COLUMBIA NEAR-SHORE
BENEFICIAL USE PROJECT

PROPOSED SCOPE OF WORK

SUMMARY

This group of public and private sector participants will engage in a collaborative process to explore the use of lower Columbia River maintenance dredge material to address the depletion of the natural sand volumes in the near-shore environment off of the South Jetty of the Columbia River. The broadly representative group of partners will work with a team of technical experts to balance economic, navigational, environmental, and operational concerns. The project includes:

- Working with Oregon and Washington agencies to identify and describe a "regulatory roadmap" that must be followed to establish near shore disposal;
- Developing a plan for the experimental testing of various methods of near shore dispersal in 2004; and
- Identifying the criteria and methods for evaluating the results of that testing.

The project will be convened by Jim Bergeron, a retired Sea Grant agent and currently a Port of Astoria Commissioner. Project support is provided by Steve Greenwood from Oregon Solutions.

The challenge

Chronic erosion to the Columbia River north spit and along Clatsop Plains has increased, along with the potential for a breach at the south jetty. The objective of this disposal action would be for these sediments to re-nourish beaches along northern Clatsop Spit and to rebuild the offshore berm to protect the jetty.

A recent white paper titled “Columbia River Littoral Cell – Technical Implications of Channel Deepening and Dredge Disposal”, by the Oregon Department of Geology and Mineral Industries (DOGAMI), describes the changes to the system over the past century. The DOGAMI study summarizes a body of research regarding the erosion that has resulted due to the reduction in sediment to the system from the Columbia River.

Studies indicate that there is a loss of offshore sediment to the mid-continental shelf and near shore region offshore from the Clatsop Plains and that the sediment is being transported northwards along the coast and into the lower Columbia River estuary. The deepening of the bathymetry offshore from the Clatsop coastline has subsequently resulted in greater wave energy being focused on the jetty and the ocean shore.

The ongoing erosion offshore from Clatsop Spit and adjacent areas has prompted the USACE to be concerned that the south jetty may eventually be undermined through toe erosion. The jetty is constructed on a sand bar, making it susceptible to erosion. There is long-standing concern that the more narrow northern end of the spit could be breached, resulting in the formation of a second river mouth. The placement of Columbia River dredge material in the near shore area adjacent to the jetty and along the north end of the Clatsop spit (as opposed to the current deep-water ocean disposal sites) may help to slow this process and prevent further damage to the jetty or erosion of the ocean shore beach.

Columbia Near-shore project tasks

1. *Working with Oregon and Washington agencies to identify and describe a "regulatory roadmap" that must be followed to establish near shore disposal*

   The project team will examine the administrative and technical review processes that would be required to obtain regulatory and planning authorization to create a designated dredge material disposal site(s), for the disposal and monitoring of dredged material in the near shore area along the northern Clatsop Spit.

   This work will include: legal mandates, implementation requirements, information needs, sequencing, timeline and notification requirements, coordination issues, public participation, and other relevant information. In particular, we will work with the regulatory agencies to explore how the various planning and regulatory processes could best be aligned and coordinated.

   The regulatory roadmap will indicate the types of data and information that must be generated to satisfy all site planning and regulatory requirements.

2. *Collect and analyze existing technical and natural resource information*

   There will need to be a review of current information on the status of benthic and biologic resources that could be affected by the disposal of dredged material in the near shore environment. The review should address if there are any information gaps or needs that must be met to satisfy the analysis of resource or use impacts and project alternatives.

   A separate technical/scientific committee will be used to help assess these information needs, as well as helping identify the parameters to be evaluated as part of the experimental testing in #3, below.

3. *Developing a plan for the experimental testing of various methods of near shore dispersal in 2004*

   The committee will recommend both methods of disposal and locations of disposal for experimental testing to be conducted by the U.S. Army Corps of Engineers in the summer/fall of 2004. In addition, with the help of the technical/science team, the committee will outline the various parameters to be evaluated, and methods of evaluation, for the experimental testing.

4. *Coordinate with other regional dredge material disposal/beneficial use planning*

   The committee will address how establishing a near shore disposal site along the Oregon Clatsop Plains would fit into the regional plan for dredge sediment management currently being developed by the U.S. Army Corps of Engineers. In addition, the Lower Columbia Solutions Group is developing a lower Columbia *beneficial use* plan for dredged material.

   This effort needs to coordinate with both of those, in part to preclude redundant efforts, but also to take advantage of mutually beneficial information.