APPENDIX A
PUBLIC INVOLVEMENT

VOLUME 2

ENVIRONMENTAL IMPACT STATEMENT FOR THE DESIGNATION OF DREDGED MATERIAL DISPOSAL SITES IN CENTRAL AND WESTERN LONG ISLAND SOUND, CONNECTICUT AND NEW YORK

EPA
New England Region

US Army Corps
of Engineers
New England District

A-4 — Pertinent Correspondence

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Federal Agencies

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US ENVIRONMENTAL PROTECTION AGENCY
REGION I
JFK FEDERAL BUILDING, BOSTON, MA 02203-2211

MEMORANDUM

DATE: May 7, 1999

SUBJ: EPA's EIS on dredge disposal sites in Long Island Sound - public involvement

FROM: Ann Rodney

TO: Long Island Sound Study Sediment Focus Group

The U. S. Environmental Protection Agency (EPA) - Region I, New England and Region II New York in cooperation with the U. S. Army Corps of Engineers (ACE), New England and New York Districts will prepare and Environmental Impact statement (EIS) to consider the potential designation of one or more dredged material disposal sites in the waters of Long Island Sound*.

In preparing and EIS, the EPA will follow the National Environmental Policy Act (NEPA) 40 C. F. R. Parts 1500-1508. Under NEPA there are requirements for public involvement. However, EPA and the cooperating Agencies plan to go beyond the minimum requirements for public involvement under NEPA, by intimately involving a group of citizens and organizations in the development process and milestones of the EIS.

The Long Island Sound Study has a group already formed and functioning - The Sediment Focus Group. Your group has interested parties, a grasp of the issues, represents a number of stakeholders and has the ability to play a role in the EIS. EPA would like to ask you to continue and possibly expand your interest to include the EIS being produced by EPA and the cooperating agencies. EPA would like to work with your sediment group to identify major issues, concerns, and stakeholders such as; citizens, marina owners, marine trades people, port operators, dredging operators, boaters, technical experts, environmental groups, local governmental officials, state officials, and other interested parties.

The group would meet with EPA and the cooperating agencies when information is gathered and needs to be explained and disseminated. The meetings would take place in the Long Island Sound area, and would be open to the public. It is anticipated that this group would meet once a month or less depending on where EPA is in the process and the issues involved. In the beginning the meetings might be more frequent (once a month).

The group would review and comment on products or documents produced by EPA and the cooperating agencies. Reviews/comments might be done in large public meeting, committee meetings, fact sheets, e-mail or other means of communication. EPA does not expect consensus, a majority opinion or voting on any reviews, but would like to get opinions of the people or representatives of groups involved. At this point in the EIS process, the products are flexible and

US ENVIRONMENTAL PROTECTION AGENCY
REGION I
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MEMORANDUM

DATE: August 10, 1999

SUBJ: Transcripts from the Public Scoping meetings.

FROM: Ann Rodney, USEPA ADR.

TO: Interested parties

Enclosed please find copies of the transcripts from the three different Public Scoping Meetings held for the Environmental Impact Statement (EIS) on the proposed designation of dredged material sites in the Long Island Sound area. These transcripts are in condensed form, meaning the font, font size has been compressed, the words spoken are verbatim. A summary of the meetings may be available in early September.

These transcripts, along with letters, faxes, and e-mails are being used to develop a Draft Work Plan which is expected to be available the middle of September. The development and production of this EIS is a cooperative effort between the US EPA and the Corps of Engineers, and we will be asking other federal and state agencies and yourself for comments on our work.

Below is an estimated time frame for work we will be doing over the next five months. Please keep in mind these dates are estimates and the time frames may change because of unforseen situations or circumstances.

September 15, 1999	Draft Work Plan available
September 15 - October 15, 1999	Comment period for Draft Work Plan
October 1, 1999 (the week of)	Workshops, one in CT, one in NY, on the Draft Work Plan (to include, the universe of Alternatives, Site Screening criteria, and Site Screen process).
December 1 - 15, 1999	Gathered information on Alternatives ID.
December 10, 199 (the week of)	Workshops for Alternatives
December 15 - January 20, 2000	Sites Screening process
January 31, 1999	1st tier site cut

You will be sent information as it becomes available and if you have any questions please feel free to contact me at the address below.

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US ENVIRONMENTAL PROTECTION AGENCY
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MEMORANDUM

DATE: September 27, 1999

SUBJ: October Workshop Factsheets

FROM: Ann Rodney AR

TO: Interested Parties

Enclosed please find four factsheets for you to read in preparation for the two workshops that will be held in October. The New York workshop will be held at the Danfords on the Sound, 25 East Broadway, Port Jefferson, NY 11777 (516) 928-5200, Tuesday October 12th from 6pm to 10pm and the Connecticut workshop will be held at the Ramada Inn, 225 Lordship Blvd. Stratford, CT 06497 (203) 375-8866, Wednesday October 13th from 6pm to 10pm.

These workshops will be held jointly by the Environmental Protection Agency, New England Region and the U.S. Army Corps of Engineers, New England District. The purpose of these workshops is to discuss the building blocks for the Environmental Impact Statement in regard to the designation of dredged material disposal site(s) in Long Island Sound.

These factsheets; Dredging Needs and Alternatives, Site Screening Process, Data Review and Recommendations and Evaluation Factors for Site Screening are for you to review in preparation of the workshops. The workshops have been designed for small group discussions on each topic.

During the workshops we look forward to your ideas, and recommendations on the information provided in these factsheets. Please come prepared to discuss your ideas. Please contact me, at the address below should you have any questions.

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US ENVIRONMENTAL PROTECTION AGENCY
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MEMORANDUM

DATE: February 9, 2000

SUBJ: LIS EIS Work Plan

FROM: Ann Rodney AR

TO: Interested Parties

Enclosed please find the Work Plan for the Long Island Sound Environmental Impact Statement (EIS) being developed and produced by the U.S. Army Corps of Engineers, New England District and the U.S. Environmental Protection Agency, New England Region. This Work Plan is also available and can be downloaded from our website:
http://www.epa.gov/region01/eco/lisdreg/

This Work Plan is the framework for the EIS. This document will continue to evolve as specific issues and topics need to be clarified and refined, and as the EIS is being developed. We are soliciting your comments on this over all Work Plan. Your comments may be sent to me at the address below.

In addition, EPA and the Corps will be holding public workshops possibly in mid-April. These workshops focus on the Work Plan, the process of giving input into the EIS, the Field Work, the Weights and Values of the evaluation factors (October workshops factsheets) and the Screening Process for the Weights & Values. A notice with more detail should be forthcoming within the next month.

We would like to receive your comments at your earliest convenience, preferably prior to the workshops.

I also ask that you pass this Work Plan on to others, should they be interested. Please feel free to contact me should you have any questions.

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WORKPLAN
LONG ISLAND SOUND

DREDGED MATERIAL MANAGEMENT STUDY
ENVIRONMENTAL IMPACT STATEMENT
January 2000

1. PURPOSE: The purpose of this work plan is to outline the tasks for the preparation of an Environmental Impact Statement (EIS) which will consider the potential designation of one or more dredged material disposal sites in the waters of Long Island Sound, under Section 102© of the Marine Protection, Research and Sanctuaries Act (MPRSA) and 40 CFR 230.80 of the regulations of the Environmental Protection Agency (EPA) under Section 404 of the Clean Water Act. The EIS will be prepared in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500 et. seq.), and the EPA/Corps site designation handbook.

2. SUMMARY: Dredged material has been disposed of at the existing sites known as the Western Long Island Sound, the Central Long Island Sound, the Cornfield Shoals and the New London Disposal Sites pursuant to programmatic and site designation EIS's released by the Corps of Engineers in 1982 and 1991. This activity has been regulated in different ways at different times depending on the status of applicable law and policy. EPA and the Corps have identified a likely need to continue the marine disposal of dredged material in the Long Island Sound area. Accordingly, the EIS will provide an evaluation of the existing sites, as well as additional alternatives including other open water disposal sites, other types of dredged material disposal and management, and the no action alternative. The EIS will support EPA's final decision on whether one or more dredged material disposal sites will be designated under the MPRSA and identified in advance under the Clean Water Act (40 CFR 230.80). The EIS will include analyses applying the five general and eleven specific site selection criteria for designating ocean disposal sites presented in 40 CFR Parts 228.5 and 228.6 and the Section 404(b)(1) guidelines. In addition, the impact criteria in 40 CFR 228.10 will be used to assess impacts of the existing sites.

3. DESCRIPTION OF WORK AND SERVICES: The contractor will use background information and data as compiled during the Phase 1 and Phase 2 study efforts, and any additional data collection and analyses performed as outlined in the tasks and subject areas below, to address the impacts of dredged material disposal at alternative dredged material disposal sites in the Long Island Sound region. The format of the EIS is shown on Attachment #1.

TASK #1: PUBLIC INVOLVEMENT PLAN

The contractor shall prepare a public involvement plan for the EIS. This plan will explain the NEPA and EIS process, discuss the proposed action, outline the activities that have been conducted to date (either by efforts previously accomplished by contractor, the Corps or EPA) and outline future public involvement activities. A summary of the NEPA and the EIS process are available from the various presentations and guidance documents available through EPA and the Corps, and the proposed action is stated in the Notice of Intent, as published in the Federal Register on June 3, 1999.

The public involvement activities have begun on this EIS. Items that have occurred are the three public scoping meetings held in June 1999 in Stony Brook, New York, and Groton and Stamford, Connecticut. A report titled "*Long Island Sound Site Designation, Environmental Impact Statement: Summary of Scoping Meetings*" provides an overview of the comments and issues presented at the meetings. The primary issues of concern raised at the 1999 public scoping meetings were grouped into four different categories (Regulatory and Public Involvement, Natural Environment, Socioeconomic Issues and Other Issues) and within the categories there were 36 issue headings. This document provides a summary of the public scoping meetings.

Public workshops were also held in Port Jefferson, New York and Stratford, Connecticut in October 1999. Four fact sheets were produced on the four topic areas of Dredging Needs and Alternatives, Data Review and Recommendations, Site Screening Process, and Evaluation Factors. These topics were the focus of small group discussions to get public input on these issues.

In the winter of 2000, there will be public workshops on the geographical area to be studied, the evaluation factors and any field work results.

The EIS shall include a table referencing the appropriate section(s) in the EIS that addresses the comments from the scoping meetings and any follow-up workshops.

The contractor will prepare a Public Involvement Plan (PIP) that will outline and incorporate the above activities and outline future activities. In this plan the contractor will identify work products to be reviewed by the public, methods of public input, and a timeline that will illustrate the elements of the PIP. The PIP will ensure that populations identified in Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", and Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" are notified and involved. Possible future public involvement may include (but not limited to) evaluation factors, site screening process, site selection, data collection, and results of field sampling. The methods to involve the public may include (but not limited to) mailings of notices, fact sheets, workshops, public meetings and other activities. Future activities are to be integrated throughout, and will be determined through discussions with the Corps and EPA.

A section devoted to public involvement will be included in the EIS. This section will be a summary of the public involvement activities accomplished since the development of the April 1998 Letter of Agreement between the Corps of Engineers and EPA.

All work products of the public involvement program (fact sheets, notices, summaries, etc.) are to be provided in a "Public Participation" Appendix to the EIS.

TASK #2: DREDGING NEEDS INVENTORY

The Corps and EPA are presently compiling data on historic dredging and disposal activities in Long Island Sound. The data will cover Federal civil works dredging projects since 1870, and permit activities by other Federal entities, state and municipal projects, and private activities, since about 1980. The contractor will use this data, together with data from other sources identified during the completed literature review, and information compiled from its survey and inventory of marine access dependant facilities (see Attachment #2, (E)1.) to prepare a dredging needs assessment.

The dredging needs assessment will project the anticipated dredging volumes from each harbor in Connecticut, New York and Rhode Island, within the coastal economic study zone, defined as the harbors tributary to the East River, NY on the west, and the Pawcatuck River and Little Narragansett Bay, CT and RI on the east, and including the harbors of Long Island located on Long Island Sound, Gardiners Bay, Peconic Bay and Block Island Sound. The projections will cover the 20-year period beginning with publication of the Final EIS and Final Rulemaking. Assumptions will be made as to the anticipated quality of the material (suitability for unconfined open-water disposal under MPRSA criteria).

Historic dredging volumes by harbor, and by source type (Federal civil works, other Federal, state and municipal, and private) will be discussed and displayed in tables, in bar graphs, and using pie diagrams on a map of the LIS area. Projected dredging volumes over the 20-year period will be similarly discussed and displayed.

The dredging needs assessment, including detailed narrative, full tables and complete graphics will be included in a "Dredging Needs" Appendix to the EIS. A summary of the dredging needs assessment, including representative tables and graphics will be included in the EIS main report in the Purpose and Need section.

TASK #3: ALTERNATIVES

The site screening process carried out for the development of alternatives will be described, as determined through input and coordination with agencies and the public at the formal scoping sessions, workshops, meetings, etc. held throughout the EIS process. The methods and results of disposal site evaluations based on the screening criteria will be summarized in the Alternatives section. The site screening process and site screening criteria will be provided in detail in a "Site Screening Process" Appendix.

The EIS will consider at a minimum various alternatives (depending on results of site screening process) including: the no action alternative (i.e., no designation of any sites), designation of one or more of the existing open water sites, designation of alternative open water sites identified within the study area that may offer environmental advantages to the existing sites, and identification of other disposal and/or management options, either in or out of the water. Those alternatives not considered reasonable or feasible will also be described, with reasons stated as to why they were not considered for further evaluation.

This section will discuss and contrast alternative disposal sites and methods. Examples that will be considered during the site selection process could include containment islands, nearshore sites, borrow pits, confined aquatic disposal sites, and beneficial use of the material. Also included in the evaluation will be alternative dredged material treatment technologies for contaminated materials. A detailed evaluation using the evaluation factors provided by the Corps and EPA, and a matrix for comparing the benefits, impacts and costs of various reasonable alternatives will be provided. Aquatic disposal sites will be evaluated based on the level of impacts to water quality and designated and existing uses, special aquatic sites, fish and fishing, marine and estuarine benthic habitat, threatened and endangered species, other wildlife, historic and archaeological resources, recreation, as well as cost, engineering and economic feasibility. The cost evaluation will measure and describe the cost of various disposal alternatives for the several classes and types of projects that would use those methods, including: large federal projects, small federal projects, and permit activities of various sizes. Open water alternatives

shall be evaluated using the MRRSA site selection criteria (228.5 and 228.6). Upland disposal sites and dewatering areas will be evaluated based on the level of impacts to surface and ground water quality, State and Federal wetlands, land use and parks, air quality, threatened and endangered species, fish and wildlife habitat, historic and archaeological resources, and traffic, as well as cost and engineering and economic feasibility. Upland and aquatic sites will be evaluated pursuant to and in accordance with the Clean Water Act, Section 404(b)(1) guidelines.

In Section 6.0 of the EIS, the contractor shall compare each alternative site or technology within the four general alternative categories, i.e., open water, upland, beneficial use/habitat development and treatment technologies. Based on the environmental and socioeconomic effects evaluation in the Environmental Consequences Section; and the engineering and economic feasibility analysis in the Alternatives Section, each alternative site/technology will be ranked within each category. The discussion should reflect and reference those analyses, and explain why certain sites were ranked higher than other sites. The EIS should not recommend a particular alternative, but note the highest ranking for each general disposal site category.

The Environmental Protection Agency's preferred alternative will be presented in the Final EIS after public review of the Draft EIS. This will be the dredged material disposal alternative(s) which are determined to be environmentally best suited to receive dredged material, in accordance with the MPRSA and the Clean Water Act. The economic component will be considered in the evaluation, but the alternative(s) will be determined as those best suited to receive dredged material based on environmental review. Any preferred alternative will be evaluated for consistency with all applicable state coastal zone management policies in accordance with the Coastal Zone Management Act.

The Alternatives section will present mitigation measures and methods to avoid or minimize any potential adverse effects of disposal, including incremental costs. Monitoring plans will also be discussed, referencing the Site Monitoring Management Plan (SMMP) discussed later in this Work Plan.

TASK #4 AFFECTED ENVIRONMENT

The EIS will succinctly describe, in language understandable to the general public, the biological, physical, chemical, socioeconomic and cultural environment of the disposal alternatives under consideration. A description of the resources to be included in the Affected Environment section, as well as direction on how these resources are to be addressed, are included in Attachment #2. Existing data sources will be used to establish baseline conditions, as well as additional information gathered through field investigations. GIS data will also be used to portray existing environmental conditions, and for the alternative site screening process to be carried out in coordination with federal and state agencies. GIS data will be illustrated in the EIS for the appropriate resources.

As outlined in Attachment #1, a general section will be included in the EIS that describes the setting for the entire study area, i.e., "the Sound proper," and shall include discussions of the topics bulleted below. Subsequent similar sections will then describe the site-specific setting for each alternative disposal site following the guidelines specified at the end of this task and Attachment #2. The Affected Environment section will also identify and treat explicitly the information used in the MPRSA site selection criteria so that the reader can easily assess each criteria in the appropriate text. The specific criteria citations are noted on Attachment #1.

The General Long Island Sound Setting shall include a detailed description of the following:

Physical Setting

- Water quality. Describe the pollution gradient in the Sound in terms of sources/loads of pollutants and flushing rates. Describe the water quality classification of the Sound and what water quality standards (CT and NY) are being met or not met and why. Describe the incidence of hypoxia and the current thinking on why it occurs and what is being done about it under the NEP. Describe the trends and gradients in contaminants in the water column

- Geology. Describe the general bathymetry, geological and sedimentary history of the Sound and mix of sediment types in the overall study area, including the large scale gradients in sediment grain size and chemistry

- Meteorology. Describe the major seasonal weather patterns that affect the Sound as they relate to temperature, precipitation and storm activity.

- Physical Oceanography. Describe the stratification and water mass dynamics relative to the temperature/salinity regime, the large scale tidal currents and seasonal current patterns for non-tidal currents and waves. Review the historical oceanographic (Yale Bingham Oceanographic Collection) and more current (NOAA/USGS/Stony Brook) data to characterize the general patterns. Use LISS model printouts to exhibit patterns. Also describe how the three basins in the Sound are similar and different and discuss flushing rates for each. Discuss sediment transport issues relative to erosion/sedimentation processes with existing USGS models/maps, referencing the geological discussions above.

Biological Resources

- Plankton. Describe the seasonal patterns and distribution of phytoplankton and zooplankton (holoplankton and meroplankton) in the Sound. Discuss species dominance patterns and how they relate to environmental conditions (temperature, salinity, light and nutrients. Discuss any incidences of nuisance or toxic blooms in the sound and their impact on resources and uses.

- Benthos. Discuss the general community types that have described in the sound in terms spatial distribution in the three basins and their seasonality. Provide a comprehensive list of species found in those community types. Describe how they relate to sediment type and reflect environmental conditions.

- Fish and Shellfish Resources. Describe the Sound's species of fish and shellfish in terms of general spatial and seasonal distribution. Generate seasonal distribution map for the most common species noting any known spawning, nursery and migration areas utilizing the applicable state fisheries data and any other pertinent studies or data sets. Discuss the various abundance patterns (catch and biomass) over regions of the Sound. Generate a comprehensive list of species and a life history table with pertinent information such as spawning habitat and time period, food habits, seasonal migratory activities and population status in the Sound. The species that are covered under the Essential Fish Habitat shall be identified and included in the life history table.

- Wildlife Resources. Describe birds, reptiles and mammals found in the sound relative to their seasonality and spatial distribution. Again, generate a similar comprehensive species list and a life history table.

- Endangered and Threatened Species. All federally listed endangered or threatened species shall be identified and discussed relative to their distribution, seasonality and current status, based on information provided by NMFS and USFWS. State endangered or rare species will also be listed based on information provided by the respective states' Natural Heritage Programs. Life History Tables shall be developed for these species.

Socio-economic Resources

- General Fishing Activities. Describe commercial and recreation species caught, general areas and seasons of fishing activities, practices, catches (trends) and economic value to region..

- Shipping/Navigation. Describe major port areas, commodities and importance of commercial shipping to the local and regional economies. Describe the range of recreational boating and associated industries that exist in the Sound and its impact to the local and regional economies.

- Beaches. Describe the public beaches throughout the sound, their location and importance to users and the local economy. Generate a map of public beaches in both states. Generate table reviewing major beaches and summarizing what is known about closures relative to local pollution inputs to the region.

- Parks/Natural areas. Map and tabulate Federal, state and local parks near all shorelines of the sound. Briefly describe what sensitive resources occur in these areas in the Table.

- Historical/Archaeological Resources. Describe general resources in Sound. Review State Historical records, NOAA charts and Side Scan Sonar to generally describe types of resources in the Sound.

- Other human uses (swimming, recreational diving, cable/pipeline locations, military, mining activities). Describe in general other uses of the Sound. Locate important areas on map.

For the existing and alternative open water site descriptions, the discussion will be specific to each candidate disposal site. The contractor shall review (1) DAMOS data, (2) data generated from the literature review and (3) the EIS site specific studies to fully describe the existing environmental conditions at each site. This includes, but is not limited to the following: water quality, sediment quality, side scan, bathymetry, current speed/direction, benthos, fish/shellfish and fishing activities, other human uses (cable/pipeline areas, military, mining) and potential for historic shipwrecks. The contractor shall describe the range of chemical conditions at each site as influenced by past disposal practices, including sediment chemistry, toxicity and bioaccumulation by comparing the samples from historic mounds (worse case) and active mounds (typical of recent disposal) with reference areas. Offsite samples can be used to characterize offsite impacts. Other available data should be included as appropriate. If appropriate (e.g. plankton), the site specific section should reference the previous discussions under the general setting to avoid unnecessary repetition and/or if no site specific information is available. See the description in Attachment #2 for further guidance.

The descriptions of the Affected Environment for the upland/beneficial use alternatives shall follow the format shown in Attachment #1. As with open water sites, a general section shall precede the descriptions of each site. The contractor will provide a general description of land uses along the shorelines of Long Island Sound. A description will be included of land uses surrounding any upland disposal site alternatives or beneficial use sites, including zoning designations. This will be supported by available land use mapping which is to be obtained from regional, state or local planning agencies, with appropriate colored graphics illustrating the various land use types.

TASK #5 ENVIRONMENTAL CONSEQUENCES

An outline of this section is provided in Attachment #1. As with the "Affected Environment Section" described above, the "Environmental Consequences" section of the EIS will describe general impacts of the type of disposal alternatives (open water, upland, beneficial use) followed by a description of impacts associated with the specific alternative site. In the general impacts discussion, disposal processes will be described, as well as impacts that are common to all open water, upland and beneficial use disposal alternatives.

The impact discussions should be highly analytical, incorporating a comprehensive, in-depth review of applicable and pertinent literature and data collected by DAMOS and the field efforts associated with this study. They shall include direct, secondary and cumulative impact determinations as required by NEPA.

The contractor shall perform a thorough and rigorous review of the scientific literature, expanding to studies outside the region, if applicable. Site specific determinations should address the site evaluation criteria that are adopted from the evaluation factors presented at the October 1999 workshops. In particular, the discussion of impacts of open water alternatives should address questions based on site selection (228.5 and 228.6) and impact criteria (228.10) in the MPRSA. These questions are provided in Attachment #3. Any applicable models shall be used to provide a quantitative assessment of impacts as much as possible, using a range of assumptions and conditions to characterize the anticipated range of effects.

Guidance for preparation of the general impact discussions as related to the MPRSA site selection criteria, and 404(b) guidelines, for open water disposal, upland disposal, and beneficial use/habitat development is provided below. Guidance for impact analyses for each alternative (open water, upland disposal, and beneficial use/habitat development sites) as related to the MPRSA site selection criteria, 404(b) guidelines, and other resource topics, is provided in Attachment #2.

General Impacts of Open Water Disposal

With the assumption that projects slated for disposal meet the Ocean Dumping criteria (Green Book) and Section 404 (b)(1) guidelines (Inland Testing Manual), the discussion of the general impacts of open water disposal should include (but is not limited to) a detailed impact discussion on the areas listed below:

- Disposal process in open water. Describe in detail the formation and consolidation process of mounds from the work of WES and others related to the MDFATE model development.

- Impacts to water column impacts relative to suspended solids and the release of sediment contaminants. Review the literature on plume studies of dredged material in detail, describing the amount and size fraction of the sediments remaining in the water column.

- Changes in the sediment environment. Describe the changes in sediment type (grain size) and likely chemical loading based on the range of projects likely to use the site (Dredging Needs effort) that would meet the above-cited testing criteria).

- Burial of the benthic epi-and infaunal invertebrates and fish (vulnerable life stages). Describe typical forms and how tolerant they are to direct burial. Describe in detail the recolonization process (a la Rhoads and Young). Review the literature to describe potential for bioaccumulation of sediment contaminants and impact of bioaccumulation to benthic organisms. Identify finfish lifestages (e.g. egg, or limited mobility or refuge seeking juveniles) or slow moving demersal lifestyle may also be impacted from direct burial)

- Effects of suspended solids on filter-feeders invertebrates, lobster and fish. Review the literature habitat (re: burrows) and food source (benthic invertebrates). Review the literature to describe potential for bioaccumulation and impacts to marine resources and human health.

- Effects on marine wildlife. Changes in habitat and food sources. Review the literature to describe potential for bioaccumulation and impacts to these resources.

- Effects on Endangered and Threatened Species. Same as wildlife.

General impacts of Upland Disposal

The contractor shall provide a detailed summary of potential impacts to land use and resources that broadly apply to typical upland sites, or, discuss a range of site conditions. The impacts of upland disposal and/or the creation of beneficial use sites on surrounding land uses, zoning, riparian rights, and water access will be presented. The contractor shall review the existing literature (including the many WES documents on the subject), liberally citing examples of impacts noted on example sites. The general impact issues discussed in the October 1999 Workshop Fact Sheet shall be addressed to the extent possible, as related to a general project. Available landfills and brownfields shall be reviewed as potential upland disposal alternatives. Loss of landfill space will be evaluated for any landfill disposal options. The secondary and indirect impacts of port development will be considered for any port development beneficial use options as well.

The contractor shall describe a range of dredges that are used, typical logistical considerations, dewatering needs, transportation and handling costs, and tipping fees (describe range in local landfills).

General impacts of Beneficial Use/Habitat Development Sites

The contractor shall provide a detailed summary of potential impacts to land use and resources that broadly apply to typical beneficial use or habitat development sites, or discuss a range of site conditions. The contractor shall review the existing literature (including the many WES documents on the subject, liberally citing examples of impacts noted on example sites.

The contractor shall describe the range of dredges used, typical logistical considerations, de-watering needs, transportation and handling costs, environmental goals and constraints. As a separate category of impacts, the contractor shall also describe all impacts associated with the implementation of the treatment technologies.

As indicated above and in Attachment #1, this subsection is to be followed by a site by site assessment of impacts of the site resources identified in Task 4.

TASK #6: COMPLIANCE/CONSISTENCY WITH ENVIRONMENTAL LAWS, REGULATIONS AND PROGRAMS

The Contractor will provide a section in the EIS regarding compliance and consistency of the preferred dredged material disposal alternative with appropriate federal, state and local environmental laws, regulations and programs. This includes the following:

- Clean Water Act, Section 404(b)(1) guidelines
- MPRSA site selection criteria
- Coastal Zone Management Act (for Connecticut, New York and Rhode Island, if applicable)
- Endangered Species Act
- Magnuson-Stevens Fishery Conservation and Management Act
- National Historic Preservation Act
- Fish and Wildlife Coordination Act
- Marine Mammal Protection Act
- Clean Air Act
- Appropriate Federal Executive Orders and Memorandums

Also, consistency will be assessed with any appropriate state or regional comprehensive conservation and management plans.

TASK #7: PREPARATION OF THE DRAFT AND FINAL EIS AND DEVELOPMENT OF DRAFT AND FINAL SITE MONITORING/MANAGEMENT PLANS (SMMP)

(A) The contractor shall prepare a Preliminary Draft EIS for review by the Corps and EPA. The contractor shall review and organize comments received, and consult with NAE and EPA on the appropriate revisions to be made to the document. The contractor shall then prepare a Draft EIS for public release.

(B) The contractor shall review, organize and categorize public comments on the Draft EIS and prepare draft responses to all comments except those that deal with policy matters for the EPA and the Corps. These will be identified by the agencies before the task will begin. Technical agency and contractor staff shall determine what changes will be made to the document for the preparation of a Final EIS based on the comments. The contractor shall prepare a Preliminary Final EIS for review by the Corps and EPA. The document will be revised accordingly in consultation with the Corps and EPA. The contractor shall then prepare a Final EIS for distribution.

(C) For each of the open water sites to be designated, the contractor shall prepare a SMMP as required under Sections 102 (c)(3) of the MPRSA. All the requirements in this plan as described in the statutory language ((c)(3)A-F) must be comprehensively addressed and integrated with the DAMOS program.

The contractor shall prepare a SMMP as a stand alone document, but incorporate the findings and evaluations in the EIS as much as possible. Example SMMPs will be provided. Draft and Final versions of the SMMP will be prepared.

ATTACHMENT #1

EIS Format

EXECUTIVE SUMMARY: An Executive Summary (10-15 pages) will be provided which will provide an overview of the analysis and findings of the EIS.

1.0 Introduction

The legislative history of the Clean Water Act and Ocean Dumping Act application to dredged material disposal in Long Island Sound, with reference to historic and current disposal and DAMOS monitoring activities will be summarized.

2.0 Purpose and Need

This section will briefly specify the underlying purpose and need for dredging of the ports of southern New England and Long Island and for identifying and maintaining environmentally sound and cost effective dredged material disposal options for the Long Island Sound region. This section will also provide a background regarding the National Environmental Policy Act process and its requirements. A summary of the public involvement process carried out for the EIS will be provided. A description of the existing Federal civil works navigation projects in the Long Island Sound area will be included, as well as a summary of non-Federal dredging projects (See Task #2).

3.0 Alternatives, including the Preferred Selected Disposal Site(s)

See Task #3

4.0 Affected Environment (See Task #4)

4.1 Location (40 CFR 228.6 (a)(1)) The geographic setting and extent of the study area will be described, as well as general land use around the Sound. The Sound will be described as the western. central and eastern basins.

4.2 History of Dredged Material Disposal in the Study Area

A brief description will be provided of the disposal history at the four existing sites and other historic sites. This section will also explain the discontinued disposal sites depicted on LIS nautical charts. The text should also include a brief description of how the study areas were selected for each disposal site to be evaluated.

4.3 Long Island Sound General Setting

4.3.1 Natural Resources

- 4.3.1.1 Water Quality (228.6(a)(4); 228.6(a)(9)
- 4.3.1.2 Geology (228.6(a)(1)
- 4.3.1.3 Meteorology (228.6(a)(6)
- 4.3.1.4 Physical Oceanography (228.6(a)(1) and (a)(6)
- 4.3.1.5 Biota (228.6(a)(2); 228.6(a)(9); 228.6.10(b)(2); 228.10(b)(3); 228.10(b)(5))
  - 4.3.1.5.1 Plankton
  - 4.3.1.5.2 Benthos
  - 4.3.1.5.3 Fish and Shellfish Resources
  - 4.3.1.5.4 Wildlife Resources
  - 4.3.1.5.5 Endangered and Threatened Species

4.3.2 Socioeconomic Resources
- 4.3.2.1 Fishing Activities (228.56(a) and (b) 228.6(a)(8))
- 4.3.2.2 Shipping/Navigation (228.5(a) and (b); 228.6(a)(8))
- 4.3.2.3 Beaches (228.5(b); 228.6(a)(3))
- 4.3.2.4 Parks/Natural Areas (228.5(b); 228.6(a)(3))
- 4.3.2.5 Historic/Archaeological Resources (228.6(a)(11))
- 4.3.2.6 Other human uses (swimming, recreational diving, cable/pipeline locations, military, mining activities) (228.6(a)(8))

4.4 Existing and Alternative Open Water Sites

4.4.1 Site A (Open Water)
- 4.4.1.1 Location/bathymetry
- 4.4.1.2 Water Quality
- 4.4.1.3 Sediment
- 4.4.1.4 Physical Oceanography
- 4.4.1.5 Biota
  - 4.4.1.5.1 Plankton
  - 4.4.1.5.2 Benthos
  - 4.4.1.5.3 Fish/Shellfish
  - 4.4.1.5.4 Wildlife
  - 4.4.1.5.5 Endangered Species
- 4.4.1.6 Fishing Activities
- 4.4.1.7 Shipping/Navigation
- 4.4.1.8 Beaches
- 4.4.1.9 Parks/Natural Areas
- 4.4.1.10 Historic/Archaeological
- 4.4.1.11 Other Human Uses

4.4.2 Site B (Open Water)
(same as above)
etc.

4.5 Upland Alternatives

4.5.1 General Land Use Setting
4.5.2 Description of range of sites considered
4.5.3 Site A
- 4.5.3.1 Location, general setting and land uses
- 4.5.3.2 Soils/Vegetation
- 4.5.3.3 Water Resources
  - 4.5.3.3.1 Surface
  - 4.5.3.3.2 Groundwater
- 4.5.3.4 Biota
  - 4.5.3.4.1 Wetlands
  - 4.5.3.4.2 Aquatic Life
  - 4.5.3.4.3 Wildlife
  - 4.5.3.4.4 Endangered Species
- 4.5.3.5 Historic/Archaeological Resources
- 4.5.3.6 Socioeconomic Resources
- 4.5.3.7 Human Uses

4.5.4 Site B
(same as above)
etc.

4.6 Beneficial Use/Habitat Development

4.6.1 General Land Use Setting
4.6.2 Description of range of sites considered
4.6.3 Site A
4.6.3.1 General Setting and Land Use
4.6.3.2 Soils/Vegetation
4.6.3.3 Water Resources
4.6.3.3.1 Surface
4.6.3.3.2 Groundwater
4.6.3.4 Biota
4.6.3.4.1 Wetlands
4.6.3.4.2 Aquatic Life
4.6.3.4.3 Wildlife
4.6.3.4.4 Endangered Species
4.6.3.5 Historic/Archaeological Resources
4.6.3.6 Socioeconomic Resources
4.6.3.7 Human Uses
4.6.4 Site B
(same as above)
etc.

5.0 Environmental Consequences (See Task #5)

5.1 Open Water Alternatives

5.1.1 General Impacts of Open Water Disposal
5.1.1.1 Disposal Process in Open Water
5.1.1.2 Water Column Impacts
5.1.1.3 Sediment Changes
5.1.1.4 Burial of benthic epi- and infaunal invertebrates and fish
5.1.1.5 Effects of suspended solids on filter-feeders invertebrates, lobster and fish
5.1.1.6 Effects on fish and lobster (all life stages)
5.1.1.7 Effects on marine wildlife

5.1.2 Impacts at Existing and Alternative Sites
5.1.2.1 Site A
5.1.2.1.1 Water Quality
5.1.2.1.2 Sediment Impacts
5.1.2.1.3 Benthos
5.1.2.1.4 Impacts to Fish/Lobster
5.1.2.1.5 Impacts to Wildlife
5.1.2.1.6 Impacts to Endangered Species
5.1.2.1.7 Socioeconomic Resources
5.1.2.1.7.1 Fishing Activities
5.1.2.1.7.2 Shipping, commercial and recreational navigation
5.1.2.1.7.3 Beaches and Swimming
5.1.2.1.7.4 Parks/Natural Areas
5.1.2.1.7.5 Historic/Archaeological Resources

5.1.2.1.7.6 Other Human Uses(recreational diving, cable/pipeline locations, military activities, mining activities)

5.1.2.2 Site B
(same as above)
etc.

5.2 Upland Disposal

5.2.1 General Impacts of Upland Disposal
- 5.2.1.1 Description of the disposal process
- 5.2.1.2 Description of range of sites considered
- 5.2.1.3 Land Uses
- 5.2.1.4 Soils/Vegetation
- 5.2.1.5 Water Resources
  - 5.2.1.5.1 Surface
  - 5.2.1.5.2 Groundwater
- 5.2.1.6 Biota
  - 5.2.1.6.1 Wetlands
  - 5.2.1.6.2 Aquatic Life
  - 5.2.1.6.3 Wildlife
  - 5.2.1.6.4 Endangered Species
- 5.2.1.7 Historic/Archaeological
- 5.2.1.8 Socioeconomic Resources
- 5.2.1.9 Human Uses

5.2.2 Impacts at Alternative Sites

5.2.2.1 Site A
- 5.2.2.1.1 General Setting and Land Use
- 5.2.2.1.2 Soils/Vegetation
- 5.2.2.1.3 Water Resources
  - 5.2.2.1.3.1 Surface
  - 5.2.2.1.3.2 Groundwater
- 5.2.2.1.4 Biota
  - 5.2.2.1.4.1 Wetlands
  - 5.2.2.1.4.2 Aquatic Life
  - 5.2.2.1.4.3 Wildlife
  - 5.2.2.1.4.4 Endangered Species
- 5.2.2.1.5 Historic/Archaeological Resources
- 5.2.2.1.6 Socioeconomic Resources
- 5.2.2.1.7 Human Uses

5.2.2.2 Site B
(same as above)
etc.

5.3 Beneficial Use/Habitat Development Sites

5.3.1 General Impacts
- 5.3.1.1 Description of the disposal process
- 5.3.1.2 Description of range of sites considered

5.3.1.3 Land Use
5.3.1.4 Soils/Vegetation
5.3.1.5 Water Resources
5.3.1.5.1 Surface
5.3.1.5.2 Groundwater
5.3.1.6 Biota
5.3.1.6.1 Wetlands
5.3.1.6.2 Aquatic Life
5.3.1.6.3 Wildlife
5.3.1.6.4 Endangered Species
5.3.1.7 Historic/Archaeological
5.3.1.8 Socioeconomic
5.3.1.9 Human Uses

5.3.2 Site A
5.3.2.1 Impacts on Land Use
5.3.2.2 Soils/Vegetation
5.3.2.3 Water Resources
5.3.2.3.1 Surface
5.3.2.3.2 Groundwater
5.3.2.4 Biota
5.3.2.4.1 Wetlands
5.3.2.4.2 Aquatic Life
5.3.2.4.3 Wildlife
5.3.2.4.4 Endangered Species
5.3.2.5 Historic/Archaeological Resources
5.3.2.6 Socioeconomic Resources
5.3.2.7 Human Uses

5.4 Impacts of Treatment Technologies
(same outline as Section 5.3)

6.0 Ranking of Disposal Site Alternatives

7.0 Compliance/Consistency with Environmental Laws, Regulations and Programs

8.0 Site Management/Monitoring Plans for Open Water Sites

9.0 Public Involvement Process

10.0 References

11.0 List of Preparers

12.0 List of Agencies, Organizations and Persons who received copies of the EIS

13.0 Index

14.0 Glossary

Fold-out sheet of abbreviations and acronyms

APPENDICES

Scoping and Workshop Reports

Public Involvement Plan

Dredging Needs

Site Screening Process and Evaluation Factors

Site Management Plan(s) for Selected/Designated Site(s)

Socioeconomics

Sediment chemistry and bioaccumulation/toxicity testing

Physical Oceanography

Biological testing and sampling (Benthic, fisheries)

Historic and Archaeological Resource Investigations

Correspondence

ATTACHMENT #2

The contractor will prepare the following Appendices which contain the detailed results of all field investigations from the existing and alternative disposal sites, including approaches, assumptions, graphics, data tables, references, etc. The contents of these report shall be in summarized in the appropriate detail in the "Affected Environment" and "Environmental Consequences" Sections of the EIS. Detailed "general Sound-wide" discussions of each topic below (as described in Tasks # 4 and 5 for each appropriate topic) shall also be included in each of the following Appendices.

(A) "Sediment/Water Quality Analyses"

(B) "Physical Oceanography and Meteorology"

(C) "Biological Resources of Open Water Sites"

(D) "Upland/Beneficial Use Site Resources"

(E) "Socio-economic Resources" (includes air and traffic impacts)

(F) "Historic and Archaeological Resources"

(G) "Alternatives Analysis"

(H) "Site Monitoring/Management Plans"

(I) "Public Participation"

(J) "Dredging Needs"

(A) SEDIMENT/WATER QUALITY ANALYSES

Affected Environment

A physical and chemical characterization of the sediments of all sampling areas is to be detailed, based on testing results and analysis from data collection efforts carried out from the Winter of 2000 to the Fall of 2000, as well as available literature. Testing and analysis results for samples taken at other alternative sites chosen through the site screening process will also be characterized. The evaluation of sediments from the sampling areas at each disposal site will include testing results from areas of historic disposal (*HISTORIC*), no history of disposal (*FARFIELD*), recent disposal (*ACTIVE*), and comparison sites (*NO IMPACT*). A detailed discussion of historical data will be provided. This data will be compared to the more recent data to illustrate any historical changes in the sediment characteristics.

