

Appendix F

Site Management and Monitoring Plan Rogue River, Oregon

April 2009



**US Army Corps
of Engineers**®
Portland District

Final

**Site Management/Monitoring Plan
for the Rogue River
Ocean Dredged Material Disposal Site
Oregon**

Section 102 of the Marine Protection, Research and Sanctuaries Act, as amended
Ocean Dredged Material Disposal Site (ODMDS)
April 2009

ABSTRACT

This Site Management and Monitoring Plan (SMMP) has been prepared jointly by the Environmental Protection Agency, Region 10 (EPA), and the U.S. Army Corps of Engineers, Portland District (USACE), and describes management and monitoring requirements for the EPA-designated ODMDS located offshore from the Rogue River, Oregon. This SMMP supersedes all previous SMMPs for the Rogue River ODMDS. Periodic review and updating of this SMMP will occur, at a minimum, no less than 10 years from the date this SMMP is effective. All permits or other authorizations to use the Rogue River ODMDS shall be conditioned as necessary to assure consistency with this SMMP.

Rogue River ODMDS Site Management/Monitoring Plan

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Introduction

This Site Management and Monitoring Plan (SMMP) was prepared jointly by the U.S. Environmental Protection Agency, Region 10 (EPA), and U.S. Army Corps of Engineers, Portland District (USACE), and describes management and monitoring requirements for the EPA-designated ocean dredged material disposal Site located offshore of Rogue River, Oregon, hereafter the Rogue River ODMDS or Site (See Figure 1). This SMMP becomes effective upon the effective date of the site designation and supersedes and replaces any previous SMMP for this location.

Figure 1 : Rogue River ODMDS and Vicinity.



It is the responsibility of the EPA and the USACE to manage and monitor the ODMDS designated by EPA pursuant to Section 102 of the Marine Protection, Research and Sanctuaries Act, as amended (MPRSA). EPA has final authority over site management. SMMP provisions establish requirements for all dredged material disposal activities at the Site. All permits issued pursuant to Section 103 of the MPRSA for the ocean disposal of dredged materials at this Site shall be conditioned as necessary to ensure consistency with this SMMP. The USACE shall ensure that its use of the Site is consistent with this SMMP.

Guidance for the preparation of SMMPs for ocean dredged material disposal sites is provided in the joint EPA/USACE Guidance Document for *Development of Site*

Management Plans for Ocean Dredged Material Disposal Sites (USACE/EPA 1996). This guidance document lays out a recommended framework for site management plan development and content.

Each SMMP is required, pursuant to the MPRSA, to include: a baseline assessment of conditions at the site; a program for monitoring the site; special management conditions or practices to be implemented at each site that are necessary for protection of the environment; consideration of the quantity of material to be disposed of at the site, and the presence, nature, and bioavailability of the contaminants in the material; consideration of the anticipated use of the site over the long term, including the anticipated closure date for the site, if applicable, and any need for management of the site after closure; and a schedule for review and revision of the plan which must be no less frequently than 10 years after adoption of the plan and every 10 years thereafter.

Specific management of each designated ODMDS involves regulating the times of use, the quantity and the physical/chemical characteristics of dredged material that is dumped at the site; and establishing disposal controls, conditions, and requirements to avoid and minimize potential impacts to the marine environment. Appropriate management of each ODMDS is aimed at assuring that disposal activities comply with permit requirements, site management objectives and conditions, and do not unreasonably degrade or endanger human health, welfare, the marine environment or economic potentialities. Monitoring the site and adjacent environs is a critical component of management to verify compliance with requirements, objectives, and conditions of site management, to ensure that unanticipated or significantly adverse effects are not occurring from use of the disposal site, and to ensure that permit terms are met.

Site Management Roles and Responsibilities

The designation of ocean dredged material disposal sites and the issuance of permits for such sites are components of the federal, non-delegable, ocean dumping program. Site designation and management are federal responsibilities. Owing to the interactive nature of regulating ocean disposal of dredged material, the functional management of ocean dredged material disposal sites along the coast of Oregon is shared between EPA, Region 10 and the USACE, Portland District. The EPA and USACE will routinely consult on all decisions regarding site use and management. The primary mechanism for pre-disposal consultation will be the annual ODMDS monitoring update prepared by the Portland District.

