Baseline Information Findings To Support Development of a Regional Upland Disposal Plan

Prepared for:

Lower Columbia Solutions Group
Toxics Subcommittee

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Prepared by:

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Executive Summary

This report was prepared for the Lower Columbia Solutions Group (LCSG) to present findings from meetings with the ports in the lower Columbia River. These findings will assist the LCSG in the development of a Regional Upland Disposal Plan by providing baseline information on the lower Columbia River ports' upland dredge material management needs.

Acknowledgements

CREST would like to acknowledge the contribution of the following ports and agencies for their assistance in the development of this report.

Ports
Port of Astoria
Port of Portland
Port of St. Helen
Port of Ilwaco
Port of Chinook
Port of Longview
Port of Kalama
Port of Ridgefield
Port of Woodland
Port of Wahkiakum #1
Port of Wahkiakum #2
Port of Vancouver

Agencies and Organizations
Lower Columbia River Estuary Partnership (LCREP)
Oregon Department of Environmental Quality (DEQ)
US Army Corps of Engineers, Portland District

Individuals
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Scott McEwen, LCREP
Dianne Perry, Port of Portland

Contents

Figures

Tables

Appendixes

Acronyms

CDF - Confined Disposal Facility

CREST - Columbia River Estuary Study Taskforce

DEQ – Department of Environmental Quality

DSL – Division of State Lands

LCSG – Lower Columbia Solutions Group

LCREP – Lower Columbia River Estuary Partnership

Definitions

Confined Disposal Facility - Includes any disposal location where dredged material is contained, upland, in-water, or nearshore. Such disposal involves the controlled placement of the dredged material at a designated dredged material disposal site. Such a process may involve the construction of levees or other holding facilities as a means of containing the material.

Contaminated Sediment – Sediments that have been tested to Tier II testing requirements and sediments that contain enough contaminants that they are not suitable for unconfined in-water disposal, but are not hazardous or regulated under a clean-up program.

Dredging – The removal of sediment or other material from an aquatic area for the purpose of deepening the area, obtaining fill material, or maintaining existing structures.

Dredged material - Sediments, sand, gravel and other solids removed from an aquatic area.

Dredged material disposal - Deposition of dredged material in aquatic or upland areas.

Flow-lane Disposal - In-water deposition of dredged material in or adjacent to the maintained navigation channel. Flow-lane disposal is allowed only in development management units between 20 and 65 feet below Mean Low Low Water (MLLW).

In-water Disposal - Deposition of dredged material in a body of water. Methods include: beach nourishment, flow-lane disposal, estuarine open-water disposal, in-water sump disposal, and agitation dredging and ocean disposal.

Maintenance Dredging - Dredging of a channel, basin, or other water-dependent facility which has been dredged before and is currently in use or operation or has been in use or

operation sometime during the past five years, provided that the dredging does not deepen the facility beyond its previously authorized or approved depth plus customary advanced maintenance dredging.

Upland Disposal - Deposition of dredged material on uplands or shorelands, including on the top and landward sides of flood control levees.

1.0 Introduction

This report was prepared for the Lower Columbia Solutions Group (LCSG). The LCSG is a bi-state organization comprised of local, state, and federal governmental and non-governmental stakeholders. The LCSG was formed by the Governors of Washington and Oregon to address dredge material disposal activities in the lower Columbia River area.

The purpose of the LCSG is to serve as a bi-state clearing house to coordinate policy, projects, and research related to dredge material disposal and management. In April 2006, the Lower Columbia Solutions Group charged a subcommittee with exploring the potential for a project to address the contaminated sediment issues. This subcommittee has been come to be known as the "Toxics Subcommittee".

The issue of contaminated sediment has become more prevalent in the lower Columbia River as maintenance dredging needs in existing channels and berthing areas and expansion and modernization of ports, harbors, and marinas continues. Some of the sediments dredged from these areas contain elevated levels of heavy metals, pesticides, and other contaminants. In most cases, the concentrations of these contaminants do not approach hazardous levels. However, the sediments contain enough contaminants that they are not suitable for unconfined in-water disposal. Disposal of any contaminated dredged materials requires special management, permitting, and disposal practices.

The LCSG Toxics subcommittee identified a Regional Upland Disposal Plan as an appropriate project for the LCSG to get involved in. A Regional Upland Disposal Plan would identify shared upland disposal sites for ports and other users in the lower Columbia River, located in areas that make sense for the environment, nearby communities, and the ports (considering transportation and disposal costs). Additionally, the plan would address regulatory issues in siting and managing a regional upland disposal site for contaminated sediments in order to streamline the permitting process and coordinate management of these sediments.

1.1 Purpose of this Report

The purpose of this report is to help define the issue. This will be done by presenting baseline data related to current upland disposal practices and contaminated sediment issues facing ports in the lower Columbia River. To help clarify the issue, this report seeks to address the following questions:

1. *How many ports should or could be a part of a Regional Upland Disposal Plan?*
2. *How much sediment is dredged from these ports each year and how much of that material must be disposed of at upland sites due to contamination?*
3. *Which upland disposal facilities are these ports currently using, and how much longer are those facilities expected to meet the ports' need for upland disposal?*
4. *What cost efficiencies, environmental protections/benefits, and community benefits could be gained through coordinated regional upland disposal planning, and how can we maximize those efficiencies, protections and benefits?*

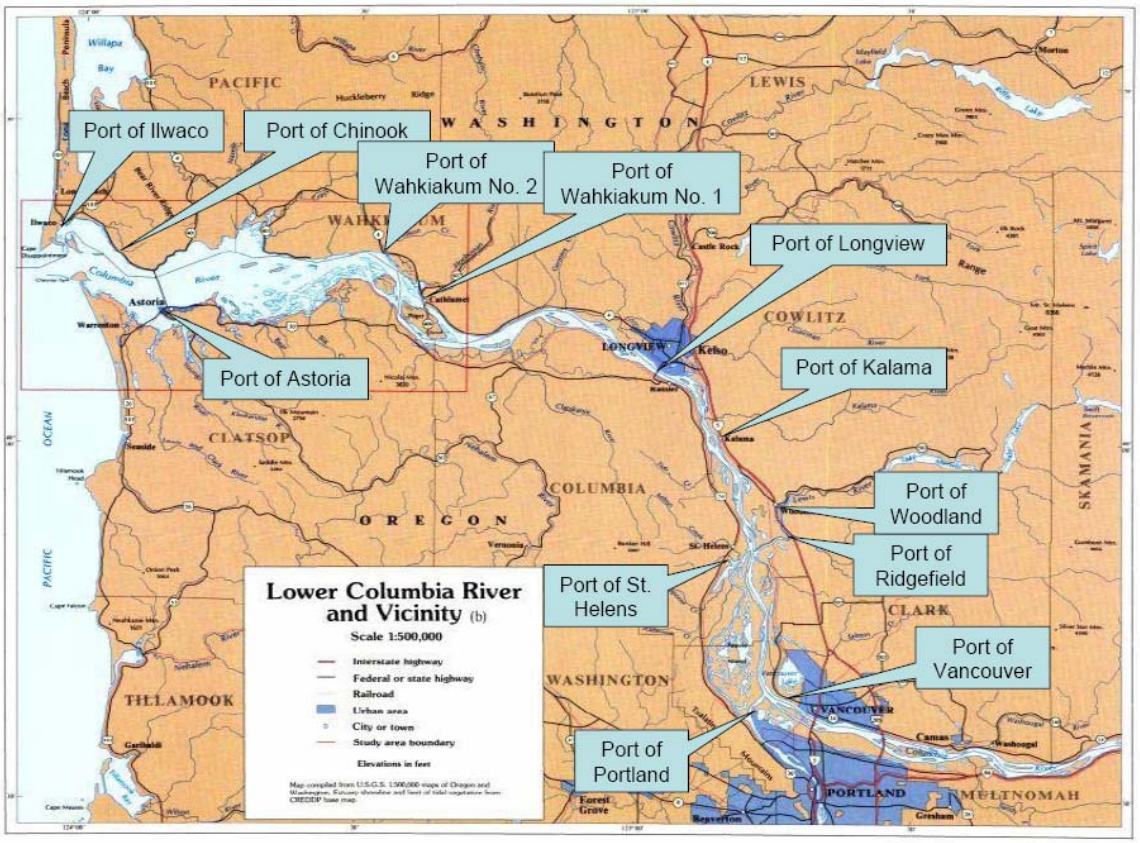
5. *What percentage of the ports budgets are used for (1) dredging and (2) upland disposal of contaminated sediments? What are the ports estimated costs for upland disposal of contaminated sediments now and in the future?*

Answers to these questions are critical to provide a foundation and direction in the development of a Regional Upland Disposal Plan, additionally this work fulfills the process adopted by the LCSG to evaluate proposed projects by providing a detailed scoping of the issue.

1.2 Method

Interviews were conducted with twelve ports on the lower Columbia River. The data summarized in this report represent findings from interviews with the following ports: in Oregon, the Ports of Astoria, St. Helen and Portland; in Washington, the Ports of Ilwaco, Chinook, Longview, Kalama, Ridgefield, Woodland, Wahkiakum No. 1, Wahkiakum No. 2, and Vancouver. Other entities that perform dredging in the lower Columbia River were not included in the survey. The study group was selected by the LCSG Toxics subcommittee and outlined in the Statement of Work in the contract between the Lower Columbia River Estuary Partnership (LCREP) and Columbia River Estuary Study Taskforce (CREST). This study group represents ports on the lower Columbia River from river mile 2.5 to 105.

Figure 1. Map of Study Area



A questionnaire (Appendix A) was developed so that a consistent review and survey would be achieved. An in-person interview was conducted with each of the ports, and the questionnaire was provided to the ports prior to the meeting. Meetings were conducted between June 12, 2007 and June 26, 2007. Lora Eddy (CREST) was the primary interviewer and attended every meeting. A general overview of the LCSG, CREST, and the project was provided at the start of each interview, and the interviewer attempted to remain neutral and not lead discussion during the process.

The questionnaire covered the following topics: ports' dredging volumes, ports' upland disposal volumes, contaminated sediment volumes at the ports, cost of the ports' dredging projects and the ports' interest in participating in a Regional Upland Disposal Plan. The questions were devised to answer the questions listed under Section 1.1, and the questionnaire was provided to the project manager for review prior to interviews occurring.

The survey collected quantitative comparable data on ports' dredging volumes, ports' upland disposal volumes, contaminated sediment volumes at the ports, and cost of the ports' dredging projects. Additionally the survey collected data on the upland disposal sites that the ports are currently using in order to gauge the ports' ability to handle upland disposal in the future as well as gather preliminary information that can be included in the Regional Upland Disposal Plan. The ports were asked to rank their capability to perform upland disposal. The questionnaire used an open ended question format to gather the ports' interest in participating in a Regional Upland Disposal Plan. Additionally the ports were asked to provide their thoughts on the largest challenges for their dredging projects and a Regional Upland Disposal Plan, as well as any additional comments.

