First Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 5, 2005 – July 5, 2006

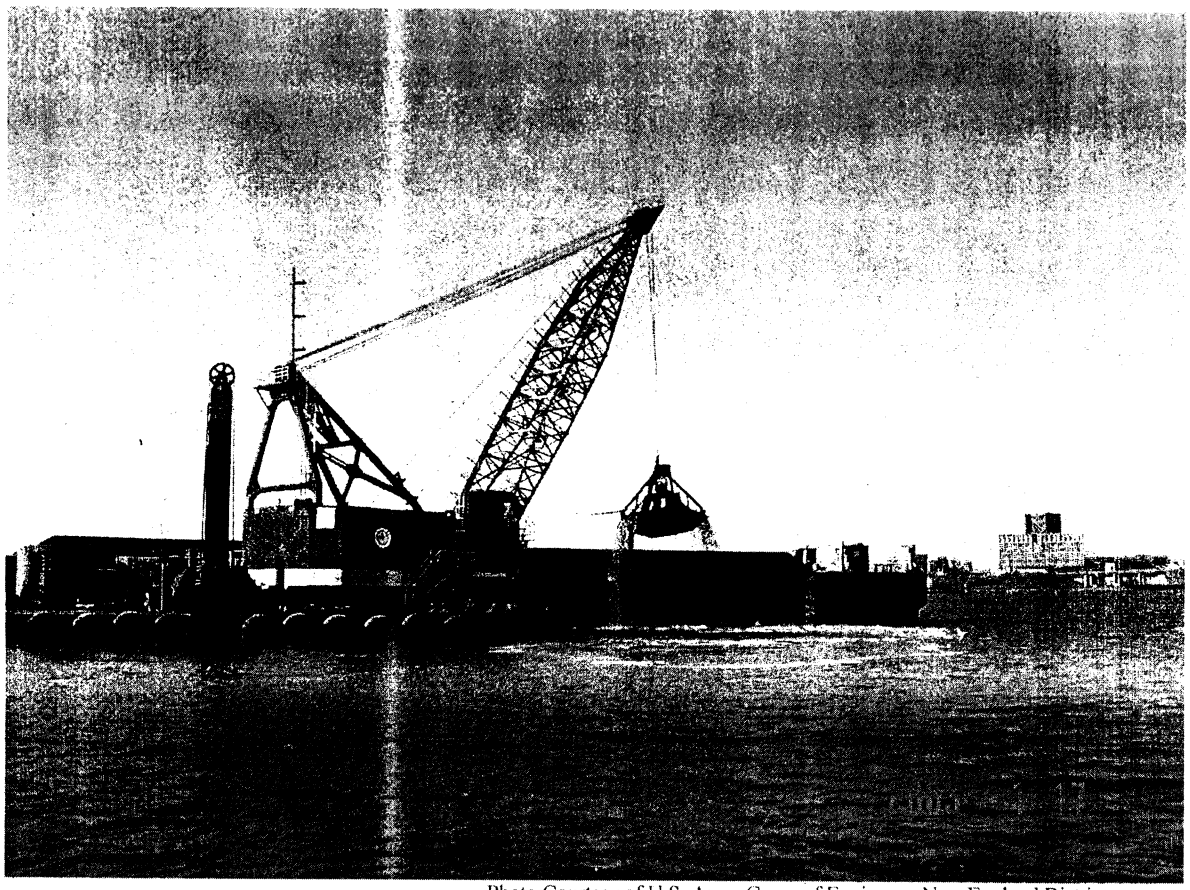


Photo Courtesy of U.S. Army Corps of Engineers, New England District

U.S. Environmental Protection Agency, Region 1
September 1, 2006

Introduction

On June 3, 2005, the U.S. Environmental Protection Agency (EPA) issued final rulemaking to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

To address concerns raised by the state of New York and some sectors of the general public about the potential impact of dredged material disposal on Long Island Sound water quality and fisheries habitat, these site designations are subject to restrictions on their use. These restrictions are described in the site designation rule and are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions, at 40 CFR 228.15(b)(4)(vi)(C), links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction, at 40 CFR 228.15(b)(4)(vi)(F), requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report shortly after the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public. This document is the first in what is anticipated to be a series of such reports.

Another restriction, at 40 CFR 228.15(b)(4)(vi)(I), is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT will review dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. The RDT also will track and document the placement of dredged material, including the volume that is beneficially used, as well as that approved for open-water disposal or other alternative disposal methods. In addition to information on the status of the DMMP, the EPA annual report will include information about each dredging project and the RDT deliberations conducted in the preceding year, including the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plan

In September 2004, prior to the final rulemaking, representatives of the EPA Regions 1 and 2; U.S. Army Corps of Engineers (USACE) North Atlantic Division, New York District, and New England District; the National Oceanic and Atmospheric

Administration (NOAA) Office of Ocean and Coastal Resource Management (OCRM); the New York State Department of State (NYS DOS); the New York State Department of Environmental Conservation (NYS DEC); and Connecticut Department of Environmental Protection (CT DEP) began a series of meetings and teleconferences to discuss development of a DMMP for the Long Island Sound region.

The USACE regulations require the Corps district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging for the next 20 years. A DMMP addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a final plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects for the required 20-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP can be expanded to include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal matching funds to support the additional work. For the Long Island Sound DMMP, it should be noted that the site designation restrictions require the inclusion of private projects as well as all federal projects in the region. The goals of the Long Island Sound DMMP are to ensure that necessary dredging proceeds while working to reduce or eliminate open-water disposal in the Sound.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment will determine whether a federal interest exists in participating in a feasibility-level DMMP study. The Preliminary Assessment also will identify the non-federal sponsor(s) for the DMMP.

