

Comprehensive Conservation and Management Plan Actions Dredged Material

D-1. Develop a future dredged material management structure (also see section on Post-CCMP Management Structure).

Key Elements: In an effort to address the dredged material management problems in the Port, a Regional Dredging Team was formed, which consists of stakeholders from NY, NJ and Federal agencies involved in dredging and regulation of dredging activities. This group is responsible for overseeing the development and periodic updating of the Dredged Material Management Plan for the Port of NY and NJ (DMMP). An ad hoc Regional Sediment Management (RSM) Work Group was established by the HEP Policy Committee in September 2005 to produce a Regional Sediment Management Plan (RSMP). The goal of the RSMP is to address all manner of sediment issues in the Harbor, including dredging and dredged material management. The plan was finalized in October 2008 and one of the recommendations is to make the RSM Work Group permanent.

Description of Activities to Date

USACE, USEPA, NJDOT/OMR, the States of New York and New Jersey, and other agencies, have been active participants in the DMMP creation and update process.

Planned Activities: Continuation of participation.

(NJDOT/OMR 2009, USEPA 2004)

The Regional Dredging Team (RDT) is a multi-agency working group that includes the USACE, the USEPA, the Port Authority of NY & NJ, NYSDEC, NJDEP, NJDOT- Office of Maritime Resources, NYC Economic Development Corp., and NYS Empire State Development Corp. The RDT meets monthly to discuss existing and future dredged material management issues to better manage sediments generated from dredging activities. The RDT is responsible for overseeing the updating of the DMMP, monitoring the progress on harbor dredging projects, reviewing placement capacity needs, monitoring the availability of dredged material placement sites and evaluating emerging technologies for managing dredged material. The DMMP process seeks to identify and implement options to manage the material generated from both the federal and non-federal maintenance and deepening of the Port through the year 2065. The 2008 Update- DMMP updates upland placement locations, dredging volumes and beneficial use options for dredged material.

Planned Activities: NY-NJ RDT meetings are ongoing on a monthly basis. Future updates of the DMMP will be implemented through the use of a USACE website that will provide the public with updated information more frequently and track the goals of the DMMP more effectively.

(Port Authority of NY-NJ 2004, USACE 2008 Update: *Dredged Material Management Plan for the Port of New York and New Jersey*, NJDOT—Scott Douglas 2009, USACE—Lisa Baron 2009)

HEP's RSM Work Group consisted of representatives from USEPA, USACE, PANYNJ, NJDOT, NJDEP, NYSDEC, NYCDEP, HRF, academic institutions, and non-profit organizations. The Work Group released a RSM Plan in October 2008 that articulates objectives for the sediment management approach covering sediment quality, quantity, and dredged material. The plan recognizes the relationship between the Harbor and the rest of the watershed, and the importance of an integrated approach to sediment management in order to improve water quality, improve habitat and fisheries, and to ensure economically viable means to maintain the navigation infrastructure of the Harbor.

Planned Activities: a new permanent workgroup is recommended to be formed under HEP whose sole mission would be the implementation of this Plan. This new Workgroup would include State Sediment Management Advocates or their representatives, and would report to the HEP Management Committee and Policy Committee. Sub-workgroups would be formed to address the three priorities of sediment quality, sediment quantity, and dredged material management. The chair of the RSM Work Group is currently drafting a charge for the new work group with input from the MC and will present it to the PC for full consideration shortly.

(HEP Office 2009, NJDOT—Scott Douglas 2009)

D-2. Reduce continuing inputs of toxic chemicals and upland sediments and soils (see Management of Toxic Contamination section and the Management of Habitat and Living Resources section, Action H-2).

Key Elements: One goal of this section is that, over the long-term, all dredged materials within the Harbor complex will become sufficiently free of contaminants and, therefore, not pose a problem with respect to disposal. The major factor constraining the selection of dredged material disposal techniques and disposal site locations is the contamination of the Harbor sediments by a wide range of chemicals of concern.

Description of Activities to Date

The Contamination Assessment and Reduction Project (CARP) is a multi-agency project sponsored by the Port Authority of NY/NJ and involved the US Army Corps of Engineers, the USEPA, NYSDEC, NJDEP, NJDOT, NYS Empire State Development Corp., and Hudson River Foundation. This project involved a vast data collection effort for the Estuary to quantify current inputs and ambient levels of various contaminants that impact the quality of sediments, water, and biota within the Estuary. Models have been developed and calibrated against data, which simulate contaminant movement in the Estuary and can be used to predict future levels of contamination. CARP main tasks have been completed and all reports, models and data have been made publicly available (see www.carpweb.org). These tools are currently being used to assess the sources of contaminants, develop toxics TMDLs, and make recommendations for contaminant reductions. The HRE Draft CRP utilized the CARP data and modeling efforts for the evaluation of potential restoration opportunities for the reduction in contaminated sediments within the HRE (Port Authority of NY-NJ 2004, HRF 2008, USACE—Lisa Baron 2009, HEP Office 2009)