2.0 Findings

The following summarizes the findings from interviews with twelve ports on the lower Columbia River between June 12, 2007 and June 26, 2007. See Appendix A for notes and completed questionnaires.

2.1 Dredging Activities

Of the twelve ports interviewed in this survey the following ports are represented in this topic, dredging activities: the Ports of Astoria, Portland, Ilwaco, Chinook, Longview, Kalama, Wahkiakum No. 1, Wahkiakum No. 2, and Vancouver.

The Ports of St. Helens, Ridgefield, and Woodland do not perform dredging. These three Ports were included as part of the study group due to the requirements of the contract, as interested parties, and potential upland disposal recipients.

2.1.1 Annual Dredging Volumes

In order to answer the question: *"How much sediment is dredged from these ports each year?"* each port was asked to report the total amount of sediment dredged annually.

The nine ports reported their total annual dredging volumes for the time period of 2005 to 2009. The ports reported the total amount of sediment dredged annually in cubic yards. The response from the ports varied. The results are represented in the table below in actual volumes, the estimated future volumes, and average annual volume based on the actual and estimated future volumes.

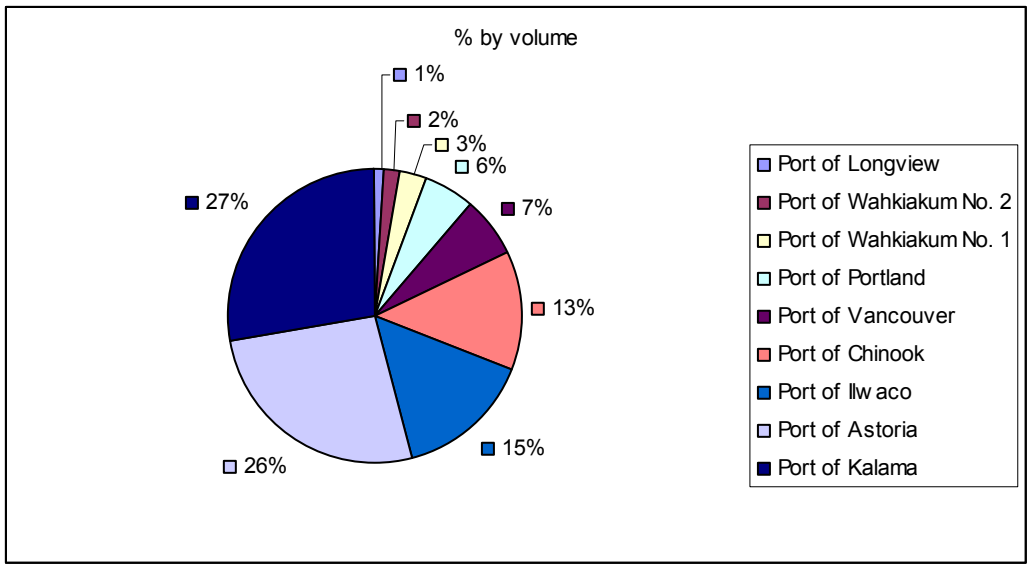
Table 1. Annual Dredging Volumes (in cubic yards)

Port	2005	2006	2007	2008	2009	Average Annual Volume
Port of Ilwaco	26,000	24,166	26,880	27,000	27,000	26,209
Port of Chinook	25,000	25,000	18,000	25,000	25,000	23,600
Port of Astoria	42,500	32,196	51,207	14,000	99,000	47,781
Port of Wahkiakum No. 2	0	14,000	0	0	0	2,800
Port of Wahkiakum No. 1	0	28,000	0	0	0	5,600
Port of Longview	0	0	0	10,000	0	2,000
Port of Kalama	98,000	0	0	150,000	0	49,600
Port of Vancouver	0	33,525	1,814	0	24,229	11,914
Port of Portland	4,329	0	15,000	15,000	15,000	9,866
Total						169,503

It should be noted that the estimated future dredging volumes for the Ports of Portland, Vancouver and Kalama include efforts to deepen facilities to a 45-foot depth consistent with the 45-foot navigation channel deepening. The volumes therefore, might not reflect typical maintenance dredging volumes and slightly increases their annual averages. The Port of Kalama and Port of Longview reported performing maintenance dredging every

three to five years due to the river dynamics in their locations. For the period of 2005 to 2009 the total volume of material dredged in the lower Columbia River by these nine ports is 896,846 cubic yards with an average annual volume of 169,503 cubic yards.

Figure 2. Annual Dredging Volumes by Percentage



The Port of Kalama is the largest dredging project and the Port of Longview is the smallest dredging project by annual average in volume. Looking at the data demographically and excluding the deepening volumes, the ports in the lower river past river mile 44 dredged larger volumes of material annually with the exception of the Port of Kalama.

2.1.2 Upland Dredge Material Disposal Volumes

Dredging projects are typically performed with the least cost or most benefit in mind. Some of the ports are not close to in-water disposal sites and upland disposal is the more cost effective alternative even though the material is approved for in-water disposal. Additionally, several of the ports have large land holdings that are planned for development and require fill, or they have land that is set aside for use as a dredge material disposal site and they re-use or sell the material. So to determine which ports perform upland disposal routinely and determine how much material dredged is placed upland (out of the total volume dredged) by the ports, each port was asked to report the amount of sediment disposed of upland.

The nine ports reported their annual dredging volumes for material disposed of upland for the time period of 2005 to 2009. The ports reported the total amount of sediment disposed of upland in cubic yards. A majority of the lower Columbia River ports dispose of their dredge material upland, and the Ports of Astoria, Wahkiakum No. 1 and Wahkiakum No. 2 are the only ports that reported in-water disposal of dredge material.

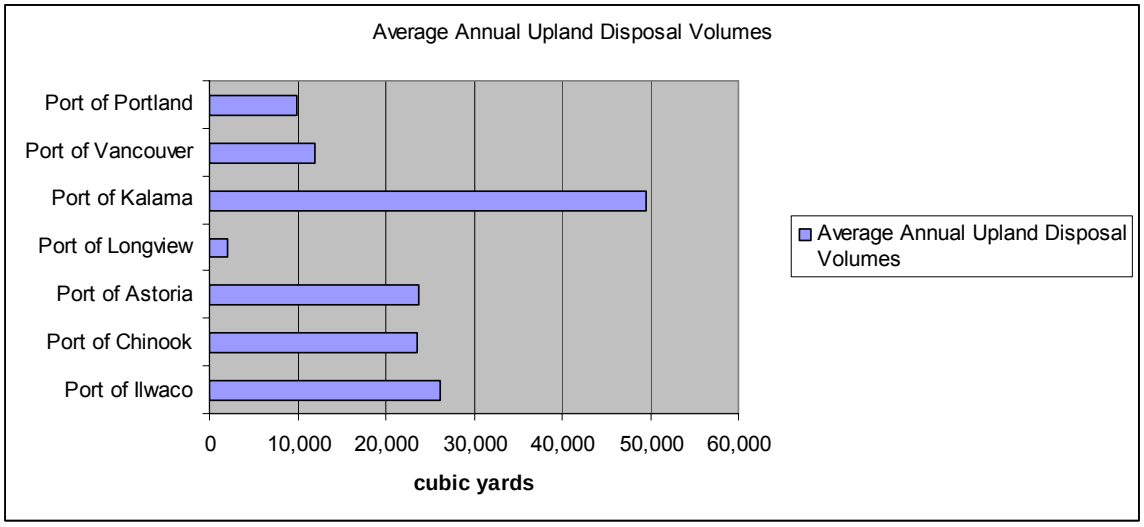
The results are represented in the table below in actual volumes, the estimated future volumes, and average annual volumes based on the actual and estimated future volumes. For the period of 2005 to 2009 the total amount of dredge material disposed of upland by these nine ports is 734,796 cubic yards and the total amount of dredge material disposed of in-water is 162,050 cubic yards. The average annual volume of dredge material disposed of upland is 146,959 cubic yards. This is approximately 87% of the average annual dredging performed by the lower Columbia River ports.

Table 2. Annual Upland Disposal Volumes (in cubic yards)

Port	2005	2006	2007	2008	2009	Average Annual Volume
Port of Ilwaco	26,000	24,166	26,880	27,000	27,000	26,209
Port of Chinook	25,000	25,000	18,000	25,000	25,000	23,600
Port of Astoria	28,500	0	5,353	0	85,000	23,771
Port of Wahkiakum No. 2	0	0	0	0	0	0
Port of Wahkiakum No. 1	0	0	0	0	0	0
Port of Longview	0	0	0	10,000	0	2,000
Port of Kalama	98,000	0	0	150,000	0	49,600
Port of Vancouver	0	33,525	1,814	0	24,229	11,914
Port of Portland	4,329	0	15,000	15,000	15,000	9,866
Total						146,959

Again it should be noted that the estimated future dredging volumes for the Port of Portland, Port of Vancouver, and Port of Kalama include efforts to deepen berths and terminals. The volumes therefore, might not reflect typical maintenance dredging volumes and slightly increases their annual averages.

Figure 3. Average Annual Upland Disposal Volumes (in cubic yards) by Port



The Port of Kalama is the largest upland disposal dredging project by annual average in volume. The Port of Wahkiakum No. 1 and Port of Wahkiakum No. 2 have not done any upland disposal dredging and do not anticipate having the funds to perform any maintenance dredging in the next two years.

2.1.3 Contaminated Sediment Disposal Volumes

With the purpose of answering the question: "*How much of that material must be disposed of at upland sites due to contamination?*" each port was asked to report the amount of contaminated sediment (not authorized for in-water disposal) disposed of upland.

Two ports reported disposal of contaminated sediment. The remaining ports reported no contaminated sediment or that they were not dredging in areas of potential contamination. The results are represented in the table below in actual volumes, the estimated future volumes, and annual average based on the actual and estimated future volumes.