The next phase of the DMMP process, termed the Feasibility Phase, requires preparation of a Project Management Plan to describe: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, broken down according to the federal fiscal year budget cycle.

Following acceptance of the Project Management Plan by the agency partners, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification.

Management Structure

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team: The interagency working group that will assist with the development of the DMMP.
- Independent Technical Review Team: Required by the USACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non-government organizations and private citizens.
- Steering Committee: Although not a standard component of the DMMP management structure, a committee of higher level agency officials may be established to facilitate communication, priority-setting, and the commitment of resources.

With respect to the CLIS and WLIS disposal site designations, the agency representatives agreed that, for the sites to remain open, the rulemaking requires the USACE to develop a DMMP for the Long Island Sound region. However, they also agreed that the USACE would still need to follow its standard procedures and prepare a Preliminary Assessment to document the need for the DMMP. The agency representatives also agreed to adopt the traditional management structure by establishing a Long Island Sound DMMP Project Delivery Team (PDT). Due to the large scope of the project and strong public interest, they followed the process utilized for the DMMP for the Port of New York and New Jersey by forming a Steering Committee to provide overarching project direction. The current rosters for the PDT and the Steering Committee are attached as Appendices A and B. The agency representatives also recognized the need to actively pursue significant federal and non-federal funding in order to carry out this effort.

During 2005, the Steering Committee and PDT met several times to establish roles and responsibilities for the two groups, define preliminary DMMP goals and objectives, and develop a conceptual outline and preliminary budget estimate for the Long Island Sound DMMP. Pursuant to the site designation rulemaking, they also formed a RDT, with representation from the same federal and state agencies as are on the Steering Committee and PDT. The current roster for the RDT is attached as Appendix C. The Steering Committee also developed operating guidance for the PDT and RDT, both of which were completed by January 2006.

Funding

Based largely on the USACE experience with the DMMP for the Port of New York and New Jersey, the PDT estimated that it would cost approximately $16 million and take 5-7 years to complete the Long Island Sound DMMP. The governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek legislative authorization of federal funds to initiate the DMMP. Copies of these

letters are provided as Appendix D.

The USACE agreed to work with the states on the DMMP, and the President's federal fiscal year budget for 2007 (FY07) includes $1.7 million for the USACE to initiate the effort. While the final funding level will not be known until Congress passes the budget and the President signs it, there appears to be strong support for the appropriations to be passed. The USACE completed the Preliminary Assessment and received final approval at the division level on June 20, 2006. The USACE has done some preliminary work on the Project Management Plan, but has not yet completed it due to insufficient funding. Concentrated work on the Project Management Plan will not begin until FY07 funds become available sometime after October 1, 2006, although the agencies plan to start the process in early September 2006 with some remaining limited funds.

To assist with the public participation component of the DMMP process, EPA secured $100,000 in FY06 funds from the Long Island Sound Study (National Estuary Program). EPA intends to use these funds to conduct public information meetings and other outreach activities to inform the public of the agencies' initial efforts on the DMMP, to solicit feedback on these efforts, and gain input on future direction. These public participation activities are presently on hold pending completion of the Project Management Plan by the USACE, because it serves as the initial work plan for the DMMP and would be central to any public presentations.

Long Island Sound Regional Dredging Team

As described above, and pursuant to 40 CFR 228.15(b)(4)(vi)(F), the EPA, USACE, NOAA, and states of New York and Connecticut agreed to form a Long Island Sound RDT to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The Steering Committee completed the guidance for the RDT in January 2006, and appointed a chairperson from the USACE New York District. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the ... site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

The RDT held its first meeting on June 28, 2006. The agency representatives focused their discussion on how to integrate this new review mechanism into the existing planning and regulatory process, and also began to develop a charter to institutionalize the RDT operating procedures. The RDT also discussed whether

and how to engage other entities in the review process, and details about meeting frequency and locations.

The RDT's second meeting was held on August 10, 2006. The team spent most of the meeting drafting its charter, which describes the procedures the RDT will use to review dredging projects and make dredged material placement recommendations. The RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives to open-water disposal that they can communicate to potential applicants as well as appropriate state and federal authorities. The next step is to finalize the charter and seek its approval by the Steering Committee.

Dredged Material Disposal in Long Island Sound

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of four active dredged material disposal sites in the Sound: Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals and New London. In 1982, the USACE issued a programmatic Environmental Impact Statement that identified these four dredged material disposal sites as the ones they would use for open-water disposal for the foreseeable future, and began keeping detailed records of disposal activity at each site. While the WLIS and CLIS disposal sites, as previously described, were recently designated by EPA for long-term use, subject to restrictions, the Cornfield Shoals and New London disposal sites were "selected" by the USACE for short-term use. The availability of these two sites for dredged material disposal will expire five years after commencement of the next disposal activity at each site.

Alternatives to open-water disposal include: upland placement or disposal (preceded by treatment if necessary to remediate contaminated material); beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing contaminated sediment in a pit excavated below the floor of the harbor or navigation channel, and covering with clean sediment); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report

on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material placement records on an annual basis, and reporting this data in an annual report for a one-year period ending July 5 each year. Detailed information on dredged material placement volumes and locations is provided in Appendix F.

The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. Detailed information on annual dredged material disposal volumes is provided in Appendix G. While EPA and the USACE used data for the period 1982-2001 in the Environmental Impact Statement supporting the site designations, the annual report will utilize the complete pre-designation disposal dataset, which includes 2002-2004, to compare with the post-designation data.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards[c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
New London	3,069,546	133,459
Cornfield Shoals	1,295,998	56,348
Central LIS	8,019,678	348,682
Western LIS	1,870,921	81,344
Totals	14,256,143	619,833

- Overall, there was a total of 287,776 c.y. of dredged material disposed of in the Long Island Sound vicinity for the period July 5, 2005 – July 5, 2006, of which:
  - 223,960 c.y. was disposed at open-water disposal sites;
  - 30,574 c.y. was disposed in a confined aquatic disposal (CAD) cell;
  - 2,242 c.y. was used beneficially to cap the CAD; and
  - 31,000 c.y. was treated and disposed at upland locations.