The toxicity of dredged material at the existing disposal sites and alternative disposal sites will be evaluated based on bulk sediment chemistry testing, bioassay, and bioaccumulation testing and compared with the sediment chemistry data. The results will be evaluated using the guidance in "Evaluation of Dredged Material Proposed for Ocean Disposal, Testing Manual,1991, Report Number USEPA-503/B-91/001", and existing information about the aquatic disposal sites. The goal of this evaluation is to

conduct ecological and human health impacts on all study areas at the four existing disposal sites and any alternative sites in Long Island Sound to evaluate effects of disposal of dredged material.

A detailed discussion of historical water quality data will be included, as well as the general water quality of LIS. The pollution gradient in LIS will be described in terms of sources/loads of pollutants and flushing rates. The water quality classification of the Sound will be described, including what water quality standards (CT and NY) are being met, or not met and why. Incidences of hypoxia will be described, the current assumptions on the reasons for its occurrence, and any proposals that are under consideration for correction under the National Estuary Program. Trends and gradients of contaminants in the water column will be described.

Environmental Consequences

Historic physical and chemical sediment data will be reviewed to project the quality and quantity of future dredged materials from the waterways in the study area that could be disposed of at the existing sites, or the alternative sites. This information is to be presented in a matrix format. Assume that only the open water site will receive material that meet the testing requirements of the MPRSA and CWA. The availability of alternative sites (discussed in Task 3) will be discussed relative to projects that will not meet the disposal criteria.

Based on site use evaluated in Dredging Needs analysis and estimated capacity (from DAMOS), predict site life expectancy of each site. Compare active mound to reference to provide example of sediment contaminant loading at site. The contractor shall use site data (DAMOS and data collected for the EIS effort) plus other studies on capping in the scientific literature to evaluate past efficacy of capping (for CLIS and NLDS) and the potential of successful capping for WLIS or any alternative confinement (non-dispersive) site evaluated in detail in the EIS. The sediment stability for each confinement site will be also assessed using LTFATE modeling. The contractor shall also hindcast the effects of tidal currents and level of storm required to resuspend and transport sediments from mound. Offsite samples/data and literature to assess whether sediment from the mounds have move offsite. The transport and the short-term/long-term fate of disposed sediments at Cornfield Shoals dispersive site (and any other proposed dispersive sites) shall be evaluated with USGS sediment transport model and other appropriate methods

The contractor shall perform STFATE modeling on a range of example project types to evaluate impacts range of contaminant release and extent and movement of a plume at each site and available dilution relative to the site boundary (depth and current speed being variable factors) and nearby sensitive resources.

In addition to review of existing data and field efforts, water quality effects and available dilution (release of contaminants) during disposal operations will be assessed using the ADDAMS-STFATE model following guidance in the Clean Water Act, and 33 CFR Part 335. Water quality data will be collected, reviewed and presented for such parameters as pathogens, fecal coliform and dissolved oxygen. A risk characterization of the existing and alternative disposal sites will be performed.

(B) PHYSICAL OCEANOGRAPHY/METEOROLOGY

Affected Environment

The Appendix will include a description of the stratification and water mass dynamics relative to the temperature/salinity regime, the large scale tidal currents and seasonal current patterns for non-tidal currents and waves. The contractor shall review the historical oceanographic (Yale Bingham Oceanographic Collection) and more current (NOAA/USGS/Stony Brook) data to characterize the general patterns. LISS model printouts will be used to exhibit patterns. A description is to be included on how the three basins in the Sound are similar and/or different. Flushing rates will be discussed for each basin. A discussion will be included on sediment transport issues relative to erosion/sedimentation processes using existing USGS models/maps, referencing the geological discussions above.

For the four existing disposal sites, data obtained through previous field investigations, and from appropriate DAMOS sponsored studies, will be summarized, with appropriate graphics provided. Side scan sonar data will be presented, as well as current-temperature data sets, and tidal analyses

For open water and nearshore alternative disposal sites, the contractor will conduct tidal analysis to determine if tidal current magnitudes can be calculated for the sites. Site monitoring of sediment transport potential from the alternative sites will be conducted.
The appendix will describe the major seasonal weather patterns that affect LIS as they relate to temperature, precipitation and storm activity.

Environmental Consequences

At each open water alternative, the contractor shall forecast and hindcast the effects of wind driven waves tidal currents on the water movement in the water column and at the bottom. This is in relation to the settlement of dredged material at the site and the stability of the mound under storm conditions. The impact of high frequency storms such as northeasters and low frequency high energy storms hurricanes shall be assess in term of their frequency and strength. In each case, the contractor shall identify the level of storm required to resuspend and transport a significant amount of sediments from mound from each site. These analyses will provide part of the bases for the assessment of water quality and mound stability described above.

(C) BIOLOGICAL RESOURCES OF THE OPEN WATER SITES

(1) BENTHIC ORGANISMS

Affected Environment

This appendix will discuss the general community types that have been described for LIS in terms of spatial distribution in the three basins and their seasonality. A comprehensive list is to be included of species found in those community types. A description is to be included on how the community types relate to sediment type, and reflect environmental conditions.

Environmental Consequences

The effects of disposal activities on marine organisms (at various trophic levels) will be evaluated based on the results of sediment and benthic community characteristics. Benthic communities (including lobsters) at the existing and alternative disposal sites will be described based on available literature and sampling efforts. Marine benthic sampling will be the basis for evaluating disposal impacts to the

marine environment. The results of toxicity testing and body burden analysis will be considered. The distribution of contaminants of concern in tissue of benthic invertebrates will be evaluated. The Corps and EPA will provide the contractor with the list of contaminants of concern.

Impacts to benthic organisms during disposal operations at the various types of disposal sites will be evaluated by considering suspended solids concentrations and effects around the disposal sites. Disposal operations will be considered in evaluating effects. Direct burial effects of disposal and recolonization time will be described based on modelling (direct burial) and the literature (recolonization time). The effect of destruction of benthic organisms due to disposal operations on benthic organism reproduction in Long Island Sound will be described. The potential extent and duration of loss of the benthic community will be compared among the potential aquatic disposal sites.

The contractor shall project site specific impacts to benthos. The contractor shall evaluate the impacts to organisms based on sediment chemistry, toxicity and bioaccumulation data taken at the active mound in comparison with the "no impact" data. This should be related to observed site-specific benthic community and REMOTS data. Observed contaminant levels to benthic organisms shall be assessed in comparison with tissue-residue effect levels from the literature (Corps ERED and EPA Duluth databases). Effects on species abundance and diversity will be assessed at the four existing sites. Impacts at new alternative sites would be projected from data at the existing sites in comparison with benthic data (chemistry, benthos, toxicity and bioaccumulation data) collected at the new site. The discussion should reference general discussions for general impacts probable recolonization scenarios.

(2) PLANKTON

Affected Environment

The EIS will describe the seasonal patterns and distribution of phytoplankton and zooplankton (holoplankton and meroplankton) in LIS. A discussion will be included regarding species dominance patterns and how they relate to environmental conditions (temperature, salinity, light and nutrients). Any incidences of nuisance or toxic blooms in LIS and their impact on resources and uses will be described.

Environmental Consequences

The contractor shall review the effects of suspended solids and released sediment contaminants on phytoplankton and zooplankton species in Long Island Sound. Assume that the suspended solid phase testing and state water quality criteria will be in compliance. Assess the potential for nuisance phytoplanktonalgae blooms as a result of dredged material disposal at each site.

(3) FISHERIES

Affected Environment

Information will be presented on the historical and current distribution of fisheries resources within Long Island Sound, including Fishers Island Sound, Gardiners Bay, Peconic Bay, Block Island Sound and open ocean waters immediately seaward of Block Island, Rhode Island and Montauk, New York.

A description of LIS's species of fish and shellfish in terms of general spatial and seasonal distribution will be included.

Key references of historical data and site specific field sampling studies will be summarized, stating the objectives of the studies, the time of year the studies were conducted, and relative abundances. This evaluation will include analyses for both juvenile, adult or sublegal fish. Fluctuations in abundances over time are to be described. Trawl assessment programs carried out for the areas noted above will be summarized, with trawl locations shown on figures. Statistical analyses of abundance of the primary species found will be discussed. A description will be provided of the most abundant species present. A comparative catch per unit effort (mean number per tow and mean weight per tow of finfish) will be graphically shown. Seasonal movements of the winter flounder population will be described in the text and illustrated. Spawning and nursery habitats will be characterized describing relative abundances of eggs and larvae. The relationship of sediment types and benthic communities to the habitat of the demersal fish species is to be described. The amount, quality, and types of species characterized as Essential Fisheries Habitat (EFH) are to be evaluated. An economic inventory and a cost benefit analysis will be conducted for fisheries and communities in and surrounding Long Island Sound.

As discussed in Task #4, the contractor will generate a seasonal distribution map for the most common species noting any known spawning, nursery and migration areas utilizing the CTDEP data, NYDEC data, and any other pertinent studies or data sets. The various abundance patterns (catch and biomass) over regions of LIS are to be discussed. The contractor will generate a comprehensive list of species and a life history table with pertinent information such as spawning habitat and time period, food habits, seasonal migratory activities and population status in LIS. The species that are covered under the Essential Fish Habitat shall be identified and included in the life history table.

Using existing literature from the database, the historic commercial and recreationally harvestable shellfish resources will be described. Annual landings will be illustrated in graphic format. The EIS will describe the distribution of contaminants of concern in tissue of commercially and recreationally available finfish and shellfish species, including lobsters, at and immediately around each active disposal site and for alternative open water disposal sites.

Environmental Consequences

The EIS will discuss direct, indirect, secondary and cumulative impacts on the fishery resources due to disposal operations at the existing disposal sties, and any alternative open water disposal sites. A description of how impacts can be minimized will be described. Key references describing potential effects of disposal operations on the early life history stages of the appropriate species will be summarized. Impacts to fish from temporary loss of the benthic communities will be described, along with impacts due to burial of eggs and larvae, water quality impacts (total suspended solids, TSS), and site specific impacts based on trawl data. Modelling results will be presented that were carried out for predicting TSS concentrations generated by disposal operations.

The contractor shall project fish and lobster impacts in terms of habitat use focusing on the type of species anticipated at each site. Relate changes in sediment grain size, chemistry and benthos to changes in predatory fish and lobster use of the site. Project effects on fish abundance, diversity and age selection at the site (citing results of BRAT analyses). Observed contaminant levels to fish and lobster shall be assessed in comparison with tissue-residue effects levels from the literature (Corps ERED and EPA Duluth databases). The contractor shall evaluate the effects of site use relative to the location of spawning, nursery, feeding and migratory pathways for all life stages. The contractor shall provide an effects determination for all species for which Essential Fish Habitat designation applies.

(4) MARINE WILDLIFE

Affected Environment

This appendix will describe the non-endangered marine birds, reptiles and mammals found or potentially found in the existing and alternative open water sites in LIS relative to their seasonality and spatial distribution. A comprehensive species list and life history table will be generated for inclusion in the document.

The contractor shall characterize and evaluate the habitat value of any open water disposal sites. Descriptions will include feeding range and preferred prey species.

Environmental Consequences

The contractor shall evaluate the impacts of site use to wildlife resources that use each site in terms of habitat use, focusing on the type of species anticipated at the site. Relate changes in fish and invertebrates that are prey to species that use the site. The contractor shall project effects on species abundance and diversity at the site and include . The contractor shall discuss potential "takings" or other impacts related to site use under the Marine Mammal Protection Act.

(5) ENDANGERED AND THREATENED SPECIES

Affected Environment

The contractor will provide a description of the presence of any federal or state threatened and endangered species, including their preferred habitat. A discussion will be included relative to their distribution, seasonality and current status, based on information provided by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. State endangered or rare species will also be listed based on information provided by the Connecticut and New York Natural Heritage Programs. Life history tables shall be developed and included for any identified species.

Environmental Consequences

For each site, the contractor shall assess the likelihood that federally listed endangered or threatened, or state listed species are present at any time. The National Marine Fisheries Service and the U.S. Fish and Wildlife Service will provide information on which species may be present and when. The State Natural Heritage Programs will provide information on state-listed species. For each site where listed species may be present, based on information from the appropriate federal and state agencies, the contractor shall evaluate the potential direct impacts from disposal activities (e.g. burial or avoidance) on listed species, as well as long and short-term impacts to their habitats and forage species. The contractor shall prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act for those sites, if any, determined by EPA to be otherwise appropriate for designation. The Biological Assessment does not have to be a separate document, but can be incorporated into the EIS framework.

(D) UPLAND/BENEFICIAL USE SITE RESOURCES

(1) LAND USE

Affected Environment

The contractor will provide a description of land uses surrounding any upland disposal site alternatives or beneficial use sites, including zoning designations. This will be supported by available land use

mapping which is to be obtained from regional, state or local planning agencies, with appropriate colored graphics illustrating the various land use types.

Environmental Consequences
The environmental and socio-economic impacts of upland disposal and/or the creation of beneficial use sites on surrounding land uses, zoning, riparian rights, and water access will be presented. Regional, state and local master plans, municipal plans, and zoning documents will be used as appropriate in considering land use effects. Available landfills and brownfields shall be reviewed as potential upland disposal alternatives. Loss of landfill space will be evaluated for any landfill disposal options. The secondary and indirect impacts of port development will be considered for any port development beneficial use options as well.

(2) WATER QUALITY

Affected Environment
Describe the local surface and ground water resources and the state classifications for each alternative site. In particular, determine whether these resources are important for existing or future public or private water supply or wildlife/fish habitats.

Environmental Consequences
The contractor shall describe the potential impacts of dredged material disposal on the surface and ground waters of each alternative site. In addition to potential long term leaching of chlorides and sediment contaminants, the contractor shall provide a description of the applicable methodologies for dewatering upland or beneficial use disposal sites will be provided. An evaluation of the characteristics of effluent from dewatering sites that would be discharged into nearby surface waters is to be provided (required by Section 404). A comparison will also be provided of those contaminants of concern for open water disposal to those that could be present in the dewatering site effluent.

(3) AQUATIC/WILDLIFE HABITAT RESOURCES

Affected Environment
This Appendix will describe narratively and graphically, using GIS mapping, the presence of important or unique upland or wetland habitats/resources that may be affected by the alternative disposal alternatives under consideration.

Vegetated shallows and mudflats, in particular, are considered Special Aquatic Sites under the Clean Water Act, Section 404(b)(1) guidelines. Potential disposal sites will be reviewed for the presence of wetlands, submerged aquatic vegetation (eelgrass beds) or mudflats based on GIS mapping, other resource maps and studies available from the states of CT and NY, private/local interests in CT and NY, and other available information. Existing habitats will be described for all wetland/habitat creation beneficial use disposal sites. Wetlands will be described primarily based on estimation of percent cover by dominant species and area.

The contractor shall characterize and evaluate the aquatic and wildlife habitat value of any alternative upland and shoreline disposal sites. The appendix will present a discussion of those species most likely to be present and affected by the potential dredged material disposal alternatives. Onsite mammals, invertebrates, fish, shellfish, amphibians, reptiles, and bird species will be considered. Particular

attention will be made to intertidal flats, salt marshes and open water areas which provide important feeding, resting and migratory habitats for shorebirds, gulls and terns, wading birds, waterfowl, diving birds and raptors. Descriptions will include feeding depth range and preferred foods for waterfowl. Any colony nesting waterbird sites will be described and illustrated. The methodology used to characterize the wildlife value will be summarized. The components of the sites that influence wildlife habitat value will be evaluated, including the quality of the vegetation and soils on the site, the spatial relationship between vegetation and physical characteristics of the site, and the position of the sites compared to other habitats.

Environmental Consequences

The contractor shall describe the effects of site use on the quality and quantity of habitat and the species that use the site. The effects of habitat displacement and water quality degradation shall be assessed. Any feasible mitigation measures shall be proposed to alleviate the severity of impacts of a particular site. The effects of disposal at alternative sites will be assessed by evaluating the changes to the existing habitats from placement of material, including re-configuration of the site, and re-establishment of aquatic and wildlife populations.

The potential beneficial uses are marsh creation or rehabilitation in nearshore areas, island habitat creation, beach nourishment, and other habitat creation, such as oyster beds, seagrass beds, and tidal flats shall be assessed. Factors to be used in evaluating creation of these habitats include: the value of the existing habitats compared to the habitats to be created; the amount of time required for created habitats to develop desired habitat characteristics; the present condition of the existing habitats vs. the future condition of the habitats to be created; the existing pattern of habitats in the area; and, the historic pattern of habitats in the vicinity.

(E) SOCIO-ECONOMIC RESOURCES

For the purpose of this task, the study area of Long Island Sound is defined as follows. The study area extends essentially from Montauk Point, NY west across northern Long Island to the East River, and then east through CT to the southern coast of RI west of Pt. Judith, including Block Island, RI. The study area includes all harbors on Long Island Sound proper in CT and NY. In NY, the study area includes the East River between Manhattan Borough (New York County) and Brooklyn Borough (Kings County), the East River and Long Island Sound shorelines of the Bronx and Queens Counties, and the Long Island Sound shoreline of Westchester, Nassau, and Suffolk Counties. In CT, the study area includes the entire coastline. In addition, the study area includes the Peconic Bay and Gardiners Bay shorelines in NY, the Fishers Island Sound shores of Connecticut and Rhode Island, and the Block Island Sound shores of New York and Block Island. The study area does not include NY Harbor itself, but does include the Corps of Engineers New York District projects for the eastern East River, Flushing Bay, Bronx River, etc. The Connecticut River below the Hartford navigation project is included, as is the Thames River to Norwich, Housatonic River to Derby, etc. All harbors and port or navigation dependent facilities in this area, whether Federal or not, are included in the study area.

A bibliography of sources used in the development of this task is included in Attachment #4.

SUBTASKS

Affected Environment

1. Identify Universe of Navigation Dependent Facilities

The contractor will identify all facilities that are dependent on navigational access and dredging for continued usage, including: deep-draft shipping terminals; marinas and yacht clubs; boat repair and construction facilities; commercial fishing facilities; and government facilities, including US Coast Guard, US Navy, municipal wharves, and port authorities. It is estimated that this will include at least 600 facilities related to recreational boating, and approximately 125 deep-draft terminals, located in approximately 25 cities and towns in Connecticut and in seven counties in New York. This survey will cover both harbors that have, and those that do not have Federal navigation projects.

The contractor will prepare a list of all facilities, by municipality and harbor. Facilities will be categorized by location and by Standard Industrial Classification (SIC) code. The list will contain mailing address, point of contact, phone number, description of facility.

2. Survey of Facilities

Conduct a 100% survey of the facilities identified in Task 1. The survey should determine the following:

Facility Use: Collect and tabulate facility use data, such as cargo types and annual volumes, draft needs of vessels, numbers and types of recreational craft, charter craft, fishing & shellfishing boats, catch volumes, etc., using each facility. Develop summary tables of this data by municipality and harbor.

Dredging and Disposal History and Needs: Collect information from facilities on past dredging and disposal activities (including description of activities, quantities of material removed, dredging methods and disposal sites used); expected future dredging quantities; frequency of future dredging; sensitivity of future dredging to disposal costs; and degree to which business is dependent on dredging.

This survey can be conducted primarily using mail questionnaires. However, for those facilities that are likely to represent a large portion of the material to be dredged in each harbor, such as deep-draft terminals or Port Authorities, large marinas, shipyards, public terminals and landings, and for facilities that are judged to be particularly important or sensitive to the analysis, telephone or in-person interviews should be conducted to ensure that the required data is collected. Submit results to EPA/Corps for review.

The data collected in Task 2 should be combined with known historic dredging volumes and projected future dredging at Corps of Engineers Federal Navigation Projects to estimate future dredging needs and disposal quantities for Long Island Sound, as described and included in the "Dredging Needs Assessment" section of this scope. The dredging projections should be made for logical sub-areas as well as the study area as a whole, to facilitate analysis of alternative disposal site locations.

3. Estimate Economic Significance of Navigation Dependent Industries

Collect economic data from Federal, state, and county sources to estimate the economic significance of navigation dependent industries to the regional economies. The analysis should analyze the different categories of navigation dependent activities separately, such as recreational boating, deep-draft navigation, and commercial fishing, and should show the importance of each category to the regional

economies. The analysis should be organized using the SIC codes into which the facilities were organized in Task 1. Economic data to be collected should include total sales, total employment, state and local fees and taxes paid, and any other relevant data identified. Judgement should be used to apportion the collected data to the port areas, since the port areas will be only portions of county or state data. Recommended data sources include County Business Patterns and the Census of Manufacturers, both from the US Census Bureau, the New York and Connecticut Departments of Labor and Employment, any other relevant state and local agencies, and any relevant trade organizations. Once primary economic data is collected, an analysis should be made of multiplier effects to determine the total economic impact of navigation dependent activities on the region. The total economic impact should be related to the no-dredging alternative. Multiplier analysis examines the economic impacts of business activities by linking changes in the economic activity of a primary industry with a measure of how the initial change affects other businesses in a particular geographic region. Multiplier effects should be determined using a generally accepted input-output model such as IMPLAN or RIMS II. The results of this economic analysis, with primary and multiplier effects shown separately, should be presented in logical sub-areas as well as for the study area as a whole in order to facilitate analysis of alternative disposal sites.

For the open water sites, a description will be included regarding commercial and recreation species caught, general areas and seasons of fishing activities, practices, catches (trends) and economic value to the region.

Beaches

The contractor shall provide a description of the public beaches throughout LIS, their location and importance to users and the local economy. A map will be generated of public beaches in CT and NY. A table will be generated reviewing major beaches and summarizing what is known about closures relative to local pollution inputs to the region.

Parks/Natural Areas

The contractor shall map and tabulate Federal, state and local parks near all shoreline of LIS. A brief description will be included regarding any sensitive resources that occur in the areas shown on the table.

Other Human Uses

Other human uses include swimming, recreational diving, cable/pipeline locations, military, and mining activities. The contractor shall include a general description of these other uses of LIS. Any important areas are to be shown on a map.

Environmental Consequences

4. Relate Economic Activity from Navigation Dependent Industries to Changes in Disposal Cost

Develop an economic model to relate the economic impacts to navigation dependent activities caused by changes in disposal costs. The model should relate dollars of economic activity to logical increments of disposal cost. Once final disposal alternatives are determined, an analysis of the economic impacts of each alternative should be conducted using this model. The analysis should project the likely change in economic activity that could reasonably be expected with each alternative, based on the cost of disposal for each alternative. The no action alternative should be analyzed thoroughly. Impacts that should be discussed for the no action alternative should include impacts to commercial fishing activity, impacts to deep-draft navigation, and impacts to recreational boating activity. The discussion of impacts to deep-draft navigation should include impacts to vessel size distribution, potential for collisions between

vessels, and potential for oil spills, and potential for shifts to other modes of transport. The discussion of impacts to recreational boating and commercial fishing with the no action alternative should include social, cultural, and quality of life effects on the affected populations.

5. Socioeconomic Impacts of Future Use of Alternative Disposal Sites

The contractor will analyze and discuss the likely social and economic impacts of future use of the alternative disposal sites being examined. Impacts to be addressed could include changes in shoreline property values near sites, impacts to commercial fishing revenues, impacts to recreational boating, impacts to recreational beaches, and any other likely social or economic impacts.

The contractor shall evaluate and discuss potential conflicts of disposal activities on commercial and recreational fishing, aquaculture, and use of fishing gear, in terms of proximity to the site. A discussion will be included regarding seasonal aspects and how seasonal restrictions may minimize such conflicts. The contractor shall perform a human health risk analysis for consumption of fish and lobster at each site using the fish, shellfish and lobster tissue data collected during the field efforts.

Impacts for an upland disposal alternative should include impacts to property values, traffic impacts, and noise impacts. In addition, any quantifiable natural resource impacts, such as fisheries impacts, should be described and evaluated in monetary terms, to the extent possible. The analysis of alternatives should take into account any disproportionate impacts on environmental justice populations, as required by Executive Order 12898, and protecting children from environmental health risks and safety risks, as required by Executive Order 13045.

6. Air Quality/Noise/Transportation and Traffic

Air quality impacts associated with disposal at the alternative sites will be assessed in general terms to assess the gross level of impacts. The existing air quality conditions in the Long Island Sound region will be described. The assessment will address general emissions associated with dredge equipment and trucks. A table will be included that shows emissions associated with dredging equipment and trucks. As this EIS is a planning document, the proposed action is exempt from the Clean Air Act General Conformity Rule.

Background noise levels at the alternative disposal sites will be generally described. The contractor will include a general description of those state and/or local noise standards applicable to dredging and disposal operations. The EIS will include language stating that future dredging and disposal projects will be evaluated on an individual basis regarding noise impacts.

For any upland site disposal alternatives, effects on transportation and traffic are to be assessed. The contractor will determine the additional projected truck trips that could be required from dewatering sites to upland disposal sites. Potential upland disposal sites and dewatering sites will be illustrated, as well as the major roadways that could be used to transport the material.

7. Prepare Socio-economic Appendix for EIS

The contractor will prepare a "Socio-economic Resources" Appendix to the EIS that will include the information and results of Tasks 1 through 5, including detailed narrative, full tables and complete graphics. The Assessment will describe the affected environment, resources affected (include income, employment, recreational fleet, commercial fleet, deep draft fleet, property values, and others), and will identify and describe impacts of disposal alternatives on these resources. Summaries of the Socio-

economic Assessment, including representative tables and graphics will be included in the EIS main report in the purpose and need section and in an economic impacts section, and other sections as appropriate.

(F) HISTORIC AND ARCHAEOLOGICAL RESOURCES

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), and implementing regulation 36 CFR 800 (newly revised as of June 17, 1999), requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1(a)).

Affected Environment

Alternative disposal sites are to be assessed for the potential existence of historic and/or archaeological resources and possible impacts to these resources. Coordination and consultation will be carried out with the Connecticut and New York State Historic Preservation Officers (SHPO's), Tribal Historic Preservation Officer(s) (THPO's), and other appropriate consulting parties. Background research, and an assessment of known, recorded, and potential historic properties within the study sites would be carried out to identify historic properties. The analysis will include the potential existence for submerged cultural resources in open water and nearshore sites. Archaeological and shipwreck site files and Native sacred sites or areas would be reviewed at the appropriate SHPO/THPO offices, as well as historic documentation and mapping at State and local libraries and other repositories. The results of the assessment, in coordination with the consulting parties, would indicate whether historic, architectural, and archaeological investigations and/or documentation would be required to further identify all historic properties within the study sites. Remote sensing archaeological surveys, intensive archaeological surveys, architectural surveys may be required, in addition to Historic American Engineering Record and Historic American Building Survey Documentation.

Environmental Consequences

Should historic properties be identified, the Corps, in conjunction with all consulting parties, would apply the Section 106 criteria of adverse effects to these properties. If adverse effects are identified, consultation would continue in an effort to resolve the identified adverse effects. Mitigation of any unavoidable impacts will be proposed and coordinated with the respective SHPO's. If impacts to any significant resources cannot be avoided, additional investigations, including the possibility for full data recovery excavations, may be needed. Consultation to resolve adverse effects could result in the preparation of Memorandum of Agreement (MOA). An MOA outlines agreed upon measures that the agency would take to avoid, minimize, or mitigate the adverse effect. In some cases, the consulting parties may agree that no such measures are possible, but that the adverse effects must be accepted in the public interest.

(G) ALTERNATIVES ANALYSES

(1) Site screening process

Describe the site screening process in detail for the open water, upland and beneficial use site categories as discussed at the October 1999 workshops and follow-up task orders. The guidance outlined in Task #3 shall be followed. The description shall include the universe of sites considered, screening criteria and the process for site selection of sites evaluated in detail in the EIS. The reason for eliminating any alternative shall be described in detail and summarized in an alterntives matrix outlining the site selection criteria.

(2) Treatment Technologies Alternatives

The contractor shall review the range of treatment technologies available in the New York/Connecticut area. In addition, the contractor shall review of the successes, failures of application of such technologies making an assessment of their usefulness in the short or long term. Alternative technology selection criteria (taking into consideration costs, engineering feasibilty, existing infrastructure and environmental/socioeconmic effects) will be developed and applied to screen appropriate technologies in the Long Island Sound region. A matrix will be used to display the results of the screening. A proposed shorter list of technologies will be assessed in detail.

(H) SITE MONITORING/MANAGEMENT PLANS (SMMP)

For each designated open water site, the contractor shall follow the EPA guidance for developing SMMPs (to be provided by EPA) and Task # 7.

(I) PUBLIC PARTICIPATION

This appendix shall include all the Public Participation Plan, public scoping and public involvement efforts providing a summary of the process, mailings, meetings and workshops. Any distributed fact sheets, public notices and meeting reports (e.g., scoping and October workshop reports) shall be included. Issues and comments provided at these events shall be summarized in a matrix with reference to the appropriate sections where they are addressed in the EIS. More guidance is provided in Task #1.

ATTACHMENT #3

QUESTIONS TO EVALUATE OPEN WATER DISPOSAL SITES

SITE LOCATION/RESOURCE ISSUES

(1) Is the disposal site located to avoid or minimize significant adverse effects/conflicts with commercial and recreational fishing activities?

(2) Is the disposal site located to avoid or minimize significant adverse effects on:

- Finfish and shellfish (including lobster) habitats that are important for spawning, nursery, feeding and migration purposes (including, but not limited to, Essential Fish Habitat)
- Unique, hard-bottom or complex benthic habitats
- Federal/state listed endangered or rare species and their habitats and prey
- Marine wildlife species (birds, sea turtles, marine mammals) and their habitats and prey
- Designated nature reserves, sanctuaries, or fish havens (artificial reefs)
- Shoreline habitats (including mudflats, vegetated wetlands and sub-aquatic vegetation)
- Historical/archaeological resources
- Aquaculture sites (including managed oyster beds)
- Beaches, parks, popular diving and other human use areas
- Navigation (commercial and recreational), shipping and other marine transportation activities
- Designated submarine cable or pipeline areas, and aids to navigation
- Designated military practice areas, anchorages, research, or other restricted areas
- Areas of potential extractable resources (e.g.sand mining for beach nourishment)?

(3) Will the site location cause significant adverse economic impacts (extraordinarily high transport/handling costs) to private (small business) facilities that need dredging?

CONTAMINANT ISSUES

(4) Does the proposed disposal site provide adequate dilution (water depth, currents) to maintain water quality within and around the site?

(5) Given the quality and quantity of projected projects in the future, what is the projected accumulation of sediment contaminants at a site and potential for bioaccumulation of toxic contaminants in the marine ecosystem or humans?

ATTACHMENT #4

Economics Bibliography

USACOE, A Dredged Material Management Study for Coastal Maine and New Hampshire, Normandeau Associates, July 1994.

USACOE, various Long Island Sound Disposal Studies, 1981-1985.

USACOE, Providence River Maintenance Dredging. Draft Environmental Impact Statement, 1998.

USACOE, Water Resources Support Center, Waterborne Commerce of the United States. Part 1. Waterways & Harbors. Atlantic Coast, 1997 or most current year.

USACOE, Port Series #4, Ports of Southern New England, 1994.

Boating Almanac. Vol. 2. Long Island. CT. RI. Peter A. Geis, publisher, Boating Almanac Co., Severna Park, Maryland, most current year.

US ENVIRONMENTAL PROTECTION AGENCY
REGION I
1 CONGRESS STREET, BOSTON, MA 02114-2023

MEMORANDUM

DATE: February 11, 2000

SUBJ: LIS EIS Work Plan

FROM: Ann Rodney

TO: Interested Parties

The Work Plan for the Long Island Sound Environmental Impact Statement (EIS) in now available. The EIS is being developed and produced by the U.S. Army Corps of Engineers, New England District and the U.S. Environmental Protection Agency, New England Region on the possible designation of ocean disposal sites for dredged material.

The Work Plan is available at the Long Island Sound Website.
(http://www.epa.gov/region01/eco/lisdreg/)
and can be downloaded from there or you may contact me at the address below for a paper copy.

The Work Plan is the framework for the EIS. This document will continue to evolve as specific issues and topics need to be clarified and refined, and as the EIS is being developed. We are soliciting comments on this over all Work Plan, comments may be sent to me at the address below.

In addition, EPA and the Corps will be holding public workshops possibly in mid-April. These workshops focus on the Work Plan, the process of giving input into the EIS, the Field Work, the Weights and Values of the evaluation factors (October workshops factsheets) and the Screening Process for the Weights & Values. A notice with more detail should be forthcoming within the next month.

Please feel free to contact me should you have any questions.

Ann Rodney
US EPA - New England Region
1 Congress Street
Suite 1100, CWQ
Boston, MA 02114-2023
(617) 918-1538
(617) 918-1505 Fax
rodney.ann@epa.gov

Ann Rodney

04/05/00 11:23 AM

To: sdeguise@canr.uconn.edu, cperkins@eri.uconn.edu, french@uconnvm.uconn.edu

cc: salata.joseph@snet.net

Subject: Re: LISS dredged material EIS process Workshop

Hello,

I am Ann Rodney with the US EPA New England Region. I am forwarding a e-mail (see below) to give you some background as to why I am writing you. I have been asked to invite you to the US EPA & Corps workshops in regard to the Long Island Sound Dredged Material Disposal Environmental Impact Statement Workshops. The following is a synopsis of the notice sent in early March.

"The U. S. Environmental Protection Agency, Regions I and II (EPA), and the U.S. Army Corps of Engineers, New England District (Corps) will be holding two workshops on the designation for dredged material disposal site(s) in Long Island Sound, one in New York and one in Connecticut. These are the second in a series of workshops to be held regarding the designation process. The EPA and the Corps invite the public to participate in these workshops to be held at the following locations:

New York:
Place: Danfords Inn, Port Jefferson, NY
Date: Tuesday April 11, 2000
Time: 6:00pm - 10:00pm

Connecticut:
Place: Groton Inn & Suites, Groton, CT
Date: Wednesday April 12, 2000
Time: 6:00pm - 10:00pm

The purpose of these workshops is to present and discuss specific building blocks for the Environmental Impact Statement with have been developed since the October 1999 workshops. The topics to be discussed are:
1.) The EIS Work Plan and the process for public input throughout the development of the EIS:
2.) The Field Work accomplished to date, as well as future field work activities:
3.) The Weights and Values for the evaluation factors (from the October 1999 workshop factsheets) and the Alternatives Screening Process using the Weights & Values.

These workshops are designed for small group discussions on each topic mentioned above, and we ask for your participation. A pre-workshop packet of information is available on the topics to be discussed. No preregistration is required for the workshop.

Because of the wide range of issues and the intricacy of the different topic areas, we will be forming volunteer working groups. These groups will be made up of people who have a particular interest in specific issues (examples: upland disposal; open water disposal; beneficial reuse; treatment technologies, etc.) These working groups will be asked to give of their time by attending meetings, participate on conference calls and review information within a very short timeframe. The formation of these groups will be explained in more detail at the workshops.

Please contact Ann Rodney at the address below should you wish to receive a pre-workshop packet."

I believe this information is on our website (www.epa.gov/region01/eco/lisdreg) & has directions. Please feel free to contact me should you have any questions. Thanks - ANN

Ann Rodney
US EPA - New England Region

1 Congress Street
Suite 1100, CWQ
Boston, MA 02114-2023
(617) 918-1538
(617) 918-1505 fax
rodney.ann@epa.gov

---- Forwarded by Ann Rodney/R1/USEPA/US on 04/05/00 10:55 AM ----

salata.joseph@snet.net

04/05/00 09:35 AM

To: french@uconnvm.uconn.edu

cc: Ann Rodney/R1/USEPA/US@EPA,

Subject: Re: LISS dredged material EIS process Workshop

Dr. French, sorry I misread your email; the LISS Dredged Material Workshops are April 11/12; I will, by cc of this reply, ask Ann Rodney of EPA Region I to invite Drs. DeGuise and Perkins to the dredged material workshops. I apologize for my error.

Joe Salata

french@uconnvm.uconn.edu wrote:

> Joe Salata:
>
> I received an invitation to the workshops (April 11 and April 12).
> Unfortunately, I will not be able to attend.
>
> As I'm sure you are aware our work on aquatic species (lobster,
> shellfish...) in LIS often involves assessment and discussion of
> contaminant issues. Presently, lobstermen are supporting efforts of
> Fish Unlimited to investigate dredging dump sites and the role in
> the recent lobster mortality event.
>
> I would like to recommend that you extend an invitaion to Dr.
> Sylvain De Guise (sdeguise@canr.uconn.edu) and Chris Perkins
> (cperkins@eri.uconn.edu). They have played a significant role in
> the toxicology work-up and proposed studies with regards to the
> lobster issue and other situations in LIS.
>
> Respectfully,
> Richard A. French, DVM, MS, PhD
> University of Connecticut
> Department of Pathobiology, U-89
> 61 N. Eagleville Road
> Storrs, CT 06269-3089
> 860-486-5370
> 860-486-2794 (fax)
> french@uconnvm.uconn.edu

Ann Rodney 04/27/00 10:43 AM
To: Cleanhbr@aol.com
cc: David Tomey/R1/USEPA/US@EPA, Jean Brochi/R1/USEPA/US@EPA, Douglas Pabst/R2/USEPA/US@EPA, Roger Janson/R1/USEPA/US@EPA, susan.e.holtham@usace.army.mil
Subject: Re: EIS LI SOUND(Document link: Ann Rodney)

Dear Dan,

I have routed your e-mail on the suggestion of a creation of a writers work group. The technique of public review and comment on draft documents is one that has worked well during the LI Sound Study and in the development of the CCMP and Action Plans. However the process and responsibility of and EIS is very different than CCMPs and Action Plans, and EIS is not a consensus process.

EPA and the Corps have the ultimate responsibility of decisions outlined in EIS. It is the government's responsibility to prepare the EIS and make it available for public comment, during the formal Public comment period. In an EIS process, the Government holds a Public Scoping meeting, develops the Draft EIS, a formal Public comment period commences. In this "by-the-books" EIS process the public has one opportunity to comment - during the formal Public comment period on the Draft EIS.

In this particular EIS process the EPA and the Corps have chosen to include the public along the way, not just during the formal Public comment period on a Draft EIS. We have produced several factsheets and held several workshops, the communication lines are open, and we have pro-actively solicited suggestions & comments from the public. As individual appendices of the EIS are developed (i.e. Needs, Alternatives, Screening Process, Economics, etc.,) the results will be provided in draft form to the appropriate working groups, and to the public through various mediums (factsheets, workshops, meetings, etc.)

This EIS will be drafted by the EPA, Corps and their consultants, reviewed and revised internally. This is the deliberative process within the government and will be used for the writing of the EIS. The public will have the opportunity to review and comment on the Draft EIS once it has been published.

Thanks - ANN

Cleanhbr@aol.com 04/25/00 06:18 AM
To: Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: EIS LI SOUND

ANN

In addition to the 4 work groups that have been suggested by EPA as well as the 5th suggested and the work shops being an economic impact group. Many of us would like to suggest the creation of a writers work group that would be composed of the agencies consultants and members of the public to review and comment on drafts of the EIS as it is being created. This would provide an objective reality check in terms of a) ease of reading and understanding by the public (one of EPA's stated goals), b) a sense of consistency from those not involved its creation and c) a reasonable sounding board to thrash out various approaches.

This is a technique that has been successfully employed in other situations including the LI Sound Study and Plan of Action resulting the EPA LIS Sound office and CAC.

Would appreciate your passing this idea along and your feed back

dan

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

May 30, 2000

Engineering/Planning Division
Evaluation Branch

Mr. Charles H. Evans
Director of Long Island Sound Programs
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

Dear Mr. Evans:

The Environmental Protection Agency and the Corps of Engineers are currently in the process of developing and collecting information in support of the Long Island Sound Dredged Material Disposal Environmental Impact Statement (EIS). As you are aware, successful completion of the comprehensive effort will require close cooperation between Federal and State agencies and numerous other interests. We are now at the stage in the development of the EIS where we must define specific dredged material disposal alternatives/sites and then begin the alternative site screening process.

The purpose of this letter is to request your assistance in identifying alternative upland disposal sites for use in the EIS site screening process. We also request your assistance in identifying potential upland and along-shore beneficial use opportunities. We would appreciate any information which your department may have regarding the presence of landfills, potential habitat creation areas, potential restoration/remediation sites, brownfield areas, or other areas which may have needs that could be met by placement of dredged materials, now or in the future.

The site screening process is scheduled to begin this summer. We would appreciate any information you may have no later than the end of June so that it can be effectively incorporated into the site screening analysis. We appreciate your assistance in this endeavor, and the continued assistance of your department and staff during the study and preparation of this document.

