

**Request for Proposals (RFP) 13016
Suffolk County Purchasing Division
on behalf of the Department of Health Services is
Seeking Proposals to Provide
Analysis and Assessment Services for the Grand Canal, Oakdale**

Timeline

Advertised/Issue Date: May 23, 2013

Technical Questions Due: June 11, 2013
Must be submitted in writing (fax/email acceptable) to the Suffolk County Purchasing Office

Proposer's Conference: June 26, 2013
(Non-mandatory) 10: 00 AM
Suffolk County Purchasing Office

Proposal Due Date: July 10, 2013
3:30 p.m.

Contact Information

Name: Thomas Malanga	Main Tel. (631) 852-5196
Title: Principal Contracts Examiner	Direct Tel. (631) 852-5463
Suffolk County Purchasing Office	Fax: (631) 852-5221
335 Yaphank Avenue, Yaphank, NY 11980	Email: tom.malanga@suffolkcountyny.gov

Response Package Requirements

- Submissions to be sent to Suffolk County Purchasing Office
- Number of Copies: Original plus 2 CD copies and 8 copies
 - 1 CD to include Proposal PLUS Fee/Revenue Schedule
 - CD to be placed in SEALED ENVELOPE containing copies of the Cost Proposal
- The Purchasing RFP No. (located on upper right hand corner of this page) must be on:
 - All outer mailing envelopes/package
 - Original Response and all copies on the binder/cover page
- Original must be labeled "ORIGINAL"
- Original must contain the actual ink signed and notarized required County forms
- All copies must be complete copies of the Original
- Cost Proposals/Fee Schedules, original and required number of copies are to be in a separate, single, sealed packet to be included with the Original Proposal ONLY
- Proposals should be submitted in a tabbed and labeled binder, not permanently bound
- Transmittal letter and all required forms should be placed in First Tab of Binder
- Do NOT return RFP document. This is for you to keep for reference.

Late Proposals Will Be REJECTED

Table of Contents

Section I Administrative Information

1. Purpose of RFP
2. Coordinating Departments
3. Background Information
4. Evaluation Committee and Award of Contract
5. Questions and Comments
6. Proposer's Conference
7. Due Date for Proposals
8. Number of Copies of Proposal
9. RFP Policies and Procedures
10. RFP Posted on County Website
11. Reservation of Rights
12. Proposal Format
13. Award Criteria
14. Contract Terms and Conditions
15. Use of County Resources to Interfere with Collective Bargaining Activities
Local Law No. 26-2003
16. Non-Responsible Bidder
17. Effective Period of Proposals
18. NYS Freedom of Information Law (FOIL)

Section II Proposer Profile

1. General Information/Proposer's History
2. Qualifications and Experience of Personnel
3. Financial Viability
4. Client History
5. References
6. Conflicts of Interest and/or Potential Conflicts of Interest
7. Subcontractors

Section III Background Information

Section III, Attachment 1 Grand Canal Location Map

Section III, Attachment 2 Grand Canal Assessment Final Report

Section III, Attachment 3 Grand Canal Preliminary Survey

Section III, Attachment 4 Grand Canal Ownership Mapping

Section III, Attachment 5 Generic Sampling Plan

Section III, Attachment 6 Generic Sampling Plan Cover Letter

Section III, Attachment 7 Grand Canal SCVC Sites

Section III, Attachment 8 Environmental Ecology Dredge Application

Section III, Attachment 9 Environmental and Ecological Criteria for County Dredging Projects

Section III, Attachment 10 § A8-5. Criteria for County dredging projects.

Section IV Technical Requirements

1. Overview
2. Minimum Requirements for Technical Services Proposals
3. Technical Services Specifications (Detailed Scope of Services)

Section V Cost Proposal/Fee Schedule

1. Separate Envelope
2. Cost Proposal/Fee Schedule is One of Several Evaluation Criteria
3. Additional Information
4. Alternative Proposals
5. Format for Cost Proposal/Fee Schedule

Section VI Model Contract

Suffolk County Required Compliance Forms in Accordance with County Laws

Note: All required forms may be obtained at www.suffolkcountyny.gov:
Click on Bids and Proposals and follow the instructions to register and download the documents

Section I Administrative Information

1. Purpose of RFP

The County of Suffolk ("County"), on behalf of the Suffolk County Department ("Department") set forth on page one, invites proposals ("Proposal(s)") from qualified companies ("Proposer") to provide services ("Services"), as described in Section IV, entitled "Technical Requirements."

The term Contractor ("Contractor") shall mean the successful Proposer who may be awarded a contract pursuant to this RFP.

2. Coordinating Departments

a. Prior to Award of Contract

The Suffolk County Purchasing Office is responsible for coordinating with the Department regarding the issuance of this RFP:

Suffolk County Purchasing Office
335 Yaphank Avenue, Room 103
Yaphank, New York 11980
Main Tel: (631) 852-5196
Fax (631) 852-5221

Contact: Purchasing Office staff member listed on page one of this RFP.

b. After Award of Contract

- i. The Department is responsible for coordinating with the Suffolk County Attorney's Office and the Contractor regarding the negotiation and execution of the contract.
- ii. The County will execute a contract with the Contractor, based on the Model Contract included in this RFP. Note that the Model Contract is subject to negotiation and revision, based on the Department's needs and the approval of the County Attorney's Office.
- iii. The Proposal submitted by the Proposer in response to this RFP, as may be negotiated by the Department, will become the basis for the Contract.

c. After Execution of Contract

The Department is responsible for administration of the Contract.

3. Background Information

- a. Suffolk County, with a population of 1.5 million, is Long Island's eastern-most county, and covers an area of approximately 900 square miles, 20 miles at its widest part and approximately 86 miles in length.
- b. The County of Suffolk is a municipal corporation of the State of New York with an annual operating budget of approximately \$2.7 billion. The County employs approximately 12,000 employees, with main offices located in Hauppauge, Yaphank, Riverhead, and several smaller locations.

4. Evaluation Committee and Award of Contract

The award of any contract will be made in the best interest of the County, taking into consideration cost as well as technical or other non-cost factors. The Suffolk County Department of Law acts as counsel to the County Evaluation Committee, but does not vote in the selection process.

The RFP Evaluation Committee shall include the following:

- a. Suffolk County Legislature Presiding Officer, or his designee; and
- b. Suffolk County Executive, or his designees; and
- c. The Department Head, or his or her designee, of the Department requesting the RFP.

5. Questions and Comments

a. Administrative Questions

Administrative questions (e.g. procedural questions on how to respond to this RFP) may be submitted by telephone or in writing (fax/email acceptable) to the Purchasing Office staff member listed on page one of this RFP.

b. Technical Questions

Technical questions (questions which are specific to the service requested in this RFP) must be submitted in writing (fax/email are acceptable) on or before the date set forth on page one of this RFP to the attention of the Purchasing Office staff member listed on page one of this RFP. Responses to such technical questions will be developed by the requesting Department and issued by the Purchasing Office in the form of an Addendum to this RFP.

c. No Direct Contact

No questions or comments should be directed to any County employee or its Contractors or any firm currently in contract with the County regarding this RFP during the RFP process, except as set forth in sub-paragraphs 5.a and 5.b above or as may be requested or permitted by the Suffolk County Purchasing Office and/or the Suffolk County Department of Law. Failure to comply may result in immediate disqualification.

6. Proposer's Conference

A Proposer's Conference (non-mandatory) will be held on the date set forth on page one of this RFP.

Location Suffolk County Purchasing Office
335 Yaphank Avenue
Yaphank, New York 11980

7. Due Date for Proposals

Proposals must be submitted to the attention of the Purchasing Agent listed on page one, by 3:30 p.m. on the date set forth on page one of this RFP.

In the interest of fairness to all participants, no extensions or exceptions will be permitted, unless issued as an Addendum to this RFP and applicable to all Proposers.

8. Number of Copies of Proposal

One original, plus such additional numbers of copies as set forth on page one of this RFP of the responses to Sections II, IV and V, are required to be sent to the Suffolk County Purchasing Office.

Note: Section V, entitled "Cost Proposal/Fee Schedule," is required to be in a **separate, sealed envelope**, properly labeled.

Do not submit Proposals that are permanently bound.

9. RFP Policies and Procedures

- a. It is the County's intent to select the Proposer that provides the best solution for the County's needs. In order for the County to conduct a uniform review process of all proposals, proposals must be submitted in the format set forth below in paragraph 12, entitled "Proposal Format." Failure to follow this format may be cause for rejection of a proposal because adherence to this format is critical for the County's evaluation process.

- b. The Contract will be in the general format set forth in Section VI entitled "Model Contract," but will be subject to final contract negotiations.
- c. This RFP is not intended, and shall not be construed, to commit the County to pay any costs incurred in connection with any proposal or to procure or contract for any services.
- d. As a preliminary step, each Proposal will be examined to determine whether it is responsive to the requirements of this RFP. After such preliminary review, all responsive proposals will be evaluated.
- e. The decision to award a contract shall be based on the ability of the Proposer to provide quality and needed services and products and to comply with all applicable laws, rules, and regulations, including without limitation the local preference and other Suffolk County local laws referenced in the Section entitled "Suffolk County Required Compliance Forms in Accordance with County Laws."
- f. While the County is under no obligation to contact Proposers for clarifications, it reserves the right to do so. Depending on the number and quality of the proposals submitted, the County, at the sole discretion of the RFP Evaluation Committee, may elect to interview all or some of the Proposers during the selection process and to request presentations.
- g. The County will not necessarily choose the Proposer(s) with the lowest rates for Services. Based on the evaluation criteria, a competitive range consisting of those Proposals which are acceptable to the County, or which could be made acceptable following written or oral presentations, will be determined.
- h. The award of any contract will be made as judged to be in the best interest of the County.

10. RFP Posted On County Website

This RFP is available on-line at: www.suffolkcountyny.gov: click on Bids and Proposals and follow the instructions to register and download the documents. By registering on-line you will automatically be notified of all future addendums. If you should need assistance, please contact the Purchasing Office for help.

11. Reservation of Rights

The County expressly reserves the right to:

- a. Reject or cancel any or all proposals or any part thereof submitted in response to this RFP;
- b. Withdraw the RFP at any time, at the County's sole discretion;
- c. Disqualify any Proposer whose conduct and/or Proposal fails to conform to the requirements of the RFP;
- d. Use Proposal information obtained through site visits, management interviews, and the County's investigation of a Proposer's qualifications, experience, ability or financial standing, and any material or information submitted by the Proposer in response to the County request for clarifying information in the course of evaluation and/or selection under this RFP;
- e. Prior to Bid opening, amend the RFP specifications to correct errors, or oversights, or to supply additional information , as shall become available;
- f. Prior to Bid opening, direct Proposers to submit Proposal modifications addressing subsequent RFP amendments;
- g. Change any of the dates concerning the RFP award schedule;
- h. Eliminate any mandatory, not-material specification that cannot be complied with by all of the prospective Proposers;

- i. Waive any requirements that are not material;
- j. Award negotiated contracts to one or more Proposers;
- k. Negotiate with the successful Proposer(s) within the scope of the RFP, in the best interest of the County;
- l. Conduct contract negotiations with the next responsible Proposer should the County be unsuccessful in negotiations with the selected Proposer;
- m. Require clarification at any time during the procurement process and/or require correction of arithmetic or other apparent errors for the purpose of assuring a full and complete understanding of a proposal and/or to determine a Proposer's compliance with the requirements of the RFP.

12. Proposal Format

The following materials are required to be received by the County, by the Proposal Due Date set forth on the first page of this RFP. The topics listed under these general headings are minimum standards and should not be viewed as limitations to the information provided by the Proposer in response to this RFP.

a. Transmittal Letter (one original plus number of copies listed on page one)

A transmittal letter is a letter on the Proposer's stationery. A corporate officer or an authorized agent of the Proposer must sign the transmittal letter. The transmittal letter must state the contact person who will be responsible for answering all questions of the County Evaluation Committee. Include the telephone number, fax number, and e-mail address for such contact person.

b. Required Forms

i. Disqualification of Non-responsible Bidders (LL 52-2012 Form) (2 pages)

LL 52-2012 Form is included in the Section entitled "Suffolk County Required Compliance Forms in Accordance with County Laws."

ii. Suffolk County Form 22 -- Contractor's/Vendor's Public Disclosure Statement (2 pages)

SCEX Form 22 is included in the Section entitled "Suffolk County Required Compliance Forms in Accordance with County Laws."

A corporate officer, or an authorized agent of the Proposer, must sign one (1) original of form and have it notarized.

Please note that any Proposers who are not-for-profit corporations are not required to complete this form.

iii. Non-Collusive Proposal Certification (FTS Form) (1 page)

FTS Form is included in the Section entitled "Suffolk County Required Compliance Forms in Accordance with County Laws."

iv. Lawful Hiring Forms (LHE-1 and LHE-2 Forms) (2 pages)

These forms are included in the Section entitled "Suffolk County Required Compliance Forms in Accordance with County Laws."

The Labor Department's Lawful Hiring of Employees Unit may be reached at (631) 853-3808 for specific questions.

v. Living Wage Forms (LW-1 and LW-38 Forms) (2 pages)

These forms are included in the Section entitled "Suffolk County Required Compliance Forms in Accordance with County Laws."

If you answer yes to LW-38, then you MUST answer questions 12 and 13 on LW 1 form.

The Labor Department's Living Wage Unit may be reached at (631) 853-3808 for specific questions.

vi. Contractor's Statement of Applicability of Local Preference Law – Section A4-13 of the Suffolk County Administrative Code (Local Preference Law)

Local Preference Law - Section A4-13 of the Suffolk County Administrative Code establishes a preference program for Suffolk County consulting contracts. This preference program requires all contracts for professional consulting services (engineering, architectural, planning, legal, and accounting, etc.) to be awarded to firms located and doing business within Suffolk or Nassau County, except where no local consultant has the necessary expertise or credentials to provide the needed service, or where the local consultant's response to a Request for Proposals (RFP) exceeds the otherwise lowest response by more than 10%. The local law contains specific definitions and language relative to application of this law which interested parties should review. The laws of Suffolk County are available free of charge at <http://legis.suffolkcountyny.gov/> under the "Search the Laws of Suffolk County" tab.

If applicable, include a statement with the Proposal asserting the applicability of the Local Preference Law. The statement must include the reasons for assertion of the applicability of the Local Preference Law.

c. Proposer Profile/Response to Questions set forth in the RFP Section entitled "Proposer Profile"

Proposers' responses will be used in the County's evaluation of the Proposers' general qualifications.

d. Proposer's Proposed Technical Services/Response to items set forth in the RFP Section entitled "Technical Requirements"

This Section will be used in the County's evaluation of the Proposer's proposed technical services.

e. List (if applicable) of Subcontractors

Identify all subcontractors the Contractor plans to use and the function for which such subcontractors will be responsible. Provide qualifications, including prior relevant experience, for all subcontractors anticipated to be used (Reference Section III).

Sub-contractors must complete all County forms listed above in paragraph 12(b).

Sub-contractors must respond to all questions set forth in the RFP Section entitled "Proposer Profile." This includes financial statements.

Sub-contractors must respond to all requirements, to the extent such requirements are applicable to the services they will be providing, set forth in the RFP Section entitled "Technical Requirements."

Failure to include this information in the Proposal may be grounds for disqualification.

f. Conflict of Interest

Proposers must disclose to the County the existence of any conflicts of interests, whether existing or potential. If none exist, state so. Proposals shall disclose:

- i. Any material financial relationships that the Proposer or any employee of the Proposer has that may create a conflict of interest in acting as a Contractor for Suffolk County.
- ii. Any family relationship that the Proposer or any employee of the Proposer has with any County employee that may create a conflict of interest or the appearance of a conflict of interest acting as a Contractor for Suffolk County.
- iii. Any other matter that the Proposer believes may create a conflict of interest or the appearance of a conflict of interest acting as a Contractor for Suffolk County.

g. Proposer's Cost Proposal/Fee Schedule - Response to items set forth in the RFP Section entitled "Cost Proposal/Fee Schedule"

This Section will be used in the County's evaluation of the Proposer's proposed Cost Proposal/Fee Schedule.

- h.** Proposals shall be prepared avoiding the use of elaborate promotional materials beyond those sufficient to provide a complete, accurate, and reliable presentation. Each response in a Proposal shall clearly identify the section and paragraph number from the RFP to which it responds.

13. Award Criteria

- | | |
|---|-------------------|
| a. General Qualifications:
Proposer's history, expertise, experience, reliability, financial viability, and references.
See RFP Section II, entitled "Proposer's Profile" for specific requirements. | 40 points |
| b. Proposed Technical Services/Products:
Strategies, methodologies, services offered by Proposer. See RFP Section IV, entitled "Technical Requirements" for specific requirements. | 40 points |
| c. Cost Proposal/Fee Schedule
Separate sealed envelope.
See Section entitled "Cost Proposal/Fee Schedule Proposal" for specific requirements. | 20 points |
| Total | 100 points |

14. Contract Terms and Conditions

- a. Reference is made to the Model Contract set forth in Section VI entitled "Model Contract." The Model Contract is included to illustrate general terms and conditions, including indemnification and insurance, which will be included in the contract when executed.
- b. If the Proposer has a concern or question as regards any of the terms and conditions included in the Model Contract, the Proposer should note such concerns or questions in their Proposal. The Proposal must identify any items relating to the Model Contract that the Proposer requests be negotiated.
- c. The Model Contract is subject to revision arising out of the terms and conditions imposed by law and/or deemed appropriate by the County Attorney's Office.
- d. Portions of the Proposal, as may be subsequently modified in negotiations with the County, may be included as exhibits in any contracts that the County may execute with the Proposer.
- e. The County will execute a contract with principal contractors only. Any arrangements, including fee arrangements, partnerships, or collaborations between the principal contractor and subcontractors that provide services as part of the Proposal, must be fully disclosed in the Proposal.
- f. The Proposer should not return the Model Contract with the Proposal.

**15. Use of County Resources to Interfere with Collective Bargaining Activities
Local Law No. 26-2003**

Proposers are advised that the efficient, timely, and nondisruptive provision of goods and services is a paramount financial interest of the County and, as such, the County requires the potential Contractor to protect the County's financial interest by adopting non-confrontational procedures for the orderly resolution of labor disputes, including but not limited to, neutrality agreements, majority authorization card agreements, binding arbitration agreements, fair communication agreements, nonintimidation agreements, and reasonable access agreements.

16. Non-Responsible Bidder

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Article II of Chapter 189 of the Suffolk County Code.

The Contractor certifies that it has complied with the disclosure requirements under section 189-7 of the Suffolk Code, it is in compliance with all applicable licensing laws, and that it either has not engaged in a prohibited act covered under section 189-5 of the Suffolk County Code or is otherwise exempt from the provisions of Article II of Chapter 189 of the Suffolk County Code under section 189-9.

This certification shall be set forth on the LL52-2012 Form "Disqualification of Non-Responsible Bidder."

17. Effective Period of Proposals

All proposals must state the period for which the proposal shall remain in effect (i.e., how much time the County has to accept or reject the proposal under the terms proposed). Such period shall not be less than 180 days from the Proposal due date.

18. NYS Freedom of Information Law (FOIL)

All submissions for the Counties' consideration will be held in confidence pending final execution of the contract(s) unless disclosure is required by law or judicial order. However, fully executed contracts are subject to the New York State Freedom of Information Law (FOIL), codified at Public Officers Law Article 6. Therefore, if a Proposer believes that any information in its submission constitutes a trade

secret or is otherwise information which, if disclosed would cause substantial injury to the competitive position of the Proposer's enterprise, and the Proposer wishes such information to be withheld if requested pursuant to FOIL, the Proposer shall submit with its Proposal a separate letter addressed to the primary contact referenced in this RFP, specifically identifying the page number(s), line(s) or other appropriate designation(s) of the Proposal containing such information, explaining in detail why such information is a trade secret or is other information which if disclosed would cause substantial injury to the competitive position of the Proposer's enterprise, and formally requesting that such information be kept confidential. Failure by a Proposer to submit such a letter with its submission will constitute a waiver by the Respondent of any interest in seeking exemption of this information under Article 6 of the Public Officers' Law relating to protection of trade secrets. The proprietary nature of the information designated confidential by the Proposer may be subject to disclosure if it is requested and the County deems it subject to disclosure or if ordered by a court of competent jurisdiction. A request that an entire Proposal be kept confidential may not be considered reasonable since a submission cannot reasonably consist of all data exempt from FOIL.

End of Text for Section I

Section II Proposer Profile

1. General Information/Proposer's History

- a. Company name and address.
- b. Year company was founded and history.
- c. Total number of employees in company, and the number of employees at servicing office(s).
- d. Location(s) from which services will be performed.
- e. Describe the nature of your organization (e.g. business corporation, not-for-profit corporation, proprietorship, etc.).
- f. Contact person and title.

2. Qualifications and Experience of Personnel

- a. Provide resumes of the account manager and other key staff who will be assigned to this account.
- b. For each professional listed above, describe his/her qualifications and provide information regarding:
 - i. Education;
 - ii. Professional licenses and other affiliations (copies of which shall be submitted with Proposals);
 - iii. Number of years engaged in services relating to the services requested in this RFP;
 - iv. Other relevant work experience or qualifications;
 - v. The role each identified person would play.
- c. Describe other accounts involving similar services. Describe the role and experience of key personnel assigned to other similar accounts who will be assigned to this account.
- d. Will temporary staff also be involved? If so, include details of their supervision and training.
- e. In addition, Suffolk County may make such investigations as it deems necessary to determine the ability of the Proposer to perform the work. The Proposer shall furnish to the County, within five (5) business days of a request, all such information and data for this purpose as may be requested. The County reserves the right to reject any Proposal if the information submitted by, or investigation of, such Proposer fails to satisfy the County that such Proposer is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional Proposals will not be accepted.

3. Financial Viability

a. Financial Statements – Mandatory for Nongovernmental Agencies

Requirement specifications:

- i. Current financial statement (if current year not available previous calendar year acceptable) prepared and certified by Independent CPA to include:
 - o Balance Sheet
 - o Income Statement
 - o Cash Flow Projection
 - o Opinion Letter
- ii. If independently audited financial statement is not available, the most current in-house Company statement to include
 - o Balance Sheet
 - o Income Statement
 - o Cash Flow Projection
 - o Financial Statement to be signed by one of the following attesting to the accuracy of the statement:
 - CEO/CFO/COO
- iii. Failure to submit complete, comprehensive documents may result in disqualification for consideration of an award.

b. Indebtedness to County, Liens, and Litigation

Submit a statement as to indebtedness, if any, to the County; and a listing of all outstanding liens, if any, against the Proposer. Submit a summary of all litigation, if any, against the Proposer and disposition or outcome of same.

c. Statement Regarding Bankruptcy

If applicable, include a statement disclosing any bankruptcy(ies) filed within the last seven (7) years. The statement must include the date the bankruptcy was originally filed, the current status, and, if applicable, the date the bankruptcy was discharged.

4. Client History

Provide a list of all clients for whom you have provided similar services within the last three years. For each client, provide the following:

- a. Client name; and
- b. Client address; and
- c. Contact name, title, and telephone number; and
- a. Description of services provided and time period.

5. References

- a. From the list provided in response to paragraph 4, entitled "Client History", provide three client references for which you have provided services (current governmental or quasi-governmental agencies preferred). Provide name of the organization, services, contact name and telephone number.
- b. Provide a list of all contracts with the County of Suffolk within the last five (5) years (regardless of type of service), the time period for those services and your primary County contact.

6. Conflicts of Interest and/or Potential Conflicts of Interest

a. Relationships with Third Parties

Any Proposer to the County of Suffolk is charged with the continuing duty to disclose to the County the existence of any interests it may have, contractual or otherwise, ongoing or previous, with any companies or individuals with whom the County of Suffolk does business with respect to the services required by this RFP. This duty continues for so long as the Proposer is retained on behalf of the County or its employees.

b. Relationships with County Departments/Agencies/Employees

Any Proposer to the County of Suffolk is charged with the continuing duty to disclose to the County the existence of any interests it may have, contractual or otherwise, ongoing or previous, with any County department, agency or employee. This duty continues for so long as the Proposer is retained on behalf of the County or its employees.

7. Subcontractors

If you intend to use the services of a subcontractor, please provide all of the above information in this Section for each such subcontractor.

Note that the County must pre-approve the use of any subcontractors.

End of Text for Section II

Section III Background Information

1. Definitions and Acronyms

- a. "ABDL" means Suffolk County Arthropod Borne Disease Laboratory.
- b. "Department" means Suffolk County Department of Health Services.
- c. "Division" means Division of Environmental Quality.
- d. "GIS" means the Geographic Information System.
- e. "IMM" means Integrated Marsh Management.
- f. "Long Term Plan" means the Vector Control and Wetlands Management Long Term Plan and GEIS.
- g. "Monitoring Plan" means Water Quality Monitoring Plan.
- h. "NYSDEC" means New York State Department of Environmental Conservation.
- i. "Office" means Office of Ecology.
- j. "OMH" means the Office of Minority Health.
- k. "OMWM" means Open Marsh Water Management.
- l. "OWR" means Office of Water Resources.
- m. "Sampling Plan" means Sediment Sampling Plan.
- n. "SCDPSC" means Suffolk County Dredge Project Screening Committee.
- o. "SCDPW" means Suffolk County Department of Public Works.
- p. "SCVC" means SCDPW's Division of Vector Control.
- q. "Services" means Grand Canal Analysis and Assessment Services.
- r. "Sondes" means continuous logging water quality monitoring devices.
- s. "USEPA" means United States Environmental Protection Agency.
- t. "WNV" means West Nile Virus.

2. Department of Health Services

- a. The mission of the Suffolk County Department of Health Services ("**Department**") is to educate and work with the public in a cooperative manner to promote health and wellness in order to prevent disease, to protect the public's health, safety and environment, both proactively and reactively by utilizing best practices, and to actively provide high quality, equitable, and affordable health services that are culturally and linguistically appropriate.
- b. The Department has a main office located at 3500 Sunrise Highway, Suite 124, Great River, New York 11739 and is comprised of eight (8) divisions and an Office of Minority Health ("**OMH**"). The divisions include; Patient Care Services, Public Health, Environmental Quality, Community Mental Hygiene Services, Services for Children with Special Needs, Preventive Medicine, Emergency Medical Services, and John J. Foley Skilled Nursing Facility.
- c. Through the various divisions and OMH, the Department delivers the following services: programs to eliminate health disparities among racial and ethnic minorities; primary care services, public health protection and diseases prevention programs; comprehensive programs to protect and preserve the natural resources of Suffolk County and protect County residents against adverse environmental factors; treatment for individuals with mental illness, mental

retardation/developmental disabilities, and chemical dependency; Pre-school Education, and Children with Special Needs programs; health education programs, tobacco cessation classes, falls prevention programs for the elderly, and community based projects promoting nutrition, physical activity and wellness; oversight for the County's emergency medical response system; and skilled nursing care and adult day health care.

- d. The Department has a 2013 Operating Budget of over \$314 million.

3. Department's Division of Environmental Quality

The Division of Environmental Quality ("**Division**") conducts comprehensive programs that protect and preserve the natural resources of Suffolk County and protects County residents against adverse environmental factors. The Division primary focuses on drinking water, fresh water, and marine surface water protection, water pollution control, enforcement of environmental protection regulations and groundwater, surface water, air quality and natural resources investigations. The Division is responsible for the operation of the following;

- a. The Office of Water Resources ("**OWR**") is authorized by the Federal Safe Drinking Water Act and the New York State Sanitary Code to enforce drinking water regulations controlling public water supplies. OWR staff monitors the quality and quantity of the groundwater supply and conducts surveys and investigations of the County's hydrology, as well as special studies such as the New York State Department of Environmental Conservation ("**NYSDEC**") Pesticide Study and the Long Island Breast Cancer Study.
- b. The Office of Pollution Control is responsible for enforcing regulations concerning toxic and hazardous material storage, industrial wastewater discharges to surface and ground waters, swimming pool plan review and inspections, and inspections of commercial and industrial facilities.
- c. The Office of Wastewater Management is responsible for permit and inspection programs for private water supplies and subsurface sewage disposal systems.
- d. The Office of Ecology ("**Office**") performs groundwater and surface water environmental management studies, supported by extensive monitoring. These studies link public health, ecology, and the economy. In addition, the Office, which serves as the program office for the Peconic Estuary Program, performs critical regulatory functions to ensure the safety of bathing beaches, and conducts required environmental quality review for development programs. The Bureau of Marine Resources, which is a part of the Office, collects samples from the County's marine surface waters, freshwater tributaries, and point sources, including analysis of dissolved oxygen and brown tide.
- e. The Public and Environmental Health Laboratory is responsible for performing tests on air, water, soil, hazardous wastes and sewage to determine the existence of any contamination.