- Of the 223,960 c.y. disposed in the Sound:
  - 208,410 c.y. went to CLIS (vs. a historical annual average of 348,641 c.y.) and
  - 15,550 c.y. went to WLIS (vs. a historical annual average of 81,344 c.y.).

- Compared with the average annual amount of dredged material disposed of at the four open-water sites in the Sound from 1982-2004, which was 619,833 c.y., for the period July 5, 2005 – July 5, 2006, there was a total of 223,960 c.y., or slightly more than one-third of the historical annual average.

Although the RDT did not review any of the eleven dredging projects that were conducted during the reporting period, since the team wasn't established until late in the reporting period, the dredged material from one project went entirely to upland placement sites. The U.S. Merchant Marine Academy in Kings Point, NY initially explored the possibility of disposing of the 31,000 c.y. of dredged material from their berthing facilities at one of the open-water disposal sites. However, the state of New York and

USACE New York District worked with the project proponent to redirect the material to two upland alternative sites in New Jersey.

While there is generally some variability from one year to the next in the number of dredging projects and volume of dredged material disposed of in the Sound or elsewhere, and there are many factors influencing this variability, reductions in the federal budget may have been one of the largest factors in the lower amount of disposal over the past year. Regardless, it is too early to establish any kind of long-term trend. EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location. For further information, please contact:

Jean Brochi
U.S. Environmental Protection Agency
One Congress Street, Suite 1100 (COP)
Boston, MA 02114
P - (617) 918-1536
F – (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	**MEMBER**	**ALTERNATE**
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management, National Ocean Service 603-862-2719 Fax: 603-862-3957 david.kaiser@noaa.gov	TBD
Corps North Atlantic Division (NAD)	Lloyd Caldwell, Director of Programs 718-765-7129 lloyd.caldwell@usace.army.mil	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
Corps New England District (NAE)	Bill Scully, Deputy District Engineer Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	Robert (Bobby) Byrne, Chief Programs & Project Management Division 978-318-8509 robert.h.byrne@usace.army.mil
Corps New York District (NAN)	Stuart Piken, Deputy District Engineer for Programs and Project Management 917-790-8200 stuart.d.piken@usace.army.mil	Frank Santomauro, Chief Planning Division 917-790-8700 frank.santomauro@usace.army.mil
EPA Region I	Linda Murphy, Director Office of Ecosystem Protection 617-918-1501 murphy.linda@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Kevin Bricke, Deputy Director Division of Environmental Planning and Protection 212-637-3736 bricke.kevin@epa.gov	Doug Pabst, Team Leader Dredged Material Management Team 212-637-3797 pabst.douglas@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	Ruth Moore, Deputy Commissioner Natural Resources and Water Quality 518-402-8560 rmoore@gw.dec.state.ny.us	TBD
Connecticut Dept. of Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@po.state.ct.us

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps North Atlantic Division (NAD)	Linda Monte, Oceanographer 718-765-7067 linda.b.monte@usace.army.mil	Joe Vietri, Chief, Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
Corps New England District (NAE)	Michael Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel, Study Manager 978-318-8871 mark.l.habel@usace.army.mil
Corps New York District (NAN)	Len Houston, Chief Environmental Analysis Branch 917-790-8702 leonard.houston@usace.army.mil	Deborah Swacker, Study Manager 917-790-8734 deborah.b.swacker@usace.army.mil
Corps New York District (NAN)	Darin Damiani 917-790-8709 darin.r.damiani@usace.army.mil	Nancy Brighton 917-790-8703 nancy.j.brighton@nan02.usace.army.mil
EPA Region I	Mel Cote, Manager Ocean and Coastal Protection Unit Office of Ecosystem Protection 617-918-1553 cote.mel@epa.gov	Jean Brochi, Project Manager Office of Ecosystem Protection 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
New York State Dept. of State	Steve Resler Division of Coastal Resources 518-474-5290 sresler@dos.state.ny.us	Shawn Kiernan Division of Coastal Resources 518-473-3656 skiernan@dos.state.ny.us
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us
Connecticut Dept. of Environmental Protection	Paul Stacey Bureau of Water Management 860-424-3728 paul.stacey@po.state.ct.us	TBD

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps North Atlantic Division (NAD)	James Haggerty 718-765-7150 james.w.haggerty@usace.army.mil	TBD
Corps New England District (NAE)	Robert DeSista 978-318-8879 robert.j.desista@usace.army.mil Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil	Sue Holtham 978-318-8536 susan.e.holtham@usace.army.mil
Corps New York District (NAN)	Joe Seebode 917-790-8209 joseph.j.seebode@nan02.usace.army.mil	TBD
EPA Region I	Jean Brochi, Project Manager Office of Ecosystem Protection 617-918-1536 brochi.jean@epa.gov	Mel Cote, Manager Ocean and Coastal Protection Unit Office of Ecosystem Protection 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Michael Ludwig 203-882-6594 michael.ludwig@noaa.gov	TBD
New York Dept. of State	Steven Resler Division of Coastal Resources 518-474-8811 gcapobia@dos.state.ny.us	Shawn Kiernan Division of Coastal Resources 518-473-3656 skiernan@dos.state.ny.us
New York State Dept. of Environmental Conservation	Chuck Hamilton (631) 444-0295 cthamilt@gw.dec.state.ny.us	TBD
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	TBD
	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us	David McKeegan Bureau of Waste Management 860-424-3313 david.mckeegan@po.state.ct.us