Any questions should be directed to Ms. Susan Holtham at (978) 318-8536 or Mr. Mark Habel at (978) 318-8871.

Sincerely,

signed

Kenneth E. Hitch, P.E.
Chief, Engineering/Planning Division

Same Letter Sent To:

Mr. Charles H. Evans
Director of Long Island Sound Programs
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

Mr. John P. Cahill, Commissioner
New York Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-1011

Mr. Alexander F. Treadwell
New York Secretary of State
41 State Street
Albany, New York 12231-0001

Copies Furnished:

Mr. David Tomey
U.S. Environmental Protection Agency
New England Region
Office of Ecosystem Protection
1 Congress Street, Suite 1100 (CQW)
Boston, Massachusetts 02114-2023

Mr. Ray Cowen
Regional Director
New York Dept. of Environmental Conservation
State University of New York – Bldg. 40
Stony Brook, New York 11790

Ms. Karen Chytalo
New York Department of Environmental Conservation
Division of Fish, Wildlife, and Marine Resources
205 North Belle Meade Road, Suite 1
East Setauket, New York 11733

Mr. George Wisker
Long Island Sound Program Office
CT Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

Mr. Steve Resler
New York Department of State
Division of Coastal Resources
41 State Street
Albany, New York 12231-0001

Ann Rodney 07/20/00 10:50 AM
To: McMYacht@aol.com
cc: David Tomey/R1/USEPA/US@EPA, susan.e.holtham@usace.army.mil
Subject: Re: Meeting(Document link: Ann Rodney)

Dear Howard,

I will take that as a compliment, thank you. I have forwarded your e-mail on to Dave Tomey (EPA lead) & Sue Holtham (Corps lead). I will not have the chance to talk with Dave or Sue about this until August 9th & will respond you at that time. Thank you for this offer!! Thanks - Ann

McMYacht@aol.com 07/20/00 10:12 AM
To: Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: Meeting

Thank you for keeping the meeting on track and focused.

I have some old charts from 1970 showing many discontinued disposal sites. I also assume that Dave? has these locations and may elect to do tests at some. If they could be used let me know. Bill Malloy gave them to me a few months ago when I was discussing the idea of multiple sites near harbors that require maintenance dredging each decade or so.

The advantages are that it does away with the problem of "Not in my backyard with your polluted material" plus it will keep disposal economically feasible for small businesses and homeowners.

Please forward this to Dave who I believe is the person in charge of this project?

Howard

Ann Rodney 08/21/00 02:23 PM
To: ctpilot@erols.com, bei@debiz.com, bay@friendsofthebay.org, bei@debiz.com, bgash36@msn.com, bjm@byy.com, bradk@marinenv.com, brbryan@fishersisland.net, ckral@javanet.com, cleanhbr@aol.com, cmta@snet.net, dwnorth@aol, essexisland@aol.com, george.proios@co.suffolk.ny.us, gulbran@battelle.org, hanluksam@aol.com, jack@byy.com, johnny.mac@att.net, jsjohnson20@hotmail.com, mcmyacht@aol.com, mpurnell@snet.net, mreiser@marinenv.com, rfromer@snet.net, rickcomeau@netscape.net, rwj@bnl.gov, sailerct@connix.com, savethesound@snet.net, saybrook@snet.net, spicersmarina@aol.com, tdubno@gateway.com, thamesdd@99main.com
cc: susan.e.holtham@usace.army.mil, Tomey.David@epamail.epa.gov, Pabst.Douglas@epamail.epa.gov, epowers@ensr.com, knchytal@gw.dec.state.ny.us, george.wisker@po.state.ct.us, Tedesco.Mark@epamail.epa.gov

Subject: July 19th - follow-up

Hello,

I just want to touch base with you all and keep you posted on anything new. At this time there is nothing new.

I expect to send you the meeting notes from the July 19th Working Group by early September, these will be for your review.

You could say we've all "gone fishing" - - continuation of the benthic tissue sampling will occur the end of August and lobster collection should be completed by September.

Any information you send me I will forward to the LIS EIS EPA & Corps team (letters, faxes, e-mails - whatever)

Again, please feel free to contact me any time. Enjoy the twilight of summer! Thanks - Ann

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(617) 918-1505 fax
rodney.ann@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

September 6, 2000

Barry R. Bryan
Fishers Island Conservancy
Fishers Island, NY 06390-0197

Dear Mr. Bryan:

Thank you for your comments about shell disease in lobsters relative to the New London Disposal Site (NLDS). We are also concerned about diseases in lobster as evidenced by the die-off in the western Long Island Sound (LIS) and the incidence of bacterial shell disease in Narragansett Bay, Buzzards Bay and eastern LIS. We plan to address the question of potential impacts to lobsters from dredged material disposal in the LIS environmental impact statement (EIS).

The general approach in the EIS for assessing the impact of dredged material disposal on lobsters is based on the long term resource data provided by the states, past studies on lobsters and other applicable scientific literature, supplemented with the disposal site sampling performed for this study. The disposal site sampling for resource data and tissue chemistry analysis will aid in our impact assessment. We also have collected data on the incidence of shell disease during all our lobster collections and will be comparing these data with similar data being collected by the states in adjacent and nearby waters (LIS, Narragansett and Buzzards Bays, Rhode Island Sound). We believe this assessment approach is scientifically sound and consistent with the guidance described in 40 CFR 228.13 of the Ocean Dumping Act Regulations as well with National Environmental Policy Act review requirements.

Relative to the lobster disease issue, we have no plans to perform a special "research" project for the EIS to study lobster disease at a particular disposal mound at any of the disposal sites addressed in the EIS. We believe from both regulatory and technical standpoints, that research projects on lobster disease are more appropriate outside the dredged material disposal site evaluation EIS. The National Environmental Policy Act does not require special research activities to address causality of a pandemic disease that occurs well beyond the geographic scope of this EIS. We will perform the appropriate environmental studies to characterize impacts consistent with our regulatory responsibilities outlined in NEPA and the Ocean Dumping Regulations. Further, and more importantly, we believe, that because of the pandemic nature of disease in both the eastern and western regions of LIS and (in the case of shell disease) in other water bodies outside LIS, the issue demands a more comprehensive assessment approach to be scientifically meaningful. This is consistent with the conclusions of the April workshop on lobster disease in LIS.

Recognizing the importance and the immediacy of this issue, we fully support efforts outside the EIS to address the issue in the most scientific way. For example, the State of Connecticut, National Marine Fisheries Service (NMFS) and EPA have begun or are planning a variety of research projects related to lobsters in LIS. EPA is funding two research projects specifically related to lobster disease in LIS. The EPA Region II RARE project will look at lobster disease relative to a variety of environmental parameters in the western LIS. The other EPA study, funded through the LIS national estuary program, will focus in particular on the *Paramoeba* infection. In addition, there are currently a number of other research activities anticipated to occur in LIS over the next several years. The State of Connecticut is focused on the status of the fishery while three NMFS studies involve both field and laboratory research on the possible causes of disease. In addition, the Connecticut Sea Grant and the CT DEP soon will be issuing a request for proposals to fund research projects related to diseases in lobsters in both the eastern and western LIS. I can assure you that we plan to incorporate as much of these studies as is possible and relevant into the dredged material disposal site EIS. Moreover, if studies completed after the EIS were to warrant additional restrictions on the use of any site that might be designated or selected for future dredged material disposal, such restrictions will be imposed.

We hope this information will address your concerns. Should you have any questions you may contact David Tomey, of my staff, at (617) 918-1627.

Sincerely,

Roger A. Janson
Manager, Water Quality Unit

cc:

Mark Tedesco
Mark Habel/Sue Holtham

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We hope this information will address your concerns. Should you have any questions you may contact David Tomey, of my staff, at (617) 918-1627.

Sincerely,

Roger A. Janson
Manager, Water Quality Unit

cc:

Mark Tedesco
Mark Habel/Sue Holtham

Ann Rodney 03/21/01 04:36 PM
To: bay@friendsofthebay.org, bei@debiz.com, bjm@byy.com, bkelly6313@aol.com, bradk@marinenv.com, brbryan@fishersisland.net, ckral@javanet.com, cleanhbr@aol.com, cmta@snet.net, ctmaritime@msn.com, ctpilot@erols.com, dwnorth@aol.com, essexisland@aol.com, george.proios@co.suffolk.ny.us, gulbran@battelle.org, hanluksam@aol.com, jack@byy.com, johnny.mac@att.net, jsjohnson20@hotmail.com, mcmyacht@aol.com, mpurnell@snet.net, mreiser@marinenv.com, mtristin@logistec.com, rfromer@snet.net, rmcomeau@netscape.net, sailerct@connix.com, savethesound@snet.net, saybrook@snet.net, spicersmarina@aol.com, tdubno@gatewayt.com, thamesdd@99main.com, wshadel@zoo.uvm.edu
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Subject: LIS EIS - WG - facilities files

Hello,
I have yet to confirm the April meeting (another e-mail). As I said in my last e-mail I will be sending you information to review for the April Working Group meeting. The attached files are the List of Facilities & Survey (#3 "Facilities" from my last e-mail).

I am not sure what format you all can view, read, print - this being the case - - - I am sending you 2 files of the same substance, but different formats. The file(s) are the names of navigation dependent Facilities(LIS Facilities ListMar.xls & Rpt_ListFacilities_Compact.rtf) and file(s) of the list of Contacts who will be surveyed for information (LIS contacts Mar xis & Rpt_Contacts.rtf).

The list of Facilities and the list of Contacts are in Draft form, we ask you to please review and should you have any additions, deletions, corrections, suggestions. Please either send them comments to me or bring them to the meeting with you.

Also attached is the Survey questionnaire (FINAL questionnaire.doc). As it has been previously stated OMB has limited our ability to modify this questionnaire. The Survey is FYI only, and is in final form.

I have yet to send you: confirmation of meeting, date, place, time (will be soon), GIS Meta data file, & upland factsheet. I am not sure if a summary report on the field work and a summary on fishing activities will be sent to you in time for the meeting, however there will be a presentation on both topics.

Please contact me should you have any questions, suggestions, or comments. Thanks - Ann

(See attached file: LIS Facilities List Mar.xls)
(See attached file: LIS contacts Mar.xls)
(See attached file: Rpt_ListFacilities_Compact.rtf)
(See attached file: Rpt_ListContacts.rtf)
(See attached file: FINAL Questionnaire.doc)

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Ann Rodney 03/22/01 06:58 PM
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Subject: LIS EIS - WG - Fishing, GIS, Upland

Hello,
I still need to confirm the April meeting (another e-mail - hopefully on Monday 3/26). This e-mail contains the following items for you to review for completeness:

Fishing Activities Report - This is the draft report on fishing activities (Fishing.pdf). The report is about 46 pages long, with graphics and you will need Adobe to read it.

GIS Meta data file - This GIS data (GISDataInventory_draft_SW2.xls)

Upland information - This is an interim report. There are 5 files:
(Uplandcover.doc) - Is just the cover of the document.
(Uplandinterim.doc) - Is the table of contents, narrative, and references
(UplandReuse.xls) - Appendix A
(Alongshore.xls) - Appendix B
(mshRestor.xls) - Appendix C

Hopefully, you will be able to read these files, if not please contact me and we'll figure something out. I am not in the office tomorrow, so I will get back to you on Monday.

As stated earlier, confirmation of the meeting with directions will be sent to you, hopefully Monday (3/26).

Again, please feel free to contact my anytime. Thanks - Ann

(See attached file: Fishing.pdf)
To read this file you may need adobe - http://www.adobe.com/products/acrobat/readstep2.html

(See attached file: GISDataInventory_draft_WS2.xls)
(See attached file: uplandcover.doc)
(See attached file: uplandinterim.doc)
(See attached file: UplReuse.xls)
(See attached file: Alongshore.xls)
(See attached file: MshRestor.xls)

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Ann Rodney 04/13/01 10:06 AM
To: Edward.Fuchs@Williams.com
cc: ring.rich@usace.army.mil, susan.e.holtham@usace.army.mil
Subject: Questions

Dear Ed,

I believe you had two questions at the meeting on the 11th. that I forwarded on to the team and got some answers. Below are the questions I asked (hope I got them right) and the answers.

1. The "secondary" impact on the economic study - "To what level will the economic modeling go?". Example, business inland that depends on harbors shipping - will this be taken into account.

Answer: The economic modeling will include the "multiplier" effects of dredging dependent industries throughout the regional economy - wherever those effects may lead. So it will take inland and other industries, dependent on the the activities of the maritime industries, into account.

2. "Will permit restrictions be considered in the economic modeling?"

Answer: In the user questionnaire there is a question in which the users are asked if they plan to dredge in the next 20 years. The user is told "please do not allow potential institutional constraints such as the type of material to be dredged, disposal options, or state and federal permit requirements, to determine the answer to this question." Simply, permit restrictions won't be considered. If they were, the analysis would become so complicated that it probably couldn't even be done.

I have also forwarded your membership list onto the "survey team". Thank you for allowing this.

I hope these answer your questions. If not may i suggest you give the Corps a call, specifically Rich Ring at (978) 318-8643. He may be able to assist you further.

Please feel free to contact me should you have any suggestions or questions. Thanks - Ann

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Cleanhbr@aol.com 04/26/01 06:13 PM
To: Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: WORKING GROUP

Ann

As per our conversation really appreciate the effort that you are going to -- its not easy and appreciate your dedication!

Per our conversation I have gone back through the emails and cannot find any that had the questionnaire -- granted that many attachments are not downloadable -- particularly large files -- but i just do not have any record.

It is unfortunate that the questionnaire has been finalized - its just a missed opportunity to get more meaningful information. It is also unfortunate that the prepares really did not listen to most of the comments made at the earlier meeting of the working group. We realize that the working group is just advisory, but many times there are some meaningful points.

I also must admit that I am astounded on the incorrect and lack of proper information on the NY side regarding harbors and harbormasters as well as proper contacts. I am not sure what is being used for their data base but it is simply inadequate if not wrong. For instance Larchmont harbor is missing for harbor masters and the dockmaster at Larchmont Yacht Club is the Harbor Master. The harbor master for the village of Mamaroneck does not appear and people form the coastal zone do appear that are not familiar with the harbor issues as much as the harbor master. I started to mark up sheets and gave them to ensur and the ace when i was at the meeting - I certainly hope that the consultant can get their act together. Granted that CT is easy to get - from one office in Hartford, but the efforts seems to be non cost beneficial from the NY side as far as i can see - historical dredging projects is the same - from my head i changed a few papers someone should go though the permit libraries.

dan

Ann Rodney 04/30/01 01:06 PM

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Subject: LIS EIS - Cover letter review by 5/3

Hello,

Thank you for attending the Thursday Working Group meeting, and for those of you who could not attend (thank you for telling me), meeting notes and various follow-up items will be coming out shortly.

It was requested that the draft cover letter be reviewed and edited by the Working Group. In this e-mail is the draft cover letter - I have sent it in two formats - attached file and written out (please see below)

Please review, edit, rewrite and get back to me by Thursday May 3rd by 5pm If we do not hear from you we will assume you have no comments. Thanks - Ann (rodeny.ann@epa.gov 617-918-1538)

DRAFT COVER LETTER:

Dear Marine Facility Owner/Operator,:

The purpose of this letter is to request your assistance in developing information necessary to estimate the needs for dredging within your area. In addition, we will be evaluating dredged material disposal options and their related economic impacts. This information will be used by the Army Corps of Engineers and the U. S. Environmental Protection Agency (EPA) in preparing an Environmental Impact Statement (EIS) for addressing dredged material disposal for Long Island Sound. Enclosed is a fact sheet that describes the EIS and its purpose.

An important part of the EIS is the determination of the economic impact of alternative dredged material disposal sites. The Corps of Engineers has contracted with ENSR International, a private consulting firm, to perform a detailed survey of all federal, state, and private dredging areas in the Long Island study area. There are two purposes of this survey. The first is to identify all potential areas to be dredged and determine the total volume of dredged material for which disposal sites are needed over the next 20 years. The second purpose is to gather information to determine the economic impact on facilities of alternative disposal options including the "no designated disposal site" option.

Your participation in this survey is voluntary. Your responses will be confidential. Only summaries of the results will be published.

We are relying on local knowledge to identify those private facilities which will require dredging. We appreciate your assistance in identifying these facilities through your direct knowledge and through contacts with whom ENSR can speak directly. We have enclosed a list of facilities which we have identified in your immediate area.

Thank you for your invaluable assistance. For questions about this questionnaire and its processing please contact Pete Jackson, ENSR, at (978) 589-3000 (email: pjackson@ensr.com). Please contact Richard Ring, Corps of Engineers, at (978) 318-8643 (email:_____) if you have questions regarding the use of your responses.

(signed by the Corps of Engineers)

Encls. (Fact sheet, facilities list and questionnaire)

Ann Rodney 04/30/01 02:09 PM
To: awaters@savethesound.org, bay@friendsofthebay.org, bei@debiz.com, bjm@byy.com, bkelly6313@aol.com, bradk@marinenv.com, brbryan@fishersisland.net, ckral@javanet.com, cleanhbr@aol.com, cmta@snet.net, ctmaritime@msn.com, ctpilot@erols.com, dajjsj@aol.com, dwnorth@aol.com, essexisland@aol.com, george.proios@co.suffolk.ny.us, gulbran@battelle.org, hanluksam@aol.com, jack@byy.com, johnny.mac@att.net, jsjohnson20@hotmail.com, kwj@bnl.gov, kwj@bnl.gov, mcmyacht@aol.com, mpurnell@snet.net, mreiser@marinenv.com, mtristin@logistec.com, rfromer@snet.net, rmcomeau@netscape.net, RPOTTS@BYY.com, sailerct@connix.com, saybrook@snet.net, spicersmarina@aol.com, tdubno@gatewayt.com, thamesdd@99main.com, wshadel@zoo.uvm.edu
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Subject: LIS EIS - Questionnaire

Hello,

Some of you mentioned at the Working Group meeting you did not receive the questionnaire. I believe I sent the questionnaire in my 03/21 e-mail, the last file attached. I am sending you the questionnaire again - please find the questionnaire in two formats - attached file and written out (I have delete spaces in format to save on the length of this e-mail). Thanks - Ann

(See attached file: FINAL Questionnaire.doc)

Ann Rodney 04/30/01 02:54 PM
To: awaters@savethesound.org, bay@friendsofthebay.org, bei@debiz.com, bjm@byy.com, bkelly6313@aol.com, bradk@marinenv.com, brbryan@fishersisland.net, ckral@javanet.com, cleanhbr@aol.com, cmta@snet.net, ctmaritime@msn.com, ctpilot@erols.com, dajjsj@aol.com, dwnorth@aol.com, essexisland@aol.com, george.proios@co.suffolk.ny.us, gulbran@battelle.org, hanluksam@aol.com, jack@byy.com, johnny.mac@att.net, jsjohnson20@hotmail.com, kwj@bnl.gov, kwj@bnl.gov, mcmyacht@aol.com, mpurnell@snet.net, mreiser@marinenv.com, mtristin@logistec.com, rfromer@snet.net, rmcomeau@netscape.net, RPOTTS@BYY.com, sailerct@connix.com, saybrook@snet.net, spicersmarina@aol.com, tdubno@gatewayt.com, thamesdd@99main.com, wshadel@zoo.uvm.edu
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Subject: Robert Fromer's request - Dr. Charles Hall's Paper

Hello,

Mr. Robert Fromer requested that I send the Working Group a paper by Dr. Hall on energy, resources and economics. Below is Dr. Hall's e-mail address, a short bio, and in the attached file is the paper - this is FYI (no action required). Please contact me should you want a paper copy . Thanks - Ann

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Attached is Dr. Hall's paper. His e-mail address is: chall@esf.edu. This is his academic background:

He is a Systems Ecologist with a primary focus on energy and resources and their relationship to economics. He received his PhD at the University of North Carolina at Chapel Hill with Dr. H.T. Odum, the most noted scholar in his field.

He has published more than 160 papers and five books on these subjects, many in the most prestigious journals. He is a full professor at the State University of New York College of Environmental Science and Forestry and has been a professor previously at the University of Montana (2 years), Cornell University (13 years) and Research Associate at the Ecosystems Center Woods Hole and Brookhaven National Laboratory. He is considered by many to be an exceptionally productive scientist on the interaction of energy, resources and economics.

Robert Fromer(See attached file: Reintegrating the natural sciences into economics.doc)

The need to reintegrate the natural sciences into economics

By Charles Hall[1], Dietmar Lindenberger[2], Reiner Kümmel[3], Timm Kroeger[1], and Wolfgang Eichhorn[4]

1. Department of Environmental and Forest Biology, and Program of Environmental Studies, College of Environmental Science and Forestry, State University of New York, Syracuse NY 13210, USA
2. Institute for Energy Economics, University of Cologne, Albertus-Magnus-Platz, D-50923 Cologne, Germany
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4. Institute for Economic Theory and Operations Research, University of Karlsruhe, D-76128 Karlsruhe, Germany

Copy for setting proofs

"How long will researchers working in adjoining fields... abstain from expressing serious concern about the splendid isolation in which academic economics now finds itself?" the Nobel Laureate in Economics, Wassily Leontief, asked in 1982.

This question is extremely important because economics is the foundation on which most decisions effecting agriculture, fisheries, the environment, and indeed most aspects of our daily lives, are based. Natural scientists, including biological scientists, may have particular views on this or that economic policy, but few question the legitimacy of economics as a tool. We believe that, paraphrasing the great Prussian military historian Karl von Clausewitz, economics is too important to leave to the economists, and that natural scientists should not leave the procedures by which we undertake economics up to economists alone. Instead, natural scientists must contribute to a new discourse about the means, methods and ends of economics.

This paper is a response to Leontief's question. It is critical that economics be based on sound principles, and that the policies that are generated from it have a solid foundation. Neoclassical economics, that form of economics derived in the mid 19th century that prevails today, focuses on problems related to value decisions, the behavior of economic actors, and the working of markets. These problems belong to the sphere of the social sciences (many of which, incidentally, have their own problems with neoclassical economic theory, see for example Marris 1992). But the wealth that is distributed in the markets must be produced in the "hard sphere" of the material world where all operations must obey the laws and principles of physics, chemistry and biology. Our concern is that most production models of economics are not based upon these biophysical laws and principles, and indeed tend to ignore them (Georgescu-Roegen 1971, Daly 1973, 1977, Kümmel et al. 1985, Leontief 1982, Cleveland et al. 1984, Hall et al. 1986, Hall 1992, 2000).

This disregard of the biophysical aspects of production by economists was not the rule historically. Quesnay and other members of the 18th century French physiocrat school focused on the use of solar radiation by biotic organisms and the role of land in generating wealth by capturing this energy through agricultural production. The classical economics of Adam Smith, David Ricardo and Karl Marx was interested in both the physical origin and the distribution of wealth (Smith 1937, Ricardo 1891, Marx 1906). Podolinsky, Geddes, Soddy and Hogben were biological and physical scientists of the 19th and early 20th centuries who thought deeply about economic issues (Martinez-Alier 1987, Christensen 1989, Cleveland and Ruth 1997). Thus we find the degree to which neoclassical economics has displaced classical economics curious, and almost an historical accident. The primary reason for this displacement was the superior mathematical rigor of the former and the development of the marginal utility theory which solved the "water vs. diamonds" paradox that classical economics had been unable to resolve. But the underlying biophysical perspective of Smith and Ricardo was not incorporated into the new mathematical elegance of the "marginal revolution".

Consequently, major decisions that affect millions of people and most of the world's ecosystems are based on neoclassical economic models that, although internally consistent and mathematically sophisticated, ignore or are not sufficiently consistent with the basic laws of nature. This leads to the failure of those economic policies that run against these laws and endanger sustainable development. In this paper we examine this issue in more detail, making a case for including the laws of nature in economic theory, analysis and the policies derived from this theory as carefully and explicitly as the assumptions on human preferences and

choices. Both natural scientists and even many economists have been leveling severe criticisms at the basis of neoclassical economics for many years (Soddy 1926, Boulding 1966, Georgescu-Roegen 1966, 1971, Daly 1973, Binswanger and Ledergerber 1974, Cleveland et al. 1984, Hall et al. 1986, Ayres 1996, 1999). These criticisms, however, are largely ignored by neoclassical economists and the rest of the scientific community seems to be largely unaware of them. We believe that it is time to again exhume these criticisms and add to them more recent analytic work that gives them even greater validity.

The past criticisms of neoclassical economics from the perspective of natural scientists can be summarized as three fundamental arguments:

1) The structure of the basic conceptual neoclassical model is unrealistic because it is not based on the biophysical world and the laws governing it, especially thermodynamics (Fig. 1a).

2) The boundaries of analysis are inappropriate because they do not include the real processes of the biosphere that provide the material and energy inputs, the waste sinks, and the necessary milieu for the economic process (Fig. 2).

3) The basic assumptions underlying the models used have not been put forth as testable hypotheses but rather as givens.

We substantiate these three criticisms below, and then present a new model of industrial production that we believe gives great weight to our criticisms and our assessment of the importance of energy. In this new model the output of the economic system and the maintenance of its components are dependent upon a continuous input of energy into the system, as is true for all organisms and ecosystems.

Critique of neoclassical economics

"Anything as important in industrial life as power deserves more attention than it has yet received from economists... A theory of production that will really explain how wealth is produced must analyze the contribution of the element energy" (Tryon 1927).

"The decisive mistake of traditional economics ... is the disregard of energy as a factor of production" (Binswanger and Ledergerber 1974).

Argument 1: Thermodynamics

Contemporary economics pays only marginal attention to the first and second laws of thermodynamics. This is a serious conceptual flaw and an obstacle to designing economic policies that can meet successfully the challenges of pollution, resource scarcity, and unemployment. The two laws say: Nothing happens in the world without energy conversion and entropy production. The consequences are: i) Every process of biotic and industrial production requires the input of energy. ii) Because of the unavoidable entropy production the valuable part of energy (called exergy) is transformed into useless heat at the temperature of the environment (called anergy), and usually matter is dissipated, too. This results in pollution and, eventually, the exhaustion of the higher grade resources of fossil fuels and raw materials. iii) Human labor, living on food, has been, and continues to be substituted, at least in part, by energy-driven machines in the routine production of goods and services as automation increases.

Although the first and second laws of thermodynamics are the most thoroughly tested and validated laws of nature and state explicitly that it is impossible to have a perpetual motion machine, i.e. a machine that performs work without the input of exergy, the basic neoclassical economic model *is* a perpetual motion machine, with no required inputs or limits (Fig. 1a). Most economists have accepted that incomplete model as the basis for their analysis and have relegated energy and other resources to unimportance in their analysis (e.g. Denison 1979, 1984). This attitude was cemented in the minds of most economists by the analysis of Barnett and Morse, who found no indication of increasing scarcity of raw materials, as determined by their inflation-corrected price, for the first half of the 20th century (Barnett and Morse 1963, Smith 1989).

Their analysis, although cited by nearly all economists interested in the depletion issue, was, however, seriously incomplete. Cleveland showed that the only reason that decreasing concentrations and qualities of resources were not translated into higher prices for constant quality was because of the decreasing price of energy and its increasing use in the exploitation of increasingly lower grade reserves in the USA and elsewhere (Cleveland 1991). Thus, although economists have argued that natural resources are not important to the economy, the truth is that it is only *because* of the abundant availability of many natural resources that economics can assign them low monetary value despite their critical importance to economic production.

The perspective of the Nobel Laureate in Economics, Robert M. Solow, is interesting. In 1974 he considered the possibility that "The world can, in effect, get along without natural resources" because of the technological options for the substitution of other factors for non-renewable resources, although noting that "if ... real output per unit of resources is effectively bounded – cannot exceed some upper limit of productivity which in turn is not too far from where we are now – then catastrophe is unavoidable" (Solow 1974, p. 11). More recently, Solow states "It is of the essence that production cannot take place without some use of natural resources" (Solow 1992, 1993). Clearly, there is need for more analytical and empirical work on the relation between production and natural resources, especially energy, but also all aspects of the supportive contributions of the biosphere. We believe that the attempt to simply put a monetary value on these services, while useful in some respects, is insufficient to resolve the issue, if only for the reason that such values are based necessarily on human perceptions that in turn are developed on the basis of imperfect information and, all too often, myopia.

Why does neoclassical economics assign a low value to natural resources?

The conventional neoclassical view of the low importance of energy and materials dates back to the first stages in the development of neoclassical economics. Initially, the focus was not so much on the generation of wealth but rather on its distribution and the "efficiency of markets". As a consequence, the early thinkers in economics started with a model of pure exchange of goods without considering their production. With a set of mathematical assumptions on "rational consumer behavior", it was shown that through the exchange of goods in markets an equilibrium situation results in which all consumers maximize their utility in the sense that it is not possible to improve the situation of a single consumer without worsening the situation of at least one other consumer (the so-called Pareto optimum). This benefit of (perfect) markets is generally considered as *the* foundation of free market-economics. It shows why markets, where "greedy" individuals meet, work at all. But later, when the model was extended to include production, the problem of the physical generation of wealth had to be coupled inseparably to the problem of the distribution of wealth as a consequence of the model structure: in the neoclassical equilibrium, with the assumption of profit maximizing entrepreneurial behavior, factor productivities by definition had to equal factor prices. This means that in the resulting model, the weights with which the production factors contribute to the physical generation of wealth are determined by the cost share of each factor. In other words, observations on contemporary social structure and entrepreneurial behaviors are used to draw inferences concerning the physical importance of production factors. Here lies the historical source of the economists' underestimation of the production factor energy, because in advanced industrial market economies energy *cost*, on the average, is only 5 to 6 percent of the total factor cost (Baron 1997). Therefore, economists tend to either neglect energy as a factor of production altogether, or they argue that the contribution of a change of energy input to the change of output is equal only to energy's small cost share of 5 to 6 percent (Denison 1979, 1984). However, it can be argued that energy has a small share in total production costs not because it is relatively less important than capital or labor as a production factor, but rather because of the free work of the biosphere and the geosphere it has been abundant and cheap, and because not all costs of its use are reflected in its market price (i.e., the problem of "externalities"). That energy actually has much more leverage was demonstrated by the impact of the two energy price explosions in the years 1973-75 and 1979-1981 that impacted economic growth significantly (Cleveland et al. 1984, Jorgenson 1984, 1988).

Neoclassical models that do not include energy cannot explain the empirically observed growth of output by the growth of the factor inputs labor and capital. There always remains a large unexplained growth residual which formally is attributed to what economists call "technological progress". "This ... has lead to a criticism of the neoclassical model: it is a theory of growth that leaves the main factor in economic growth unexplained" (Solow 1994). As we will argue below, weighting a factor by its cost-share is an incorrect approach in growth theory. Likewise, the finite emission-absorption capacity of the biosphere is vastly more important to future economic production than its present (often zero) price indicates.

The human economy uses fossil and other fuels to support and empower labor and to produce and utilize capital just as organisms and ecosystems use solar-derived energy to produce and maintain biomass and biotic functions. Labor productivity has been correlated highly with increasing energy use per worker. This has been especially critical in agriculture (Hall et al. 1986). Energy, capital, and labor are combined in human economies to upgrade natural resources (generated by natural energy flows) to useful goods and services. Therefore economic production, like biotic production, can be viewed as the process of upgrading matter into highly ordered (thermodynamically improbable) structures, both physical structures and information. Where one speaks of "adding value" at successive stages of production, one may also speak of "adding order" to matter through the use of free energy (exergy). The perspective of examining economics in the "hard sphere" of physical production, where energy and material stocks and flows are important, is called *biophysical* economics. It *must* complement the social sphere perspective.

Argument 2: Boundaries

Another problem with the basic model used in neoclassical economics (Figure 1a) is that it does not include boundaries that in any way indicate the physical requirements or effects of economic activities. We believe that at a minimum Figure 1a should be reconstructed as Figure 1b to include the necessary resources, the generation of wastes, and the necessity for the economic process to occur within the larger system, the biosphere (Daly 1977, Cleveland et al. 1984, Dung 1992, Ayres 1996, Dasgupta et al. 2000). Taking this assessment one step further, we believe that something like Figure 2 is the diagram that should be used to represent the actual physical aspects of an economy's working. It shows the necessity of the biosphere for the first steps of economic production and as a milieu for all subsequent steps. Figure 2 further emphasizes the flow of energy and matter across the boundary separating the reservoirs of these gifts of nature from the realm of cultural transformation within which subboundaries indicate the different stages of their subsequent transformation into the goods and services of final demand. Some such diagram should be presented to every student in an introductory economics course so that the way in which the economic process operates in the real world is properly understood.

Argument 3: Validation

Natural scientists expect theoretical models to be tested before applied or developed further. Unfortunately, economic policy with far-reaching consequences is often based on economic models that, although elegant and widely accepted, are not validated (Daly 1977, Cleveland et al. 1984, Dung 1992, Ayres 1996). Empirical tests to validate economic models are undertaken even less frequently in the developing countries where these models are followed regularly (e.g., Kroeger and Montagne 2000). As the Nobel laureate in economics Wassily Leontief noted, many economic models are unable "to advance, in any perceptible way, a systematic understanding of the structure and the operations of a real economic system"; instead, they are based on "sets of more or less plausible but entirely arbitrary assumptions" leading to "precisely stated but irrelevant theoretical conclusions" (Leontief 1982).

Most non-economists do not appreciate the degree to which contemporary economics is laden with arbitrary assumptions. Nominally objective operations, such as determining the least cost for a project, evaluating costs and benefits, or calculating the total cost of a project, normally use explicit and supposedly objective economic criteria. In theory, all economists might come up with the same conclusions to a given problem. In fact, such "objective" analyses, based on arbitrary and convenient assumptions, produce logically and mathematically tractable, but not necessarily correct, models. Where there have been empirical analyses (of, for example, consumer choice), the results frequently have shown that the behavior of real people in experimental or laboratory situations were quite different from the assumptions of a given neoclassical model (Schoemaker 1982, Smith 1989, Hall 1991). On the one hand, this is not surprising, because social science models of human behavior sometimes apply and sometimes they do not, depending upon which modeled subset of the infinite set of human behavioral patterns is matched by the actual group of people to which the model is applied. On the other hand, the authority economists often assign to their models is somewhat curious, because unavoidably fuzzy economic models do not become precise just because they emulate the mathematical rigor of physics. For example, Hamiltonians are used in economics in analogy to the Hamiltonians in physics. In fact, in physics a Hamiltonian is an energy function representing the sum of kinetic and potential energy in a system from which one can derive the equations of motion of the particles of the system. In neoclassical production theory the price vector is given by the gradient of the output in the space of the production factors just as the

vector of a conservative physical force is given by the gradient of potential energy in real space (Mirowski 1989).

Validation also proves difficult or impossible because both classical and neoclassical theories were originally developed using concepts of production factors as they existed in agrarian societies. These theories have been transferred more or less unchanged to applications in the modern industrial world. No provisions have been added to the basic theory for industrialization and its consequences. We next discuss how one may add such provisions.

The importance of energy to economic production

In industrial economies the capital stock consists of all energy conversion devices and the installations and buildings necessary for their operation and protection. Its fundamental components are heat-engines and transistors (formerly mechanical switches, relays, and electronic valves), activated by energy and handled by labor. They provide the average citizen of the industrially developed countries with services that are energetically equivalent to those of ten to thirty hard laboring people - "energy slaves" if you will. These numbers would more than triple if one included energy for room and process heat. In 1995 primary energy consumption per capita per day was 133 kWh in Germany and 270 kWh in the USA. This would correspond numerically to more than 40 and 90 energy slaves per capita in Germany and the USA, respectively, each one delivering about 3 kWh per day. Huge armies of energy slaves create our wealth.

In order to demonstrate the economic importance of energy quantitatively we present an econometric analysis of economic growth over three decades for the USA, Japan, and Germany (Kümmel 1980, 1982, 1989, Kümmel et al. 1985, Kümmel et al. in press). This analysis shows how the proper inclusion of energy removes most of the unexplained residual encountered by neoclassical theory (see App. 1).

We make the fundamental assumption that wealth, as represented by the output Q of value added, is created by the cooperation of the production factors capital K, labor L, and energy E in conjunction with creativity Cr. Raw materials are the passive partners of the production process. They are critically important but do not contribute by themselves to the generation of value added. Their monetary value is not included in the national accounts' empirical time series on value added with which we compare our theoretical results. However, if materials become scarce in spite of recycling, growth of course will be constrained. In systems, where catalytic processes play a quantitatively important role, one might consider treating the catalytic materials as a factor distinct from the capital stock. Creativity is that specifically human contribution to economic evolution that cannot be made by any machine capable of learning and which cannot be realized by changing factor combinations. Creativity contributes ideas, inventions, value judgments, and decisions. Creativity's influence may be weak in the short run but important in the long run. In fact, creativity often has been about finding ways to increase energy subsidies for a task. Q is measured of necessity in inflation-corrected monetary units, and so is K, whereas appropriate measures for E are Petajoules per year and for L man-hours worked per year. E and L are obtained from the national energy and labor statistics and K and Q from the national accounts. Ideally, one would like to measure K by the amount of work-performance and information processing that capital is capable to deliver when being totally activated by energy and labor. Likewise the output Q might be measured by the work-performance and information processing necessary for its generation. The detailed, quantitative technological definitions of K and Q are given by Kümmel (1980, 1982, Kümmel et al. in press). However, these physical measurements of K and Q are not available. Therefore, we assume proportionality between them and the constant currency data. We normalize all variables to their values (Q_0, K_0, L_0, E_0) for a base year. For a quantitative analysis of growth we employ production functions $q = q[k(t),l(t),e(t);t]$ that describe the evolution of the normalized output $q = Q/Q_0$ as the normalized inputs of capital, $k = K/K_0$, labor, $l = L/L_0$, and energy, $e = E/E_0$ change with time t; we allow for an explicit time-dependence of q in order to model the effects of creativity.

We calculate production functions from the following growth equation that relates the (infinitesimal) relative change of the normalized output, dq/q, to the relative changes of the normalized inputs, dk/k, dl/l, de/e, and creativity's action:

$$dq/q = \alpha(dk/k) + \beta(dl/l) + \gamma(de/e) + Cr. \qquad (1)$$

α, β, and γ are called the *elasticities of production* of capital, labor, and energy in the language of economics. They measure the productive powers of the factors in the sense that (roughly speaking) they give the percentage of output change when the corresponding inputs change by one percent. They, and Cr, involve the partial derivatives of q (see App. 2). If one can approximately neglect the explicit time-dependence of q, as we will do for the moment, one has $Cr = 0$.

Our procedure for calculating the production function from eq. (1) differs in one essential point from that of neoclassical economics: We do not set α, β and γ equal to the *cost* shares of capital, labor, and energy in total factor cost. (In industrialized countries such as the USA, energy commands about 5%, labor about 70%, and capital about 25% of total factor cost.) This stipulated equality of elasticities of production and cost shares is a result of the fundamental hypotheses underlying the neoclassical equilibrium model. Instead, we determine these coefficients differently using an econometric analysis and a set of three differential equations representing the integrability conditions of the production function (see App. 3). The simplest non-constant solutions of these equations with technologically meaningful boundary conditions are $\alpha = a_0(l+e)/k$, $\beta = a_0(c_0(l/e)-l/k)$, and $\gamma = 1 - \alpha - \beta$, with technology parameters a_0 and c_0 (see App. 4). Here, a_0 gives the weight with which the labor/capital and energy/capital input-ratios contribute to the productive power of capital, and c_0 indicates the energy demand $e_t = c_0 k_t(q_t)$ of the fully utilized capital stock $k_t(q_t)$, that would be required in order to generate the fraction q_t of output accessible to totally automated production with virtually no labor, while the production of $(q - q_t)$ is labor saturated; then β goes to zero as e and k approach e_t and k_t. If one inserts these elasticities of production into equation (1) and integrates, with $Cr = 0$, one obtains the (first) LINEX production function:

$$q = q_0 e \exp[a_0(2 - (l+e)/k) + a_0 c_0(l/e - 1)], \qquad (2)$$

which depends *lin*early on energy and *ex*ponentially on quotients of capital, labor, and energy. The integration constant q_0 is the third technology parameter of the theory; its changes indicate changes in the monetary valuation of the original basket of goods and services making up the output-unit Q_0. Activities of creativity Cr which lead to an explicit time-dependence of the production function can be modeled by allowing a_0, c_0, and q_0 to change in time. α, β and γ must be non-negative in order to make sense economically. This poses important restrictions on the admissible factor quotients in α, β and eq. (2). Integration of eq.(1) with the constants α_0, β_0, and $\gamma_0 = 1 - \alpha_0 - \beta_0$, yields the energy-dependent Cobb-Douglas production function $q = q_0 k^{\alpha_0} l^{\beta_0} e^{1-\alpha_0-\beta_0}$. This function, however, violates the laws of thermodynamics because it allows for the almost complete substitution of energy by capital. Thus, it should be avoided in scenarios for the future. Our model incorporates the limits to substitution, thanks to the restrictions on α, β, and γ. The LINEX function is of the type "variable-elasticities-of-substitution." Its relation to the frequently used translog function has been discussed by Kümmel et al. (1985).