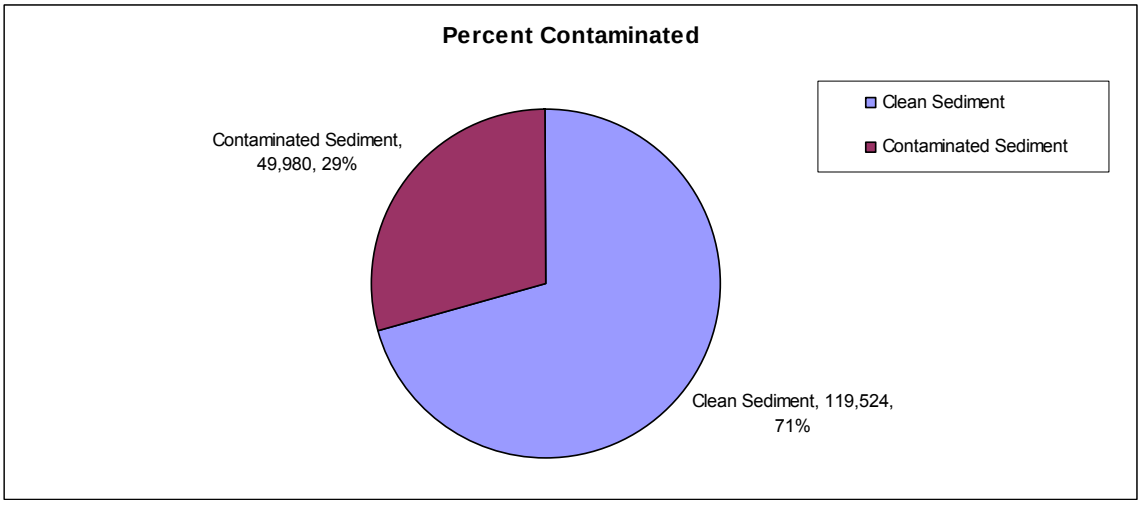
The Port of Portland Terminal 4 located on the Willamette is in the vicinity of a Superfund site and the dredging and cleanup of this area is directed by U.S. Environmental Protection Agency (EPA). The proposed Regional Upland Disposal Plan would not address this level of contamination since the clean up and management of this level of contamination is already directed under a federally administered program.

Table 3. Annual Contaminated Sediment Volumes Disposed Upland (in cubic yards)

Port	2005	2006	2007	2008	2009	Average Annual Volume
Port of Ilwaco	26,000	24,166	26,880	27,000	27,000	26,209
Port of Astoria	28,500	0	5,353	0	85,000	23,771
Total						49,980

The average annual volume of dredge material that is contaminated and disposed of upland is 49,980 cubic yards. Approximately 29% of the average annual dredging performed by the lower Columbia River ports is contaminated sediment (not authorized for in-water disposal), and 34% of the dredge material that is disposed of upland is contaminated.

Figure 4. Percent Contaminated of the Average Annual Dredging Volume



2.2 Cost of Dredging

With the aim of answering the question: "*What percentage of the ports budgets are used for (1) dredging and (2) upland disposal of contaminated sediments? What are the ports estimated costs for upland disposal of contaminated sediments now and in the future?*" the ports were asked several economic questions geared toward collecting these answers. Because each port is different operationally, in economic scale, and due to river location these numbers are not easily comparable. Again only nine ports are represented in this topic since the Ports of St. Helens, Ridgefield, and Woodland do not perform dredging.

2.2.1 Cost Per Cubic Yard

The ports were asked to report the cost of dredging in dollars per cubic yard of material dredged. The cost was further broken down into the following categories: cost of routine dredging, cost of upland disposal dredging and cost of upland disposal of contaminated sediments.

Table 4 represents the ports' routine dredging cost in dollars per cubic yard. The Port of Astoria is the only port that reported a different cost per cubic yard for disposal of contaminated sediment. The Port of Astoria reported a cost of $29.32/cy to dispose of contaminated sediment upland. The increased cost to the Port of Astoria is a result of a contractor performing the dredging and re-handling (trucking) the material. The Port of Ilwaco which is the only other port reporting disposal of contaminated sediment reported $2.15 per cubic yard for disposal of the contaminated sediment. The Port of Ilwaco routinely disposes of dredge material upland while the Port of Astoria typically performs in-water disposal of dredge material as a practice.

Table 4. Cost of routine dredging per cubic yard of material

Port	2005	2006	2007
Port of Ilwaco[2,3]	$2.00	$2.14	$2.15
Port of Chinook[2]	$2.00	$1.40	$1.67
Port of Astoria[1,3]	$3.00	$3.00	$3.00
Port of Wahkiakum No. 2[1]	-	$6.79	-
Port of Wahkiakum No. 1[1]	-	$4.57	-
Port of Longview[2]	-	-	-
Port of Kalama[2]	$5.82	-	-
Port of Vancouver[2]	-	$10.65	$36.00
Port of Portland[2]	$92 to $240	$40.00	$40 to $200

Note: (1) These ports routinely dispose of dredge material in-water and are located in close proximity to in-water disposal sites.

(2) These ports routinely dispose of dredge material upland and have upland disposal sties in close proximity to the areas they dredge.

(3) These ports are the only ports that reported disposal of contaminated sediment. Port of Ilwaco reported the same cost per cubic yard for disposal of the contaminated sediment while Port of Astoria reported a cost of $29.32/cy to disposal of the contaminated sediment.

2.2.2 Operating Budgets

The ports were asked to report their total operating budget, the percentage of the port's operating budget used for dredging, and the percentage of the port's operating budget used for disposal of contaminated sediment.

Table 5. Port's Total Operating Budget

Port	Operating Budget
Port of Ilwaco	2,300,000
Port of Chinook	400,000
Port of Astoria	6,800,000
Port of Wahkiakum No. 2	180,000
Port of Wahkiakum No. 1	964,850
Port of Longview	16,000,000
Port of Kalama	9,000,000
Port of Vancouver	17,500,000
Port of Portland	61,510,000

Table 6 represents the percent of each port's budget used for dredging and disposal inclusive of contaminated, non-contaminated sediment and in-water and upland disposal.

Table 6. Percentage of the Port's Operating Budget used for Dredging

Port	% of Budget
Port of Ilwaco	3%
Port of Chinook	13%
Port of Astoria	4%
Port of Wahkiakum No. 2	53%
Port of Wahkiakum No. 1	17%
Port of Longview	1%
Port of Kalama	6%
Port of Vancouver	2%
Port of Portland[1]	-

Note: (1) The Port of Portland did not report a value. The port indicated that due to inevitable overlapping of line items for the numerous significant constituent costs that would contribute to this percentage it is not possible to extract a meaningful and accurate number.

Table 7. Evaluation of Port's Cost for Disposal of Contaminated Sediment

Port	% of Budget	Total Cost of Dredging 2005 to 2007	Anticipated Dredging Costs in 2008 & 2009
Port of Ilwaco	3%	$161,507	$116,100
Port of Astoria	2%	$518,098	$2,484,550

As previously mentioned, two ports, Ilwaco and Astoria routinely dredge sediment that has a level of contamination not suitable for unconfined in-water disposal. Table 7 represents the percent of those Ports' total budget that is spent on disposal contaminated materials only. These ports perform maintenance dredging annually. The Port of Astoria is constrained by the lack of adequate upland disposal sites in close proximity to the port's facilities which necessitates increased handling of dredge material that must be placed upland. The Port of Ilwaco is limited by the capacity of its current disposal site and needs to remove the material in order to sustain the sites' use.

2.3 Port's Interest in Participating in a Regional Upland Disposal Plan

Each port was asked if they would be interested in participating in a Regional Upland Disposal Plan and to rate their capability to handle upland disposal. These questions where aimed at answering the question: *How many ports should or could be a part of a Regional Upland Disposal Plan?*

When the nine ports that perform maintenance dredging were asked to rank their capability to handle upland disposal, ports were divided into three groups with about equal numbers in each group. One third rated their ability to handle upland disposal as high, one third were moderate, and one third reported low potential to handle upland disposal.

Table 8. Port's Capability to Handle Upland Disposal

Capability to Handle Upland Disposal	No. of Responses	%
Low	3	33%
Low to Moderate	1	11%
Moderate	2	22%
Moderate to High	0	0%
High	3	33%
Total	9	100%

Following the query on capability to handle upland disposal, a space was provided for additional comments. The comments varied with certain remarks related to the preceding questions on the dredging volumes and dredging economics. The most notable detail is the fact that the ports vary regionally as well as in their operation, equipment, and financial resources (See the completed questionnaires in Appendix A for additional information). In order to compare the rankings in a different manner the table below is a comparison of the reported capability ranking and whether or not the port has an upland disposal site.

Table 9. Comparison of Ability Ranking and Disposal Site

Port	Upland Disposal Site	Capability Ranking
Port of Ilwaco	x	low to moderate
Port of Chinook	x	high
Port of Astoria		low
Port of Wahkiakum No. 2		moderate
Port of Wahkiakum No. 1		low
Port of Longview	x	low
Port of Kalama	x	high
Port of Portland	x	high
Port of Vancouver	x	moderate

All twelve ports were asked if they would be interested in participating in a Regional Upland Disposal Plan. The Ports of St. Helens, Ridgefield, and Woodland are included in this response as interested parties and potential upland disposal recipients. 58% of the respondents indicated that they would be interested in participating in a Regional Upland Disposal Plan.

Table 10. Individual Port's Response to Interest in Participating in a Regional Upland Disposal Plan

Port	Interest in Participating in a Regional Upland Disposal Plan
Port of Ilwaco	yes
Port of Chinook	yes
Port of Astoria	yes
Port of Wahkiakum No. 2	yes
Port of Wahkiakum No. 1	yes
Port of Longview	yes
Port of Kalama	no
Port of Portland	yes
Port of Vancouver	maybe
Port of St. Helens	maybe
Port of Woodland	maybe
Port of Ridgefield	maybe

Table 11. Interest in Participating in a Regional Upland Disposal Plan

Interest in Participating in a Regional Upland Disposal Plan	No. of Responses	%
Yes	7	58%
No	1	8%
Maybe	4	33%
Total	12	100%

Of the seven ports that indicated that they would be interested in participating in a Regional Upland Disposal Plan, all mentioned key factors for their involvement to be limited liability, feasibility of cost and logistics for the port, and agency adoption.

2.4 Port's Upland Disposal Sites

With the purpose of answering the question: *"Which upland disposal facilities are these ports currently using, and how much longer are those facilities expected to meet the ports' need for upland disposal?"* each port was asked to name the upland disposal site(s) they use, the type of upland site, the design capacity, the potential life time of the site, and the ownership of the site. All twelve ports are represented in this section because the three ports which do not dredge are potential upland disposal recipients. The responses to these questions are represented in Table 9.

There are many caveats to the table below. While the Ports of Ilwaco, Chinook, and Portland have upland disposal sites that they use regularly, the ports need to remove the material periodically in order to sustain their use. The Port of Astoria has a small upland confined disposal facility (CDF) but it is currently filled to capacity.

The Port of Wahkiakum No. 1 and Port of Wahkiakum No. 2 have not done any upland disposal dredging, but the Port of Wahkiakum No. 2 has a disposal site that the Corps has used for maintenance of the navigational channel and could potentially be used by the port. Additionally, the Port of Wahkiakum No. 1 is proximate to two upland disposal sites (W-38.1 Huntington Island and W-38.4 County Sand Pit) identified in the CREST Columbia River Estuary Dredge Material Management Plan (DMMP).