Appendix D

Correspondence regarding development of the Long Island Sound DMMP

(1) Letter from Governors Pataki and Rell to General Strock, Chief of Engineers, February 8, 2005

(2) Letter from Governor Pataki to NY Members of U.S. House of Representatives, May 9, 2006

(3) Letter from Governor Pataki to NY Members of U.S. Senate, May 9, 2006

(4) Letter from Governor Rell to Senator Lieberman, March 15, 2005

(5) Letter from Governor Rell to Senator Lieberman, September 15, 2005

(6) Letter from Governor Rell to Senator Lieberman, February 27, 2006

NEW YORK • CONNECTICUT

February 8, 2005

Lieutenant General Carl A. Strock
Chief of Engineers/Commanding General
U. S. Army Corps of Engineers
441 G St., NW
Washington, DC 20314

Dear General Strock:

We request the U.S. Army Corps of Engineers (Corps) North Atlantic Division Office to develop a Dredged Material Management Plan (DMMP) for the Long Island Sound (LIS) region. Considering the responsibilities of your agency for maintaining major channels and waterways in LIS, as well as your regulatory responsibilities to protect the environmental well being of our waterways under the Clean Water Act, the Corps is uniquely suited to take the lead in the DMMP process. A committee comprised of representatives from the Corps, EPA, New York and Connecticut would manage the effort.

Dredging and appropriate management of dredged sediment is vital to the economic and environmental well-being of both New York and Connecticut. However, as you are aware, dredged material management for LIS dredging projects has been a particularly significant issue and concerns have been raised recently over the proposed EPA designation of open water disposal sites in central and western LIS. To resolve these issues for the long term, we believe the interests of all stakeholders are best served by development of a comprehensive DMMP that would identify feasible and environmentally sound alternatives and establish future protocols for dredged material management. These alternatives include, but are not limited to, reducing sediment sources, reducing contaminant loading, and developing feasible beneficial reuses for dredged material, with the goal of reducing or eliminating the need for open water disposal.

Our respective staffs are prepared to begin immediate discussions regarding the scope and extent of effort necessary to prepare such a plan. We stand ready to seek the support of the New York and Connecticut congressional delegations to assist in providing funding sufficient to complete the development of this plan.

Additionally, we urge the Corps to include funds to undertake a DMMP in your budget request. The States will work with our respective Congressional delegations to support the appropriation.

We are committed to a regional DMMP that will promulgate feasible sediment management options for LIS and request the Corps to immediately begin preparation of the DMMP.

Sincerely,

George E. Pataki
Governor

M. Jodi Rell
Governor

c: Brigadier General Merdith W. B. Temple - Division Commander, North Atlantic Division
Colonel Thomas Koenig, District Engineer - New England District
Colonel Richard J. Polo, Jr., District Engineer - New York District

STATE OF NEW YORK

GEORGE E. PATAKI
GOVERNOR

May 9, 2006

Dear Chairman Hobson and Ranking Member Visclosky:

As you move forward with this year's Energy and Water Development appropriations bill, I would like to bring to your attention a number of environmental and energy infrastructure projects and programs important to New York State, and for which I seek your support in providing adequate federal funds.

- The New York City Watershed Program provides high quality affordable drinking water for the eight million residents of New York City, as well as one million upstate consumers--essentially half of the population of our State. Funding for the program is authorized in the Water Resources Development Act (WRDA) for up to $42.5 million. The innovative New York City Watershed Program ensures the continued protection of the Nation's largest unfiltered drinking water supply in a unique manner that avoids the need to construct a drinking water filtration plant at an estimated cost of $8-10 billion. An appropriation of $15 million to the United States Army Corps of Engineers for FY 07 is needed to ensure we continue this essential and cost-effective drinking water initiative.

- Only two years ago, I wrote to you to express my concern about a decision by the Army Corps to reprogram funds which Congress had appropriated for New York City Watershed projects to other activities. Upon the direction of Secretary Rumsfeld, the Corps agreed to fully restore these funds, totaling approximately $7 million. However, language in the FY 06 Energy and Water Development Appropriations Bill generally prohibits the Corps from restoring reprogrammed funds. I urge you to amend the FY 06 language so that the Corps can honor its agreement to restore the Watershed funds.

- Section 1105 of WRDA authorized $5 million annually to fund the operation, maintenance and rehabilitation of the New York State Barge Canal. For FY 07, the full authorized amount will be necessary to ensure the effective operation of the Barge Canal. In addition, a total of $9 million--half of the $18 million authorized pursuant to Section 553 of WRDA of 1996, as amended by Section 341 of WRDA of 1999--will be needed to address critical rehabilitation, renovation, preservation and maintenance needs along the aging New York State Canal system.

- The Port of New York and New Jersey is an extraordinary economic engine for the entire region and supports 40,000 terminal-based jobs, 189,000 regional off-terminal jobs and an additional 186,000 jobs nationwide. The Army Corps has deemed its project to dredge and deepen the Port's channels to be a National Priority and the President's budget includes $90 million for continued construction. Deepening the channels of the Port is essential to continue to accommodate large cargo ships. This project will ensure that the Nation's major gateway on the Atlantic Ocean continues to fuel the national economy as it has done for many years.

- The Long Island Sound Dredged Material Management Plan, or LIS DMMP, is a cooperative effort of New York, Connecticut, the US EPA and the Army Corps to maintain safe, environmentally sound and economically viable navigation in the Sound's ports and harbors. This initiative is unprecedented and, given the need to ensure safe navigation which protects the Sound's precious natural resources, the assurance of adequate funding is vital. An FY 07 appropriation of $3.5 million to the Corps is needed for this project to proceed. An additional appropriation of $1.5 million to design and site a project in New York that will demonstrate the innovative reuse of dredged material will complement a similar demonstration project which the Corps is now designing for Bridgeport, Connecticut.