We tested our energy-dependent production function (eq. 2) with empirical data, examining the sectors "Industries" of the USA and Japan and the West German manufacturing sector ("Warenproduzierendes Gewerbe"). (The sectors "Industries" are defined by the "System of National Accounts" and include the services-producing sectors). We were able to obtain consistent sets of data for these sectors which produce about 80, 90, and 50%, respectively, of gross domestic product (GDP). When we inserted the numerical values for the technology parameters given in Fig. 3 and the annual empirical inputs of k, l, and e for the USA from 1960 to 1993, Japan from 1965 to 1992, and West Germany from 1960 to 1989 into the LINEX function we obtained the theoretical outputs which are shown in Fig. 3, together with the annual empirical outputs. For each country the numerical values of the three technology parameters have been determined by fitting the LINEX function to the empirical time series of output before and after 1977, using the Levenberg-Marquardt method (see Press et al. 1992). This results in the different sets of a_0, c_0 and q_0 shown in Fig. 3, i.e. a time dependence of the parameters between 1977 and 1978.

RESULTS

The LINEX functions, which include the production factor energy, reproduce the output of all three production systems for all years considered with only minor residuals, including the recessions caused by the two major energy crises (App. 7). The energy crises were triggered by the first and second oil-price explosions in 1973-1975 and 1979-1981 in the wake of the Jom-Kippur war between Israel and its Arab neighbors and the war between Iraq and Iran, respectively. The influence of creativity in response to the oil price increase shows

in the reduction of the energy demand of the capital stock, c_0, and the enhancement of capital's productive power by the enhanced a_0 after 1977. These shifts of the technology parameters are the results of the decisions of governments and entrepreneurs to invest in energy conservation technologies after the shock of the first oil-price explosion. Structural changes towards less energy-intensive economic activities played a role, too.

Of course, the limitation of the parametric time-changes to one year is a consequence of our simple modeling of creativity's action as a single one-year pulse. If one goes a step further, assumes that creativity is always active, and models the transitions between the different values of a_0 and c_0 before and after the energy crises using continuous functions of time, the discrepancies between the theoretical and empirical USA-curves after 1985 disappear and the results for Japan and Germany remain practically the same (Henn 2000; see App. 5). In any case, in the short run the changes caused by creativity are small compared to the changes caused by the changing combinations of capital, labor, and energy. Therefore, creativity's influence, and thus any explicit time dependence of the production function can be neglected during time spans of at least a decade. Even without any parameter readjustments between 1977 and 1978 the evolution of production in Germany and Japan during three decades is reproduced by the LINEX function with residuals of less than 10 per cent (Kümmel et al. in press). Other energy-dependent production functions with mathematically simpler, i.e. constant, or more complicated elasticities of production yield quantitatively and qualitatively similar results (Lindenberger 2000; see also App. 6).

The results of our analysis also demonstrate in all three cases that the productive power of energy is more important than that of capital or labor, and nearly an order of magnitude larger than the 5 percent share of energy cost in total factor cost. This follows from the time-averaged LINEX elasticities of production of capital, labor, and energy, which are:

a) for the USA: (α=0.36, β=0.10, γ=0.54),
b) for Japan: (α=0.34, β=0.21, γ=0.45), and
c) for West Germany: (α=0.45, β=0.05, γ=0.50), (see App. 7).

In addition the elasticity of production of labor is much smaller than labor's cost share of typically 0.70. In industrialized countries such as the USA energy commands about 5%, labor about 70%, and capital about 25% of total factor cost. The stipulated equality of elasticities of production and cost shares is a result of the fundamental hypotheses underlying the neoclassical equilibrium model. This means that one of the fundamental assumptions of neoclassical equilibrium economics, i.e. the equality of marginal productivities and cost shares, has not been satisfied under the conditions of production reigning during the last three decades in the USA, Japan, and Germany. Rather, under the pressure of cost minimization, the economies have been driven into substituting weak, expensive labor by the combination of powerful, cheap energy with increasingly automated capital. This substitution takes time because of i) technical constraints on the progress of automation, ii) the demand for those products and services that cannot be produced in a totally automated fashion, and iii) still existing and respected laws and agreements. Therefore, the possible maximum of the sum of profits in the economies has not yet been reached.

Some social implications of our analysis

If one accepts the importance of a biophysical basis for economics then there are some important implications of our analysis for economics and for society.

1. The replacement of expensive labor in routine jobs by the combination of cheap energy with capital is likely to continue under the present incentive structure. This combination also reinforces the trend towards globalization, because goods and services produced in low-wage countries can be transported cheaply into high-wage countries. Thus, high unemployment (in most high-wage countries) will continue if the disparities we identified between the productive powers and cost shares of labor and energy are not removed, for example by fiscal policy. Certainly, the low price of fossil fuels relative to their productive power generates large profits. But, as is well known, it also prevents the market penetration of large-scale energy conserving and non-fossil energy technologies, which could decrease the demand for fossil fuels and relieve some of the burden of pollution. Therefore we believe that the problems of unemployment, resource depletion, and pollution can be attacked successfully only if the pivotal role of energy as a factor of production is properly taken into account in economic and social policy.

2. Price does not always reflect scarcity and economic importance. Scarcity of a resource must be defined in terms of both short- and long-term resource availability. Price, the economist's usual metric of scarcity, reflects many important aspects of scarcity poorly because it is often based on short-term market values. Most importantly, Norgaard (1990) and Reynolds (1999) show how uncertainty about the size of the base of a resource can obscure the actual trend in scarcity of that resource, with the result that "empirical data on cost and price declines ... do not necessarily imply decreasing scarcity" (Reynolds 1999, p. 165).

As an example of this phenomenon, in mid 1999 the real price of oil was at nearly its lowest level ever despite of the fact that most estimates of the time at which global oil production will peak range from 2000 to 2020 (Kerr 1998, Cleveland 1999).

3. The concept and implementation of sustainable development as interpreted and advocated by most economists must be thought through much more carefully, because of the requirement for energy and materials for all economic activity (see Hall 2000 for a detailed analysis of Costa Rica). Energy is in fact disproportionally more important in terms of its impact on the economy than its monetary value suggests, as evidenced by the events of the 1970s (i.e. inflation, stock market declines, reduced economic output etc.) which appear to be reoccurring to some degree in 2000 partly in response to a similar proportional increase in the price of oil. Fundamentally, current societal infrastructure has been built and maintained on the basis of abundant cheap supplies of high quality energy, i.e., energy characterized by the large amount of energy delivered to society per unit of energy invested in this delivery (through exploration and development, or through trade of goods for imported energy, Hall et al. 1986).

4. In developing nations, investment policies based on neoclassical economic analyses encourage borrowing from developed countries and hence growing indebtedness. Pressure to service the debt encourages the quick extraction of resources to generate a cash flow so that payments of interest and repayment of principal can be maintained. In the meantime, the long-term productivity of the region may be destroyed. But those assessments are not included in neoclassical analyses; in the rare cases where resources are included in the analysis their value is heavily discounted. For example, many tropical countries sell their forest products at a price far below their worth (Repetto 1988, Hall 2000), and the Russian government has been talked into abolishing its export tax on fossil fuels which was the last source of secure revenues for highly indebted Russia. Developing countries and nations in transition to market economies should attribute more importance to their natural resources than they do presently under the influence of the reigning economic theory.

5. Humans tend to seek political explanations for events that in fact may have been precipitated by biophysical causes. For example, Reynolds (2000) shows how the sharp decline in the oil production of the former Soviet Union may have precipitated the economic crises that led to the collapse of the Soviet Union.

Some biological implications of our analysis

1) Economies, just like ecosystems, or indeed any system, can be represented as stocks and flows of materials and energy, with human material welfare largely a function of the per capita availability of these stocks and flows.

2) Present agricultural technologies, most wildlife management and conservation programs, and perhaps biomedical technologies are as dependent upon the availability of cheap energy as anything else. For example, most increases in agricultural productivity have not come from genetics alone. In fact for many crops there appears to be essentially no increase in gross photosynthesis but rather only an increase in the proportion of photosynthate that goes to the parts we eat, generally seeds, while the organs and functions of a wild plant (i.e. growing roots to take up more nutrients and water, generating secondary compounds for insect defense) are increasingly supplied by industrially-derived inputs from outside the plant (Smil 2000). In addition, the efficiency of agriculture tends to be inversely related to the intensity of use of land area or fertilizer (Hall et al. 1998, Hall 2000 chapter 12).

3) Human material well-being is derived essentially by redirecting energy stocks and flows from what natural selection and the accidents of geology dictated to ends determined by human needs, and increasingly, desires. Now some 40 to 60 percent of the global primary production is exploited, in one way or another, by the human economy (Vitousek et al. 1986, 1997).

Outlook: The challenge to construct a model including the biophysical basis of the economy

At the present time no 'economic' model exists that is an effective representation of a total economy including the biophysical basis. There are, however, a number of beginning attempts. First, there are very detailed and comprehensive models of the flow of energy through each sector of the U.S. economy (Hannon 1982). But they do not include the flows of nature (such as the energy associated with the hydrological cycle, flows of rivers, solar energy, photosynthesis and other important components of the economic system). Another approach that does include the energy flows of nature (although associated with considerable controversy) is that of emergy (with an m) analysis, which does attempt to include all flows of nature and the human economy, and in addition attempts to give each energy flow a weighting according to its quality (Odum 1996). This approach has been applied at a very aggregated level to national economies and even used to recommend policy (Brown et al. 1995). Finally, evolutionary economics looks for ways of modeling the economic process by combining nature's principle of self-organization with the growth of human knowledge and innovations (Witt 1997, Faber and Proops 1998, see also App. 8).

We must conclude, however, that a truly useful and acceptable model including the biophysical basis of the economy is probably still rather far into the future. What then is the utility of bringing a biophysical perspective into economics? We believe at this time that it is overwhelmingly heuristic. By thinking about economies as they actually are (i.e. Figure 1b or 2) instead of how we might conceptualize them for analytic ease and tractability (i.e. Figure 1a) we can teach a new generation of economists about the real operations of human economies and their various links to the 'economies' of the natural world. We believe this is especially important, as we understand increasingly through science that there are at least constraints, and possibly even limits, to growth. Future generations of economists probably will not be able to treat such issues as over-population, oil and ground-water depletion, and changes in the composition of the atmosphere and the biosphere simply as "externalities" to be given a price and rolled into the larger analysis, but as fundamental components of the total economic model. We do not understand how that can be done without starting from a biophysical basis, and challenge a new generation of economists and natural scientists to think from this perspective.

Acknowledgements

We are thankful to Rick Beal, Bart Daly, Jae-Young Ko, and Paul Christensen for discussion, to four anonymous reviewers for critical comments, to Julian Henn for analytic help, to the Roosevelt Wildlife Collection for contribution #___, and to the "Denman Foundation" for logistic inputs.

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Figure legends

Figure 1. Two views of the economy.
a) The neoclassical view of how economies work. Households sell or rent land, natural resources, labor and capital to firms in exchange for rent, wages, and profit (factor payments). Firms combine the factors of production and produce goods and services in return for consumption expenditures, investment, government expenditures and net exports. This view represents, essentially, a perpetual motion machine.
b) Our perspective, based on a biophysical viewpoint, of the minimum changes required to make figure 1a) conform to reality. We have added the basic energy and material inputs and outputs that are essential if the economic processes represented in figure 1a) are to take place.

Figure 2. A more comprehensive and accurate model of how economies actually work. The second column of this diagram represents the entire global ecosystem milieu within which the rest of the global economy operates. Natural energies drive geological, biological and chemical cycles that produce natural resources and public service functions and maintain the milieu essential for all other economic steps. Extractive sectors use economic energies to exploit natural resources and convert them to raw materials. Raw materials are used by manufacturing and other intermediate sectors to produce final goods and services. These final goods and services are distributed by the commercial sector to final demand. Eventually, non-recycled materials and waste heat return to the environment as waste products. We believe this diagram to be the minimum model of how a real economy works.

Figure 3. Theoretical (diamonds) and empirical (squares) growth of annual industrial production $q = Q/Q_0$ in the USA ($Q_0 = Q_{1960}$), top, Japan ($Q_0 = Q_{1972}$), middle, and West Germany ($Q_0 = Q_{1960}$), bottom. In all three systems the overall growth of the capital stock k is similar to the overall growth of the output q, and the ups and downs of energy inputs e and outputs q occur at the same times. Labor l rises in the USA, stays nearly constant in Japan, and decreases in West Germany. The empirical time series of k,l,e can be found on the web under: http://theorie.physik.uni-wuerzburg.de/TP1/kuemmel/profile.html

APPENDIX

1. The constraints on economic growth due to entropy production (Kümmel 1980, 1982, 1989, Kümmel et al. 1985) will not be considered in this analysis of the past.

2. Eq. (1) results from the total differential of the production function. The elasticities of production are $\alpha(k,l,e) \equiv (k/q)(\partial q/\partial k)$, $\beta(k,l,e) \equiv (l/q)(\partial q/\partial l)$, $\gamma(k,l,e) \equiv (e/q)(\partial q/\partial e)$, and the term due to the creativity-induced explicit time-dependence of the production function is $Cr = (t/q)(\partial q/\partial t)(\mathrm{d}t/t)$.

3. The differential equations result from the requirement that the second-order mixed derivatives of the production function with respect to the production factors are equal. With the assumption of constant returns to scale, i.e. $\gamma = 1 - \alpha - \beta$, the differential equation for α is $k(\partial\alpha/\partial k) + l(\partial\alpha/\partial l) + e(\partial\alpha/\partial e) = 0$, the equation for β has identical structure, and the coupling equation reads $l(\partial\alpha/\partial l) = k(\partial\beta/\partial k)$. The most general solutions of the first two equations are $\alpha = f(l/k, e/k)$ and $\beta = g(l/k, e/k)$, with arbitrary differentiable functions f and g. The boundary conditions which would unequivocally determine the solutions of this system of partial differential equations would require knowledge of β on a surface and of α on a curve in k,l,e space. It is practically impossible to obtain such knowledge. Therefore, one has to choose approximate or asymptotic boundary conditions.

4. These solutions take into account the possible approach to the state of total automation, as described in the paragraph above eq. (2), and the condition that α must vanish if $(l+e)/k$ goes to zero: with zero labor and energy, i.e. zero capacity utilization of capital, capital growth cannot contribute to output growth. These "asymmetric" boundary conditions lead to the "asymmetric" solutions of the symmetric set of differential equations.

When we tested other boundary conditions and more sophisticated elasticities of production with the corresponding "higher" LINEX functions the quantitative results did not change significantly (Lindenberger 2000, see also Kümmel et al. 1985).

5. Yet another modeling of creativity's action is possible for West Germany where we know the time-series of the share of electricity $El(t)$ in end-energy consumption: If one replaces e by $[1+El(t)]e$ in the LINEX production function and determines the three technology parameters by only one fitting procedure for the time from 1960 to 1989, one obtains a theoretical output which is barely discernible from the one in Fig. 3, bottom (Kümmel et al. in press). This is consistent with the observation that normally efficiency improvements require more electrical devices and confirms the view that electrification and technological progress are closely interrelated (Jorgenson 1984).

6. Like the Deutsche Bundesbank (Federal Reserve Bank of Germany: 1996) in its macro-econometric multi-country model we present here the standard econometric quality measures, namely the coefficient of determination, R^2 (the "best" possible value is 1.0), and the Durbin-Watson coefficient of autocorrelation, dw (the "best" possible value is 2.0). The R^2 and dw pertinent to the LINEX functions in Fig. 3 are: for West Germany 0.991 and 1.23 during 1960-1977, 0.782 and 0.96 during 1978-1989; for Japan 0.995 and 1.22 during 1965-1977, 0.992 and 1.15 during 1978-1992; and for the USA 0.983 and 0.65 during 1960-1977, and very small during 1978-1993. In Julian Henn's (2000) innovation-diffusion model with continuously decreasing $c_0(t)$ and increasing $a_0(t)$ - not shown in Fig. 3 - one finds for the USA $R^2 = 0.997$ and $dw = 0.95$ for the time 1960-1993, and for Japan and Germany the R^2 and dw are better than 0.993 and 1.57 for the full length of the observation times. The technology parameters have been determined with the help of the Levenberg-Marquardt method in non-linear optimization, subject to the constraints of non-negative elasticities of production (see Press et al. 1992).

The positive autocorrelations are due to the unavoidable approximations for the boundary conditions on the elasticities of production (see App. 3) and, as a consequence, the necessarily approximate character of the production functions. When estimating the GDP of the USA, Japan and Germany between 1974 and 1995, using a translog-type production function of capital and labor with cost-share weighting and exponential time dependence, the econometricians of the Deutsche Bundesbank (1996) obtained 0.997, 0.995, 0.97 for R^2 and 0.72, 0.32, 0.24 for dw, respectively.

7. The time-averaged LINEX elasticities are approximately equal to the constant elasticities of production of the energy-dependent Cobb-Douglas production function $q = q_0 K^{\alpha_K} L^{\alpha_L} e^{\alpha_E \ln(e/e_0)}$ that also fits reasonably well to the empirical data. Thus, energy-augmented Cobb-Douglas functions approximate the LINEX functions on past growth-paths in factor space that, of course, did not violate the physical limits to substitution.

8. An opportunity of starting this process was offered by the seminar "Economic Growth - Driving Forces and Constraints in the Perspective of Economics and the Sciences" of the WE-Heraeus Foundation (WE-Heraeus-Stiftung, P.O. Box 1553, D-63405 Hanau, Germany) from October 22 to October 25, 2000, in Bad Honnef, Germany.

Ann Rodney

04/30/01 03:19 PM

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Subject: 4/26 Power Point Presentations

Hello,

It was requested that the presentations presented on Thursday April 26th at the Working Group be e-mailed to the Working Group. These files are very large, this being the case I will be sending each presentation individually (you will be receiving five {5} different e-mails) Again, should you want paper copies, please contact me.

The agenda for the 4/26 meeting was:

1. Field Summary - (Wg#2 field.ppt)
2. Fishing Activities (Fish Activities.ppt)
3. Upland - (Wg#2 Upland.ppt)
4. GIS - (Workgroup2_GIS.ppt)
5. Economics - (Wg#2 econ1.ppt)

Thanks - Ann

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Subject: Re: LIS meeting(Document link: Ann Rodney)

Dear Keith,

I am glad you were able to attend the meeting, I hope your ride with Allen was pleasant. The upland report is in draft form and the issue of decontamination technologies will be reviewed. The focus of this EIS is open water disposal, however we do need to look at the different technologies - decontamination being one of them.

Eric is on the EIS team and we plan to use his and your knowledge, your offer is very generous - thank you. At this time, I am not sure what would be the best action to take. I have cc'd this (& your e-mail) on to some team members (any suggestions??) We will be talking.
Thanks - Ann

Keith Jones <kwj@bnl.gov> 04/30/01 03:39 PM
To: Ann Rodney/R1/USEPA/US@EPA
cc: Lore Barbier <barbier@bnl.gov>, Eric Stern/R2/USEPA/US@EPA
Subject: LIS meeting

Ann,

Thanks for the assistance with rides from the ferry to the meeting.
I found the talks interesting and stimulating. I do have a suggestion about the presnetation on upland disposal. I think that the use of decontamination technologies should be introduced as an option for assisting in the disposal of some fraction of the dredged material, particularly the most contaminated portion.

Eric Stern (and I) have gained much experience during the course of the decontamination demonstration run by EPA in New York/New Jersey Harbor. I think that it would be useful (and necessary) to incorporate this knowledge into the EIS that was the subject of the meeting.

Eric and I would be happy to make suggestions, prepare material, and provide whatever material required.

keith

Ann Rodney 05/10/01 04:49 PM
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Subject: LIS EIS - follow-up (no files attached)

Hello,

This e-mail is a quick follow-up to the April 26th meeting. Over the past 2 months I have sent you reports to review, make suggestions and give comments on. some of you have given comments and suggestions and we thank you, your knowledge of your area is extremely important. We are coming up to some "completion dates" and would like to get all your comments for each report listed by the following date.

Please send comments and suggestion on the following reports by Friday May 18, 2001:
1. Upland Report(e-mail sent 3/22 - LIS EIS - WG - Fishing, GIS, Upland)
2. The Facilities List(e-mail sent 3/21 - LIS EIS - WG - facilitiesfiles)
3. The Contact List (e-mail sent 3/21 - LIS EIS - WG - facilitiesfiles)
4. Facilities Cover letter (e-mail sent 3/21 - LIS EIS - WGfacilities files)

Please send your comment by May 18, 2001. If I do not hear from you it will be assumed you do not have any comments. Please, contact me should you have any questions, suggestion, comments. Thanks - Ann

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Subject: LIS Questionnaire Status - 1 file Attached

Hello,

Below is an e-mail message & file (at very end) sent to me by Pete Jackson (ENSR) who is the lead on the economic survey/questionnaire for the LIS EIS - (dredging needs survey). As Pete states, the return rate for the questionnaire is low. Gathering this information is important to assess the possible future dredging needs of the marine industry in LIS, and I believe it is in the marine industry's best interest to return the survey.

We request your assistance with contacting and encouraging facility owners to complete and return the questionnaire. Please read Pete's message and review attached file for owners you know who are "Enter Data" or "No Address" -(meaning they have not have not returned survey).

As to the overall EIS progress, we are reviewing and drafting various reports and they should be completed by the fall and up on the website. These reports include: 1. April Working Group meeting notes. 2. Sediment Chemistry and Grainsize Reports & appendices. 3. Benthic Community Analysis reports for February and July. 4. Reviewing Fish Trawl Data.

Funding from EPA will support Corps staff to work approximately 2 hours a week on the LIS EIS, however the overall funding issue is still unresolved. We will not be preforming any "new" tasks or "new" work (tasks outline in the Work Plan) until the funding issue is resolved.

Please feel free to contact me should you have any questions or suggestions. Or you may also contact Pete Jackson specifically on the questionnaire (number below).

(The summer season in New England is short, so please take time to enjoy it!!) Thanks - Ann

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REPLY TO ATTENTION OF

September 27, 2001

Engineering/Planning Division
Planning Branch

Mr. Arthur J. Rocque, Jr., Commissioner
Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

Dear Mr. Rocque:

I am writing in response to your letter of May 17, 2001, to myself and Mr. Ira Leighton, then Acting Regional Administrator for the U.S. Environmental Protection Agency, New England Region (EPA), concerning the status of the four open water dredged material disposal sites in Long Island Sound.

As you state, in April 1998 the U.S. Army Corps of Engineers (Corps) and EPA executed a Letter of Agreement to undertake an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) to evaluate the possible designation by EPA of one or more dredged material disposal sites in the waters of Long Island Sound, consistent with the provisions of the Marine Protection, Research and Sanctuaries Act (MPRSA). None of the historically used sites in Long Island Sound has previously been formally designated by EPA under MPRSA. When the Corps and EPA executed the Letter of Agreement, the cost of the EIS was estimated at between $2 and $6 million dollars, and the projected completion date was October 2003.

As a result of the public EIS scoping process, a critical examination of available data sources on the Sound, and coordination with other Federal and State agencies, the scope of the EIS was substantially increased. This increase was necessary to adequately address the criteria specified for site designation under MPRSA. Consideration of a number of alternatives is necessary because of the environmental analysis requirements of NEPA and the MPRSA, and because this designation effort is addressing disposal needs for the entire Sound. The present cost estimate for completion of the EIS and site designation process is $10 million. Given our budget constraints, this has resulted in an expansion of the schedule for completion of this effort. It now appears that a final designation by EPA of any identified disposal sites in Long Island Sound would not occur before the spring of 2005.

The site selection authority in Section 103(b) of MPRSA, as amended by section 506(b) of the Water Resources Development Act of October 31, 1992, limits use of a non-designated site to a period of five years, with a potential extension for an additional five year period if certain additional criteria are satisfied. The first five-year period for each of the four currently active disposal sites (Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals Disposable Site (CSDS), and New London Disposal Site (NLDS)), began with the first disposal of material from a project covered by Section 106(f) of the MPRSA at that site after the October 31, 1992 amendment to MPRSA. As you know, Section 106(f) of the MPRSA covers disposal of material from a Federal navigation project under the Corps civil works program, projects under permit to another Federal agency, or disposal from a non-Federal permitted project involving more than 25,000 cubic yards. A review of records at the New England District has revealed the following as the first applicable post-1992 amendment disposal actions for each site:

Site	Project/Applicant	Type of Work	Source Harbor	Date of First Disposal
WLIS	Town of Westport	Permit – Municipal	Compo Cove	26 Jan 1995
CLIS	New Haven FNP	FNP Maintenance	New Haven Harbor	3 Oct 1993
CSDS	Island Cove Marina	Permit – Private	Connecticut River	1 Mar 1996
NLDS	US Navy	Other Federal	Thames River	6 Feb 1993

The end of the first five-year selection period for each site would be as follows:

WLIS	26 Jan 2000	CSDS	1 Mar 2001
CLIS	3 Oct 1998	NLDS	6 Feb 1998

Following expiration of the first five-year period, the additional five-year period is initiated by the next Section 106(f) disposal action at each site. Only the CLIS has had a Section 106(f) disposal action initiated after the expiration of the first five-year period. That project was the Mamaroneck Harbor Federal Navigation Project maintenance dredging which began disposal on February 18, 1999. The second five-year period for the CLIS would end on February 18, 2004. The second five year period has not yet been initiated for any of the other three sites.

The EIS is scheduled for completion in the spring of 2005. CLIS would close in February 2004, and it is unknown when and if a new site in that area would become available for use by a project subject to Section 106(f). As you may be aware, there are several Federal maintenance dredging projects, including Southport and Norwalk Harbors, and major maintenance of New Haven Harbor and portions of Bridgeport Harbor, which may be affected by closure of CLIS.

Since none of these projects have yet to complete the state and Federal regulatory processes, it is impossible to say with certainty whether any of them would ultimately be affected by closure of a particular disposal site prior to completion of the EIS. However, it is likely that closure of such sites would have consequences on the Corps maintenance-dredging program in Connecticut and potentially on the activities of private parties seeking disposal permits.

Both Corps Districts and both EPA Regions involved in the site designation process will continue to diligently work towards completion of the EIS, as available funds allow. The Corps, for its part, intends to fulfill its commitment to maintaining Connecticut's commercial harbors, including Bridgeport, New Haven and New London, as needed, in an environmentally sound manner, subject of course to the availability of sufficient funds, feasible dredged material disposal options, and required approvals. We will continue to involve your office, and the other agencies of Connecticut, New York and Rhode Island, as well as the public, in our investigations and the site designation process. The Corps has coordinated this letter with the EPA.

Should you have any further questions please do not hesitate to contact me at (978) 318-8220 or Mr. Mark Habel of my staff at (978) 318-8871.

Sincerely,

Brian E. Osterndorf
Colonel, Corps of Engineers
District Engineer

Copy Furnished:

Mr. Roger Janson
U.S. Environmental Protection Agency
New England Region
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Roger Janson

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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October 10, 2001

OFFICE OF THE
REGIONAL ADMINISTRATOR

Arthur J. Rocque, Jr.
Commissioner
Department of Environmental Protection
79 Elm St.
Hartford, CT 06106

Dear Commissioner Rocque:

Thank you for your letter regarding the status of the four open water dredged material disposal sites in Long Island Sound. We apologize for the delay in responding, but it has been necessary to coordinate with the New England District, U.S. Army Corps of Engineers (Corps), to assure that the information we convey is accurate and complete. Each agency also had to consult with headquarters.

We have worked closely with the Corps to develop a response to your letter. Colonel Brian Osterndorf of the Corps sent you a letter dated September 27, 2001, and we agree with its contents. A copy of this letter is enclosed. We will not repeat here the points made in the Corps' letter. There are, however, a few additional points that we wanted to emphasize.

First, we want to clarify that completion of the EIS and site designation process has been rescheduled to the spring of 2005. As the Corps' letter indicated, the present cost estimate for completing this effort is $10 million. The Corps/EPA Letter of Agreement stipulates that the Corps will provide the necessary funds and technical support, while EPA will devote the necessary staff and management.

Second, as the Corps' letter indicates, the second five-year period for use of the Central Long Island Sound disposal site (CLIS) pursuant to a Corps site "selection" will end on February 18, 2004. The availability of the CLIS beyond February 18, 2004, can only be determined by completing the EIS and designation processes. A second five-year period has not been initiated yet at any of the other three existing disposal sites. Thus, it is possible that the closure of the CLIS potentially could affect a number of maintenance projects such as the ones you mention for New Haven, Southport, Norwalk and, perhaps, portions of Bridgeport Harbor. At the same time, if the CLIS is unavailable, it is also possible that the Corps could select one or more of the other three disposal sites, or could select another alternative site, assuming such sites satisfy the site selection criteria.

In closing, I want to assure you that together with the Corps, both EPA Regions involved in the site designation process will continue to diligently work toward completion of the EIS, as available funds allow. Our efforts will continue to involve the public and all interested constituencies such as the several marine trade groups that have expressed great interest and concern about this matter. We will, of course, also continue to work with your office and appropriate state agencies in Connecticut, New York and Rhode Island.

Thank you for your continued involvement and cooperation in this matter. Please feel free to call Linda Murphy, Roger Janson or me if you would like to discuss this issue in more detail.

Sincerely,

Robert W. Varney
Regional Administrator

Enclosure

cc: Colonel Brian Osterndorf

Ann Rodney/R1/USEPA/US@EPA 01/07/02 04:31 PM
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Subject: Hello Working Group & "others"

Hello All,
Happy New Year! I hope your holiday season was successful and this e-mail finds all of you well!

This e-mail is to give you a heads up for a possible LIS EIS WorkingGroup meeting to be held in late February or early March. We (EPA &Corps) are looking into holding an all day informational meeting in Port Jefferson, NY. At this point I have no details (who, what, when & where). I hope to have more details in the next week or so, and will contact you with a date, place, time & agenda, and any information you might need for the meeting. Talk with you soon.

Again, please contact me should you have any questions!

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Subject: Information for March 5th Work Group meeting

Hi,

The LIS EIS website has new reports pertaining to the March 5th Working Group meeting. The new reports are:

#4. Economic Significance of Navigation Dependant Industries October 2001. #5. Dredging Needs Report October 2001. #6. Sediment Quality Triad Report November 2001. #7. Essential Fish Habitat Summaries November 2001. #8. Analysis of CT DEP Trawl Data November 2001. #9. Physical Oceanographic Evaluation of Long Island Sound and Block Island Sound 2001.

The Working group meeting will be at Danford's in Port Jefferson, NY, Tuesday March 5, 2002 from 9:30am - 4pm. (Please see the e-mail I sent on 2/11/02)

Please feel free to contact me should you have any questions. Thanks - Ann

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Milford Biological Laboratory
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DATE: March 21, 2002

MEMORANDUM FOR : LIS Site Designation Alternatives Team & Project Files

FROM: Mike Ludwig, NOAA/NMFS

SUBJECT: Alternatives for the LIS 103 driven Dredged Material Disposal Site Designation for the Middle and Western Basins of Long Island Sound.

1) By now, the addressees should have been made aware of the compressed schedule and reduc zone of siting feasibility that EPA and the Corps of Engineers are pursuing regarding dredged material disposal site designation(s) under Section 103 of the Marine Protection, Research and Sanctuaries Act for Long Island Sound (LIS). To that end, I offered to facilitate the development o alternatives site screening effort that would identify the field of alternatives, including those require by a NEPA action, for inclusion in the EIS / Designation package. **The project will move faster each addressee (and those I overlooked) develops their own list of possible sites based on criteria and the discussion laid out below.**

2)Two items: a) Open water disposal of dredged material proposals are screened, initially, to ident that alternatives to the very practice are not available. Site designation of an open water disposal ignores that evaluation and assumes that the alternatives to the open water disposal practice hav been found wanting. The law and regulations regarding open water disposal find it to be a reason and practicable solution to the relocation of "suitable" dredged material, we are unable to change law. And, b) For this effort, I suggest, the eastern limit of the zone of siting feasibility be the Matti Sill. The Western limit be Throgs Neck.

3) I needed a place to start and found myself thumbing through the 1998, LIS Study Section 103 Selection Evaluation document done by ENSOR and SAIC for the New England District. Ignoring problems with the document, there is some value to the thing. We might find it a good base for ou

effort. Quoting from the document: "Disposal sites used under the authority of the MPRSA Sectio 103 are subject to several procedures outlined in 40 CFR Section 228.4. " "Disposal sites will be designated by the USEPA based on environmental studies of each site conducted in accordance sections 228.5 and 228.6. I read this to say that the environmental studies are defined in 228.5 & These two sections contain 16 (5 in 228.5 and 11 in 228.6) criteria. I include the criteria here because they define the character of our task and should help in the initial alternatives identificatio **PLEASE, TAKE A FEW MINUTES TO READ THE 16 CRITERIA BEFORE YOU CONSIDER TH CHALLENGE OF DEVELOPING YOUR ALTERNATIVES LIST.**

SECTION 228.5 (General Criteria)

(a) The dumping of dredged material into the ocean will be permitted only at sites or in areas sele to minimize the interference of disposal activities with other activities in the marine environment, particularly avoiding areas of existing fisheries or shellfisheries, and regions of heavy commercial recreational navigation.

(b) Locations and boundaries of disposal sites will be so chosen that temporary perturbations in w quality or other environmental conditions during initial mixing caused by disposal operations anyw within the site can be expected to be reduced to normal ambient seawater levels or to undetectabl contaminant concentrations of effects before reaching any beach, shoreline, marine sanctuary, or known geographically limited fishery or shellfishery.

(c) If at any time during or after disposal site evaluation studies, it is determined that existing disp sites presently approved on an interim basis for ocean dumping do not meet the criteria or site selection set forth in Section 228.5 through 228.6, the use of such sites will be terminated as soon suitable alternate disposal sites can be designated. (NMFS HATES this specific criteria!)

(d) The sizes of ocean disposal sites will be limited in order to localize for identification and control any immediate adverse impacts and permit the implementation of effective monitoring and surveillance programs to prevent adverse long-range impacts. The size, configuration, and locati of any disposal site will be determined as a part of the disposal site evaluation or designation, site study.

(e) USEPA will, wherever feasible, designate ocean dumping sites beyond the edge of the Continental shelf and other such sites that have been historically used.

SECTION 228.6 (Specific Criteria)

(1) Geographical position, depth of water, bottom topography and distance from coast;

(2) Location in relation to breeding, spawning, nursery, feeding or passage areas of living resources in adult or juvenile phases;

(3) Location in relation to beaches and other amenity areas;

(4) Types and quantities of wastes proposed to be disposed of, and proposed methods of release, including methods of packing waste, if any;

(5) Feasibility of surveillance and monitoring;

(6) Dispersal, horizontal transport and vertical mixing characteristics of the area, including prevailing current direction and velocity, if any;

(7) Existence and effects of current and previous discharges and dumping in the area (including cumulative effects);

(8) Interference with shipping, fishing, recreation, mineral extraction, desalination, fish and shellfish culture, areas of special scientific importance and other legitimate uses of the ocean;

(9) The existing water quality and ecology of the site as determined by available data or by trend assessment or baseline surveys;

(10) Potentiality for development or recruitment of nuisance species in the disposal site;

(11) Existence at or in close proximity to the site of any significant natural or cultural features of historical importance.

4) **The Challenge**:

We need to develop a list of aquatic sites that meet the 16 criteria arrayed above. Each site must have some characteristics that can be used to assess its relative importance to LIS and be a reasonable and practicable alternative. There is little time and even less money, to undertake ne studies, but the criteria do not require such an initiative. The criteria require we use available data trend assessments or baseline surveys. The data presented at Port Jefferson by ENSOR et.al. is the website, I'm told.

As a first cut at the alternatives characterization, I offer a "Family of Alternatives" concept that **ma** satisfy our needs. The family includes: a) no action on aquatic site designation; b) all previously (disposal sites in the two basins; c) potential, new sites within the two basins; d) potential old or ne sites outside the two basins; and, e)

possible Confined Disposal Facilities (CDF)/Confined Aquatic Disposal (CAD) sites in aquatic setti in the two basins. I have intentionally excluded upland sites because the criteria do not ask for th Upland disposal is a topic for the EIS but, not for this aspect of the work.

The alternative sites work produced under the various ENSOR efforts could be strengthened by th use of the Providence River alternatives screening matrix. (I'll forward that screening to the partie ASAP.) Between the two packages, the siting criteria objectives could be fully met. However, to to your burden, there are a number of items to consider. These include:

a) Although using the two basins to define the geographic extent of the alternatives selection is on table, please consider and identify other geographic boundaries / limitations that you would prefer applied to the endeavor and why.

b) Physical oceanographic constraints; *i.e.* are we seeking depositional areas or could dispersal/erosional areas be included?

c) Geological constraints; *e.g.* should the sites meet the sediment compatibility (like on like) substrates objective?

d) Chemical constraints;

e) Biological constraints: *e.g.* pelagic, epi-benthic and benthic species use patterns

f) Capacity: I expect that a twenty year capacity should be the objective.

5). We need a meeting of the active parties by the third week in April if the list of preferred alternat is to be ready by early May. We have one month to that date. If we can't physically be in the sam room, a conference call or use of group E-Mail are options. Whatever, time is slipping away.

6. Responses: PLEASE use the reply to all option on all E-Mail unless you want to call me bad names. AND, provide me with additional names/E-Mail addresses of others that need to be in the loop. Deletions are gratefully accepted as well.

Mike Ludwig
NOAA/NMFS

L:\lissitedes

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cc: Mel Cote/R1/USEPA/US@EPA

Subject: LIS EIS announcement

Hello,

Below is a notice that will be mailed to the full Long Island Sound Environmental Impact Statement (LIS EIS) mailing list, and e-mail contacts. Please feel free to pass this along to others. Thanks - Ann

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EPA, Ann Rodney (617-918-1538)

UPDATE ON THE EVALUATION OF POTENTIAL DREDGED MATERIAL DISPOSAL SITES FOR LONG ISLAND SOUND.

This announcement updates the Notice of Intent (NOI) to prepare a federal Environmental Impact Statement (EIS) which would evaluate potential dredged material disposal site(s) within Long Island Sound. The NOI was published in the Federal Register during June1999 and was a formal announcement of the EIS process, beginning with scoping. The scope and the evaluative criteria to be used for site evaluation/selection were developed through National Environmental Policy Act guided formal public scoping meetings, working group meetings and workshops held in Connecticut and New York from 1999 through 2002.

At this time, United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (USEPA) has made a determination to narrow the Zone of Siting Feasibility of the initial effort to theThe EIS will consider the potential designation of one or more dredged material disposal sites in the western and central Long Island Sound regions, while deferring review of the eastern region in a Supplemental EIS to be prepared at a later date. The primary reasons for the decision are: 1) the disposal needs and alternatives of the central and western Long Island Sound regions are geographically and environmentally separate from those of the Eastern Long Island Sound region; 2) the need to assess, in a timely manner, the appropriateness of maintaining operational continuity and continued use of a central LIS disposal site and; 3) this change in scope will not preclude consideration of a comprehensive range of alternatives for disposal site(s) for all three LIS regions.

All identified interested parties, including federal, state and local governments, civic groups, environmental groups, labor and industry, as well as individuals, will remain on the EIS mailing list and will continue to be notified of meetings, workshops, documents and other developments associated with the EIS process.

One aspect of the USACE/EPA public outreach effort has been to supplement mailings by providing public access to all available project information via the World Wide Web

(http://www.epa.gov.region01/eco/lisdredge/ index.html). Information posted to date includes the workplans, reports and fact sheets, alternative site screening criteria, maps, Federal Register Notice, workshop summaries and points of contacts. The website contains information on the field studies which have been conducted to supplement existing information on such subjects as fisheries and oceanography. As additional information, including the results of any additional field studies, becomes available, it will continue to be posted for public review.

The Draft EIS, including any site monitoring plans and management plans (SMMPs, including appendices), will be available for a 45 day public review and comment period commencing on or about February 1, 2003. Concurrently, the Proposed Rulemaking for candidate dredged material disposal sites will be published in the Federal Register and will include a list of any candidate sites to be included in the Federal Regulations. Public meetings will be held to provide additional opportunity to receive comments and information on the Draft EIS. Comments received on the Draft EIS, and responses to those comments, will be included in the Final EIS.

