

## **Progress Report on Regional Sediment Planning**

Prepared for Lower Columbia Solutions Group

November 29, 2007 Meeting

### **Background**

In 2006, a subcommittee of the Lower Columbia Solutions Group began an investigation of what a regional sediment management plan would contain and what benefits would accrue from a planning process. Since then, the subcommittee has overseen the development of two reports to help clarify issues and move the planning process forward.

Historically, dredged materials were placed in the most economical locations, which often were on the banks of rivers, or alongside the channel in rivers, bays, and estuaries resulting in submerged features and island formations. More recently environmental concerns over the effects of open water or unconfined placement resulted in sediment being put in confined areas both upland and aquatic. In dredging to maintain navigability, some sediment is now put in deeper offshore waters. However, these practices do not necessarily consider regional sediment issues. For example, taking sediment to a deep water disposal site off the Oregon coast removes it from the littoral zone where it may be needed for sustaining beaches, jetties and habitats. The result may be an optimized, least-cost project, but possibly not the best solution for the region if the goal is to management sediments for economic and ecological beneficial uses. Regional sediment management is the practice of making the best local project decisions within the context of a regional plan that maximizes regional benefits and/or reduces regional cost.

### **Regional Sediment Planning goals**

As a starting point to provide direction for developing a sediment management plan, the LCSG identified three important goals:

1. To develop a plan to manage the removal and placement of sediment in a manner that balances all components of the sediment budget of the river system,
2. To maximize the beneficial use<sup>1</sup> of sediments for maintaining river functions, providing habitat, nourishing beaches and the littoral cell, and providing materials for construction and land reclamation.
3. To develop the administrative, economic and logistical infrastructure needed to support the implementation of the plan.

### **Efforts Currently Underway**

Several independent but related efforts are underway that support regional sediment planning efforts. The draft Declaration of Cooperation document has been helpful in highlighting planning issues that require resolution and common agreement prior to actual sediment planning. Currently, the document is still being discussed and refined by the interests to ensure its value to the Solutions Group and others.

The **Lower Columbia River Estuary Partnership** has developed a Restoration Framework to help analyze the quantity and quality of habitats in the lower river. In addition, the Partnership has developed complementary tools for GIS analysis including digital videography of shorelines, bathymetry data, Lidar, and geo-referenced historical surveys. Recent efforts to explore mainstem restoration techniques have led to increased interest in removing derelict pile structures and the creation and/or expansion of tidal marsh in dredge materials. An increasing awareness of the role of sediment (bedload and suspended) in salmonid habitat maintenance, restoration, and creation has motivated the Estuary Partnership to expand its interest in sediment planning and the development of a sediment budget for the lower river. The Estuary Partnership is also leading efforts to monitor toxic

---

<sup>1</sup> Beneficial use: one of the important work tasks for development of the Sediment Plan will be developing a clear definition of this term.

contaminants throughout the lower river and to help CREST and the Ports identify potential solutions for the disposal of contaminated sediments.

The **Portland District of the US Army Corps of Engineers** recently submitted two grants to its Headquarters in Washington DC for sediment-related restoration efforts. While the grants are relatively modest (approximately \$50,000 each), if funded they will help move habitat restoration and creation efforts in the lower Columbia River forward. The two grants explore the feasibility of removing derelict Corps pile structures and also help explore the creation of tidal marsh using dredged materials. These two approaches to sediment management may play a prominent role in regional sediment planning in the lower river.

The **Corps, the Port of Portland, and the Lower Columbia River Estuary Partnership** recently met to discuss habitat creation/expansion using dredged materials. The purpose of the meeting was to share information and identify potential partnership opportunities.

The **Washington Department of Ecology** is assisting the sediment planning effort by initiating discussions with key scientists to help define parameters of a sediment budget for the lower Columbia River. Ecology staff attended a Regional Sediment Budget workshop in Mobile, Alabama last August, and then followed up with discussions between the US Geological Survey and Ecology scientists. These continuing efforts to define the questions that could be answered by a sediment budget will be fundamental to the planning process.

**USGS-Geologic Division** is developing a hydrodynamic model for the lower river. They have expressed interest to the Estuary Partnership to link this with a broader effort of regional sediment management planning. Potentially this model could be used as the backbone to such a plan. USGS also has articulated the need for a sediment management plan to integrate pile dike removal work being contemplated.

### **Next Steps**

Over the next month, the most important step in sediment planning will be to use the Declaration of Cooperation document to clearly establish roles and commitments by sediment planning interests. Once agreed upon, the document will provide a solid foundation to initiate planning activities and secure planning resources.

### **LCSG Role**

At the November 29 meeting, the LCSG be asked to provide any suggested changes for the draft Declaration of Cooperation, affirm roles and contributions of each signatory, and give approval for signing the Declaration at the LCSG's January 2008 meeting.

In addition, a LCSG subgroup will be identified to develop a congressional funding request to support regional sediment planning (as well as other LCSG projects), for full LCSG review and approval in January. The subgroup's goal will be to prepare a comprehensive, collaborative request that maximizes the resources that could come to our region while avoiding competition in revenue streams.