The EPA may condition, terminate or restrict site use with cause. Region 10 is responsible for managing and monitoring ocean dredged material disposal sites in ocean waters off the States of Alaska, Washington, and Oregon, including the Rogue River ODMDS addressed in this SMMP.

The USACE is expected to be the primary user of the Rogue River ODMDS for dredged material from federal navigation projects. The USACE also issues permits for transportation of dredged material for the purpose of ocean disposal, after consultation with and concurrence from the EPA, in compliance with these criteria. The USACE

meets substantive permit requirements for its own use of this Site and EPA concurs on site use by the USACE.

Baseline Definition

The MPRSA, at section 102(c)(3)(A), requires that the SMMP include a baseline assessment of conditions at the site. The baseline record for the Site includes over thirty years of studies and surveys which are pertinent to dredged material management. Assessments of physical, chemical and biological characteristics of the section of the Pacific Ocean encompassing the Rogue River ODMDS are described in a 1991 draft environmental impact statement, a draft 2008 environmental assessment for ODMDS site designation, and other technical studies and annual monitoring surveys. There are no rare or unique features or habitats at, or in the vicinity of, the Rogue River ODMDS. The Site is situated within sight of land in an open, dynamic ocean environment. The seafloor is characterized as relatively uniform and featureless with highly active shifting sands grading to rock/gravel as it slopes (10/100 feet) westward into deeper water. The Rogue River ODMDS, or areas in the same vicinity, have been used by Portland District since 1962 exclusively for the placement of dredged material. Between 1986 and 2007, approximately 1.1 million cubic yards (MCY) of dredged material was placed in the Rogue River ODMDS, with no persistent mound resulting.

In general, ocean dredged material dumping sites in the Pacific Northwest are dispersive. However, mounds (and potential navigation hazards) have been known to develop when more material was placed in discrete locations than the ocean had capability to disperse between disposal events. Current understanding, and experience through observation and monitoring indicate rapid dispersion rates within nearshore areas shallower than 18 meters (approximately 60 ft.), and a reduction in dispersion with increased depth. However, at the Rogue ODMDS, no mounding has been observed in more than 30 years of regular disposal and site monitoring. The bathymetric baseline for the Rogue River ODMDS was established in 1986.

Site Definitions and Description

Disposal Site Definitions

For the purposes of management and monitoring of the designated Rogue River ODMDS the following definitions are applicable:

Disposal Site: The sea bottom within the coordinates specified in the applicable *Federal Register* Final Rule designating the individual site and the overlying water column.

Placement Area (also can be called disposal area): The area of the sea bottom that will be immediately occupied by disposed dredged material released at the water surface (1) on an annual use basis, and/or (2) over the anticipated life of the disposal site. Material

disposed and accumulating in the placement area during the active disposal season is expected to be transported out of the Site and redistributed by natural forces (e.g., tides, currents, waves) leaving the placement area with near its original capacity.

Disposal Site Description

The Site is located near the mouth of the Rogue River and is primarily intended to receive suitable dredged material from the USACE Rogue River navigation project, other local USACE projects, and appropriately permitted dredged material from non-USACE projects. The Site location (coordinates) and size are provided below in table 1:

Table 1. Coordinates (NAD 1983) and Dimensions of the Site

42° 24' 15.40" N	124° 26' 52.39" W
42° 24' 03.40" N	124° 26' 39.39" W
42° 23' 39.40" N	124° 27' 17.40" W
42° 23' 51.40" N	124° 27' 30.40" W

Dimensions: 3,600 feet long x 1,400 feet wide'

Azimuth (long axis): 230° T

Average Depth: approximately 18 meters (60 feet)

Components of the Disposal Site: The Rogue River ODMDS Disposal Site, Placement Area, and Drop Zone are identical.

Disposal Capacity: Based on placement of dredged material between 1986 and 2007, at the Site prior to designation, approximately 1.1 million cubic yards were placed, for a twenty year average annual loading volume of 51,000 cubic yards/year, without persistent mounding. Annual bathymetry has shown that material placed in the disposal area redistributes out of the Site. Site capacity, at current levels of use, appears over the long term to be unlimited.