The Final EIS, including SMMPs for any candidate sites, will be prepared and circulated for an additional 30 day review. The Final Rulemaking, which formally records the decision to designate a site(s), will be published in the Federal Register, on or about October 1, 2003 provided that there is approval of a site.

Ann Rodney/R1/USEPA/US@EPA 07/08/02 03:46 PM
To: bay@friendsofthebay.org, bei@debiz.com, bjm@byy.com, bkelly6313@aol.com, bradk@marinenv.com, brbryan@fishersisland.net, ckral@javanet.com, cleanhbr@aol.com, cmta@snet.net, ctmaritime@msn.com, ctpilot@erols.com, CSqueri@aol.com, dajjsj@aol.com, dwnorth@aol.com, esailer@sailerenv.com, essexisland@aol.com, george.proios@co.suffolk.ny.us, gulbran@battelle.org, hanluksam@aol.com, jack@byy.com, johnny.mac@att.net, jsjohnson20@hotmail.com, kwj@bnl.gov, kwj@bnl.gov, "leahl."@savethesound.org, mcmyacht@aol.com, mpurnell@snet.net, mreiser@marinenv.com, mtristin@logistec.com, Milfordtrees@aol.com, rmcomeau@netscape.net, RPOTTS@BYY.com, saintrobert@attbi.com, saybrook@snet.net, spicersmarina@aol.com, tdubno@gatewayt.com, thamesdd@99main.com, wshadel@zoo.uvm.edu
cc: Jean Brochi/R1/USEPA/US@EPA, christopher.j.high@usace.army.mil, epowers@ensr.com, george.wisker@po.state.ct.us, j.evans-brumm@eudoramail.com, jatkins@savethesound.org, knchytal@gw.dec.state.ny.us, ksz1@cornell.edu, Douglas Pabst/R2/USEPA/US@EPA, Patricia Pechko/R2/USEPA/US@EPA, Ann Rodney/R1/USEPA/US@EPA, salata.joseph@snet.net, stennert@BATTELLE.ORG, susan.e.holtham@usace.army.mil, Mark Tedesco/R2/USEPA/US@EPA, David Tomey/R1/USEPA/US@EPA, Mark Westrate/R2/USEPA/US@EPA

Subject: LIS EIS Working Group meeting - July 24th

Hello,
I hope you all had fun and safe 4th of July, and that the summer is treating you well!

There will be a Working Group meeting on Wednesday July 24th from 10:00am to 3:00pm at the Bridgeport Regional Vocational Aquaculture School in Bridgeport, CT.

Two major topics will be discussed: first is the alternative site screening process used to select alternative open water sites in the Central and Western basins of Long Island Sound. The GIS data layer information used to screen sites will be presented, as well as the tiered approach used in the screening process. Second, is the field sampling program for the proposed alternative open water sites. A summary will be presented for the resource areas that are recommended for surveying and sampling, with a discussion of how the field work will be undertaken.

You may be getting a written notice in the mail on this, and others who are not on the Working Group may also get a written notice. Should people who receive the notice, that are not on the Working Group approach you, please have them contact me. Of course everyone is welcome to any meeting we hold.

I hope to send you more information by the end of this week.

I would like to apologize for the short notice, however it was unavoidable.

Again, should you have any questions please feel free to contact me. Thanks - Ann

Ann Rodney
US EPA New England Region
1 Congress Street
Suite 1100, CWQ
Boston, MA 02114-2023
(617) 918-1538
rodney.ann@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

August 30, 2002

Mr. Tobias Glaza, Land Management Coordinator
Eastern Pequot Tribe
391 Norwich-Westerly Road
P.O. Box 208
North Stonington, CT 06359

Paucatuck Eastern Pequot
393 Gold Star Highway
Groton, CT
06340

Re: Long Island Sound Environmental Impact Statement

Dear Mr. Glaza:

The United States Environmental Protection Agency - New England and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the Designation of one or more Long-Term Dredged Material Disposal Sites in the Long Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Long Island Sound region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the four proposed existing disposal sites in Long Island sound, known as the Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS) and New London (NLDN) Disposal Sites, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

EPA would like to take this opportunity to invite the Tribe to participate in the Long Island Sound EIS process. We will be notifying you of any upcoming public meetings and including the Tribe on the Agency's distribution lists for review and comment on the documents concerning this EIS.

Under NEPA, a tribe may be recognized as a cooperating agency if the tribe has any special expertise concerning a project. Accordingly, if the Tribe wants to participate as a cooperating agency, please provide us with documentation of your areas of special expertise for this project by September 30, 2002.

Morever, we are currently assessing the NHPA requirements for this project and hope to consult with you shortly concerning section 106 of the NHPA process.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,

Jean Brochi for

Melville P. Cote Jr.
Manager
Water Quality Unit
Office of Ecosystem Protection (CWQ)

cc: Mark Paivos, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Ann Rodney, EPA
Mel Cote, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

August 30, 2002

Dr. Norman Richards
Mohegan Tribe
P.O. Box 488
Uncasville, CT 06382

Re: Long Island Sound Environmental Impact Statement

Dear Dr. Richards:

The United States Environmental Protection Agency - New England and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the Designation of one or more Long-Term Dredged Material Disposal Sites in the Long Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Long Island Sound region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the four proposed existing disposal sites in Long Island sound, known as the Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS) and New London (NLDN) Disposal Sites, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

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Morever, we are currently assessing the NHPA requirements for this project and hope to consult with you shortly concerning section 106 of the NHPA process.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,

Jean Brochi for

Melville P. Cote Jr.
Manager
Water Quality Unit
Office of Ecosystem Protection (CWQ)

cc: Mark Paivos, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Ann Rodney, EPA
Mel Cote, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

August 30, 2002

Mr. Michael Boland, Director of Natural Resources Protection
Mashantucket Pequot Tribal Nation
Tribal Office
Indiantown Road - P. O. Box 3060
Mashantucket, CT 06339-3060

Re: Long Island Sound Environmental Impact Statement

Dear Mr. Boland:

The United States Environmental Protection Agency - New England and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the Designation of one or more Long-Term Dredged Material Disposal Sites in the Long Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Long Island Sound region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the four proposed existing disposal sites in Long Island sound, known as the Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS) and New London (NLDN) Disposal Sites, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

EPA would like to take this opportunity to invite the Tribe to participate in the Long Island Sound EIS process. We will be notifying you of any upcoming public meetings and including the Tribe on the Agency's distribution lists for review and comment on the documents concerning this EIS.

Under NEPA, a tribe may be recognized as a cooperating agency if the tribe has any special expertise concerning a project. Accordingly, if the Tribe wants to participate as a cooperating agency, please provide us with documentation of your areas of special expertise for this project by September 30, 2002.

Morever, we are currently assessing the NHPA requirements for this project and hope to consult with you shortly concerning section 106 of the NHPA process.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674

Sincerely,

Jean Brochi for

Melville P. Cote Jr.
Manager
Water Quality Unit
Office of Ecosystem Protection (CWQ)

cc: Mark Paivos, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Ann Rodney, EPA
Mel Cote, EPA
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LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

September 30, 2002

Matthew Thomas, Chief
Narragansett Indian Tribe
P.O. Box 268
Charlestown, RI 02813

Re: Rhode Island Sound Environmental Impact Statement

Dear Chief Thomas:

The United States Environmental Protection Agency - New England (EPA) and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under National Environmental Policy Act (NEPA) for the Designation of Long-Term Dredged Material Disposal Sites in the Rhode Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Rhode Island Sound region, including potential sites in the southeastern Massachusetts area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the proposed offshore disposal sites in Rhode Island Sound, known as Sites 69a, 69b, 16 and 18, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

EPA recently sent a letter to the Tribe's National Historic Preservation Act (NHPA) representative inviting the Narragansett Tribe's participation in the Long Island Sound EIS process. The letter indicates that EPA will notify the Tribe of all upcoming public meetings and will include the Tribe on the Agency's distribution lists for review and comment on documents concerning this EIS.

Under NEPA, the lead agency may invite others, including tribes, into the NEPA process as a cooperating agency if the invitee has special expertise concerning a project. Accordingly, we also requested that the Tribe's NHPA representative and the Natural Resource Directors provide EPA with documentation of the Tribe's areas of special expertise that could be of assistance to this project by September 30, 2002 if the tribe would like to participate as a cooperating agency.

Moreover, the Agency also indicated that it is in the process of evaluating National Historic Preservation Act requirements in connection with this project and that we hope to consult with you shortly concerning the Tribe's historic properties.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,

Robert W. Varney
Regional Administrator

cc: John Brown, Narragansett Indian Tribe
Dinalyn Spears, Narragansett Indian Tribe
Marcos Paiva, Army Corps of Engineers
Catherine Rogers, Army Corps of Engineers
Michael Keegan, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

September 30, 2002

Beverly Wright, Chairperson
Wampanoag Tribe of Gay Head
20 Blackbrook Road
Gay Head, MA 02535

RE: Rhode Island Sound Environmental Impact Statement

Dear Chairperson Wright:

The United States Environmental Protection Agency - New England (EPA) and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under National Environmental Policy Act (NEPA) for the Designation of Long-Term Dredged Material Disposal Sites in the Rhode Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Rhode Island Sound region, including potential sites in the southeastern Massachusetts area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the proposed offshore disposal sites in Rhode Island Sound, known as Sites 69a, 69b, 16 and 18, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

EPA recently sent a letter to the Tribe's National Historic Preservation Act (NHPA) representative inviting the Wampanoag Tribe's participation in the Long Island Sound EIS process. The letter indicates that EPA will notify the Tribe of all upcoming public meetings and will include the Tribe on the Agency's distribution lists for review and comment on documents concerning this EIS.

Under NEPA, the lead agency may invite others, including tribes, into the NEPA process as a cooperating agency if the invitee has special expertise concerning a project. Accordingly, we also requested that the Tribe's NHPA representative and the Natural Resource Directors provide EPA with documentation of the Tribe's areas of special expertise that could be of assistance to this project by September 30, 2002 if the tribe would like to participate as a cooperating agency.

Moreover, the Agency also indicated that it is in the process of evaluating National Historic Preservation Act requirements in connection with this project and that we hope to consult with you shortly concerning the Tribe's historic properties.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,

Robert W. Varney
Regional Administrator

cc: Matthew Vanderhoop, Wampanoag Tribe
Bret Sterns, Wampanoag Tribe
Marcos Paiva, Army Corps of Engineers
Catherine Rogers, Army Corps of Engineers
Michael Keegan, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

September 30, 2002

Mark Brown, Tribal Chairman
Mohegan Tribe
P.O. Box 488
Uncasville, CT 06382

Re: Long Island Sound Environmental Impact Statement

Dear Chairman Brown:

The United States Environmental Protection Agency - New England (EPA) and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under National Environmental Policy Act (NEPA) for the Designation of Long-Term Dredged Material Disposal Sites in the Long Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Long Island Sound region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the proposed offshore disposal sites in Long Island Sound, known as Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London(NLDN) Disposal Sites, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

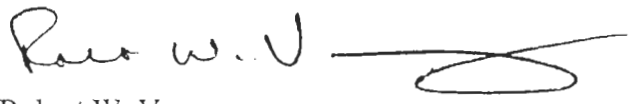
EPA recently sent a letter to the Tribe's National Historic Preservation Act (NHPA) representative inviting the Mohegan Tribe's participation in the Long Island Sound EIS process. The letter indicates that EPA will notify the Tribe of all upcoming public meetings and will include the Tribe on the Agency's distribution lists for review and comment on documents concerning this EIS.

Under NEPA, the lead agency may invite others, including tribes, into the NEPA process as a cooperating agency if the invitee has special expertise concerning a project. Accordingly, we also requested that the Tribe's NHPA representative and the Natural Resource Directors provide EPA with documentation of the Tribe's areas of special expertise that could be of assistance to this project by September 30, 2002 if the tribe would like to participate as a cooperating agency.

Moreover, the Agency also indicated that it is in the process of evaluating National Historic Preservation Act requirements in connection with this project and that we hope to consult with you shortly concerning the Tribe's historic properties.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,



Robert W. Varney
Regional Administrator

cc: Norman Richards, Mohegan Tribal Office
Marcos Paiva, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

September 30, 2002

Marsha Flowers, Chairwoman
Eastern Pequot Tribe
391 Norwich-Westerly Road
P.O. Box 208
North Stonington, CT 06359

Re: Long Island Sound Environmental Impact Statement

Dear Chairwoman Flowers:

The United States Environmental Protection Agency - New England (EPA) and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under National Environmental Policy Act (NEPA) for the Designation of Long-Term Dredged Material Disposal Sites in the Long Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Long Island Sound region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the proposed offshore disposal sites in Long Island Sound, known as Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London(NLDN) Disposal Sites, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

EPA recently sent a letter to the Tribe's National Historic Preservation Act (NHPA) representative inviting the Eastern Pequot Tribe's participation in the Long Island Sound EIS process. The letter indicates that EPA will notify the Tribe of all upcoming public meetings and will include the Tribe on the Agency's distribution lists for review and comment on documents concerning this EIS.

Under NEPA, the lead agency may invite others, including tribes, into the NEPA process as a cooperating agency if the invitee has special expertise concerning a project. Accordingly, we also requested that the Tribe's NHPA representative and the Natural Resource Directors provide EPA with documentation of the Tribe's areas of special expertise that could be of assistance to this project by September 30, 2002 if the tribe would like to participate as a cooperating agency.

Moreover, the Agency also indicated that it is in the process of evaluating National Historic Preservation Act requirements in connection with this project and that we hope to consult with you shortly concerning the Tribe's historic properties.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,

Robert W. Varney
Regional Administrator

cc: Tobias Glaza, Eastern Pequot Tribal Office
Marcos Paiva, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

September 30, 2002

James A. Cunha, Jr., Chief
Paucatuck Eastern Pequot Tribal Office
393 Gold Star Highway
Groton, CT 06340

Re: Long Island Sound Environmental Impact Statement

Dear Chief Cunha:

The United States Environmental Protection Agency - New England (EPA) and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under National Environmental Policy Act (NEPA) for the Designation of Long-Term Dredged Material Disposal Sites in the Long Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Long Island Sound region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the proposed offshore disposal sites in Long Island Sound, known as Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London(NLDN) Disposal Sites, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

EPA recently sent a letter to the Tribe's National Historic Preservation Act (NHPA) representative inviting the Paucatuck Tribe's participation in the Long Island Sound EIS process. The letter indicates that EPA will notify the Tribe of all upcoming public meetings and will include the Tribe on the Agency's distribution lists for review and comment on documents concerning this EIS.

Under NEPA, the lead agency may invite others, including tribes, into the NEPA process as a cooperating agency if the invitee has special expertise concerning a project. Accordingly, we also requested that the Tribe's NHPA representative and the Natural Resource Directors provide EPA with documentation of the Tribe's areas of special expertise that could be of assistance to this project by September 30, 2002 if the tribe would like to participate as a cooperating agency.

Moreover, the Agency also indicated that it is in the process of evaluating National Historic Preservation Act requirements in connection with this project and that we hope to consult with you shortly concerning the Tribe's historic properties.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,

Robert W. Varney
Regional Administrator

cc: Marcos Paiva, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

September 30, 2002

Kenneth Reels, Chairman
Mashantucket Pequot Tribal Nation
Tribal Office
Indiantown Road - P.O. Box 3060
Mashantucket, CT 06339-3060

Re: Long Island Sound Environmental Impact Statement

Dear Chairman Reels:

The United States Environmental Protection Agency - New England (EPA) and the U.S. Army Corps of Engineers, New England District are in the process of developing an Environmental Impact Statement (EIS) under National Environmental Policy Act (NEPA) for the Designation of Long-Term Dredged Material Disposal Sites in the Long Island Sound. The purpose of this EIS is to consider the potential designation of one or more long term dredged material disposal sites in the Long Island Sound region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the proposed offshore disposal sites in Long Island Sound, known as Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London(NLDN) Disposal Sites, as well as additional alternatives, including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

EPA recently sent a letter to the Tribe's National Historic Preservation Act (NHPA) representative inviting the Mashantucket Tribe's participation in the Long Island Sound EIS process. The letter indicates that EPA will notify the Tribe of all upcoming public meetings and will include the Tribe on the Agency's distribution lists for review and comment on documents concerning this EIS.

Under NEPA, the lead agency may invite others, including tribes, into the NEPA process as a cooperating agency if the invitee has special expertise concerning a project. Accordingly, we also requested that the Tribe's NHPA representative and the Natural Resource Directors provide EPA with documentation of the Tribe's areas of special expertise that could be of assistance to this project by September 30, 2002 if the tribe would like to participate as a cooperating agency.

Moreover, the Agency also indicated that it is in the process of evaluating National Historic Preservation Act requirements in connection with this project and that we hope to consult with you shortly concerning the Tribe's historic properties.

If you have any questions, please contact Jean Brochi at (617) 918-1536 or Valerie Bataille at (617) 918-1674.

Sincerely,

Robert W. Varney
Regional Administrator

cc: Michael Boland, Mashantucket Pequot Tribal Office
Marcos Paiva, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
David Tomey, EPA
Jean Brochi, EPA
LeAnn Jensen, EPA

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO:
ATTENTION OF:

December 10, 2002

Engineering/Planning Division
Evaluation Branch

Ms. Karen Chytalo
New York Department of Environmental Conservation
Bureau of Marine Resources
205 N. Belle Meade Road, Suite 1
East Setauket, NY 11733

Dear Ms. Chytalo:

This letter is in regard to the Long Island Sound Dredged Material Disposal Site Designation Environmental Impact Statement (EIS), and available resource data from your agency that is applicable to the five general and eleven site specific criteria outlined in the Marine Protection Research and Sanctuaries Act (MPRSA) for designation of dredged material disposal sites, for use in the EIS analysis.

We are in the final stages of completing the data gathering step for the preparation of the EIS, and would like to ensure that we have obtained all the information and data that is available from the state of New York either in an electronic GIS format, on existing maps, reports, etc. It is our understanding that some information has been obtained through email and telephone conversations with Mr. Mike Ludwig, National Marine Fisheries Service, and the Corps contractor, Battelle. To date, it is our understanding that we have obtained information regarding two artificial reef sites, lease areas, two wildlife refuges, parks and recreation areas, and tidal wetlands. We would appreciate any other information that your department may have available, or, confirmation that no other information is available at this time. A listing of the MPRSA criteria is attached for your use. We are particularly interested in obtaining any available electronic GIS data for fisheries and shellfisheries resources, aquatic vegetation and cultural resources for the Sound.

We would appreciate it if you could inform us by December 31, 2002 on the availability of the resource data and information. Should there be any questions, please feel free to contact Ms. Sue Holtham, at (978) 318-8536, or at susan.e.holtham@usace.army.mil, or Mr. Mark Habel at (978) 318-8871, or at mark.l.habel@usace.army.mil. Thank you very much for assistance.

Sincerely,

John R. Kennelly
Deputy Chief, Engineering/Planning Division

Enclosure

Copy Furnished:

Mr. Rod McNeil
New York Department of State
Division of Coastal Resources
41 State Street
Albany, New York 12231-0001

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF:

December 10, 2002

Engineering/Planning Division
Evaluation Branch

Mr. Rod McNeil
New York Department of State
Division of Coastal Resources
41 State Street
Albany, New York 12231-0001

Dear Mr. McNeil:

This letter is in regard to the Long Island Sound Dredged Material Disposal Site Designation Environmental Impact Statement (EIS), and available resource data from your agency that is applicable to the five general and eleven site specific criteria outlined in the Marine Protection Research and Sanctuaries Act (MPRSA) for designation of dredged material disposal sites, for use in the EIS analysis.

We are in the final stages of completing the data gathering step for the preparation of the EIS, and would like to ensure that we have obtained all the information and data that is available from the state of New York either in an electronic GIS format, on existing maps, reports, etc. We have also been working with the New York DEC Region 1 office in East Setauket, New York in obtaining this information. To date, we have obtained information regarding two artificial reef sites, lease areas, two wildlife refuges, parks and recreation areas, and tidal wetlands. We would appreciate any other information that your department may have available, or, confirmation that no other information is available at this time. A listing of the MPRSA criteria is enclosed for your use. We are particularly interested in obtaining any available electronic GIS data for fisheries and shellfisheries resources, aquatic vegetation and cultural resources for the Sound.

We would appreciate it if you could inform us by December 31, 2002 on the availability of the resource data and information. Should there be any questions, please feel free to contact Ms. Sue Holtham, at (978) 318-8536, or at susan.e.holtham@usace.army.mil, or Mr. Mark Habel at (978) 318-8871, or at mark.l.habel@usace.army.mil. Thank you very much for your assistance.

Sincerely,

John R. Kennelly
Deputy Chief, Engineering/Planning Division

Enclosure

Copy Furnished:

Ms. Karen Chytalo
New York Department of Environmental Conservation
Bureau of Marine Resources
205 N. Belle Meade Road, Suite 1
East Setauket, New York 11733

Marine Protection, Research and Sanctuaries Act of 1972

40 CFR § 228.6 Specific Criteria for Site Selection.
In the selection of disposal sites, ...the following factors will be considered:

(1) *Geographical position, depth of water, bottom topography and distance from coast;*

(2) Location in relation or breeding, spawning, nursery, feeding, or passage areas of living resources in adult or juvenile phases;

(3) Location in relation to beaches and other amenity areas;

(4) Types and quantities of wastes proposed to be disposed of, and proposed methods of release, including methods of packing the waste, if any;

(5) Feasibility of surveillance and monitoring;

(6) Dispersal, horizontal transport and vertical mixing characteristics of the area, including prevailing current direction and velocity, if any;

(7) Existence and effects of current and previous discharges and dumping in the area (including cumulative effects);

(8) Interference with shipping, fishing, recreation, mineral extraction, desalination, fish and shellfish culture, areas of special scientific importance and other legitimate uses of the ocean;

(9) The existing water quality and ecology of the site as determined by available data or by trend assessment or baseline surveys;

(10) Potentiality for the development or recruitment of nuisance species in the disposal site;

(11) Existence at or in close proximity to the site of any significant natural or cultural features of historical importance.

Marine Protection, Research and Sanctuaries Act of 1972

40 CFR § 228.5. General criteria for the selection of sites.

(a) The dumping of dredged material into the ocean will be permitted only at sites or in areas selected to minimize the interference of disposal activities with other activities in the marine environment, particularly avoiding areas of existing fisheries or shellfisheries, and regions of heavy commercial or recreational navigation.

(b) Locations and boundaries of disposal sites will be so chosen that temporary perturbations in water quality or other environmental conditions during initial mixing caused by disposal operations anywhere within the site can be expected to be reduced to normal ambient seawater levels or to undetectable contaminant concentrations of effects before reaching any beach, shoreline, marine sanctuary, or known geographically limited fishery or shellfishery.

(c) If at any time during or after disposal site evaluation studies, it is determined that existing disposal sites presently approved on an interim basis for ocean dumping do not meet the criteria for site selection set forth in Sections 228.5 through 228.6, the use of such sites will be terminated as soon as suitable alternate disposal sites can be designated.

(d) The sizes of ocean disposal sites will be limited in order to localize for identification and control any immediate adverse impacts and permit the implementation of effective monitoring and surveillance programs to prevent adverse long-range impacts. The size, configuration, and location of any disposal site will be determined as a part of the disposal site evaluation or designation study site.

(e) USEPA will, wherever feasible, designate ocean dumping sites beyond the edge of the continental shelf and other such sites that have been historically uses.

January 10, 2003

Engineering/Planning Division

Mr. John Blevin
National Marine Fisheries Service (NEFSC)
166 Water Street
Woods Hole, MA 02543

Dear Mr. Blevin:

The U.S. Army Corps of Engineers, New England District, in cooperation with the U.S. Environmental Protection Agency, Region 1, is preparing an Environmental Impact Statement to consider the potential designation of one or more dredged material disposal sites in the waters of Long Island Sound. To fully consider the socio-economic impacts of this potential designation on commercial fishing we need commercial fishing data by port within Statistical Area 611. Specifically, we would like to request that the following data be provided in spreadsheet format (e.g., *.rpt format):

- Landings 1984-2001
- Statistical area 611
- year
- month
- species
- port landed
- trip type
- weight
- value

We would appreciate receiving these data by January 20, 2003. Please contact Ms. Sue Holtham at 978-318-8536 or Mr. Mark Habel at 978-318-8871 if you have any questions regarding this request. Thank you for your cooperation.

Sincerely

John R. Kennelly
Deputy Chief, Engineering Planning Division

cc: Ms. Holtham (Eval)
Planning Branch LIS EIS Files

McLeod, Lynn

From: Rodney.Ann@epamail.epa.gov
Sent: Thursday, January 16, 2003 11:13 AM
To: bay@friendsofthebay.org; bei@debiz.com; bjm@byy.com; bkelly6313@aol.com; bradk@marinenv.com; brbryan@fishersisland.net; ckral@javanet.com; cleanhbr@aol.com; cmta@snet.net; ctmaritime@msn.com; ctpilot@erols.com; CSqueri@aol.com; dajjsj@aol.com; dwnorth@aol.com; esailer@sailerenv.com; essexisland@aol.com; george.proios@co.suffolk.ny.us; gulbran@BATTELLE.ORG; hanluksam@aol.com; jack@byy.com; johnny.mac@att.net; jsjohnson20@hotmail.com; kwj@bnl.gov; kwj@bnl.gov; "leahl."@savethesound.org; llopez@savethesound.org; mcmyacht@aol.com; mpurnell@snet.net; mreiser@marinenv.com; mtristin@logistec.com; Mfdbadger@aol.com; Milfordtrees@aol.com; rmcomeau@netscape.net; RPOTTS@BYY.com; saintrobert@attbi.com; spicersmarina@aol.com; stephen@saybrook.com; tdubno@gatewayt.com; thamesdd@99main.com; wshadel@zoo.uvm.edu
Cc: aflechic@gw.dec.state.ny.us; bob91632@aol.com; bonnevien@BATTELLE.ORG; brochi.jean@epamail.epa.gov; bstearns@wampanoagtribe.net; Brownjbb123@aol.com; christopher.j.high@usace.army.mil; cote.mel@epamail.epa.gov; DSpears@nitribe.org; ecopley@ensr.com; erika.swanson@mail.house.gov; george.wisker@po.state.ct.us; huntc@BATTELLE.ORG; j.evans-brumm@eudoramail.com; jatkins@savethesound.org; jdieterich@town.huntington.ny.us; knchytal@gw.dec.state.ny.us; knchytal@gw.dec.state.ny.us; ksz1@cornell.edu; mcleod@BATTELLE.ORG; mfdradger@aol.com; MBoland@MPTN.org; NRichards@moheganmail.com; Pabst.Douglas@epamail.epa.gov; Pechko.patricia@epamail.epa.gov; rodney.ann@epamail.epa.gov; salata.joseph@epamail.epa.gov; stennert@BATTELLE.ORG; susan.e.holtham@usace.army.mil; Tedesco.Mark@epamail.epa.gov; Tglaza@aol.com; Westrate.mark@epamail.epa.gov
Subject: LIS EIS website - 2 reports posted

Hello,
Happy New Year! I hope all of you had successful holidays.

This e-mail is an FYI. There are two "new" reports posted on the LIS EIS website:
2002 Reports & Factsheets:
#9. - Sediment Profile Image Analysis at the Historic Bridgeport & Milford Sites for the LIS EIS Report - September 2002. This report is 59 pages and has many color images, tables, and figures. (I have been told is very difficult to download). #10. - Alternative Site Screening Report - September 2002. This report is 21 pages.

It is anticipated that 4 more reports will be posted between February and April (2003), and I will try to inform you when reports are posted. It is also anticipated that a working group meeting may be held in late spring.

Again, please feel free to contact me should you have any questions.

Thanks - Ann

Ann Rodney
US EPA New England Region
1 Congress Street
Suite 1100, CWQ
Boston, MA 02114-2023
(617) 918-1538
rodney.ann@epa.gov

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

January 30, 2003

Engineering/Planning Division
Evaluation Branch

Ms. Ruth L. Pierpont, Director
Bureau of Field Services
NY State Parks, Recreation, and Historic Preservation
Peebles Island, Post Office Box 189
Waterford, New York 12188-0189

Dear Ms. Pierpont:

The U.S. Army Corps of Engineers, New England District, and the U.S. Environmental Protection Agency (EPA), Region 1, are in the process of developing an Environmental Impact Statement (EIS) for the designation of long-term dredged material disposal sites in Long Island Sound (LIS). The purpose of this EIS is to consider the potential designation of one or more long-term dredged material disposal sites in the LIS region, including potential sites in the Block Island Sound area, under section 102(c) of the Marine Protection, Research and Sanctuaries Act. The EIS will provide an evaluation of the proposed offshore disposal sites in LIS, known as Western LIS (WLIS), Central LIS (CLIS), Cornfield Shoals (CSDS), and New London (NLDS) Disposal Sites, as well as additional alternatives including other possible open water disposal sites in this and adjacent waters, other dredged material disposal and management techniques, and a no action alternative.

Please note that this EIS will focus primarily upon the central and western portions of LIS. The eastern portion of the LIS, including Block Island Sound, will be dealt with in the future through the use of a supplementary EIS. Coordination with the regional tribal entities is being conducted separate from this notification.

In accordance with the National Historic Preservation Act of 1966, as amended, the Corps has conducted an archaeological/geomorphological survey of the historic Bridgeport and the historic Milford disposal sites in LIS. A copy of this report is enclosed for your review and comment. As the report recommends, should either the Bridgeport or Milford sites be recommended for designation during the EIS process, additional remote sensing surveys will be required to achieve 100% coverage of the site(s). If anomalies are detected during this survey that appear to be significant cultural resources, then further underwater archaeological investigation will be needed to properly identify the nature of these targets. Throughout the process, the Corps and EPA will continue to consult with your office and other interested parties to identify all cultural

resources that may be present. Please note that project alternatives evaluated in the EIS could potentially be located in Connecticut, Rhode Island, and New York. Coordination with the respective state historic preservation officers would continue in compliance with Section 106 of the National Historic Preservation Act and implementing regulations 36 CFR 800.

If you have any questions, please contact Mr. Marc Paiva, the Corps project archaeologist at 978-318-8796.

Sincerely,

John R. Kennelly
Deputy Chief, Engineering/Planning Division

Enclosure

SAME LETTER SENT TO (with enclosure):
Mr. John W. Shannahan, SHPO
Office of the State Historic Preservation Officer
59 South Prospect Street
Hartford, Connecticut 06106

Copy furnished (with enclosure):
Dr. Nicholas Bellantoni, State Archaeologist
Office of Connecticut State Archaeology
University of Connecticut
U-214
Storrs, Connecticut 06269-4214

Copies furnished (without enclosure):
Ms. Jean Brochi, Project Manager
Environmental Protection Agency
Region 1, CWQ
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Ms. Ann Rodney
Environmental Protection Agency
Region 1, CWQ
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Mr. John F. Vetter, EPA Archaeologist
Environmental Protection Agency, Region 2
Strategic Planning and Multimedia Program Branch
290 Broadway, 25th Floor
New York, New York 10007-1866

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

January 30, 2003

Engineering/Planning Division
Evaluation Branch

Mr. John W. Shannahan, SHPO
Office of the State Historic Preservation Officer
59 South Prospect Street
Hartford, Connecticut 06106

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Deputy Chief, Engineering/Planning Division

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Environmental Protection Agency
Region 1, CWQ
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Ms. Ann Rodney
Environmental Protection Agency
Region 1, CWQ
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Mr. John F. Vetter, EPA Archaeologist
Environmental Protection Agency, Region 2
Strategic Planning and Multimedia Program Branch
290 Broadway, 25th Floor
New York, New York 10007-1866

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 11, 2003

Honorable Marcia Flowers
Tribal Chairwoman
Eastern Pequot Indians of Connecticut
391 Norwich Westerly Road
P.O. Box 208
North Stonington, CT 06359

Re: Environmental Study of Dredged Material Disposal Site Designations for Long Island Sound

Dear Chairwoman Flowers:

Thank you for your letter of October 8, 2002, expressing the Eastern Pequot Tribal Nation's willingness and desire to serve as a "cooperating agency" with the New England Regional Office of the United States Environmental Protection Agency (EPA NE) as we work to develop an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) concerning the potential designation of long-term dredged material disposal sites for use in Long Island Sound. Through this effort, we hope to ensure the protection of the aquatic environment while facilitating safe, environmentally sound dredging and dredged material disposal as needed to ensure safe navigation and marine commerce in the Sound.

In addition to an extensive public involvement effort for the general public, EPA is working closely on this project with the U.S. Army Corps of Engineers (the Corps), the National Marine Fisheries Service, and the States of Connecticut and New York. The Corps is already serving as a cooperating agency for the EIS. We now welcome the Eastern Pequot Tribal Nation into this process in the role of a "cooperating agency." Obviously, the Tribe is not an "agency" of the federal government. However, a Memorandum from James Connaughton, Chairman of the President's Council on Environmental Quality (CEQ) (January 30, 2002), encourages federal agencies to more "actively consider" designating federal, state and *tribal* government agencies with either jurisdiction by law or special expertise related to issues requiring NEPA analysis. A copy of this memorandum is attached. See also 40 C.F.R. § 1508.5.

"Cooperating agency" status is addressed in the regulations of the President's Council on Environmental Quality at 40 C.F.R. § 1501.7 (a copy is attached to this letter). CEQ Chairman Connaughton's memorandum explains that "[c]ooperating agency status is a major component of agency stakeholder involvement that neither enlarges nor diminishes the decision-making authority of any agency involved in the NEPA process." The same holds for non-federal cooperating agencies. In addition, Chairman Connaughton's memorandum states the following:

> [i]n order to assure that the NEPA process proceeds efficiently, agencies responsible for NEPA analysis are urged to set time limits, identify milestones, assign responsibilities for analysis and documentation, specify the scope and detail of the cooperating agency's contribution, and establish other appropriate ground-rules addressing issues such as availability of pre-decisional information.

Several of the issues listed in the above paragraph are addressed below.

First, your letter states that "the Tribe feels it may be able to provide historical and cultural expertise that could be of assistance in the project." We agree that you may be able to assist this project by providing special substantive information and analytical expertise on historic and cultural issues. As a result, we are designating you as a cooperating agency *with respect to these issues*. We, of course, welcome your comments on other issues as well, and we will consider any such comments carefully, but we are especially hoping for assistance on the historic and cultural issues you mention.

Second, as a cooperating agency, you will be asked to review and comment upon "preliminary draft" segments of the Draft EIS, as well as certain draft materials developed to support the Draft EIS. With respect to supporting materials, for example, we have already shared a draft historical/archeological report with you. After review by EPA and the cooperating agencies, the preliminary draft materials may be revised under the direction of EPA. Ultimately, a final Draft EIS will be formally released by EPA to the public for review and comment under the NEPA process. EPA asks that you exercise care to keep confidential the preliminary draft materials that are being provided to you only because of your role as a cooperating agency. We presently intend that these materials will be shared for deliberations only among the pertinent cooperating agencies and we ask for your assistance in this regard.

Third, please be aware that because this project is subject to deadlines related to a settlement agreement from a court case, the review periods for the preliminary draft materials are on a very tight schedule. To ensure that the project is completed in a timely manner, EPA anticipates that it and the cooperating agencies will have only

two weeks to review and comment upon preliminary draft segments of the EIS (and supporting materials). As discussed above, EPA will then release revised drafts to the general public for a 45-day comment period. Please note that you can also provide us with comments on the Draft EIS during the formal comment period provided for the general public. It is imperative that the Agency and the cooperating agencies comply with these tight review deadlines.

EPA will also inform you of upcoming meetings and may send you additional materials to review and comment upon concerning historic and cultural issues as the project goes forward. If you have any comments concerning materials that have already been given to your Tribe, please submit them to EPA NE as soon as you can.

Thank you again for your interest in serving as a cooperating agency. EPA NE looks forward to working with you on this important project.

Sincerely,

Robert W. Varney
Regional Administrator

Enclosure

cc: Tobias Glaza, Environmental Coordinator, Eastern Pequot Tribal Nation
Marcos Paiva, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
Jean Brochi, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 11, 2003

Honorable Matthew Thomas, Chief
Narragansett Indian Tribe
P.O. Box 268
Charlestown, RI 02813

Re: Environmental Study of Dredged Material Disposal Site Designations for Long Island Sound and Rhode Island

Dear Chief Thomas:

Thank you for the email dated October 2, 2002, from John Brown, Tribal Historic Preservation Officer (THPO), expressing the Narragansett Indian Tribes willingness and desire to serve as a cooperating agency with the New England Regional Office of the United States Environmental Protection Agency (EPA-NE) as we work to develop an Environmental Impact Statements (IS) under the National Environmental Policy Act (NEPA) concerning the potential designation of long-term dredged material disposal sites for use in Rhode Island Sound and Long Island Sound. Through this effort, we hope to ensure the protection of the aquatic environment while facilitating safe, environmentally sound dredging and dredged material disposal as needed to ensure safe navigation and marine commerce in the Sound.

In addition to an extensive public involvement effort for the general public, EPA is working closely on this project with the U.S. Army Corps of Engineers (the Corps), the National Marine Fisheries Service, and the States of Connecticut and New York. The Corps is already serving as a cooperating agency for the IS. We now welcome the Eastern Paced Tribal Nation into this process in the role of a "cooperating agency." Obviously, the Tribe is not an "agency" of the federal government. However, a Memorandum from James Connaughton, Chairman of the President's Council on Environmental Quality (SEQ.) (January 30, 2002), encourages federal agencies to more "actively consider" designating federal, state and *tribal* government agencies with either jurisdiction by law or special expertise related to issues requiring NEPA analysis. A copy of this memorandum is attached. See also 40 C.F.R. § 1508.5.

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> [i]n order to assure that the NEPA process proceeds efficiently, agencies responsible for NEPA analysis are urged to set time limits, identify milestones, assign responsibilities for analysis and documentation, specify the scope and detail of the cooperating agency's contribution, and establish other appropriate ground-rules addressing issues such as availability of pre-decisional information.

Several of the issues listed in the above paragraph are addressed below.

First, your letter states that "the Tribe feels it may be able to provide historical and cultural expertise that could be of assistance in the project." We agree that you may be able to assist this project by providing special substantive information and analytical expertise on historic and cultural issues. As a result, we are designating you as a cooperating agency *with respect to these issues*. We also welcome your comments concerning your scientific knowledge regarding fishing, whaling and other marine animals in these areas under investigation. We, of course, welcome your comments on other issues as well, and we will consider any such comments carefully, but we are especially hoping for assistance on the historic and cultural issues you mention.

Second, as a cooperating agency, you will be asked to review and comment upon "preliminary draft" segments of the Draft IS, as well as certain draft materials developed to support the Draft IS. With respect to supporting materials, for example, we have already shared a draft historical/archeological report with you. After review by EPA and the cooperating agencies, the preliminary draft materials may be revised under the direction of EPA. Ultimately, a final Draft IS will be formally released by EPA to the public for review and comment under the NEPA process. EPA asks that you exercise care to keep confidential the preliminary draft materials that are being provided to you only because of your role as a cooperating agency. We presently intend that these materials will be shared for deliberations only among the pertinent cooperating agencies and we ask for your assistance in this regard.

Third, please be aware that because the Long Island Sound EIS is subject to deadlines related to a settlement agreement from a court case, the review periods

for the preliminary draft materials are subject to a very tight schedule. To ensure that the project is completed in a timely manner, EPA anticipates that it and the cooperating agencies will have only two weeks to review and comment upon preliminary draft segments of the IS (and supporting materials). As discussed above, EPA will then release revised drafts to the general public for a 45-day comment period. Please note that you can also provide us with comments on the Draft IS during the formal comment period provided for the general public. It is imperative that the Agency and the cooperating agencies comply with these tight review deadlines.

EPA will also inform you of upcoming meetings and may send you additional materials to review and comment upon concerning historic and cultural issues as the project goes forward. If you have any comments concerning materials that have already been given to your Tribe, please submit them to EPA NE as soon as you can.

Thank you again for your interest in serving as a cooperating agency. EPA NE looks forward to working with you on this important project.