The Port of Longview has one upland disposal site for maintenance of their berths, but the port is planning to develop this site. If needed the Port of Longview could potentially use a site that the Corps is using for the Columbia River Channel Deepening Project, but the port performs very little dredging and has naturally deep berths. The Ports of Kalama and Vancouver have upland disposal facilities that will sustain their dredge material disposal needs for several years.

Table 11. Port's Upland Disposal Sites

Port	Upland Disposal Site Name	Part of a DMMP[1]	Design Capacity	Type of CDF	Potential Lifetime of Site	Ownership of Site
Port of Ilwaco	Port of Ilwaco	Yes, Site # W-3.2	260,000 cy or 10.7 acres	Nearshore CDF - breakwater	3 dredge seasons	Port-Owned
Port of Chinook	Port of Chinook	Yes, Site # W-8.8	20,000 cy or 3 acres	Upland CDF	?	Port-Owned
Port of Astoria	"Volcano" Northern tip of Pier 3	No	10,000 cy or 2.1 acres	Upland CDF	0 dredge seasons	Port-Owned
Port of Wahkiakum No. 2	Vista Park Beach	Yes, Site # W-33.4	250,000 cy	Upland CDF	?	Port-Owned
Port of Longview	IP Site	Yes, Site # W-67.5	? cy	Upland CDF	0 dredge season	Port-Owned
Port of Longview	Potential Fill site for capping RCRA Site	No	100,000 cy or 10 to 12 acres	Upland CDF	2-3 dredge seasons	Port-Owned
Port of Longview	Howard Island	Yes, Site # W-68.7	6.4 million cy or 200 acres	Upland CDF	?	Corps Disposal Site
Port of Kalama	South Port	Yes, Site # W-76.8	200,000 cy	Upland CDF	∞ dredge seasons	Port-Owned
Port of Kalama	North Port	Yes, Site # W-72	2 million cy	Upland CDF	∞ dredge seasons	Port-Owned
Port of Woodland	Austin Point	Yes, Site # W-86.5	1.5 million cy	Upland CDF	~500,000 cy	Port-Owned

Port	Upland Disposal Site Name	Part of a DMMP[1]	Design Capacity	Type of CDF	Potential Lifetime of Site	Ownership of Site
Port of Woodland	Martin Bar	Yes, Site # W-82	1.5 million cy	Upland CDF	20+ years	Corps Disposal Site
Port of St. Helens	Tressel Beach	No	? cy	Upland CDF	?	Port-Owned
Port of Ridgefield	Potential Fill site for capping Brownfield Site	No	8 acres	Upland CDF	?	Port-Owned
Port of Vancouver	Hickey Marine	No	450,000 cy	Upland CDF	?	Hickey Marine
Port of Vancouver	Ross Island Sand & Gravel	No	? cy	Island CDF	?	Ross Island Sand & Gravel
Port of Vancouver	Port of Vancouver Parcel 3	No	2 million cy or 500 acres	Upland CDF	20 years (~2006 to 2026)	Port-Owned
Port of Portland	Suttle Road Re-Handle Facility	No	70,000 cy per year	Upland CDF	∞ dredge seasons	Port-Owned
Port of Portland	West Hayden Island	No	1.6 million cy	Upland CDF	20+ years	Port-Owned
Port of Portland	3 Regulated Subtitle D Landfills	No	?	Daily Cover for Landfill	20+ years	Varies

Note: (1) From the Columbia River Estuary Dredged Material Management Plan (DMMP) dated July 2002 by CREST or the US Army Corps of Engineers DMMP.

2.5 Additional Comments and Suggestions from the Ports

During the interview process, the ports were asked to include their thoughts on the challenges for a Regional Upland Disposal Plan as well as any ideas for a project to help address the contaminated sediment issue. The ports consistently stated that the site would need to be close by to limit re-handling and transportation costs as well as be economically feasible for the port. Several ports mentioned concern about the liability associated with operating a facility that accepted potentially contaminated material. However, overall the ports were interested in a plan that would identify upland disposal sites as part of a Regional Sediment Management Plan and a beneficial use of dredge material.

Another recommendation that came out of the research was development of long term monitoring of the contaminated sediment issue to provide data on the extent and nature of the problem. Several of the ports that had experience in upland contamination and remediation suggested that an investment in the development of in-water treatment or technology or a shared resource such as a contained treatment barge would be a valuable alternative. Additionally, a majority of the ports reported that the permitting process was the largest challenge for their dredging projects. The ports reported that the sediment evaluation process and permitting turnaround timeframe was very lengthy.

3.0 Conclusions & Recommendations

The LCSG Toxics subcommittee identified a Regional Upland Disposal Plan as a potential project to address issues related to contaminated sediment disposal and management. As part of the process adopted by the LCSG to evaluate proposed projects interviews were conducted with twelve ports on the lower Columbia River to help define this issue. The information gathered from these interviews is summarized below.

Summary of the findings:

- Approximately 169,503 cubic yards of material is dredged by the ports on the lower Columbia River annually.
- Approximately 29% (or 49,980 cubic yards) of this material is classified as contaminated sediment that is not authorized for in-water disposal.
- Additionally, a large portion of the sediment that is dredged annually in the lower Columbia River (approximately 146,959 cubic yards) is disposed of upland. This is approximately 87% of the annual total dredging volume.
- Two ports in the lower Columbia River dredge and dispose of contaminated sediment. Of these two ports both reported a low capability to handle upland disposal and limited capacity for future dredging disposal needs.
- The ports involved in disposal of contaminated sediment are the smaller (in regards to tonnage or budget) ports.
- The two ports dealing with contaminated sediment are the Ports of Astoria and Ilwaco. The Port of Astoria is constrained by the lack of adequate upland disposal sites in close proximity which increases re-handling of dredge material and cost of dredging. The Port of Ilwaco is limited by the capacity of its' disposal site and needs to remove the material in order to sustain the sites' use.
- Seven ports that indicated that they would be interested in participating in a Regional Upland Disposal Plan, but indicated that the following factors would need to be addressed in order to assure their participation in a plan: limited liability, feasibility of cost and logistics for the port, and agency adoption. The ports were interested in a plan that would identify upland disposal sites as part of a Regional Sediment Management Plan and a beneficial use of dredge material.

The Benefits of a Regional Upland Disposal Plan

Developing a long term management strategy such as a Regional Upland Disposal Plan would identify environmentally preferable disposal sites and develop a unified approach to management of contaminated dredge material and upland disposal. A Regional Upland Disposal Plan would provide a centralized permitted upland site for contaminated sediment, established testing and monitoring protocols, and a long term management strategy.

A regional upland disposal site would provide permitting efficiencies since one site would have multiple users, and would address the management of contaminated sediment regionally and eliminate case by case evaluation. Permitting for dredging projects would be more streamlined through legislative and regulatory adoption of this plan. Better environmental controls would be provided through consistent testing, monitoring, record keeping and inspections. For these reasons permitting and developing a single site would provide cost savings.

Challenges for a Regional Upland Disposal Plan

- Locating a large site that is on the Columbia River, located in an area with limited environmental constraints or land use issues.
- Identifying a land owner willing to allow such a facility to be located on their property.
- Obtaining or organizing funding for the design, permitting, development and operation of the site.
- Identifying a site that is cost effective for multiple users.
- Development of a management plan for the site that addresses the potential liability associated with the contaminated dredge material.
- Only two ports near the mouth of Columbia River have been affected by contaminated sediments; there may not be enough incentive at this point in time to effectively implement a Regional Upland Disposal Plan.

Next Steps for a Regional Upland Disposal Plan

- Evaluate the findings in this report and determine the direction the LCSG will take in development of a Regional Upland Disposal Plan.
- Assemble the current bi-state regulations and policies that guide upland disposal sites.
- Assemble a taskforce to develop a regulatory road map and guide to outline the current requirements for upland disposal sites.
- Identify key elements for long term sustainability of a Regional Upland Disposal Plan such as beneficial reuse and treatment of sediment and the bi-state regulations and policies that affect these elements.

Appendix A
Completed Questionnaires

Lower Columbia River Solutions Group
Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Introduction

The Lower Columbia Solutions Group (LSCG) was formed by the Governors of Washington and Oregon to address dredge material disposal activities in the Lower Columbia River area. The initial focus of the LCSG was on beneficial use of dredge material and coordination of dredging projects for this purpose. In April 2006, the Lower Columbia Solutions Group charged a subcommittee with exploring the potential for a project to address toxic sediment issues.

The toxics issue has become more prevalent in the lower Columbia River as maintenance dredging needs in existing channels and berthing areas and expansion and modernization of ports, harbors, and marinas continues. Some of the sediments dredged from these areas contain elevated levels of heavy metals, pesticides, and other contaminants. In most cases, the concentrations of these contaminants do not approach hazardous levels. However, the sediments contain enough contaminants that they are not suitable for unconfined in-water disposal. Disposal of any contaminated dredged materials requires special management, such as placement in a confined aquatic disposal site, capping, or disposal in an upland site.

Since, managing contaminated sediment is fundamental to managing sediment in general, the LCSG Toxics subcommittee agreed that there is an appropriate and important role for the LCSG to play in addressing contaminated sediment issues by leading the development of a Regional Upland Disposal Plan.

A Regional Upland Disposal Plan would identify shared upland disposal sites for ports and other users in the Lower Columbia, located in areas that make sense for the environment, nearby communities, and the ports (considering transportation and disposal costs).

Purpose

The purpose of this questionnaire is to gather baseline data on the upland disposal practices and contaminated sediment issues that the ports are facing to help define the scope of the problem. Communication with each of the Ports in the lower river is essential in developing a complete representation of the issues related to contaminated sediment and upland disposal. Thank you for participating in this effort.

