Port Angeles Harbor Trustee Council

March 4, 2014

Via email to representatives of Western Port Angeles Harbor Group:
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Re: Transmission of NRDA Approach

Dear Western Port Angeles Harbor Group:

The enclosed Natural Resource Damage Assessment Approach describes the general approach that the Port Angeles Harbor Trustee Council intends to use for a damage assessment, which we will present to you upon its completion by May 1, 2014. We hope that this assessment could lead to meaningful discussions between the Trustee Council and WPAHG.

Sincerely,

PORT ANGELES HARBOR TRUSTEE COUNCIL

Enclosure: Natural Resource Damage Assessment Approach

cc: Voting representatives, PA Harbor Trustee Council

Natural Resource Damage Assessment Approach for Port Angeles Harbor
Port Angeles, Washington

Goal – Conduct a timely, streamlined and cost-effective natural resource damage assessment (NRDA) for the ecological resources of the Port Angeles Harbor (Harbor) using existing data, methods, and inputs. This NRDA quantifies and scales injuries to ecological resources in the Harbor resulting from exposures to hazardous substances released by sources to Port Angeles Harbor. Furthermore, the scaled injuries enable identification of the scale of habitat restoration projects sufficient to make the public whole.

The NRDA is being conducted by the Port Angeles Harbor Trustee Council (Trustee Council)[1]. A proposed estimate of ecological injuries is anticipated no later than May 1 of 2014.

Scope of the Assessment – The NRDA encompasses the area of the Harbor depicted in Figure 1 and hereafter referred to as the assessment area. The Trustees recognize that 1) hazardous substances in the sediments of the assessment area have been released from multiple sources and 2) that a portion of these hazardous substances are likely to be attributed to sources that are not contiguous to the assessment area.

Assessment Approach –A habitat equivalency analysis (HEA) approach is being applied to the assessment area to scale ecological injuries. Inputs to the HEA will include:

- **Habitat values.** This habitat "layer" considers the current level of habitat function, and accounts for the loss of functions due to development and/or hardening of shorelines and nearshore areas, log storage, and other non-contaminant-related degradations. Such losses of function, for which parties are not liable, will be differentiated from losses of function resulting from releases of hazardous substances.

- **Surface sediment chemistry data.** Chemistry data is spatially weighted into raster grids using available natural resource service loss ramps. Spatial weighting methods consider inverse distance weighting and nearest neighbor. Hazardous substances in the HEA include dioxin using toxic equivalency factors (TEQs), total polycyclic aromatic hydrocarbons (PAHs), and total polychlorinated bi-phenyls (PCBs). Additional hazardous substances that most obviously contribute towards causing ecological injury are also being considered (e.g., mercury, zinc, cadmium, phthalates, phenols). Service loss ramps for PAHs and PCBs are being based on those used in recent NRDA settlements (e.g., St. Lawrence River in New York) and those developed for other Puget Sound NRDA cases such as Commencement Bay in Tacoma, Washington (i.e., Hylebos Waterway). Service losses associated with dioxins are being scaled using a TEQ-based

[1] Washington State Department of Ecology, Lower Elwha Klallam Tribe, Jamestown S'Klallam Tribe, Port Gamble S'Klallam Tribe, National Oceanic and Atmospheric Administration, and U.S. Fish and Wildlife Service.

approach[2]. Service losses associated with other hazardous substances are being scaled using Hylebos Waterway service loss ramps.

- **Remedial Scenarios.** Trustee Council technical staff will continue to consult closely with Ecology staff involved in the Western Port Angeles Harbor cleanup process regarding potential remedial decisions so that appropriate assumptions regarding clean-up actions, and thus recovery of natural resources, can be explicitly considered in the HEA. In general, more aggressive clean-up scenarios will reduce the amount of residual NRDA liability and, thus, the amount of restoration required to offset the associated damages.

The HEA process as described above produces a range of scenarios and estimates for ecological injuries in the form of discounted service acre years, or DSAYs. Liable parties can then address their NRDA liability by entering into a settlement that will provide for one or more suitable habitat restoration projects that produce an equivalent number of DSAYs.

Figure 1. Port Angeles Harbor Assessment Area. The final area of the assessment may vary slightly but not substantially from the area presented herein pending the completion of a digital elevation model.

[2] The Trustee Council will provide a description of this approach in the May 1, 2014 deliverable.