Attachment A
Portland Harbor Natural Resource Damage Assessment
Phase 2 Action Plan
June 1, 2010

I. Interaction between Natural Resource Trustees (Trustees) and Participating Parties (PPs)

The Trustees' proposed approach to interaction with PPs seeks to balance the need for in-person discussions with the practical need for cost-effectiveness. As discussed below, the Trustees propose to hold four quarterly meetings per year and interact with PPs in between these meetings via written materials and telephone conference calls.

The Phase 2 process will begin with a kickoff meeting, held within a month of the initiation of Phase 2, at which dates will be set for the remaining quarterly meetings. At this meeting, the Trustees will propose to the PPs a schedule for discussing key topics relevant to habitat equivalency analyses (HEA), resource equivalency analyses (REA), and benefits transfer (BT) for the Portland Harbor (PH) natural resource damage assessment (NRDA). At the first quarterly meeting, the Trustees will also present their initial views on a number of HEA, REA, and BT topics, as time permits. Topics highlighted in bold text in Part II of this Action Plan will be priorities for Trustee focus in the first quarterly meeting. Topics addressed in subsequent meetings will be determined following the first meeting.

At subsequent quarterly meetings, the Trustees will continue to share their views about HEA, REA, and BT topics, augmented where appropriate by written materials provided in advance of meetings. The Trustees will entertain real-time comments at meetings, written materials after meetings, and presentations at subsequent meetings, and the Trustees will provide the PPs with modified positions, as appropriate, in subsequent written materials or presentations at quarterly meetings.

The Trustees intend to reach refined initial positions (modified as appropriate by information from PPs) on all of the key inputs to, and outputs from, HEA, REA, and BT for PH during the first year, regardless of whether consensus can be reached between Trustees and PPs on all issues, so that all parties can begin to understand the implications of these positions for the subsequent analyses. The Trustees will document their positions and the areas of agreement with PPs and will take comments on this documentation. At the end of the first year, the Trustees will

provide a preliminary estimate of potential natural resource damages based on the Trustees' positions on all of the key inputs.

During the second year, the Trustees and the PPs will focus on narrowing and resolving any areas of disagreement regarding the HEA, REA, and BT. This will be accomplished by examining the effect of disagreements on bottom-line outcomes (e.g., determining how restoration costs or recreational values vary with different assumptions) with the goal of identifying cost-effective, affordable restoration projects that would overcome uncertainties and disagreements to the mutual satisfaction of Trustees and PPs. However, the Trustees will also consider options for analytical refinements and/or data collections, which could be accomplished during the second year. The Trustees will provide a final estimate of potential natural resource damages (for settlement purposes), along with all calculations, supporting data, and related materials needed by the allocation team to perform an allocation, in the second year. The Trustees will strive to complete this estimate by six months into the second year; however, the exact date will depend on the nature and extent of discussions with PPs.[1] The Trustees will also be identifying realistic restoration opportunities for actual settlements with particular PPs at or around the time of the U.S. Environmental Protection Agency (EPA) ROD. Work by the Trustees on restoration planning is expected to extend into the third year. Furthermore, the Trustees will determine whether any formal agreements (e.g., restoration implementation agreements) other than settlements are necessary. The Trustees and PPs will begin work on a settlement template in Year 1.

II. Specific Topics that the Trustees Will Address during Phase 2[2]

At the kickoff meeting, the Trustees will propose a schedule for addressing topics listed below during the first year.

A. HEA debit[3]

1. HEA tools [e.g., spreadsheet, geographic information system (GIS) to be used]
2. Discount rate
3. Time period
   - **a. Initial accounting of injuries**
   - b. Projected time to recovery (will likely vary according to alternative remedial scenarios)

1. This schedule assumes a remedial Record of Decision (ROD) date of December 2012. If the ROD is delayed, there may be additional flexibility in this schedule to resolve inputs and issues.

2. Section 22 of the Phase 2 budget narrative is relevant to all of the topics that follow.

3. Sections 25, 29, 30–33, and 44–49 of the Phase 2 budget narrative are relevant to this topic.

4. Areas to be included in the HEA debit

5. List of hazardous substances to be included in an analysis of sediment concentrations

6. Determining relative ecological values (see Section E, HEA credit)

7. Thresholds
   - **a. Species to be incorporated**
     - **i. What key species can be incorporated?**
     - **ii. Evaluate whether to include wildlife species (e.g., bald eagle, osprey, mink, river otter) in HEA or conduct separate REA**
   - b. Standards and existing threshold values
   - c. Literature relevant to potential newly calculated thresholds
   - d. Relevant Phase 1 data
   - e. Species not covered by existing standards, thresholds, literature, or data: integrate into HEA or separate REA?

8. Key resources and services of Tribal interest
   - **a. Evaluate potential gathering/fishing service losses for key resources (lamprey and salmon) distinct from general recreational fishing**
   - b. Evaluate HEA/REA to ensure that they adequately reflect tribal resources

9. Current percent service loss estimates
   - a. What range seems plausible, based on holistic review of existing standards, thresholds, and literature and in light of the concentrations measured in PH?
   - b. How to integrate information relevant for benthic invertebrates with information relevant for vertebrate species
   - c. Method for integration of thresholds for multiple contaminants

10. Past and future percent service losses
    a. Integration of current average percent service loss
    b. Shape of recovery curve
    c. Estimation of past service losses relative to current based on historical records of earlier releases, contamination data from before remedial investigation (RI; if sufficient), sediment cores (if relevant and appropriate), river modeling (if sufficient)
    d. Estimation of future service losses based on no action and reasonable assumptions about cleanup [including ongoing modeling from the RI and feasibility study (FS)]