Port of Ilwaco

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Ilwaco
Contact Name:	Jim Neva, Port Manager
E-mail:	jneva@portofilwaco.org
Phone:	(360) 642-3143
Fax:	(360) 642-3148
Interviewer Name:	Lora Eddy

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy). * from boat basin	26,000cy	24,166cy	26,880cy	27,000cy	
Amount of sediment disposed of upland in cy.	"	"	"		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	"	"	"		
Cost of routine dredging* in $/cy.	$2/cy	$2.14/cy	$2.15/cy		
Cost of upland disposal dredging in $/cy.	"	"	"		
If different, upland disposal cost for contaminated sediments in $/cy.					
Total Port operating budget $Tax Revenues $131,000 IDD Revenues $200,000			2.3 mil		
Percentage of the Port's operating budget used for dredging			2.5%		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments			2.5%		
Port capacity (tonnage) or annual volume of freight handled. 2004 30 mil. lbs Fish					

* look at obtaining federal appropriations for creating sites Port of Ilwaco has had some success with this to fund the maint. dredging of the entrance channel

Total DDT 7.75ppb 12.1ppb – hits on 2 sample sites in 2002-2001
actually 3 hits 7.0ppb above DMEF screening levels

Port of Ilwaco

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?		X	X		

Additional comments:
Need to be able to remove stockpiled material from Ports upland disposal site, biggest challenge is finding someone/somewhere to put it

***Describe routine dredging and material disposal method:**	Port owned hydraulic pipeline dredge and material is pumped to port's disposal site
Name of upland disposal sites currently in use:	1. P-float area south 2. 3.
Type of site: (island, upland, or nearshore)	1. upland – breakwater 2. 3.
Upland site design capacity in cy:	1. 260,000cy = 10.7 acres 2. 3.
Potential lifetime of site:	1. 3 more dredge seasons = 3 years 2. 3.
Ownership of site	1. Port of Ilwaco 2. 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.	W-3.2	
2.		
3.		

Port of Ilwaco

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. full in 3 to 4 more years 2. 3.
What in your opinion is the largest challenge for your dredging projects?	Disposal sites, unless can find places to take dewatered dredge material current site will fill up
Would you be interested in participating in a Regional Upland Disposal Plan?	yes
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	biggest challenge would be cost and permitting
Additional comments:	

Port Amenities / Business

- Airport 2000' runway
- Fuel dock ← privately owned and operated $0.015/gallon paid to port
- Moorage
- Haul-out
- Dry storage for Boats
- Lease agreement

Port of Ilwaco

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Ilwaco
Contact Name:	Mark Elliott * Jim Neva
E-mail:	melliott@portofilwaco.com
Phone:	360-642-3143
Fax:	360-642-3148
Interviewer Name:	

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	24,166 →	26,880 →	27,000cy		
Amount of sediment disposed of upland in cy.	24,166 →	26,880 →	))		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	—				
Cost of routine dredging* in $/cy.	2.14 →	2.15 →			
Cost of upland disposal dredging in $/cy.	2.14 →	2.15 →			
If different, upland disposal cost for contaminated sediments in $/cy.	—				
IDD revenues $200,000 **Total Port operating budget** Tax revenues $131,000	311,570	404,099	$660,000		
Percentage of the Port's operating budget used for dredging	27,542	23,893	~~660,000~~		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments					
Port capacity (tonnage) or annual volume of freight handled.					

Total Budget = 2.3 mil for 2007

Corps entrance channel disposed of in-water, use a clamshell bucket dredge and barge (dump scow 2100 cy capacity) last dredged in 06-07 | Placed in Flow Lane Area BB-3 at river mile 3 in 2003 (Hickey Main)

~ 26,000 cy from 1998-2002 average amount removed

Channel 75,000cy in 2003

Port of Ilwaco

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?		X	X		

Additional comments:
Need to be able to remove stockpiled material, biggest challenge is finding someone/somewhere to put it

***Describe routine dredging and material disposal method:**	Dredge at 8 hr shifts 5-6 days a week. Material pumped to contained disposal site using Port owned hydraulic pipeline dredge.
Name of upland disposal sites currently in use:	1. 2. P Float area South 3.
Type of site: (island, upland, or nearshore)	1. 2. upland 3.
Upland site design capacity in cy:	1. 2. 75,000 more CY 3.
Potential lifetime of site:	1. 2. 3 more seasons at 4 months each 3.
Ownership of site	1. 2. Port of Ilwaco 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.		
2.		
3.		

Port of Ilwaco

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. 2. Full in 3 to 4 more years 3.
What in your opinion is the largest challenge for your dredging projects?	Funding – entrance channel Marina – disposal Breakdowns of dredge and occasional plugged lines
Would you be interested in participating in a Regional Upland Disposal Plan?	Yes
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Running out of room for disposal in the coming years - & people complaining about dredge containment wall getting too high Challenge would be cost and permitting
Additional comments:	

Port of Ilwaco Entrance Channel

	2005	2006	2007
Total amount dredged from the channel annually			0

From 1991 to 2002 annual average dredging = ~ 26,000cy
Corps last dredged channel in 2003 75,000cy

Port of Chinook

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Chinook
Contact Name:	Dan Todd
	Port Manager
E-mail:	pchinook@willapabay.org
Phone:	(360) 777-8797
Fax:	
Interviewer Name:	Lora Eddy

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	25,000	25,000	18,000 1*	25,000	25,000
Amount of sediment disposed of upland in cy. 2*	"	"	"		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy. not sure what level of cont. may be in sediment					
Cost of routine dredging* in $/cy. includes fuel, prep work, demobilization	~$2/cy	~$2/cy $1.40	$2/cy $1.67		
Cost of upland disposal dredging in $/cy.	"	"	"		
If different, upland disposal cost for contaminated sediments in $/cy.					
Total Port operating budget	$350,000	$375,000	$400,000		
Percentage of the Port's operating budget used for dredging	14%	11%	13%		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments					
Port capacity (tonnage) or annual volume of freight handled.	1.6M crab	1.8M total 1.3M crab other fisheries			

* Port has commercial fishing but doesn't handle freight

1* ~~lots of equipment breakdown~~ prevented dredging from being 25,000cy (typical)
In-water work window 12/1 to 2/28

2* all of dredge material from the Port's boat basin is placed upland @ Port's dredge material disposal site

High for Cd ←

Port of Chinook

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?					X

Additional comments:
Port owns a small hydraulic dredge and has a upland disposal site proximate to boat basin.

Port-owned

***Describe routine dredging and material disposal method:**	hydraulic pipeline dredge 8" cutterhead pump to Port's upland site and remove material from disposal site as needed to maintain capacity.
Name of upland disposal sites currently in use:	1. Port of Chinook 2. 3.
Type of site: (island, upland, or nearshore)	1. upland 2. 3.
Upland site design capacity in cy:	1. 25,000 cy – 80,000 ± rebuilt in 1994 by Nehalem Marine and originally had this capacity has since been filled 2. 3.
Potential lifetime of site:	1. depends on ability to remove material 2. 3.
Ownership of site	1. Port 2. 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.	W-8.8	
2.		
3.		

SO maybe could use East or West Sand Island for disposal of channel if needed but would have to use a contractor to do work since need a large dredge to move material that far doesn't think this would be feasible for Port's Boat Basin due to cost + distance

Port of Chinook

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. 99 year lease from the Corps (or to) (2040) could make it 8 acres exp. and extend into parking area 2. 3. currently applying for dredge permit
What in your opinion is the largest challenge for your dredging projects?	For the Port - waiting on what comes up in new permitting but permitting process is the biggest challenge For channel – $, the Port can afford to perform dredging off the boat basin (currently) but cannot afford to maintain the entrance channel
Would you be interested in participating in a Regional Upland Disposal Plan?	as long as didn't cost any $ for the Port have limited funds and not a ton of ~~earning~~ earning power
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	See location of disposal site as greatest challenge for plan, need sites close by so not handling material multiple times, but could use a place to haul material from Port's site and make the process easier (dredge material stockpile removal)
Additional comments:	was looking at Goulder property (farm) 4 miles away as a potential site but was shot down b/c of wetland issues concerned about Port of Chinook's capability to handle upland disposal in the long term since site is filling up and permitting a new site is challenging and would increase dredging cost overall

Port Amenities/Business

- Fuel Dock
- Haul-out – boat hoist
- Boat ramp
- Moorage – 300 slips w/ water + power

High for Cd in 1998

Port of Chinook

in processes of renewing Corps permit 2/28/08 ← expiration date for Boat Basin dredging

Chinook Federal Nav. entrance

Disposal Site for channel = Area D ← channel

Channel is 1¼ mile from in-water disposal site

have appropriations from congress to perform channel dredging

Paid $185,000 this 2007 SO $6/cy

Split w/Port of Illwaco

would like to do 40,000cy / year

	2005	2006	2007	2008
Total amt. dredged from channel annually		0	30,000cy	0

3-4 year rotation in dredging channel due to funds/federal appropriations

Past Dredging that had been performed by USACE for Federal Entrance channel to Boat Basin

- Willamette 20" pipeline dredge in 1960s in-water disposal in channel or beach nourishment near the Port Nav.
- Unquinna shallow draft hopper dredge also used a few times after willamette (took material to area D)
- Ross Island #10 24" cutterhead hydraulic dredge 1980s? ↑ after Mt. St. Helens blew boat basin channel 1½' was filled put material at East Sand Island (smaller site)
- Since then clam shell dredge from Hickey or Ross Island contracted by corps performed dredging of entrance channel and barged material over to Area D disposal site
- in 2000 or 2002 Corps stopped dredging through their process due to low use Port status for the Port of Chinook

BUT Corps completes permitting for channel, sampling, and all

Channel is 1¼ mile long

Name = Area D

CRE DMMP Site O-8.5

Type of Site = in-water

Capacity =

Lifetime of Site =

Ownership of Site =

Limitations of Site = limited to Chinook Channel + Baker Bay West Channel and in-water disposal standards must be met to use site See CRE DMMP for more details

Port of Astoria

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Astoria
Contact Name:	Ron Larsen, Interim Director
E-mail:	rlarsen@portofastoria.com
Phone:	(503) 325-4521
Fax:	(503) 325-4525
Interviewer Name:	Lora Eddy

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	42,500	32,196	51,207	14,000	99,000
Amount of sediment disposed of upland in cy.	28,500	—	5,353	0	85,000
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	28,500	—	5,353	0	85,000
Cost of routine dredging* in $/cy.	$3/cy	$3/cy	$3/cy		
Cost of upland disposal dredging in $/cy.	~$4.90/cy	—	$29.23/cy		
If different, upland disposal cost for contaminated sediments in $/cy.			"		
Total Port operating budget	$19.0 mil	$26.3 mil	$6.8 mil		
Percentage of the Port's operating budget used for dredging			4%		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments			2%		
Port capacity (tonnage) or annual volume of freight handled.		Port supports fisheries	do not handle freight		

~ $54000 + (28,500 cy × $3/cy) = $139,500 ÷ 28,500 cy to create upland site

Total dredging cost in 2007 = $294,010

✓ with Rita OR Coastal Zone Mgmt Newport (OCZMA) (541) 265-8918

4 fish processors

Port of Astoria

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?	X				

Additional comments:
Land/site not available close by

Port owned.

***Describe routine dredging and material disposal method:**	hydraulic pipeline dredge pump dredge material to Columbia River Navigational Channel during ebb tide
Name of upland disposal sites currently in use:	1. Volcano 2. 3.
Type of site: (island, upland, or nearshore)	1. upland 2. 3.
Upland site design capacity in cy:	1. 40,000cy 2. 3.
Potential lifetime of site:	1. 1 dredge season 2. 3.
Ownership of site	1. Port owned 2. 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.		
2.		
3.		