The PANYNJ funded research & publication of NYAS reports on Industrial Ecology, Pollution Prevention and Management Strategies studies for mercury, cadmium, PCBs, dioxins and furans, PAHs, and suspended solids. Findings from these publications and related materials will be used in the development of implementation plans for toxics TMDLs to address pollutant emissions at their source. (PANYNJ 2004, HEP Office 2009)

The Port Authority of NY and NJ is working to offset NO_x emissions for the Federal Channel Deepening Project.

Planned Activities: The PANYNJ, as local sponsor of the Harbor Deepening Project (HDP), is required to provide offsets to the air pollution that will be generated by the vessels and equipment utilized as part of the HDP. In that regard, the Port Authority, in conjunction with the Regional Air Team (which is comprised of representatives from the EPA, the NYSDEC, the NJDEP, the NYCDOT, and the USACE), developed initiatives to meet the emission offset requirements. One of the initiatives developed was the Marine Vessel Engine Replacement Program (MVERP), under which the Port Authority reimburses marine vessel owners for the costs associated with replacing old diesel engines with new engines, thereby allowing the PANYNJ to realize the emission reduction offsets. To date, approximately 330 tons of NO_x offsets have been realized annually under the MVERP. An additional 230 tons of NO_x offsets will be available under this program by 2010. The Port Authority also entered into an agreement with the NYCDOT to allow the PANYNJ to retrofit the Staten Island Ferry fleet. To date, four ferries have been retrofitted generating 354 tons of NO_x offsets on an annual basis. The four remaining ferries will be retrofitted over the next 2 years and generate approximately 216 tons of additional NO_x offsets.

(Port Authority of NY-NJ 2009)

D-3. Characterize, categorize, and quantify material to be dredged.

Key Elements: There is no single “best” disposal or management option for all dredged material- a combination of alternatives is needed. Establishing implementable disposal alternatives depends on the quality and quantity of the sediments requiring dredging.

Description of Activities to Date

In September 2000, a Memorandum of Agreement was signed by EPA and the USACE which, among other things, established steps for these two agencies to work together to revise the framework to evaluate dredged material for placement at the HARS and subject it to Scientific Peer Review, in consultation with the Remediation Material Workgroup (RMW). The RMW was formed in September 2000 and is composed of federal, state, city, environmental, and port stakeholders. In addition, the MOA established a new level of 113 ppb for worm tissue evaluation to assess PCBs in dredged material for placement at the HARS as remediation material.

EPA, the USACE and the RMW agreed to separate the review into two phases: one looking at public health effects and one looking at ecological effects. In June 2002, the scientific peer review consensus report on the human health effects evaluation was simultaneously distributed to EPA, the USACE and the RMW, and the EPA and USACE distributed a draft proposal on the HARS ecological effects evaluation. To address certain comments made by the scientific peer reviewers, the USACE initiated some scientific studies, which are currently either complete or nearing completion.

Planned Activities: EPA, USACE and RMW will prepare the ecological effects package and charges for scientific peer review, finalize responses to the peer reviewers’ comments on human health and ecological evaluations, and develop a final framework. The RMW met last in June 2007. EPA and USACE are currently working with their contractors to finalize ecological risk assessment proposals in anticipation of a late spring meeting with the RMW. Elements of the assessments include a population modeling tool and several interpretive tissue guideline values

(USEPA 2004, USEPA—Douglas Pabst 2009)

The 1999 and 2008 Update of the Dredged Material Management Plan for the Port of NY and NJ outlines dredged material volumes and management options including beneficial use opportunities (such as habitat creation, enhancement and restoration and use of potential upland placement sites).

Planned Activities: The NY/NJ RDT meets monthly to discuss dredging schedules, volumes and placement locations, as well as the regulatory and operational status of all current and new beneficial use opportunities.

(USACE—Lisa Baron 2009)

Reference site and reference sediment database (D-3.2) are no longer under consideration. Addressed in the HARS site designation process. (USEPA 2004)

A national guidance document to assist the USEPA regions in bioaccumulation decision-making (CCMP D-3.3) is no longer under consideration (USEPA 2004)

The Mud Dump Site was closed and the Historic Area Remediation Site (HARS) was designated. The HARS site designation included an appropriate site management and monitoring plan (SMMP). A Scientific Review Panel (comprised of federal and state resource agencies, academia, and NGOs) was formed as part of the HARS SMMP. EPA Region 2 and the USACE New York District distributed a revised HARS SMMP to the Scientific Review Panel and received comments in September 2008.

