I. Background

The Ross Island project is one of several initiatives by the Lower Columbia Solutions Group (LCSG) to explore, identify and implement sustainable dredge material disposal projects. The Ross Island project meets LCSG’s project selection criteria and furthers the group’s desire to explore the feasibility for small, consensus demonstration sites that test the potential for in-water disposal of dredge materials for ecosystem management, including habitat restoration. Accordingly, the LCSG agreed in its December 2002 Agreement Document to form a project team to look at whether and how Lower Columbia River maintenance dredge material could be used as a source of fill for the reclamation of Ross Island.

The Ross Island project team was established through Oregon Solutions. Northwest Power Planning and Conservation Council member and former state senator Gene Derfler was appointed by Governor Ted Kulongoski to convene the process. Partners include Ross Island Sand & Gravel (RISG), the Oregon Department of Environmental Quality (DEQ), the Oregon Division of State Lands (DSL), the Port of Portland, the U.S. Army Corps of Engineers (COE), and the City of Portland.

II. Project Description

In June 2003, DSL issued a revised Removal-Fill Permit (RF-26) to RISG authorizing reclamation of Ross Island in accordance with a revised reclamation plan submitted to the state in September 2002. The revised reclamation plan was developed over a two-year period through a collaborative process guided by the Ross Island Reclamation Plan Advisory Committee.

The stated goals of the revised reclamation plan are to:

1. Protect and enhance anadromous fish and wildlife habitat values of the islands;
2. Protect surface water and groundwater resources;
3. Protect the structural integrity of the islands; and
4. Preserve options for future public ownership and benefit.

The plan proposes to achieve reclamation goals through the following actions:

- The placement of approximately 4.5 million cubic yards of reclamation fill at the island over a ten-year period;
- Grading to create more diversity in upland elevations and make the current shoreline more irregular;
- Providing for a very gradual transition from upland to water to support emergent wetland vegetation;
• Creating a mosaic of habitat types including forest, emergent wetland, riparian and shallow water; and
• Allowing continued natural deposition of sediments over time in the Ross Island lagoon.

The revised Ross Island reclamation plan identifies Columbia River maintenance dredge material as a major (up to 2.0 million cubic yards of the 4.6 million total) potential source of the fill material required to achieve reclamation goals.

III. Oregon Solutions Ross Island Project Objectives

The objectives of the Oregon Solutions Ross Island project are to 1) clarify agency policy, environmental and transportation questions related to the feasibility of using Lower Columbia River maintenance dredge material as a source of reclamation fill at Ross Island; 2) obtain commitments from key partners regarding resolution of these questions and issues; and 3) develop a plan for next steps.

IV. Description of Lower Columbia Solutions Group Ross Island Project Process

The Ross Island project team met four times over a period of several months. Each meeting focused on a different policy issue or set of issues. Team members from relevant agencies provided background and identified important technical and policy considerations, which were discussed in detail by the team. Where possible, potential next steps were identified.

V. Issues

The following issues were identified and discussed by the project team:

A. Fill Quality Issues – RISG has committed to use only clean or “Class A” material, as defined by DEQ, for reclamation fill at Ross Island. DEQ has not made a formal determination regarding whether Columbia River dredge material meets agency standards for “Class A” fill. The Ross Island team looked at DEQ definitions of Class A fill, reviewed data developed by the COE on Columbia River dredge material, and identified a process and timeline for reaching a formal agency determination.

B. Cost Issues - Ross Island is located over 100 miles from the mouth of the Columbia River. According to RISG, the cost of transporting dredged material for this distance, including removing the material from the channel and placing it at Ross Island, is about $5.00/cy. RISG’s target cost for reclamation fill is $2.85/cy. In order for RISG to cost competitively use material from the Lower Columbia, a means must be found to bridge the gap between RISG’s target cost and the higher cost of transporting the material from the lower river. Among the options discussed for bridging the gap were cost-sharing with the COE under existing authorities or pursuing special legislation.
C. **State Royalties** - The State of Oregon, through DSL, requires a waterway lease and charges a royalty fee for removal of material from waters of the state, including the Oregon portion of the Columbia River. The team reviewed several leasing and royalty issues relevant to the placement of lower Columbia River dredge material at Ross Island.