Port of Astoria

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. 2. 3.
What in your opinion is the largest challenge for your dredging projects?	Contamination in the river and how it effects disposal
Would you be interested in participating in a Regional Upland Disposal Plan?	Yes
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Suitable upland disposal sites location-wetland issues and distance from Port
Additional comments:	

Port of Wahkiakum No. 2

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Wahkiakum No. 2
Contact Name:	Steve McClain
	Port Manager
E-mail:	portwah2@teleport.com
Phone:	(360) 795-8605
Fax:	(360) 795-8611
Interviewer Name:	Lora Eddy

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	—	13K to 14K disposed in-water	—		
Amount of sediment disposed of upland in cy.	—	~~—~~	—		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	—	—	—		
Cost of routine dredging* in $/cy. $10,000 planning permitting $85,000 dredging	—	$6.79/cy	—		
Cost of upland disposal dredging in $/cy.	—	—	—		
If different, upland disposal cost for contaminated sediments in $/cy.	—	—	—		
Total Port operating budget $53K to $59K tax base/revenue	$170K	$170K to 180K	$180K		
Percentage of the Port's operating budget used for dredging	—	53%	—		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments	—	—	—		
Port capacity (tonnage) or annual volume of freight handled.					

V w/ WDFW rene martin Study

1994 mouth of creek - Skamokawa was last dredged the Sandwick - Prop wash 1980s dredge hydraulically and material placed on beach re-use site Navig. Channel dredging is placed on Port's site/State ownership have Port's Management Agreement

Port of Wahkiakum No. 2

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?			X		

Additional comments:
Depends on permitting requirements if allowed to use Vista Park Beach and not required to create a settling pond

***Describe routine dredging and material disposal method:**	Clamshell bucket dredge w/ barge, contractor performed or corps
Name of upland disposal sites currently in use:	1. — 2. in past used Skamokawa Vista Park Corps uses site for Nav. Channel 3.
Type of site: (island, upland, or nearshore)	1. — 2. upland 3.
Upland site design capacity in cy:	1. — 2. 250,000 cy 3.
Potential lifetime of site:	1. — 2. ? material is removed as needed and sold Port collects income and returns royalties to the state of WA 3.
Ownership of site	1. — 2. State and the Port has a management agreement with WA DNR 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.	33	
2.	W-33.4	
3.		

Port of Wahkiakum No.2

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. — 2. see CRE DMMP 3.
What in your opinion is the largest challenge for your dredging projects?	funding 2nd challenge is permitting
Would you be interested in participating in a Regional Upland Disposal Plan?	Yes if the project saved the Port $ and didn't cost too much ← limited funds, small Port
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Challenge would be leaving individual interests aside to deal with the overall challenge
Additional comments:	

Port Amenities / Business

- cabin / yurt rentals
- rv hook-up
- camping
- boat ramp

Port of Wahkiakum No.1

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Wahkiakum No. 1
Contact Name:	Jackie Lea
	Port Manager
E-mail:	jleaportdist1@centurytel.net
Phone:	(360) 795-3501
Fax:	
Interviewer Name:	Lora Eddy

	2005	2006 (05-06 dredge season)	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	0	28,000	0	0	0
Amount of sediment disposed of upland in cy.	0	0	0	0	0
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	0	0	0	0	0
Cost of routine dredging* in $/cy. includes survey, permits, dredging $128,000	—	$4.57/cy	—		
Cost of upland disposal dredging in $/cy.	—	—	—		
If different, upland disposal cost for contaminated sediments in $/cy.	—	—	—		
Total Port operating budget	$698,580	$771,512 $964,850	$964,850		
Percentage of the Port's operating budget used for dredging $47,000 - tax base	—	16.6%	—		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments	—	—	—		
Port capacity (tonnage) or annual volume of freight handled.	—	15,000 Tons rock	—	potential to create commercial fishery by creating boat at entrance moving moorage around	

for next 3 years working on floats do not anticipate dredging or having funding have a lot of dilapidated old floats that need repair

In 2005-2006 used Hickey Marine Clamshell bucket dredge w/ barge to dump material in Navigational channel (~2.5mi away) @ In-water disposal site Buoy #11 (Thlamet Buoy) - work performed in elochoman slough and entrance to boat basin (entrance channel)

elochoman slough channel

Port of Wahkiakum No.1

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?	X				

Additional comments: End of Puget Island potential site for disposal for boat basin or Hunting Island #38.1 CREDMMP

CRE DMMP #38.4 County Sand Pit

but these sites have never been used by the Port before, Port has had corps doing the dredging and disposal has always been in-water. Clam-shell

***Describe routine dredging and material disposal method:**	bucket dredge w/ barge to belly dump material in-water @ buoy #4 ← as far as Jackie knows have always dredge this way performed by a contractor
Name of upland disposal sites currently in use:	1. — 2. 3.
Type of site: (island, upland, or nearshore)	1. — 2. 3.
Upland site design capacity in cy:	1. — 2. 3.
Potential lifetime of site:	1. — 2. 3.
Ownership of site	1. — 2. 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.		
2.		
3.		

Port of Wahkiakum No. 1

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. — 2. 3.
What in your opinion is the largest challenge for your dredging projects?	Mob/De-Mob cost and permitting
Would you be interested in participating in a Regional Upland Disposal Plan?	Yes, but the Port would be challenged to provide funding
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Distance b/w ports, might want to divide river regionally Difference b/w ~~States~~ regulations Difference b/w large and small ports issues
Additional comments: Fueldock RV hook-up Campsites rentals Storage units / trailer storage Cabins Rock pit~~e~~ Moorage Boat Ramp	Port Amenities/Business

Port of Longview

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Longview
Contact Name:	Judy Griggs
	Manager of Environmental Affairs
E-mail:	jgrigg@portoflongview.com
Phone:	(360) 425-3305
Fax:	(360) 636-5188
Interviewer Name:	Lora Eddy and Dianne Perry

	2005	2006	2007	2008	2009
* **Total amount of sediment dredged annually in cubic yards (cy).**	0	0	0	10,000	0
Amount of sediment disposed of upland in cy.	0	0	0	10,000	0
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	0	0	0	0	0
Cost of routine dredging* in $/cy.	—	—	—	$12 to $20/cy	haven't dredged since 2001 estimate
Cost of upland disposal dredging in $/cy.				$12 to $20/cy	
If different, upland disposal cost for contaminated sediments in $/cy.				—	
Total Port operating budget		16mil.	~~16mil~~		
Percentage of the Port's operating budget used for dredging		if budget is consistent		0.75% to 1.3%	
Percentage of the Port's operating budget used for upland disposal of contaminated sediments				—	
Port capacity (tonnage) or annual volume of freight handled. talk Dianne total values lumber, grain	1.6mil	1.4mil			

river mile 67.5, Port handles grain, located on an area in the river where velocity is high, river is narrow so the berths are naturally deep
* usually only dredge around berth 8 where Cowlitz River is depositing sediment
2000 or 2001 was last time Port dredged

Port of Longview

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?	X				

Additional comments:
IP site filling up, don't want to place additional material on site since planning on developing

***Describe routine dredging and material disposal method:**	Clamshell bucket dredging w/ barge and the material offloaded and placed upland at the Port or once 15 years ago Ross Island took material
Name of upland disposal sites currently in use:	1. IP Site 2. RCRA site – International Paper Co *3. Howard Island corps site in DMMP ← Port could maybe use if needed
Type of site: (island, upland, or nearshore)	1. upland 2. upland *3.
Upland site design capacity in cy:	1. 2. 100,000 cy 10 to 12 acres (as a way to fill + cap site) *3. 6.4 million cy (200 acres)
Potential lifetime of site:	1. ~1 year 2. 10 years 3.
Ownership of site	1. Port-owned 2. port-owned 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.		
2.		Port-owned
3. W-68.7		

Port of Longview

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. 2. Site use would have to be approved by DOE ← since under remediation 3.
What in your opinion is the largest challenge for your dredging projects?	economics and the permitting time ← amount that it takes mainly the review process by the RSMT (SAP)
Would you be interested in participating in a Regional Upland Disposal Plan?	Yes, cost of transport — would look for agreement by agencies for the site to be used
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Finding a site close by so that it is economically feasible Liability issue
Additional comments: Port has a 10yr. maintenance dredging permit for 10,000 cy/year Typically works on 1 berth at a time. Haven't dredged in a long time, typically deep berths and scouring here. Currently seeing some filling in - sand from the Cowlitz River draining material from Mt. St. Helens. 2000 or 2001 was the last time they dredged and only berth 8 ← which is closest to the Cowlitz River. May need to dredge berth 8 this coming year.	

Port of Kalama

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Kalama
Contact Name:	Mark Wilson
	Manager of Planning
E-mail:	markwilson@portofkalama.com
Phone:	(360) 673-2325
Fax:	(360) 673-5017
Interviewer Name:	Lora Eddy and Dianne Perry

	2005	2006	2007	2008	2009
* **Total amount of sediment dredged annually in cubic yards (cy).**	98,000cy	—	—	150,000	
Amount of sediment disposed of upland in cy.	98,000cy	—	—	150,000	
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	—	—	—	—	
Cost of routine dredging* in $/cy.	contractor $570,000 $5-6/cy Ross Island Sand + Gravel	actual $5.82/cy			
Cost of upland disposal dredging in $/cy.	11				
If different, upland disposal cost for contaminated sediments in $/cy.	N/A				
Total Port operating budget		9 mil.			
Percentage of the Port's operating budget used for dredging	~	6%			
Percentage of the Port's operating budget used for upland disposal of contaminated sediments	—	—	—	—	—
Port capacity (tonnage) or annual volume of freight handled.	2005 – 9.5 million tons				

* Port does maintenance dredging every 3-5 years typically, in ~2008 plan of dredging 150,000 cy of material for deepening not maint. for the berths the Port has permit applications into the agencies for this deepening work Material dredged in this area is coarse to fine sand and good re-use applications for fill so the Port usually places material upland and has no problem getting rid of it

Port of Kalama

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?					X

Additional comments:
Haven't dredged marina much, just twice since Marks has been @ the Port usually have to do Tier II testing (chemical) in marina but has always been clean, only do Tier I testing for berths

***Describe routine dredging and material disposal method:**	Hydraulic pipeline dredge (contractor) directly piped to disposal site (dewatered onsite)
Name of upland disposal sites currently in use:	1. South port 2. North Port 3.
Type of site: (island, upland, or nearshore)	1. upland 2. upland 3.
Upland site design capacity in cy:	1. 200,000 2. 2 mil 3.
Potential lifetime of site:	1. ∞ 2. ∞ 3.
Ownership of site	1. Port-owned 2. port-owned 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1. 76.8		
2. 72. ← not in deepening		
3.		