- For several years the Department of Energy has implemented a radioactive waste management demonstration project at West Valley on a 90/10 federal/state cost-sharing ratio specified in the West Valley Demonstration Project Act. The Act specifies the work which DOE must undertake to remediate this site, and the President's budget recognizes the importance of this issue by including $73 million for DOE activities at West Valley. New York supports a higher number--$95 million--to sustain jobs and ensure that DOE fulfills its commitments at the site.

- Several New York State agencies and authorities are working together to identify shovel-ready sites for the development of advanced "clean coal" power plants by private sector power developers. The State is committed to assisting these power developers with financing through a number of economic and regulatory incentives, including the establishment of a Clean Coal Initiative Fund of $10 million annually over five years. Federal assistance with development of the technology and capitalization of the Clean Coal Initiative Fund would help to advance this State effort and would support the President's goal of ensuring that our Nation meets its energy needs through clean, sustainable technologies.

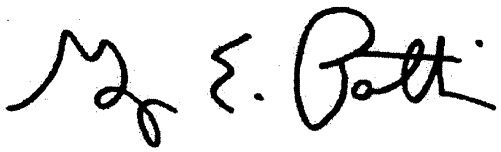
- New York, in order to help our nation reduce its dependence on foreign oil, is seeking a federal appropriation to help develop innovative technologies to produce ethanol from biomass feedstocks containing cellulose. The State is making $20 million available to help construct a pilot-scale cellulosic ethanol facility and then transfer the resulting production capacity to commercial-scale, and seeking further federal funding to assist our effort.

- I also strongly support the President's request to provide $45 million for project engineering and design for the next-generation National Synchrotron Light Source, or NSLS II, that will be built at Brookhaven National Lab. This new facility will provide academia, government and industry scientists from all parts of the United States with world-leading capabilities for basic and applied research in materials and nanoscience, life-sciences and chemistry, and geosciences. I have committed $30 million of New York State funds to construct a Joint Photon Sciences Institute, or JPSI, at the Lab to help maximize the benefits of NSLS II. The JPSI would serve as the intellectual center for development and applications of the photon sciences and as a gateway for users of the NSLS II. Together with this State investment, federal support for the NSLS II will ensure that United States remains the world leader in this critical research.

- I am strongly committed to developing hybrid vehicles in New York State, and I encourage you to appropriate the funds necessary to support federal efforts to help us nurture this emerging technology.

All of these requests provide tangible benefits to New York State's environment through concrete actions that will improve our infrastructure and address on-going problems that threaten our natural resources, public health and environmental quality. I appreciate your assistance to the State for these high priority matters.

Very truly yours,



The Honorable David L. Hobson
Chairman
Subcommittee on Energy and Water Development
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

The Honorable Peter J. Visclosky
Ranking Minority Member
Subcommittee on Energy and Water Development
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

STATE OF NEW YORK

GEORGE E. PATAKI
GOVERNOR

May 9, 2006

Dear Chairman Domenici and Ranking Member Reid:

As you move forward with this year's Energy and Water Development appropriations bill, I would like to bring to your attention a number of environmental and energy infrastructure projects and programs important to New York State, and for which I seek your support in providing adequate federal funds.

- The New York City Watershed Program provides high quality affordable drinking water for the eight million residents of New York City, as well as one million upstate consumers--essentially half of the population of our State. Funding for the program is authorized in the Water Resources Development Act (WRDA) for up to $42.5 million. The innovative New York City Watershed Program ensures the continued protection of the Nation's largest unfiltered drinking water supply in a unique manner that avoids the need to construct a drinking water filtration plant at an estimated cost of $8-10 billion. An appropriation of $15 million to the Unites States Army Corps of Engineers for FY 07 is needed to ensure we continue this essential and cost-effective drinking water initiative.

- Only two years ago, I wrote to you to express my concern about a decision by the Army Corps to reprogram funds which Congress had appropriated for New York City Watershed projects to other activities. Upon the direction of Secretary Rumsfeld, the Corps agreed to fully restore these funds, totaling approximately $7 million. However, language in the FY 06 Energy and Water Development Appropriations Bill generally prohibits the Corps from restoring reprogrammed funds. I urge you to amend the FY 06 language so that the Corps can honor its agreement to restore the Watershed funds.

- Section 1105 of WRDA authorized $5 million annually to fund the operation, maintenance and rehabilitation of the New York State Barge Canal. For FY 07, the full authorized amount will be necessary to ensure the effective operation of the Barge Canal. In addition, a total of $9 million--half of the $18 million authorized pursuant to Section 553 of WRDA of 1996, as amended by Section 341 of WRDA of 1999--will be needed to address critical rehabilitation, renovation, preservation and maintenance needs along the aging New York State Canal system.

- The Port of New York and New Jersey is an extraordinary economic engine for the entire region and supports 40,000 terminal-based jobs, 189,000 regional off-terminal jobs and an additional 186,000 jobs nationwide. The Army Corps has deemed its project to dredge and deepen the Port's channels to be a National Priority and the President's budget includes $90 million for continued construction. Deepening the channels of the Port is essential to continue to accommodate large cargo ships. This project will ensure that the Nation's major gateway on the Atlantic Ocean continues to fuel the national economy as it has done for many years.

- The Long Island Sound Dredged Material Management Plan, or LIS DMMP, is a cooperative effort of New York, Connecticut, the US EPA and the Army Corps to maintain safe, environmentally sound and economically viable navigation in the Sound's ports and harbors. This initiative is unprecedented and, given the need to ensure safe navigation which protects the Sound's precious natural resources, the assurance of adequate funding is vital. An FY 07 appropriation of $3.5 million to the Corps is needed for this project to proceed. An additional appropriation of $1.5 million to design and site a project in New York that will demonstrate the innovative reuse of dredged material will complement a similar demonstration project which the Corps is now designing for Bridgeport, Connecticut.