D. **Rice Island** - Rice Island has been a key site for disposal of Columbia River maintenance dredge materials for many years, but will reach capacity within 5-15 years (depending on whether the site can be expanded beyond its existing footprint). A separate Lower Columbia Solutions Group team has examined the question of increasing the capacity of Rice Island to handle additional dredge materials by developing markets for the material currently at the site. The Ross Island team was briefed on the Rice Island cooperative agreement and discussed policy and economic issues related to the use of sand from Rice Island as reclamation fill at Ross Island.

VI. Outcomes

A. **Fill Quality**

DEQ’s fill classification system for Ross Island, and its applicability to lower Columbia dredge materials, was clarified through this process. The system defines four levels or classes of fill quality. The current process for evaluating Ross Island fill parallels the Dredged Material Evaluation Framework, with three tiers of review – chemical screening, biological testing, and site specific risk assessment. Class A fill is defined as posing no unacceptable risk to human health or the environment regardless of placement location. Based upon its preliminary evaluation of COE sediment quality data for samples taken from various locations in the lower Columbia, DEQ believes that Columbia River in-channel maintenance dredge material will qualify as “Class A” without additional testing.

The following steps were identified to move toward a formal determination:

- Re-review the COE data – DEQ will meet with the COE to make sure the data are accurate, examine maps of sampling locations and review the characterization process (from Bonneville Dam to the lower Columbia).
- Resolve issues with detection limits – Also working with the COE, DEQ will review data already provided and look at additional data, including where the sample was taken from, what standards apply, and detection limits.
- Draft DEQ approval letter as the formal mechanism for identifying the material as Class A.
B. Cost Issues

The group identified cost as a significant obstacle to using lower Columbia maintenance material as reclamation fill at Ross Island. As noted, RISG has identified a target cost of $2.85/cy for reclamation fill (including handling, barge fuel and labor costs). The company has calculated the cost of removing dredged material from various distances, then transporting them to Ross Island as follows:

<table>
<thead>
<tr>
<th>Distance from Ross Island</th>
<th>Cost Per Cubic Yard (cy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 miles</td>
<td>$2.00/cy</td>
</tr>
<tr>
<td>25 miles</td>
<td>$2.27/cy</td>
</tr>
<tr>
<td>45 miles</td>
<td>$2.85/cy</td>
</tr>
<tr>
<td>55 miles</td>
<td>$3.32/cy</td>
</tr>
<tr>
<td>Mouth of the Columbia River</td>
<td>$4.85/cy</td>
</tr>
</tbody>
</table>

The group discussed three scenarios for improving the financial feasibility of using lower Columbia material at Ross Island.

- **Beneficial use.** The Corps of Engineers shares costs and provides grants for placement of dredged material for environmental purposes under sections 204, 1135 or 206 of the Water Resources Development Act (as amended). All these authorities require a public or non-profit partner. Under these authorities, the COE would only be able to cost-share acres of habitat created over and above the 22 acres of wetland RISG has committed to develop under its approved reclamation plan with the State of Oregon.

- **Least cost dredge disposal.** This is an unlikely scenario given Ross Island’s distance from the lower river. However, once Rice Island reaches capacity, it is possible that the cost of alternative disposal sites for this stretch of the river may exceed the incremental cost to the COE of using Ross Island as a disposal site.

- **Rice Island.** The team discussed whether there is a definable public benefit to extending the future disposal capacity of Rice Island by excavating sand from the island and placing it at suitable alternative disposal sites, including Ross Island. Recognition of such a benefit could provide a rationale for special legislation and/or appropriation to enable high prioritization for Federal O&M expenditures for a portion of the cost. The team concluded, however, that current project sponsors (lower Columbia ports, including the Port of Portland) would find it difficult to press for this plan over other high priority work needing funding while Rice Island still has disposal capacity.

The team also discussed the implications for Ross Island of the cooperative agreement developed by the Lower Columbia Solutions Group Rice Island project team. The primary goal of the Rice Island team was to ensure continued dredge disposal capacity at Rice Island. To achieve that goal, DSL, the Port of Astoria and the Port of Portland have entered into an intergovernmental agreement.
authorizing the two ports to market sand from Rice Island. Under the agreement, DSL may issue the ports an exclusive license for the state-owned sand, and the ports may develop infrastructure to improve the marketability of the sand. A state royalty fee will be charged when applicable.