Sincerely,

Robert W. Varney
Regional Administrator

Enclosure

cc: John Brown, THEO
Dinalyn Spears, Director of Natural Resources
Marcos Paiva, Army Corps of Engineers
Susan Holtham, Army Corps of Engineers
Mark Habel, Army Corps of Engineers
Chris High, Army Corps of Engineers
Valerie Bataille, EPA
Jean Brochi, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 13, 2003

Mr. Michael Bartlett, Supervisor
U.S. Fish and Wildlife Service-Ecological Services
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

RE: Long Island Sound Environmental Impact Statement

Dear Mr. Bartlett,

The New England Regional Office of the United States Environmental Protection Agency (EPA NE) and the U.S. Army Corps of Engineers are preparing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the designation of dredged material disposal sites in the central and western basins of Long Island Sound, consistent with the Marine Protection Research and Sanctuaries Act (MPRSA). The proposed project will involve the designation of two dredged material disposal sites, one in the western portion of Long Island Sound and one in the central portion of Long Island Sound.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, we are coordinating with your agency to insure that designation of disposal sites will not jeopardize the continued existence of endangered and threatened species under the jurisdiction of the of the U.S. Fish and Wildlife Service (FWS).

We appreciate your input and encourage your continued cooperation under NEPA as we near completion of the EIS process. In addition, this letter is to (1) obtain your comments on this project pursuant to the Fish and Wildlife Coordination Act, as amended and (2) to request a list of endangered and threatened species for the project area pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended. A location map of the alternative dredged material disposal sites to be considered in the EIS is enclosed.

If you require additional information or have any questions, please contact the EPA Project Manager, Ms. Jean Brochi at (617) 918-1536 (or by e-mail, Jean.Brochi@epa.gov).

Sincerely,

Roger Janson,
Associate Director, Surface Waters Program

Enclosure

Cc: Greg Mannesto USFWS-RI, Dr. Mamie A. Parker-USFWS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 13, 2003

Mr. David Stillwell
U.S. Fish and Wildlife Service
3817 Luker Road
Courtland, NY 13045

RE: Long Island Sound Environmental Impact Statement

Dear Mr. Stillwell,

The New England Regional Office of the United States Environmental Protection Agency (EPA NE) and the U.S. Army Corps of Engineers are preparing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the designation of dredged material disposal sites in the central and western basins of Long Island Sound, consistent with the Marine Protection Research and Sanctuaries Act (MPRSA). The proposed project will involve the designation of two dredged material disposal sites, one in the western portion of Long Island Sound and one in the central portion of Long Island Sound.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, we are coordinating with your agency to insure that designation of disposal sites will not jeopardize the continued existence of endangered and threatened species under the jurisdiction of the of the U.S. Fish and Wildlife Service (FWS).

We appreciate your input and encourage your continued cooperation under NEPA as we near completion of the EIS process. In addition, this letter is to (1) obtain your comments on this project pursuant to the Fish and Wildlife Coordination Act, as amended, and (2) to request a list of endangered and threatened species for the project area pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended. A location map of the alternative dredged material disposal sites to be considered in the EIS is enclosed.

If you require additional information or have any questions, please contact the EPA Project Manager, Ms. Jean Brochi at (617) 918-1536 (or by e-mail, Jean.Brochi@epa.gov).

Sincerely,

Roger Janson
Associate Director, Surface Water Programs

Enclosure

cc: Steven Mars -USFWS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 13, 2003

Ms. Patricia Kurkul, Regional Administrator
National Marine Fisheries Service,
One Blackburn Drive
Gloucester, Massachusetts 01930-2298

RE: Long Island Sound Environmental Impact Statement

Dear Ms. Kurkul:

The New England Regional Office of the United States Environmental Protection Agency (EPA NE) and the U.S. Army Corps of Engineers are preparing a Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the designation of dredged material disposal sites in the central and western basins of Long Island Sound, consistent with the Marine Protection Research and Sanctuaries Act (MPRSA). The proposed project will involve the designation of two dredged material disposal sites, one in the western portion of Long Island Sound and one in the central portion of Long Island Sound.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, we are coordinating with your agency to insure that designation of disposal sites will not jeopardize the continued existence of endangered and threatened species under the jurisdiction of the National Marine Fisheries Service.

We appreciate your input and encourage your continued cooperation under NEPA as we near completion of the EIS process. In addition, this letter is to (1) obtain your comments on this project pursuant to the Fish and Wildlife Coordination Act, as amended, (2) to request a list of endangered and threatened species for the project area pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended, and (3) begin the Essential Fish Habitat consultation process. A location map of the alternative dredged material disposal sites to be considered in the EIS is enclosed.

We appreciate the assistance provided throughout this EIS process from Mr. Mike Ludwig of the Milford Laboratory.

If you require additional information or have any questions, please contact the EPA Project Manager, Ms. Jean Brochi at (617) 918-1536 (or by e-mail, Jean.Brochi@epa.gov).

Sincerely,

Mel Cote
Manager, Water Quality Unit

Enclosure

cc: Mike Ludwig- NMFS Milford

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 13, 2003

Mr. Art Rocque
Commissioner
CT Department of Environmental Protection
79 Elm Street
Hartford CT 06106-5127

RE: Long Island Sound Environmental Impact Statement

Dear Mr. Rocque,

The New England Regional Office of the United States Environmental Protection Agency (EPA NE) and the U.S. Army Corps of Engineers are preparing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the designation of dredged material disposal sites in the central and western basins of Long Island Sound, consistent with the Marine Protection Research and Sanctuaries Act (MPRSA). The proposed project will involve the designation of two dredged material disposal sites, one in the western portion of Long Island Sound and one in the central portion of Long Island Sound.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, we are coordinating with your agency to insure that designation of disposal sites will not jeopardize the continued existence of endangered and threatened species under the state endangered species program of the state of Connecticut.

We appreciate your input and encourage your continued cooperation under NEPA as we near completion of the EIS process. In addition, this letter is to request a list of state endangered and threatened species for the project area. A location map of the alternative dredged material disposal sites to be considered in the EIS is enclosed.

We appreciate the assistance provided throughout this EIS process from Mr. George Wisker of the Long Island Sound Program office.

If you require additional information or have any questions, please contact the EPA Project Manager, Ms. Jean Brochi at (617) 918-1536 (or by e-mail, Jean.Brochi@epa.gov).

Sincerely,

Mel Cote
Manager, Water Quality Unit

Enclosure
CC: George Wisker-CTDEP, Dawn McKay -CT DEP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 13, 2003

Mr. Randy A. Daniels
Secretary of State
NY DOS
41 State Street
Albany, NY 12231

RE: Long Island Sound Environmental Impact Statement

Dear Mr. Daniels,

The New England Regional Office of the United States Environmental Protection Agency (EPA NE) and the U.S. Army Corps of Engineers are preparing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the designation of dredged material disposal sites in the central and western basins of Long Island Sound, consistent with the Marine Protection Research and Sanctuaries Act (MPRSA). The proposed project will involve the designation of two dredged material disposal sites, one in the western portion of Long Island Sound and one in the central portion of Long Island Sound.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, we are coordinating with your agency to insure that designation of disposal sites will not jeopardize the continued existence of endangered and threatened species under the state endangered species program of the state of New York.

We appreciate your input and encourage your continued cooperation under NEPA as we near completion of the EIS process. In addition, this letter is to request a list of state endangered and threatened species for the project area. A location map of the alternative dredged material disposal sites to be considered in the EIS is enclosed.

If you require additional information or have any questions, please contact the EPA Project Manager, Ms. Jean Brochi at (617) 918-1536 (or by e-mail, Jean.Brochi@epa.gov).

Sincerely,

Mel Cote
Manager, Water Quality Unit

Enclosure

CC: Rod McNeil- NY DOS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 13, 2003

Ms. Erin Crotty
Commissioner
NY DEC
625 Broadway
Albany, NY 12233

RE: Long Island Sound Environmental Impact Statement

Dear Ms. Crotty,

The New England Regional Office of the United States Environmental Protection Agency (EPA NE) and the U.S. Army Corps of Engineers are preparing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the designation of dredged material disposal sites in the central and western basins of Long Island Sound, consistent with the Marine Protection Research and Sanctuaries Act (MPRSA). The proposed project will involve the designation of two dredged material disposal sites, one in the western portion of Long Island Sound and one in the central portion of Long Island Sound.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, we are coordinating with your agency to insure that designation of disposal sites will not jeopardize the continued existence of endangered and threatened species under the state endangered species program of the state of New York.

We appreciate your input and encourage your continued cooperation under NEPA as we near completion of the EIS process. In addition, this letter is to request a list of state endangered and threatened species for the project area. A location map of the alternative dredged material disposal sites to be considered in the EIS is enclosed.

We appreciate the assistance provided throughout this EIS process from Ms. Karen Chytello of your office.

If you require additional information or have any questions, please contact the EPA Project Manager, Ms. Jean Brochi at (617) 918-1536 (or by e-mail, Jean.Brochi@epa.gov).

Sincerely,

Mel Cote
Manager, Water Quality Unit

Enclosure

CC: Karen Chytello- NY DEC

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
James J. Howard Marine
Sciences Laboratory
74 Magruder Road
Highlands, New Jersey 07732

March 19, 2003

Mr. Mel Cote
Manager, Water Quality Unit
United States Environmental Protection Agency
Region I
1 Congress Street, Suite 1100
Boston, Massachusetts 01930-2298

Dear Mr. Cote:

This letter is in response to your February 13, 2003, request for information regarding federally listed, proposed or candidate endangered, threatened and special concern species and habitats in the central and western basins of Long Island Sound (LIS). We appreciate the ongoing coordination with NMFS.

LIS is used by three species of sea turtles listed under the Endangered Species Act of 1973. All three species are seasonal residents within the Sound. Their occurrence is normally limited to the period from mid-May through late October. However, with the climatic changes occurring in our region, sea temperatures have allowed extension of their residence. Arrival and departure can occur up to one month earlier (late-April) and be postponed until well into December.

Kemps ridley (*Lepidochelys kempi*) and loggerhead (*Caretta caretta*) sea turtles are bottom feeders, relying extensively on crustaceans such as spider (*Libinia* spp.), cancer (*Cancer* spp.) and blue (*Callinectes sapidus)* crabs. In water deeper than 19.7 meters (65 feet), normal feeding by these species appears somewhat limited and predominately undertaken by the more mature individuals. However, the dominate number of Kemps ridleys in LIS are juveniles that appear to prefer more protected "inshore" feeding locations in shallower water. This habitat is found in coves, embayments and the nearshore zone along both the Connecticut and New York shorelines.

Sea turtles spend the majority of their time submerged, making them difficult to observe. However, vessel traffic has been found to have a casual, but inverse influence on sea turtle activities. As traffic increases, sea turtle use of an area diminishes. Because vessel traffic, particularly during the boating season, is moderately high in the two basins, and escalating toward the west, sea turtle use is presumed to be limited in heavy use corridors such as the waters around the presently used Western Long Island Sound Disposal Site off Darien, Connecticut. Vessel use patterns are somewhat lower on the New York side of the Sound and tracking studies indicate a greater presence of sea turtles. Leatherback turtles (*Dermochelys coricea*) feed on

jellyfish, comb jellies, salps and other such organisms in the water column. This species is more likely to be found in the more open water portions of LIS.

Over the last decade, there has been a burgeoning use of both the eastern and western portions of the Sound by gray and harbor seals. Their local population appears to reflect the general increase in the coast wide population, along with the availability of prey items such as squid and alewife in LIS throughout the late fall and winter. We do not expect the disposal of dredged material will represent a threat to the well-being of either the seals or their prey, but suggest that the two seal species be afforded some consideration in the evaluation process.

Baleen and toothed whales, as well as dolphins, have been seen throughout LIS. Sightings have been, invariably, single individuals, or small pods, as in the case of the dolphins. The sightings are uncommon, as both vessel traffic and depleted populations limit use of the Sound. Should the sea turtle consultation conclude that observers traveling on the disposal vessels are a necessary and prudent protective measure, the unlikely interaction between slow moving disposal tug and barge trains and these species would be covered as well.

Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act requires an essential fish habitat (EFH) consultation for any action or proposed action authorized, funded, or undertaken by a federal agency that may adversely affect EFH. For certain types of actions that will likely result in no more than minimal adverse effects to EFH individually and cumulatively, NMFS may issue a statement of general concurrence in accordance with the requirements of 50 CFR 600.920(f) after appropriate coordination with the federal agency, the relevant fishery management council, and the public.

In the portions of LIS under consideration, virtually all of the 56 commercially sought and federally managed species listed for the New England and Mid Atlantic regions have been identified as occasional visitors, at least. Thus, there are a number of overlapping EFH designations. However, because of the extensive coordination EPA and the New England District, Army Corps of Engineers have undertaken already, sufficient information upon which a consultation opinion can be generated is expected in the National Environmental Policy Act documentation. As project alternative assessments advance, we will continue to coordinate on these matters.

As you know, commercial shellfishing has expanded in recent years and occurs in waters approaching the 15-meter isobath on the Connecticut side of LIS. Much of the effort is directed toward the northern quahog (*Mercenaria mercenaria*), but the eastern oyster (*Crassostera virginica*) continues to be actively farmed in the Sound. We encourage continued communications with the state agencies responsible for shellfish management in CT. and NY. In CT. we recommend that you contact Mr. John Volk at the State of Connecticut, Department of Agriculture, Aquaculture Bureau in Milford. In NY, the contact is Mr. William Hasbach, at the Department of Environmental Conservation at East Seatucket.

Finally, the assessment of dredged material disposal impacts related to the presence and harvesting of American lobster (*Homarus americanus*) should be aided by the informal meetings

with commercial lobstermen. The lobster population in LIS has been depleted by high mortalities which began in 1999, but the cause of the mortalities remains unknown. The mortalities began in the western basin but included significant declines eastward to Guilford, Connecticut. One result of the population collapse has been that although some of the survivors appear to range more widely, recent American lobster tagging information on the western basin community indicates that the ranging behavior of the survivors may be so limited as to retard recovery.

As this proposal continues to evolve or should you wish to discuss this matter at any time, please contact Michael Ludwig at our Milford, CT facility, E-Mail: <Michael.Ludwig@NOAA.gov > or by telephone at (203) 882-6504.

Sincerely Yours,

Stanley W. Gorski
Field Offices Supervisor

cc: EPA, Reg I - Brochi
NAE, ACE - Holtham
NMFS - Ludwig

EPALIS - 031

Tribes

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EASTERN PEQUOT INDIANS OF CONNECTICUT

cc:
B Yoetzl
J Seppien
V Perry
L MacMillan
T Timmerman
M Cote
J Brochi
R Janson
L Murphy

October 8, 2002

Mr. Robert Varney
Regional Administrator, Region 1
Environmental Protection Agency
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Re: Long Island Sound Environmental Impact Statement

Dear Mr. Varney:

Thank you for your September 30th letter informing the Tribe of recent developments in nearby Long Island Sound. This letter is to inform you of the Eastern Pequot Tribal Nation's desire to be considered a cooperating agency in the development of an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) for the Designation of Long-Term Dredged Material Disposal Sites in Long Island Sound.

As several of the proposed sites fall within our aboriginal territory, the Tribe feels it may be able to provide historical and cultural expertise that could be of assistance in the project

We look forward to the opportunity to review and comment on EIS related documents as well as the chance to take part in upcoming public meetings. Please don't hesitate to call the tribal office with any questions or concerns.

Sincerely,

Marcia Flowers

Marcia Flowers
Chairwoman

cc: Tobias Glaza, Environmental Coordinator

391 NORWICH WESTERLY ROAD ♦ P.O. BOX 208 ♦ NORTH STONINGTON, CONNECTICUT 06359
PHONE: 1-860-535-1868 ♦ FAX: 1-860-535-8026

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State Agencies

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New York State Department of Environmental Conservation
Division of Water
Bureau of Watershed Assessment and Research, Room 392
50 Wolf Road, Albany, New York 12233-3502
Phone: (518) 457-7470 • **FAX:** (518) 485-7786
Website: www.dec.state.ny.us

John P. Cahill
Commissioner

March 27, 2000

Ann Rodney
US EPA - New England Region
1 Congress Street
Suite 1100, CWQ
Boston, MA 02114-2023

Dear Ms. Rodney,

We have reviewed the Work Plan for the Long Island Sound Environmental Impact Statement (EIS) and offer the following comments.

1. Task 1 and Appendix I describe the Public Participation Plan , including tables in which the sections of the EIS which address specific comments from scoping meetings and follow-up workshops will be referenced. This level of detailed responsiveness to public interest is well advised.

2. The appendices described in the Work Plan and those listed in Attachment 1 (EIS Format) and Attachment 2 are not the same. For example, the Site Screening Process appendix required in Task 3 of the Work Plan is listed in Attachment 1 but not listed or described in Attachment 2. In addition, the Dredging Needs appendix required in Task 2 is listed in Attachment 2 but has no corresponding description. Several of the elements of the dredging needs assessment seem to have been incorporated into Appendix E, Socio-economic Resources. Because the Work Plan provides the framework for the EIS, careful consistency should be achieved between the Work Plan and the EIS format to ensure that all of the information is provided in a concise and easily accessible format.

3. The requirements described in Work Plan Task 5 sections for General Impacts of Upland Disposal and General Impacts of Beneficial Use and Treatment Technologies do not match up well with the outline for the EIS Format, sections 5.2, 5.3, and 5.4. There are many items specified in the Work Plan which do not appear to be included in the Format outline. For example, the outline for upland disposal does not seem to cover landfill and brownfield evaluations specified in the Work Plan. Again, consistency between the Work Plan and the EIS Format is important to ensure easy accessibility to the information presented.

4. The Work Plan may need to be updated to reflect the agreed-upon Zones of Siting Feasibility. Presumably, these zones will be fully described in Appendix G in the Site screening process section. The last paragraph of Task 4 and the first paragraph of Appendix E (Attachment 2) currently define study areas that are more limited than the upland and beneficial use ZSFs.

5. The EIS has been referred to both as a "site designation EIS" which implies open-water disposal options only under MPRSA, and as a "Dredged Material Management Study EIS" which implies the consideration of alternative disposal methods. The EIS Work Plan itself is unclear. The Purpose section refers to the "designation of one or more dredged material disposal sites in the waters of Long Island Sound", and then includes other disposal and/or management options, either in or out of the water, in the Summary section. There needs to be clarification on this issue. It is our position that alternatives to open-water disposal, including nearshore containment and beneficial uses, should be encouraged whenever possible.

6. Work Plan Task #6 requires the Contractor to evaluate the compliance and consistency of the preferred dredged material disposal alternative with appropriate federal, state, and local environmental laws, but the list includes only federal laws. In New York State, regulatory demands on dredging projects depend on the particular circumstances of each case, such as the sediment classification and the disposal method or intended use of the material. Regulatory consistency should be evaluated in Task #6 with respect to at least the following State programs:

   a. Section 401 Water Quality Certification
   b. State Pollution Discharge Elimination System (SPDES) - NYCRR Part 751.3
   c. Use and Protection of Waters- 6 NYCRR Part 608.2(a) and Part 608.5
   d. Section 10 Rivers and Harbors Act (federal)
   e. Solid Waste Management Permits and Beneficial Use Determinations- 6 NYCRR Part 360.

Please feel free to contact me if you have any questions regarding these comments.

Sincerely,

Diane M. English

Diane M. English
Sediment Assessment and Management Section

cc: Frank Estabrooks
Art Newell

liseisworkplan.wpd

STATE OF NEW YORK
DEPARTMENT OF STATE
41 STATE STREET
ALBANY, NY 12231-0001

ALEXANDER F. TREADWELL
SECRETARY OF STATE

June 15, 2000

Mr. Kenneth E. Hitch, PE
Chief, Engineering/Planning Division
Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Dear Mr. Hitch:

Thank you for your letter of May 30 concerning the development of the Long Island Sound Dredged Material Disposal Environmental Impact Statement and the identification of potential uses of dredged material. The Department of State has participated in this effort with the Corps and other agencies during the past few years.

I understand that Susan Holtham of the Corps recently spoke with Steve Resler in our Division of Coastal Resources concerning this matter. Ms. Holtham suggested a possible meeting in early July to discuss this effort among the involved agencies. We agree that a meeting would be useful.

Please call Mr. Resler at (518) 473-2470 to discuss this matter further or to arrange a meeting between the involved agencies.

Again, thanks for writing.

Sincerely,

Alexander F. Treadwell

AFT/mab

New York State Department of Environmental Conservation
Division of Environmental Permits, Room 538
50 Wolf Road, Albany, New York 12233-1750
Phone: (518) 457-2224 • **FAX:** (518) 457-7759
Website: www.dec.state.ny.us

John P. Cahill
Commissioner

June 27, 2000

Kenneth E. Hitch, Chief
Engineering/Planning Division
Department of the Army, New England District, Corps of Engineers
696 Virginia Road
Concord, NA 01742-2751

Re: Long Island Sound Dredged Material Disposal Environmental Impact Statement

Dear Mr. Hitch:

This responds to your May 30, 2000 letter to Commissioner John P. Cahill regarding the alternative site screening analysis process for the referenced EIS. Your letter requests that the Department identify potential beneficial use sites for the placement of sediments dredged from Long Island Sound.

In New York State dredged material is regulated as a solid waste, pursuant to Article 27 of the New York State Environmental Conservation Law; and Part 360 of Chapter 6 of the New York Code of Rules and Regulations. The placement of dredged material is subject to the Department's regulatory approval, a decision rendered only after the Department has evaluated impartially all relevant facts submitted in a formal application procedure. Identifying specific sites where dredged material may be placed suggests a prejudgement of such facts and would call into question the Department's impartiality if formal approval were sought at a later date. Accordingly, the Department is unable to provide the information you are requesting.

As you may be aware, the Corps' New York District is just completing a lengthy dredge material planning effort in New York-New Jersey harbor. The *Dredge Material Management Plan for the Port of New York and New Jersey* and its *Programmatic Environmental Impact Statement* quantify the harbor's near and long-term dredging needs; identify a hierarchy of management strategies; and seeks to plan for the material's management over the next 40 years. The EIS considers the social, economic, and environmental impact of all alternatives, and thereby allows decisions to be made on the a basis of a balanced evaluation of all options.

The port of New York and New Jersey borders two states, employs roughly 167,000 people, generates $20 billion in economic activity annually, and is estimated to generate 3.7 million cubic yards of dredge material annually. The DMMP was developed through several iterations, beginning in 1998, and was created with the participation of both states, federal agencies, and the numerous harbor stakeholders. The New York District's approach to

planning for the harbor's dredging needs would appear to be an appropriate model for planning dredge material management in Long Island Sound.

Following this format would allow for in-depth assessment of the full range of management alternatives, weighing environmental, social, and economic considerations, and would lead to the development of a regionally supported strategy for the near- and long-range management of the Sound's dredging.

If you have any questions please call me at 518/457-0782.

Very truly yours,

John J. Ferguson
Coordinator, Dredge Material Management Team

cc: K. Chytalo

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF LONG ISLAND SOUND PROGRAMS

July 12, 2000

Mr. Kenneth Hitch, P.E.
Chief, Engineering/Planning Division
U.S. Army Corps of Engineers, New England District
696 Virginia Road
Concord, MA 01742-2751

RE: Potential Connecticut Upland Dredged Sediment Disposal Sites

Dear Mr. Hitch,

We are in receipt of your May 30, 2000 letter requesting assistance in identifying alternative upland disposal sites for use in the Long Island Sound EIS for open water site designation. You have specifically requested information on landfills, potential habitat creation areas, potential restoration/remediation sites, brownfield areas, or other areas that could benefit from the placement of dredged sediments.

I have enclosed a list of currently active licensed landfill sites in Connecticut along with a figure outlining the acceptable textural characteristics of landfill cover. According to Dave McKeegan of the DEP Waste Engineering and Enforcement Division (WEED), the Hartford, Manchester, and Windsor municipal landfills are the only ones that are expected to be open in 5-10 years. The remaining facilities are either in the process of closing or will be closing shortly. Disposal of contaminated dredged sediments at a licensed landfill in Connecticut requires a Special Waste Authorization from the DEP. If you need additional information on landfills, please contact Dave McKeegan at (860) 424-3313.

As a general rule when evaluating dredged sediment for upland disposal/reuse, the Remediation Standard Regulations (copy enclosed), Section 22a-133k-1 through –3 of the Regulations of Connecticut State Agencies (RSRs) should be consulted for the specific standards applying to residential or industrial reuse sites. While these RSRs were developed for reuse of soils contaminated by pollutant releases, they are being used as guides to determine if the reuse of dredged sediments in a specific upland setting will potentially result in unacceptable migration of contaminants into groundwater, surface waters, or unacceptable risk from direct exposure to the sediments. If you need any additional information on potential reuse of sediments in upland locations, please contact Christine Lacas at (860) 424-3766.

Opportunities for habitat creation are limited by the statutory requirement to avoid loss of existing habitats (ie., filling open water or intertidal areas to create new wetlands or islands). Restoration opportunities are hampered by the paucity of restoration sites where placement of

dredged sediments will be needed. Habitat restoration in Connecticut has predominantly involved restoration of degraded tidal wetlands. In most wetland restorations that the DEP has been involved with, removal of previously placed sediments to restore proper marsh elevations has predominated. In some very limited circumstances, it may be necessary to raise the elevation of a marsh that has subsided due to restricted tidal exchange and subsequent deterioration of the marsh peat. However, restoration of marshes using dredged sediments is not currently planned. For further information on current marsh restoration practices, please contact Paul Capotosto of the DEP Marsh Restoration Unit at (860) 642-7239.

One area where efforts at habitat restoration using dredged sediments are being evaluated is Morris Cove in New Haven Harbor. In the 1950's approximately 1.2 million cubic yards (cy) of sand and gravel were removed from the cove for use as fill in the construction of I-95 through New Haven. This left a large pit with depths exceeding 35 ft in an area where the average depth is 10 feet, eliminating a large area of shellfish and winter flounder habitat. Discussions among state and federal resource agencies led to the recent decision to dispose of approximately 15,000 cy of dredged sediment from the nearby New Haven Coast Guard Station as a pilot project to test the feasibility of filling the pit to restore the lost shellfish and flounder habitat. The disposal has been completed with post disposal monitoring of the completed Coast Guard project by DAMOS scheduled for this summer. However, at the request of local residents, future dredge sediment disposal at this site will require studies of potential shoreline changes due to any wave and current modifications attributable to filling the pit.

Another potential restoration location that could benefit from dredged sediment placement is the Housatonic River from Shelton south to the CNG gas pipeline crossing. Extensive sand and gravel mining in this river has resulted in water quality problems and loss of shallow water habitat. The undredged area of the CNG pipeline crossing creates a relatively shallow sill that restricts circulation to the north of the sill and results in very low currents that are allowing deposition of fine grained sediment in the deeper dredged areas and significant water column stratification, based on a study titled "Estuarine Circulation and Suspended Sediment Transport in the Housatonic River Estuary" completed in 1993 by Dr. Peter Patton of Wesleyan University (abstract enclosed). Placement of suitable dredged sediments in the deep holes in the river would reduce the greatly oversized channel cross sections and improve water circulation. However, the shallow sill at the pipeline crossing would limit the draft of loaded barges attempting to move up the river.

Beach nourishment remains one the most promising beneficial uses of suitable dredged sediment. As in many coastal regions, numerous beaches in Connecticut are in serious need of sand nourishment, both to maintain safe recreational opportunities as well as to protect existing homes and infrastructure. Unfortunately, a large percentage of sediments dredged from Connecticut waters are predominantly fine sand, silt, and clay that are unsuitable for beach nourishment. Additionally, in those dredging projects having suitable sand, the logistics of placing dredged sand on the beach must be considered early in the project design, otherwise it may prove both economically and technically infeasible to move the sand to the beach. However, dredged sediments from several Corps of

Engineers federal channel maintenance projects, most notably the sandbars in the lower Connecticut River, may well prove suitable for reuse as nourishment on local beaches. Local government and private interests have expressed a desire to study the feasibility of obtaining suitable sand for beach nourishment purposes.

Several former industrial/commercial areas along the Connecticut coast in Bridgeport, New Haven and Stamford, one of 16 Brownfields Showcase Communities, are slated for redevelopment and involve various levels of previous site contamination. The use of dredged sediments in the redevelopment of these sites would be highly dependent on the nature of any existing site contamination, the proposed plans for reuse of the sites, the textural and chemical characteristics of any dredged sediment proposed for reuse, and the schedules of the redevelopment and dredging projects. Please contact Doug Zimmerman at (860) 424-3800 if you have questions regarding brownfields remediation in Connecticut.

I am very concerned that the increasingly broad scope of this EIS will obscure the primary purpose of undertaking the EIS; that is, to determine which, if any, locations in Long Island Sound are suitable for designation as open water disposal sites for Long Island Sound dredged sediments pursuant to the Marine Protection, Research, and Sanctuaries Act. This EIS should stay focused on that charge. From our perspective, the discussion of which dredged material disposal alternative (open water, upland, or some other option) is appropriate for any specific disposal situation is best determined through the development of a comprehensive Dredged Material Management Plan (DMMP) for Long Island Sound. However, development of the DMMP must logically follow the outcome of the open water site designation EIS process to ensure that all potential options can be considered.

Should you have any other questions, please feel free to contact George Wisker of my staff at (860) 424-3034. Thank you.

Sincerely,

Charles H. Evans

Charles H. Evans
Director

CHE/gw
Encl.
cc: George Wisker, OLISP
Dave McKeegan, WEED
Christine Lacas, PERD
Doug Zimmerman, PERD

ATTN Ann Rodney / Gann

DI TICUT
AL PROTECTION
001

Colonel Brian E. Osterndorf
District Engineer
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Mr. Ira Leighton
Acting Regional Administrator
U.S. Environmental Protection Agency
Region 1
John F. Kennedy Federal Building
Boston, MA 02203-0001

Dear Colonel Osterndorf and Mr. Leighton:

The New England District, U.S. Army Corps of Engineers (Corps) and the New England Regional Office of the U.S. Environmental Protection Agency (EPA) are undertaking a dredged material disposal site designation process for Long Island Sound in a manner consistent with the provisions of the Marine Protection, Research, and Sanctuaries Act (MPRSA) and 40 CFR Part 228, and relevant provisions of the Clean Water Act, as outlined in a letter of agreement between EPA and the Corps dated April 16, 1998. The cost was estimated at between 2 to 6 million dollars and the planned completion date of the designation process was October 1, 2003. At the current time, however, I understand that the designated funding has run out and the current estimated cost is now at least 10 million dollars, with the projected date for completion now sometime in 2005.

We do not concede that the singular application of MPRSA and it's corresponding regulations to the inland waters of Long Island Sound under the 1980 Ambro amendment to MPRSA is legally defensible or appropriate. While we will continue to reserve our rights and options with regard to future appeal of this application of the MPRSA, I am extremely concerned that the use of open water disposal in Long Island Sound for federal projects and non-federal projects in excess of 25,000 cubic yards is seriously threatened under the current regulatory framework. My concern is predicated by the understanding that section 103 of MPRSA limits the use of open water disposal sites that have not been designated under MPRSA to no more than 10 years of use after selection of the sites by the Corps.

Opponents of open water disposal in Long Island Sound have expressed the opinion that the current sites were never properly selected, or if they were, the 10-year time limit has lapsed, or is about to lapse. As of this date, the EPA or the Corps have not expressed any definitive determinations as to when the 10 year interim period expires and disposal of MPRSA projects at the current sites must cease, or what actions the EPA and the Corps intend to take to preserve the ability of all federal projects and large non-federal projects to dispose of dredged sediments in this environmentally and economically sound manner.

Most immediately, I am concerned how the limitations of the interim site selection will affect several pending large federal navigation projects including New Haven Harbor, Bridgeport Harbor, and the lower Connecticut River. Both New Haven and Bridgeport Harbor need to be dredged as soon as possible due to serious shoaling. It is vital to the economic and environmental interests of Connecticut as well as New England that waterborne commerce in these and other

affected harbors and rivers continue in a safe and efficient manner. The ports of Bridgeport, New Haven, and New London handle significant quantities of freight traffic, particularly petroleum products. In 1997 over 12 million tons of petroleum products passed through these three ports. The Port of New Haven, handling 622 thousand tons of steel in 1997, is the 4th largest port of entry for steel products in the United States after New Orleans, Houston and Philadelphia.

Losing the option and ability to dispose of suitable dredged sediments at sites that have been carefully monitored for the last 25 years will result in navigation channels and facilities silting in and reducing underkeel clearances. This will increase the potential for grounding of vessels, with the associated increased risk of spillage of cargoes. More significantly, it will result in loading less freight on board ships to reduce vessel draft as well as increase the use of lightering, or transferring part of the cargo to barges or other ships to reduce draft. Increased handling will increase the risk of cargo spillage as well as significantly raise shipping costs. Substantial volumes of cargo would also be shifted to truck transport, putting an even greater burden on our interstate highways, increasing air pollution and the potential for accidents and cargo spillage at a time where the State of Connecticut is embarking on a major initiative to increase the use of its ports. The end result of losing the option of open water disposal in Long Island Sound in a timely manner will be substantial increases in costs of vital commodities to Connecticut consumers as well as significantly increased environmental impacts to coastal areas. This scenario is unacceptable to Connecticut.

I would appreciate it if your staffs could provide answers to my concerns and inform us of your current plans regarding MPRSA site designations in Long Island Sound as soon as possible. I also expect that our regulated community will be raising similar concerns as they become aware of this very real problem. I look forward to hearing from you regarding this issue. Thank you.

Sincerely,

Arthur J. Rocque, Jr.
Commissioner

AJR/GW/gw

cc: Deputy Commissioner Jane K. Stahl
Director Charles H. Evans, Office of Long Island Sound Programs

STATE OF CONNECTICUT

CONNECTICUT HISTORICAL COMMISSION

February 3, 2003

Mr. John R. Kennelly
Engineering/Planning Division
Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Subject: Long-Term Dredged Material Disposal Sites
Long Island Sound
Bridgeport and Milford, CT

Dear Mr. Kennelly:

The State Historic Preservation Office has reviewed the *Summer 2002 Archaeological/Geomorphological Survey at the Historic Bridgeport and Historic MIlford Disposal Sites* prepared by Ocean Surveys Inc. and the University of Massachusetts Archaeological Services concerning the above-named project. In the opinion of the State Historic Preservation Office, the archival and archaeological methodologies employed by Ocean Surveys Inc. and the University of Massachusetts Archaeological Services are consistent with our *Environmental Review Primer for Connecticut's Archaeological Resources.*

The State Historic Preservation Office concurs with Ocean Surveys Inc. and the University of Massachusetts Archaeological Services that further archaeological investigations appear warranted if either the Bridgeport or Milford disposal site is recommended for designation as a long-term dredged material disposal location.

This office anticipates additional coordination with the Corps of Engineers, the Environmental Protection Agency and all interested parties regarding the expeditious furtherance of the Environmental Impact Statement process as well as the integral consideration of Connecticut's archaeological and maritime cultural resources.

We recommend that the Corps of Engineers provide on additional copy of the archaeological and geomorphological survey report to our professional staff for technical review purposes.

For further information please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

John W. Shannahan
Director and State Historic
Preservation Officer

cc: Dr. Nicholas Bellantoni/OSA
Mr. Marc Paiva/ACOE

TEL: (860) 566-3005 e-mail: cthist@neca.com *FAX: (860) 566-5078*
59 SOUTH PROSPECT ST. - HARTFORD, CONN 06106 - 1901

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
625 Broadway, Albany, New York 12233-4750
Phone: (518) 402-8924 • **FAX:** (518) 402-9027
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

March 17, 2003

Mr. Mel Cote
Manager, Water Quality Unit
USEPA, Region 1
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Dear Mr. Cote:

Our Department has recently received your letter regarding EPA's investigation of potential dredge-spoil sites in Long Island Sound. Unfortunately, the map included in the fax we received was of such poor quality, we could not decipher it.

If you would direct a hard copy map and additional explanatory information to our Natural Heritage Program, they will provide a review and list of any threatened or endangered species in the vicinity, as you requested. Please address the information to:

New York Natural Heritage Program
Attention: Nick Conrad
625 Broadway
Albany, New York 12233

Sincerely,

Gerald A. Barnhart
Director
Fish, Wildlife and Marine Resources

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

March 31, 2003

Mr. Melville P. Cote, Jr., Manager
U.S. Environmental Protection Agency Region 1
Water Quality Unit, Office of Ecosystem Protection (CWQ)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

RE: Long Island Sound Environmental Impact Statement

Dear Mr. Cote: Mel

A copy of your February 13, 2003 letter to Commissioner Rocque has been referred to this office. Your request for endangered species information in the project area was reviewed by staff in the Environmental and Geographical Information Center and a response was sent under separate cover. Additionally, staff recently received an e-mail request to respond to your February 13, 2003 request regarding participation as a coordinating agency in the EIS process, however, it was not apparent that your February 13, 2003 letter requested confirmation of cooperating agency status.

We certainly desire cooperating agency status for our involvement in this EIS process, as we have been very active participants in this process from the beginning and appreciate the efforts of EPA to keep us informed and involved.

If you have any additional informational needs, please contact George Wisker of my staff at (860) 424-3034.

Sincerely,

Charles H. Evans

Charles H. Evans
Director
Office of Long Island Sound Programs

CHE/gw
cc: Dawn McKay, EGIC

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

April 29, 2003

Jean Brochi
U.S. Environmental Protection Agency, Region 1
1 Congress St, Suite 1100
Boston, MA 02114-2023

Dear Ms. Brochi:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to the proposed Environmental Impact Statement for the Designation of Dredged Material Disposal Sites in Long Island Sound, New York State.

> We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.
>
> PLEASE NOTE: Sea turtles, some of which are state-listed, can occur in Long Island Sound, mainly in shallow bay and near-shore waters. While they may conceivably travel in the vicinity of the proposed disposal sites on occasion, our program has no information on possible impacts, if any. Perhaps the NYS DEC Region 1 Wildlife Staff in Stony Brook, (631-444-0305), Dan Rosenblatt, may be able to refer you to other sources of information.
> (Listed sea turtle species include leatherback, Atlantic ridley and hawksbill, all endangered; and green and loggerhead, both threatened).

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Databases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Nicholas Conrad jp

Nicholas B. Conrad, Information Services
New York Natural Heritage Program

Encs.

cc: Reg. 1 , Wildlife Mgr.
Peter Nye, Endangered Species Unit

DIVISION OF ENVIRONMENTAL PERMITS

June 2001

REGION	COUNTIES	REGIONAL PERMIT ADMINISTRATORS
1	Nassau & Suffolk Telephone: (631) 444-0365	John Pavacic NYS-DEC BLDG. 40 SUNY at Stony Brook Stony Brook, NY 11790-2356
2	New York City (Boroughs of Manhattan, Brooklyn, Bronx, Queens, & Staten Island Telephone: (718) 482-4997	John Cryan NYS-DEC One Hunters Point Plaza 47-40 21st Street Long Island City, NY 11101-5407
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster & Westchester Telephone: (845) 256-3054	Margaret Duke (Peg) NYS-DEC 21 South Putt Corners Road New Paltz, NY 12561-1696
4	Albany, Columbia, Greene, Montgomery, Rensselaer & Schenectady Telephone: (518) 357-2069	William Clarke NYS-DEC 1150 North Wescott Road Schenectady, NY 12306-2014
4 (sub-office)	Delaware, Otsego & Schoharie Telephone: (607) 652-7741	John Feltman NYS-DEC Route 10 HCR#1, Box 3A Stamford, NY 12167-9503
5	Clinton, Essex, Franklin & Hamilton Telephone: (518) 897-1234	Richard Wild NYS-DEC Route 86, PO Box 296 Ray Brook, NY 12977-0296
5 (sub-office)	Fulton, Saratoga, Warren & Washington Telephone: (518) 623- 1281	Thomas Hall* NYS-DEC County Route 40 PO Box 220 Warrensburg, NY 12885-0220
6	Jefferson, Lewis & St. Lawrence Telephone: (315) 785-2245	Brian Fenlon NYS-DEC State Office Building 317 Washington Street Watertown, NY 13601-3787
6 (sub-office)	Herkimer & Oneida Telephone: (315) 793-2555	J. Joseph Homburger* NYS-DEC State Office Building 207 Genesee Street Utica, NY 13501-2885

7	Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga & Tompkins Telephone: (315) 426-7438	Ralph Manna NYS-DEC 615 Erie Blvd. West (Env.Permits Room 206) Syracuse, NY 13204-2400
7 (sub-office)	 Telephone: (607) 753-3095	Michael Barylski* NYS-DEC 1285 Fisher Avenue Cortland, NY 13045-1090
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne & Yates Telephone: (716) 226-5390	Peter Lent NYS-DEC 6274 East Avon Lima Road Avon, NY 14414-9519
9	Allegany, Cattaraugus, Chautauqua, Erie, Niagara & Wyoming Telephone: (716) 851-7165	Steve Doleski NYS-DEC 270 Michigan Avenue Buffalo, NY 14203-2999
9 (sub-office)	 Telephone: (716) 372-0645	Ken Taft* NYS-DEC 182 East Union, Suite 3 Allegany, NY 14706-1328

* Deputy Regional Permit Administrator

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Public

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May 14, 1999

Memo via E-Mail
Hard Copy Send

To: Ann Rodney

From: Lisa Carey

Re: Dredging Conference Notes

I am writing in response to our conversation of 5/12/99 wherein you indicated your interest in using the notes of the March 19th Dredging Conference for development of the Long Island Sound EIS.