B. BT debit[4]

1. BT tool (e.g., spreadsheet to be used)
2. Discount rate
3. Time period
    a. Initial accounting of injuries
    b. Projected time to recovery (may differ for no-action and reasonable remedial scenarios)
4. Categories of loss that could be included based on literature (e.g., recreation categories; local uses)
5. Categories of public to be included in the analysis (e.g., anglers, other recreational users, tribal members, general public)
6. What specific data and literature are available to estimate numbers of people in the relevant categories?
    a. Geographical area
    b. Creel data
    c. Other recreational use data
    d. Census data
7. What information is available to develop a change in use?
    a. Site-specific information on likely change in use
    b. Typical change in use from relevant literature
8. What are the criteria for literature inclusion and selection?
    a. Criteria for change in use levels literature
    b. Criteria for change in the value of trips literature
9. Transformations of values
    a. Over time
    b. Over distance from site
    c. To account for differences between other sites with literature and PH

4. Sections 34–38 and 39–43 of the Phase 2 budget narrative are relevant to this topic.

d. Transfer of point estimates or value functions

10. Value-to-cost or value-to-value (and how to estimate restoration values if the latter)?

C. Navigation debit[5]

1. Geographical footprint (study area, further downstream, further upstream, federally-authorized areas versus other areas)
2. Categories of loss to be included (State proposal, others)
3. Cost methodologies and available data

D. Restoration opportunities[6]

1. Refinement of the current list of Trustee projects and priorities (including how to include projects or project components best suited to offset tribal, recreational, and navigational losses)
2. How to sequence projects within Study Area versus those in the larger geographic area (with the latter comprising no more than half of the total)
3. Continue to identify additional projects, particularly in the larger geographic area[7]
4. How to determine practical obstacles and realistic costs for priority restoration projects

E. HEA credit[8]

1. Determining the footprint area of specific high-priority projects
2. Determining relative ecological values
a. Injured PH habitats
b. Project areas before restoration
c. Project areas following restoration
d. Ideal habitats
3. Integrating habitat needs for different species, including wildlife species
4. Balancing and integrating ecological priorities with tribal priorities, recreational priorities, and navigational priorities
5. Determining the timeline of improvement caused by restoration activities
a. Restoration
b. Preservation to avoid practically-predicted losses

5. Section 76 of the Phase 2 budget narrative is relevant to this topic.

6. Sections 59–69 of the Phase 2 budget narrative are relevant to this topic.

7. The Trustees are currently working to identify restoration projects outside of the study area.

8. Sections 70–74 of the Phase 2 budget narrative are relevant to this topic.

6. Representative restoration projects to evaluate the average cost per discounted service acre-year (DSAY; inside and outside of the Study Area)
7. Banking DSAYs (as DSAYs or cash equivalent), cashing out DSAY debits, BT values, and navigational costs (including how to practically avoid any obvious double counting)

F. Overarching issues[9]

1. Baseline
- **a. Accounting for contamination not released by PPs**
- **b. Accounting for losses (e.g., habitat degradation) not caused by contamination or required cleanup**

2. Uncertainty and disputes
   a. What processes may be used to determine an acceptable range of uncertainty, or what specific methods can be used to resolve disagreements about uncertainty?
   b. Can cost-effective, affordable restoration projects be identified, that will limit the need for disputes?
3. Avoiding double counting
   a. Integrating navigation debit, BT debit, REA debit, and HEA debit
   b. Determining the scale of restoration

III. Additional Provisions

A. Meeting logistics

The Trustees will make their best effort to send an agenda for each quarterly meeting along with written materials and any presentation(s) to the PPs two weeks in advance of each meeting. PPs may submit comments on the information provided one week in advance of each meeting.

A notetaker will be present at each meeting to develop detailed notes from each meeting and to record areas of agreement and disagreement between the Trustees and PPs. The Trustees and PPs will strive to reach agreement on HEA, REA, and BT inputs. However, in order to ensure that all of the issues outlined in Section II above are addressed in Year 1, the Trustees reserve the right to cut off debate on an issue, note the specific disagreement, and move on to the next issue. Specific areas of disagreement will be revisited in Year 2.

The Trustees and PPs will consider convening small technical groups to address areas of disagreement if it is determined that such a group would help achieve consensus.

B. PP access to tools utilized in the Assessment

9. Sections 27 and 28 of the Phase 2 budget narrative are relevant to this topic.

PPs will be provided access to Trustee analyses and electronic files used by the Trustees to develop those analyses, including tools and datasets developed in a Geographic Information System (GIS) for HEA analyses.

C. Opportunities for technical input by PPs

As described above, the Trustees will develop initial positions on inputs to the HEA, REA, and BT analyses and present these positions at the quarterly meetings. Through this process, the PPs will have opportunities to review the sources for inputs to these models and provide feedback on those sources, as well as propose alternative sources and inputs.

D. Use of technical neutral

The Trustees will consider utilizing a technical neutral in Year 2 to help resolve disagreements between the Trustees and PPs. Any costs associated with the use of a technical neutral are not part of the Trustees' Phase 2 budget and will be funded separately by the PPs. The Trustees and PPs must all agree to the use of a technical neutral to resolve a specific issue.

If the Trustees and PPs agree to the use of a technical neutral on a specific issue, the technical neutral will be asked to attend a half-day meeting with the Trustees and PPs. At this meeting, the parties will have an opportunity to present their positions. The technical neutral will render a binding opinion within two weeks after that meeting unless the parties agree to a different schedule.

The Trustees and PPs will work to identify a short list of potential technical neutrals to address specific issues that may arise. This will be done in Year 1.