Anticipated Site Use

The MPRSA, at section 102(c)(3)(E), requires that the management plan include consideration of the anticipated use of the site. Primary and regular use of the Rogue River ODMDS is expected by the USACE, Portland District, for maintenance material removed from the federal navigation project, a summary of the Rogue River federal project is included in this SMMP. Recent maintenance volumes dredged by the USACE from the Rogue River navigation channel and entrance channel have averaged 54,000 cubic yards annually. It is expected that the Site will also be used in the future for disposal of material dredged by other public or private entities (e.g., U.S. Coast Guard) in accordance with Section 103 of the MPRSA. These disposals would require Section 103

permits (which could be multiple-year authorizations up to 7 years) from the Regulatory Branch of the USACE, and EPA concurrence. Individual permits are typically public noticed and require other federal consultations (e.g., ESA, EFH) and authorizations (e.g., water quality certification).

Rogue River Navigation Project Description

The Rogue River federal navigation project was originally authorized by the Rivers and Harbor Act of September 3, 1954, and provided for the construction of jetties, a channel, bank protection, and a turning basin. A second channel and turning basin was also built in response to local construction of a small boat basin. Maintenance dredging as a federal responsibility was authorized in 1962. The authorized project includes:

- A channel 13 feet deep, 300 feet wide and 3500 feet long from the ocean to the boat basin entrance channel;
- The Gold Beach Boat Basin with an access channel 2,100 feet long, 100 feet wide, and 10 feet deep with a turning basin 600 feet long, 150 feet wide, and 10 feet deep;
- A turning basin 650 feet long, 500 feet wide, and 13 feet deep;
- A North Jetty 3,300 feet long and a South Jetty 3,400 feet long; and
- A north shore bank protection structure.

Site Management Objectives

The primary objective of this SMMP is to provide for the safe and efficient disposal of dredged material at the Rogue River ODMDS while minimizing adverse impact on the environment to the greatest extent practicable. General objectives for accomplishing this are to:

- 1 Avoid creation of persistent mounds;
- 2 Minimize impacts on coastal sediment circulation by keeping sediment in the littoral zone;
- 3 Minimize long-term adverse effects to marine resources;
- 4 Minimize interference with other uses of the ocean;
- 5 Maintain safe navigation and commerce;
- 6 Promote safe and efficient dredge operations; and
- 7 Document disposal and monitoring activities at the ODMDS.

All these general site management objectives are applicable to the Site and additional specific management restrictions may be imposed as necessary. Placement of dredged material consisting primarily of gravel may be restricted to the deeper portions of the Site because side-scan sonar indicates this area is rocky in nature. Specific individual site objectives and restrictions will be periodically reassessed and/or revised in the future.

Site Monitoring and Special Studies

Site monitoring is a key component of site management. The main purpose of a disposal site monitoring program is to determine compliance with site use requirements or conditions and to determine whether dredged material site management practices, including disposal operations, at the site need to be changed to avoid unreasonable degradation or endangerment of human health or welfare or the marine environment. These activities are collectively referred to as “Routine Monitoring” throughout the SMMP. Routine monitoring events may be triggered annually or some other time period (e.g., five years), when a set volume of material has been placed, or a combination of volume and chronology. Special Studies will be undertaken as necessary to address specific questions or issues that are not covered by routine monitoring events. Such situations could include follow-up after an accident (e.g., spill of a material) or in advance of use of a new type of equipment, or a different type of material (e.g., rocks). The results of these Special Studies are intended to refine future management objectives and practices, modify routine monitoring requirements or reset Baseline conditions.

Potential decision outcomes resulting from routine monitoring of disposal at the ODMDS include the following:

No Change:

No Change *Required* (e.g., routine monitoring reveals no cause for concern; disposal and monitoring continue as planned)

No Change *Possible* (e.g., one-time event or accident took place at the Site; while there may be no change in disposal operations, other actions may be appropriate)

Additional Information Required:

Adjust routine monitoring (e.g., go to more frequent bathymetric surveys, conduct physical, chemical or biological monitoring)

Operational Change Required:

Scheduling (e.g., adjust time periods or rates of disposal)

Adjust Placement of Material Within Site (e.g., place material in a different manner)

Restrict Type or Quantity of Material Placed

Change Sites:

Relocate disposal activities from one site to another; follow-up with monitoring to determine if additional attention warranted.