Upon further consideration I have realized that it would be inappropriate to use the comments of attendees in the development of the EIS. Participants in the conference were told repeatedly that their candor was appreciated, and that any comments and views would not be used for the development of policy.

Additionally, I have had the EIS regulations reviewed, and it is clear that the spirit of an EIS includes providing the public an opportunity to comment on a proposed project. The commenting public must be aware of their participation. Because the dredging conference attendees were specifically told that they were not part of a decision making process, it would be wrong to use the information. This is true even if the information is used to determine the "scope of the issues to be addressed". CFR 40 § 1501.7.

With the sponsorship of EPA, Save the Sound is more than willing to provide a forum for the purpose of scoping. Pursuant to the relevant law, (§ 1508.22) EPA should at that time provide notice of intent in the Federal Register inviting the participation of affected parties. This forum would be an excellent way to bring all the issues to the table.

Thank you for your time the other day. Please call if you have questions.

cc: Mark Tedesco, EPA, LISO
Curt Johnson, CFE

FROM : MARGUERITE W. PURNELL PHONE NO. : 860 868 6042

FAX COVER SHEET

TO: Ann Rodney
U.S. EPA New England Region
Fax: 617.918.1505

FROM: Marguerite W. Purnell
Fishers Island Conservancy
Fax: 860.868.6042
Phone: 860.868.6624
Email: mpurnell@snet.net

DATE: May 8, 2000

RE: LIS DMD EIS Ballot (and working group signup)

PAGES SENT: 12 (Including this cover sheet)

COMMENTS:

Ann,

I'm faxing the April 2000 working draft LIS DMD EIS ballot with its associated comments. The hard copy is being mailed out today as well. There was a large amount of material to review in order to comment substantively on the ballot.

A few questions:

- Is this the only opportunity to comment on the evaluation factors?
- Will the working groups further refine these evaluation factors?
- Are these evaluation factors meant to screen potential sites, evaluate potential sites or both?

With regard to the sampling that is proposed for May 2000:

- Will sediment samples be collected at the "no impact" sites (R1 - R4) during the lobster field survey? Bulk sediment chemistry for these areas would be very informative.
- Why is the fish trawl oriented differently (NW/SE) in vicinity of NLDS?
- Why is only one trawl proposed in the vicinity of NLDS? What about at least a second trawl in September 2000?

There is a dearth of information surrounding the NLDS. I thought the EIS process is meant to fill the existing data gaps to allow for objective assessment of all possible open water sites. If the appropriate information is not collected, how can an objective evaluation be performed?

Thank you for the opportunity to comment,

Margie

William Gash
<ctmaritime@msn.com>

03/12/01 05:26 PM

To: Ann Rodney/R1/USEPA/US@EPA

cc: Cross Sound Ferry Services Wronowski <adam@longislandferry.com>, Coastline Terminals of Connecticut Shuda <anacabe@aol.com>, Briarpatch Enterprises Gilbert <HiddenEmp@aol.com>, Bridgeport Port Authority Riccio <bpa1@snet.net>, Save The Sound Atkin <jatkin@savethesound.org>, Machine Works at Essex Johnson <jsjohnson20@hotmail.com>, Seaworthy Systems Toyen <mtoyen@seaworthysys.com>, Logistec Connecticut Tristine <mtristin@logistec.com>, Rives Potts <rpotts@byy.com>, Beacon Point Marina Kral <ckral@javanet.com>

Subject: LIS EIS

Ann, this email is based on our conversation earlier today. CMC is concerned that the current funding set aside for the LIS EIS may be exhausted prior to completion of the study. The CMC respectfully request that your office address this concern as soon as possible. The CMC leadership regards the LIS EIS as the vehicle for addressing our dredging concerns in Connecticut. If funding constrains the completion of the study then our industry must look at next steps to protect our ability to remain competitive in the marketplace. CMC values the relationship we have forged with your office and looks forward to your response. Thank you for your efforts to date and in the future.

Bill Gash
Connecticut Maritime Coalition
Competitively Positioning the Connecticut Maritime Industry in the Global Marketplace

MEMBERSHIP:
Beacon Point Marina, Blakeslee Arpaia Chapman Inc, Brewer Yacht Yard Group, Briarpatch Enterprises Inc, Bridgeport Port Authority, Coastline Terminals of Connecticut, Connecticut Marine Trades Association, Connecticut Maritime Association, Connecticut State Marine Pilots Inc, Cross Sound Ferry Services Inc, Electric Boat Corporation, Fox Navigation, Gateway Terminal, ILA Local 1398, Logistec Connecticut Inc, Machine Works at Essex Inc, New England Shipping Company Inc, Save the Sound Inc, Sea Support, Seaworthy Systems Inc, The Sound School, The Bridgeport Port Jefferson Steamboat Company, Williams Energy

165 State Street, Suite 309
New London, Connecticut 06320
Ph. 1.860.439.0848 Fax. 1.860.439.0181

Keith Jones <kwj@bnl.gov>
To: Ann Rodney/R1/USEPA/US@EPA 03/30/01 03:48 PM Subject: email address

Ann,

My email is just kwj@bnl.gov.

I think jones@bnl.gov also works.

phone is 631 344 4588
fax: 631 344 5271.

please let me know if there are problems

Also, could you tell me what has happened in terms of using decontamination technologies? I believe there is funding to the Corps for a project on Long Island Sound.

keith

Robert Fromer <rfromer@snet.net> 05/01/01 01:49 AM
To: Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: Suggested Revisions to Draft Cover Letter

Apr. 30th

Ann:

I suggest the following revised cover letter:

Robert Fromer

DRAFT COVER LETTER:

"Dear Marine Facility Owner/Operator.:

The purpose of this letter is to [request] seek your assistance in developing information necessary to estimate the current and future needs for dredging within your area. In addition, we will be evaluating dredged material disposal options and their related economic and environmental impacts, irretrievable and irreversible commitment of resources and possible mitigative measures. This information will be used by the Army Corps of Engineers and the U. S. Environmental Protection Agency (EPA) in preparing an Environmental Impact Statement (EIS) for addressing "feasible and prudent" dredged-material disposal alternatives for Long Island Sound. Enclosed is a fact sheet that describes the EIS and its purpose.

An important part of the EIS is the determination of the economic impact of alternative dredged material disposal sites. The Corps of Engineers has contracted with ENSR International, a private consulting firm, to perform a detailed survey of all federal, state, and private dredging areas in the Long Island study area. There are two purposes of this survey. The first is to identify all potential areas to be dredged and better determine the total anticipated volume of dredged material for which disposal sites are needed over the next 20 years. The second purpose is to gather information to determine the economic impact on facilities of different [alternative: note - alternative and options mean the same] disposal options including the "no designated disposal site" option.

Your participation in this survey is voluntary and sincerely welcomed. Your responses will be strictly confidential. Only summaries of the results will be published.

We are relying on local knowledge to identify those private facilities which will require dredging. We truly appreciate your assistance in identifying these facilities through your direct knowledge and through contacts with whom ENSR can speak directly. This is your opportunity to assist us on your behalf. We have enclosed a list of facilities which we have identified in your immediate area.

Thank you for your invaluable assistance. For questions about this questionnaire and its processing please contact Pete Jackson, ENSR, at (978) 589-3000 (email: pjackson@ensr.com). Please contact Richard Ring, Corps of Engineers, at (978) 318-8643 (email:_____) if you have questions regarding the use of your responses.

(signed by the Corps of Engineers)

Encls. (Fact sheet, facilities list and questionnaire)

William Gash <ctmaritime@msn.com> 05/04/01 02:55 PM
To: USACE <richaard.j.ring@usace.army.mil>
cc: Rives Potts <rpotts@bvy.com>, Logistec Connecticut, Tristine <mtristin@logistec.com>, Bridgeport Port Authority Riccio <bpa1@snet.net>, Ann Rodney/R1/USEPA/US@EPA, Office of LIS Program Wingfield <betsey.wingfield@po.state.ct.us>, Save The Sound Atkin <jatkin@savethesound.org>, Mike Werle <ctcase@ix.netcom.com>, DECD Molina-Rios <carmen.molinarios@po.state.ct.us>
Subject: CT Port Study

Rich, attached please find CT Port Economic Study just completed by UCONN for the CT Port Authority, as funded by CT DECD. This should add to the economic data previously provided to your office thru Ann.

Ann, if there are other folks you think should see this data, please forward.

Carmen, as discussed, dredging is the industry's first priority opportunity. In three years time Bridgeport will cease to be a competitive port for cargo if maintenance dredging is not completed. Our industry is assessing current status of dredging this harbor by the USACE. This is a federal issue that impacts CT - trade and economy - locally. Unfortunately, Bridgeport Harbor may be contaiminated (sediments) which makes disposition of the dredged sediments an unpopular activity. This is at least a high magnitude (perhaps billion dollar) annual loss to the state if Bridgeport Harbor ceases to exist as a working cargo port...I think we are going to need your departments assistance on this particular issue.

Bill Gash
Connecticut Maritime Coalition
Competitively Positioning the Connecticut Maritime Industry in the Global Marketplace

MEMBERSHIP:
Beacon Point Marina, Blakeslee Arpaia Chapman Inc, Brewer Yacht Yard Group, Briarpatch Enterprises Inc, Bridgeport Port Authority, Coastline Terminals of Connecticut, Connecticut Marine Trades Association, Connecticut Maritime Association, Connecticut State Marine Pilots Inc, Cross Sound Ferry Services Inc, Electric Boat Corporation, Fox Navigation, Gateway Terminal, ILA Local 1398, Logistec Connecticut Inc, Machine Works at Essex Inc, Mallory Jones Lynch Flynn & Associates, New England Shipping Company Inc, Save the Sound Inc, Sea Support, Seaworthy Systems Inc, The Sound School, The Bridgeport Port Jefferson Steamboat Company, Williams Energy

165 State Street, Suite 309
New London, Connecticut 06320
Ph. 1.860.439.0848 Fax. 1.860.439.0181

Martin Tristine <mtristin@logistec.com> 05/11/01 10:02 AM
To: Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: RE: LIS EIS - follow-up (no files attached)
Please respond to mtristin

I'm not sure if it may be under a different name, but I know Santa Fuel has a barge dock in Bridgeport Harbor. In New Haven, Wyatt is now owned by Williams Energy. The New Haven Terminal scrap dock is operated by Logistec and they also have a joint use agreement on the finger pier. There is also a barge dock at Coastline Terminal's "northyard" on the Quinnipiavc River that is leased by Blakeslee Arpaia Chapman. Also the Rusty Scupper had slips around the restaurant and there are still pilings there. In New London Meehan Overseas has been gone since 1993. The State Pier is now being operated by Logistec.

> -----Original Message-----
> From: Rodney.Ann@epamail.epa.gov [mailto:Rodney.Ann@epamail.epa.gov]
> Sent: Thursday, May 10, 2001 4:50 PM
> To: awaters@savethesound.org; bay@friendsofthebay.org; bei@debiz.com; bjm@byy.com; bkelly6313@aol.com; bradk@marinenv.com; brbryan@fishersisland.net; ckral@javanet.com; cleanhbr@aol.com; cmta@snet.net; ctmaritime@msn.com; ctpilot@erols.com; CSqueri@aol.com; dajjsj@aol.com; dwnorth@aol.com; essexisland@aol.com; george.proios@co.suffolk.ny.us; gulbran@battelle.org; hanluksam@aol.com, jack@byy.com; johnny.mac@att.net; jsjohnson20@hotmail.com; kwj@bnl.gov; kwj@bnl.gov; mcmyacht@aol.com; mpurnell@snet.net; mreiser@marinenv.com; mtristin@logistec.com; MilfordtreeS@aol.com; rfromer@snet.net; rmcomeau@netscape.net; RPOTTS@byy.com; sailerct@connix.com; saybrook@snet.net; spicersmarina@aol.com; tdubno@gatewayt.com; thamesdd@99main.com; wshadel@zoo.uvm.edu
Cc: brochi.jean@epamail.epa.gov; christopher.j.high@usace.army.mil; epowers@ensr.com; george.wisker@po.state.ct.us; j.evans-brumm@eudoramail.com; jatkins@savethesound.org; knchytal@gw.dec.state.ny.us; knchytal@gw.dec.state.ny.us; Pabst.Douglas@epamail.epa.gov; rodney.ann@epamail.epa.gov; salata.joseph@snet.net; susan.e.holtham@usace.army.mil; Tedesco.Mark@epamail.epa.gov; Tomey.David@epamail.epa.gov
Subject: LIS EIS - follow-up (no files attached)

> Hello,
> This e-mail is a quick follow-up to the April 26th meeting. Over the past 2 months I have sent you reports to review, make suggestions and give comments on, some of you have given comments and suggestions and we thank you, your knowledge of your area is extremely important. We are coming up to some "completion dates" and would like to get all your comments for each report listed by the following date. Please send comments and suggestion on the following reports by Friday
May 18, 2001:
> 1. Upland Report (e-mail sent 3/22 - LIS EIS - WG - Fishing, GIS, Upland)
> 2. The Facilities List (e-mail sent 3/21 - LIS EIS - WG – facilities files)
3. The Contact List (e-mail sent 3/21 - LIS EIS - WG – facilities files)
> 4. Facilities Cover letter (e-mail sent 3/21 - LIS EIS – WG facilities files)
> Please send your comment by May 18, 2001. If I do not hear from you it will be assumed you do not have any comments.
> Please, contact me should you have any questions, suggestion, comments.
> Thanks - Ann
>
> Ann Rodney
> US EPA New England Region
> 1 Congress Street
> Suite 1100, CWQ
> Boston, MA 02114-2023

Robert Fromer <rfromer@snet.net> 05/15/01 08:04 PM
To: Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: Re: LIS EIS - follow-up (no files attached)

May 15th

Ann:

My comments on the Upland Reuse Potential is that no consideration was given to reuse potentials of cleaned dredged material. The material that would be available is the raw dredged material. I believe that the opportunities for reuse expands with clean material including other countries and ocean disposal.

Fromer

----- Original Message -----
From: <Rodney.Ann@epamail.epa.gov>
To: <awaters@savethesound.org>; <bay@friendsofthebay.org>; <bei@debiz.com>; <bjm@byy.com>; <bkelly6313@aol.com>; <bradk@marinenv.com>; <brbryan@fishersisland.net>; <ckral@javanet.com>; <cleanhbr@aol.com>; <cmta@snet.net>; <ctmaritime@msn.com>; <ctpilot@erols.com>; <CSqueri@aol.com>; <dajjsj@aol.com>; <dwnorth@aol.com>; <essexisland@aol.com>; <george.proios@co.suffolk.ny.us>; <gulbran@battelle.org>; <hanluksam@aol.com>; <jack@byy.com>; <johnny.mac@att.net>; <jsjohnson20@hotmail.com>; <kwj@bnl.gov>; <kwj@bnl.gov>; <mcmyacht@aol.com>; <mpurnell@snet.net>; <mreiser@marinenv.com>; <mtristin@logistec.com>; <Milfordtrees@aol.com>; <rfromer@snet.net>; <rmcomeau@netscape.net>; <RPOTTS@byy.com>; <sailerct@connix.com>; <saybrook@snet.net>; <spicersmarina@aol.com>; <tdubno@gatewayt.com>; <thamesdd@
Cc: <brochi.jean@epamail.epa.gov>; <christopher.j.high@usace.army.mil>; <epowers@ensr.com>; <george.wisker@po.state.ct.us>; <j.evans-brumm@eudoramail.com>; <jatkins@savethesound.org>; <knchytal@gw.dec.state.ny.us>; <knchytal@gw.dec.state.ny.us>; <Pabst.Douglas@epamail.epa.gov>; <rodney.ann@epamail.epa.gov>; <salata.joseph@snet.net>; <susan.e.holtham@usace.army.mil>; <Tedesco.Mark@epamail.epa.gov>; <Tomey.David@epamail.epa.gov>
Sent: Thursday, May 10, 2001 4:49 PM
Subject: LIS EIS - follow-up (no files attached)

> Hello,
> This e-mail is a quick follow-up to the April 26th meeting. Over the past 2 months I have sent you reports to review, make suggestions and give comments on, some of you have given comments and suggestions and we thank you, your knowledge of your area is extremely important. We are
coming up to some "completion dates" and would like to get all your comments for each report listed by the following date. Please send comments and suggestion on the following reports by Friday
May 18, 2001:
> 1. Upland Report (e-mail sent 3/22 - LIS EIS - WG - Fishing, GIS, Upland)
> 2. The Facilities List (e-mail sent 3/21 - LIS EIS - WG – facilities files)
> 3. The Contact List (e-mail sent 3/21 - LIS EIS - WG – facilities files)
> 4. Facilities Cover letter (e-mail sent 3/21 - LIS EIS – WG facilities files)

> Please send your comment by May 18, 2001. If I do not hear from you it will be assumed you do not have any comments.
> Please, contact me should you have any questions, suggestion,
comments.
> Thanks - Ann
>
> Ann Rodney
> US EPA New England Region
> 1 Congress Street
> Suite 1100, CWQ

Robert Fromer <rfromer@snet.net> 06/04/01 10:08 AM
To: Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: Fw: NYTimes.com Article: The Mirage of a Growing Fuel Supply

June 4th

Ann:

The NY Times article below is the reason that energy costs (consumption) must be considered in rational decisionmaking for the EIS.

Also, I have yet to see anyone crafting selection criteria for selection of the preferred alternative: however, the least energy waste should be one major factor for such selection.

Fromer

----- Original Message -----
From: <mberger@99main.com>
To: <rfromer@snet.net>
Sent: Monday, June 04, 2001 7:42 AM
Subject: NYTimes.com Article: The Mirage of a Growing Fuel Supply

>
> The Mirage of a Growing Fuel Supply
>
> By EVAR D. NERING
>
> COTTSDALE, Ariz. — When I discussed the exponential function in the first-semester calculus classes that I taught, I invariably used consumption of a nonrenewable natural resource as an example. Since we are now engaged in a national debate about energy policy, it may be useful to talk about the mathematics involved in making a rational decision about resource use. In my classes, I described the following hypothetical situation. We have a 100-year supply of a resource, say oil - that is, the oil would last 100 years if it were consumed at its current rate. But the oil is consumed at a rate that grows by 5 percent each year. How long would it last under these circumstances? This is an easy calculation; the answer is about 36 years.

> Oh, but let's say we underestimated the supply, and we actually havea 1,000-year supply. At the same annual 5 percent growth rate in use, how long will this last? The answer is about 79 years.
> Then let us say we make a striking discovery of more oil yet - a bonanza - and we now have a 10,000-year supply. At our same rate of growing use, how long would it last? Answer: 125 years.
>
> Estimates vary for how long currently known oil reserves will last,though they are usually considerably less than 100 years. But the point of this analysis is that it really doesn't matter what the estimates are. There is no way that a supply-side attack on America's energy problem can work.
>
> The exponential function describes the behavior of any quantity whose rate of change is proportional to its size. Compound interest is the most commonly encountered example - it would produce exponential growth if the interest were calculated at a continuing rate. I have heard public statements that use "exponential" as though it describes a large or sudden increase. But exponential growth does not have to belarge, and it is never sudden. Rather, it is inexorable.
>
Calculations also show that if consumption of an energy resource is allowed to grow at a steady 5 percent annual rate, a full doubling of the available supply will not be as effective as reducing that growth rate by half - to 2.5 percent. Doubling the size of the oil reserve will add at most 14 years to the life expectancy of the resource if we

continue to use it at the currently increasing rate, no matter how large it is currently. On the other hand, halving the growth of consumption will almost double the life expectancy of the supply, no matter what it is.

> This mathematical reality seems to have escaped the politicians pushing to solve our energy problem by simply increasing supply. Building more power plants and drilling for more oil is exactly the wrong thing to do, because it will encourage more use. If we want to avoid dire consequences, we need to find the political will to reduce the growth in energy consumption to zero - or even begin to consume less.
>
> I must emphasize that reducing the growth rate is not what most people are talking about now when they advocate conservation; the steps they recommend are just Band-Aids. If we increase the gas mileage of our automobiles and then drive more miles, for example, that will not reduce the growth rate.
>
> Reducing the growth of consumption means living closer to where wework or play. It means telecommuting. It means controlling population growth. It means shifting to renewable energy sources.
>
> It is not, perhaps, necessary to cut our use of oil, but it is essential that we cut the rate of increase at which we consume it. To do otherwise is to leave our descendants in an impoverished world.
>
> Evar D. Nering is professor emeritus of mathematics at Arizona State
> University.

William O'Donnell <wjodonnell1@home.com> 06/10/01 09:19 PM
To: richard.j.ring@usace.army.mil, Ann Rodney/R1/USEPA/US@EPA
cc:
Subject: Dredging in Branford River (Connecticut)

Ann Rodney & Rich Ring,

Our yacht club (Indian Neck Yacht Club) in Branford, Connecticut recently received your correspondences and survey regarding dredging in Long Island Sound. We appreciate your efforts and we will be responding to your survey shortly.

In the meantime, we are interested to learn if there is any Army Corps. or EPA plan to dredge the Branford (Connecticut) River in the next few years.

I can tell you that our yacht club is badly in need of a dredge at this time. We have less thant 3' of water in most places at low tide. We are rapidly becoming a "half tide" marina. Our last dredge was approximately 10-12 years ago (1989-1991). Cost is obviously a big concern for our small, blue collar, club. We have 180 members and 80 slips. Exhorbatent dredging costs could mean that we remain a "half tide" marina until such tima as when high tide becomes our current version of low tide and we eventually have "no water" at all. A that time we become an "extinct" marina and defunct yacht club. While that
may seem far-fetched, I can assure you it is a distinct possibility facing our club as well as every public and private marina in Long Island Sound. We are all very concerned about a cleaner LIS, however
the health of an entire industry should not be sacrificed to meet your goal.

The end resuly woule be: No water, no boating. No boating, no fuel purchases. No boating, no local & state taxes. No boating, no regattas to other transient marinas which rely on folks like us. While we are only talking about dredging and the negative affects that the potential exhorbantent dredging coulds could have, I can assure you that rising fuel costs will also have a negative impact on this industry. That's
another topic however.

In the meantime, we were hoping that you could share with us any public plans (by either of your agencies) to dredge the Branford (Conn.) River within the next 12-18 months. If so, our plan would be to try to "hook up" with the dredger to get a discount for doing two jobs in the area. If not we may have to (somehow find a way) to bite the bullet and pay the full cost to dredge our facility so that it doesn't become a "half tide" marina and recaptures it's stature as a "full tide" marina.

Please advise of any timetables you may have for dredging the Branford (Conn) River.

Thank you and be assured that a completed survey will be sent out very soon.

Bill O'Donnell
Former Flag Officer INYC
Member of INYC Waterfront Committee.

GEOFFREY B. STEADMAN

Land and Water Resources Planning • Coastal Area Management

May 31, 2002

Ms. Ann Rodney
U.S. Environmental Protection Agency
1 Congress Street
Suite 1100, CWQ
Boston, Massachusetts 02114-2023

Subject: Draft Report on the Federal Maintenance Dredging Process in Connecticut

Dear Ms. Rodney:

Enclosed, for your review and comment, is a draft report by the Connecticut Harbor Management Association on the Federal maintenance dredging process in the State of Connecticut.

We intend to submit a final report, along with a brief summary document, to appropriate State officials in July.

Please call me at (203) 226-9383 or John Roberge at (203) 377-0663 to discuss any comments you may have at this time. We look forward to hearing from you and to incorporating your comments in our final report.

Sincerely,

Geoff Steadman

GS/gs

345 NORTH MAIN ST. WESTPORT, CONNECTICUT 06880, TEL.& FAX. 203/226-9383

DRAFT

THE FEDERAL MAINTENANCE DREDGING PROCESS IN THE STATE OF CONNECTICUT:

FINDINGS AND RECOMMENDATIONS FROM A STUDY BY THE CONNECTICUT HARBOR MANAGEMENT ASSOCIATION

Conducted In Cooperation With:

CONNECTICUT MARITIME COALITION
CONNECTICUT MARINE TRADES ASSOCIATION

Prepared By:
GEOFFREY STEADMAN AND JOHN ROBERGE, P.E.

May 20, 2002

A STUDY BY THE CONNECTICUT HARBOR MANAGEMENT ASSOCIATION[1] OF THE FEDERAL MAINTENANCE DREDGING PROCESS IN THE STATE OF CONNECTICUT:

FINDINGS AND RECOMMENDATIONS

By Geoffrey Steadman and John Roberge, P.E.[2]

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INTRODUCTION

The Connecticut Harbor Management Association (CHMA) has studied the process for planning and conducting maintenance dredging of Federal navigation projects in Connecticut ports and harbors. The navigation projects include Congressionally authorized channels and anchorage basins supporting waterborne commerce, recreational boating, commercial fishing, and other beneficial uses of Long Island Sound (LIS). The purpose of the CHMA study is to develop information and recommendations to improve the maintenance dredging process and thereby promote continued and timely maintenance dredging of the navigation projects by the U.S. Army Corps of Engineers (Corps).

In 2002 a number of Connecticut towns, most acting through municipal harbor management commissions (HMCs), are pursuing Federal maintenance dredging projects. The HMCs are members of the CHMA and their experience provides insight into the complex issues affecting dredging and dredged material disposal in LIS. It is the opinion of the CHMA Board of Directors that dredging and dredged material management issues are among the most significant issues currently affecting LIS. As a result, the CHMA has pursued constructive dialogue on dredging-related issues since its inception in 1996 and has participated in a number of initiatives to increase understanding of the issues and to encourage cooperative efforts to resolve them in an objective, balanced, and practical manner.

---

[1] The Connecticut Harbor Management Association (CHMA) is a State-wide, not-for-profit organization representing the interests of municipal harbor management commissions, State of Connecticut harbormasters appointed by the Governor, and others concerned with Connecticut's harbors and marine resources. The mission of the CHMA is to share information and facilitate coordination to address issues of common interest to its members.

[2] Geoffrey Steadman, a member of the Board of Directors of the Connecticut Harbor Management Association, is an environmental planner and sole proprietor of a consulting practice based in Westport, Connecticut. John Roberge is a member of the Connecticut Harbor Management Association and the principal of a coastal engineering firm in Stratford, Connecticut.

Resolution of the dredging-related issues is particularly important because timely and economical maintenance dredging of navigation channels, anchorages, port facilities, marina basins, and other areas is needed to maintain the viability of Connecticut's marine-related business and industry. Water-dependent businesses utilizing Federal navigation projects provide substantial benefits for State-wide, regional, and local economies. Waterborne transportation also provides substantial benefits, including environmental and quality of life benefits, associated with reduced truck traffic on the State's highways. In addition, dredging is needed to provide public access to LIS for the many thousands of persons who enjoy recreational boating and other activities that depend on safe navigation. At the same time, dredging and dredged material disposal must be carried out in a manner that does not cause any significant degradation of the Sound's vital natural resources and ecological functions, now and in the future. This potential conflict presents a continuing challenge for LIS decision-makers who must balance goals for conservation of the Sound's environmental resources with goals for recreational, commercial, and other beneficial uses of the Sound.

The current process to achieve Federal maintenance dredging is lengthy and consists of a series of steps and decisions involving a number of agencies. In addition to Federal agencies, the State of Connecticut has a major role in the process. Before a Federal dredging project may proceed, the Connecticut Department of Environmental Protection's Office of Long Island Sound Programs (DEP OLISP) must determine that the project as proposed is consistent with Connecticut's Coastal Management Program. The U.S. Congress must then allocate the funds needed to conduct the work.

Planning for Federal maintenance dredging projects in Connecticut is currently proceeding against a complicated background of studies and issues concerning the open water disposal of dredged material in LIS. The four currently used LIS dredged material disposal sites have not been designated by the U.S. Environmental Protection Agency (EPA) in accordance with the requirements of Section 102(c) of the Federal Marine Protection, Research and Sanctuaries Act (MPRSA)—key legislation controlling disposal of dredged material in LIS. An ongoing Environmental Impact Statement (EIS) process by the EPA and Corps for designating one or more sites for open water disposal has not been funded to completion. Even with additional funding, the EIS can not be finished before Spring of 2006. Without this designation, however, the Central LIS disposal site is scheduled to be closed for use by Federal and large private dredging projects in February of 2004.

To ensure continued use of the open water disposal sites in LIS, representatives of Connecticut's maritime organizations and businesses, joined by the DEP OLISP, have urged repeal or amendment of the MPRSA (specifically the 1980 Ambro amendment of the MPRSA which applies the Act to LIS). Others have urged completion of the EIS under the MPRSA and increased use of alternatives to open water disposal of dredged material. These issues are now being considered by Connecticut's U.S. Congressional delegation.

In the meantime, the need for timely maintenance dredging of Federal channels and anchorage basins in Connecticut's ports and harbors continues. A number of those ports and harbors are now well past their historical maintenance dredging intervals; the Corps reports a considerable backlog in Federal maintenance dredging projects in the State. In general, the time between a

municipal request to the Corps for Federal maintenance dredging and the actual initiation of the project is typically measured in years. Some HMCs and Corps representatives have expressed concerns that the process as it affects Connecticut's ports and harbors can be improved.

In response to those concerns, the CHMA Board of Directors established a study committee to review the Federal maintenance dredging process in Connecticut and provide recommendations to improve that process to the extent possible. That committee worked closely with the Dredge Task Force of the Connecticut Maritime Coalition (CMC). Information was obtained from representatives of the State's marine industry, environmental organizations concerned with LIS, the Connecticut DEP OLISP, the coastal management programs of other northeastern states, the Federal Office of Ocean and Coastal Resource Management, and the staffs of Connecticut's U.S. Congressmen. Information was also obtained from numerous reports and other documents concerning dredging and dredged material management in LIS and other locations.

This report summarizes the findings and recommendations of the CHMA study, jointly approved by the boards of directors of the CHMA, CMC, and Connecticut Marine Trades Association. The findings and recommendations are numbered for reference purposes and not to denote priority.

FINDINGS

1. **Currently active Federal navigation projects authorized by Acts of Congress are found in 28 Connecticut waterways.** These navigation projects include channels and, in some locations, anchorage basins authorized by Congress in the 1800's and early 1900's to serve waterborne commerce. Today, those projects also serve recreational boating interests. Some projects include navigation-related structures such as jetties and breakwaters. Authorizing documents establish the dimensions of each project, including depths, widths, and lengths of designated channels and anchorages. The U.S. Army Corps of Engineers acting through its New England District (formerly New England Division) is responsible for maintaining the projects as well as some 150 other navigation projects in the states of Maine, New Hampshire, Massachusetts, and Rhode Island. (These projects are generally described in the reports "Navigation and Beach Erosion Control Projects. Volume 1 - Maine and New Hampshire; Volume 2 - Massachusetts; and Volume 3 - Rhode Island and Connecticut" by the U.S. Army Corps of Engineers, New England Division, revised to September 30, 1986.)

2. **Federal navigation projects in Connecticut waterways support a variety of industrial, commercial, and recreational activities.** Federal navigation projects in Connecticut serve the State's three major ports at Bridgeport, New Haven, and New London, as well as small harbors used primarily by recreational vessels and other harbors supporting a mix of industrial, commercial, and recreational uses.

3. **The economic benefits of the water-dependent businesses and activities making use of the State's Federal navigation projects are substantial—measured in billions of dollars.** A recent study for the Connecticut Coastline Port Authority by the Connecticut Center for

Economic Analysis finds that Connecticut's three ports directly and indirectly accounted for almost 2% of the State's total employment and 2.6% of the State's total output (Gross State Product) in 1997 and that port operation contributed almost 2.5% of the State's total taxes, including municipal taxes. Further, using one economic model, that study calculated the annual direct, indirect, and induced economic impacts of the three ports alone in terms of 22,765 jobs, $2.62 billion in Gross State Product, and $965.38 million in personal income. Another economic model used in the same study suggests even greater economic benefits. (See the report ''The Economic Impact of Connecticut's Deepwater Ports: An IMPLN and REMI Analysis,'' May 23, 2002.) Research conducted for the Connecticut Maritime Coalition (see ''Strategic Cluster Initiative Final Report'' by Michael Gallis and Associates, July 2000) finds that the four industry components of Connecticut's overall maritime economy (transportation, manufacturing and services, recreation, and commercial fishing) generate total direct revenues in excess of $2.6 billion annually in the State.

Recreational boating is supported by a variety of businesses, including commercial boatyards, marinas, and other boating support facilities. These traditional water-dependent facilities, which provide boat docking, launching, storage, repair, maintenance, sales, and related services, are important to the economies of the State's coastal communities. The viability of many of these businesses depends on continued and timely maintenance of Federal navigation channels.

4. **Waterborne transportation utilizing Federal navigation projects results in substantial environmental and other benefits associated with reduced truck traffic on the State's highways. Enhancement of existing port and navigation facilities and increased waterborne transportation could reduce existing truck traffic on I-95, thereby providing substantial quality of life benefits.** Waterborne transport of bulk materials and other goods through the State's port facilities and utilizing Federal navigation projects produces substantial environmental and other quality of life benefits associated with reduced truck traffic on the State's highways, including reduced congestion and vehicle emissions, and lower highway maintenance costs. Information provided by one waterfront terminal utilizing the Norwalk Harbor Federal navigation project is instructive in this regard. This terminal facility handles barge deliveries of fuel oil, sand, and crushed stone. A single barge delivers 520,000 gallons of fuel oil per trip to this terminal; over the course of a recent year there were 25 barge deliveries totalling 13,000,000 gallons of fuel oil. Alternatively, a tanker truck can hold 6,500 gallons of fuel oil for delivery. Approximately 2,000 tanker truck deliveries (4,000 truck trips) utilizing I-95 would be required to deliver the same amount of oil each year to the terminal as 25 barges. The total amount of diesel fuel required to operate that number of trucks to the terminal is estimated at 208,293 gallons. The total amount of diesel fuel required to power 25 barge deliveries was calculated at 85,300 gallons.

During the same year, this terminal facility also handled 86 barge deliveries totalling 77,300 cubic yards of sand and crushed stone. Alternatively, a large dump truck can hold 15 cubic yards of sand or crushed stone for delivery. Approximately 5,153 heavy truck deliveries (10,306 truck trips) utilizing I-95 would be required to deliver the same amount of materials

to the terminal as 86 barge deliveries. The total amount of diesel fuel required to operate that number of trucks to the terminal is estimated at 175,793 gallons. The total amount of diesel fuel required to power 86 barge deliveries was calculated at 65,700 gallons.

In summary, potential adverse impacts on State and local highways that would be associated with a shift from waterborne to highway transportation are evident when looking at statistics provided by just one Connecticut terminal facility. That facility received 111 barge shipments of materials during the course of a recent year. To bring in the same amount of materials by truck would have required 7,153 truck deliveries (14,306 truck trips) utilizing I-95 over the course of a year or 275 truck trips per week. (This information provided by Devine Brothers, Inc., Norwalk, Connecticut, to the Norwalk Harbor Management Commission in 2001.)

On a much larger scale, New Haven Harbor received over 1.8 billion gallons of petroleum products via waterborne transportation in 1998, the equivalent of 278,000 truck deliveries. That number of truck deliveries, as calculated by representatives of the Port of New Haven, would require over 44 million road miles, use almost 10 million gallons of diesel fuel, and generate about $5.3 million in road maintenance costs (estimated at $0.12 per truck mile).

While the adverse environmental impacts of reduced waterborne transportation are evident, so too are the environmental and quality of life benefits that would be associated with increased waterborne transportation of commodities and passengers utilizing Connecticut's ports and harbors instead of I-95.

5. **Federal navigation projects in Connecticut waterways are subject to naturally occurring siltation (shoaling) and therefore require timely and economical maintenance dredging to maintain beneficial use by industrial, commercial, and recreational users.** The Federal navigation projects in Connecticut ports and harbors are subject to naturally occurring siltation and therefore require maintenance dredging from time to time to maintain their authorized depths and widths. Timely and economical maintenance dredging is needed to maintain the advantages of waterborne transportation, the viability of water-dependent businesses, and the competitive advantage of Connecticut ports to attract new business. Shoaling in navigation channels, for example, may adversely affect the economic advantages of waterborne deliveries and shipments by limiting them to high tide and by requiring that vessels be loaded to less than capacity, thereby increasing the number of vessel trips required to deliver or ship bulk materials and other goods.

Substantial shoaling without maintenance dredging in the main Bridgeport Harbor channel, for example, has resulted in recent relocation of facilities handling gasoline, fuel oil, and jet fuel to New Haven Harbor.

Timely and economical maintenance dredging is also necessary to maintain public access to Long Island Sound (LIS) by the thousands of people who enjoy recreational boating, including visiting boaters and tourists. The Connecticut Department of Tourism estimates that over 50% of the State's visitors are seeking water and shoreline activities.

6. **Lack of timely maintenance dredging increases environmental and public safety risks.** Shoaling of Federal channels not only affects the economic advantages of waterborne transportation but poses environmental and public safety risks as well. Increased vessel trips resulting from the use of vessels loaded to less than capacity and the need for lighterage (transferring commodities to a smaller vessel where channel shoaling prevents the larger vessel from entering port fully loaded) unavoidably increase the risk of shipping accidents. Shipments of petroleum products account for approximately 75% of all waterborne commerce on Long Island Sound. While specific procedures and requirements are in place for guarding against and responding to fuel spill emergencies, it is apparent that timely maintenance dredging of navigation channels to maintain authorized depths and widths generally decreases the risk that vessels carrying fuel oil and other petroleum products could run aground. It is also apparent that timely maintenance dredging decreases the risk of groundings of recreational vessels and improves the utilization of certain Connecticut harbors as "harbors of refuge" for recreational boaters.

7. **A number of navigation projects are currently in need of maintenance dredging to restore authorized channel and/or anchorage dimensions for the purpose of maintaining safe and efficient navigation and the economic advantages of waterborne transportation.** In 2002, the Corps reports a considerable backlog in Federal maintenance dredging projects in Connecticut. Some navigation projects have not been maintained (dredged) for a number of years including projects that have not been dredged for over 20 years (well past their historical maintenance dredging intervals) and other projects subject to a more rapid siltation rate that have been maintained more recently. A number of projects, including some more recently dredged, now require maintenance dredging to restore authorized channel and/or anchorage dimensions for the purpose of maintaining safe and efficient navigation. Federal maintenance dredging projects are now being planned for the harbors of Norwalk, Southport, Bridgeport, New Haven, Guilford, and Clinton, as well as the Housatonic River at Stratford and Milford, sections of the Connecticut River, and North Cove at Old Saybrook. Federal maintenance dredging operations were last conducted in Norwalk Harbor in 1981; in Southport Harbor in 1961; in Bridgeport Harbor in 1983 (a relatively minor dredging project); and in the Housatonic River in 1976.

   Reflecting the current length and complexity of the Federal maintenance dredging process (see no. 11 below), planning for the Norwalk Harbor and Bridgeport Harbor dredging projects was initiated in 1997 and planning for the Southport Harbor project was initiated in 1996. Planning for these projects is still ongoing. Other towns, including but not limited to Greenwich, Milford, and Essex, are preparing requests to the Corps for maintenance dredging projects.

8. **Municipal harbor management commissions may pursue an important role in the Federal maintenance dredging process.** The Connecticut Harbor Management Act (Sections 22a-113k through 22a-113t of the Connecticut General Statutes) authorizes municipalities to establish harbor management commissions and prepare harbor management plans. Those plans must be reviewed and approved by the Connecticut commissioners of

environmental protection and transportation, reviewed by the Corps of Engineers, and adopted by the local legislative body. The plans address a variety of issues, including dredging, navigation, and coastal resource protection issues. There are currently 16 municipalities with State approved and locally adopted harbor management plans; at least another six municipalities are in the process of preparing harbor management plans. All of these municipalities have Federal navigation projects within or adjoining their municipal jurisdictions. A number of harbor management plans call for the HMC to serve as the municipal advocate for requesting Federal maintenance dredging as needed, and for working cooperatively with the Corps and Connecticut Department of Environmental Protection to advance the dredging process. A number of plans also include provisions concerning maintenance dredging, including policies encouraging timely Federal dredging to ensure continued ease and safety of navigation. The HMC may initiate the Federal maintenance dredging process through a request to the Corps (see no. 11 below).