4. Background of the Grand Canal

a. Description of the Grand Canal

The Grand Canal is a man-made waterway and is a tributary or branch of the Connetquot River, located in Oakdale New York, Town of Islip (refer to Section III, Attachment 1 entitled "Grand Canal Location Map"). The main channel of the canal is approximately 8,000 feet in length and 20 feet wide and variable. The canal system also includes a number of branch channels that extend into residential areas, providing access to the main channel. The Grand Canal is unique in that it has two (2) interfaces that open to the Connetquot River. One opening is in the midsection of the tidal portion of the river and the second opening is in the southern section of the tidal portion of the river. This creates a situation where the river flow may have an influence on the currents and tidal flow in the canal. The Grand Canal is also integral to an extensive wetlands system. The canal's northern opening is surrounded by residential properties and the

southern opening is bordered on either side by commercial properties, including a marina and restaurant. The land area surrounding the northern section of the main canal, that runs east-west, is residential. For the north-south section of the main channel, the land to the west is a mixture of residential properties and tidal wetlands. The adjacent land area to the east is dominated by an extensive tidal and freshwater wetland complex known as Pickman-Remmer Wetlands owned by the State of New York and managed by the New York State Department of Environmental Conservation (“**NYSDEC**”).

b. Grand Canal Assessment Final Report

For a number of years, Grand Canal has been the subject of complaints by area residents, reportedly concerned with progressive shoaling and reduction in tidal flushing. Issues surrounding the reduction of tidal flushing include but are not limited to: possible increases of mosquito breeding with links to West Nile Virus (“**WNV**”), general water quality degradation, the ecological health of the adjacent wetlands, along with residential flooding and shoaling within the navigation channel. In response to concerns and the possibility that the declining health of the canal may present a public health risk, the Suffolk County Department of Public Works (“**SCDPW**”) and the Department collaborated in preparing and executing a study to investigate the canal. A preliminary assessment of the canal conducted in year 2004, and final report released in January 2005 attached as Section III, Attachment 2 entitled “Grand Canal Assessment Final Report” of this RFP, suggested that an Open Marsh Water Management (“**OMWM**”) approach in conjunction with a dredging project designed to increase flushing in the canal may have a beneficial impact on restoring the overall health and environment of the Grand Canal, the adjacent wetlands and surrounding waters.

- i. In February of 2005, the findings were presented to the Suffolk County Dredge Project Screening Committee (“**SCDPSC**”). The SCDPSC determined that these findings justified the Grand Canal to be approved under Public Benefit Dredging Criteria #6 ‘Reduction of the Risk of Public Health Problems’ based upon certification by the Department that the public health will be protected by dredging for the particular year the channel is proposed to be dredged. Subsequent to the SCDPSC’s determination, two (2) actions took place that effect future projects in Grand Canal and the adjacent wetlands;

- A. In 2006, a new approvable dredge criteria was added to the dredge criteria list. The new criterion 11 states:

“Improvement of environmental/ecological health and/or marine productivity, based upon a certification from the Suffolk County Department of Health Services, Office of Ecology, or the Suffolk County Department of Environment and Energy. Such determination shall consider factors including, but not limited to, flow rates, contaminant levels, nitrogen levels, phosphorus levels, coliform levels, algal growth rates, salinity levels, pH levels, dissolved oxygen, water temperature, oxygen levels and other such considerations that may jeopardize the health of the marine ecology or productivity”.

- B. In 2007, the County approved the Vector Control and Wetlands Management Long Term Plan and GEIS (“**Long Term Plan**”). The Long Term Plan includes a Wetlands Stewardship Strategy that, among other things, determined that any OMWM work for mosquito control should be only part of an Integrated Marsh Management (“**IMM**”) approach that primarily emphasizes the natural resources values of the wetland. Any wetlands management conducted by the County will follow the IMM strategy.

- ii. In regards to mosquito analysis, the Grand Canal Assessment Final Report states:

“The wetlands are primary breeding areas. Vector control has identified through arboviral surveillance efforts, twenty-nine (29) WNV positive birds and WNV mosquito pools within a three (3) mile radius of the canal.”

There are seven (7) vector Control mosquito breeding locations along or adjacent to the area of the Grand Canal (see attached map, Attachment 7). Control of mosquito larvae can reduce long term, recurring threats of human disease such as that posed by WNV, which is an ongoing and chronic public health issue. Environmental management can prevent disease and otherwise protect the public health.

NOTE: All Attachments for Section III begin after Page 45.

End of Text for Section III

Section IV Technical Requirements

1. Overview

- a. The County of Suffolk ("**County**") acting through the Suffolk County Department of Health Services ("**Department**"), invites proposals from qualified companies ("**Proposer(s)**") interested in providing Grand Canal Analysis and Assessment Services ("**Services**").
- b. The intent of the Services is to provide a more detailed analysis of the potential ecological issues and to precisely define potential public health problems associated with Grand Canal and the adjacent wetlands, as well as to evaluate the ecological health of the Grand Canal and the adjacent wetlands. The Contractor will be required to compile the data necessary to evaluate both the public health risk associated with and the ecological health of the Grand Canal and provide analysis of the data and make recommendations to the Department. After determinations have been made, the Contractor will be required to propose procedures and methodology for assessment of whether dredging combined with IMM will alleviate any identified public health problem or improve the ecological health of the Grand Canal and adjacent wetlands. Specific work tasks include, but are not limited to, gathering and analyzing; sediment cores, surface water samples and mosquito data, measuring tidal flow in the canal and adjacent marsh land characterizing the adjacent wetlands and evaluating mosquito breeding potential in the adjacent wetlands. Conclusions concerning the environmental conditions in and immediately surrounding the Grand Canal system will be presented to the Department. The Contractor will be required to submit a report including all data, analyses and conclusions to the Department.

2. Minimum Requirements for Technical Services Proposals

a. NYSDEC Permission

The wetlands involved in this project are owned by NYSDEC and therefore the Contractor will be required to obtain written permission from the NYSDEC for any ground work that will be performed in the wetlands. The Contractor shall not begin any work until the Contractor obtains such written permission from the NYSDEC. As part of the response to this RFP, Proposers must **confirm in writing** that they agree to this requirement.

b. Understanding of the Project

The Proposal must include a statement of work that describes the Proposer's understanding of the Project. The Proposer is expected to discuss its understanding of the proposed "Scope of Work."

- i. The complexity, challenges and problems involved in performing the work.
- ii. Approach and philosophy for dealing with problems.
- iii. Experience dealing with key issues.
- iv. Any additional issues or matters relating to the "Scope of Work" which the Proposer wishes to address.

b. Key Personnel and Staffing

Key personnel identified in the Proposal will be expected to remain assigned to the Project for the term of the Contract. Requests for a change in key personnel assignments during the term of the Contract must be approved in advance, in writing, by the County. The Proposal should also include a discussion that outlines staffing levels/man-hour requirements that should be expected on the County level to support the implementation and day-to-day operation of the

system. This information will be a recommendation only for discussion purposes. The Proposer should describe other potential burdens that may be placed on the County as regards the servicing of the account.

c. Subcontractors

Services that are to be subcontracted must be clearly defined in the Proposal. The Contractor retains responsibility for all acts and omissions of the subcontractor. The Contractor must obtain the prior approval from the Department for all subcontracts.

Sub-contractors must respond to all requirements set forth above in this Section, to the extent such requirements are applicable to the services they will be providing.

The County may require that subcontracted activities be provided under the terms of a three-party contract between the Contractor, the County and the subcontractor.

3. Technical Services Specifications (Detailed Scope of Services)

Proposers must **describe** how they will provide the following tasks:

a. Task 1: Start-Up Meeting and Monthly Progress Meetings

Schedule, prepare presentation and meeting materials (as necessary), attend, and provide summaries to the Department for the following meetings;

- i. One (1) start-up meeting with the Department.
- ii. Monthly progress meetings throughout the term of the contract with the Department. Monthly progress meetings will entail discussion of the progress of the Services and any outstanding issues that may arise.

b. Task 2: Review Existing Data

- i. Review existing data attached in Section III, Attachments 1 through 10 of this RFP.
- ii. Contact SCVC and make arrangements to review all records pertaining to the Grand Canal region – Oakdale, as depicted in the Grand Canal Assessment Final Report (refer to Section III, Attachment 2 of this RFP). This information can be provided in either GIS, database, or Excel format.
- iii. Contact the Suffolk County Arthropod Borne Disease Laboratory (“**ABDL**”) and make arrangements to review all records pertaining to the Grand Canal region - Oakdale, as depicted in the Grand Canal Assessment Final Report. This information can be provided in either GIS, database, or Excel format.
- iv. Contact the Department for all available surface water quality data collected by the Department. This information can be provided by the Department in either Access or Excel format.
- v. Obtain any necessary supporting data sets and/or monitoring data assessments that may be available from other agencies or groups.

c. Task 3: Data Collection and Analysis

i. Physical Characteristics of the Water Body

- A. Complete a bathymetric survey in Grand Canal and conduct a stream flow and tidal flushing measurements in Grand Canal and adjacent wetlands. The bathymetric survey will be completed to determine the stream/water body cross section and profile. Results from this investigation will be used to identify whether or not there are restrictions to the water body's flow and/or tidal flushing due to bottom features including, but not limited to, fluvio-marine and anthropogenic

features such as sediment bars, shoals, reefs, deep spots, point-source discharge features, etc.

- B. Evaluate the benthic community and fisheries in the Grand Canal and adjacent wetlands, which include an essential fish habitat assessment in the canal and adjacent wetlands.

ii. **Sediment Analysis**

- A. Develop a Sediment Sampling Plan ("**Sampling Plan**") for Grand Canal for the review and approval of the Department and SCDPW. Core sample depths and locations will be based on potential future dredging of the canal. It is anticipated that there will be a minimum of ten (10) locations.
- B. Submit the approved Sampling Plan to the NYSDEC for their approval.
- C. In strict compliance with the approved NYSDEC approved Sampling Plan, core, sample and examine the sediment of the Grand Canal System. Refer to Section III, Attachment 5 for a copy of the NYSDEC generic sediment sampling plan.

iii. **Water Quality Analysis**

- A. Review all compiled data, develop and conduct a Water Quality Monitoring Plan ("**Monitoring Plan**") to augment, fill data gaps and further investigate the issues identified in the Grand Canal Assessment Final Report. The Monitoring Plan must be approved by the Department and must include the analysis of all parameters reported on in the Grand Canal Assessment Final Report and for all parameters that are required to complete the Suffolk County Dredging Needs Application in the Public Interest to Improve Ecological Health and/or Marine Productivity (refer to Section III, Attachment 8).
 - 1. In addition to total and fecal coliforms, the bacterial analysis must also include Enterococcus.
- B. Based on the data review, identify and provide testing for any other potential contaminants of public health concern and include it in the Monitoring Plan.
 - 1. At a minimum, choose ten (10) locations for the Monitoring Plan based on the data review conducted and review the proposed sample locations with the Department. Sample each location a minimum of two times at each of the following tidal stages: low tide, midpoint of incoming tide, high tide, and midpoint of outgoing tide. The two (2) samplings per tidal stage must be separated by a minimum of fourteen (14) days.
 - 2. Assess data generated by two (2) continuous logging water quality monitoring devices ("**Sondes**") at two (2) locations in Grand Canal. The Sondes will be deployed and maintained by Department and will be placed near the bottom of the canal from May through July and will record data at fifteen (15) minute intervals for the following physical parameters: temperature, dissolved oxygen and salinity.
 - 3. Sample a minimum of six (6) locations adjacent to direct discharge locations emanating from street drainage at various locations, one (1) time before a rainfall event and one (1) time within three (3) hours after the completion of a rainfall event. For post rainfall sampling consideration, there must be at least one-half inch (1/2") of precipitation and there must be a period of dry weather for at least seventy-two (72) hours prior to the rainfall event.

iv. Wetlands Characterization and Assessment

- A.** Characterize the hydrology, vegetation, habitat and species within the wetlands associated with Grand Canal in accordance with USEPA's Comparative Wetland Monitoring and Assessment of Coastal Wetlands (3-tiered approach) or any other applicable standards used for such assessments.
- B.** Utilize available aerial photography to the extent possible.
- C.** Provide an assessment of the health of the wetlands.
- D.** Map the wetlands and scribe the assessment area boundaries based on wetland areas that are hydraulically connected to Grand Canal and may be affected by a dredging and IMM project.

v. Mosquito Analysis

- A.** Obtain all past and present mosquito data in the Grand Canal area from the SCDPW's Division of Vector Control ("**SCVC**") for use in the analysis of mosquitos potential impact on public health.
- B.** Review, analyze and summarize the information provided by SCVC and the ABDL.
- C.** Collaborate with the Department, SCVC, and the ABDL in locating an arboviral surveillance site in the Grand Canal region – Oakdale for the 2013 mosquito season.
- D.** Assist the Department and SCVC in assessing the public health risk associated with the existence of mosquitos in and around the Grand Canal.

vi. Additional Samplings and/or Evaluations

Suggest any other environmental samplings and/or evaluations that may assist the Department in a making a determination on public health and ecological health issues related to Grand Canal and the adjacent wetlands.

d. Task 4: Public Health Problem Evaluation and Draft Report

- i.** Perform an analysis and evaluation of the potential public health impact of the Grand Canal and adjacent marshes using the data gathered in Tasks 2 and 3. The evaluation must include, but not be limited to, water quality, flushing, benthic community, fisheries, sediment sampling, tidal wetlands conditions and mosquito breeding.
- ii.** Collaborate with the Department to develop a methodology to determine if a public health problem exists in Grand Canal and the associated wetlands.
- iii.** Apply the methodology to the data and make recommendations to the Department as to whether there are public health problems associated with Grand Canal and the adjacent wetlands.
- iv.** Develop a draft report detailing the proposed methodology and recommendations to be submitted to the Department for review before the report is finalized. The draft report must be submitted in the form of five (5) paper copies and ten (10) CDs containing a .pdf file of the draft report and all associated data layers and files.
- v.** Amend the draft report as necessary in response to comments provided by the Department. The final version of this report must be included in the final project report as described in Task 6.

e. Task 5: Ecological Health Evaluation and Draft Report

- i. Using the Environmental Dredging Factors Considered for Improving Environmental Quality, Ecological Health and Marine Productivity (refer to Section III, Attachment 9) as a guide, perform an analysis and evaluation of the ecological health of the Grand Canal and adjacent marshes. The evaluation must include, but not be limited to, conditions and mosquito breeding. In addition, the evaluation must define any changes that have occurred since the Grand Canal Assessment Final Report.
- ii. Develop a draft report detailing the findings to be submitted to the Department for review before the report is finalized. The draft report must be submitted in the form of five (5) paper copies and ten (10) CDs containing a .pdf file of the draft report and all associated data layers and files.
- iii. Amend the draft report as necessary in response to comments provided by the Department. The final version of this report must be included in the final project report as described in Task 6.

f. Task 6: Final Project Report

- i. Present a draft final project report to the Department. The draft final project report which must include;
 - A. an executive summary;
 - B. the data and findings of Tasks 2 and 3;
 - C. the final versions of the draft reports generated in Tasks 4 and 5; and
 - D. proposed procedures and methodology for assessment of whether dredging and IMM will alleviate any identified public health problem or improve the ecological health of the Grand Canal and adjacent wetlands based on the outcomes of Tasks 4 and 5.

The draft report must be submitted in the form of five (5) paper copies and ten (10) CDs containing a .pdf file of the draft report and all associated data layers and files.
- ii. Amend the draft final project report as necessary in response to comments provided by the Department.
- iii. Submit a final project report in the form of five (5) colored copies and ten (10) CDs containing a .pdf file of the final project report and all associated data layers and files.

End of Text for Section IV

Section V
Cost Proposal/Fee Schedule

1. Separate Envelope

Your Original, plus all of your required extra copies of the Cost Proposal/Fee Schedule, should be submitted in one (1) sealed envelope and packaged only in your "Original" proposals set.

Do not include cost information in the body of your Proposal response.

Do not include Cost Proposal/Fee Schedules in sealed envelopes in any of the extra sets submitted.

Include the name of your company on each page of your Cost Proposal/Fee Schedule.

2. Cost Proposal/Fee Schedule is One of Several Evaluation Criteria

Based on the evaluation criteria set forth in Section I, entitled "Administrative Information," please note that the County will not necessarily choose the Proposer with the lowest rates for services.

If the Cost Proposal/Fee Schedule involves revenue in any form to the County, please also note that the County will not necessarily choose the Proposer with the highest rates for revenue to the County.

3. Additional Information

The Proposer should provide any additional information it deems necessary to explain or clarify its Cost Proposal/Fee Schedule.

4. Alternative Proposals

The Proposer may submit alternative Technical Proposals and alternative Cost Proposal/Fee Schedules, if there is more than one viable approach to performing the services.

Proposers must supply Cost Proposal/Fee Schedules in the format set forth below. Cost Proposal/Fee Schedules in alternative formats will be reviewed and may be accepted. However, all Proposers, at a minimum, must provide a Cost Proposal/Fee Schedule in the format set forth below. Proposers are requested to submit any additional information, charts, data and descriptions as the Proposer deems necessary for evaluation.

Remainder of Page Intentionally Left Blank

5. Format for Cost Proposal/Fee Schedule

- a. Proposers shall provide a detailed list for anticipated charges it will impose for items that shall or may apply to the Services requested under this RFP. Failure to include a charge or schedules of charges may preclude the Contractor from billing the County for such non-specified items.
- b. All schedules submitted must include the name of the Proposer and must be paginated.
- c. The anticipated term of the Contract is August 1, 2013 through July 31, 2014
- d. Proposers must submit their Cost Proposal/Fee Schedule in the following format;

<u>Task</u>	<u>Cost per Task</u>
Task 1: Start-Up Meeting and Monthly Progress Meetings	\$_____
Task 2: Review Existing Data	\$_____
Task 3: Data Collection and Analysis	\$_____
Task 4: Public Health Problem Evaluation and Draft Report	\$_____
Task 5: Ecological Health Evaluation and Draft Report	\$_____
Task 6: Final Project Report	\$_____
 Total Project Cost:	 \$_____

End of Text for Section V

Section VI
Model Contract Subject to Negotiation

Consultant/Personal Services Contract
Grand Canal Analysis and Assessment Services

This Contract (“the Contract”) is between the **County of Suffolk (“the County”)**, a municipal corporation of the State of New York, acting through its duly constituted **Department of Health Services (“the Department”)**, located at 3500 Sunrise Highway, Suite 124, Great River, New York 11739-9006; and

Insert Name of Contractor (“the Contractor”), having an address at Insert Address.

The Contractor has been designated to receive funds from the County for Grand Canal Analysis and Assessment Services (**“the Services”**) as set forth in Article I, entitled “Description of Services.”

Term of the Contract: August 1, 2013 through July 31, 2014.

Total Cost of the Contract: Shall be as set forth in Article II, attached.

Terms and Conditions: Shall be as set forth in Articles I and II and Exhibits 1, 2, and 3 attached hereto and made a part hereof.

In Witness Whereof, the parties hereto have executed the Contract as of the latest date written below.

Name of Contractor

COUNTY OF SUFFOLK

By: _____
Name: _____
Title: _____
Federal Tax ID No.: _____

Date: _____

By: _____
Dennis M. Cohen
Chief Deputy County Executive

Date: _____

Approved as to Legality:
Dennis M. Brown, County Attorney

Approved:
Department of Health Services

By: _____
Jessica H. Hogan
Assistant County Attorney

Date: _____

By: _____
Margaret B. Bermel, M.B.A.
Director of Health Administrative Services

Date: _____

Recommended:
Division of Environmental Quality

By: _____
Walter Dawydiak
Acting Director

Date: _____

List of Articles & Exhibits

Article I

Description of Services

1. Conflicting Provisions
2. Description of Services
3. Reports/Progress Meetings
4. Professional and Skillful Manner
5. Termination
6. Excluded/Debarred Party
7. Compliance with False Claims Policy and Code of Conduct
8. Certification Regarding Lobbying
9. Change in Applicable Law or Regulations

Article II

Financial Terms and Conditions

1. Conflicting Provisions
2. General Payment Terms
3. Contract Subject to Appropriation of Funds
4. Budget Deficiency Plan
5. Accounting Procedures
6. Audit of Financial Statements
7. Comptroller's Rules and Regulations for Consultant's Agreements
8. Total Cost of Contract
9. Specific Payment Terms and Conditions

Exhibit 1

County Terms and Conditions

1. Elements of Interpretation
2. Meanings of Terms
3. Contractor Responsibilities
4. Qualifications, Licenses, and Professional Standards
5. Notifications
6. Documentation of Professional Standards
7. Credentialing
8. Engineering Certificate
9. Termination
10. Indemnification and Defense
11. Insurance
12. Independent Contractor
13. Severability
14. Merger; No Oral Changes
15. Set-Off Rights
16. Non-Discrimination in Services
17. Nonsectarian Declaration
18. Governing Law
19. No Waiver
20. Conflicts of Interest
21. Cooperation on Claims
22. Confidentiality

23. Assignment and Subcontracting
24. Changes to Contractor
25. No Intended Third Party Beneficiaries
26. Certification as to Relationships
27. Publications
28. Copyrights and Patents
29. Arrears to County
30. Lawful Hiring of Employees Law in Connection with Contracts for Construction or Future Construction
31. Record Retention
32. Notice

Exhibit 2

Suffolk County Legislative Requirements

1. Contractor's/Vendor's Public Disclosure Statement
2. Living Wage Law
3. Use of County Resources to Interfere with Collective Bargaining Activities
4. Lawful Hiring of Employees Law
5. Gratuities
6. Prohibition Against Contracting with Corporations that Reincorporate Overseas
7. Child Sexual Abuse Reporting Policy
8. Non Responsible Bidder
9. Use of Funds in Prosecution of Civil Actions Prohibited
10. Youth Sports
11. Work Experience Participation
12. Suffolk County Local Laws Website Address

Exhibit 3

Environmental Contract Terms and Conditions

1. Changes in Plan, Service or Report
2. Availability of Technical Data
3. Delivery of All Survey Notes, Computations, Documents, Etc.

Article I
Description of Services

Whereas, the County issued a Request for Proposal for the solicitation of Grand Canal Analysis and Assessment Services (“Services”) for the Department’s Division of Environmental Quality; and

Whereas, the County selected Contractor for the award of contract for Services pursuant to such RFP; and

Whereas, the parties desire to enter into an agreement for the contracted Services;

Now Therefore, in consideration of the mutual provisions and covenants hereafter set forth, the parties hereto agree as follows:

1. Conflicting Provisions

In the event of any conflict between this **Article I** and any other provision to this Contract, such other provision shall prevail unless it is expressly stated that this **Article I** shall prevail.

2. Description of Services

Insert description of service as set forth in RFP and/or as negotiated.

3. Reports/Progress Meetings

The Contractor shall be responsible for issuing timely reports in writing on the status of pending and proposed activities, as may reasonably be requested by the Department. Depending upon the nature of the services provided under the Contract, the parties may meet from time to time; the meeting time, place and attendees shall be as mutually agreed upon by the parties. All written reports shall also be made available to the County in electronic format.

4. Professional and Skillful Manner

All activities performed hereunder shall be conducted in a competent, professional and skillful manner.

5. Termination

a. Termination for Failure to Maintain Insurance Coverage

Notwithstanding paragraph 9 of Exhibit 1 of the Contract or any other provision of the Contract, a failure on the part of the Contractor to maintain County-mandated insurance coverage shall result in immediate termination of the Contract without the necessity for any action on the part of the County.

b. Equitable Adjustment upon Termination

Notwithstanding paragraph 9 of Exhibit 1 of the Contract, upon termination, an equitable adjustment of the fee shall be made, which shall not include any profit for services or other work not performed. The Contractor acknowledges and agrees that it shall not be entitled to nor shall it make a claim for lost profits or loss of anticipated earnings due to termination.

6. Excluded/Debarred

The Contractor represents and warrants that neither it, nor its employees or contractors, are excluded from participation, and are not otherwise ineligible to participate in a "federal health care program" as defined in 42 U.S.C. § 1320a-7b(f) or in any other government payment program. In the event Contractor, or one of its employees or subcontractors, is excluded from participation or becomes otherwise ineligible to participate in any such program during the Term of the Contract, the Contractor shall notify the Department in writing within three (3) days after such event. Upon the occurrence of such event, whether or not such notice is given to the Contractor, the Department reserves the right to immediately terminate the Contract. The Contractor further represents and warrants it shall, at a minimum, check all of its employees and subcontractors on a monthly basis against:

- a. The General Services Administration's Federal Excluded Party List System or any successor system; and
- b. The United States Department of Health and Human Service's Office of the Inspector General's Lists of Excluded Individuals and Entities or any successor list; and
- c. The New York State Department of Health's Office of the Medicaid Inspector General's list of Restricted, Terminated or Excluded Individuals or Entities.

The Contractor's failure to comply with the requirements of this paragraph shall constitute an Event of Default.

7. Compliance with False Claims Policy and Code of Conduct

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of the Department's Mandatory Provider Compliance/False Claims Policy ("**Policy**") and Code of Conduct dated December 15, 2010 and any amendments thereafter. Said Policy and Code of Conduct can be viewed online at the Department's website. Go to "Suffolk County Department of Health Services", choose "Document and Forms", "Commissioner", and then "Compliance Policy".

8. Certification Regarding Lobbying

Together with this Contract and as a condition precedent to its execution by the County, the Contractor shall have executed and delivered to the Department the "Certification Regarding Lobbying", if payment under this Contract may exceed \$100,000. Such Certification is required by 31 U.S.C. Section 1352 and regulations thereunder. The Contractor shall promptly advise the County of any material change in any of the information reported on such Certification and shall otherwise comply with, and shall assist the County in complying with, said regulations as now in effect or as amended during the Term.

9. Change in Applicable Law or Regulations

The County reserves the right to unilaterally amend this Contract, upon written notice to the Contractor, in order to reflect any changes, updates, revisions, amendments, or the like to applicable laws and regulations governing the Services provided under this Contract.

End of Text for Article I

Article II
Financial Terms and Conditions

1. Conflicting Provisions

In the event of any conflict between any provision in this Article II and an exhibit to this Contract, the exhibit shall prevail unless it is expressly stated in the conflicting provision in this Article II, that it shall prevail over the exhibit.

2. General Payment Terms

a. Presentation of Suffolk County Payment Voucher

In order for payment to be made by the County to the Contractor for the Services, the Contractor shall prepare and present a Suffolk County Payment Voucher (Voucher), which shall be documented by sufficient, competent and evidential matter. Each Suffolk County Payment Voucher submitted for payment is subject to Audit at any time during the Term or any extension thereof. This provision shall survive expiration or termination of this Contract for a period of not less than seven (7) years, and access to records shall be as set forth in paragraph 31 of Exhibit 1, and paragraph 4(b) of Article II.

b. Voucher Documentation

The Suffolk County Payment Voucher shall list all information regarding the Services and other items for which expenditures have been or will be made in accordance with the Contract. Either upon execution of the Contract (for the Services already rendered and expenditures already made), or not more than thirty (30) days after the expenditures were made, and in no event after the 31st day of January following the end of each year of the Contract, the Contractor shall furnish the County with detailed documentation in support of the payment for the Services or expenditures under the Contract, e.g., dates of the Service, worksite locations, activities, hours worked, pay rates for all Services. The Suffolk County Payment Voucher shall include time records, certified by the Contractor as true and accurate, of all personnel for whom expenditures are claimed during the period. All Suffolk County Payment Vouchers must bear a signature as that term is defined pursuant to New York State General Construction Law §46 by duly authorized persons. Disbursements made by the Contractor in accordance with the Contract and submitted for reimbursement must be documented and must comply with accounting procedures as set forth by the Suffolk County Department of Audit and Control.

c. Payment by County

Payment by the County shall be made within thirty (30) days after approval of the Voucher by the Comptroller.

d. Final Voucher

The acceptance by the Contractor of payment of all billings made on an approved voucher shall operate as and shall be a release of the County from all claims by the Contractor through the date of the Voucher.

3. Contract Subject to Appropriation of Funds

a. The Contract is subject to the amount of funds appropriated each fiscal year and any subsequent modifications thereof by the County Legislature, and no liability shall be incurred by the County beyond the amount of funds appropriated each fiscal year by the County Legislature for the Services.

b. If the County fails to receive Federal or State funds originally intended to pay for the Services, or to reimburse the County, in whole or in part, for payments made for the Services, the County shall have the sole and exclusive right to:

- i.** determine how to pay for the Services;
- ii.** determine future payments to the Contractor; and

- iii. determine what amounts, if any, are reimbursable to the County by the Contractor and the terms and conditions under which such reimbursement shall be paid.

