

UNITED STATES - EAST COAST
MASSACHUSETTS

BUZZARDS BAY

**Identification and Designation of a
Buzzards Bay Disposal Site for
Suitable Dredged Material
EOEA No. 10284**

Draft Environmental Impact Report (DEIR)

November 15, 2005

**Prepared For:
Office of Coastal Zone Management**



**Prepared By:
Maguire Group Inc.
33 Commercial Street, Suite One
Foxborough, MA**



A Project Funded by the Seaport Advisory Council

**Identification and Designation of a
Buzzards Bay Disposal Site for
Suitable Dredged Material
EOEA No. 10284**

DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)

November 15, 2005

**Prepared for:
Office of Coastal Zone Management**



**Prepared by:
Maguire Group Inc.
33 Commercial Street, Suite One
Foxborough, MA**



**In association with:
ASA, Inc.
CoastalVision
CR Environmental
SAIC
SeaRay Environmental**

A Project Funded by the Seaport Advisory Council

ACKNOWLEDGMENTS

The Massachusetts Office of Coastal Zone Management (CZM) acknowledges the assistance of the many local, state and federal interests who have generously contributed their time and expertise to the development of this Draft Environmental Impact Report:

Falmouth Dredged Material Management Committee
Department of Environmental Protection
Department of Conservation and Recreation, Waterways Division
Division of Marine Fisheries
Board of Underwater Archaeology
National Marine Fisheries Service
US Army Corps of Engineers
US Environmental Protection Agency
US Fish and Wildlife Service

Any errors in the use of data, policy guidance and/or recommendations provided for this document are the sole responsibility of CZM.



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

100 Cambridge Street, Suite 900

Boston, MA 02114-2524

MITT ROMNEY
GOVERNOR

KERRY HEALEY
LIEUTENANT GOVERNOR

ELLEN ROY HERZFELDER
SECRETARY

Tel. (617) 626-1000
Fax. (617) 626-1181
<http://www.mass.gov/envir>

RECEIVED

MAY 27 2005

COASTAL ZONE MANAGEMENT
Exec. Office of Environmental Affairs

May 23, 2005

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS ON THE NOTICE OF PROJECT CHANGE

PROJECT NAME:	Identification and Designation of a Buzzards Bay Disposal Site Suitable for Dredged Material
PROJECT MUNICIPALITY:	Falmouth
PROJECT WATERSHED:	Buzzards Bay
EOEA NUMBER:	10284
PROJECT PROPONENT:	Massachusetts Office of Coastal Zone Management
DATE NOTICED IN MONITOR:	April 23, 2005

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62H) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) submitted on this project and hereby determine that it **continues to require** the preparation of an Environmental Impact Report (EIR).

The project involves the identification and designation of a disposal site in the Buzzards Bay area for clean dredged material. Pursuant to the advance site disposal identification provisions of the Clean Water Act (CWA) regulations (40 CFR Part 230.80), the Massachusetts Office of Coastal Zone Management (CZM) is the project proponent for the site designation. The Massachusetts Department of Conservation and Recreation (DCR), formerly the Department of Environmental Management, was the original project proponent and will assume responsibility for maintenance and monitoring of any site following designation. The NPC is being submitted in accordance with Section 11.10 (2) of the MEPA regulations for a lapse of time because more than three years have elapsed between the publication of the ENF and the publication or the notice of the availability of the single or final EIR.

As proposed in a 1995 Environmental Notification Form, the project involved the evaluation and designation of a site in Buzzards Bay for the disposal of clean, medium to coarse-grained dredge material at the formerly used Cleveland Ledge Disposal Site. A 500-yard diameter circle in 30 to 40 feet of water 1.4 nautical miles west of Chappaquoit Point in Buzzards Bay was proposed.