Discontinue Disposal Site Use:

Cease Disposal--Short-Term (e.g., 1 season): A known temporary condition occurs which merits discontinued use for a short period of time; subsequent follow-up with monitoring is done

to determine if additional attention is warranted;

Cease Disposal--Long-Term. Typically this would occur when routine monitoring or a Special Study confirms an unacceptable condition persists. This would require site modification or identification and designation of a new site(s).

Routine Monitoring

The 1996 Guidance Documentation (USACE/EPA, 1996) for developing management plans states that continuous monitoring of all physical, chemical, and biological parameters and resources in and around a typical disposal site is not necessary.

Routine monitoring will consist of, annual bathymetric monitoring of dredge material disposal of the Site, typically done in the spring. The annual bathymetry will be compared to the baseline survey from 1986, and the previous year's survey. More intensive monitoring is employed when annual bathymetry or direct field observation reveal persistent mounding. Only the level of monitoring sufficient to address the specific management questions at hand would be undertaken.

The following Specific Monitoring Objectives are identified for the Rogue River ODMDS:

- Ensure that dredged material is being placed as required by this SMMP;
- Ensure that the dredged material is behaving as predicted during placement (e.g., monitoring v. modeling);
- Ensure that placement of dredged material does not create persistent and adverse wave-generating mounds (principally shallow water concern);
- Assess the significance of potential impacts of disposal operations on the public safety and resources or resource use; and
- Verify that material is moving out of the Site over time, as predicted, providing long-term capacity without adverse effects.

Rogue River ODMDS Routine Monitoring

For management purposes, routine monitoring will concentrate on determining how the disposed dredge material is behaving within and in the vicinity of the Site. Bathymetric surveys shall be conducted annually. Bathymetric surveys will be used to monitor the disposal mound to assist in verification of material placement, to monitor bathymetric changes and trends and to ensure that the Site capacity is not exceeded, (e.g. that the Placement Area does not exceed the Site boundaries). The entire Site is surveyed to assess the potential capacity of the Site for the next dredging season and for future years. Annual bathymetric profiles are evaluated for cumulative changes based upon comparison of the baseline and most complete surveys available with the then-current

survey results. Bathymetric surveys and difference plots will be provided to EPA as part of the annual assessment report.

If mound heights appear to be increasing over time, more intensive monitoring and/or management action will be taken. Such action may consist of restricting placement to only certain portions of the Site or some other similar disposal or management action.

Monitoring the use of the Site and surrounding area for biological resources, and confirmatory characterization of sediment, physical, biological, and chemical studies as determined to be necessary are expected to occur on an approximate 7 to 9 year schedule, with the first monitoring event to occur in 2016. This schedule can be adjusted as necessary (see below Section on Adaptive Management and Monitoring). The level of effort for this reassessment is expected to be similar to effort expended in the 2007 baseline studies at the Site and surrounding area. It is anticipated that such reassessments will be documented as stand-alone reports to directly support monitoring efforts at the Rogue ODMDS. Monitoring reports will be provided to EPA.

Adaptive Management and Monitoring

The Site will be adaptively managed to avoid unreasonable degradation or endangerment of human health or welfare or the marine environment. The Corps and EPA may from time to time, discuss ODMDS monitoring with Federal and State agencies. Site management and monitoring will be adjusted as conditions warrant.

Special Studies

Special Studies are non-routine studies of specified duration that are intended to address specific questions or issues that are not covered by routine monitoring events or that arise from routine monitoring. The obvious need for a Special Study would be following an accident or spill. However, other circumstances may warrant special studies. Under such circumstances, the EPA and USACE would mutually scope and conduct appropriate studies to determine the effect on the Site and to ascertain whether specific contingency or possible enforcement action would be necessary. The results of any Special Studies would be used to refine future management objectives and practices, modify routine monitoring requirements, or reset baseline conditions. Depending on the objective of the study, technical assistance or advice would be sought from other agencies and entities. It is anticipated that special studies would be coordinated with the Northwestern Regional Dredging Team (RDT).