4. Budget Deficiency Plan

The County has imposed and may impose a budget deficiency plan(s). Upon written notification from the Department, the Contractor shall comply with the same restrictions as are imposed upon the Department, a copy of which will be furnished with such notification and shall thereupon be deemed to be incorporated by reference in and made part of the Contract.

5. Accounting Procedures

- a. The Contractor shall maintain accounts, books, records, documents, other evidence, and accounting procedures and practices which sufficiently and properly reflect all direct and indirect costs of any nature expended in the performance of the Contract, in accordance with generally accepted accounting principles and with rules, regulations and financial directives, as may be promulgated by the Suffolk County Department of Audit and Control and the Department. The Contractor shall permit inspection and audit of such accounts, books, records, documents and other evidence by the Department and the Suffolk County Comptroller, or their representatives, as often as, in their judgment, such inspection is deemed necessary. Such right of inspection and audit as set forth in subparagraph (b) below shall exist during the Term and for a period of seven (7) years after expiration or termination of the Contract.
- b. The Contractor shall retain all accounts, books, records, and other documents relevant to the Contract for seven (7) years after final payment is made by the County. Federal, State, and/or County auditors and any persons duly authorized by the County shall have full access and the right to examine any of said materials during said period. Such access is granted notwithstanding any exemption from disclosure that may be claimed for those records which are subject to nondisclosure agreements, trade secrets and commercial information or financial information that is privileged or confidential.
- c. The Contractor shall utilize the accrual basis of accounting and will submit all financial reports and claims based on this method of accounting during the Term.

6. Audit of Financial Statements

- a. All payments made under the Contract are subject to audit by the Comptroller pursuant to Article V of the Suffolk County Charter. The Contractor further agrees that the Comptroller and the Department shall have access to and the right to examine, audit, excerpt, copy or transcribe any pertinent transactions or other records relating to Services. If such an audit discloses overpayments by the County to the Contractor, within thirty (30) days after the issuance of an official audit report by the Comptroller or his duly designated representatives, the Contractor shall repay the amount of such overpayment by check to the order of the Suffolk County Treasurer or shall submit a proposed plan of repayment by check to the order of the Suffolk County Treasurer or shall submit a proposed plan of repayment to the Comptroller. If there is no response, or if satisfactory repayments are not made, the County may recoup overpayments from any amounts due or becoming due to the Contractor from the County under the Contract or any otherwise.
- b. The provisions of this paragraph shall survive the expiration or termination of the Contract for a period of seven (7) years, and access to records shall be as set forth in paragraph 31 of Exhibit 1, and paragraph 4(b) of Article II.

7. Comptroller's Rules and Regulations for Consultant's Agreements

The Contractor shall comply with the "Comptroller's Rules and Regulations for Consultant's Agreements" as promulgated by the Department of Audit and Control of Suffolk County and any amendments thereto during the Term of the Contract. The "Comptroller's Rules and Regulations for Consultant's Agreements" may be viewed online at the County's website. Go to "Government," then "Comptroller," then "Consultant's Agreements."

8. Total Cost of Contract

- a.** In consideration of the Contractor's faithfully complying with all of the covenants set forth in the Contract, the County shall pay the Contractor in accordance with this Article II.
- b.** The Contractor agrees that it shall be entitled to no more than the fees as set forth in the Contract, for the completion of all work, labor and services contemplated in the Contract
- c.** The Contractor may reallocate funds among tasks as more clearly defined in Exhibit 3 of the Contract.

9. Specific Payment Terms and Conditions

The Contractor shall be paid as follows;

End of Text for Article II

Exhibit 1
County Terms and Conditions

1. Elements of Interpretation

As used throughout the Contract:

a. Words of the masculine gender shall mean and include correlative words of the feminine and neuter genders and words importing the singular number shall mean and include the plural number and vice versa. Words importing persons shall include firms, associations, partnerships (including limited partnerships), trusts, corporations and other legal entities, including public bodies, as well as natural persons, and shall include successors and assigns.

b. Capitalized terms used, but not otherwise defined herein, shall have the meanings assigned to them in the Contract.

2. Meanings of Terms

As used in the Contract:

“**Comptroller**” means the Comptroller of the County of Suffolk.

“**Contract**” means all terms and conditions herein forming all rights and obligations of the Contractor and the County.

“**Contractor**” means the signatory person, partnership, corporation, association or other entity, its officers, officials, employees, agents, servants, sub-contractors and any successor or assign of any one or more of the foregoing performing the Services.

“**County**” means the County of Suffolk, its departments, and agencies.

“**County Attorney**” means the County Attorney of the County of Suffolk.

“**Department**” means the signatory department approving the Contract.

“**Engineering Services**” means the definition of the practice of engineering and the definition of practice of land surveying, as the case may be, under Section 7201 and Section 7203 of the State Education Law, respectively.

“**Event of Default**” means

a. the Contractor’s failure to perform any duty required of it under paragraphs 4 through 7 of this Exhibit 1 of the Contract; or

b. the Contractor’s failure to maintain the amount and types of insurance with an authorized insurer as required by the Contract; or

c. the Contractor’s failure to maintain insurance required by the Contract with an insurer that has designated

the New York Superintendent of Insurance as its lawful agent for service of process; or

d. The Contractor’s failure to comply with any Federal, State or local law, rule, or regulation, and County policies or directives; or

e. The Contractor’s bankruptcy or insolvency; or

f. The Contractor’s failure to cooperate in an Audit; or

g. The Contractor’s falsification of records or reports, misuse of funds, or malfeasance or nonfeasance in financial record keeping arising out of, or in connection with, any contract with the County; or

h. The Contractor’s failure to submit, or failure to timely submit, documentation to obtain Federal or State funds; or

i. The inability of the County or the Contractor to obtain Federal or State funds due to any act or omission of the Contractor; or

j. Any condition the County determines, in its sole discretion, that is dangerous.

“**Federal**” means the United States government, its departments and agencies.

“**Fund Source**” means any direct or indirect sum payable to the Contractor by the County pursuant to any lawful obligation.

“**Legislature**” means the Legislature of the County of Suffolk.

“**Services**” means all that which the Contractor must do, and any part thereof arising out of, or in connection with, the Contract as described in **Article I** “Description of Services.”

“**State**” means the State of New York.

“**Suffolk County Payment Voucher**” means the document authorized and required by the Comptroller for release of payment.

“**Term**” means the time period set forth on page one of the Contract and, if exercised by the County, the option period.

3. Contractor Responsibilities

a. It shall be the duty of the Contractor to discharge, or cause to be discharged, all of its responsibilities, and to administer funds received in the interest of the County in accordance with the provisions of the Contract.

b. The Contractor shall promptly take all action as may be necessary to render the Services.

c. The Contractor shall not take any action that is inconsistent with the provisions of the Contract.

d. Services provided under this Contract shall be open to all residents of the County.

4. Qualifications, Licenses, and Professional Standards

a. The Contractor represents and warrants that it has, and shall continuously possess, during the Term, the required licensing, education, knowledge, experience, and character necessary to qualify it to render the Services.

b. The Contractor shall continuously have during the Term all required authorizations, certificates, certifications, registrations, licenses, permits, and other approvals required by Federal, State, County, or local authorities necessary to qualify it to render the Services.

Notifications

a. The Contractor shall immediately notify the County, in writing, of any disciplinary proceedings, commenced or pending, with any authority relating to a license held by any person necessary to qualify him or the Contractor to perform the Services.

b. In the event that a person is no longer licensed to perform the Services, the Contractor must immediately notify the County, but in no event shall such notification be later than five (5) days after a license holder has lost the license required to qualify the license holder or the Contractor to perform the Services.

c. In the event that the Contractor is not able to perform the Services due to a loss of license, the Contractor shall not be reimbursed for the Services rendered after the effective date of termination of such license. Without limiting the generality of the foregoing, if any part of the Contract remains to be performed, and the termination of the license does not affect the Contractor's ability to render the Services, every other term and provision of the Contract shall be valid and enforceable to the fullest extent permitted by law.

6. Documentation of Professional Standards

The Contractor shall maintain on file, in one location in Suffolk County, all records that demonstrate that it has complied with paragraphs 4 and 5 above. The address of the location of the aforesaid records and documents shall be provided to the County no later than the date of execution of the Contract. Such documentation shall be kept, maintained, and available for inspection by the County upon twenty-four (24) hours notice.

7. Credentialing

a. In the event that the Department, or any division thereof, maintains a credentialing process to qualify the Contractor to render the Services, the Contractor shall complete the required credentialing process. In the event

that any State credential, registration, certification, or license, Drug Enforcement Agency registration, or Medicare or Medicaid certification is restricted, suspended, or temporarily or permanently revoked, it is the duty of the Contractor to contact the Department, or division thereof, as the case may be, in writing, no later than three (3) days after such restriction, suspension, or revocation.

b. The Contractor shall forward to the Department, or division thereof, as the case may be, on or before July 1 of each year during the Term, a complete list of the names and addresses of all persons providing the Services, as well as their respective areas of certification, credentialing, registration, and licensing.

Engineering Certificate

In the event that the Contract requires any Engineering Services, the Contractor shall submit to the County, no later than the due date for submission for approval of any engineering work product, the Certificate of Authorization ("Certificate"), issued pursuant to § 7210 of the New York Education Law, of every person performing any Engineering Services. The failure to file, submit or maintain the Certificate shall be grounds for rejection of any engineering work product submitted for approval.

9. Termination

a. Thirty Days Termination

The County shall have the right to terminate the Contract without cause, for any reason, at any time, upon such terms and conditions it deems appropriate, provided, however, that no such termination shall be effective unless the Contractor is given at least thirty (30) days notice.

b. Event of Default; Termination on Notice

i.) The County may immediately terminate the Contract, for cause, upon such terms and conditions it deems appropriate, in the Event of Default.

ii.) If the Contractor defaults under any other provision of the Contract, the County may terminate the Contract, on not less than five (5) days notice, upon such terms and conditions it deems appropriate.

c. Termination Notice

Any notice providing for termination shall be delivered as provided for in paragraph 32 of this **Exhibit 1**.

d. Duties upon Termination

i.) The Contractor shall discontinue the Services as directed in the termination notice.

ii.) Subject to any defenses available to it, the County shall pay the Contractor for the

Services rendered through the date of termination.

iii.) The County shall be released from any and all liability under the Contract, effective as of the date of the termination notice.

iv.) Upon termination, the Contractor shall reimburse the County the balance of any funds advanced to the Contractor by the County no later than thirty (30) days after termination of the Contract. The provisions of this subparagraph shall survive the expiration or termination of the Contract.

v.) Nothing contained in this paragraph shall be construed as a limitation on the County's rights set forth in paragraphs 5(c) and 15 of this Exhibit 1.

10. Indemnification and Defense

a. The Contractor shall protect, indemnify, and hold harmless the County, its agents, servants, officials, and employees from and against all liabilities, fines, penalties, actions, damages, claims, demands, judgments, losses, suits or actions, costs, and expenses caused by the negligence or any acts or omissions of the Contractor, including reimbursement of the cost of reasonable attorneys' fees incurred by the County, its agents, servants, officials, and employees in any action or proceeding arising out of or in connection with the Contract.

b. The Contractor hereby represents and warrants that it will not infringe upon any copyright in performing the Services. The Contractor agrees that it shall protect, indemnify, and hold harmless the County, its agents, servants, officials, and employees from and against all liabilities, fines, penalties, actions, damages, claims, demands, judgments, losses, suits or actions, costs, and expenses arising out of any claim asserted for infringement of copyright, including reimbursement of the cost of reasonable attorneys' fees incurred by the County, its agents, servants, officials, and employees in any action or proceeding arising out of or in connection with any claim asserted for infringement of copyright.

c. The Contractor shall defend the County, its agents, servants, officials, and employees in any proceeding or action, including appeals, arising out of, or in connection with, the Contract, and any copyright infringement proceeding or action. Alternatively, at the County's option, the County may defend any such proceeding or action and require the Contractor to pay reasonable attorneys' fees or salary costs of County employees of the Department of Law for the defense of any such suit.

11. Insurance

a. The Contractor shall continuously maintain, during the Term of the Contract, insurance in amounts and types as follows:

i.) **Commercial General Liability** insurance, including contractual liability coverage, in an amount not less than Two Million Dollars (\$2,000,000.00) per occurrence for bodily injury and Two Million Dollars (\$2,000,000.00) per occurrence for property damage. The County shall be named an additional insured.

ii.) **Automobile Liability** insurance (if any non-owned or owned vehicles are used by the Contractor in the performance of the Contract) in an amount not less than Five Hundred Thousand Dollars (\$500,000.00) per person, per accident, for bodily injury and not less than One Hundred Thousand Dollars (\$100,000.00) for property damage per occurrence.

iii.) **Workers' Compensation and Employer's Liability** insurance in compliance with all applicable New York State laws and regulations and **Disability Benefits** insurance, if required by law. The Contractor shall furnish to the County, prior to its execution of the Contract, the documentation required by the State of New York Workers' Compensation Board of coverage or exemption from coverage pursuant to §§57 and 220 of the Workers' Compensation Law. In accordance with General Municipal Law §108, the Contract shall be void and of no effect unless the Contractor shall provide and maintain coverage during the Term for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

iv.) **Professional Liability** insurance in an amount not less than Two Million Dollars (\$2,000,000.00) on either a per-occurrence or claims-made coverage basis.

b. The County may mandate an increase in the liability limits set forth in the immediately preceding paragraphs (11)(a)(i), (ii), and (iv).

c. All policies providing such coverage shall be issued by insurance companies authorized to do business in New York with an A.M. Best rating of A- or better.

d. The Contractor shall furnish to the County, prior to the execution of the Contract, declaration pages for each policy of insurance and certificates, other than a policy for commercial general liability insurance, and upon demand, a true and certified original copy of each such policy evidencing compliance with the aforesaid insurance requirements.

e. In the case of commercial general liability insurance, and business use automobile insurance, the Contractor shall furnish to the County, prior to the execution of the Contract, a declaration page or insuring agreement and endorsement page evidencing the County's status as an additional insured on said policy, and upon demand, a true and certified original copy of such policy

evidencing compliance with the aforesaid insurance requirements.

f. All evidence of insurance shall provide for the County to be notified in writing thirty (30) days prior to any cancellation, nonrenewal, or material change in the policy to which such evidence relates. It shall be the duty of the Contractor to notify the County immediately of any cancellation, nonrenewal, or material change in any insurance policy.

g. In the event the Contractor shall fail to provide evidence of insurance, the County may provide the insurance required in such manner as the County deems appropriate and deduct the cost thereof from a Fund Source.

12. Independent Contractor

1. The Contractor is not, and shall never be, considered an employee of the County for any purpose. Notwithstanding anything herein, the Contract shall not be construed as creating a principal-agent relationship between the County and the Contractor or the Contractor and the County, as the case may be.

13. Severability

It is expressly agreed that if any term or provision of the Contract, or the application thereof to any person or circumstance, shall be held invalid or unenforceable to any extent, the remainder of the Contract, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and every other term and provision of the Contract shall be valid and shall be enforced to the fullest extent permitted by law.

14. Merger; No Oral Changes

It is expressly agreed that the Contract represents the entire agreement of the parties and that all previous understandings are herein merged in the Contract. No modification of the Contract shall be valid unless in written form and executed by both parties.

15. Set-Off Rights

The County shall have all of its common law, equitable, and statutory rights of set-off. These rights shall include, but not be limited to, the County's option to withhold from a Fund Source an amount no greater than any moneys due and owing to the County for any reason. The County shall exercise its set-off rights subject to approval by the County Attorney. In cases of set-off pursuant to a Comptroller's audit, the County shall only exercise such right after the finalization thereof, and only after consultation with the County Attorney.

16.

Non-Discrimination in Services

a. The Contractor shall not, on the grounds of race, creed, color, national origin, sex, age, disability, sexual orientation, military status, or marital status:

- i.) deny any individual the Services provided pursuant to the Contract; or
- ii.) provide the Services to an individual that is different, or provided in a different manner, from those provided to others pursuant to the Contract; or
- iii.) subject an individual to segregation or separate treatment in any matter related to the individual's receipt of the Services provided pursuant to the Contract; or
- iv.) restrict an individual in any way from any advantage or privilege enjoyed by others receiving the Services provided pursuant to the Contract; or
- v.) treat an individual differently from others in determining whether or not the individual satisfies any eligibility or other requirements or conditions which individuals must meet in order to receive the Services provided pursuant to the Contract.

b. The Contractor shall not utilize criteria or methods of administration which have the effect of subjecting individuals to discrimination because of their race, creed, color, national origin, sex, age, disability, sexual orientation, military status, or marital status, or have the effect of substantially impairing the Contract with respect to individuals of a particular race, creed, color, national origin, sex, age, disability, sexual orientation, military status, or marital status, in determining:

- i.) the Services to be provided, or
- ii.) the class of individuals to whom, or the situations in which, the Services will be provided; or
- iii.) the class of individuals to be afforded an opportunity to receive the Services.

17.

Nonsectarian Declaration

The Services performed under the Contract are secular in nature. No funds received pursuant to the Contract shall be used for sectarian purposes or to further the advancement of any religion. The Services will be available to all eligible individuals regardless of religious belief or affiliation.

18.

Governing Law

The Contract shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflict of laws. Venue shall be designated in the Supreme Court, Suffolk County, the United States District

Court for the Eastern District of New York, or, if appropriate, a court of inferior jurisdiction in Suffolk County.

19. No Waiver

It shall not be construed that any failure or forbearance of the County to enforce any provision of the Contract in any particular instance or instances is a waiver of that provision. Such provision shall otherwise remain in full force and effect, notwithstanding any such failure or forbearance.

20. Conflicts of Interest

The Contractor shall not, during the Term, pursue a course of conduct which would cause a reasonable person to believe that he or she is likely to be engaged in acts that create a substantial conflict between its obligations under the Contract and its private interests. The Contractor is charged with the duty to disclose to the County the existence of any such adverse interests, whether existing or potential. This duty shall continue as long as the Term. The determination as to whether or when a conflict may potentially exist shall ultimately be made by the County Attorney after full disclosure is obtained.

21. Cooperation on Claims

The Contractor and the County shall render diligently to each other, without compensation, any and all cooperation that may be required to defend the other party, its employees and designated representatives against any claim, demand or action that may be brought against the other party, its employees or designated representatives arising out of, or in connection with, the Contract.

22. Confidentiality

Any document of the County, or any document created by the Contractor and used in rendering the Services, shall remain the property of the County and shall be kept confidential in accordance with applicable laws, rules, and regulations.

23. Assignment and Subcontracting

a. The Contractor shall not delegate its duties under the Contract, or assign, transfer, convey, subcontract, sublet, or otherwise dispose of the Contract, or any of its right, title or interest therein, or its power to execute the Contract, or assign all or any portion of the monies that may be due or become due hereunder, (collectively referred to in this paragraph 23 as "Assignment"), to any other person, entity or thing without the prior written consent of the County, and any attempt to do any of the foregoing without such consent shall be void ab initio.

b. Such Assignment shall be subject to all of the provisions of the Contract and to any other condition the County requires. No approval of any Assignment shall be

construed as enlarging any obligation of the County under the terms and provisions of the Contract. No Assignment of the Contract or assumption by any person of any duty of the Contractor under the Contract shall provide for, or otherwise be construed as, releasing the Contractor from any term or provision of the Contract.

24. Changes to Contractor

a. The Contractor may, from time to time, with the County's consent, enter into a Permitted Transfer. For purposes of the Contract, a Permitted Transfer means:

i.) if the Contractor is a partnership, the withdrawal or change, voluntary, involuntary or by operation of law, of the partners, or transfer of partnership interests (other than the purchase of partnership interests by existing partners, by the partnership itself or the immediate family members by reason of gift, sale or devise), or the dissolution of the partnership without immediate reconstitution thereof, and

ii.) if the Contractor is a closely held corporation (i.e. whose stock is not publicly held and not traded through an exchange or over the counter),

1. the dissolution, merger, consolidation or other reorganization of the Contractor,

2. the sale or other transfer of twenty percent (20%) or more of the shares of the Contractor (other than to existing shareholders, the corporation itself or the immediate family members of shareholders by reason of gift, sale or devise).

b. If the Contractor is a not-for-profit corporation, a change of twenty percent (20%) or more of its shares or members shall be deemed a Permitted Transfer.

c. The Contractor shall notify the County in writing, which notice (the "Transfer Notice") shall include:

i.) the proposed effective date of the Permitted Transfer, which shall not be less than thirty (30) days nor more than one hundred eighty (180) days after the date of delivery of the Transfer Notice;

ii.) a summary of the material terms of the proposed Permitted Transfer,

iii.) the name and address of the proposed transferee,

iv.) such information reasonably required by the County, which will enable the County to determine the financial responsibility, character, and reputation of the proposed transferee, nature

of the proposed assignee/transferee's business and experience;

v.) all executed forms required pursuant to Exhibit 2 of the Contract, that are required to be submitted by the Contractor; and

vi.) such other information as the County may reasonably require.

d. The County agrees that any request for its consent to a Permitted Transfer shall be granted provided that the transfer does not violate any provision of the Contract, and the transferee has not been convicted of a criminal offense as described under Article II of Chapter 189 of the Suffolk County Code. The County shall grant or deny its consent to any request of a Permitted Transfer within twenty (20) days after delivery to the County of the Transfer Notice, in accordance with the provisions of Paragraph 32 of this **Exhibit 1** of the Contract. If the County shall not give written notice to the Contractor denying its consent to such Permitted Transfer (and setting forth the basis for such denial in reasonable detail) within such 20-day period, then the County shall be deemed to have granted its consent to such Permitted Transfer.

e. Notwithstanding the County's consent,

i.) the terms and conditions of the Contract shall in no way be deemed to have been waived or modified, and

ii.) such consent shall not be deemed consent to any further transfers.

25. No Intended Third Party Beneficiaries

The Contract is entered into solely for the benefit of the County and the Contractor. No third party shall be deemed a beneficiary of the Contract and no third party shall have the right to make any claim or assert any right under the Contract.

26. Certification as to Relationships

The Contractor certifies under penalties of perjury that, other than through the funds provided in the Contract and other valid agreements with the County, there is no known spouse, life partner, business, commercial, economic, or financial relationship with the County or its elected officials. The Contractor also certifies that there is no relationship within the third degree of consanguinity, between the Contractor, any of its partners, members, directors, or shareholders owning five percent (5%) or more of the Contractor, and the County.

27. Publications

Any book, article, report, or other publication related to the Services provided pursuant to this Contract shall contain the following statement in clear and legible print:

"This publication is fully or partially funded by the County of Suffolk."

28. Copyrights and Patents

a. Copyrights

If the work of the Contractor should result in the production of original books, manuals, films, or other materials for which a copyright may be granted, the Contractor may secure copyright protection. However, the County reserves to itself, and the Contractor hereby gives to the County, and to any other person designated by the County, a royalty-free, nonexclusive license to produce, reproduce, publish, translate, or otherwise use any such materials.

b. Patents

If the Contractor makes any discovery or invention during the Term, or as a result of work performed under the Contract, the Contractor may apply for and secure for itself patent protection. However, the County reserves to itself, and the Contractor hereby gives to the County, and to any other person designated by the County, a royalty-free, nonexclusive license to produce or otherwise use any item so discovered or patented.

29. Arrears to County

The Contractor warrants that, except as may otherwise be authorized by agreement, it is not in arrears to the County upon any debt, contract, or any other lawful obligation, and is not in default to the County as surety.

30. Lawful Hiring of Employees Law in Connection with Contracts for Construction or Future Construction

In the event that the Contract is subject to the Lawful Hiring of Employees Law of the County of Suffolk, Suffolk County Code Article II of Chapter 353, as more fully set forth in **Exhibit 2** entitled "Suffolk County Legislative Requirements," the Contractor shall maintain the documentation mandated to be kept by this law on the construction site at all times. Employee sign-in sheets and register/log books shall be kept on the construction site at all times and all covered employees, as defined in the law, shall be required to sign such sign-in sheets/register/log books to indicate their presence on the construction site during such working hours.

31. Record Retention

The Contractor shall retain all accounts, books, records, and other documents relevant to the Contract for seven (7) years after final payment is made by the County. Federal, State, and/or County auditors and any persons duly authorized by the County shall have full access and the right to examine any of said materials during said period. Such access is granted notwithstanding

any exemption from disclosure that may be claimed for those records which are subject to nondisclosure agreements, trade secrets and commercial information or financial information that is privileged or confidential. Without limiting the generality of the foregoing, records directly related to contract expenditures shall be kept for a period of ten (10) years because the statute of limitations for the New York False Claims Act (New York False Claims Act § 192) is ten (10) years.

32.

Notice

Unless otherwise expressly provided herein, all notices shall be in writing and shall be deemed sufficiently given if sent by regular first class mail and certified mail, or personally delivered during business hours as follows: 1.) to the Contractor at the address on page 1 of the Contract and 2.) to the County at the Department, or as to either of the foregoing, to such other address as the addressee shall have indicated by prior written notice to the addressor. All notices received by the Contractor relating to a legal claim shall be immediately sent to the Department and also to the County Attorney at 100 Veterans Memorial Highway, P.O. Box 6100, (Sixth Floor), Hauppauge, New York, 11788-0099.

End of Text for Exhibit 1

Exhibit 2
Suffolk County Legislative Requirements

1. Contractor's/Vendor's Public Disclosure Statement

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of section A5-7 of Article V of the Suffolk County Code.

Unless certified by an officer of the Contractor as being exempt from the requirements of section A5-7 of Article V of the Suffolk County Code, the Contractor represents and warrants that it has filed with the Comptroller the verified public disclosure statement required by Suffolk County Administrative Code Article V, Section A5-7 and shall file an update of such statement with the Comptroller on or before the 31st day of January in each year of the Contract's duration. The Contractor acknowledges that such filing is a material, contractual and statutory duty and that the failure to file such statement shall constitute a material breach of the Contract, for which the County shall be entitled, upon a determination that such breach has occurred, to damages, in addition to all other legal remedies, of fifteen percent (15%) of the amount of the Contract.

Required Form:

Suffolk County Form SCEX 22; entitled "Contractor's/Vendor's Public Disclosure Statement"

2. Living Wage Law

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Chapter 575, of the Suffolk County Code.

This Contract is subject to the Living Wage Law of the County of Suffolk. The law requires that, unless specific exemptions apply, all employers (as defined) under service contracts and recipients of County financial assistance, (as defined) shall provide payment of a minimum wage to employees as set forth in the Living Wage Law. Such rate shall be adjusted annually pursuant to the terms of the Suffolk County Living Wage Law of the County of Suffolk. Under the provisions of the Living Wage Law, the County shall have the authority, under appropriate circumstances, to terminate the Contract and to seek other remedies as set forth therein, for violations of this Law.

Required Forms:

Suffolk County Living Wage Form LW-1; entitled "Suffolk County Department of Labor – Living Wage Unit Notice of Application for County Compensation (Contract)."

Suffolk County Living Wage Form LW-38; entitled "Suffolk County Department of Labor – Living Wage Unit Living Wage Certification/Declaration – Subject To Audit."

3. Use of County Resources to Interfere with Collective Bargaining Activities

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Article I of Chapter 803 of the Suffolk County Code.

County Contractors (as defined by section 803-2) shall comply with all requirements of Chapter 803 of the Suffolk County Code, including the following prohibitions:

- a. The Contractor shall not use County funds to assist, promote, or deter union organizing.
- b. No County funds shall be used to reimburse the Contractor for any costs incurred to assist, promote, or deter union organizing.
- c. No employer shall use County property to hold a meeting with employees or supervisors if the purpose of such meeting is to assist, promote, or deter union organizing.

If the Services are performed on County property, the Contractor must adopt a reasonable access agreement, a neutrality agreement, fair communication agreement, non-intimidation agreement, and a majority authorization card agreement.

If the Services are for the provision of human services and are not to be performed on County property, the Contractor must adopt, at the least, a neutrality agreement.

Under the provisions of Chapter 803, the County shall have the authority, under appropriate circumstances, to terminate the Contract and to seek other remedies as set forth therein, for violations of this Law.

Required Form:

Suffolk County Labor Law Form DOL-LO1; entitled "Suffolk County Department of Labor – Labor Mediation Unit Union Organizing Certification/Declaration - Subject to Audit."