- For several years the Department of Energy has implemented a radioactive waste management demonstration project at West Valley on a 90/10 federal/state cost-sharing ratio specified in the West Valley Demonstration Project Act. The Act specifies the work which DOE must undertake to remediate this site, and the President's budget recognizes the importance of this issue by including $73 million for DOE activities at West Valley. New York supports a higher number--$95 million--to sustain jobs and ensure that DOE fulfills its commitments at the site.

- Several New York State agencies and authorities are working together to identify shovel-ready sites for the development of advanced "clean coal" power plants by private sector power developers. The State is committed to assisting these power developers with financing through a number of economic and regulatory incentives, including the establishment of a Clean Coal Initiative Fund of $10 million annually over five years. Federal assistance with development of the technology and capitalization of the Clean Coal Initiative Fund would help to advance this State effort and would support the President's goal of ensuring that our Nation meets its energy needs through clean, sustainable technologies.

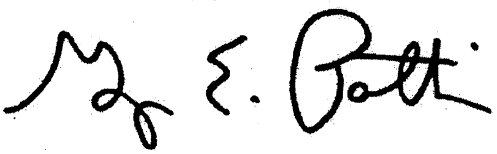
- New York, in order to help our nation reduce its dependence on foreign oil, is seeking a federal appropriation to help develop innovative technologies to produce ethanol from biomass feedstocks containing cellulose. The State is making $20 million available to help construct a pilot-scale cellulosic ethanol facility and then transfer the resulting production capacity to commercial-scale, and seeking further federal funding to assist our effort.

- I also strongly support the President's request to provide $45 million for project engineering and design for the next-generation National Synchrotron Light Source, or NSLS II, that will be built at Brookhaven National Lab. This new facility will provide academia, government and industry scientists from all parts of the United States with world-leading capabilities for basic and applied research in materials and nanoscience, life-sciences and chemistry, and geosciences. I have committed $30 million of New York State funds to construct a Joint Photon Sciences Institute, or JPSI, at the Lab to help maximize the benefits of NSLS II. The JPSI would serve as the intellectual center for development and applications of the photon sciences and as a gateway for users of the NSLS II. Together with this State investment, federal support for the NSLS II will ensure that United States remains the world leader in this critical research.

- I am strongly committed to developing hybrid vehicles in New York State, and I encourage you to appropriate the funds necessary to support federal efforts to help us nurture this emerging technology.

All of these requests provide tangible benefits to New York State's environment through concrete actions that will improve our infrastructure and address on-going problems that threaten our natural resources, public health and environmental quality. I appreciate your assistance to the State for these high priority matters.

Very truly yours,



The Honorable Pete V. Domenici
Chairman
Subcommittee on Energy and Water, and
and Related Agencies
SD-133 Dirksen Senate Office Building
Washington, D.C. 20510-6030

The Honorable Harry Reid
Ranking Minority Member
Subcommittee on Energy and Water,
and Related Agencies
SD-133 Dirksen Senate Office Building
Washington, D.C. 20510-6030

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS
HARTFORD, CONNECTICUT
06106

M. JODI RELL
GOVERNOR

March 15, 2005

Senator Joseph I. Lieberman
706 Hart Senate Office Building
Washington, DC 20510

Dear Senator Lieberman:

I am writing this letter to you and other members of the Connecticut congressional delegation to seek your support for Connecticut's efforts to develop a comprehensive Dredged Material Management Plan (DMMP) for Long Island Sound in cooperation with the state of New York. NY Governor Pataki and I recently sent a joint letter (copy attached) to General Strock, Chief of the Army Corps of Engineers, requesting that the Corps take the lead to develop a DMMP for Long Island Sound. Recent meetings between staff from the states of CT and NY, EPA regions I and II, the Corps of Engineer's New England and New York Districts, and the Corp's North Atlantic Division have initiated the process of scoping the level of effort and the approximate costs necessary to complete such a plan.

It is estimated an appropriation of at least 16 million dollars over a minimum of five years will be required to complete the DMMP. I am requesting the delegation to seek funding for FY 06 of 1.6 million dollars to initiate development of this plan that is so vital to the environmental and economic well-being of both Connecticut and New York.

If you have any questions regarding any of the above, please contact Department of Environmental Protection Commissioner Gina McCarthy at (860) 424-3001. I understand that your staff has been briefed on these matters and are encouraged to contact George Wisker of Commissioner McCarthy's staff at (860) 424-3034 or Rachel Towbin of our Washington Office at (202) 347-4535 to discuss these issues further. Thank you.

Sincerely,

M. Jodi Rell

M. Jodi Rell.
Governor

MJR/gw
attachment

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS

M. JODI RELL
GOVERNOR

September 15, 2005

Senator Joseph I. Lieberman
706 Hart Senate Office Building
Washington, DC 20510

Dear Senator Lieberman:

I am again writing to you and other members of the Connecticut congressional delegation to seek your strong support for funding of the cooperative state/federal efforts to maintain safe, environmentally sound and economically viable navigation in our Long Island Sound ports and harbors.

Earlier this year, New York Governor Pataki and I asked the U.S. Army Corps of Engineers to undertake the development of a Dredged Material Management Plan (DMMP) for Long Island Sound. We requested 1.6 million dollars for FY 06 to enable the Corps to initiate this vital process (copy attached). Unfortunately, since funding was not included in either of the passed Senate or House water legislation now in conference, I must now urge you to find a mechanism to include the necessary funding for this planning during conference, or through some other vehicle.

