

PORTLAND HARBOR SUPERFUND SITE  
NATURAL RESOURCE DAMAGE  
ASSESSMENT PLAN

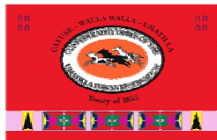
*ADDENDUM FOR PUBLIC REVIEW*

PREPARED BY STRATUS CONSULTING

FOR THE

PORTLAND HARBOR

NATURAL RESOURCE TRUSTEE COUNCIL



April 1, 2010

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# **1. Inclusion of Navigational Services in the Portland Harbor Superfund Site Natural Resource Damage Assessment**

The Portland Harbor Natural Resource Trustee Council (Trustee Council) released a Draft Natural Resource Damage Assessment Plan (Assessment Plan) for public review and comment on December 9, 2009. Comments received from the public on this Assessment Plan included a proposal to quantify the losses of navigational services from the Willamette River in Portland Harbor as part of the Injury Assessment.

After consideration of this proposal, the Trustee Council has decided to include navigational services as an element of its Injury Assessment. Because this is a significant modification to the Assessment Plan, the Trustees are releasing this Addendum for public review and comment. Comments on this Addendum to the Assessment Plan should be submitted in writing, by May 1, 2010 to:

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## **1.1 Navigational Services**

The Willamette River provides important services in supporting commerce in the region. In the Portland Harbor stretch, the federally-approved navigation channel provides access to public and private docks and terminals. Portland Harbor is a key location for export of grains, minerals, and fertilizers; and for import of automobiles and other freight. The value of annual commerce related to international deep-draft shipping in the harbor is \$16.8 billion dollars for the last year of record (Global Trade Information Services, 2008). This trade also generates, directly or indirectly, 18,000 jobs in the greater Portland metropolitan area (Martin Associates, 2007). The public services provided by the river are directly affected by a decrease in navigational access to Portland Harbor or an increase in the costs of navigation or channel maintenance.

## 1.2 Navigational Service Loss

Portland Harbor and the Willamette River have supported maritime traffic at least since Oregon statehood in 1859. Commercial navigation remains an important service of the Willamette River in Portland Harbor. The State is responsible for management of surface water resources, including navigational services under multiple statutes and State agencies. The U.S. Army Corps of Engineers (Corps) directs maintenance of the navigation channel, and the State, through the Port of Portland, conducts ongoing maintenance and provides upland disposal areas for dredge materials.

Due to natural sedimentation, the federally-approved navigation channel in the Willamette River requires periodic maintenance dredging to make the channel deep enough to accommodate commercial shipping vessels. However, no dredging has taken place since 1997 because of hazardous substances in the river sediment and the designation of the harbor as a Superfund site. In 1997, the Corps announced that it was suspending maintenance dredging of the Federal navigation channel until the U.S. Environmental Protection Agency issued its decision on how to proceed with the harbor-wide cleanup (Corps, 2008). Lack of dredging since 1997 has led to substantial accumulation of sediments in several sections of the Federal navigation channel.

Navigational service loss occurs in two ways due to delayed dredging and accumulation of contaminated sediments. First, the ability to navigate is impacted. Ships calling at public terminals in Portland Harbor can no longer navigate the channel as before, which has led the Columbia River Pilots to raise public safety concerns about moving ships in and out of Portland Harbor (Columbia River Pilots, 2009). Damages for service losses tied to navigation could include:

- ▶ Damages from restricted navigational access by deep draft vessels to Port of Portland and private marine terminals on the Willamette River, and the associated loss of public revenue when shipping entities instead choose to use other ports due to increased navigational costs in Portland Harbor and restrictions on the draft of ships entering the harbor
- ▶ Increased operational costs as shippers change their operation to accommodate reduced draft, maneuverability, etc., including vessels to move cautiously around obstructions whose removal has been delayed; vessels waiting for tidal windows to avoid transiting areas of reduced draft; and vessels undertaking lightering operations at the mouth of the Willamette River to enable vessels with a reduced draft to move into the harbor.

A second category of navigational service loss relates to increased dredging costs due to hazardous substances in the accumulated sediments. Damages for increased dredging costs could include:

- ▶ Increased costs of characterizing sediments in proposed dredge areas (e.g., increased number of chemical analyses and bioassays required)
- ▶ Increased dredging costs due to the need for different dredging and sediment handling methods, expanded monitoring requirements during dredging, and potentially the need for placing sand layers over post-dredging surfaces
- ▶ Increased costs for expanded post-dredge monitoring
- ▶ Increased dredge material disposal costs
  - Increased costs of upland disposal (instead of open water disposal)
  - Costs to design, permit, construct, and monitor local upland or in-water repositories appropriate for contaminated materials
  - If local constructed repositories are unavailable, increased costs for disposal at upland landfills.

The Trustees will consider past, interim, and future service losses and damages as follows:

- ▶ *Past* – Incremental costs due to contamination associated with navigational activities, including dredging between 1980 and start of cleanup/restoration
- ▶ *Interim* – Incremental costs due to contamination associated with navigational activities, including dredging between the start of cleanup/restoration and completion/recovery
- ▶ *Future* – Incremental costs expected to be associated with dredging after cleanup/recovery, such as additional disposal costs and more expensive operational requirements for dredging associated with the components of the remedy.

The Trustees expect that damages will include interim and future incremental costs for planning and implementing dredging and dredge material disposal. However, the Trustees will also consider damages from decreased access to Portland Harbor, including reduced revenue and/or increased shipping operations costs. Information to support assessment of service losses and damages for increased costs of channel maintenance is primarily available from records of the Corps and Port of Portland on the costs of planning and implementing dredging and disposal.

## References

Columbia River Pilots. 2009. Letter from Captain Paul Amos, President, Columbia River Pilots to Sheryl Carrubba, Operations Manager, Channels and Harbors, U.S. Army Corps of Engineers, Portland, OR. February 27.

Corps. 2008. Willamette River Dredged Material Management Plan Suspended. News Release from Portland District of U.S. Army Corps of Engineers. Jennifer Sowell. September 18.

Global Trade Information Services. 2008. World Trade Atlas.

Martin Associates. 2007. The Local and Regional Economic Impacts of the Port of Portland, 2006. Prepared for the Port of Portland by Martin Associates. January 31.