4. Lawful Hiring of Employees Law

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Article II of Chapter 353 of the Suffolk County Code.

This Contract is subject to the Lawful Hiring of Employees Law of the County of Suffolk. It provides that all covered employers, (as defined), and the owners thereof, as the case may be, that are recipients of compensation from the County through any grant, loan, subsidy, funding, appropriation, payment, tax incentive, contract, subcontract, license agreement, lease or other financial compensation agreement issued by the County or an awarding agency, where such compensation is one hundred percent (100%) funded by the County, shall submit a completed sworn affidavit (under penalty of perjury), the form of which is attached, certifying that they have complied, in good faith, with the requirements of Title 8 of the United States Code Section 1324a with respect to the hiring of covered employees (as defined) and with respect to the alien and nationality status of the owners thereof. The affidavit shall be executed by an authorized representative of the covered employer or owner, as the case may be; shall be part of any executed contract, subcontract, license agreement, lease or other financial compensation agreement with the County; and shall be made available to the public upon request.

All contractors and subcontractors (as defined) of covered employers, and the owners thereof, as the case may be, that are assigned to perform work in connection with a County contract, subcontract, license agreement, lease or other financial compensation agreement issued by the County or awarding agency, where such compensation is one hundred percent (100%) funded by the County, shall submit to the covered employer a completed sworn affidavit (under penalty of perjury), the form of which is attached, certifying that they have complied, in good faith, with the requirements of Title 8 of the United States Code Section 1324a with respect to the hiring of covered employees and with respect to the alien and nationality status of the owners thereof, as the case may be. The affidavit shall be executed by an authorized representative of the contractor, subcontractor, or owner, as the case may be; shall be part of any executed

contract, subcontract, license agreement, lease or other financial compensation agreement between the covered employer and the County; and shall be made available to the public upon request.

An updated affidavit shall be submitted by each such employer, owner, contractor and subcontractor no later than January 1 of each year for the duration of any contract and upon the renewal or amendment of the Contract, and whenever a new contractor or subcontractor is hired under the terms of the Contract.

The Contractor acknowledges that such filings are a material, contractual and statutory duty and that the failure to file any such statement shall constitute a material breach of the Contract.

Under the provisions of the Lawful Hiring of Employees Law, the County shall have the authority to terminate the Contract for violations of this Law and to seek other remedies available under the law.

The documentation mandated to be kept by this law shall at all times be kept on site. Employee sign-in sheets and register/log books shall be kept on site at all times during working hours and all covered employees, as defined in the law, shall be required to sign such sign-in sheets/register/log books to indicate their presence on the site during such working hours.

Required Forms:

Suffolk County Lawful Hiring of Employees Law Form LHE-1; entitled "Suffolk County Department of Labor – Notice Of Application To Certify Compliance With Federal Law (8 U.S.C. Section 1324a) With Respect To Lawful Hiring of Employees."

Suffolk County Lawful Hiring of Employees Law Form LHE-2; entitled "Affidavit Of Compliance With The Requirements Of 8 U.S.C. Section 1324a With Respect To Lawful Hiring Of Employees"

5. Gratuities

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Chapter 664 of the Suffolk County Code.

The Contractor represents and warrants that it has not offered or given any gratuity to any official, employee or agent of the County or the State or of any political party, with the purpose or intent of securing an agreement or securing favorable

treatment with respect to the awarding or amending of an agreement or the making of any determinations with respect to the performance of an agreement.

6. Prohibition Against Contracting with Corporations that Reincorporate Overseas

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of sections A4-13 and A4-14 of Article IV of the Suffolk County Code.

The Contractor represents that it is in compliance with sections A4-13 and A4-14 of Article IV of the Suffolk County Code. Such law provides that no contract for consulting services or goods and services shall be awarded by the County to a business previously incorporated within the U.S.A. that has reincorporated outside the U.S.A.

7. Child Sexual Abuse Reporting Policy

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Article II of Chapter 880 of the Suffolk County Code.

The Contractor shall comply with Article II of Chapter 880, of the Suffolk County Code, entitled "Child Sexual Abuse Reporting Policy," as now in effect or amended hereafter or of any other Suffolk County Local Law that may become applicable during the term of the Contract with regard to child sexual abuse reporting policy.

8. Non Responsible Bidder

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Article II of Chapter 189 of the Suffolk County Code.

Upon signing the Contract, the Contractor certifies that it has not been convicted of a criminal offense within the last ten (10) years. The term "conviction" shall mean a finding of guilty after a trial or a plea of guilty to an offense covered under section 189-5 of the Suffolk County Code under "Nonresponsible Bidder."

9. Use of Funds in Prosecution of Civil Actions Prohibited

It shall be the duty of the Contractor to read, become familiar with, and comply with the requirements of Article III of Chapter 893 of the Suffolk County Code.

The Contractor shall not use any of the moneys, in part or in whole, and either directly or indirectly, received under the Contract in connection with the prosecution of any civil action against the County in any jurisdiction or any judicial or administrative forum.

10. Youth Sports

It shall be the duty of the Contractor to read, become familiar with, and comply with Article III of Chapter 730 of the Suffolk County Code.

All contract agencies that conduct youth sports programs are required to develop and maintain a written plan or policy addressing incidents of possible or actual concussion or other head injuries among sports program participants. Such plan or policy must be submitted prior to the award of a County contract, grant or funding. Receipt of such plan or policy by the County does not represent approval or endorsement of any such plan or policy, nor shall the County be subject to any liability in connection with any such plan or policy.

11. Work Experience Participation

If the Contractor is a not-for-profit or governmental agency or institution, each of the Contractor's locations in the County at which the Services are provided shall be a work site for public-assistance clients of Suffolk County pursuant to Chapter 281 of the Suffolk County Code at all times during the Term of the Contract. If no Memorandum of Understanding ("MOU") with the Suffolk County Department of Labor for work experience is in effect at the beginning of the Term of the Contract, the Contractor, if it is a not-for-profit or governmental agency or institution, shall enter into such MOU as soon as possible after the execution of the Contract and failure to enter into or to perform in accordance with such MOU shall be deemed to be a failure to perform in accordance with the Contract, for which the County may withhold payment, terminate the Contract or exercise such other remedies as may be appropriate in the circumstances.

12. Suffolk County Local Laws Website Address

Suffolk County Local Laws, Rules and Regulations can be accessed on the homepage of the Suffolk County Legislature.

End of Text for Exhibit 2

Exhibit 3
Environmental Contract Terms and Conditions

1. Changes in Plan, Service or Report

- a.** The Contractor shall submit a progress report with each claim. Such progress report will confirm completion and satisfaction of each task versus the amounts charged to date as a percentage of the total Contract amount, together with the Contractor's recommendations for future time and activity to be devoted to remaining tasks. The County shall have the right to redirect the Contractor's time and activities on the Study at any time during the term of the Contract to accomplish said goals and purposes as conceived by the County at any time during the period of the Contract.
- b.** The County and the Contractor recognize that the estimates of costs by tasks in Article II of the Contract may require modification. Therefore, the Contractor may reallocate funds among tasks to accomplish the goals of the Services without approval, up to but not exceeding fifteen percent (15%) of any line item or in excess of fifteen percent (15%) upon the written request of the Contractor and with the written approval of the Department; provided

that the total cost after modifications does not exceed the Total Cost of Contract on the cover page of the Contract or of any amendment thereto in writing signed by the parties.

2. Availability of Technical Data

All technical data in regard to the Services, whether existing in the office(s) of the Department or in the office of the Contractor, shall be made available to the other party to the Contract without expense to such other party, as the case may be.

3. Delivery of All Survey Notes, Computations, Documents, Etc.

At the time of completion of the work, the Contractor shall, if requested, deliver to the Department all survey notes, computations, maps, tracings, and all other documents, data models and products pertaining to the Services. In the event that the Contract is terminated for any reason, the Contractor shall deliver all the data and material described herein above to the Department within ten (10) days. All original tracings of maps and other data furnished to the Department by the Contractor shall bear thereon the certification and signature of the Contractor.

End of Text for Exhibit 3

End of Text for Section VI

**Suffolk County Required Compliance Forms
in Accordance with County Laws**

These mandatory forms are available on Suffolk County Purchasing Website by registering on the website for the RFP.

To register, access the website: www.co.Suffolk.ny.us : Select Business tab; click on Bids & Proposals; follow links to Purchasing site to register and download document. By registering, you will automatically receive all future addenda.

LL52-2012 – Disqualification of Non-responsible Bidders

Suffolk County Form 22 – Contractor's/Vendor's Public Disclosure Statement

FTS Form – Non-Collusive Offer Certification

LHE-1 and LHE-2 Forms – Lawful Hiring

LW-1 and LW-38 Forms – Suffolk County Living Wage

**DOL-L01- Suffolk County Union Organizing Certification/Declaration
(Note: this Form will be required only from the Apparent Successful Proposer)**



Feb. 23, 2005 meeting

Grand Canal, Oakdale, New York Environmental Assessment



Steve Levy, Suffolk County Executive



Suffolk County Department of Health Services

Brian L. Harper, M.D., M.P.H., Commissioner

Suffolk County Department of Public Works

Charles Bartha, P.E., Commissioner

January 2005

Grand Canal Environmental Assessment

Suffolk County Department of Health Services
Division of Environmental Quality
Vito Minei, P.E., Director
Walter Dawydiak, P.E., J.D., Acting Chief Engineer

Office of Ecology
Martin Trent, Acting Chief

Bureau of Marine Resources
Robert M. Waters, Acting Supervisor
Michael Jensen
John Bredemeyer
Gary Chmurzynski
Nancy Panarese

Public & Environmental Health Laboratory
Kenneth M. Hill, Lab Director

Suffolk County Department of Health Services
Division of Public Health
David Graham, M.D., M.P.H., Director
Patricia Dillon, M.D., M.P.H.
Scott Campbell, Ph.D.

Suffolk County Department of Public Works
James K. Peterman, P.E., Assistant to the Chief Engineer
James Carioto

Division of Vector Control
Dominic Ninivaggi, Director
Tom Iwanejko

January 2005

Grand Canal Environmental Assessment

Abstract

The water quality monitoring conducted for this assessment indicates that Grand Canal is significantly impacted by nutrient enrichment and, potentially, by pathogen contamination. Poor flushing in the canal has a negative effect on its ecology. Mosquitoes do not breed directly within the canal, but the adjacent wetlands are primary breeding areas. Vector Control has identified, through arboviral surveillance efforts, West Nile Virus positive birds and mosquito pools in the area. Although there is no immediate public health threat to the residents within the Grand Canal region, the area of the canal currently requires multiple larvicide events annually. Dredging the canal in conjunction with a comprehensive Open Marsh Water Management (OMWM) strategy to provide greater water flows to adjacent wetlands, could be a major step towards decreasing the need for annual larviciding. As always, any dredging activity must be conducted in a manner to avoid creating any adverse problems with changes in the current fish and wildlife habitat, and dredging spoils must be removed to prevent foul odors to the residents in the community. The plan could reduce pesticide usage and mosquito breeding, while enhancing the ecology, increasing water circulation in the canal and restoring the surrounding wetlands.

Introduction

Grand Canal consists of a series of shallow, interconnected canals located on the east side of the Connetquot River in Oakdale (Figure 1). According to a Dowling College website, the canal was built sometime prior to 1920 to serve the former "Idle Hour" estate of William K. Vanderbilt. The canal system includes a main "outside" canal that has north and south openings to the Connetquot River, and a number of "inner" finger canals that extend into what are now residential areas. There are a number of tidal wetlands within the area encompassed by the canal, in addition to a large marsh immediately to the east of the canal that includes both tidal and freshwater wetlands. All these wetlands depend on the canal for tidal circulation.

For a number of years Grand Canal has been the subject of complaints by area residents, reportedly concerned with progressive shoaling and with conditions potentially associated with a reduction in tidal flushing. Issues that have been raised include the potential for mosquito breeding, potential West Nile virus and other epizootic activity, the possible contamination of canal waters with Vector Control pesticides (used in adjacent marshes), and general water quality deterioration. The suggestion that these conditions collectively may represent a public health risk has, at the request of Suffolk County Executive Steve Levy, prompted this investigation.



Figure 1. Grand Canal, Oakdale

At a meeting in June 2004 among representatives of the County Executive's Office, the Department of Public Works (SCDPW), and the Department of Health Services (SCDHS), a multi-agency strategy was adopted to assess environmental conditions in the canal. The objective was to document existing conditions and determine whether a risk to public health exists, and if dredging of the canal would reduce that risk. The SCDHS Office of Ecology was assigned the tasks of assessing water quality conditions, coordinating monitoring efforts, and compiling a draft report. The SCDHS Division of Public Health was to evaluate mosquito and viral epizootic activity and assess the potential for public health implications. The SCDPW would evaluate adjacent wetland and ditch conditions as they relate to mosquito breeding, in addition to determining sediment conditions for potential dredging.

Canal Water Quality

In late June, staff from the Office of Ecology surveyed the canal to determine the degree of accessibility of various areas and to establish suitable sampling locations. Twelve sites representative of the different canal areas were selected, latitude-longitude coordinates obtained, and GIS maps prepared.

Water quality monitoring was conducted on four occasions from July through early September 2004. Samples were collected at or near the time of low tide, to avoid influences from the Connetquot River, from a depth approximately six inches below the surface. The samples were delivered to the Suffolk County Public & Environmental Health Laboratory (PEHL) in Hauppauge for analysis. Parameters analyzed included nutrients, salinity, coliform bacteria, and various organic constituents (solvents, pesticides, etc). At each site the water depth and secchi depth were recorded and measurements of surface and bottom temperature and dissolved oxygen also taken. Average values for physical measurements are given in Table 1. Tables 2 and 3 include results of inorganic and organic samples, respectively. Results for selected parameters are discussed below.

- ***Water Depth:*** Average depths at the sites monitored varied from 2.5 ft. at station 10 to 10.1 ft. at station 4. In general, the shallowest water was found in



the stretch from station 7 to station 11, with the deepest water found at inner canal stations 3 through 6 where numerous boats are moored. Navigation with shallow-draft outboard powered boats (19 and 25' in length) was generally not a problem, although when a 25' inboard powered vessel was used it was very difficult to

Table 1. Average Values for Physical Measurements						
Station	Depth	Temperature (°C)	Dissolved Oxygen (mg/L)		Salinity (o/oo)	Secchi (ft)
			Surface	Bottom		
GC1	4.8	23.9	6.5	5.0	19.1	1.5
GC2	4.1	24.0	6.6	4.8	19.0	1.6
GC3	9.9	24.3	7.1	1.7	19.5	1.6
GC4	10.1	24.3	5.5	0.9	19.6	1.3
GC5	5.6	24.2	6.5	2.9	19.2	1.8
GC6	6.0	24.6	8.2	1.1	19.0	1.9
GC7	4.0	24.4	7.3	3.5	18.5	1.9
GC8	3.5	24.4	5.6	5.4	18.1	1.6
GC9	3.4	24.6	6.4	4.1	15.9	2.0
GC10	2.5	24.5	4.4	4.1	15.0	1.4
GC11 *	3.0	26.9	----	----	7.1	1.0
GC12	4.3	25.4	10.4	5.9	16.5	1.8
* Only one sample collected; no D.O. data due to meter malfunction						

turn around in the narrow canals without the boat striking the bottom. Many of the boats moored throughout the canal system are greater than 25' in length.

- Salinity:** As would be expected, average salinities generally decreased in a northward direction with increasing distance from the tidal influence of Great South Bay. From stations 1 through 8 levels varied little, averaging from 18.1 to 19.6 parts per thousand. Further north at stations 9 through 12, average salinity declined to between 15.0 to 16.5 parts per thousand.
- Secchi Depth:** The secchi depth, a general measure of water transparency, is obtained by lowering a white disk through the water column to the point at which it disappears. Average secchi depths found in Grand Canal ranged from 1.0 to 2.0 ft., levels indicative of very turbid conditions. Factors that may be contributing to the turbidity include algal blooms, sediments that are washed off area streets or re-suspended from the bottom by boat traffic, and detritus from adjacent wetlands. Samples collected from a turbid area near station 8 on 9/7/04 revealed a massive bloom of a flagellated brown alga, *Heterocapsa akashiwo*, an organism common in brackish waters.



Table 2. Average Values for Coliforms and Nutrients

Station	Total Coliform (MPN/100 ml)	Fecal Coliform	Dissolved Inorganic Nitrogen (DIN) (mg/L)	Total Nitrogen (mg/L)	Total Dissolved Nitrogen (mg/L)	Dissolved Inorganic Phosphorus (DIP) (mg/L)	Total Phosphorus (mg/L)	Total Dissolved Phosphorus (mg/L)
GC1	1,033	433	0.148	0.36	0.19	< 0.005	0.063	< 0.025
GC2	3,800	967	0.092	0.45	0.24	< 0.005	0.049	< 0.025
GC3	470	197	0.132	0.38	0.18	< 0.005	0.053	< 0.025
GC4	290	130	0.212	0.56	0.30	< 0.005	0.056	< 0.025
GC5	5,713	253	0.251	0.38	0.46	< 0.005	0.057	0.030
GC6	533	193	0.092	0.24	0.20	< 0.005	0.038	< 0.025
GC7	633	533	0.221	0.47	0.32	< 0.005	0.073	< 0.025
GC8	3,500	567	0.428	0.45	0.36	< 0.005	0.050	< 0.025
GC9	1,050	650	0.633	0.76	0.94	< 0.005	< 0.025	< 0.025
GC10	1,033	777	0.668	0.96	0.82	< 0.005	0.061	< 0.025
GC11 *	1,300	800	1.350	1.50	1.50	< 0.005	0.052	0.038
GC12	460	147	0.531	1.07	0.85	< 0.005	0.071	< 0.025

Table 3. Organic Positive Detects

Date	Station	1,2,4-Trimethyl-benzene	Benzene	Carbon disulfide	1,2-Dichloro-ethene	Ethyl-benzene	Fluoranthene	MTBE	Naphthalene	Tetra-Chloroethene	Toluene	Total Xylene
07/26/04	GC1							1				
08/10/04	GC2	0.7		0.7				3	0.8	0.6	2	2
08/10/04	GC6							3				
07/26/04	GC7							3			1	1
08/10/04	GC7				0.5			3		0.9	1	1
08/10/04	GC8							2				
08/10/04	GC9				0.9			3		1		
07/26/04	GC10				1			2		0.9		
08/10/04	GC10				2		0.2	3		2	0.5	
07/26/04	GC12	1	0.9		2	0.9		2	0.9	1	5	5

* Only one sample collected

- ***Dissolved Oxygen:*** Adequate levels of dissolved oxygen (DO) are critical to the development and survival of aquatic organisms. Hypoxia (low DO) is a problem that often develops in waters that experience frequent algal blooms due to excessive levels of nutrients. Hypoxia can also develop from the decomposition of other resident plant material (macroalgae) or, in shallow systems, from the oxygen demand exerted by highly organic bottom sediments. A level of 5.0 mg/L, the New York State ambient water quality standard for DO, is a concentration below which adverse effects on aquatic organisms may begin to occur. As guidance to states developing water quality standards, the USEPA has established DO criteria for saltwater environments of 4.8 mg/L for species growth and 2.3 mg/L for species survival.

In this survey, surface DO values in Grand Canal varied widely from 1.8 mg/L to 15.4 mg/L. Average values ranged from 4.4 mg/L at station 10 to 10.4 mg/L at station 12. Thirteen of the 44 surface measurements taken were below the 5.0 mg/L benchmark, and 3 were below the survival criteria. Bottom DO levels ranged from 0.2 mg/L to 9.2 mg/L with averages ranging from 0.9 at station 4 to 5.9 at station 12. Over 65% of the bottom DO measurements (29 of 44) were less than the 5.0 mg/L benchmark and 41% (18) were less than the 2.3 mg/L species survival criteria. The lowest averages were noted at the deeper inner canal stations (3, 4, 5 and 6). Because of the bottom topography in these areas (i.e. shallow sills preceding deeper basins), it is likely these sites act as sediment sinks for fine organic particulates that exert an increased oxygen demand during decomposition.

- ***Coliform Bacteria:*** Coliforms are a group of bacteria commonly found in soil, on vegetation, and in the intestinal tract of warm-blooded animals. Those of intestinal origin are referred to as “fecal coliforms” and although generally harmless, have long been used as an indicator for the possible presence of intestinal parasites or pathogens. Current standards for bathing waters permit a maximum 30-day average of 200 fecal coliforms per 100 ml of sample. The standard for shellfishing waters is 70 total coliforms per 100 ml of sample.

Coliform levels found in Grand Canal were consistently elevated, with total coliform averages ranging from 290 to 5,713 organisms/100 ml and fecal coliforms averaging from 130 to 967 organisms/100 ml (Table 2). From a regulatory standpoint, these waters would be unsuitable for both shellfishing and bathing. Likely sources of coliforms in Grand Canal include stormwater runoff, waterfowl or other area wildlife, and perhaps, improperly functioning residential septic systems.

- **Nutrients:** Nutrients, including various nitrogen and phosphorous compounds, are essential for life in marine environments. However, over-enrichment with nutrients as a result of human activities (a process known as eutrophication) can have serious adverse impacts, both temporary and long-term, on the marine ecology. Excessive nutrient levels can cause explosive growths of phytoplankton (algal blooms), reduced water transparency, decreased levels of dissolved oxygen, and the production of foul odors. Over the long-term, impacts such as reduced species diversity and the proliferation of harmful algal species may result.

Levels of dissolved inorganic nitrogen (DIN) are typically monitored in marine ecology programs as an indicator of nutrient enrichment. In Grand Canal, average DIN levels ranged from 0.09 to 0.67 mg/L. Stations 9 through 12 (nearest the college STP) in the northern canal area had the highest levels of DIN, collectively averaging three times as much as that found at stations 1 through 8. In comparison, long-term DIN levels in adjacent areas of Great South Bay have averaged less 0.05 mg/L. With this apparent high level of dissolved nitrogen in the canal, it is likely that algal blooms, reduced water transparency, and depressed oxygen levels are a common occurrence. Nutrient sources to the canal likely include leachate from area septic systems, runoff from fertilized lawns, and decomposing detritus from area wetlands. It is interesting to note, that the supply of nitrogen to the canal is so excessive that phosphorus has apparently become the limiting nutrient (usually not the case in temperate marine systems). This is evidenced by the very low levels of dissolved inorganic phosphate (DIP), normally at their peak during the summer, found during this survey.

- **Organics:** Samples were analyzed for numerous "organic" constituents (241 in total), including volatile organic compounds (VOCs), semi-volatile organics (SVOCs), carbamate and chlorinated pesticides, and a number of herbicide metabolites (a list of analytes is included in Appendix I). Because of laboratory limitations however, only a limited number of these samples could be collected. VOCs were collected at each station on one occasion; the remaining organics were only collected at 6 of the 11 sites monitored.

Results were negative for all pesticide analytes, including the larvicide *methoprene* that is used by the Suffolk County Vector Control Division for mosquito control in adjacent wetlands. A number of VOC and SVOC compounds were identified. The gasoline additive MTBE was detected at all stations (Table 3). Many of the compounds found are present in petroleum products and likely have their source in boat engine exhaust or in stormwater runoff from area roads.

Mosquito Breeding

Routine mosquito larval surveillance conducted by the SCDPW Division of Vector Control has not identified mosquito breeding within Grand Canal. Although water movement in the canal is limited, there is apparently enough water depth and flow to allow access by fish and other predators. Representatives of Vector Control and the SCDHS Division of Public Health verified the absence of larvae in the canal this summer. This included a historical review of records of arboviral findings within three miles of the Grand Canal area. The Division of Public Health concluded that there is little relationship between the canal and arboviral findings.

Suffolk County Vector Control has however, identified several sites near the Grand Canal as primary breeding areas for mosquitoes. Although none of these sites are directly in Grand Canal itself, several are associated with freshwater and tidal wetlands that border the canal (Figure 2). Three of these sites are considered major mosquito breeding areas that are large enough to require the use of a helicopter to treat them regularly with larvicides.



Major vector species associated with these sites are *Ochlerotatus sollicitans*, *Oc. taeniorhynchus* and *Oc. cantator* in the salt marsh. Mosquito species breeding within the adjacent freshwater wetlands and along the upper reaches of the salt marsh are primarily *Culex pipiens/restuans* and *Aedes vexans*. Arboviral surveillance shows that during the period of 1999 to 2003, there have been 29 West Nile Virus (WNV) positive birds and 8 WNV positive mosquito pools found within a three-mile radius of the Grand Canal. In 1997, there were 5 Eastern Equine Encephalitis virus positive mosquito pools found one mile to the north of the Grand Canal at Connetquot River State Park.

Breeding potential at these three main sites, and several smaller ones near the canal, may actually have been created or exacerbated by earlier dredging projects in Grand Canal where dredge spoil was placed on a berm along the canal. This dredge spoil berm cut off tidal circulation to these marshes, causing rain and flood waters to accumulate on the marsh surface and created ideal breeding grounds for mosquitoes. In an effort to restore some tidal circulation to this marsh, Vector Control installed several culverts and opened a small breach along the berm. However, more substantial restoration work would be appropriate to restore the proper hydrology to the site and to reduce mosquito breeding.

Suffolk County Vector Control Primary Breeding Sites Grand Canal Region - Oakdale

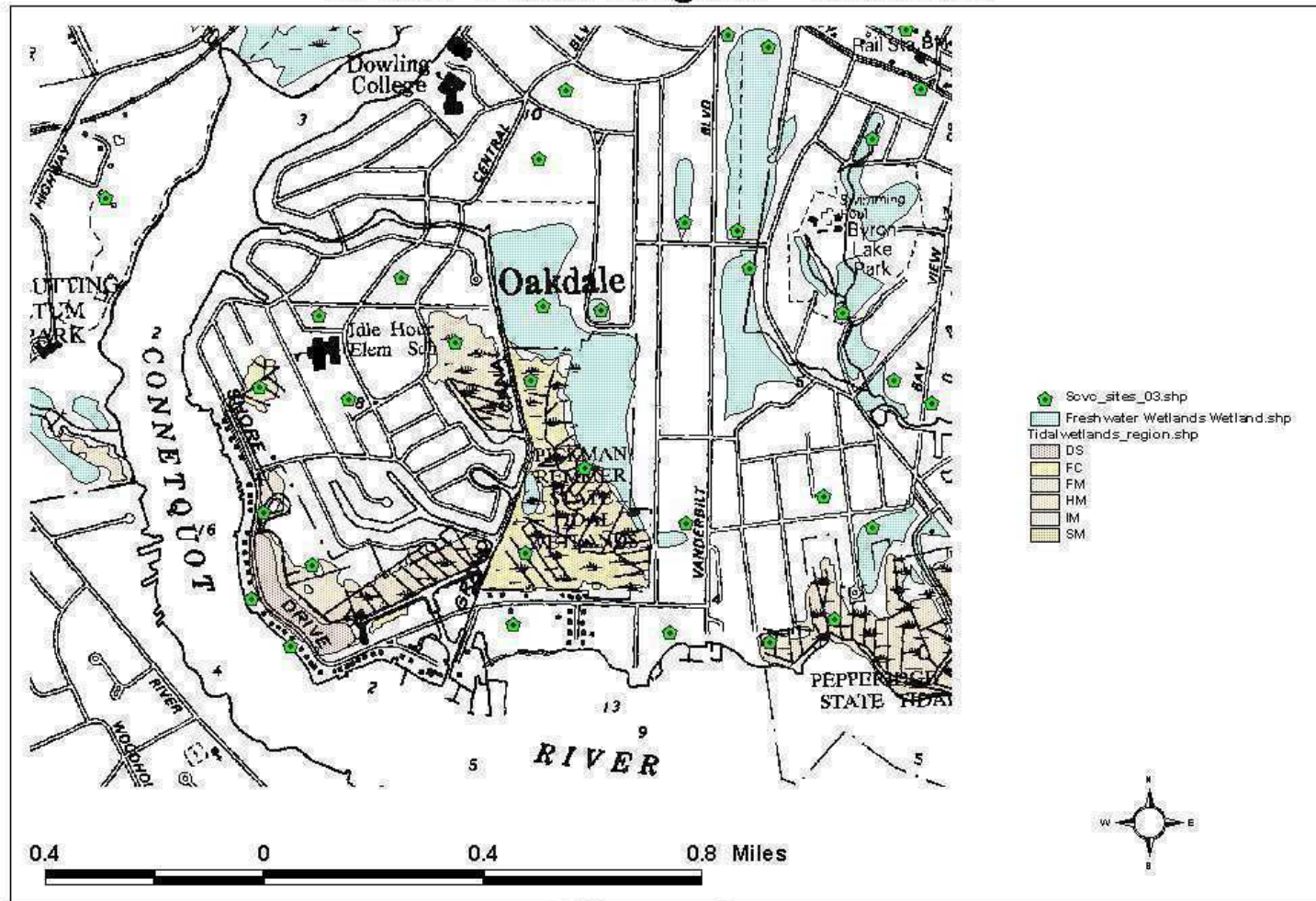


Figure 2



According to SCDPW, in their current condition these wetlands require aerial larviciding ten or more times a year, and it would be very desirable to reduce or eliminate the need for pesticide spraying via proper water management.