I can't emphasize enough that failure to adequately fund this endeavor, particularly at this critical initial stage, will likely cripple this unprecedented regional effort and result in serious environmental and economic consequences for Connecticut's ports and waterways.

If you have any questions regarding any of the above, or would like to more fully explore the course of action that I have outlined, please contact Department of Environmental Protection Commissioner Gina McCarthy at (860) 424-3001. I understand that your staff has been briefed on these matters and are encouraged to contact George Wisker of the CT DEP at (860) 424-3034 or Rachel Towbin of our Washington Office at (202) 347-4535 to discuss these issues further. Thank you.

Sincerely,

M. Jodi Rell
Governor

MJR/gw
Attachment

STATE CAPITOL, HARTFORD, CONNECTICUT 06106
TEL: (860) 566-4840 • FAX: (860) 524-7396
www.state.ct.us/governor

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS

M. JODI RELL
GOVERNOR

February 27, 2006

Senator Christopher J. Dodd
448 Russell Senate Office Building
Washington, DC 06109

Dear Senator Dodd

Last year, I wrote to you and other members of the Connecticut congressional delegation in connection with the efforts of Connecticut, New York and the U.S. Army Corp of Engineers to develop a comprehensive Dredged Material Management Plan ("DMMP") for Long Island Sound. As you may recall, the Environmental Protection Agency ("EPA") required that this DMMP be completed within eight years as a condition of their approval of the Central and Western Long Island Sound disposal sites. Our continued access to these disposal sites is critical if we are to maintain Connecticut's ports and waterways given their need for periodic dredging and the limited feasible and cost-effective options available at this time for reuse and/or upland disposal.

Federal funding of this planning is critical to maintaining safe, environmentally sound and economically viable navigation in Long Island Sound's ports and waterways. Unfortunately, Connecticut was unsuccessful last year in securing the monies necessary to fund this planning. An opportunity now exists, however, to fund the development of a DMMP for Long Island Sound. It is my understanding that President Bush included $1.742 million in his proposed Fiscal Year 2007 budget for the Long Island Sound DMMP. I urge you to support the President's proposal to fund the Long Island Sound DMMP and aggressively seek the funds necessary for the preparation and implementation of the Long Island Sound DMMP

If you have any questions or would like additional information, please do not hesitate to contact Commissioner Gina McCarthy of the Connecticut Department of Environmental Protection at (860) 424-3001. Rachel Fawhin in our Washington office may also be of assistance. Her telephone number is (202) 347-4535. Thank you.

Sincerely,

M. Jodi Rell

M. Jodi Rell
Governor

MJR:mmd

STATE CAPITOL, HARTFORD, CONNECTICUT 06106
TEL: (860) 566-4840 • FAX: (860) 524-7396
www.ct.gov

Appendix F

Dredged Material Disposal Data, July 5, 2005 – July 5, 2006

(1) Summary of All Dredging and Disposal Activities

(2) All Corps of Engineers Civil Works Activities

(3) Activities under Permit by Federal Agencies other than the Corps of Engineers

(4) All Non-Federal Permit Activities

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
Summary of All Dredging and Disposal Activities

Disposal Sites and Methods	CONNECTICUT			NEW YORK			Total All Projects and States
	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	
Open Water Disposal	117,997	0	87,800	0	0	18,163	223,960
CLIS	117,997	0	76,700	0	0	13,713	208,410
WLIS	0	0	11,100	0	0	4,450	15,550
Confined Disposal	30,574	0	0	0	0	0	30,574
CAD Cells	30,574						30,574
Upland Containment	0						0
Landfill							0
Beneficial Use	2,242	0	0	0	0	0	2,242
CAD Cap	2,242						2,242
Beach/Bar Nourishment							0
Habitat Creation/Enhance							0
Brownfield Remediation							0
Treated Dredged Material	0	0	0	0	31,000	0	31,000
Upland Disposal					31,000		31,000
Commercial Use							0
TOTAL ALL DISPOSAL	150,813	0	87,800	0	31,000	18,163	287,776

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
All Corps of Engineers Civil Works Activities - Federal Navigation Projects

Project Name	Total Project Volume (CY)	Corps Contract No.	Dates of Disposal	Disposal Location	Actual Volume Disposed (CY)
Norwalk Harbor FNP, CT	150,813	2005-C0016	10/27/05 -12/30/05		
Dredged from Channel	65,413			CLIS	65,413
Dredged from Channel	30,574			CAD Cell	30,574
Dredged from CAD Cell	52,584			CLIS	52,584
Dredged from Channel	2,242			CAD Cell Cap	2,242
TOTAL CY THIS YEAR	150,813				150,813

Corps Projects Disposal Summary	Site	State	Volume	Remarks
Open Water	CLIS	CT	117,997	
Open Water	CLIS	NY		
Open Water	WLIS	CT		
Open Water	WLIS	NY		
Confined Disposal	CAD Cell	CT	30,574	
Confined Disposal	CAD Cell	NY		
Confined Disposal	Upland	CT		
Confined Disposal	Upland	NY		
Beneficial Use	Upland Use	CT		
Beneficial Use	Upland Use	NY		
Beneficial Use	Beach Nourishment	CT		
Beneficial Use	Beach Nourishment	NY		
Beneficial Use	CAD Cap	CT	2,242	
Beneficial Use	CAD Cap	NY		
TOTAL			150,813	

NOTE: All FNP CY Volumes are measured in-place as difference between pre-dredge and after-dredge surveys.

