RE Sources
for Sustainable Communities

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GPT/BNSF Custer Spur EIS Co-Lead Agencies
c/o CH2M HILL
1100 112th Avenue NE, Suite 400
Bellevue, WA 98004

January 22, 2013,

Dear GPT/BNSF Custer Spur EIS Co-Lead Agencies:

Please accept these additional comments for scoping from RE Sources for Sustainable Communities. These focus on Indirect Effects on Wetlands and on Public Access.

Sincerely,

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Lead Scientist
North Sound Baykeeper Team
RE Sources

INDIRECT EFFECTS ON WETLANDS

While the proposed development plan for the Cherry Point facility calls for no destruction of category I wetlands, including wetland 12, the coastal marsh, development of the proposed terminal could affect the coastal marsh as well as other wetlands and wetland complexes. The following comments are directed at wetlands which are not directly impacted through filling and through reduced buffers but through indirect impacts.

Runoff from impervious surfaces: One disturbance that cannot be avoided is the increase of impervious surfaces. Increases in impervious surfaces can have significant impacts on the health and functions of freshwater ecosystems. There have been various studies that have found different thresholds of increased impervious surfaces at which wetland functions begin to deteriorate .One expert asserts that there is no threshold

and that deterioration of wetland function begins with any increase in impervious surfaces (Sheldon, et. al. 2005). In addition, Reinelt and Taylor concluded that the removal of only 3.5% of forested cover in rural areas resulted in a changed water movement pattern within a watershed. While impervious surfaces can be reduced to some extent, there is no doubt a project of this magnitude will substantially increase impervious surface and runoff, potentially harming the adjacent coastal marsh and other wetlands (Sheldon, et. al. 2005).

In addition to, and as a result of, increased impervious surfaces, increased nutrient and toxics loading into Wetland 12 and other wetlands is likely to result if the proposed development is approved. From the 2005 Wetlands in Washington State, Volume 1 – A Synthesis of the Science:

> Schueller and Holland cite a number of studies indicating that urban pollutant loads are directly related to the amount of impervious surface in the watershed. Impervious surfaces such as roads, parking lots, and storage yards are places where toxics from numerous sources collect. Precipitation falling on the impervious surfaces washes the collected chemicals and particles into the storm drain system (Schueller and Holland 2000).The runoff from many different types of land use in urban areas can be toxic to aquatic life. Pitt et al. (1995) studied the relative toxicity of the runoff from different types of land uses in urban and suburban areas. Parking areas, storage areas, and landscaped areas (lawns, gardens) had the highest toxicity with approximately 20% of the samples being highly toxic. Over half of the samples of runoff from these urban land uses were moderately toxic.

Detail how will the increase in impervious surfaces affect the following:

- the peak and volume of stormater flow
- the loading of pollutants into the wetland
- the functionality of all wetlands on site, including that of the coastal marsh
- the altered use of the wetland by birds, fish, amphibians, and other animals

<u>Altered hydrology from impervious area:</u> There are a number of ways which increased impervious area affects wetland hydrology. Sheldon et al (2005) lists the following potential consequences:

- Increased erosion
- Sediment movement and deposition
- Burying of vegetation
- Increased depths of inundation
- Water level fluctuations
- Downcutting of natural channels (which can remove riparian vegetation from the floodplain)
- Changes in the seasonal extent and duration of saturation and inundation
- Unstable substrates
- A decrease in interflow (shallow, subsurface flow) and base flow

- Altered hydroperiod of downgradient wetlands

We request an assessment of each of the potential impacts to the wetlands for the above listed effects.

Nitrogen, toxicants, and particulate matter from diesel exhaust and coal dust: Added nitrogen from diesel exhaust and coal particulate matter can change the level of eutrophication of wetlands and estuaries. As well, coal dust can smother habitats, small creatures, and abrade fish gills and algae (Ahrens and Morrissey, 2005)
From Particulate Matter in New Jersey, Report. January 1999

> "It is now obvious that ammonium and nitrate deposition are central concerns to the health of coastal ecosystems. Although these species are major contributors to acid deposition, their main environmental consequence is eutrophication of coastal waters. The problem is not just deposition to the water bodies themselves, but the transport of airborne nitrogen species through surrounding watersheds, streams, ground water into the water bodies that become over enriched with nutrients. Depending on the water body in question, atmospheric deposition is likely to account for as much as 30-40% of the total nutrient loading received…. Nitrogen is the limiting nutrient for the growth of algae in many estuaries and near-coastal systems, rather than phosphorus, which typically limits algal growth in freshwater systems."

Detail the effects of coal dust and diesel exhaust from vessels and all other operations on the following:

- Levels of nitrogen and eutrophication on wetlands and estuaries
- Impact of nitrogen and eutrophication on wetland health, estuary health, and the fish, birds, and other animals that depend on these wetlands and estuaries.
- Impact of coal dust on wetland and estuarine habitat and animal diversity including the effects from smothering and abrasion.

Other impacts on habitats, endemic species, including wetland and migratory birds, and wetland and estuarine ecosystem and function should also be assessed. These are outlined in Wetlands in Washington State - Volume 1: A Synthesis of the Science. (Sheldon et al 2005).

- Noise impact from operations, vessel loading/ unloading, and vessel traffic
- Fragmentation of wetlands from filling activity, roads, and operations
- Introduction of exotic species from ballast water

PUBLIC ACCESS

Public access to the Gulf Road beach must be addressed. The public has enjoyed use of this access for many years. In fact, the 1999 settlement agreement outlined a very

small area for the public to use. An assessment of the location and amount of public access should be made taking into account the following factors:

- the public trust doctrine
- the 1999 settlement agreement, where the size of the terminal project was much smaller than it is now
- historic use of the site by the public for recreation
- historic access to the site for biological monitoring, by various groups such as the Coastal Observation and Seabird Survey Team (http://depts.washington.edu/coasst/find_a_beach.html) and the MESA and John Bower bird studies. (Bower, 2009)

Ahrens M. J and D. J. Morrisey. 2005. Biological effects of unburnt coal in the marine environment. *Oceanography and Marine Biology*: An Annual Review, 43: 69-122.

Bower, J.L. 2009. Changes in marine bird abundance the Salish Sea: 1975 to 2007. Marine Ornithology. 37: 9-17.

Coastal Observation and Seabird Survey Team: find a beach. (http://depts.washington.edu/coasst/find_a_beach.html). Accessed 1/22/2013.

Particulate Matter in New Jersey, Report. January 1999. Woodrow Wilson School of Public and International Affairs. Princeton University, Princeton, NJ.

Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale. March 2005. Wetlands in Washington State - Volume 1: A Synthesis of the Science. Washington State Department of Ecology. Publication #05-06-006. Olympia, WA.