Dredging of Grand Canal, together with marsh restoration efforts and water management, would be expected to have a beneficial impact on reducing mosquito breeding in the area. Dredging of the canal, in conjunction with a program utilizing progressive Open Marsh Water Management (OMWM) techniques, should be considered as a first step of a comprehensive plan to fully restore the hydrology of the degraded wetlands. Such a project would need to be conducted with the cooperation of the primary owner of the wetlands along the Grand Canal: the New York State Department of Environmental Conservation (NYSDEC).

Open Water Marsh Management (OMWM)

The most effective, economical and potentially environmentally benign means of control for salt marsh mosquitoes is to manage their habitat such that the breeding of larvae and the subsequent propagation of adults is minimized. In the past, the practice of constructing mosquito grid ditches was intended as a means to drain the upper reaches of marshes in order to eliminate mosquito habitat. It is now widely recognized that this approach is only partly effective, in that all breeding sites may not be addressed by the grid pattern. Where tidal flow is limited, it is particularly difficult to provide adequate habitat for predatory fish. This is especially true for the marshes that are separated from Grand Canal by a dike. As a result, the application of mosquito larvicides (and potentially adulticides) has been necessary for mosquito control.

Open Marsh Water Management is a habitat restoration and mosquito control technique designed to re-establish natural flow patterns in ditched marshes. An OMWM project may involve a variety of procedures, including the plugging or filling of selected ditches, re-opening natural tidal creeks, and the excavation of small ponds to function as fish reservoirs. For an OMWM project to succeed, it is important that the marsh receive adequate tidal flow to ensure that marsh channels and ponds have water quality capable of supporting fish. OMWM has been successfully implemented in a number of areas of the northeast, including New Jersey, Connecticut, and Rhode Island. Currently in Suffolk County, an OMWM demonstration project is underway at the Wertheim National Wildlife Refuge as part of the Suffolk County Vector Control and Wetlands Management Long-Term Plan.

Dredging

Dredging History: The Suffolk County Department of Public Works (SCDPW) has not dredged Grand Canal in the past, although the feasibility was briefly investigated in 1983. A hydrographic survey determined that there was adequate depth for navigation at that time.

Project Approvals: Grand Canal was approved for "interface dredging" in December of 2002 by the Dredging Projects Screening Committee (interface dredging clears sediment from the entrance of a canal or waterway). Other high priority projects have prevented the SCDPW from progressing with further investigation, as the Town of Islip has not requested the canal to be placed on the SCDPW priority list. The approved channel is approximately 500 ft. long adjacent to the marina at the south entrance of Grand Canal. Approval for dredging the entire length of Grand Canal (approximately 8,000 ft.) was tabled at the meeting.

- ***Sediment Composition:*** Four sediment samples from Grand Canal were recently obtained and analyzed by the SCDPW. According to the results of a grain-size analysis (Table 4), the sediment is composed mostly of fine silty material.
- ***Dredge Volume:*** Based upon an average channel width of 20 ft. (to maintain a safe distance from existing bulkheads), a design depth of 5 feet below Mean Low Water (which would yield an average depth of cut of 2.5 ft.), and a canal length of 8,000 ft., the estimated quantity of sediment to be dredged is 15,000 cubic yards.
- ***Sediment Disposal:***
 - a. **Open Water Disposal (Surf Zone Disposal):** This method of disposal utilizes direct discharge of dredged sediment into the ocean. Open water disposal is unacceptable to the regulatory agencies.
 - b. **Beach Nourishment:** Beaches are sometimes replenished by pumping a mixture of sand and water onto them from a hydraulic dredging project. The high percentage of silt and clay found in Grand Canal makes it unsuitable for beach nourishment.
 - c. **Upland Disposal in a Containment Dike:** This is the preferred method for disposing of sediment with a high percentage of fine material. A mixture of water and dredged sediment is pumped into a containment dike, settlement of the fine particles is allowed to occur, and clear water is allowed to return to the waterway through a spillway and effluent pipes.

Table 4. Results of Sediment Grain Size Analysis (% Passing)				
	Sample No.			
Sieve Size	1	2	3	4
¾" (19mm)			<i>See</i>	100
½" (12.5mm)			<i>Note</i>	98
3/8" (9.5mm)			<i>Below</i>	94
¼" (6.3mm)				91
No. 4 (4.75mm)				89
1/8" (3.17mm)				87
No. 8 (2.36mm)				86
No. 10 (2.00mm)				86
No. 16 (1.18mm)			100	83
No. 20 (0.850mm)	100	100	99	80
No. 30 (0.600mm)	99	99	97	74
No. 40 (0.425mm)	97	97	91	64
No. 50 (0.300mm)	93	96	84	55
No. 80 (0.180mm)	89	94	70	52
No. 100 (0.150mm)	85	93	66	48
No. 200 (0.075mm)	81	91	56	45
No. 230 (0.063mm)	81	90	55	44
No. 270 (0.053mm)	80	89	55	43
Note: Sample # 3 contained 36.0% organic material				
Sediment Sampling Locations				
Sample No. 1	1500'± N/o southern canal entrance near Shore Dr. 425'± S/o Tower Mews Rd. in center of canal at intersection of Grand Canal and small canal running south towards the marina			
Sample No. 2	1300'±N/o Sample #1. 200'± NE/o intersection of Canal Rd and Edgewater Rd. Taken in the center of the intersection of Grand Canal and small canal that runs to the west			
Sample No. 3	1900'± N/o Sample #2. 200'± S/o Central Blvd, and 250'± W/o Hollywood Dr. Bridge. Taken in the center of the canal			
Sample No. 4	2000'± W/o Sample #3. 300'± E/o the north entrance to Grand Canal. Taken in the center of the canal			

- **Possible Upland Dike Sites:** Three viable sites for containment dikes have been identified (Table 5, Appendix III). A combination of sites may be necessary to dispose of the estimated 15,000 cubic yards of material to be dredged from the canal.

Table 5. Potential Upland Sites for Spoil Disposal				
Dike Location	Land Area (acres)	Estimated Capacity (cubic yards)	Maximum Pumping Distance (feet)	Comments
Area 1	3.0	13,500	6,500	Town owned drainage reserve area
Area 2	2.0	9,000	8,000	County owned, Timber Pt. Park
Area 3	1.3	6,000 (if emptied)	15,000	Current dike is full of material from prior dredging. Owned by St. John's University
Reference Calculation: (750cy/ac/ftx6ft high fill) All quantities are approximate and subject to survey				

- ***Project Complications:***

1. Low Clearance Bridges - There are four low clearance bridges, which would hinder mobilization and operation of the small 6-inch dredge.

In order for the dredge to work past the bridge obstructions, it may be necessary to partially dismantle and reassemble it, or completely remove the dredge from the canal using a crane. This additional procedure will add extra equipment, time, and cost to the project.



2. Private Bulkhead Condition - The canal is lined with individually owned private bulkheads of unknown embedment depths. Significant portions of the bulkheads are in poor condition, which could be undermined without a carefully planned channel width for the dredging operation. Before dredging could commence it would be necessary for the adjacent owners to provide the County with ***Hold Harmless Agreements***.
3. Odors Generated - Dredging of the highly organic sediments may release noxious sulfide odors to the surrounding area. These odors are expected to be temporary during the dredging operations, but may persist for some time in the spoil area.

- **Permitting Process:** There are three regulatory agencies that must approve a proposed dredging project through a permit application process. All three regulatory agencies include a period of public notice and comment in their permit review processes.
 1. The NYS Department of State issues a Letter of Concurrence if the project complies with the State's Coastal Management Program (CMP).
 2. The Department of Environmental Conservation issues a Work Permit and a Water Quality Certificate according to State Environmental Conservation Law (ECL).
 3. The US Army Corps of Engineers issues a Work Permit according to comments from Federal Agencies, such as the National Marine Fisheries Service, the Fish and Wildlife Service, the US Environmental Protection Agency, and the US Coast Guard.

Regulations

Under Suffolk County law, in order for a dredging project to be approved it must be judged to be in the public interest. Criteria for making this determination are set forth in Article 8-5 of the county's Administrative Code. The full text of the article is included in Appendix II. The Criteria for county dredging projects states in section A8-5 B (5) that:

*A dredging project shall be deemed to be in the public interest if it supports, advances or enhances the following types of uses activities and/or facilities: 5) Recreational uses, **including but not limited to** (emphasis added) boat livery stations, party boats, charter boats, marinas and yacht clubs open to use by the general public.*

Recreational uses of the canal would certainly be enhanced by dredging and this section of the Criteria does not exclude the canal from consideration. Section A8-5 B (1) allows dredging at a boat ramp with parking for *at least six cars with trailers*. There can be little doubt that a canal that provides docking for more than 100 recreational boats provides greater recreational opportunities than a ramp with parking for six vehicles. It is inconsistent to differentiate the public interest by including a boat ramp that may be utilized by a half-dozen individuals in the dredge criteria versus more than 100 boat owners on Grand Canal.

The criteria relevant to a public health reason are contained in section A8-5 B (6), of the criteria that reads as follows:

Reduction of the risk of public health problems based upon a certification by the Suffolk County Department of Health Services that the public health will be protected by dredging for the particular year the channel is proposed to be dredged.

Poor flushing of the canal and altered marsh features contribute to high levels of mosquito breeding in the adjacent wetlands. West Nile Virus positive birds and mosquito pools have been documented in the area. Mosquito breeding areas along the South Shore in the vicinity of Grand Canal are not uncommon. However, efforts to reduce mosquito breeding to minimize risk to public health are certainly prudent, especially in light of the findings of West Nile Virus-positive birds and mosquito pools in the area. Enhanced management of the greater Grand Canal area (including adjacent wetlands) presents such an opportunity to reduce mosquito breeding, with multiple ancillary benefits of minimizing pesticide usage and restoring hydrology and ecology.

Conclusions & Recommendations

The water quality monitoring conducted for this assessment clearly indicates that Grand Canal is significantly impacted by nutrient enrichment and potentially, by pathogen contamination. The excessive levels of nitrogen found in the canal suggest that algal blooms, and the consequential reduction in water clarity and depleted levels of dissolved oxygen, are a common occurrence. Potential sources of contamination include stormwater runoff from fertilized lawns and roadways, area wildlife, and perhaps, improperly functioning residential septic systems. Whatever the source however, the effect is exacerbated by the canal's low tidal prism and lack of flushing. A dredging project designed to increase flow in the canal will undoubtedly have a positive effect on its ecology.

The county dredging criteria does not exclude the canal from consideration. Recreational uses of the canal by the public, assuming more than 100 taxpaying boat owners are considered "the public," would be enhanced by dredging. Docking for more than 100 recreational boats provides greater recreational opportunities for Suffolk County residents than the criteria of a ramp with parking for six vehicles. Moreover, the canal itself is a waterway accessible for public usage and touring.

Mosquitoes do not breed directly within the canal, but the adjacent wetlands are primary breeding areas. Vector Control has identified through arboviral surveillance efforts 29 West Nile Virus (WNV) positive birds and 8 WNV mosquito pools within a 3-mile radius of the canal. Mosquito control is a public health management issue requiring multiple larvicide events annually. The best method of addressing this public health issue is through source control and abatement. In this case the wetlands bordering Grand Canal are inadequately flushed, providing a mosquito habitat. Dredging the canal, in conjunction with an OMWM strategy to provide greater water flows to the surrounding

marshlands, would be a major step in alleviating the mosquito problem in areas adjacent to the Grand Canal.

Dredging of Grand Canal could result in improvements in water quality, reduction in the use of pesticides, and enhancement of recreational uses. It is, therefore, recommended that a comprehensive program to design and implement an OMWM/dredging strategy be considered. Development and implementation of such a program should be eligible for $\frac{1}{4}\%$ Sales Tax Water Quality Protection and Restoration Program funding.

Article XII Section C12-2 of the Suffolk County Charter (Drinking Water Protection Program) addresses programmatic expenses permissible under the $\frac{1}{4}\%$ program. Under sub-section (a), which refers to projects recommended by the management plans of South Shore Estuary Reserve (SSER), Peconic Estuary Program (PEP), and/or the Long Island Sound Study (LISS), it appears that the proposed Grand Canal project would qualify under the *"wetlands preservation and enhancement"* and *"open marsh water management"* criteria of the *Aquatic Habitat Restoration* category.

Appendix I

Organic Constituents Analyzed by the Suffolk County Public & Environmental Health Laboratory

(Analytes detected appear in boldface type)

Group	Analyte
<u>Carbamate pesticides</u>	
3-Hydroxycarbofuran	Carbofuran
Aldicarb	Methiocarb
Aldicarb sulfone	Methomyl
Aldicarb sulfoxide	Oxamyl
A-Naphthol	Propoxur
Carbaryl	
<u>Herbicide Metabolites</u>	
2,4,5-T	Didealkylatrazine
2,4-D	Imidacloprid
2,4-DB	Malaoxon
2,6-Dichlorobenzamide	MCPA
2-Hydroxyatrazine	MCPP
3,5-Dichlorobenzoic Acid	Metolachlor ESA (CGA-354743)
4-Nitrophenol	Metolachlor Metabolite (CGA-37735)
Acifluorfen	Metolachlor Metabolite (CGA-40172)
Alachlor ESA	Metolachlor Metabolite (CGA-41638)
Alachlor OA	Metolachlor Metabolite (CGA-67125)
Bentazon	Metolachlor OA (CGA-51202)
Chloramben	Pentachlorophenol
Deisopropylatrazine	Picloram
Desethylatrazine	Propamocarb hydrochloride
Dicamba	Silvex (2,4,5-TP)
Dichloroprop	
<u>Chlorinated Pesticides</u>	
4,4 DDD	Dieldrin
4,4 DDE	Endosulfan I
4,4 DDT	Endosulfan II
Alachlor	Endosulfan sulfate
Aldrin	Endrin
Alpha - BHC	Endrin aldehyde
Beta - BHC	Gamma - BHC
Chlordane	Heptachlor
Dacthal	Heptachlor epoxide
Delta - BHC	Methoxychlor

<u>Semi-volatile Organic Compounds (SVOCs)</u>	
Acenaphthene	Diethyltoluamide (DEET)
Acenaphthylene	Dimethyl phthalate
Acetochlor	Dinoseb
Allethrin	Dioctyl phthalate
Anthracene	Disulfoton
Atrazine	Disulfoton sulfone
Azoxystrobin	EPTC
Benfluralin	Ethofumesate
Benzo(a)anthracene	Ethyl parathion
Benzo(b)fluoranthene	Fluoranthene
Benzo(ghi)perylene	Fluorene
Benzo(k)fluoranthene	Gemfibrozil
Benzo-a-pyrene	Hexachlorobenzene
Benzophenone	Hexachlorocyclopentadiene
Benzyl butyl phthalate	Hexachloroethane
bis(2-ethylhexyl) adipate	Ibuprofen
bis(2-ethylhexyl) phthalate	Indeno(1,2,3-cd)pyrene
Bloc	Iodofenphos
Bromacil	Iprodione
Butachlor	Isofenphos
Butylated Hydroxyanisole	Kelthane
Butylated Hydroxytoluene	Malathion
Caffeine	Metalaxyl
Carbamazepine	Methoprene
Carbazole	Methyl parathion
Carisoprodol	Metolachlor
Chlorofenvinphos	Metribuzin
Chlorothalonil	Naled (Dibrom)
Chloroxylenol	Napropamide
Chlorpyrifos	Pendimethalin
Chrysene	Pentachlorobenzene
Cyanazine	Pentachloronitrobenzene
Cyfluthrin	Permethrin
Cypermethrin	Phenanthrene
Deltamethrin	Piperonyl butoxide
Diazinon	Prometon
Dibenzo(a,h)anthracene	Prometryne
Dibutyl phthalate	Propiconazole
Dichlorbenil	Pyrene
Dichlorvos	Resmethrin
Diethyl phthalate	Siduron

<u>Semi-volatile Organic Compounds (SVOCs)</u>	
Simazine	Trichlorfon
Sumithrin	Triclosan
Tebuthiuron	Trifluralin
Terbufos	Vinclozolin
Triadimefon	
<u>Volatile Organic Compounds (VOCs)</u>	
1,1,1,2-Tetrachloroethane	Benzene
1,1,1-Trichloroethane	Bromobenzene
1,1,2,2-Tetrachloroethane	Bromochloromethane
1,1,2-Trichloroethane	Bromodichloromethane
1,1-Dichloroethane	Bromoform
1,1-Dichloroethene	Bromomethane
1,1-Dichloropropene	Carbon disulfide
1,2 dibromoethane	Carbon Tetrachloride
1,2 dibromomethane	Chlorobenzene
1,2,3-Trichlorobenzene	Chlorodibromomethane
1,2,3-Trichloropropane	Chlorodifluoromethane
1,2,4,5-Tetramethylbenzene	Chloroethane
1,2,4-Trichlorobenzene	Chloroform
1,2,4-Trimethylbenzene	Chloromethane
1,2-Dichlorobenzene (o)	cis-1,2-Dichloroethene
1,2-Dichloroethane	cis-1,3-Dichloropropene
1,2-Dichloropropane	Dibromomethane
1,3,5-Trimethylbenzene	Dichlorodifluoromethane
1,3-Dichloropropane	Diethyl ether
1,4-Dichlorobutane	Dimethyldisulfide
1-Bromo-2-chloroethane	d-Limonene
1-Methylethylbenzene	Ethenylbenzene (Styrene)
2,2-Dichloropropane	Ethylbenzene
2,3-Dichloropropene	Ethylmethacrylate
2-Bromo-1-chloropropane	Freon 113
2-Butanone (MEK)	Hexachlorobutadiene
2-Chlorotoluene	Isopropylbenzene
3-Chlorotoluene	Isopropyltoluene (p-cymene)
4-Chlorotoluene	m,p-Dichlorobenzene
Acrylonitrile	Methacrylonitrile
Allyl chloride	Methyl isothiocyanate
Methyl sulfide	tert-Amyl-Methyl-Ether
Methylene Chloride	tert-Butylbenzene
Methylmethacrylate	tert-Butyl-Ethyl-Ether
Methyl-Tertiary-Butyl-Ether (MTBE)	Tetrachloroethene
m-Xylene	Tetrahydrofuran

<u>Volatile Organic Compounds (VOCs)</u>	
Naphthalene	Toluene
n-Butylbenzene	Total Chlorotoluene
n-Propylbenzene	Total Xylene
o-Xylene	trans-1,2-Dichloroethene
p-Diethylbenzene	trans-1,3-Dichloropropene
p-Isopropyltoluene	Trichloroethene
p-Xylene	Trichlorofluoromethane
sec-Butylbenzene	Vinyl Chloride

Appendix II

Laws of Suffolk County, Part II Administrative Code § A8-5. Criteria for County Dredging Projects

- A. A. No proposed county dredging project shall be approved by the Dredging Project Screening Committee nor by the County Legislature unless such project shall be in the public interest.
- B. A dredging project shall be deemed to be in the public interest if it supports, advances or enhances the following types of uses, activities and/or facilities:
 - 1. Publicly owned, leased and/or operated marine facilities, including but not limited to mooring areas, boat basins, marinas, docks and boat ramps. Boat ramps need not consist solely of paved asphalt but may be composed of concrete, treated lumber, gravel or crushed stone extending to the mean low water mark. The parking areas associated with such a facility must accommodate at least six cars with trailers and may be composed of smooth grassed area, crushed stone, pavement or concrete. A public mooring area within an enclosed embayment must have within its proximity a publicly owned parcel of land fronting on the embayment permitting public access in order to qualify as a public purpose.
 - 2. Marine commercial uses, including but not limited to boatyards, ship repair facilities, commercial fishery docks and product transfer sites.
 - 3. Industrial, transportation and utility uses, including but not limited to petroleum product transfer facilities, ferry terminals and power plants.
 - 4. Institutional uses such as education and public safety facilities.
 - 5. Recreational uses, including but not limited to boat livery stations, party boats, charter boats, marinas and yacht clubs open to use by the general public.
 - 6. Reduction of the risk of public health problems based upon a certification by the Suffolk County Department of Health Services that the public health will be protected by dredging for the particular year the channel is proposed to be dredged.
 - 7. Open water shoals outside of navigation channels to improve general navigation.

8. Obtaining fill from navigation channels for the purpose of beach nourishment and shoreline construction.
 9. Mitigating damage or shoaling caused by the County of Suffolk.
 10. Reduction of a navigational hazard caused by shoaling at bay-canal interfaces.
- C. A dredging project shall be deemed to be in the private interest in the following circumstances:
1. It does not provide direct access to or service for any of the uses or facilities mentioned in Subsection B of this section.
 2. It provides service solely and exclusively to shoreline homeowners or a group of homeowners in a civic association, the membership of which is controlled by a residency requirement, regardless of the nature of the water body.
 3. It dredges within privately owned facilities.
 4. It only maintains privately owned boat slips or basins.

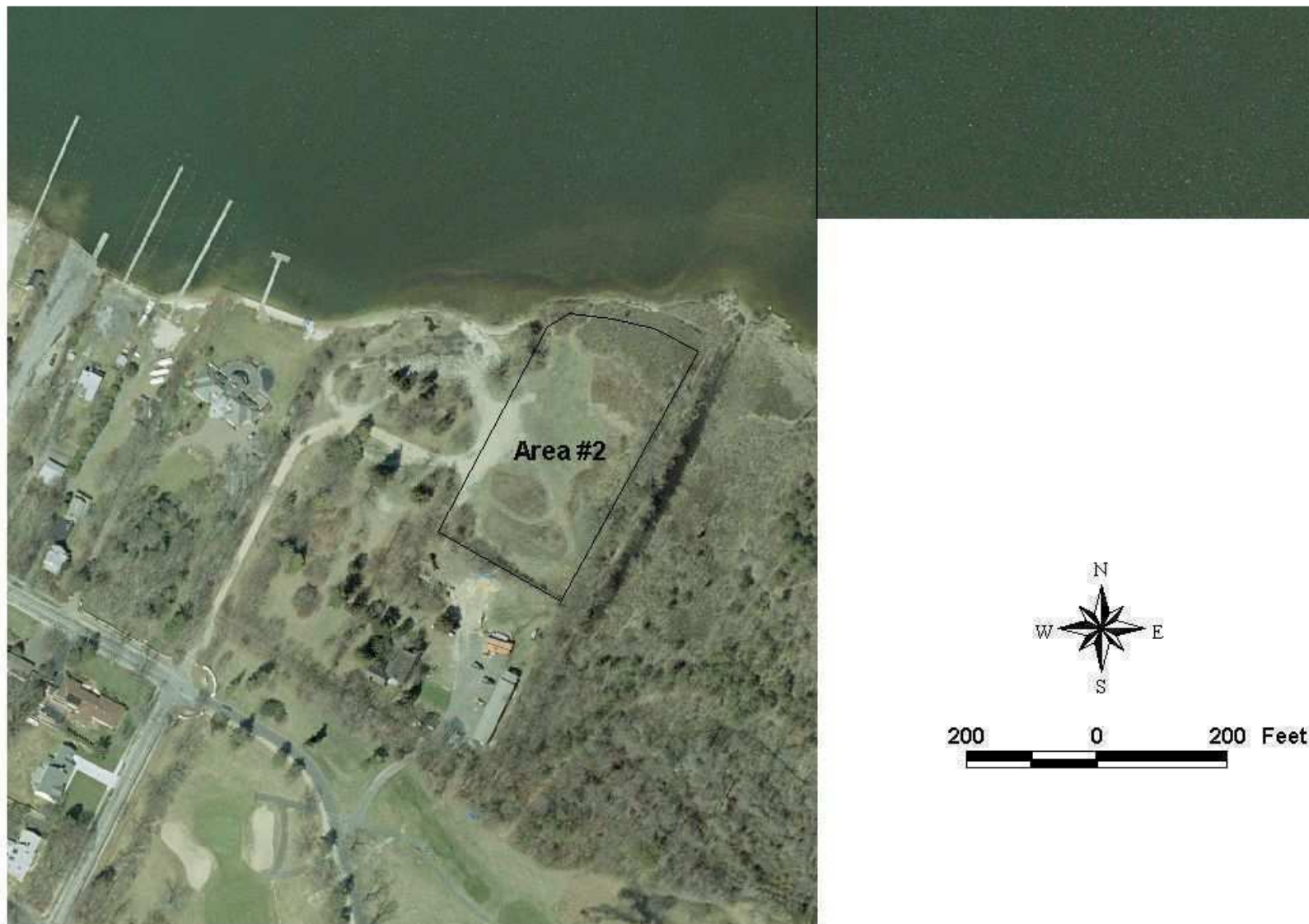
No proposed county dredging project shall be approved by the Dredging Project Screening Committee nor by the County Legislature unless the county shall have first conducted soundings or other reliable and accepted measurements in accordance with normal engineering practices and procedures of the area to be dredged to determine the estimated cost of such proposed work.