Port of Kalama

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. no 2. 3.
What in your opinion is the largest challenge for your dredging projects?	Obtaining the permit ~~USFWS~~, NOAA, Corps ← Portland
Would you be interested in participating in a Regional Upland Disposal Plan?	Not needed for Port
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Coordination and permitting of site
Additional comments: Talk to Eric Johnson WA Public Ports Assoc. working on contaminated sediments (360) 943-0760 ↖ all Ports involved lobby local issues PNWA ← federal dredging issues	

Gene Leverton - Economist who has looked at beneficial use of dredge material on the Columbia

Protor – Geotechnical Engineer

Port of Ridgefield

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Ridgefield
Contact Name:	Brent ~~Green~~ Grening
	Executive Director
E-mail:	bgrening@portridgefield.org
Phone:	(360) 887-3873
Fax:	(360) 887-3403
Interviewer Name:	Lora Eddy

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	—	—	—		
Amount of sediment disposed of upland in cy.	—	—	—		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	—	—	—		
Cost of routine dredging* in $/cy.	—	—	—	Port does not dredge just industrial/commercial land holdings on Lake River, have a large Brownfield clean up on a majority of Port's holdings	
Cost of upland disposal dredging in $/cy.	—	—	—		
If different, upland disposal cost for contaminated sediments in $/cy.	—	—	—		
Total Port operating budget Without clean up		~~90~~	$900,000		
Percentage of the Port's operating budget used for dredging			—		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments					
Port capacity (tonnage) or annual volume of freight handled. Industrial/commercial development			N/A		

Port of Ridgefield

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?					
Additional comments:					

***Describe routine dredging and material disposal method:**	Port does not dredge
Name of upland disposal sites currently in use:	1. Potential fill site for Brownfield Site 2. 3.
Type of site: (island, upland, or nearshore)	1. Upland 2. 3.
Upland site design capacity in cy:	1. ~~10~~ 8 acres most cap with 5 to 15 feet of clean fill 2. 3.
Potential lifetime of site:	1. ? 2. 3.
Ownership of site	1. Port-owned 2. 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.		
2.		
3.		

Port has a Brownfield project that might need some clean material for a cap

Port of Ridgefield

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. 2. 3.
What in your opinion is the largest challenge for your dredging projects?	doesn't dredge N/A
Would you be interested in participating in a Regional Upland Disposal Plan?	Maybe would attend development/startup meetings to have an understanding of ~~what~~ how the Plan would serve the Port or fit into the Port's needs
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Locating site
Additional comments: Sees a lack in treatment technology recommends the group/plan have some means to financially support this	

Port of Woodland

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Woodland
Contact Name:	David Ripp
	Manager
E-mail:	portwood@worldaccessnet.com
Phone:	(360) 225-6555
Fax:	(360) 225-6556
Interviewer Name:	Lora Eddy and Dianee Perry

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	—	—	—		
Amount of sediment disposed of upland in cy.	—	—	—		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	—	—	Port does not dredge		
Cost of routine dredging* in $/cy.	—	—	—		
Cost of upland disposal dredging in $/cy.	—	—	—		
If different, upland disposal cost for contaminated sediments in $/cy.	—	—	—		
Total Port operating budget					
Percentage of the Port's operating budget used for dredging					
Percentage of the Port's operating budget used for upland disposal of contaminated sediments					
Port capacity (tonnage) or annual volume of freight handled.					

Port of Woodland

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?					
Additional comments:					

***Describe routine dredging and material disposal method:**	Port does not dredge
Name of upland disposal sites currently in use:	1. Austin Point ← on Martin Island? 2. Martin Bar 3.
Type of site: (island, upland, or nearshore)	1. upland 2. upland 3.
Upland site design capacity in cy:	1. ~~1.5~~ million cy 2. 1.5 million cy 3.
Potential lifetime of site:	1. ? ← would like the Corps to use the site 2. – 20 years for Corps deepening project 3.
Ownership of site	1. port-owned 2. port-owned 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1. W-82		
2. W-82		
3.		

Corp deepening 1.5 million cy of material over next 20 years
Port sells the dredge material or utilizes it for fill.

Port of Woodland

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. ✓ 2. 3.
What in your opinion is the largest challenge for your dredging projects?	N/A
Would you be interested in participating in a Regional Upland Disposal Plan?	Would like to here more about the plan in regards of benefit to Port's needs and operations maybe
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Permitting
Additional comments:	

Port of St. Helens

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of St. Helens
Contact Name:	Kim Shade
	Operations Manager
E-mail:	Shade@portsh.org
Phone:	(503) 397-2888
Fax:	
Interviewer Name:	Lora Eddy

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	—	—	—		
Amount of sediment disposed of upland in cy.	—	—	—		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.	—	—	Port does not dredge		
Cost of routine dredging* in $/cy.	—	—	—		
Cost of upland disposal dredging in $/cy.	—	—	—		
If different, upland disposal cost for contaminated sediments in $/cy.	—	—	—		
Total Port operating budget					
Percentage of the Port's operating budget used for dredging					
Percentage of the Port's operating budget used for upland disposal of contaminated sediments					
Port capacity (tonnage) or annual volume of freight handled.					

Port of St. Helens

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?					
Additional comments:					

***Describe routine dredging and material disposal method:**	Port does not dredge
Name of upland disposal sites currently in use:	1. Tressel Beach - Near Deer Island 2. 3.
Type of site: (island, upland, or nearshore)	1. upland 2. 3.
Upland site design capacity in cy:	1. 1.5 million cy 2. 3.
Potential lifetime of site:	1. ? 2. 3.
Ownership of site	1. Port-owned 2. 3.

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1. (O)-77		
2.		
3.		

Port of St. Helens

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. 2. 3.
What in your opinion is the largest challenge for your dredging projects?	N/A
Would you be interested in participating in a Regional Upland Disposal Plan?	Maybe, liability associated with potentially contaminated sediment is a concern
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Not Sure
Additional comments:	

Port of Portland

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan
Questionnaire

Organization Name:	Port of Portland
Contact Name:	Eric Burnette, Sr. Waterways Planner
	121 NW Everett Street, Portland, Oregon, 97209
E-mail:	eric.burnette@portofportland.com
Phone:	503 944 7791
Fax:	503 548 5595
Interviewer Name:	Lora Eddy and Dianne Perry

deepening berth 6 and 5 to 43'

	FY 2003	FY 2004	FY 2005	FY 2006	FY 07-09
Total amount of sediment dredged annually in cubic yards (cy). From Terminals 2,5 or 6 not #4	8000	400	4329+	40K cy planned but not performed	10-20K cy per yr estimated
Amount of sediment disposed of upland in cy.	All of it.	All of it.	All of it.	N/A.	TBD
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy. (note 1)	(note 2)	(note 2)	(note 2)	N/A.	TBD
Cost of routine dredging* in $/cy.	$45.06 to $213.73	$450.00	$92.46 to $240.43	$40 budgeted	$40-200 estimated
Cost of upland disposal dredging in $/cy.	$45.06 to $213.73	$450.00	$92.46 to $240.43	N/A.	TBD
Total Port operating budget (Port of Portland Marine and Navigation Divisions, excluding depreciation and other ancillary expenses)	$67.18M	$55.48M	$43.01M	$61.51M	TBD
Percentage of the Port's operating budget used for dredging.	(note 3)	(note 3)	(note 3)	(note 3)	(note 3)
Percentage of the Port's operating budget used for upland disposal of contaminated sediments	(note 3)	(note 3)	(note 3)	(note 3)	(note 3)
Port capacity (tonnage) or annual volume of freight handled. (In millions of short tons.)	11.5M	12.4M	11.9M	11.8M	TBD

FY 2006 lack of permits ~~+sites~~ is why they didn't dredge, not ready for the in-water work window

Port does have some potential contamination

Port of Portland

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?					X

Additional comments:

(1) Any material dredged from our Terminal 4 (on the Willamette) is not authorized for in-water disposal. However, materials dredged from our Terminals 2 or 5 (on the Willamette) or Terminal 6 (on the Columbia) may be disposed of in-water, although we currently have no approved site for in-water disposal.

(2) For Port of Portland, this question is moot since we currently have no approved in-water disposal site. Thus, all of our dredged material must go to upland sites. That said, we routinely perform due diligence testing to Tier 2 levels, since we use a re-handle facility, and we need to know that the material placed in the re-handle facility for dewatering will be suitable for eventual beneficial use elsewhere.

(3) Due to inevitable overlapping of line items for the numerous significant constituent costs that would contribute to this percentage, (i.e., sediment testing costs, permitting overhead, community outreach, legal expenses, hydro surveys, etc.) it is not possible to extract a meaningful and accurate number.

*Describe routine dredging and material disposal method:	POP owned dredge Oregon ← hydraulic pipeline ← channel clamshell bucket dredge ← berths
Name of upland disposal sites currently in use:	1. Suttle Road re-handle site. 2. West Hayden Island site. not Hazardous waste site 3. Three Regulated Subtitle D Land Fills; Columbia Ridge Landfill in Arlington OR, Northern Wasco County Landfill in Wasco County OR, and Finley Buttes Landfill in Morrow County, OR.
Type of site: (island, upland, or nearshore)	1. Upland (PLEASE NOTE: This is a de-watering and transfer site that is used to prep materials for dry disposal at other final locations.) 2. Upland 3. Regulated landfills in which the material is used as daily cover.
Upland site design capacity in cy:	1. In theory, the capacity of this site is unlimited since it is a throughput facility and not a final destination. However, it can only handle materials in batches of 70,000 cubic yards or less, with an annual maximum of throughput of two batches per year. 2. The capacity of this site is approximately 1.6M cu/yd. ← just site not whole side of island 3. The individual capacities of these sites are unknown.
Potential lifetime of site:	1. The lifetime is indefinite since this is a reusable site. 2. 20+ years. 3. 20+ years.
Ownership of site	1. Port of Portland 2. Port of Portland 3. Varies by regulated landfill site.

Site near W. Hayden upland site as well as in-water site
20yr. maint for Corps project

Port of Portland

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Corps DMMP ID	**CRE DMMP ID**	**Private Site: Tax lot**
1. No known ID designator.		
2. O-105.0		
3.		Varies by regulated landfill site.