Planned Activities: The revised HARS SMMP will be sent out for public comment and should be finalized by end of 2009.

(USEPA 2004, USEPA—Douglas Pabst 2009)

Ongoing characterization of Harbor's sediments for all channels to be dredged by the US Army Corps of Engineers. (Port Authority of NY and NJ 2004)

Pro-active sampling and testing to estimate quantities of dredged material in each category related to suitability for ocean disposal (CCMP D-3.7) is no longer under consideration. The USACE Dredged Material Management Plan estimated the quantities of materials to be dredged and the types of placement options that might be available based upon historical sampling and testing.

Planned Activities: The 2008 Update DMMP will be made available via the USACE website. Any needs for additional sampling and testing will be identified and addressed on a case-by-case basis.

(USEPA 2004, USACE—Lisa Baron 2009)

D-4. Identify, evaluate, and select disposal and treatment/decontamination alternatives.

Key Elements: Identifying, evaluating, and selecting disposal and treatment/decontamination alternatives are necessary for dredged material. All concerned parties will work within HEP to promote beneficial uses of dredged material.

Description of Activities to Date

Determining a recommended depth and controlling depth for dredged material at the Mud Dump Site (CCMP D-4.1) is no longer applicable. (USEPA 2004)

The Port Authority of NY/NJ, The USEPA and NJDOT/OMR activities:

UPLAND - Solidification/ Stabilization has been successfully used to process dredged material for use in remediation of landfills and contaminated industrial sites. An evaluation of decontamination alternatives is completed on dredged materials that have more contaminants and might produce end products such as blended cement, manufactured soil, or lightweight aggregate.

OCEAN – No longer applicable.

(Port Authority of NY and NJ and USEPA 2004, NJDOT—Scott Douglas 2009)

The region continues to explore innovative approaches to dredged material management while facilitating the existing solutions that support ongoing navigation system maintenance and improvement. Currently there are several permitted facilities for the processing of navigational dredged material for upland placement. The Newark Bay Confined Disposal Facility is nearing capacity and will be expected to be closed by the end of 2010. The Regional Dredging Team is exploring the potential for a publically owned dredged material treatment and processing center which may be used to augment existing capacity as well as providing more predictability for navigation and remediation projects planned for the region. The facility could also be used to stage material for transportation to Pennsylvania for mine reclamation.

Planned Activities: Continuation of participation and support.

(NJDOT/OMR—Scott Douglas 2009)

A Supplemental Environmental Impact Statement (SEIS) was prepared for the HARS in May 1997. The HARS encompasses a 15.8 square nautical mile area and includes the 2.2 square nautical miles of the Mud Dump Site. Final designation of the HARS took place in September 1997. No further action necessary. (USEPA 2004)

In 1997, USACE issued a permit to PANYNJ to construct and operate two subaqueous CDFs in Newark Bay to accommodate dredged material not suitable for HARS placement. To date, one has been constructed and capacity still remains.

Planned Activities: The PANYNJ and State of NJ plan to close the Newark Bay CDF by late 2010. At this time, there is no consideration being given to sub-channel cells.

(USEPA 2004, NJDOT—Scott Douglas 2009)

Assessing the feasibility of modifying sand mining practices for the purpose of creating new borrow pits (CCMP D-4.7) is no longer under consideration. (USEPA 2004)

Sediment decontamination technologies have been under evaluation since the early 1990s for applicability to navigational and remedial dredging projects. USEPA and NJDOT/OMR have recently completed the last of three full scale demonstrations of technologies designed to manufacture products from navigational dredged material. The three technologies use chemical oxidation, thermal desorption and sediment washing techniques to produce products such as blended cement or manufactured soil. All three showed that it is possible to use sediment decontamination to process navigational dredged material at a cost competitive with current prices to process and place material at upland sites. Other technologies have been evaluated at smaller scales.

Through the Sediment Decontamination Technology Demonstration Program, sediment dredged during the Lower Passaic River Environmental Dredging Pilot (USACE 2009) was processed using thermal destruction and sediment washing technologies with beneficial use applications. Manufactured soil and construction-grade cement was created from Lower Passaic River sediment and has been placed in a beneficial use demonstration at Montclair State University.

(NJDOT—Scott Douglas 2009, USACE—Lisa Baron 2009)

USEPA and NJDOT completed nine bench-scale and 5 pilot-scale tests.