Appendix III

Aerial Images of Potential Upland Sites for Spoil Disposal



Area #1 Owner: Town of Islip (drainage reserve area)
Approx. 3 ac. 6,500' pumping distance

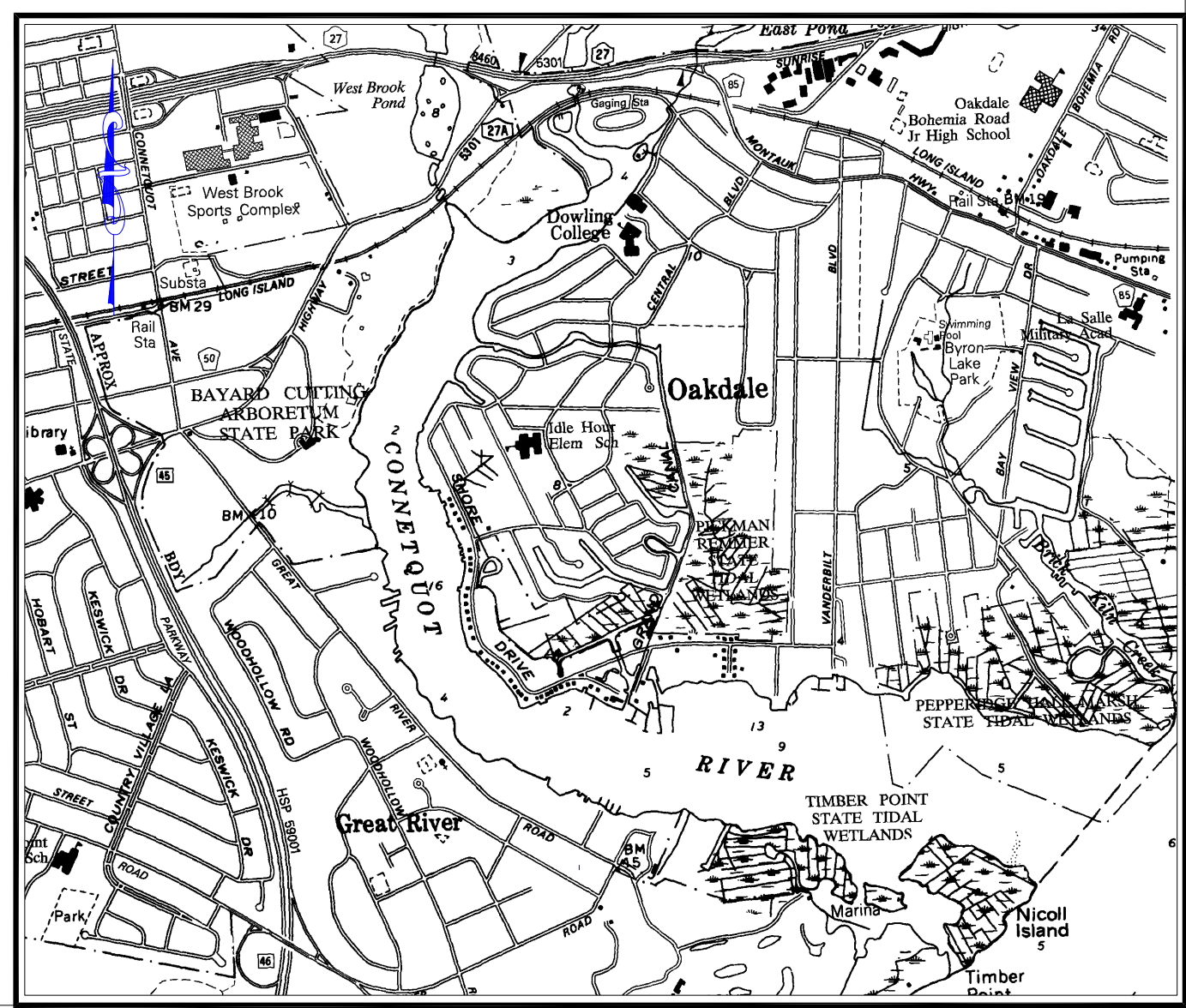


Area #2 Owner: County of Suffolk
Approx. 2 ac. 8,000' pumping distance

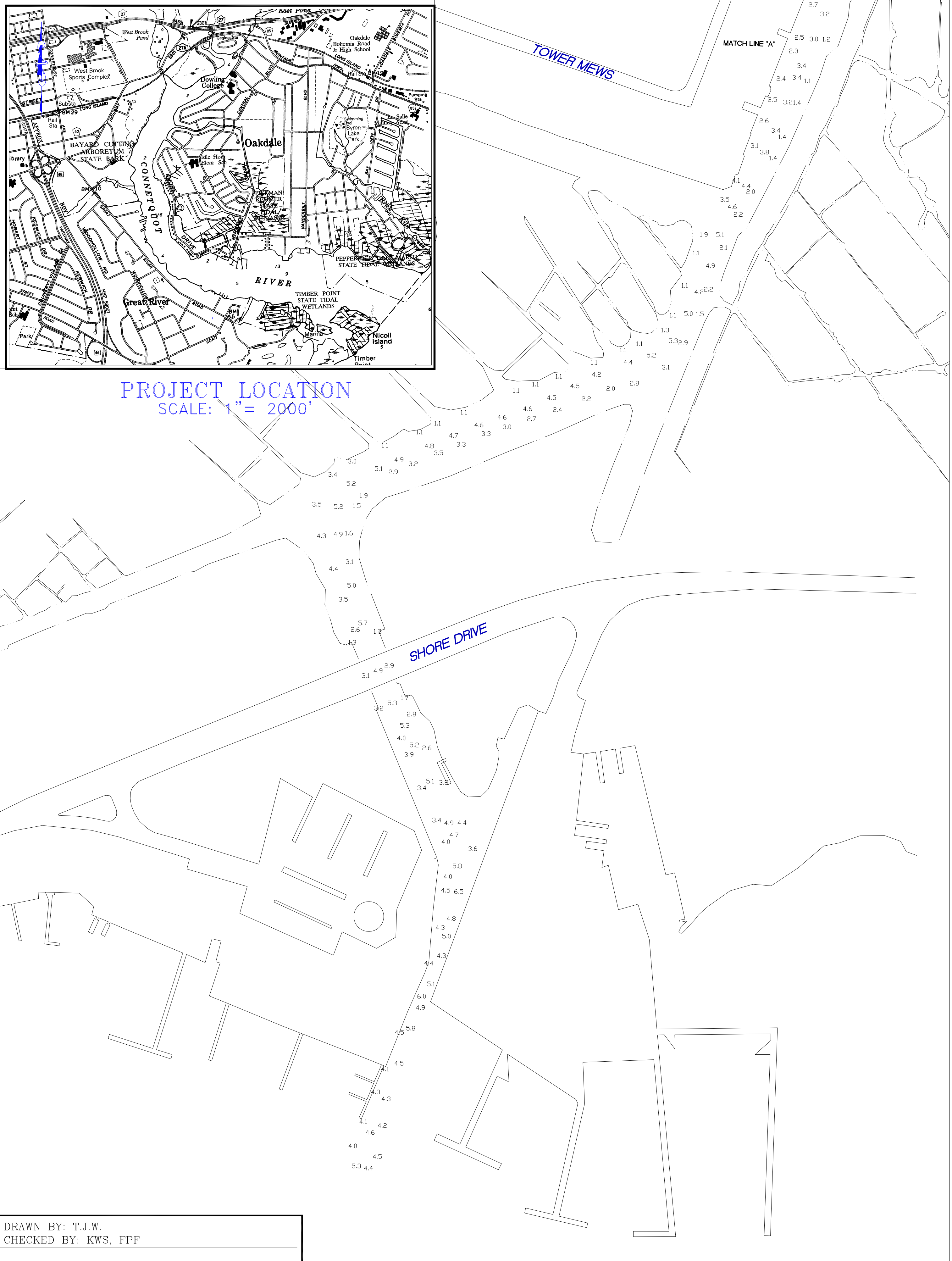


Area #3 Owner: St. John's University
Approx. 1.3 ac. 15,000' pumping distance

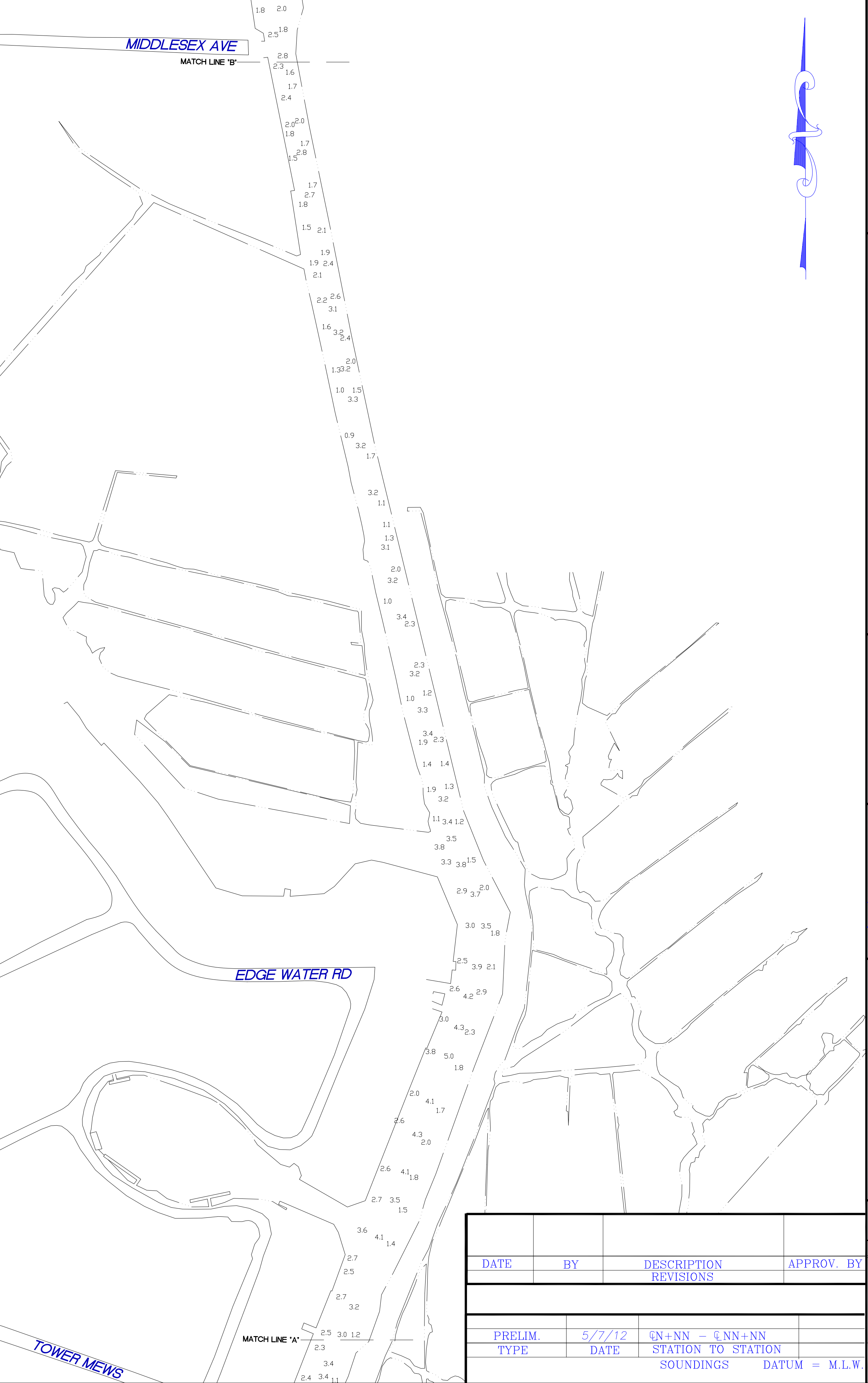
Section III Attachment 3 Grand Canal Preliminary Survey



PROJECT LOCATION
SCALE: 1"= 2000'



DRAWN BY: T.J.W.
CHECKED BY: KWS, FPF



DATE	BY	DESCRIPTION REVISIONS	APPROV. BY
PRELIM. TYPE	5/7/12 DATE	QNN+NN - QNN+NN STATION TO STATION SOUNDINGS	DATUM = M.L.W.

GENERAL NOTES

1. THE SOUNDINGS AND ELEVATIONS SHOWN ON THIS PLAN REPRESENT THE RESULTS OF SURVEYS MADE ON THE DATE SHOWN BELOW AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIME.
2. COORDINATES SHOWN ARE BASED ON THE NAD 83 STATE PLANE COORDINATES, N.Y. LONG ISLAND ZONE.
3. SOUNDINGS ARE EXPRESSED IN FEET AND TENTHS OF A FOOT AND REFER TO THE LOCAL PLANE OF MEAN LOW WATER (M.L.W.) WHICH IS N.NN FEET NN BELOW NN MEAN SEA LEVEL (M.S.L.)
4. THE RANGE IS N.NN FEET.
5. PLAN DETAIL TRACED FROM 2010 AERIAL

COORDINATES

Q Sta. 0+00
Q Sta.
Q Sta.
Q Sta.
Q Sta.

CHANNEL

Left Toe
Q Sta. 0+00
Q Sta.
Q Sta.
Q Sta.
Q Sta.

Right Toe
Q Sta. 0+00
Q Sta.
Q Sta.
Q Sta.
Q Sta.

BENCH MARKS

BM1: N/C 3' +/- North from South end of bulkhead on West side of Grand Canal, southside of Shore Drive bridge. 3.64' above M.L.W.

BM2: N/C on dock @ East end of Middlesex Avenue. 3.37' above M.L.W.

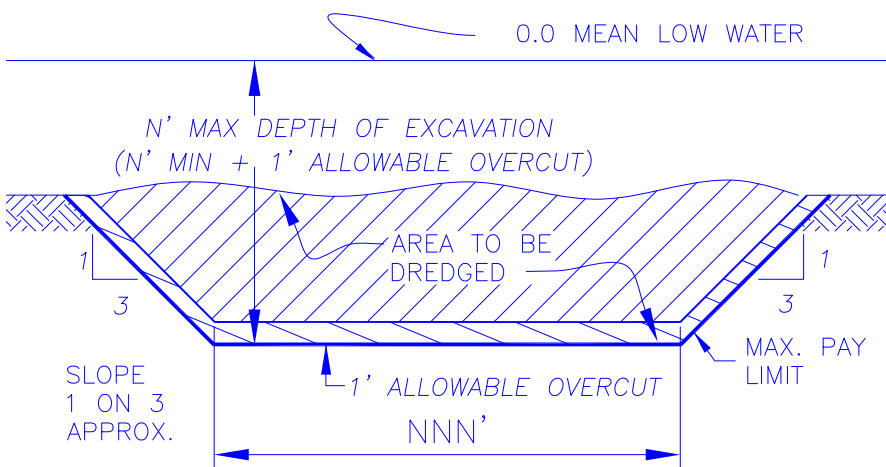
BM3: N/C on bulkhead on North side of Grand Canal, 10' +/- East of pedestrian bridge @ South end of Miami Road. 5.11' above M.L.W.

TABLE OF EARTHWORK

(APPROX.)

SUBJECT TO PRE-CONSTRUCTION
CROSS-SECTION VERIFICATION

STATION TO STATION	CUBIC YARDS MATERIAL	
	NET	ROUNDED



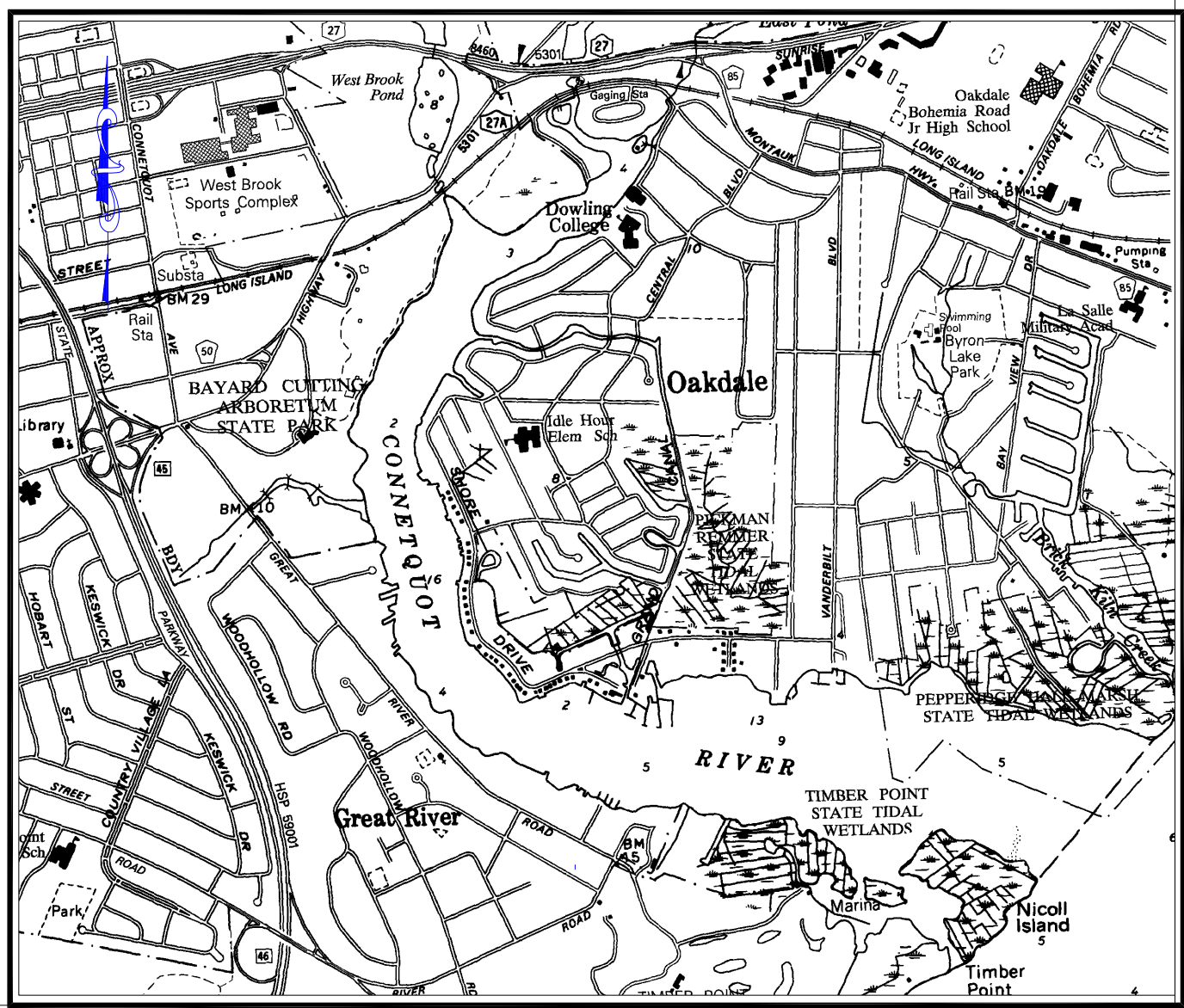
TYPICAL CHANNEL SECTION
N.T.S.

COUNTY OF SUFFOLK
DEPARTMENT OF PUBLIC WORKS
YAPHANK, NEW YORK
GILBERT ANDERSON, P.E. - COMMISSIONER

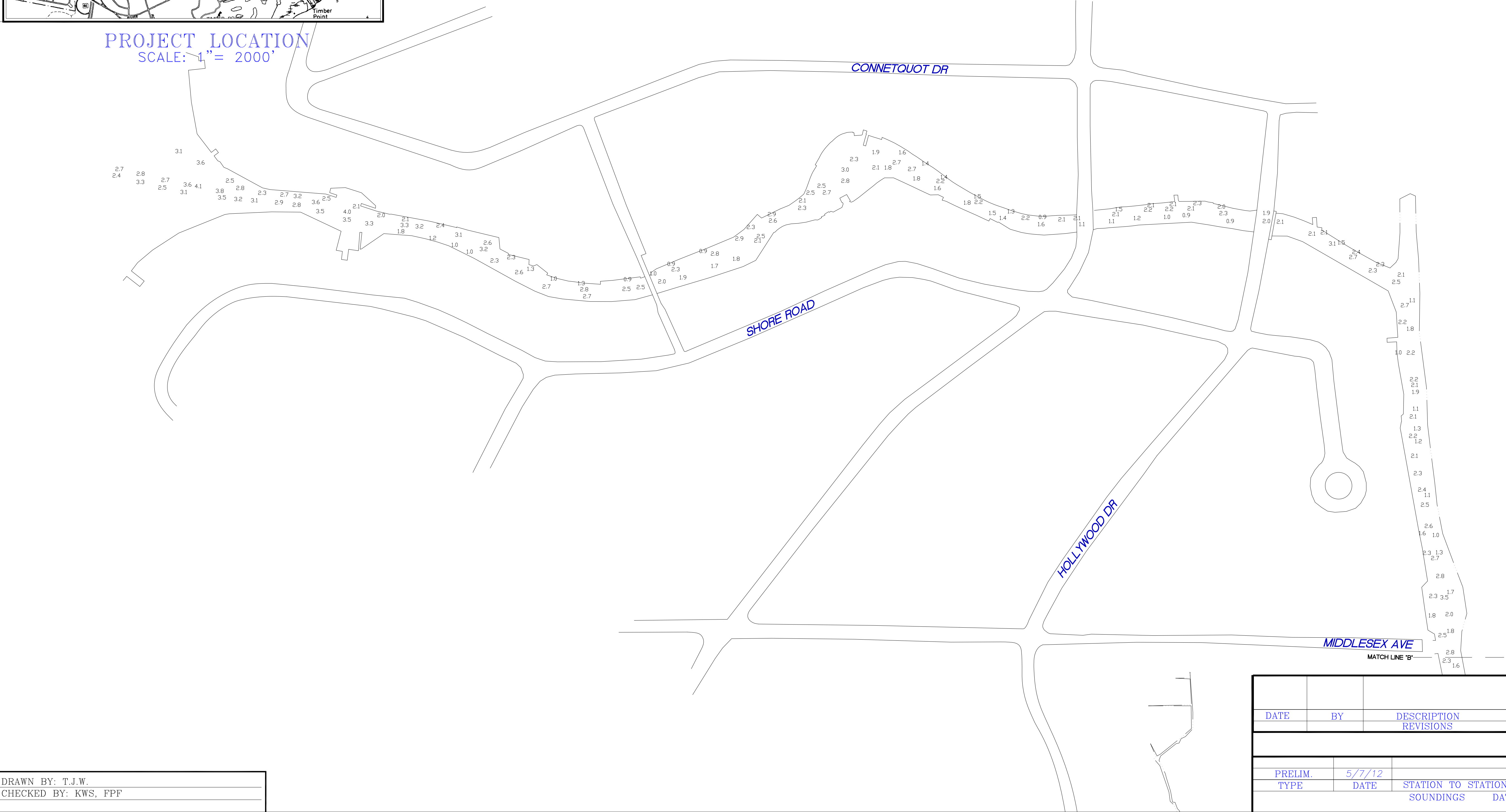
MAINTENANCE DREDGING AT
GRAND CANAL

TOWN OF ISLIP

PROJECT NO. 5200
SCALE 1"=100'
SHEET 1 OF 2



PROJECT LOCATION
SCALE: 1"= 2000'



DRAWN BY: T.J.W.
CHECKED BY: KWS, FPF

GENERAL NOTES

1. THE SOUNDINGS AND ELEVATIONS SHOWN ON THIS PLAN REPRESENT THE RESULTS OF SURVEYS MADE ON THE DATE SHOWN BELOW AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIME.
2. COORDINATES SHOWN ARE BASED ON THE NAD 83 STATE PLANE COORDINATES, N.Y. LONG ISLAND ZONE.
3. SOUNDINGS ARE EXPRESSED IN FEET AND TENTHS OF A FOOT AND REFER TO THE LOCAL PLANE OF MEAN LOW WATER (M.L.W.) WHICH IS NNN FEET BELOW MEAN SEA LEVEL (M.S.L.)
4. THE RANGE IS NNN FEET.
5. PLAN DETAIL TRACED FROM 2010 AERIAL

COORDINATES

Q Sta. 0+00
Q Sta.
Q Sta.
Q Sta.
Q Sta.

CHANNEL

Left Toe
Q Sta. 0+00
Q Sta.
Q Sta.
Q Sta.
Q Sta.

Right Toe
Q Sta. 0+00
Q Sta.
Q Sta.
Q Sta.
Q Sta.

BENCH MARKS

BM1: N/C 3' +/- North from South end of bulkhead on West side of Grand Canal, southside of Shore Drive bridge. 3.64' above M.L.W.

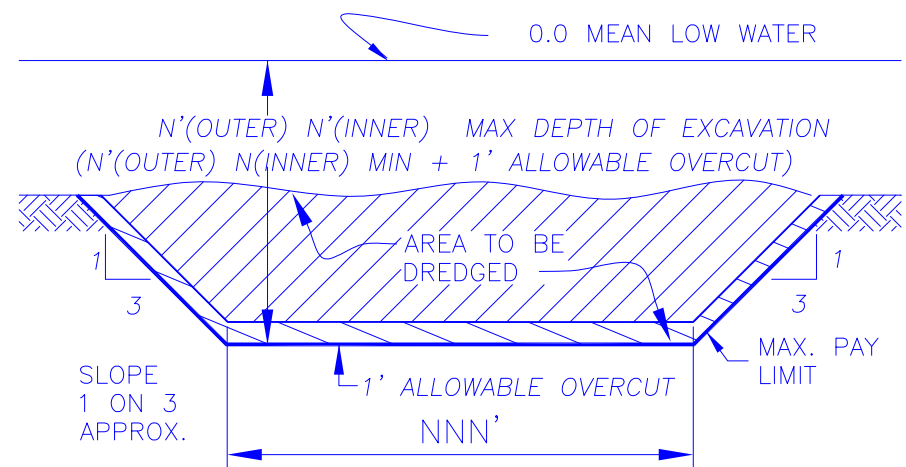
BM2: N/C on dock @ East end of Middlesex Avenue. 3.37' above M.L.W.

BM3: N/C on bulkhead on North side of Grand Canal, 10' +/- East of pedestrian bridge @ South end of Miami Road. 5.11' above M.L.W.

TABLE OF EARTHWORK

(APPROX.)

SUBJECT TO PRE-CONSTRUCTION CROSS-SECTION VERIFICATION		
STATION TO STATION	CUBIC YARDS MATERIAL	
	NET	ROUNDED



TYPICAL CHANNEL SECTION
N.T.S.

COUNTY OF SUFFOLK
DEPARTMENT OF PUBLIC WORKS
YAPHANK, NEW YORK
GILBERT ANDERSON, P.E. — COMMISSIONER

MAINTENANCE DREDGING AT
GRAND CANAL

TOWN OF ISLIP

PROJECT NO. 5200
SCALE 1"=100'
SHEET 2 OF 2

Grand Canal Oakdale, Town of Islip



- New York State
- Suffolk County
- S.C. underwater land
- Town of Islip
- Dowling College
- SCRPTM Base Tis02_83.shp



© 2001 Aerial Photography New York State Office for Technology.
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Real Property Taxmap parcel linework used with permission of Suffolk County Real Property Tax Service Agency (R.P.T.S.A.). This rendering is a DRAFT MAP in that it is the data displayed is an interagency or intra agency work* produced for the purpose of identifying and correcting data. It is not a final agency determination. It is not statistical or factual compilation of data. In some cases correct data has been left out and questionable or inaccurate data has been exaggerated to help identify errors. In short this is a DRAFT MAP produced in an effort to aid in the correction of data and is not held out as being complete or accurate in any way.
*excepted from (FOIL) the provisions of the Freedom of Information Law [Public Offices Law Article 6 Section 84-90] by section 87.2.g

Map prepared September 18, 2003

Section III, Attachment 5 Generic Sampling Plan

FACILITY/PROJECT NAME NYSDEC APPLICATION # (if assigned) Proposed Sediment Sampling Plan

Prepared by: Name

Date: Date

I. Project Background

The project site is located in [waterbody] at [location (facility, town, county)]. The proposed dredge area is approximately [length] by [width, (square footage)]. Dredging will be conducted by [method of dredging] to a depth of [proposed depth] (MLW). The material will be dewatered [location for dewatering] and then [trucked/barged] to [location material will be placed] for final placement. The estimated volume of material to be removed is [volume] yd³. Dredging must be done [provide reason for dredging].

Site Description: [provide a description of the site, including the current use; existing habitats and resources; rare, threatened or endangered species or species of special concern. Identify specially protected or regulated habitats or resources; area designations (such as Significant Coastal Fish and Wildlife Habitat, National Estuaries, Essential Fish Habitat, etc.); document presence of eel grass or important wintering/spawning/nursery/foraging habitats that may be impacted].

Site History: [provide history of the site, prior uses, known spills or activities that may indicate a potential presence of specific contaminants (e.g., boat maintenance, prior industrial uses) known point source locations (e.g., road runoff outfalls), major fires at the facility or in the surrounding area, etc]. The site history may require modification of the list of contaminants provided in Table 2 if additional potential contaminant sources are identified. Similarly, the case for removing a contaminant such as dioxin from the required testing parameters will need to be supported by the information provided in this section.

II. Sampling Methodology

Sediment samples will be collected by [sampler: name, address, telephone number of entity that will conduct the sampling]. The analytical laboratory to be used for the chemical analysis will be [name, address, telephone number of laboratory performing the testing and analysis]. This laboratory is approved and certified by the New York State Department of Health.

Sediment cores shall be collected from [number of locations. Note: MHP typically requires a minimum of three samples per project] sample locations identified on Figure 1

(Proposed Sample Locations) [provide a scaled plan, survey, or aerial of the proposed dredge area with sample locations and numbers clearly identified. Surveyed existing depths, referenced to MLW, should also be provided on this plan.]. These sample locations were selected [explain how the number and location of samples were selected].

Core samples shall be collected using a vibracore system or similar sediment coring device to a minimum depth of one foot below the proposed dredging depth as depicted in Figure 2 (Sampling Depth Diagram). [provide a cross section of sample cores showing existing and proposed depths]. Sample collection will follow established protocols and procedures, consistent with the sediment sampling guidance provided in Appendix C of NYSDEC TOGS 5.1.9 (In-Water and Riparian Management of Sediment and Dredge Material).

A visual inspection of the sediment cores will be performed and documented. Individual horizons or strata within each core will be measured along with the overall core length. These measurements and all significant features will be documented in a field notebook in accordance with Section III a. of this sampling plan. Using a permanent marker, the date, time, and sample location will also be recorded on the sediment core tube liner in accordance with Section III b. of this plan. Each core sample will be divided into segments representing (a) the surface to proposed dredging depth, (b) 0" to 6" below the proposed dredging depth (the post-dredging bottom to be exposed) and (c) 6" to 12" below the proposed dredging depth. Color photographs shall be taken of each core sample and each segment of each core sample.

Each core segment will be analyzed separately. It should be noted that, if the sample segments are distinctly layered rather than fairly uniform, then the layers will also be sampled separately. If the sediments within a segment appear to be fairly uniform, then the material will be composited by placing the material in a clean tub and mixing it with a clean spatula to a uniform consistency. Care will be taken to include material from the entire thickness of each core segment when creating a composite. Generally, sediment to be analyzed for trace metals should not come into contact with metals and sediment to be analyzed for organic compounds should not come into contact with plastics. In addition, samples collected for VOC analysis should be grab samples, selected before the sediments within each segment are mixed to create the segment composite. The layer showing obvious signs of impact (i.e. odor, color, etc.) should be selected. If the segment is fairly uniform, any portion of that segment may be selected for VOC analysis.