Restrictions and Requirements

- Only clean dredged material can be placed into the ocean under current statutes and regulations. Sediment suitability must be documented prior to disposal at the Site following procedures approved by the Regional Sediment Evaluation Team.
- **The EPA may condition, terminate or restrict Site use with cause.**

Annual Summary Assessment Requirement

The operational mechanism for use and monitoring of the Site on an annual basis, as well as management decision-making, will be the annual summary report updates. The annual summary report for a given dredging year is based on the results of the previous year's monitoring, the pre-dredging/disposal hydrographic surveys (typically conducted in the spring), and dredge operating parameters. The summary will focus on any operational adjustments which should be implemented. It is expected that the primary user of the ODMDS will be the USACE for material dredged from federal projects. The summary will identify the capacities of the ODMDS, expected volumes to be disposed, dredging and disposal techniques, timings and locations, routine monitoring or special studies, and other considerations drawing on the then-current Site use conditions and SMMP. The USACE, either as user of the Site or as permitting authority, will take the lead to draft the summary and provide it to EPA. Once reviewed by EPA, the summary will constitute the template for that year's disposal. EPA recognizes that the summary cannot anticipate every operational situation and that day-to-day flexibility in dredging and disposal decisions will be necessary. However, the user will make every effort to consult with EPA and seek EPA's concurrence before changes are initiated. Such changes could include decisions to increase the spacing between the dumping positions, to shift disposal operations to other portions of the Site, to redistribute material at the Site, or to make other significant changes in Site use or management.

Record-Keeping and Reporting Requirements

Daily records are required of dredging and disposal activities, indicating where material was dredged and where and how material was disposed. Also required to be recorded are start and endpoint coordinates for each load disposed. An annual summary report of quantities dredged and disposed at the Site will be prepared and provided to EPA.

Data from any routine monitoring or special studies will be compiled and submitted to the EPA (ATTN: Region 10, Pacific Northwest Ocean Dumping Coordinator). These results will be evaluated by EPA and the USACE. EPA has final authority over site management decisions. In addition, EPA should be notified by the USACE 15 days prior to the beginning of a dredging cycle or project disposal. Holders of Section 103 permits shall notify EPA not less than 10 days prior to use of the Rogue River ODMDS.

Inspection and Surveillance Provisions

Contract dredges are periodically inspected by USACE personnel to ensure dredging and disposal are taking place in the correct locations. USACE dredges are responsible for ensuring their proper positioning. USCG has a surveillance role under the MPRSA. EPA will typically utilize the inspection and surveillance capabilities of these other agencies; however, EPA may choose to implement its own inspection and surveillance requirements using EPA personnel or contractors. It is expected that EPA will coordinate with the USACE on any special inspections and surveillance.

Special Management Conditions or Practices

The following Special Management Conditions will be implemented at the Rogue River ODMDS:

Placement Strategy

The placement strategy has a large influence on the consequences of disposal in any site. Placement strategies vary, ranging from individual dumps to the long-term distribution of material. Both EPA and USACE policy establishes a preference for beneficial use of dredged material when practical. A Uniform Placement Strategy will be applied. The Site is relatively small which limits disposal options. However, placement at the Site is expected to result in a uniform accumulation on the bottom.

Equipment Considerations

The type of dredge used for disposal influences the dimensions of the individual and cumulative dump mound. No specific disposal technique is required at the Rogue River ODMDS. For the hopper dredges that commonly work at Rogue River, such as the USACE's multiple bottom-door hopper dredge, Yaquina, each load would produce a thinner deposit than the split-hull contract hopper dredges at any given water depth. Material disposed from a split-hull barge is typically more consolidated than material disposed from a hopper dredge. Hopper dredges are the dredge type normally deployed at Rogue River for sandy material, however, a clam shell with hopper barges was used in 2007.

Quantity, Seasonal, Weather, and Environmental Restrictions

Dredging and disposal actions are generally concurrent activities. Quantities placed at the Site will vary year-to-year depending on shoaling of the project. Disposal volumes and placement will be closely monitored and documented, to verify uniform placement, and to assess dispersive capability. Seasonal restrictions due to adverse sea and weather conditions, limit dredging and disposal to a period typically from June through October. Even during the dredging season, storm events can restrict disposal. Environmental restrictions may be imposed on dredging and / or disposal. In the event that monitoring results reveal the need for any additional restrictions, disposal activities will be scheduled so as to avoid or minimize unacceptable adverse impacts.