Planned Activities: With demonstration projects and final evaluation reports completed, USEPA and NJDOT/OMR continue to work with technology developers in developing market niches for commercialization of promising technologies with beneficial applications. This includes firms outside the USEPA - NJDOT/OMR sediment treatment programs. Individual demonstration reports are available on NJDOT/OMR and USEPA websites. A full report of the federal and state NY/NJ Sediment Decontamination Treatment Program including future directions and recommendations for implementation is expected by the end of 2009.

(USEPA 2004, NJDOT—Scott Douglas 2009, USACE—Lisa Baron 2009)

D-5. Develop plans for closure of the Mud Dump Site and historical disposal areas.

Key Elements: The Mud Dump Site, adjacent areas, and historical disposal areas need to be managed.

Description of Activities to Date

An EPA SEIS published in May 1997 demonstrated the need to terminate and de-designate the MDS and simultaneously designate the MDS and surrounding areas as the HARS. The HARS is currently being remediated in order to reduce impacts to acceptable levels.

Planned Activities: Remediation of the former MDS and other areas potentially adversely impacted by historic dumping practices continues through the placement of “clean” dredged material.

(USEPA 2009)

D-6. Improve dredging, transport, and disposal operations.

Key Elements: Improved dredging, transport, and disposal operations will reduce the potential environmental risks posed by these operations. There are two concerns associated with dredging: resuspension of sediments and removal precision.

Description of Activities to Date

Using enhanced BMPs where applicable and when practicable, USACE is currently undertaking Total Suspended Sediment/Turbidity Monitoring at all Newark Bay Study Area (NBSA) deepening contracts, conducting weekly CWA Quality Assurance/Quality Control compliance monitoring during dredging operations and have modified a 26 cubic yard navigation bucket (for environmentally-protective removal of non-HARS sediments that reduces the number of passes required, therefore reducing potential resuspension events) for use in select NBSA contracts. (USACE—Lisa Baron 2009)

NJDOT/OMR has been in the forefront of implementation of innovative dredged material management options, working with other agencies and programs to ensure that the costs of alternative management options continue to drop, and encourage the streamlining of contracting and permitting.

Planned Activities: Continuation of support.

(NJDOT/OMR 2003, NJDOT/OMR—Scott Douglas 2009)

The PANYNJ conducted several pilot studies involving geotextile containers placed in barges and disposal at the MDS. In summary, the containers experience a variety of ruptures. Since the HARS has been designated, this action is not longer applicable to ocean disposal. No further studies are planned at this time as all dredged material generated from the Port of New York and New Jersey is being used beneficially.

(USEPA 2004)

The recently completed Regional Sediment Management Plan recommends a series of actions to improve dredged material management, including a recommendation to strengthen regional coordination and consistency on regulatory issues, watershed planning, and dredged material management. The Plan also calls for establishing sediment management advocates at the state government level to facilitate regional sediment management and bring together the various elements of their respective states towards a common goal.

Planned Activities: HEP is working to form a permanent Regional Sediment Management Work Group to implement the Plan.

(USACE—RSMP 2008, HEP Office 2009)

D-7. Expedite permit decisions.

Key Elements: There are many complex federal, state, and local laws, Executive Orders, and regulations governing dredging and dredged material, with overlapping jurisdictions. The result is cumbersome and sometimes conflicting regulatory process. The keys to expediting this process are appropriate regulatory coordination and availability of disposal sites for the type of dredged material to be disposed.

Description of Activities to Date

Exploring the development of a federal regional regulation/guidance document addressing the concerns of the federal resource agencies (D-7.3) is no longer under consideration. (USEPA 2004)

Explore development of consistent testing requirements for dredged material disposal for both ocean and non-ocean disposal alternatives that would be coordinated with the Criteria Workgroup and the Dredged Material Management Forum (D-7.7) is no longer under consideration. States have testing requirements. (USEPA 2004)

The USEPA established Regional Dredging Teams (RDTs) to improve local coordination on dredged material management issues. The NY-NJ Harbor RDT currently meets monthly to discuss and problem-solve specific and general dredging and disposal concerns for this region, with particular emphasis on beneficial use of dredged material. A new interagency group (i.e., the Dredged Material Management Subgroup) that includes the appropriate agencies, stakeholders and the public is needed to foster inclusive communication and long-term regional dredging planning. (USACE—RSMP 2008)

The recently completed Regional Sediment Management Plan recommends a series of actions to improve dredged material management, including a recommendation to strengthen regional coordination and consistency on regulatory issues, watershed planning, and dredged material management. The Plan also calls for establishing sediment management advocates at the state government level to facilitate regional sediment management and bring together the various elements of their respective states towards a common goal.

Planned Activities: HEP is working to form a permanent Regional Sediment Management Work Group to implement the Plan.

(USACE—RSMP 2008, HEP Office 2009)