Sample containers will be supplied by the testing laboratory. The containers will be laboratory cleaned, pre-preserved and sealed with the appropriate documentation. All sample containers will be labeled using a permanent marker to indicate the date, time, sample location, and sample identification number. This information will also be recorded in a field log book and on a chain of custody form that will follow the samples. Once each sample container is filled, capped and labeled, it will be appropriately packaged to prevent breakage and placed in an ice-filled insulated cooler, maintained at a temperature of 4° C, until the samples are delivered to the laboratory within 24 hours of collection.

Sample numbering shall be formatted as follows:

Each sample segment will be given a sample test number according to the following format **FC / LLL / CS/SS-EE / DDMMYYYY**, where:

FC = Facility Code (abbreviation identifying the facility)

LLL = Location according to label on Figure 1 – Proposed Sample Locations (e.g., Sample #1, Sample #2, Sample #3, etc.)

CS = Core Segment: (A) material to be dredged, (B) 0” to 6” of post-dredging bottom, (C) 6” to 12” below post-dredging bottom

SS – EE = sample depth interval (in inches) from which sample was collected (SS = start depth, EE = end depth)

DDMMYYYY = day, month and year of the sample collection

A minimum of [number of samples] samples will be examined and identified according to the following format:

Sample [FC] 1A - Location 1, surface to proposed dredging depth

Sample [FC] 1B – Location 1, 0”-6” below post-dredge bottom

Sample [FC] 1C – Location 1, 6”-12” below post-dredge bottom

Sample [FC] 2A - Location 2, surface to proposed dredging depth

Sample [FC] 2B - Location 2, 0”-6” below post-dredge bottom

Sample [FC] 2C - Location 2, 6-12” below post-dredge bottom

Sample [FC] 3A - Location 3, surface to proposed dredging depth

Sample [FC] 3B - Location 3, 0”-6” below post-dredge bottom

Sample [FC] 3C - Location 3, 6”-12” below post-dredge bottom

Proposed Cost Reduction Strategy: [This section should be included for any project proposing to manage the costs of analyses through a reduction in the number of samples that will actually be analyzed. The strategy should yield a reasonably accurate representation of the spatial and vertical contaminant distribution in the area to be dredged and take into account historical and current pollutant inputs. Cost reduction strategies do not apply to grain size analysis or TOC analysis. These analyses should be conducted on each individual core sample segment. Cost reduction strategies that may be applicable to further contaminant analyses may include: 1) collecting the required number of cores, then selecting those with the highest organic carbon levels and closest to known/potential contaminant sources for analysis; or 2) collecting the required number of cores and compositing those with similar characteristics (e.g., grain size, TOC, color, etc.) for analysis. If strategy 2 is selected, a record of the cores that were composited, including their percentages of total organic carbon and USCS descriptions, as well as the post-compositing analytical results, should be submitted to the Divisions. Cost reduction strategies should not yield less than the minimum one composite sample per 3,000 yd³ of material to be dredged (S&HM) or three samples per project (MHP). All samples, including composited samples, must be analyzed and appropriately representative of the material to be dredged (Segment A) and the substrate to

be exposed (Segment B). These segments shall not be composited together for analysis. If a cost reduction strategy is not proposed for sample analysis, this section may be omitted from the proposed plan]

III. Quality Assurance and Quality Control

Field and laboratory QA/QC procedures will be consistent with the requirements outlined in Appendix C of the NYSDEC In-Water and Riparian Management of Sediment and Dredged Material (TOGS 5.1.9). Testing for samples will be in accordance with the following procedures and methods:

<u>Contaminants</u>	<u>United States Environmental Protection Agency (USEPA) SW-846 Method</u>
Pesticides (Including Mirex)	8081 A
Herbicide (Silvex)	8151
Total Aroclors of PCB's	8082
Volatile Organics (VOC's)	8260 B
Semi-Volatile Organics (SVOC's)	8270 C
Metals	6010 B
Hexavalent Chromium	7196A
Cyanide	9012A
Total Organic Carbon (TOC)	9060 A
Dioxin	1613B

The laboratory will provide a category B data package for Department review in PDF format on a CD.

a. Field Documentation Procedures

The following information shall be collected and documented on an appropriate data sheet and submitted with the test results:

- Field Conditions
- Weather Conditions
- Pertinent observations that may bear influence on the analyses of the samples
- Name of sampler
- Sample designation
- Collection method
- Detailed description of soil (estimation of soil composition)

The sampler shall document each sample taken with photographs and take other photographs to document the surrounding conditions, sampling procedures, etc.

b. Custody Procedures (Chain-of-Custody)

The samples shall remain in the custody of the sampler from the time the samples are taken through the delivery to the testing laboratory. Custody will be transferred in compliance with all applicable standards. Care will be taken to ensure that:

- All samples are uniquely identified
- Vital sample characteristics are preserved
- Correct samples are tested and traceable to their source
- Samples are protected from loss and / or damage
- Sample information is recorded on a sample label that corresponds to a chain-of-custody form (see attached)

A Chain-of-Custody form (copy attached) shall be completed for each sample in order to provide an accurate record that traces the possession and handling of each sample from the time of collection through performance of the analyses. The form shall contain the following information, at a minimum:

- Project / Site Name
- Unique Sample Number
- Date of Collection
- Time of Collection
- Type of preservation (if applicable)
- Sampler's name

IV. Analyses to be Performed

The following analyses will be performed on sample segments A (material to be dredged) and B (0" to 6" below the post-dredging bottom) from each sample location before the maximum allowable holding time for testing is exceeded. Core segment C from each sample location shall be retained and preserved for further testing in the event that test results indicate Class C materials are present and not fully removed by the proposed dredging or that significantly higher levels of contaminants are present in Segment B relative to Segment A. Significantly higher levels are indicated when the level of a given contaminant increases to or nearly to the point where the classification of the material would be altered for that contaminant (e.g., Class B to Class C).

a. Grain Size Distribution

Grain size distribution of each sample segment will be determined by a sieve analysis performed in accordance with [\[select method that will be used: ASTM C136,](#)

Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates or ASTM D422, test method that covers the quantitative determination of the distribution of particle sizes in soils].

b. Total Organic Carbon

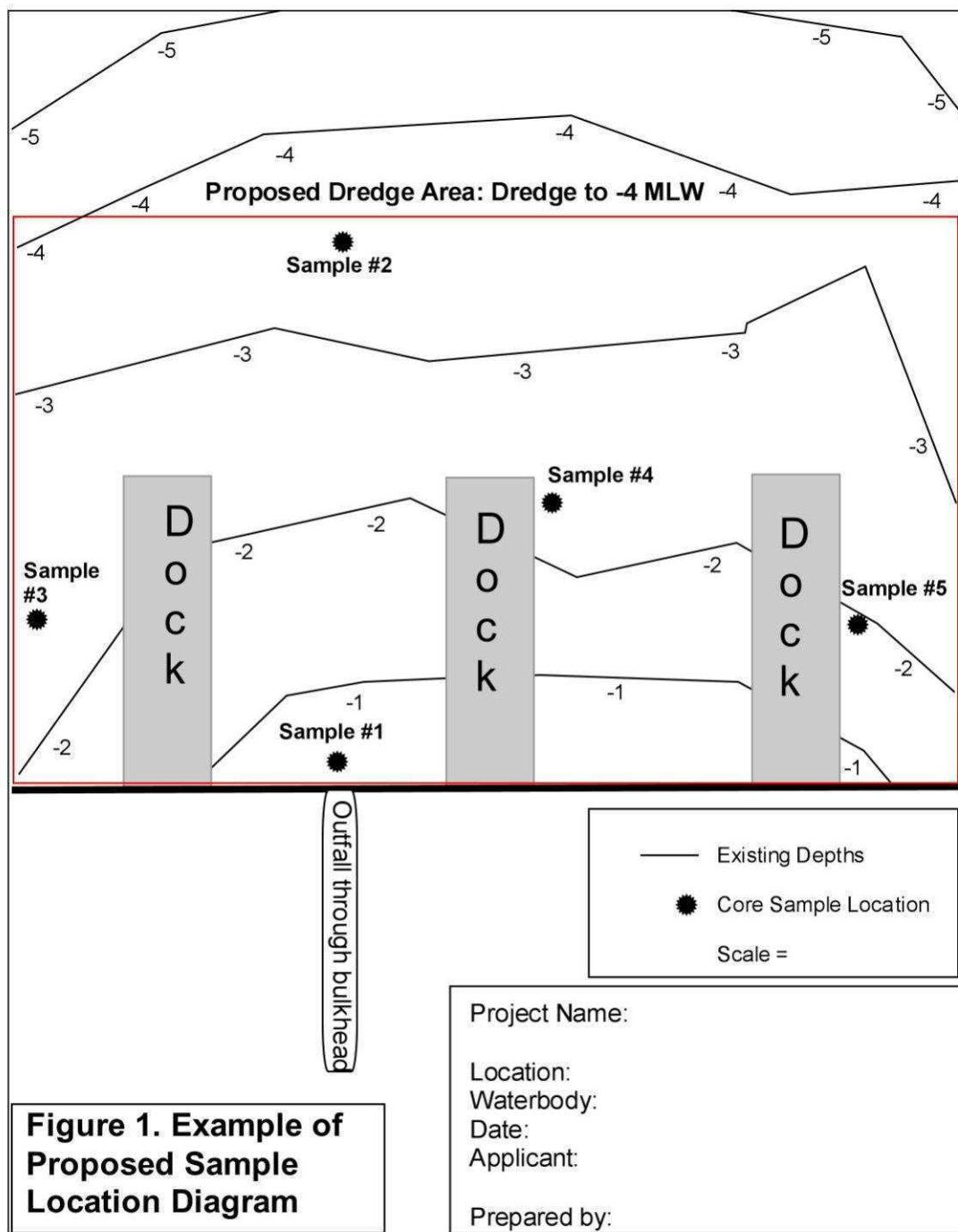
The Total Organic Carbon (TOC) of each sample segment will be determined in accordance with EPA Method 9060A.

c. Testing Sequence

If the grain size and TOC analyses determine that the composition of any sample is at least 90% sand or larger material (less than 10% of the material passes through the No. 200 sieve) and less than 0.5% TOC, no further testing of that sample will be required by the NYSDEC. All samples that fall below this limit shall be tested for contaminant parameters identified in Table 2 in accordance with the testing methods provided. Results will be calculated and summed as indicated and all data will be reported in the units listed.

Segment A and segment B from each sample location containing more than 10% of material passing through the No. 200 sieve or greater than 0.5% TOC will be analyzed for all parameters identified in Table 2. If the analysis of segments indicates that the level of any contaminant is significantly higher in Segment B relative to Segment A or that Class C levels of contaminants are present and will not be removed by the proposed dredging, contaminant analysis will also be conducted on Segment C (6" to 12" below the proposed dredging depth) for all parameters identified in Table 2 to determine if alteration of the dredging depth will mitigate the problem.

If the results of the sediment analyses determine that there is risk of significantly higher contaminant levels becoming exposed in the post-dredging bottom or that existing Class C levels are not removed by the proposed dredging depth, the applicant will provide a proposed plan to mitigate the problem of elevated contaminant levels. The mitigation plan will be submitted to the NYSDEC for review and comment along with the results of the sediment analyses.



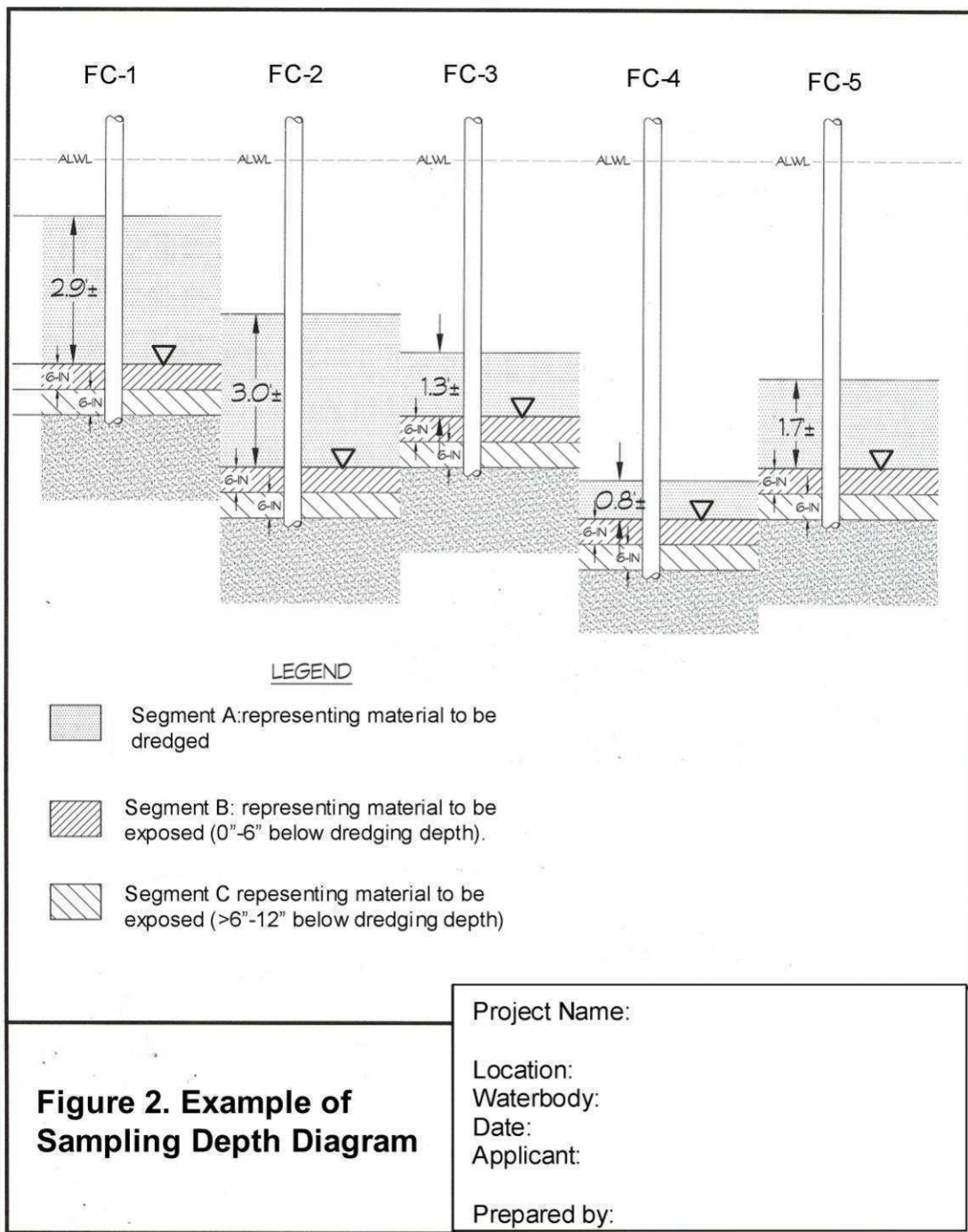


Table 2. NYSDEC Contaminant Parameters, Methods and Thresholds

Physical Properties

Grain Size	ASTM C136 or D422
Total Organic Carbon	EPA 9060A

NYSDEC Technical Reviewing Unit	Parameter Sediment/Soil	Suggested EPA Analytical Method CLP/RCRA	CAS Number	S&HM Unrestricted Use (ppm)	MHP Class B Threshold ¹ (mg/kg)	MHP Class C Threshold (mg/kg)
Metals						
MHP, S&HM	Arsenic	EPA 6010B	7440-38-2	13 ^c	14 (8.2)	53
S&HM	Barium	EPA 6010B	7440-39-3	350 ^c		
S&HM	Beryllium	EPA 6010B	7440-41-7	7.2		
MHP, S&HM	Cadmium	EPA 6010B	7440-43-9	2.5 ^c	1.2	9.5
MHP	Chromium	EPA 6010B			26 (81)	110 (370)
S&HM	Chromium, hexavalent ^c	EPA 7196A	18540-29-9	1 ^b		
S&HM	Chromium, trivalent ^c	EPA 6010B	16065-83-1	30 ^c		
MHP, S&HM	Copper	EPA 6010B	7440-50-8	50	33	207 (270)
S&HM	Total Cyanide ^{e,f}	EPA 9012A		27		
MHP, S&HM	Lead	EPA 6010B	7439-92-1	63 ^c	33(47)	166(218)
S&HM	Manganese	EPA 6010B	7439-96-5	1600 ^c	460	1100
MHP, S&HM	Mercury	EPA 6010B, 7470		0.18 ^c	0.17	1.6 (1.0)
MHP, S&HM	Nickel	EPA 6010B	7440-02-0	30	16 (21)	50 (52)
S&HM	Selenium	EPA 6010B	7782-49-2	3.9 ^c		
MHP, S&HM	Silver	EPA 6010B	7440-22-4	2	1.0	2.2 (3.7)
MHP, S&HM	Zinc	EPA 6010B	7440-66-6	109 ^c	120 (150)	270 (410)
Pesticides						
S&HM	2,4,5 – TP Acid (Silvex) ^f	EPA 8151	93-72-1	3.8		

NYSDEC Technical Reviewing Unit	Parameter Sediment/Soil	Suggested EPA Analytical Method CLP/RCRA	CAS Number	S&HM Unrestricted Use (ppm)	MHP Class B Threshold ¹ (mg/kg)	MHP Class C Threshold (mg/kg)
S&HM	4,4'- DDE	EPA 8081A	72-55-9	0.0033 ^b		
S&HM	4,4' – DDT	EPA 8081A	50-29-3	0.0033 ^b		
S&HM	4,4' - DDD	EPA 8081A	72-54-8	0.0033 ^b		
MHP	Sum of DDT+DDE+DDD	EPA 8081A			0.003	0.03
S&HM	Aldrin	EPA 8081A	309-00-2	0.005 ^c		
S&HM	Alpha - BHC	EPA 8081A	319-84-6	0.02		
S&HM	Beta – BHC	EPA 8081A	319-85-7	0.036		
S&HM	Delta – BHC ^g	EPA 8081A	319-86-8	0.04		
S&HM	Chlordane (alpha)	EPA 8081A	5103-71-9	0.094		
MHP	Chlordane	EPA 8081A			0.003	0.036
S&HM	dibenzofuran ^f	EPA 8270	132-64-9	7		
MHP, S&HM	Dieldrin	EPA 8081A	60-57-1	0.005 ^c	0.11	0.48
S&HM	Endosulfan I ^{d,f}	EPA 8081A	959-98-8	2.4		
S&HM	Endosulfan II ^{d, f}	EPA 8081A	33213-65-9	2.4		
S&HM	Endosulfan sulfate ^{d,f}	EPA 8081A	1031-07-8	2.4		
S&HM	Endrin	EPA 8081A	72-20-8	0.014		
S&HM	Heptachlor	EPA 8081A	76-44-8	0.042		
S&HM	Lindane	EPA 8081A	58-89-9	0.1		
MHP	Mirex	EPA 8081A			0.0014	0.014
PCBs						
MHP, S&HM	PCBs (sum of aroclor)	EPA 8082	1336-36-3	0.1	0.1	1
Semi-Volatile Organics						
MHP	2-chloronaphthalene	EPA 8270	91-58-7			
MHP	2-methylnaphthalene	EPA 8270	91-5706			
MHP, S&HM	Acenaphthene	EPA 8270	83-32-9	20	0.016	0.5
MHP, S&HM	Acenaphthylene ^f	EPA 8270	208-96-8	100 ^a	0.044	0.64
MHP, S&HM	Anthracene ^f	EPA 8270	120-12-7	100 ^a	0.085	0.11
MHP, S&HM	Benz(a)anthracene ^f	EPA 8270	56-55-3	1 ^c	0.261	1.6
MHP, S&HM	Benzo(a)pyrene	EPA 8270	50-32-8	1 ^c	0.43	1.6
MHP, S&HM	Benzo(b)fluoranthene ^f	EPA 8270	205-99-2	1 ^c		

NYSDEC Technical Reviewing Unit	Parameter Sediment/Soil	Suggested EPA Analytical Method CLP/RCRA	CAS Number	S&HM Unrestricted Use (ppm)	MHP Class B Threshold ¹ (mg/kg)	MHP Class C Threshold (mg/kg)
MHP, S&HM	Benzo(g,h,i)perylene ^f	EPA 8270	191-24-2	100		
MHP, S&HM	Benzo(k)fluoranthene ^f	EPA 8270	207-08-9	0.8 ^c		
MHP, S&HM	Chrysene ^f	EPA 8270	218-01-9	1 ^c	0.384	2.8
MHP, S&HM	Dibenz(a,h)anthracene ^f	EPA 8270	53-70-3	0.33 ^b	0.063	0.26
MHP, S&HM	Fluoranthene ^f	EPA 8270	206-44-0	100 ^a	0.6	5.1
MHP, S&HM	Fluorene	EPA 8270	86-73-7	30	0.019	0.54
MHP, S&HM	Indeno(1,2,3-cd)pyrene ^f	EPA 8270	193-39-5	0.5 ^c		
S&HM	m-Cresol ^f	EPA 8270	108-39-4	0.33 ^b		
MHP, S&HM	Naphthalene ^f	EPA 8270	91-20-3	12	0.16	2.1
S&HM	o-Cresol ^f	EPA 8270	95-48-7	0.33 ^b		
S&HM	p-Cresol ^f	EPA 8270	106-44-5	0.33 ^b		
S&HM	Pentachlorophenol	EPA 8270	87-86-5	0.8 ^b		
MHP, S&HM	Phenanthrene ^f	EPA 8270	85-01-8	100	0.24	1.5
S&HM	Phenol	EPA 8270	108-95-2	0.33 ^b		
MHP, S&HM	Pyrene ^f	EPA 8270	129-00-0	100	0.665	2.6
MHP	Total PAH ²	EPA 8270			0.33	4
Volatile Organic Compounds						
S&HM	1,1,1 - trichloroethane ^f	EPA 8260B	71-55-6	0.68		
S&HM	1,1 - Dichloroethane ^f	EPA 8260B	75-34-3	0.27		
S&HM	1,1 - Dichloroethene ^f	EPA 8260B	75-35-4	0.33		
S&HM	1,2 - Dichlorobenzene ^f	EPA 8260B	95-50-1	1.1		
S&HM	1,2 - Dichloroethane	EPA 8260B	107-06-2	0.02 ^c		
S&HM	cis 1,2 - Dichloroethene ^f	EPA 8260B	156-59-2	0.25		
S&HM	trans 1,2 - Dichloroethene ^f	EPA 8260B	156-60-5	0.19		
S&HM	1,3 - Dichlorobenzene ^f	EPA 8260B	541-73-1	2.4		
S&HM	1,4 - Dichlorobenzene	EPA 8260B	106-46-7	1.8		
S&HM	1,4 – Dioxane	EPA 8260B	123-91-1	0.1 ^b		
S&HM	Acetone	EPA 8260B	67-64-1	0.05		
MHP, S&HM	Benzene	EPA 8260B	71-43-2	0.06	0.59	2.16
S&HM	n-Butylbenzene ^f	EPA 8260B	104-51-8	12		
S&HM	Carbon tetrachloride ^f	EPA 8260B	56-23-5	0.76		
S&HM	Chlorobenzene	EPA 8260B	108-90-7	1.1		
S&HM	Chloroform	EPA 8260B	67-66-3	0.37		

NYSDEC Technical Reviewing Unit	Parameter Sediment/Soil	Suggested EPA Analytical Method CLP/RCRA	CAS Number	S&HM Unrestricted Use (ppm)	MHP Class B Threshold ¹ (mg/kg)	MHP Class C Threshold (mg/kg)
S&HM	Ethylbenzene ^f	EPA 8260B	100-41-4	1		
S&HM	Hexachlorobenzene ^f	EPA 8260B	118-74-1	0.33 ^b		
S&HM	Methyl ethyl ketone	EPA 8260B	78-93-3	0.12		
S&HM	Methyl tert-butyl ether ^f	EPA 8260B	1634-04-4	0.93		
S&HM	Methylene chloride	EPA 8260B	75-09-2	0.05		
S&HM	n-Propylbenzene ^f	EPA 8260B	103-65-1	3.9		
S&HM	sec-Butylbenzene ^f	EPA 8260B	135-98-8	11		
S&HM	tert-Butylbenzene ^f	EPA 8260B	98-06-6	5.9		
S&HM	Tetrachloroethene	EPA 8260B	127-18-4	1.3		
S&HM	Toluene	EPA 8260B	108-88-3	0.7		
S&HM	Trichloroethene	EPA 8260B	79-01-6	0.47		
S&HM	1,2,4-Trimethylbenzene ^f	EPA 8260B	95-63-6	3.6		
S&HM	1,3,5- trimethylbenzene ^f	EPA 8260B	108-67-8	8.4		
S&HM	Vinyl chloride ^f	EPA 8260B	75-01-4	0.02		
S&HM	Xylene (mixed)	EPA 8260B	1330-20-7	0.26		
MHP	Total BTEX ³	EPA 8260B			0.96	5.9
	Dioxin					
MHP	2,3,7,8-TCDD ⁴ (Toxic Equivalency Total)	EPA 1613B			0.0000045	0.00005

¹ Threshold values lower than the Minimum Detection Limit are superseded by the Minimum Detection Limit.

² Total PAHs – sum the concentrations of the 18 semi-volatile analytes identified as MHP parameters

³ Total BTEX – The sum of benzene, toluene and xylene concentrations

⁴ TEQ calculation as per the NATO – 1988 method. For more information see TEQ Calculation for Dioxin/Furan below.

^a The Soil Cleanup Objectives (SCOs) for unrestricted use were capped at a maximum value of 100 ppm. See Technical Support document, section 9.3

^b For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.

^c For constituents where the calculated where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and the Department of Health rural soil survey, the rural soil background concentration is used as the track 1 SCO value for this use of the site.

^d SCO is the sum of endosulfan I, endosulfan II and endosulfan sulphate.

^e The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

^f Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with “NS”. Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources SCO according to the TSD.

TEQ CALCULATION FOR DIOXIN/FURAN

The 2,3,78-TCDD equivalent for a congener is obtained by multiplying the concentration of that congener by its Toxicity Equivalency Factor (TEF) from the table below. The TEQ is the sum of the products.

CONGENER	TEF
2,3,78 -Tetrachlorodibenzo-p-dioxin	1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.5
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01
Octachlorodibenzo-p-dioxin	0.001
2,3,7,8-Tetrachlorodibenzofuran	0.1
1,2,3,7,8-Pentachlorodibenzofuran	0.05
2,3,4,7,8-Pentachlorodibenzofuran	0.5
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01
Octachlorodibenzofuran	0.001

TEQ calculation as per: NATO.1988. International Toxicity Equivalency Factors (I-TEF) Method of Risk Assessment for Complex Mixtures of Dioxins and Related Compounds. North Atlantic Treaty Organization. Report Number 176.

End of Text for Section III, Attachment 5

Section III, Attachment 6 Generic Sampling Plan Cover Letter

Dear Applicant:

Applications for dredging that include upland disposal will require review by both the NYSDEC Division of Materials Management (DMM) and the Bureau of Habitat (BOH) regulatory programs. Program review of the long and short term impacts that may be associated with the project will require an analysis of the sediment materials to be dredged as well as the substrate that will be exposed upon completion of the project. Sediment analysis is also necessary for determining appropriate disposal options, including potential beneficial uses, of the dredged material. Prior to sampling, a sediment sampling plan will need to be prepared and provided to Department staff for review.

The attached generic sediment sampling plan provides guidance for developing and submitting a plan that incorporates the informational needs and sampling requirements of both regulatory programs. At a minimum, applicants should adapt the document to their own proposed project by filling in all text areas highlighted in blue. Please note that the blue comments and font should not be maintained in the final document. The finalized document should be a cohesive narrative of similar format that provides all of the information and attachments identified. Any additional supplemental information, documentation, photographs or aerials that will contribute to the reviewer's understanding of the proposed project, including project objectives, limitations or requirements, or that will provide relevant documentation about the history or current conditions of the site should also be included.

All proposed sediment sampling plans should be reviewed and approved by the Department prior to sampling to ensure that both programs concur with the sample number and locations selected by the applicant. In addition, the parameters provided in Table 2 may need to be adjusted based on the history of the site.