A fundamental policy question related to the financial feasibility of using lower Columbia River maintenance dredge materials as reclamation fill at Ross Island is whether, and to what degree, the public sector should share in the cost of reclaiming Ross Island. In the case of COE participation under its existing environmental restoration authority, it is clear that the public could only share in restoration above and beyond that required under the current state permit. In the “least cost” example, total cost of an alternative that includes disposal at Ross Island would need to be less than the cost of all other alternatives, so that there would be no additional cost to the public.

In the Rice Island scenario, the public interest issue hinges on the value to the public of expanding the capacity of Rice Island and deferring the cost of developing alternative dredge disposal sites for this section of the river. What, if anything, is the value to the public of RISG using Rice Island sand instead of lower cost material located closer to the island? If alternative markets develop for Rice Island sand as a result of the Rice Island cooperative agreement, there is no value to the public in using the sand at Ross Island instead. If such markets do not develop and if lower cost alternatives for Rice Island will not be available, there may be value to the general public in the long-term.

C. **State Royalties**

Recently enacted legislation (HB 2688) clarifies that certain beneficial uses are clearly exempt from state royalty fees if they are “solely for a public purpose by a political subdivision”, and authorizes DSL to establish royalty amounts for non-exempt uses. DSL and the State Land Board will initiate administrative rule-making later this year to implement the legislation. DSL encouraged RISG to participate in the rule-making process to highlight the policy questions surrounding “beneficial use” and raise the question of reduced royalty rates for uses addressing both public and commercial purposes.

D. **Rice Island**

Major issues related to Rice Island are discussed under the “Cost Issues” section, above. Based on initial review, it appears that the cost of acquiring sand from Rice Island will be prohibitive for RISG. However, the Ross Island project team has encouraged the company to consider the value of having a large, clean, reliable source of fill for the life of the project and to factor reduced handling costs (due to the new infrastructure at Rice Island) into its overall cost calculations.
VII. Conclusion and Next Steps

The members of the Lower Columbia Solutions Group Ross Island Project agree to the following next steps toward the objective of using Lower Columbia River maintenance dredge material as reclamation fill at Ross Island:

A. Conduct (additional) review of COE sediment quality data from the Columbia River to confirm that in-channel maintenance dredge material from the Columbia River navigation channel, qualifies as “Class A” material suitable for placement at Ross Island without further testing.

Party Responsible: DEQ
Key Result: Confirmation of material as “Class A”.
Timetable: February 13, 2004

B. Pending satisfactory determination regarding sediment quality under A, issue formal DEQ approval letter.

Party Responsible: DEQ
Key Result: Formal letter of determination.
Timetable: March 5, 2004

C. Conduct an analysis of the cost to contract with RISG to dredge and dispose of material from river miles 18-26 (that area currently served by Rice Island) including Harrington Sump, at Ross Island as an alternative to regular disposal practices.

Parties Responsible: COE & RISG & the Port of Portland
Key Result: Technical memo describing cost and factors considered.
Timetable: February 29, 2004

D. Identify opportunities, costs and benefits associated with RISG’s acquisition of Rice Island material under the terms of the Rice Island marketing agreement between DSL, the Port of Portland and the Port of Astoria. Responsible parties to consider the following:

- Advantages to RISG of certainty of Rice Island as a clean, high volume source of reclamation fill material, and cost reductions due to infrastructure placed at Rice Island pursuant to the Rice Island management agreement between DSL and the ports; and
- Advantages to the ports of having a guaranteed market for a significant quantity of Rice Island material.

Parties Responsible: RISG and the Ports of Astoria and Portland
Key Result: Possible agreement; clear identification of opportunities and constraints
Timetable: March 30, 2004
E. Involve RISG and other Lower Columbia Solutions Group stakeholders in discussions of beneficial use/non-exempt royalty issues and definitions related to administrative rulemaking to implement HB 2688.

Party Responsible: DSL  
Key Result: Stakeholder participation in rule-making  
Timetable: Spring 2004

F. Report back to the Lower Columbia Solutions group on progress made in implementing these actions, and any other activities related to using lower Columbia River maintenance dredge materials as a source of reclamation fill at Ross Island.

Party Responsible: Gene Derfler  
Key Result: Report to LCSG  
Timetable: May 30, 2004

VIII. Signatures