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
Activities under Permit by Federal Agencies other than the Corps of Engineers

Project Name	Waterbody/Location	Total Project Volume (CY)	Yardage Measurement Method	Corps Application No.	Dates of Disposal	Disposal Location	Actual Volume Disposed (CY)
U.S. Merchant Marine Academy (MARAD)	Kings Point, NY	31,000	Scow Measure			Upland NJ	31,000
TOTAL CY		31,000					31,000

Permit Actions Disposal Summary	Site	Source State	Volume	Remarks
Open Water	CLIS	CT	0	
Open Water	CLIS	NY	0	
Open Water	WLIS	CT	0	
Open Water	WLIS	NY	0	
Confined Disposal	CAD Cell	CT	0	
Confined Disposal	CAD Cell	NY	0	
Confined Disposal	Upland	CT	0	
Confined Disposal	Upland	NY	0	
Treated	Uplans	NY	31,000	USMMA material treated with Portland cement and deposited at 2 upland NJ sites
Beneficial Use	CAD Cap	CT	0	
Beneficial Use	CAD Cap	NY	0	
TOTAL VOLUME			31,000	

Note: Yardage Measurement Method is either In-Place (by Difference in Pre-Dredge and After-Dredge Surveys) or Estimated Scow Measure

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
All Non-Federal Permit Activities
(All Projects other than Corps Civil Works Federal Navigation Projects and other Federal Agency Actions)

Project Name	Waterbody/Location	Total Project Volume (CY)	Yardage Measurement Method	Corps Application No.	Dates of Disposal	Disposal Location	Actual Volume Disposed (CY)
Motiva Enterprises	New Haven Harbor, CT	23,900	Scow Measure	2003-02051	12/30/05 - 2/14/06	CLIS	23,900
Revik, Olav & Rebecca	Bermuda Lagoon, Westport, CT	900	Scow Measure	NAE-2004-3068	11/16/05-11/23/05	CLIS	900
Brewers Point Marina	Menunketesuck River, Westbrook, CT	7,200	Scow Measure	NAE-2004-3725	11/28/05-1/30/06	CLIS	7,200
Guilford Yacht Club Assc.	West River, Guilford, CT	24,500	Scow Measure	NAE-2004-2014	12/15/05-2/14/06	CLIS	24,500
Guilford Yacht Club	West River, Guilford, CT	20,200	Scow Measure	2003-01752 2004-4015	4/7/05-7/1/06	CLIS	20,200
Riverside Yacht Club	Mianus River (Cos Cob Harbor), Greenwich, CT	10,800	Scow Measure	2002-01805	1/1/06-7/1/06	WLIS	10,800
Long Neck Point Owners Association	Darien, CT	100	Scow Measure	NAE-2004-1830	4/11/06	WLIS	300
New York Athletic Club, Pelham Manor, NY	New Rochelle Harbor, NY	20,500	Scow Measure	2000-01118 (NAN) 2001-01303 (NAE)	Dec-05	CLIS	13,713
Wyncote Yacht Club	Huntington Harbor, NY	6,600	Scow Measure	2002-01280	10/3/05-11/14/05	WLIS	4,450
TOTAL CY		114,700					105,963

Permit Actions Disposal Summary	Site	State	Volume	Remarks
Open Water	CLIS	CT	76,700	
Open Water	CLIS	NY	13,713	
Open Water	WLIS	CT	11,100	
Open Water	WLIS	NY	4,450	
Confined Disposal	CAD Cell	CT	0	
Confined Disposal	CAD Cell	NY	0	
Confined Disposal	Upland	CT	0	
Confined Disposal	Upland	NY	0	
Beneficial Use	CAD Cap	CT	0	
Beneficial Use	CAD Cap	NY	0	
TOTAL VOLUME			105,963	

Note: Yardage Measurement Method is either In-Place (by Difference in Pre-Dredge and After-Dredge Surveys) or Estimated Scow Measure

Appendix G

Annual Scow Disposal Volumes in Cubic Yards, 1982-2004

DISPOSAL AREA	1982	1983	1984	1985	1986	1987	1988
NEW LONDON	1,975	192,153	290,454	367,005	207,900	160,905	110,440
CORNFIELD SHOALS	36,920	266,200	84,925	4,100	18,955	20,405	35,625
CENTRAL LIS	283,568	1,234,072	134,925	119,020	253,068	93,290	533,570
WESTERN LIS	60,395	156,085	166,358	423,080	78,360	65,380	39,250
	382,858	1,848,510	676,662	913,205	558,283	339,980	718,885

DISPOSAL AREA	1989	1990	1991	1992	1993	1994	1995
NEW LONDON	41,800	162,357	64,262	79,320	21,930	7,650	787,800
CORNFIELD SHOALS	66,497	29,380	167,616	103,700	16,100	39,940	31,690
CENTRAL LIS	588,755	206,980	126,278	47,223	1,212,140	600,210	280,541
WESTERN LIS	2,250	249,005	114,465	43,211	32,310	13,428	63,235
	699,302	647,722	472,621	273,454	1,282,480	661,228	1,163,266

DISPOSAL AREA	1996	1997	1998	1999	2000	2001	2002
NEW LONDON	504,400	12,725	2,900	23,250	4,450	1,995	11,425
CORNFIELD SHOALS	40,015	49,375	96,575	14,200	52,350	23,850	14,430
CENTRAL LIS	291,395	90,105	115,150	602,695	80,050	98,400	50,625
WESTERN LIS	59,604	14,775	8,950	40,300	35,450	50,250	41,975
	895,414	166,980	223,575	680,445	172,300	174,495	118,455

DISPOSAL AREA	2003	2004
NEW LONDON	4450	8000
CORNFIELD SHOALS	49550	33600
CENTRAL LIS	774606	203012
WESTERN LIS	20150	92655
	848,756	337,267

TOTALS	AVERAGE
3,069,546	133,459
1,295,998	56,348
8,019,678	348,682
1,870,921	81,344
14,256,143	619,832