Additional references that may assist you in determining appropriate sampling and analytical requirements can be found on the Department's website:

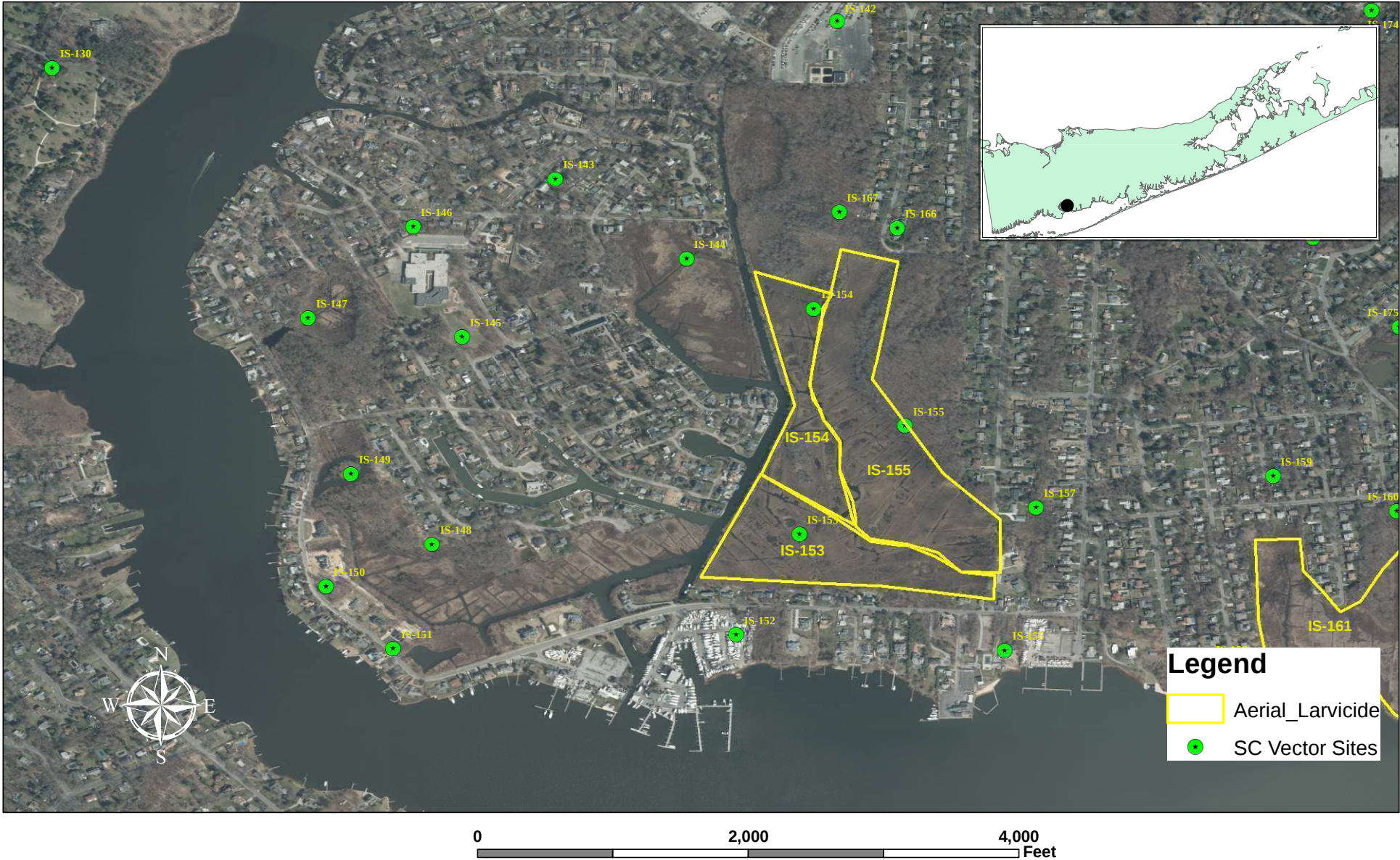
- NYSDEC TOGS 5.1.9 (*In-Water and Riparian Management of Sediment and Dredge Material*) at http://www.dec.ny.gov/docs/water_pdf/togs519.pdf
- NYSDEC Remedial Program Soil Cleanup Objectives at <http://www.dec.ny.gov/regs/15507.html>

The Region 1 office can also provide a copy of the Region 1 BOH Sediment Sampling Guidance for projects in which disposal options will remain within Article 25 or Article 15 jurisdiction (e.g., beach or in-water placement). These projects are not reviewed by DMM.

Please submit four copies of the completed sediment sampling plan to the Division of Environmental Permits at NYSDEC – Region 1, SUNY @ Stony Brook, 50 Circle Rd, Stony Brook, NY 11790-3409. If you have technical questions, you may contact the appropriate program at:

Bureau of Habitat	Andrew C. Walker	631-444-0270
Materials Management	Peter D. Hourigan, P.E.	631-444-0375
Environmental Permits		631-444-0355

Grand Canal - Oakdale



Section III, Attachment 8: Environmental Ecology Dredge Application
**Suffolk County Dredging Needs Application in the Public Interest to
Improve Ecological Health and/or Marine Productivity**

I. Applicant Name:

Address:

Date:

II. Name & Location of Waterbody:

III. Ownership of underwater lands to be dredged:

IV. Project Description:

- a) methods of dredging
- b) estimated amount of material to be removed
- c) dimensions of project
- d) overcut/overdepth

V. Dredge Material Composition (Percent)

- a) gravel
- b) sand
- c) silt
- d) other (describe)

VI. Dredge Material Placement/Disposal Site(s):

VII. Project Purpose (describe):

1) Improve Water Quality (e.g., dissolved oxygen, temperature, nitrogen, hydrogen sulfide, phosphorous, coliform, enterococcus, pH, salinity, other contaminants)

2) Sediment Management (e.g., to improve stream flow, tidal flushing, elimination of silt/sediment accumulations, bars, shoals, sinks, other flow impediments)

3) Improve Habitat/Living Resources and promote beneficial flora/fauna (e.g., to improve environmental/ecological health and/or marine productivity, to improve tidal flushing or light penetration, eliminate harmful algal blooms, contaminated or potentially hazardous sediments, improve shellfish/fin fish productivity, spawning, and/or fish access)

VIII. Documentation Submitted (attach additional sheets as required):

1. Bathymetric Survey
2. Tidal and/or flow Measurements
3. Photographic Representations
4. Water Quality Analyses
5. Sediment Analyses
6. Essential Fish Habitat Assessment
7. Modeling Studies
8. Affirmation of Support by Underwater Landowners
9. NYS DEC Atlantic/Long Island Sound Basin Priority Waterbodies List
10. Other (describe)

IX. Submit three copies of this application, any fee required by the Commissioner of Public Works, and supporting documentation to:

Suffolk County Department of Health Services, Office of Ecology
360 Yaphank Avenue, Suite 2B, Yaphank, NY 11980

It is incumbent upon the applicant to sufficiently document that environmental/ecological health and/or marine productivity will be improved by the proposed dredge project. Upon certification by the Office of Ecology (or Dept. of Environment and Energy), this application will be forwarded to the Suffolk County Department of Public Works and the Dredging Project Screening Committee for further consideration. This certification does not imply the Dredging Project Screening Committee will approve nor the County of Suffolk will fund the proposed project; that required permits from other agencies including the New York State Department of Environmental Conservation and the United States Army Corps of Engineers will be granted; or that the information and data submitted by the applicant are sufficient for any other departmental and agency purposes.

§ A8-5. Criteria for County Dredging Projects.

B. A dredging project shall be deemed to be in the public interest if it supports, advances or enhances the following types of uses, activities and/or facilities:

(11) improves environmental/ecological health and/or marine productivity, based upon a certification from the Suffolk County Department of Health Services, Office of Ecology, or the Suffolk County Department of Environment and Energy. Such determination shall consider factors including, but not limited to, flow rates, contaminant levels, nitrogen levels, phosphorus levels, coli form levels, algal growth rates, salinity levels, pH levels, dissolved oxygen, water temperature, oxygen levels and other such considerations that may jeopardize the health of the marine ecology or productivity.

The undersigned hereby certifies that based upon the information herein this application, together with supporting documentation, complies with §A8-5, B.(11) of Local Law No. 50-2006 [above]:

For the Suffolk County Department of Health Services
Office of Ecology

Date

OR

For the Suffolk County Department of Environment & Energy

Date

Section III, Attachment 9 Environmental and Ecological Criteria for County Dredging Projects

Environmental Dredging Factors Considered for Improving Environmental Quality, Ecological Health and Marine Productivity

Background

The County of Suffolk enacted Resolution Number 1040-2006 a Local Law to Add Ecological Health and Marine Productivity as Acceptable Criteria for County Dredging Projects (Local Law No. 50-2006, Added 09-19-2006) which amended the Suffolk County Administrative Code and added an eleventh criterion that could be utilized to justify county dredging projects as being “in the public interest.” This added criterion provides that the Suffolk County Department of Health Services Office of Ecology (OE) (or Department of Environment and Energy [DEE]) shall evaluate such Environmental Factors to determine and certify whether a proposed dredging project is needed to improve the ecological health or marine productivity. If certified, the application and supporting documentation will be forwarded to the County’s Dredging Project Screening Committee for consideration of the proposed project as being “in the public interest.”

§ A8-5. Criteria for County Dredging Projects.

B. A dredging project shall be deemed to be in the public interest if it supports advances or enhances the following types of uses, activities and/or facilities:

(11) improves environmental/ecological health and/or marine productivity, based upon a certification from the Suffolk County Department of Health Services, Office of Ecology, or the Suffolk County Department of Environment and Energy. Such determination shall consider factors including, but not limited to, flow rates, contaminant levels, nitrogen levels, phosphorus levels, coliform levels, algal growth rates, salinity levels, pH levels, dissolved oxygen, water temperature, oxygen levels and other such considerations that may jeopardize the health of the marine ecology or productivity.

This document formulates a process for evaluation of Environmental Dredging Factors for determining whether a proposed dredging project is necessary to increase flushing rates to protect or enhance marine ecology and productivity. This document also outlines the information and data the applicant may submit to support obtaining certification under these criteria. It is incumbent upon the applicant to sufficiently document that environmental/ecological health and/or marine productivity will be improved by the proposed dredge project to the satisfaction of the Office of Ecology (or Dept. of Environment and Energy). This certification does not imply the Dredging Project Screening Committee will approve nor the County of Suffolk will fund the proposed project; that required permits from other agencies including the New York State Department of Environmental Conservation and the United States Army Corps of Engineers will be granted; or that the information and data submitted by the applicant are sufficient for any other departmental and agency purposes.

Environmental Dredging Factors

Environmental Dredging Factors are classified into three broad categories:

1. Water Quality – e.g., surface and bottom dissolved oxygen, temperature, nitrogen, hydrogen sulfide, phosphorous, coliform, enterococcus, pH, salinity, other pollutants, etc.;

2. Sediment Management – to modify sedimentary features, thereby improving stream flow or tidal flushing rates of harbors or embayments with respect to current, circulation, salinity, etc.; and remove toxic/noxious/eutrophic sediments; and
3. Habitat/Living Resources – e.g., to improve environmental/ecological health and/or marine productivity, to improve tidal flushing or light penetration, eliminate harmful algal blooms, contaminated or potentially hazardous sediments, improve shellfish/fin fish productivity, spawning, and/or fish access.

The applicant must affirmatively demonstrate, using accepted scientific methodology (data, models, status/trend studies, etc.) that an impairment or violation exists for sediment, water quality, and/or habitat/living resources, and that dredging will result in alleviating the impairment (i.e., attainment of objective standard). Such analysis must be based on numeric criteria, including, but not necessarily limited to: NYS standard for Dissolved Oxygen (or other ambient water quality standard), Estuary Plan nitrogen guidelines, estuary program eelgrass habitat criteria, shellfish sanitation bacteriological standards, sediment toxicity criteria (EPA, DEC, literature studies, etc.). Habitat/living resources impairments and mitigation must similarly be demonstrated using quantitative metrics (e.g., estuary program guidelines or generally accepted, published scientific indices), and accepted scientific methodology.

Dredging may be proposed to increase tidal flushing to meet NYS dissolved oxygen standards. As an example New York State Environmental Conservation Law §703.3 Water quality standards for dissolved oxygen (DO) state:

- Chronic: Shall not be less than a daily average of 4.8 mg/L;
- Acute: Shall not be less than 3.0 mg/L at any time.

Waters listed on the NYSDEC Atlantic/Long Island Sound Basin Priority Waterbodies List and ECL Part 41.3, Sanitary Condition of Shellfish Lands in Suffolk County, may also be considered where dredging is proposed to alleviate stressing factors.

The burden of proof is on the applicant to demonstrate both of the following:

1. A high likelihood of success of dredging as a mitigation measure to achieve the desired objective (based on data, models, studies, etc.). For example, a hydrodynamic model can be used to calculate dilution of nitrogen and other contaminants. Mere anecdotal or observational conclusions that dredging will improve water or sediment quality are not sufficient.
 2. Significant environmental improvement, i.e., mitigation of a measurable impairment to a significant resource, with meaningful environmental health benefits.
- Town/municipality must sponsor each application, and is responsible for all data, analyses, and/or studies.
 - A review fee, to be determined by the Commissioner of the Department of Public Works may be required for independent consultant review and analysis of the application, or the applicant may apply to and obtain necessary permits from the NYSDEC.

The applicant shall complete and submit the County's application contained herein as part of this document (Dredging Needs Application in the Public Interest to Improve Ecological Health

and/or Marine Productivity). The information obtained to complete this checklist shall be considered in review of the Environmental Dredging Factors and may include any supporting observations, measurements, analyses and findings relating to the physical and chemical qualities of the water body and sediments in the areas of proposed dredging. Photographs may be taken of physical conditions such as impediments to flow, and included as an attachment(s). Other measurements such as tidal gauge and/or flow information, depth measurements, modeling data, historical data, and other hydrographic information may be provided as supporting records to be evaluated by the OE (or DEE) in the decision to of whether the proposed dredging project will improve environmental/ecological health and/or marine productivity.

Certification by the OE (or DEE) that dredging to remove sediments from a waterbody supports, advances or enhances the environmental quality and productivity of the water body shall be forwarded to the Committee in consideration of whether the project is in the public interest. The Legislative Intent behind adding environmental criteria factors to the Committee's decision-making process, relating to a Dredging Project's benefit to the public interest, is the finding that dredging may, at times, be necessary to increase flushing rates in order to protect marine ecology and productivity.

Dredging projects in the public interest to improve the environmental quality of a water body shall be completed in water bodies including, but not necessarily limited to:

- I. Those demonstrated to have impaired environmental quality due to inadequate stream flow and/or tidal flushing resulting in an excessive accumulation of sediments and/or impaired water quality within the water body;
- II. Those shown to have a history of detrimental affects to the environmental quality caused by existing and/or former activities within the water body, or in the surrounding areas, impacting the water body; and
- III. Those where a significant restriction or reduction of the flushing rates is causing detrimental changes in environmental conditions, impairing the water body's marine ecology and productivity.

A. Physical Characteristics of the Water Body

The applicant shall complete a bathymetric survey and may conduct stream flow and/or tidal flushing measurements. The bathymetric survey shall be completed to determine the stream/water body cross section and profile. Results from this investigation shall be used to identify whether or not there are restrictions to the water body's flow and/or tidal flushing, due to bottom features including, but not limited to, fluvio-marine and anthropogenic features such as sediment bars, shoals, reefs, deep spots, jetties, groins, point-source discharge features, etc. This information shall be part of the hydrographic evaluation of the water body's physical characteristics and flushing rates, which will be combined with any water column and sediment testing conducted by the applicant to become part of the overall decision making process.

B. Sediment Sampling Plan

Where sediment quality is perceived as impacting the ecological health or marine productivity of a waterbody, the applicant shall follow the procedures and decision-making criteria contained in the attached the NYSDEC, Region 1, Office of Marine Habitat Protection, "Developing Sediment Sampling Plans for Proposed Dredging Projects in Region 1."

In situ sediments to be dredged often require sampling according to the Sediment Sampling Plan approved by the NYSDEC as per DEC's technical operation guidance (TOG's) on In-Water and Riparian Management of Sediment and Dredged material and or the attached document used by NYSDEC Region 1 for development of sediment sampling plans. The web site for the TOG's is http://www.dec.ny.gov/docs/water_pdf/togs519.pdf and the attached quick reference guidance on sediment testing.

Identifying sediment quality aids on identifying disposal options both for beneficial re-use or disposal facilities. This information will dictate how and when dredging is done and have significant implications regarding dredge window restrictions, operational restrictions and cost implications that weigh into moving a dredge project forward.

C. Sediment Sample Analysis for Physical Parameters and Chemical Contaminants

Sediment sampling may include procedures for identifying and characterizing sediment physical characteristics based on grain size, grain size distribution, mineralogy, layering, and possible sediment sources. Based on the sediment's physical characteristics, sediment samples collected may be further evaluated for physical and chemical parameters of concern, e.g., heavy metals, pesticides/herbicides.

If sediment samples are collected, they shall be analyzed for chemical contaminants according to the analytical methods and recommended method detection limits defined in the NYSDEC's guidance documents. The results of this set of sample analyses will provide evidence that sediments in the water body possess chemical contaminants at concentrations exceeding applicable Action Levels (USEPA, ACOE, NYSDEC, SCDHS), which may be affecting the water body's overall environmental quality. The removal of these sediments via dredging may be necessary, not only to possibly increase flushing rates, but also to reduce levels of chemical contamination in the water body, improving overall environmental quality.

The collection and analysis for additional chemical parameters may be conducted if other contaminants are suspected to be present in the sediments, based on knowledge of the existing and/or historical uses of the water body and/or lands surrounding it. The collection and analysis of sediment samples for these other contaminants shall be on a case by case basis in consultation with the County, New York State Department of Environmental Conservation, Army Corp of Engineers, and following state and/or federal guidelines.

D. Water Sample Analysis for Chemical Contaminants and Physical Parameters

Where water quality is perceived as impacting the ecological health or marine productivity of a waterbody, the applicant may collect and analyze samples from the water column to determine the environmental conditions (e.g., surface and bottom dissolved oxygen levels within the water column). This assessment is designed to determine whether dredging may be appropriate for the improvement of the water body's environmental quality. The applicant shall describe its reasoning for selecting the timing, tide, number, type(s) and locations of samples collected. The water quality samples shall be evaluated according to appropriate criteria (USEPA, ACOE, NYSDEC, SCDHS).

The collection and analysis of water samples for additional chemical parameters (e.g., nutrients, metals) may be necessary if other contaminants are suspected to be present in the water column or in the sediment pore waters, based on knowledge of the existing and/or historical uses of the water body and/or lands surrounding it. The need for further sampling and evaluation of other

contaminants shall be determined on a case by case basis in consultation with the County, and also following New York State and/or federal guidelines.

E. Dredging Project Application

The decision by the OE (or DEE) whether or not to certify an application for a proposed dredging project shall be based on the submitted documentation relating to the Environmental Dredging Factors and the potential for the project to improve the health of the marine ecology or productivity. The attached application shall be completed by the applicant summarizing the results of the investigation of the Environmental Dredging Factors relating to the target water body.

It is incumbent upon the applicant to sufficiently characterize and document the Environmental Dredging Factors that will be improved by completing the proposed dredging project. If the OE (or DEE) determines that the information submitted by the applicant is not sufficient to support a certification decision, they may request additional information from the applicant. Upon certification, the application together with supporting documentation shall be forwarded to the Committee for the consideration. As stated previously, certification of an application does not guarantee Committee approval, or County funding for the project (if applicable). Also, additional approvals and permitting may be required by the NYSDEC and the US Army Corps of Engineers; as well as any other applicable requirements by government agencies, prior to proceeding with a proposed County Dredging Project.

NYSDEC Region 1 Office of Marine Habitat Protection

Developing Sediment Sampling Plans for Proposed Dredging Projects in Region 1

The information provided below is intended to assist applicants in the development of a suitable sediment sampling plan to provide adequate grain size and contaminant information for the review of dredging projects that are proposed in Region 1. For further information on sediment sampling and analysis, refer to the New York State Department of Environmental Conservation guidance document for **In-Water and Riparian Management of Sediment and Dredged Material**, (TOGS 5.1.9).

Sediment sampling plans are not required for all proposed dredging projects but may be required for certain proposals. The rationale for requesting sampling may include:

- Λ large volumes of material
- Λ material to be taken offsite for upland disposal (all untested material taken offsite and out of the Department's Tidal Wetland jurisdiction must be taken to a lined landfill for disposal unless an alternative disposal site has been approved by the Division of Solid and Hazardous Materials)
- Λ areas with a history or suspected history of contamination
- Λ areas of new dredging or where dredging has not occurred for a long period
- Λ changes in environmental condition for maintenance projects

Developing a Sampling Plan:

Sediment sampling plans can and should be tailored to the specific project proposal based on the following general guidance:

- The number and location of sediment sample cores should be determined based on several parameters. Specifically, the size of the proposed area to be dredged (square footage rather than volume) and the availability of previous sediment data are important factors. Larger areas with less data available will require more sampling. Similarly, the likelihood of contamination based on expected sediment type and the history of the area will affect the number and location of samples. Consistency of sediment type throughout the proposed area and how recently the area was last dredged are also factors to be considered.
- Preliminary data collection should identify point sources of potential contamination (outfall pipes, industrial use locations, etc.) within or adjacent to the proposed dredging area. Once these areas are identified, sample locations should always be skewed to pick up areas of potential contamination as well as areas where finer sediments may be anticipated. Proposed marina dredging projects, should consider areas where boat scraping, painting or maintenance activities may have occurred in the past; fueling areas; areas where the smell or sheen of petroleum or other chemicals on certain tides have been noted, etc. This information of prior history and use provide rationale for selection of these areas as sample sites.

- Once the number and location of sample sites are determined, sediment samples should always be collected with core samples rather than grab devices. Core samples should be taken to one foot below the proposed dredging depth or, when applicable, proposed over-depth. This allows an analysis of the material to be dredged as well as the material that will be exposed on the bottom once the dredging is completed.
- Each core should be inspected for visibly distinct layers. If distinct layers are apparent, they should be analyzed separately. However, if the sediment in the core sample is reasonably consistent, then the core can be composited into two sections for analysis. The top section, comprised of the surface to dredging depth material, represents an analysis of the material to be dredged. The second section, comprised of the first six inches of material below the dredging depth, represents the bottom sediment that will be exposed after the dredging is completed. The last six inches of the core can be set aside for analysis should the proposed exposed bottom sediment show elevated contaminant levels. This last segment can help determine if increasing the dredging depth will provide a reduction in exposed contaminant levels.
- Cores should be photographed and analyzed for sediment grain size. If the grain size of any core sample or segment is finer than 90% sand, additional contaminant analysis will be required. If several core samples require additional contaminant analysis, and the additional analysis becomes too economically burdensome, it is possible to limit testing of samples to those with the finest material and highest organic content – representing the “worst case material”. Similarly, samples may be selected that have been subject to specific contamination events based on the known history of the sample site. Proposals to reduce analytical testing by analyzing only a selection of core samples or compositing (combining) individual core segments together should be approved by the Department prior to testing.
- The attached list of parameters is recommended as a baseline for contaminant testing of core samples. The list provided can and may need to be refined based on available historic information of known and/or suspected site contamination or prior dredging and/or sampling data. Results should be quantified and provided based on the levels identified below. All testing should be conducted at a NYSDOH approved laboratory. In addition to providing the results of the grain size analysis and contaminant testing, total and percent organic carbons should also be provided.
- Appropriate upland disposal sites may be recommended and identified by Division of Solid and Hazardous Materials based on the physical and chemical characteristics of the dredged material. If the applicant has identified a proposed disposal site (other than a landfill), it may be necessary to test the existing sediment at the proposed disposal site to show whether or not the existing sediment has contaminant levels higher, lower or similar to the material to be dredged. This testing will help identify the feasibility of using the location for spoil disposal. There may also be a need for verification sampling of the dredge material after dredging if the material is to be re-used or if test results of the in-situ dredge material sampling shows that contaminants are present but the results are not adequate for properly characterizing the material.

Once a proposed sampling plan has been developed, it should be submitted to the Department for review and comment **before** collection is initiated. A summary of the available historical data as well as the rationale for the number and location of samples to be collected must be included with the plan for staff to provide an informed review.

NYSDEC Region 1 Office of Marine Habitat Protection

Parameter Sediment/Soil	Suggested EPA Analytical Method CLP/RCRA	Recommended Method Detection Limit (mg/kg, ppm)
Arsenic	EPA 6010B	3.0
Mercury	EPA 6010B, 7470	0.2
Cadmium	EPA 6010B	1.0
Lead	EPA 6010B	2.0
Chromium	EPA 6010B	5
Nickel	EPA 6010B	5
Silver	EPA 6010B	0.2
Zinc	EPA 6010B	15
Copper	EPA 6010B	5.0
Chlordane	EPA 8081A	0.0017
Sum of DDT+DDE+DDD	EPA 8081A	0.0033
Dieldrin	EPA 8081A	0.0033
PCBs (sum of aroclors)	EPA 8082	0.033
Total PAH	EPA 8270	0.33
Total BTX	EPA 8021, 8260B	0.0008
Benzene	EPA 8021, 8260B	0.0003
Mirex	EPA 8081A	0.189
Dioxin (Toxic Equivalency Total)	EPA 1613B	0.000002

Physical Properties

Grain Size	ASTM D41/D42	
Total Organic Carbon	EPA 9060A	

Section III, Attachment 10
§ A8-5. Criteria for County dredging projects

[Derived from Res. No. 242-1979; amended 12-23-1986 by L.L. No. 6-1987]

- A. No proposed County dredging project shall be approved by the Dredging Project Screening Committee nor by the County Legislature unless such project shall be in the public interest.
- B. A dredging project shall be deemed to be in the public interest if it supports, advances or enhances the following types of uses, activities and/or facilities:
- (1) Publicly owned, leased and/or operated marine facilities, including but not limited to mooring areas, boat basins, marinas, docks and boat ramps. Boat ramps need not consist solely of paved asphalt but may be composed of concrete, treated lumber, gravel or crushed stone extending to the mean low water mark. The parking areas associated with such a facility must accommodate at least six cars with trailers and may be composed of smooth grassed area, crushed stone, pavement or concrete. A public mooring area within an enclosed embayment must have within its proximity a publicly owned parcel of land fronting on the embayment permitting public access in order to qualify as a public purpose.
 - (2) Marine commercial uses, including but not limited to boatyards, ship repair facilities, commercial fishery docks and product transfer sites.
 - (3) Industrial, transportation and utility uses, including but not limited to petroleum product transfer facilities, ferry terminals and power plants.
 - (4) Institutional uses such as education and public safety facilities.
 - (5) Recreational uses, including but not limited to boat livery stations, party boats, charter boats, marinas and yacht clubs open to use by the general public.
 - (6) Reduction of the risk of public health problems based upon a certification by the Suffolk County Department of Health Services that the public health will be protected by dredging for the particular year the channel is proposed to be dredged.
 - (7) Open water shoals outside of navigation channels to improve general navigation.
 - (8) Obtaining fill from navigation channels for the purpose of beach nourishment and shoreline construction.
 - (9) Mitigating damage or shoaling caused by the County of Suffolk.
 - (10) Reduction of a navigational hazard caused by shoaling at bay-canal interfaces.
 - (11) Improvement of environmental/ecological health and/or marine productivity, based upon a certification from the Suffolk County Department of Health Services, Office of Ecology, or the Suffolk County Department of Environment and Energy. Such determination shall consider factors including, but not limited to, flow rates, contaminant levels, nitrogen levels, phosphorus levels, coliform levels, algal growth rates, salinity levels, pH levels, dissolved oxygen, water temperature, oxygen levels and other such considerations that may jeopardize the health of the marine ecology or productivity.

[Added 9-19-2006 by L.L. No. 50-2006]

- C. A dredging project shall be deemed to be in the private interest in the following circumstances:
- (1) It does not provide direct access to or service for any of the uses or facilities mentioned in Subsection B of this section.
 - (2) It provides service solely and exclusively to shoreline homeowners or a group of homeowners in a civic association, the membership of which is controlled by a residency requirement, regardless of the nature of the water body.
 - (3) It dredges within privately owned facilities.

(4) It only maintains privately owned boat slips or basins.

D. No proposed County dredging project shall be approved by the Dredging Project Screening Committee nor by the County Legislature unless the County shall have first conducted soundings or other reliable and accepted measurements in accordance with normal engineering practices and procedures of the area to be dredged to determine the estimated cost of such proposed work.

E. The specifications accompanying a solicitation for the award of a contract for dredge services shall require that biodiesel fuel be employed by dredges in the performance of the dredge project, except that dredges with a discharge pipe of 16 inches and greater, that are utilized for deep water operations, are exempt from this requirement.

[Added 4-4-2006 by L.L. No. 25-2006]

End of Text for Section III, Attachment 10