizeffer 2015). The coal companies will benefit from the ability to continue to exploit the same fields as well as from higher prices and more demand for their product. However, the environment in the area of these mines has well-documented problems. Coal fields replace range land, and only 7% of that land has been restored to full use. Residents complain of not being able to drink well water because of its sulfur dioxide content (Braasch 2015). The DEIS mentions the potential for increased coal dust from loading coal at the mines and along rail lines between the mines and Washington State. Pollution problems in other states are not under the direct purview of Washington State’s Department of Ecology. However, as part of the U.S. Corps of Engineers NEPA of regional effects of the proposed Millennium coal terminal, the Washington Department of Ecology should be a partner in discussions about mitigation for the increase in pollution that will result from increased mining in the Powder River Basin mines.

- **Health effects of burning coal in Asia –**

The coal companies that own Millennium will receive most of the short and long-term benefit from the proposed project. Similarly, in both the short and long-term, Asian importers will benefit from coal prices that are lower than the current norm in their market. According to the DEIS, most of the 44 million tons of coal exported by the terminal will be bought by the Chinese. However, these lower coal prices will not benefit the Asian population in the long term because they will incentivize more use of coal in power plants. This in turn will create more pollution of Asian, especially Chinese, air and soil from particulates, mercury, and sulfur dioxide, and will prolong and increase well-documented adverse health effects on their human

and wildlife populations. In effect, the U.S. is off-shoring the adverse health effects of Millennium's project. No mitigation measures are proposed in this DEIS, but in the future Washington's laws should address this kind of externalizing of environmental destruction.

- **State-wide dis-incentives for greenhouse gas creation –**

The Millennium coal terminal project actually incentivizes some parts of the state to benefit from exporting greenhouse emissions while the citizens of the state, and some communities in particular, are sacrificing to decrease greenhouse emissions. In the big picture, the short-term construction boom of jobs, and creation of 135 to 200 permanent jobs in a Cowlitz County job market of 38,100 non-farm jobs (Nonfarm Employment 2014) are small factors in Cowlitz County's economy. Similarly, the tax contributions from this project would be small—for example, \$1.6 million taxes per year during operations in an overall annual budget of \$200 million in Cowlitz County (Proposed Amended Budget 2015). Despite their negligible total impact, these jobs and taxes are being promoted by Millennium and some of their supporters as a major contribution to our local economy.

At the same time, utility customers throughout the state are paying higher rates to subsidize production of green energy, and state funds are used to support green energy projects. Some communities are bearing a more direct burden in the shift to energy sources that do not produce greenhouse gases. For instance, to meet state goals for reduced greenhouse gas emissions, the coal-fired electricity plant will be closed in Centralia (Profita 2015), and a permit for a new coal-gas electricity plant was denied in Kalama (Olson 2013).

Millennium and its coal company owners will benefit most from this project, and the DEIS makes some attempt to have them create mitigation measures to restore or partly restore its environmental damage to the planet through greenhouse gas emissions. Washington law needs to extend this kind of mitigation to local and state governments. Instead of reaping only tax and job benefits from the new coal terminal, local governments such as the city of Longview, Cowlitz County, and the state of Washington should be required to pay mitigation for part of the increase in greenhouse gases that will result from shipping 44 million tons of coal to Asia. The Department of Ecology should help propose and support future legislation that includes local government mitigation for greenhouse gas emissions or some other way of evening out the playing field; the goal of this legislation should remove the incentives for local elected authorities to undermine overall state policy to reduce greenhouse gases.

Conclusion

Thank you again for the opportunity to comment on this DEIS. We emphasize that no final EIS should be published until the Health Impact Assessment is completed, as well as studies to find out the true extent of adverse effects of coal dust on humans not working in the coal industry, marine life, and birds, and to evaluate the effectiveness of measures to reduce dusting from coal rail cars. In addition, we have highlighted severe problems in analysis and proposed mitigation measures, or lack thereof.

Because of these major deficiencies and omissions, we recommend the “NO ACTION” alternative.

Sincerely,



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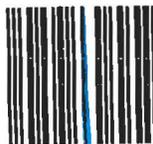
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