Site special conditions or limitations:	1. **Suttle Road site:** Since this site is designed for the initial dewatering and subsequent transfer of dredge materials, capacity really depends on rate of use. Dredge materials placed at this site must be clean and ultimately suitable for beneficial use in other upland locations. 2. **West Hayden Island site:** Capacity at this site is for the most part dedicated to meeting ACOE local sponsor requirements for current and future Columbia and lower Willamette River projects. Eventually the site will be used as a maritime/industrial development location. 3. **Regulated Landfills:** Conditions and limitations vary, and specifics are based on the individual site licenses. I.e., dredge materials must usually meet the "paint filter" dry material test, after which they must be suitable for beneficial uses such as daily cover or road bed material.
What in your opinion is the largest challenge for your dredging projects?	In fact, there are two: 1.) A lack of suitable and approved in-water dredge material disposal sites in the Columbia and Willamette. 2.) The high cost and slow pace of the regulatory process for approving routine but essential dredging projects.
Would you be interested in participating in a Regional Upland Disposal Plan?	Potentially yes, but only if participation in a RUDP makes clear economic and operational sense for the Port of Portland.
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	There are three significant challenges that we see: 1.) The transportation and offloading costs required to move dredge material from the dredge site to the disposal sites may prove to be unacceptably high. 2.) Obtaining regulatory approval for a sufficient number of disposal sites, spaced at appropriate intervals along the river, may not be practical. 3.) The liability exposure burden for disposal site owners may prove to be unworkable.

Additional comments:

design a baseline testing, ongoing sampling (kinda ambient conditions or maybe to determine long term deposition/contamination trend potentially identify sources? ← my thoughts/understanding on this)
sediment handling/(treatment) barge
12 in hydraulic dredge ← Port of Portland is looking at purchasing
in the Willamette other potential dredgers that have cont. issues might be able to share in group

Port of Vancouver

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Vancouver, USA
Contact Name:	Craig Heimbacher Patty Boyden
E-mail:	pboyden@portvanusa.com
Phone:	360-693-3611
Fax:	360-735-1565
Interviewer Name:	Lora Eddy + Dianne Perry

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	NA	33525	1814		
Amount of sediment disposed of upland in cy.		33525	1814		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.		NA	NA		
Cost of routine dredging* in $/cy. Cost includes just dredging contractor		$10.65/cy*	$36/cy**		
Cost of upland disposal dredging in $/cy.					
If different, upland disposal cost for contaminated sediments in $/cy.		NA	NA		
Total Port operating budget OPexp = 17.5 nonop = 10.4 Capital = 20.5 avail cash = 28.7M	$83M				
Percentage of the Port's operating budget used for dredging					
Percentage of the Port's operating budget used for upland disposal of contaminated sediments					
Port capacity (tonnage) or annual volume of freight handled. 70% cargo, grain, Subaru bulk material		(not in water upland)			

Only issue with Contaminants is Alco Evergreen facility, looking at purchasing this area after PCBs are cleaned up, to industrial cleanup standards before purchase this development is a while away, if re-develop would probably place clean material here to cap it?

Port of Vancouver

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

	Low		Moderate		High
Capability to handle upland disposal?			X		

Additional comments:

*Two separate dredging projects in 2006. One project, dredge material was disposed of at Port upland disposal site (7500 cy). The other project, material was disposed of at Hickey Marine upland disposal site (26,025 cy).
**Includes mobilization and dredging

***Describe routine dredging and material disposal method:**	The majority of routine dredging performed at the Port of Vancouver consists of using a clamshell bucket
Name of upland disposal sites currently in use:	1. Hickey Marine 2. Ross Island Sand & Gravel 3. Port of Vancouver – Parcel 3 (~500acres to west of Port Terminals)
Type of site: (island, upland, or nearshore)	1. Upland 2. Island 3. Upland
Upland site design capacity in cy:	1. 450,000 cy 2. unknown 3. 2 million cy
Potential lifetime of site:	1. unknown 2. unknown 3. Approximately 3 years
Ownership of site	1. Hickey Marine 2. Ross Island Sand & Gravel 3. Port of Vancouver

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.		
2.		
3.		

Port of Vancouver

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Site special conditions or limitations:	1. 2. Restrictions set by Oregon DEQ 3. Limited access
What in your opinion is the largest challenge for your dredging projects?	Where to place the material. Future development projects will require large amounts of fill. Fill placement logistics are a challenge. As far as permitting RSMT ← review process for SAP
Would you be interested in participating in a Regional Upland Disposal Plan?	This may be a possible long-term option for the Port of Vancouver. As stated above, the Port would like to use dredge material as fill for upcoming development projects. ↑ Port is in good shape for the next 7 to 10 years as far as upland disposal
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Finding sites in general, and finding sites that are cost effective for a large group

Additional comments:
Port has a 5 year permit to dredge 70,000 cy (↙ total ~~amount for the permit~~) for maintenance of terminals to a 40' depth, working on a permit to get terminals to 43' like the channel but won't be doing ~~terminals~~ berths 2 and 5 until improvements to piers are made. This additional material would be placed upland as fill for Parcel 3 development hope to do this in 2009. Additionally will be "new" dredging near Parcel 3 for a turning basin + car terminal ← not sure when maybe 2013 ← again material will be used as fill on Parcel 3 site

Port is located in a self-scouring location

Had a sediment transport study done on Port's terminals by Gold Water ← in permitting for Parcel 3 so that they could place the material upland not in-water

Corps dredging project in the area placed the material in Parcel 3

2 miles of terminals

Port of Vancouver Deepening Volumes

Terminal	2	2	2	3	3	3	4	
Berth	Grain Term.	1	2 - 4	5	7	8 - 9	10 - 13 - 14	
Berth Deepening Phase	1	2	1	2	1	1	2	TOTAL
DMMU	GT	B1	B2/4	B5	B7	B8/9	B10/13/14	PROJECT
Dredge Volume (cy)								
Berth to Pierhead	---	MD	---	MD	2,240	9,278	MD	11,518
Pierhead to Channel	364	MD	6,969	MD	2,705	2,673	MD	12,711
TOTAL Berth Volume	364	MD	6,969	MD	4,945	11,951	MD	24,229
Potentially Affected Volume (cy)[1]								
Side-Slope	0	0	13,184	0	797	1,741	0	15,722
TOTAL Berth + Side Slope	364	MD	20,153		5,742	13,692		39,951
Dredge Area (ft^2)								
Berth to Pierhead	---	MD	---	MD	20,137	110,011	MD	130,148
Pierhead to Channel	46,458[2]	MD	65,092	MD	38,582	81,796	MD	185,470
TOTAL Berth Area	46,458	MD	65,092	MD	58,719	191,807	MD	362,076
Dredge Area (acres)								
TOTAL Berth Area	1.1	MD	1.5	MD	1.3	4.4	MD	8.3
Number of Cores								0
Number of Surface Samples								0

MD = Maintenance Dredging only (to -40 ft. CRD). These berths will not be deepened until Phase 2.

[1] Potentially affected side-slopes projected on 1.5-to-1 slope up to -25 ft. CRD, and 2-to-1 slope at shallower elevations.

[2] Grain Terminal includes material outside the Channel Line

2009 2009 2009 2009

til 2013 working on deepening berth but for berth 5 and 1 improvements to piers need to be performed before deepening

Port of Vancouver

LCSG Toxics Subcommittee
Regional Upland Disposal Plan
Questionnaire

Regional Upland Disposal Plan Questionnaire

Organization Name:	Port of Vancouver, USA
Contact Name:	Director of Env. Services Patty Boyden / Craig Heimbucher Env. Services Specialist
E-mail:	pboyden@portvanusa.com / cheimbucher@portvanusa.com
Phone:	360-693-3611
Fax:	360-735-1565
Interviewer Name:	Lorn Eddy and Dianne Perry

	2005	2006	2007	2008	2009
Total amount of sediment dredged annually in cubic yards (cy).	NA	33525	1814		
Amount of sediment disposed of upland in cy.		33525	1814		
Amount of contaminated sediment (not authorized for in-water disposal) disposed of upland in cy.		NA	NA		
Cost of routine dredging* in $/cy.		$10.65/cy*	$36/cy**		
Cost of upland disposal dredging in $/cy.					
If different, upland disposal cost for contaminated sediments in $/cy.		NA	NA		
Total Port operating budget	Total = 58M Operating=9.4M	Total = 67M Operating=15.3M	Total = 83M Operating=17.5M		
Percentage of the Port's operating budget used for dredging	65K = 1%	470K = 3%	355K = 2%		
Percentage of the Port's operating budget used for upland disposal of contaminated sediments	NA	NA	NA		
Port capacity (tonnage) or annual volume of freight handled.	3,979,939 metric tons handled – all commodities	5,194,209 metric tons handled – all commodities	6,089,719 metric tons handled – all commodities (projected)		

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	Low		Moderate		High
Capability to handle upland disposal?			X		

Additional comments:

*Two separate dredging projects in 2006. One project, dredge material was disposed of at Port upland disposal site (7500 cy). The other project, material was disposed of at Hickey Marine upland disposal site (26,025 cy).
**Includes mobilization and dredging

***Describe routine dredging and material disposal method:**	The majority of routine dredging performed at the Port of Vancouver consists of using a clamshell bucket.
Name of upland disposal sites currently in use:	1. Hickey Marine 2. Ross Island Sand & Gravel 3. Port of Vancouver – Parcel 3 Corps Channel Improvement Disposal Site (40-acres)
Type of site: (island, upland, or nearshore)	1. Upland 2. Island 3. Upland
Upland site design capacity in cy:	1. 450,000 cy 2. unknown 3. 2 million cy
Potential lifetime of site:	1. unknown 2. unknown 3. 20 years (~2006-2026)
Ownership of site	1. Hickey Marine 2. Ross Island Sand & Gravel 3. Port of Vancouver

Corps DMMP ID	CRE DMMP ID	Private Site: Tax lot
1.		
2.		
3.		

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Site special conditions or limitations:	1. Parcel 3 disposal site subject to Channel Improvement permit conditions 2. Limited vehicular access for removal of materials from the disposal site.
What in your opinion is the largest challenge for your dredging projects?	1. Obtaining permit approval in a timeframe that is consistent with project needs. In particular review time by the Regional Sediment Management Team can be lengthy. 2. Where to place the material. Future development projects will require large amounts of fill. Fill placement logistics are a challenge.
Would you be interested in participating in a Regional Upland Disposal Plan?	This may be a possible long-term option for the Port of Vancouver. For the next ~ ten years, the Port requires approximately 7 million cubic yards of fill for industrial and marine facility development. In the future, the Port may have a need for a regional disposal site.
What in your opinion is the largest challenge for a Regional Upland Disposal Plan?	Site selection: Finding multiple, large pieces of land (likely on the Columbia River) with limited environmental constraints that can be permitted at a reasonable cost. Finding a site that is cost effective for a variety of users. Defining on-going liabilities for landowners and users that dispose of contaminated materials at regional facility. Obtaining funding for site selection, permitting, and operation. Identifying willing partners to operate facilities.
Additional comments: **In addition to disposal/storage site, would be helpful to identify locations for sediment disposal that would create an ecological benefit.**	