9. **Three State-wide organizations representing the diverse interests of Connecticut's maritime community have conducted research on Connecticut dredging issues and collaborated for the development of recommendations to improve the Federal dredging process.** These organizations—the Connecticut Harbor Management Association (CHMA), the Connecticut Maritime Coalition (CMC), and the Connecticut Marine Trades Association (CMTA)—encourage and support timely and economical maintenance dredging of Connecticut's Federal navigation projects in a manner that does not cause any significant adverse impacts on the environmental quality of Long Island Sound and Connecticut's harbors.

10. **Issues concerning dredging and dredged material management are of national significance and interest. Federal recommendations to facilitate the planning of Federal maintenance dredging projects have not been implemented in the State of Connecticut.** In 1995, the President of the United States endorsed a National Dredging Policy as set forth in a Federal Interagency Report entitled "The Dredging Process in the United States: An Action Plan for Improvement." The principles of that policy are:

    - The regulatory process must be timely, efficient, and predictable, to the maximum extent practicable.

    - Advanced dredged material management planning must be conducted on a port or regional scale by a partnership that includes the Federal government, the port authorities, state and local governments, natural resource agencies, public interest groups, the maritime industry, and private citizens.

    - Dredge material managers must become more involved in watershed planing to emphasize the importance of point and nonpoint source pollution controls to reduce harbor sediment contamination.

- Dredged material is a resource, and environmentally sound beneficial use of dredged material for such projects as wetland creation, beach nourishment, and development projects must be encouraged.

The President also directed Federal agencies to implement a series of recommendations set forth in the same report to advance the National Dredging Policy, including recommendations for: 1) creating regional and local dredged material management plans; 2) establishing both National and Regional "Dredging Teams" to enhance coordination and communication in the dredging project approval process; 3) clarifying and improving the guidance used to evaluate the presence of contaminants in dredged material and the best scientific methodologies to segregate contaminated sediments from the marine environment; and 4) achieving consistent and efficient funding of Federal dredging projects.

To date, many of these recommendations have not been implemented to facilitate the planning of Federal maintenance dredging projects in Connecticut ports and harbors. For example, long-range dredged material management plans have not been prepared for the operating Federal navigation projects and regional/local dredged material planning groups have not been created to aid in the development of those plans.

The Federal Office of Ocean and Coastal Resource Management (OCRM) within the Department of Commerce is responsible for providing policy analysis and technical assistance to state coastal management programs, including the State of Connecticut's Coastal Management Program. The OCRM, in an effort to develop information to facilitate the resolution of Federal dredging issues through effective State coastal management initiatives, conducted a comprehensive inventory of the dredging-related policies of all 28 states with Federally approved coastal management programs. In 2002, the OCRM is utilizing that information to prepare a national policy concerning dredging and the Federal Coastal Zone Management Act (CZMA).

11. **The Federal maintenance dredging process in Connecticut is inherently complicated and lengthy, consisting of a series of specific steps and decisions involving a number of agencies, principally the Corps and Connecticut DEP, and typically requiring several years to complete.** The time between a request to the Corps for maintenance dredging and the actual initiation of the work is typically measured in years. The basic steps in the dredging process are summarized below.

    a) Request or complaint to the Corps of Engineers: A local request or complaint to the Corps concerning the need for dredging starts the dredging process. This request or complaint may be expressed by the municipal harbor management commission (if such commission has been established) in the form of a letter to the Corps. That letter may include information from review of the Corps' Navigation Project Condition Survey as well as information on navigation project users and documentation of compliance with the Corps' "open to all on equal terms" policy. (See (b), (c), and (e) below.)

b) Navigation Project Condition Survey: The Corps from time to time conducts surveys of the navigable depths in Federally authorized navigation projects. The results of these Condition Surveys are compared to the authorized depths of the surveyed channels and anchorages to identify any shoaling that may have occurred and which may be limiting navigation. This comparison may be undertaken by the local agency or group requesting a Federal maintenance dredging project and described in a letter to the Corps (see (a) above).

c) Assemble and review information on navigation project users: This step in the dredging process involves review of the number, type, size, and draft of the vessels using the navigation project. Although a channel may have shoaled to less than its authorized depth, there may be no need for dredging if the vessels using the channel are not affected by the shoaling. Information on navigation project users is assembled to help document the need for a Federal maintenance dredging project. This information may be included in a letter to the Corps requesting a Federal maintenance dredging project (see (a) above).

d) Economic justification of Federal dredging project: When considering if a Federal dredging project is justified, the Corps considers the results of its Condition Survey, the authorized navigation project depth, and the size of vessels using the navigation project. The Corps applies a ''harbor efficiency'' formula to determine how many vessels are affected by any shoaling that has occurred and how often they are affected. This formula is used to determine if the cost of a Federal dredging project is economically justified before the Corps moves ahead with all of the additional tests and plans needed to implement the dredging project.

e) Establishing compliance with the Corps' ''Open to All on Equal Terms'' policy: Since construction, operation, and maintenance of Federal navigation projects are funded by Federal tax dollars, the Corps has a policy that navigation projects must be ''open to all on equal terms.'' This policy is to ensure that all citizens have an equal opportunity to benefit from the project. The Corps will not undertake a Federal maintenance dredging operation if it determines this policy is not being complied with. Docks, piers, and other structures, for example, can not encroach into a navigation project; boat mooring locations may not be managed to exclude nonresidents from having a fair opportunity to apply for those locations; and local fees for boating access to a navigation project may not be arbitrary or discriminatory against nonresidents or any other group of users.

f) Sampling and analysis of material to be dredged: After the Corps determines that a Federal maintenance dredging project is economically justified, it moves ahead with the sediment sampling and analysis needed to plan the project. A dredge material sampling plan is developed by the Corps in consultation with the Connecticut DEP, U.S. Environmental Protection Agency, National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (FWS). The purpose is to identify the locations from which samples of sediments to be dredged will be collected. Core samples are then obtained by a Corps contractor from those locations. The cores are sent to a

laboratory for various tests to determine the physical composition of the sediments to be dredged and the presence of any contamination in the sediment that might affect the method and location of dredged material disposal.

Generally, for dredging of Federal navigation projects, two sets of analyses are required. The first involves physical and chemical tests to determine the composition and grain size of the material (to distinguish between sandy and silty material, for example) and the presence of lead, chromium, mercury, and other metals, petrochemical substances, and other contaminants.

The second set of analyses generally undertaken prior to Federal dredging projects involves much more expensive "biological" testing to, in effect, see how the sediment in suspension affects living marine organisms. These tests are required of all Federal maintenance dredging projects by the Federal Marine Protection, Research and Sanctuaries Act which is one of the Federal laws controlling dredging and dredged material disposal in Long Island Sound. Each "bio" sample/test costs about $50,000; a typical Federal maintenance dredging project could require six such samples/tests. These costs are borne by the Federal Government. The Corps estimates that the requirements for biological testing add at least one year to the maintenance dredging process. In addition, increased sampling and testing costs mean that less money is available from the Corps's annual budget for pursuing other projects.

h) Preparation of dredged material disposal plan: This is a key element for advancing the dredging process. Suitable disposal areas to handle all of the material to be dredged from the navigation project must be identified. The DEP, EPA, NMFS, and FWS are required to provide input for the Corps' development of the dredged material disposal plan. When preparing the disposal plan, consideration will be given to both open water and upland disposal options, including opportunities for beneficial use of dredged material. Historically, most of the material dredged from Connecticut harbors has been placed in specific open water disposal sites in Long Island Sound. Four disposal sites—the Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals, and New London disposal sites—have been used in recent years. (See no. 22 below.)

i) Determination of Coastal Zone Consistency and Water Quality Certification: Proposed maintenance dredging of Federal navigation projects in Connecticut ports and harbors by the Corps is a Federal action in State waters that must, in accordance with Federal and State law, be reviewed for consistency with the State of Connecticut's Coastal Management Program (CMP). The CMP is based on the legislation contained in the Connecticut Coastal Management Act (CCMA). (See no. 17 below.) It is the responsibility of the DEP to determine that the proposed dredging project is or is not consistent with the legislative policies and other provisions established in the CCMA. The DEP must also issue a State water quality certification pursuant to the Federal Clean Water Act. These two State authorizations require about a two-month period to process if the DEP has all of the information needed to review the project and no significant adverse comments are provided in the course of public review.

Following completion of the dredged material disposal plan, the Corps will fill out an application describing the proposed dredging project and submit that application to the DEP for the purpose of obtaining a coastal zone consistency determination and water quality certification. Once that determination and certification are obtained, the Corps will move forward with the Federal budgeting process (see below).

j) Federal budgeting process: The Federal budgeting process typically followed by the Corps to obtain funds for Federal maintenance dredging projects is a lengthy process that may take 16 to 18 months. (See no. 12 below.) The Corps will not start this process until it receives the coastal consistency determination and water quality certification from the Connecticut DEP. In other words, the Corps will not request funds for a project that has not yet been approved.

In addition, the municipality may be required to contribute to the cost of the Federal maintenance dredging project. (See no. 13 below.)

k) Environmental Assessment or Environmental Impact Statement: The Corps is required by Federal law (the National Environmental Policy Act or NEPA) to prepare either an Environmental Assessment (EA) or Environmental Impact Statement (EIS) to address the potential environmental impacts of the proposed dredging project. The EA is less involved than an EIS which must be prepared when there are anticipated large-scale adverse environmental impacts. Since the Federal navigation projects being considered for maintenance dredging in Connecticut have all been dredged historically, it is anticipated that the Corps will be required to prepare an EA for those projects. The Corps can start work on the EA prior to receiving the coastal zone consistency determination and water quality certification from the DEP. The EA and a finding of no significant impact, however, is necessary before the Corps can begin to advertise for bids from contractors to do the work. (See below.)

l) Plans and specifications; bids and contracts: The Corps will generally not conduct maintenance dredging using its own equipment (the exception is the use of the *Currituck* dredge owned by the Corps for small projects) but instead will put the project out to bid and hire a contractor to do the work. The Corps will prepare detailed plans and specifications for the work and follow a specific procedure to select the contractor.

It typically takes at least four months to advertise a dredging project and select a contractor. For example, if a maintenance dredging project is to start on October 1 of the year (the typical beginning of the "dredging season" in Connecticut), the Corps might follow the following schedule once Federal funding is secured and any local cost-sharing agreement is reached: 1) placement of a notice of the Corps' intent to conduct the work in the Commerce Business daily for a period of 30 days beginning on June 1; 2) issuance of an "invitation to bid" by July 1; 3) opening on August 1 of the bids received; 4) awarding of the contract on September 1; and 5) issuance of an order to proceed with the work on September 15. The Corps emphasizes it can not start this process until the funds to conduct the work have been authorized by

Congress. If the Corps started the bidding process before the funds are authorized and it turned out the funds are not authorized, the agency could be liable for expenses incurred by potential contractors who participated in the bidding process.

m) Implementation of the maintenance dredging project: Implementation of maintenance dredging projects is affected by the imposition of specific dredging "windows" established by the DEP to avoid impacts on spawning shellfish and finfish in harbors to be dredged. These windows typically limit dredging to the fall (beginning October 1), winter, and early spring. (See no. 14 below.)

Another consideration to be addressed in the planning and implementation of a Federal maintenance dredging project is the extent to which local water-dependent facilities may wish to coordinate dredging of their facilities with Federal dredging. In some instances it is not practical for a local facility to conduct maintenance dredging without maintenance of the Federal channel leading to that facility. Any proponent desiring to conduct nonfederal dredging at the same time as a Federal project is being dredged must apply for and obtain necessary State and Federal dredging permits and/or certificates for their proposed work. Those permits and certificates are valid for three years. Nonfederal applicants for maintenance dredging approvals may be able to benefit from the sediment data collected by the Corps and should be spared the expense of the "biological" tests if their projects do not exceed 25,000 cubic yards of dredged material. According to the DEP, all nonfederal applicants will, however, have to conduct some sediment tests to show the sediments they would dredge are similar in composition to the sediments to be dredged by the Corps.

The Corps typically does not wish to have more than one contractor working on the same dredging project at the same time because it would then be necessary to pay for two mobilization efforts and experience shows there is potential for conflicts generated by simultaneous dredging operations in the same harbor.

12. **The Federal budgeting process typically followed by the Corps to obtain funds for Federal maintenance dredging projects is a lengthy process that may take 16 to 18 months.** Described above, the Corps will not start the Federal budgeting process until it receives the necessary coastal consistency determination and water quality certification from the Connecticut DEP. Once the approvals have been received, the Corps's New England District will submit a budget request for the specific dredging project to the Corps's headquarters in Washington D.C. The Corps's headquarters is responsible for preparing the Corps's national budget for water resources projects. This type of request is typically made in or about June. If the specific request makes it into the Corps's national budget request submitted to Congress, it must still be approved by Congress for authorization through Federal legislation and inclusion in the Federal budget which is not announced by the President until early in the following year. Funds for water resources projects are typically authorized through the Federal Water Resources Development Act which is usually enacted biennially. The President announces the budget early in the year and funds become

available for the upcoming Federal Fiscal Year beginning on October 1 of the year the budget is announced.

Each municipality seeking a Federal maintenance dredging project requires the assistance of its U.S. Representative and Connecticut's U.S. Senators in the budgeting process, either through the Corps's normal budgeting process or through Congressional action to authorize funds for dredging projects outside of the Corps' normal process. The City of Norwalk, for example, acting through its Mayor and Harbor Management Commission, has recently requested assistance from Connecticut's U.S. Senators and the City's U.S. Representative for a special authorization of six to eight million dollars for the Corps's proposed maintenance dredging of Norwalk Harbor. That project will involve dredging and disposal of 600,000 cubic yards of sediment.

The Federal budgeting system does not work well when a number of projects are being planned simultaneously in the same state. With 10 projects currently being planned in Connecticut, it will not be possible to obtain the funding necessary to undertake all of the work in the same time period.

13. **Connecticut municipalities may be required to contribute to the cost of a Federal maintenance dredging project. The State of Connecticut provides no funding support for project planning or implementation.** Under current Federal rules, a municipality requesting a Federal maintenance dredging project will be required to sign a "Project Cooperation Agreement" with the Corps and contribute, prior to dredging, a predetermined percentage of the extra cost for any special handling of dredged material (e.g., upland disposal of material not suitable for disposal in Long Island Sound). That percentage is based in part on the authorized depth of the particular Federal channel involved. The municipality would also have to provide an additional percentage of the extra cost over a 30-year period. The State of Connecticut provides no funding support.

The City of Norwalk, for example, will be required to sign a cost-sharing agreement with the Corps and contribute 20% of the extra cost of handling approximately 40,000 cubic yards of contaminated dredged material. The contaminated material will be buried in a Confined Aquatic Disposal (CAD) cell to be constructed by the Corps at the bottom of the channel. The City's total cost is estimated by the Corps at this time to be about $200,000. The local cost share for Federal maintenance dredging of Bridgeport Harbor will be substantially greater since there is an estimated 700,000 cubic yards of dredged material not suitable for open water disposal.

14. **Implementation of maintenance dredging projects is affected by the imposition of specific dredging "windows" established by the DEP to avoid adverse impacts on spawning shellfish and finfish in the harbors to be dredged.** These windows typically limit dredging to the fall (beginning October 1), winter, and very early spring.

The Corps and DEP sometimes disagree on the appropriate dredging window. The Corps has expressed concern that if the imposed dredging windows are overly restrictive, the Corps's ability to complete the dredging project most efficiently is affected. For example, dredging restricted to the middle of winter increases project costs; may extend the project over more than one dredging "season"; and may create problems with the Corps's annual budgeting and need to expend all of its funds within the Fiscal Year.

Representatives of the DEP state that the DEP's Fisheries Division is the authority on establishing the State's dredging windows and will not recommend restrictions not supported by scientific data.

It appears that the end date of the dredging window is more problematic for the Corps in conducting its maintenance dredging projects than the beginning date. Due to the timing of the Federal budget process and the time requirements for advertising the work, selecting a contractor, and entering into a contract, it is generally not practical to consider starting a dredging project prior to October 1. As a result, the Corps would prefer to see the dredging season extended into the spring, instead of opened earlier in the fall.

15. **There is no State official or agency in Connecticut working to advocate or facilitate the Federal dredging process. The experience of other northeastern states provides examples of opportunities for improving the process in Connecticut.** In Connecticut, unlike other northeastern states, there is no State official or agency that serves as an advocate or proponent for advancing the Federal dredging process in the most timely manner, nor is there any official or agency working to coordinate or prioritize the timing of the projects now being planned or anticipated in the near future. It may be argued that a strong State advocacy for Federal maintenance dredging projects may serve Connecticut's interests when competing with other states for the limited Federal funds available for project implementation.

The experience of the other New England states and the states of New York and New Jersey is instructive with respect to state participation in the Federal dredging process and provides examples of opportunities for improving the process in Connecticut.

For example, the Rhode Island Legislature has designated the State's Coastal Resources Management Council (CRMC) as the lead agency for dredging in Rhode Island, responsible for coordinating the interests of the State with regard to all dredging. Among its statutory responsibilities, the CRMC is to: 1) formulate and adopt a State policy with regard to the State's dredging interests; 2) cooperate with, negotiate, and enter into agreements on behalf of the State with the Federal government; 3) develop, prepare, adopt, implement, and maintain a comprehensive plan for dredged material management; and 4) cooperate and coordinate with other State agencies in the conduct of these responsibilities. The CRMC, as the agency responsible for implementing the State's coastal management program, regulates Federal dredging projects through its coastal zone consistency determinations, but also acts as a sponsor for the work.

The State of Massachusetts assumes sponsorship of State and municipal dredging projects through its Department of Environmental Management (DEM) which dredges some nonfederal projects on its own and has acted as a cost-share sponsor for some of the Corps's work. Initiation of any specific local project is politically driven by local representatives to the State legislature. Within the State's Coastal Zone Management (CZM) office there is a position of Dredging Coordinator to serve primarily a regulatory function—to review proposed Federal maintenance dredging projects for consistency with the Massachusetts Coastal Management Program. Unofficially, the CZM office serves as an advocate for Corps maintenance dredging projects.

New Hampshire has established a Dredging Task Force that meets regularly to discuss dredging issues and is considering designation of a State Dredging Coordinator.

At the urging of the Corps of Engineers, the Maine State Planning Office/Maine Coastal Program established, in 1995, a process to annually set State priorities for Federal maintenance dredging throughout the State. The program, under the direction of the State Dredging Coordinator, was formally assigned to and staffed by the Maine Department of Transportation by legislative action. Principal responsibilities of the State Dredging Coordinator are to: 1) maintain and annually update a priorities list summarizing the current status of each maintenance dredging project based on evidence of need, State and local economic benefit, local support, and other considerations; 2) determine the need for maintenance dredging and expedite the regulatory approval process; and 3) coordinate with the Corps of Engineers to annually review and prioritize the maintenance dredging needs of the State's Federal navigation projects.

New York's Coastal Management Program is administered by the New York State Department of State (DOS). New York's coastal managers describe a dual function of the Department of State with respect to maintenance dredging of Federal navigation projects. One function is to review proposed maintenance dredging for consistency with the State's Coastal Management Program. This is the regulatory process implemented pursuant to Section 307 of the Federal Coastal Zone Management Act by every state with an approved coastal management program. The second and equally important function of the DOS is to actively work to advance the legislative goals of the State's coastal management program which include goals for timely maintenance of Federal navigation projects. In this regard, the DOS meets regularly with the Corps and other involved agencies to plan, coordinate, and otherwise advance the maintenance dredging process. In addition, the DOS is actively encouraging, through disbursement of State grants and technical assistance, the development of non-open water disposal options for dredged material.

New Jersey officials say that closing of the ocean disposal site formerly known as the ''mud dump'' site (for all but ''clean'' material intended to cover existing sediments) forced the State to review its regulatory program concerning dredged material disposal and to plan for long-range disposal needs. As a result, the Governor put together a team to address these issues, the New Jersey Department of Environmental Protection established an office of Dredging and Sediment Technology, and the State is now pursuing a number of alternatives

to open water disposal, including beach nourishment, habitat development, structural and nonstructural fill, and confined disposal options.

16. **The principal role of the State of Connecticut in the Federal maintenance dredging process is that of a regulator of the process. In this regard, the State acts through the Department of Environmental Protection's Office of Long Island Sound Programs,** Recent experience indicates that the principal role of the State of Connecticut in the Federal dredging process is that of a regulator of the process to ensure that no significant adverse impacts affect the State's coastal resources and water quality. (See no. 18 below.) Section 307 of the Federal Coastal Zone Management Act provides Connecticut, and all other states with Federally approved coastal management programs, with the authority to review all Federal activities affecting the State's coastal area for consistency with the State's Coastal Management Program (CMP). Under this authority, the State, acting through the Department of Environmental Protection's Office of Long Island Sound Programs, reviews proposals for maintenance dredging projects submitted by the Corps of Engineers for the purpose of determining coastal zone consistency and issuing a water quality certification. (See no. 11 above.) Prior to the submittal of an application for coastal zone consistency and water quality certification, the DEP may interact with the Corps and the affected municipality in the course of the planning process to provide input concerning the information that will be required from the Corps in order for the State to make a consistency determination. In this regard, this State involvement is similar to the sort of pre-application conference the DEP may have with an applicant proposing a nonfederal maintenance dredging project. The DEP also provides input, along with other agencies, in the development of the dredged material sampling plan and dredged material disposal plan. (See no. 11 above.)

    Currently, the Connecticut Department of Transportation (DOT) does not play a major role as an advocate or facilitator of the Federal maintenance dredging process. The DOT has some statutory oversight concerning the navigable waterways of the State, but water transportation issues have not been given the same level of agency attention as highway and aviation matters.

17. **The Connecticut Coastal Management Act establishes legislative goals and policies in support of maintenance dredging of Federal channels and anchorage basins. Those goals and policies are of equal weight to the Act's goals and policies concerning coastal resources protection.** When determining the consistency of any proposed Federal action with the Connecticut Coastal Management Program, including a Federal maintenance dredging project proposed by the Corps, it is the Department of Environmental Protection's responsibility to consider the legislative goals and policies of the Connecticut Coastal Management Act (CCMA) which establishes the basis for the CMP. A legislative intent of the CCMA is to establish a balance between conservation of the State's natural coastal resources and beneficial use and development of those same resources in the public interest. The CCMA contains policies concerning ''development, facilities and uses'' in the coastal area as well as policies concerning the protection of coastal land and water resources. The

Act does not attach a higher priority to either category of policies. In other words, the policies for coastal resources protection are of equal significance to the policies concerning development, facilities, and uses in the coastal area.

Several provisions of the CCMA specifically address maintenance dredging of Federal channels and anchorage basins.

a) Federal navigation projects are "water-dependent uses" and "facilities and resources in the national interest" as defined in the CCMA. "Water-dependent uses" are defined in the CCMA to include "navigation aids, basins, and channels." "Facilities and resources which are in the national interest" are defined in the CCMA to include "continued operations of existing federally-funded dredged and maintained navigation channels and basins."

b) One of the most significant provisions of the CCMA concerns the priority and preference that must be given to water-dependent uses. A basic legislative goal is "To give high priority and preference to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters." (Connecticut General Statutes Sec, 22a-92(a)(3).) In many instances, those uses and facilities are dependent on maintenance of Federal navigation projects. A basic legislative policy is "To manage uses in the coastal boundary through existing state... siting and regulatory authorities, giving highest priority and preference to water-dependent uses and facilities in shorefront areas." (CGS Sec. 22a-92(b)(1)(A).) Not only are Federal navigation channels and anchorages water-dependent uses in themselves, they are also necessary to support the viability of other water-dependent uses and activities.

c) The CCMA establishes a policy "to encourage, through the state permitting program for dredging activities, the maintenance and enhancement of existing federally-maintained navigation channels, basins, and anchorages..." (CGS Sec. 22a-92(c)(1)(C).)

18. **State coastal managers believe it would be a conflict of interest for the Department of Environmental Protection's Office of Long Island Sound Programs to serve as an advocate or facilitator of the Federal maintenance dredging process.** In the course of the CHMA Dredging Study, representatives of the DEP's Office of Long Island Sound Programs have asserted that the DEP can not serve as an advocate or facilitator of Federal maintenance dredging projects on a State-wide basis because the agency regulates those same projects. This regulatory role is conducted primarily through the agency's review of a proposed Federal maintenance dredging project to determine its consistency with the Connecticut Coastal Management Program. (See no. 16 above.) Acting as an advocate would therefore be a conflict of interest, they say. Further, recent experience indicates that State coastal managers generally do not believe it is the role of the DEP OLISP to pursue planning programs and other initiatives to "advance" the legislative goals and policies established in the Connecticut Coastal Management Act, including the goals and policies

concerning maintenance of Federal navigation projects. Instead, it is a principal responsibility of the DEP OLISP to judge the consistency of proposed actions (including Federal maintenance dredging proposals) for consistency with the CCMA goals and policies, and most importantly with the goals and policies concerning coastal resource protection.

19. **A significant issue affecting the Federal maintenance dredging process is the presence of various contaminants, including heavy metals, petroleum hydrocarbons, and other toxic substances, in sediments to be dredged from some of the State's harbors. As a result, not all dredged material is suitable for open water disposal in Long Island Sound.** The Federal Marine Protection, Research and Sanctuaries Act (see no. 22 below) prohibits the open water disposal of dredged material found to have more than trace amounts of certain contaminants. Alternatives to open water disposal of contaminated dredged material must therefore be found. To restore authorized channel depths and maintain the viability of the Port of Bridgeport, for example, appropriate means of disposal must be found for an estimated 700,000 cubic yards of dredged material not suitable for open water disposal. Alternatives to open water disposal of contaminated dredged material are now being considered throughout the U.S., including use of dredged material for structural and nonstructural fill (fill for landfill cover and remediation of brownfield sites, for example), agricultural uses, and mine reclamation. Confined underwater disposal options are also being considered, as well as decontamination opportunities. Alternative disposal technology, however, has not been developed to the extent that the above alternatives are economically feasible on a large scale.

    There is currently no State-sponsored program investigating alternative dredged material disposal options or technologies. The Corps reports that a number of its maintenance dredging projects in Connecticut will generate sandy, beach-compatible dredged material and that the Corps's regulations encourage beneficial use of dredge material for beach nourishment. Nonfederal cost-sharing is required, however, and there are currently no State-sponsored initiatives to pursue this opportunity. Also, the Corps reports that nearshore disposal of suitable dredged material for beach nourishment is a practice used with success in other New England states and elsewhere in the country, and is potentially applicable in some Connecticut locations.

    Section 345 of the Federal Water Resources Development Act of 2000 authorized $20 million for a demonstration program for the use of innovative sediment treatment technologies for dredged material from LIS; those funds have not been appropriated. Other possible alternatives to open water disposal of dredged material include use of the material for beach nourishment and wildlife habitat creation.

20. **Current Connecticut statutes and regulations concerning solid waste management affect the upland disposal of dredged material.** Current Connecticut statutes and regulations concerning solid waste management do not facilitate the beneficial use of dredged material for upland applications, including use of dredged material for structural and nonstructural fill and beach nourishment purposes. Under current statutes and regulations,

dredged material is regulated by the DEP as solid waste; special testing and a State permit are required before it can be placed on upland locations. Representatives of the DEP indicate that appropriate amendments to the statutes and regulations may be appropriate to facilitate beneficial upland use of suitable dredged material; these issues are currently being considered by the DEP.

21. **Dredging and dredged material disposal for maintenance of Federal navigation projects in Connecticut is not being planned or managed on a State-wide basis.** There is no long-range, comprehensive dredged material management plan (DMMP) for Connecticut ports and harbors and for dredged material disposal in Long Island Sound. A 1980 ''Interim Plan for the Disposal of Dredged Material from Long Island Sound'' is the only agreement between Connecticut and New York that addresses dredged material disposal in LIS. The Interim Plan called for development of a comprehensive, long-range DMMP and identified several tasks needed to do so. A 1998 study undertaken for the Connecticut DEP assembled background information for preparation of a LIS DMMP and presented recommendations for proceeding with development of the Plan, recognizing that the Plan will be strongly influenced by the results of the Environmental Impact Statement process for designating one or more open water disposal sites under the Marine Protection, Research, and Sanctuaries Act (See no. 23 below.) The DEP has indicated that it is committed to preparing a LIS DMMP but does not intend to proceed with development of the DMMP until the EIS process is completed.

22. **Planning for Federal maintenance dredging projects in Connecticut is currently proceeding against a complicated background of studies and issues concerning the open water disposal of dredged material in Long Island Sound.** Some of the principal issues now being addressed concern the application of the requirements of the Federal Marine Protection, Research and Sanctuaries Act to dredged material disposal in LIS. On average, 700,000 cubic yards of material, most of it from Connecticut harbors, have been placed in the four Long Island Sound disposal sites each year from 1982 to 1996, according to the DEP. The disposal sites used, however, have never been officially ''designated'' by the U.S. Environmental Protection Agency (EPA) in accordance with Section 102(c) of the MPRSA.

    Congress amended the MPRSA in 1980 (the Ambro amendment) to require that disposal of dredged material in Long Island Sound from all Federal dredging projects and from nonfederal projects exceeding 25,000 cubic yards of material be subject to the MPRSA's environmental testing criteria. These criteria are more stringent and costly to comply with than the standards established under the Federal Clean Water Act which had previously been the principal Federal legislation controlling all dredged material disposal in LIS. (Sampling and testing costs for maintenance dredging of a typical Corps project are now on the order of $300,000.) So that marina owners would not be unduly burdened by ''an unrealistically costly set of testing standards,'' small dredging projects of less than 25,000 cubic yards were specifically exempted from the MPRSA criteria; those projects remain subject to the Clean Water Act criteria.

A 1988 opinion by the United States Court of Appeals for the Second Circuit (see Town of Huntington v. Marsh) describes the intention of Congress in passing the Ambro amendment to afford the Sound "equal or greater protection from polluted dredged spoils [as that afforded] to open ocean waters." It is the stated position of the Connecticut DEP OLISP, however, that the MPRSA has provided no additional protection to LIS and that the Sound should be deleted from the MPRSA. Others, including New York State coastal managers, do not agree.

Section 102(c) of the MPRSA requires that open water sites used for the disposal of dredged material be designated by the EPA for that use and that the EPA and Corps prepare a site management plan for each designated site. None of the four historically used disposal sites in Long Island Sound—the WLIS disposal site, CLIS disposal site, Cornfield Shoals disposal site, and New London disposal site—have been designated by the EPA; nor have any site management plans been prepared under the MPRSA. Under Section 103(b) of the MPRSA, if no feasible disposal site has been designated, the Corps under certain circumstances can select an alternative disposal site to be used for a limited period of time, subject to the EPA's concurrence.

23. **The Environmental Impact Statement (EIS) for designating one or more LIS disposal sites under the MPRSA and preparing a long-term management plan for the use of each designated site has not been completed.** In April of 1998, the EPA and Corps entered into an agreement to begin a disposal site designation process for Long Island Sound and to develop site management and monitoring plans, recognizing that this work may or may not result in the designation of any particular site or sites. The agencies agreed to complete this work by the year 2003 or earlier, if possible. They also agreed that dredged material disposal may proceed, in the meantime, if authorized by the Corps under Section 103(b) of the MPRSA. The cost of the EIS was initially estimated at between $2 and $6 million. In 2002 the funding is about to run out and the work has not been completed. Additional Federal funding in the amount of $5.5 million is now needed to complete the EIS over the next four Federal fiscal years, with completion not expected before the spring of 2006. The eventual outcome of this process may have a profound effect on the future maintenance dredging of all Connecticut ports and harbors. Scientific research presented to date for the EIS appears to indicate that past use of the four LIS disposal sites has not resulted in significant adverse impacts on the ecological health of LIS.

24. **The Central Long Island Sound (CLIS) disposal site will be closed for use by Federal and large private dredging projects on February 18, 2004 unless it is designated by the EPA under the MPRSA.** Under the MPRSA, use of a nondesignated dredged material disposal site is limited to a period of five years, with a potential extension for a second five-year period. Under this legislation, the Corps reports a February 18, 2004 closure date for the CLIS site unless that site is designated under the MPRSA by that time. The EIS for site designation, however, can not be finished before Spring 2006. Several Federal maintenance dredging projects, including major maintenance of Norwalk, Bridgeport, and New Haven harbors, may be affected by closure of the CLIS disposal site. The Corps reports that none

of the other three LIS disposal sites are yet operating under the second five-year period permitted by the MPRSA.

25. **The State of New York is a major stakeholder for resolution of the LIS dredging issues and for designation of one or more disposal sites under the MPRSA.** By virtue of their shared boundary in LIS, the states of Connecticut and New York have a common interest in the resolution of the current issues concerning open water disposal of dredged material in LIS. While most of the dredged material disposal needs are associated with Connecticut ports and harbors, both states have strong coastal management programs committed to maintaining and enhancing the ecological health of LIS. Members of New York's Congressional delegation have previously expressed concerns about the adverse environmental impacts that may be associated with open water disposal of dredged material in LIS. New York State interests were supportive of the lawsuit against the Corps (Forbes v. Corps of Engineers) filed in response to the open water disposal of contaminated material (capped with clean material) dredged from the Thames River for the Seawolf submarine project. New York coastal managers report that designation by the EPA of any open water disposal site in LIS under the MPRSA will affect New York State waters and therefore is subject to approval by the New York State Department of State—the administrator of New York's Coastal Management Program.

26. **The DEP OLISP has suggested that the research and other efforts to date to prepare the EIS now be refocused into preparation of a comprehensive LIS Dredged Material Management Plan (DMMP).** This suggested approach would involve repeal of the Ambro Amendment of the MPRSA. It would also involve agreement by Connecticut and New York that open water disposal of dredged material in LIS would be regulated pursuant to the Federal Clean Water Act and the water quality standards and coastal management programs of the two states. The DEP OLISP suggests this approach will provide the same level of protection to LIS as completion of the EIS and designation of one or more disposal sites under the MPRSA. The agency also suggests there would also be significant cost savings under this approach when compared to the costs associated with completing the EIS.

RECOMMENDATIONS

1. **The State of Connecticut should actively encourage and facilitate timely maintenance dredging of Federal navigation projects in all Connecticut ports and harbors as necessary to maintain and enhance the viability of the State's marine-related economies, the beneficial quality of life associated with the Connecticut coast, and opportunities for public access to Long Island Sound. A specific office with powers and duties for this purpose and sufficient resources to carry out those powers and duties should be designated by the legislature.**

   1(a) An office of the State Coordinator of Federal Maintenance Dredging should be established. Consideration should be given to establishing this office subject to the direction and authority of the Connecticut Port Authority (CPA) authorized by Public Act No. 01-143, amended as may be necessary to facilitate this recommendation.

   1(b) The principal duty of the office of the State Coordinator of Maintenance Dredging will be to coordinate all interests of the State with regard to maintenance of Federal navigation projects. The office will be responsible for: long-range planning to ensure that regular maintenance dredging of these projects is performed on a timely basis; coordination of the interests of the Connecticut departments of Environmental Protection, Transportation, and Economic and Community Development in the Federal maintenance dredging process; coordination with the members of the State's Congressional delegation to obtain the Federal funds needed to implement maintenance dredging projects; coordination with municipal interests, including port authorities and harbor management commissions, pursuing Federal maintenance dredging projects; and cooperation, negotiation, and agreements on behalf of the State with the Federal government with regard to Federal dredging projects.

   1(c) The Office of the State Coordinator of Maintenance Dredging, in coordination with other agencies, will develop and implement a process to annually establish the State's priorities for Federal maintenance dredging and to annually evaluate the status of each Federal maintenance dredging project. The Office will collect, compile, and maintain the State's data base of information needed to facilitate the dredging process, including but not limited to information on costs and funding, rates of shoaling, authorized project dimensions, dredging history, sediment characteristics, economic benefits, environmental concerns, and dredged material disposal options. In coordination with other agencies, the Office will be responsible for establishing a schedule for completing the planning necessary to undertake each Federal maintenance dredging project.

   1(d) The Office of the State Coordinator of Maintenance Dredging will regularly solicit the advice and assistance of an Advisory Council appointed by the Governor consisting of 10 citizens of Connecticut knowledgeable of the needs, operations, economic impacts, environmental issues, and related matters regarding dredging and dredged material disposal in Connecticut ports and harbors and Long Island Sound.

1(e) The Office of the State Coordinator of Maintenance Dredging will prepare an annual report, provided to the Governor and Legislature, on the status of maintenance of Connecticut's ports and harbors. Such report will identify any issues affecting timely and economical maintenance dredging of Connecticut's ports and harbors requiring the attention of the Governor and/or Legislature.

2. **The Environmental Impact Statement to evaluate the possible designation by the U.S. Environmental Protection Agency of one or more open water dredged material disposal sites in Long Island Sound pursuant to the Federal Marine Protection, Research and Sanctuaries Act should be completed in the most timely manner, along with the site designation process.**

2(a) The U.S. Congress should appropriate the additional funds needed to complete the EIS and designation process according to a specific schedule and scope of work agreed to by the EPA and Corps of Engineers with input from other stakeholders.

2(b) Prior to resumption of the EIS with additional Federal funding, the principal stakeholders, including the EPA, Corps, Connecticut Department of Environmental Protection, New York State Department of State, New York Department of Environmental Conservation, National Marine Fisheries Service, and U.S. Fish and Wildlife Service should review and evaluate all work completed to date on the EIS.

2(c) All stakeholders, including environmental organizations and business interests, should be provided the opportunity for meaningful participation in the EIS and site designation process throughout the remainder of that process.

3. **Appropriate Federal legislation should be enacted to ensure that currently used open water disposal sites in Long Island Sound remain available for disposal of suitable material generated by Federal and large private (greater than 25,000 cubic yards) dredging projects while the Environmental Impact Statement and site designation process is being completed. In this regard, the February 2004 closure date of the Central Long Island Sound disposal site, currently mandated by the Marine Protection, Research and Sanctuaries Act, should be extended.**

4. **At the same time as the Environmental Impact Statement and site designation process is being completed, work should begin on the preparation of long-range dredged material management plans (DMMPs) for maintenance of Federal navigation projects in Connecticut and New York harbors utilizing Long Island Sound disposal sites.**

4(a) Preparation of the DMMPs should be through a partnership of interested stakeholders, including local, State, and Federal agencies, business interests, and environmental organizations. Through technical and funding assistance, the State of Connecticut should be an active participant in this process as it affects Connecticut's ports and

harbors. DMMPs should include specific measures needed to manage the volume of material likely to be dredged over at least a 20-year period, including material that is not suitable for open water disposal in LIS. (See no. 5 below.) The Department of Environmental Protection's Office of Long Island Sound Programs should identify development of the DMMPs as a priority of the agency and serve as the principal State agency facilitating their development.

4(b) Priority attention should be given to development of a DMMP for the Port of Bridgeport. A priority list for development of DMMPs for all Connecticut ports and harbors should be developed and a schedule for completion of those DMMPs should be established.

5. **Increased attention should be given to the identification of feasible alternatives to open water disposal of dredged material, including but not limited to use of dredged material for structural and nonstructural fill, including remediation of brownfields sites, and other applications such as beach nourishment. Opportunities for confined aquatic disposal and decontamination should also be evaluated.**

5(a) The $20 million authorized by the Federal Water Resources Development Act of 2000 for a demonstration program for use of innovative sediment treatment technologies for LIS dredged material should be appropriated. A suitable amount of this total should be applied to identification of feasible alternatives to open water disposal of contaminated material that must be dredged to maintain the Port of Bridgeport.

5(b) Connecticut statutes and regulations concerning solid waste management should be amended as necessary to facilitate the beneficial, environmentally sound use of dredged material for upland applications.

6. **Following completion of the EIS and site designation process for Long Island Sound dredged material disposal, stakeholders should review and evaluate the status of dredged material management in LIS. That review should be for the purpose of considering any appropriate modifications of the Marine Protection, Research and Sanctuaries Act (and specifically the Ambro Amendment of that Act) as may be necessary to best balance the need for timely and economical maintenance dredging with the need to protect LIS resources.**

6(a) Stakeholders conducting the review and evaluation of the status of LIS dredged material management must include the EPA, Corps, Connecticut Department of Environmental Protection, New York State Department of State (acting as the State agency responsible for implementing New York's Coastal Management Program), New York Department of Environmental Conservation, National Marine Fisheries Service, and U.S. Fish and Wildlife Service, as well as appropriate environmental organizations and business interests.

7. **All stakeholders concerned with LIS dredged material management, including governmental agencies, environmental organizations, and business interests, should recognize and respect each others' objectives as important and legitimate, and work together as partners to resolve the current issues in an objective, balanced, and practical manner.**