Equipment Requirements and Disposal Point

Hopper dredges or clamshell and barge operations could include USACE and private contract dredges. All such operations are required to meet all U.S. Coast Guard requirements for safety. They are also required to use modern global positioning equipment capable of fixing their location within plus or minus 3 feet to ensure that material is placed within the designated disposal Site.

Debris Removal Provisions

Debris is material that could cause interference with particular uses of the ocean. Floatable debris comprises material such as logs that could cause navigation hazards or solids, such as plastic or wood chunks that could foul beaches. Non-floatable debris comprises material that could reasonably be expected to cause conflicts with bottom-net or trawl fishing. As a general rule, non-floatable, non-sediment materials that would pass through a 24-inch x 24-inch mesh is not considered debris if it is dredged as part of the sediment matrix.

The USACE or EPA may make dredging or disposal area inspections to ensure that the contractor is in compliance with the approved operating plans, and that debris is removed prior to disposal at the Site. The need for such a requirement will be assessed during the planning or permitting process. Floatable debris must be either removed at the dredging area or picked out of the water at the disposal area. Sediments, which contain debris that is not easily removed, may require screening through a 24-inch x 24-inch mesh. The mesh must be periodically cleaned and the debris disposed of according to the approved dredging and disposal plan. Hopper and pipeline dredges are incapable of picking up large debris.

Disposal of debris at the Site is prohibited. Typically the planning or permitting process assesses the potential risks of any debris that could be encountered during dredging. Dredging contractors and USACE dredge captains are required to maintain a record of the handling of debris encountered during dredging and disposal. Compliance inspectors may review these records. Copies of these records may be required as part of annual reporting.

Quantity of Material and Presence of Contamination

The MPRSA, at section 102(c)(3)(D), requires that management plans include consideration of the quantity of the material to be disposed of at the Site, and the presence, nature, and bioavailability of the contaminants in the material.

The dredged material disposed at the Site is not expected to remain within the boundaries of the Rogue River ODMDS after disposal. The rate and direction of movement across the Site boundaries are determined by physical transport mechanisms. Depending on these transport mechanisms and the nature of the material, transport may be rapid and continuous, or may occur only during episodic events, such as storms or seasonal changes in transport mechanisms.

Only clean dredged material can be placed into the ocean under current statutes and regulations; there is no need for further restriction on material suitability. Material suitability must be documented prior to disposal at the Site. This is typically completed as part of regulatory permitting (non-USACE) or the USACE substantive review process. All sediments to be disposed at the Rogue River ODMDS will be evaluated according to then-current requirements of the MPRSA, national guidance, and

local/regional manual and determined to be suitable for that purpose. Representatives of the USACE, Portland District, EPA, Region 10, other federal agencies and the States of Oregon and Washington comprise the Regional Sediment Evaluation Team (RSET), which has developed a comprehensive Interim Final Sediment Evaluation Framework (SEF – 2006) for the Pacific Northwest under the direction of the Northwestern Regional Dredging Team (RDT). It is expected that the interagency RDT through the local Portland Project Review Group (PRG) will continue to evaluate the suitability of sediments using the SEF. The current and future SEF evaluation procedures are designed to be consistent with the MPRSA.

Characterization records of dredged material approved to be disposed at any portion of the Rogue River ODMDS shall typically be retained by the USACE—either as the entity responsible for the dredging and disposal (Planning and/or O&M program) or the permitting agency (regulatory permits). USACE O&M projects sediment evaluation reports are to be posted upon the web at <https://www.nwp.usace.army.mil/ec/dme.asp> . Ultimately, all sediment data will be routinely entered into the Northwestern RDT sediment database where it would be publicly available. Secondary copies of characterizations will be retained by EPA.

Site Management Plan Review and Revision

The MPRSA, at section 102(c)(3)(F), requires that the management plan include a schedule for review and revision of the plan. SMMP revisions will be made as determined necessary by EPA. Should the results of monitoring or special studies indicate that the continued use of the Site would lead to unacceptable effects, then this SMMP will be modified as necessary to mitigate the adverse effects. No less often than every 10 years after this SMMP is finalized and throughout the life of the Site, EPA will conduct a substantive review of the SMMP. These reviews will involve coordination with other agencies, technical experts, and stakeholders.

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