The project required the preparation of an EIR pursuant to Section 11.25 (2) of the MEPA regulations because the project involved the alteration of more than 10 acres (40.6 acres) of land under the ocean and because the project required the following state agency actions: management and monitoring of the site by the DCR; issuance of Water Quality Certification and approvals pursuant to the Waterways Chapter 91 program by the Department of Environmental Protection. The project also required approval pursuant to the Massachusetts Wetlands Protection Act from the Falmouth Conservation Commission. Because the project is being pursued by an agency of the Commonwealth, MEPA jurisdiction extends to all aspects of the project that have the potential to cause significant Damage to the Environment. The scope of the required EIR was established in the ENF Certificate issued May 10, 1995.

Comments on the ENF raised concerns related to impacts on marine fishery resources; the potential for resuspension of material by bottom currents; whether or not the proposal will meet the long-term needs of the region; and the environmental-economic tradeoffs of open-water disposal. The proponent is preparing a Draft EIR to address these concerns as well as other issues as directed by the MEPA scope.

In 1998, a NPC was submitted that proposed to designate the site for all physical categories of clean material suitable for unconfined open-water disposal, from fine to coarse grained, subject to all applicable state and federal chemical and biological testing protocols. The 1998 NPC also indicated a change from the original project description to designate the former Buzzards Bay Disposal Site to investigation of a larger area for a potential designation site, within and adjacent to the historic Cleveland Ledge Disposal Site. Subsequent investigations have identified two rectangular areas most promising for a possible dredge material site, identified as candidate sites 1 and 2 in Figure 1-3 in the NPC. These two sites will be discussed in greater detail in the DEIR.

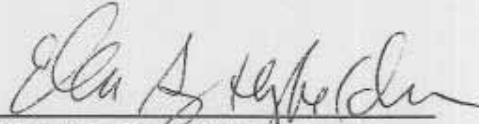
The scope for the EIR required an alternatives analysis to evaluate the potential environmental benefits/drawbacks of opening an historic disposal site versus identifying a new site. Following comments received on the current NPC from the Buzzards Bay Coalition, the EIR should also investigate potential options for the upland use or disposal of dredge material.

The Massachusetts Board of Underwater Archaeological Resources notes the presence of a potentially significant cultural resource close to or within one of the candidate sites. CZM should continue to work with the Board to identify and evaluate this resource and determine appropriate measures to ensure its protection from dredge disposal activity. The EIR should contain information about the project's potential impacts on archeological resources and proposed mitigation.

Based on a review of the information provided in the NPC, and after consultation with the relevant public agencies, I conclude that the scope issued May 10, 1995, as amended by this Certificate, adequately covers the issues that need to be evaluated for site designation and management.

May 23, 2005

Date



Ellen Roy Herzfelder, Secretary

Comments Received:

5/10/2005	Commonwealth of Massachusetts, Board of Underwater Archaeological Resources
5/11/2005	The Coalition for Buzzards Bay
5/12/2005	Town of Falmouth, Office of Selectmen & Administrator
5/13/2005	Massachusetts Marine Trades Association

ERH/BA/ba

MEPA Analyst:

Phone: 617-626-

NPC

Notice of Project Change

The information requested on this form must be completed to begin MEPA Review of a NPC in accordance with the provisions of the Massachusetts Environmental Policy Act and its implementing regulations (see 301 CMR 11.10(1)).

Project Name: Identification and Designation of a Buzzards Bay Disposal Site for Suitable Dredged Material		EOEA #:10284	
Street: NA			
Municipality: Falmouth		Watershed: Buzzards Bay	
Universal Tranverse Mercator Coordinates:		Latitude: 41° 36.000' N Longitude: 70°41.000' W	
Status of project construction: NA		%complete	
Proponent: MA CZM			
Street: 251 Causeway Street, Suite 800			
Municipality: Boston		State: MA	Zip Code: 02114-2136
Name of Contact Person From Whom Copies of this NPC May Be Obtained: Dave Janik			
Firm/ MA CZM		Street: 251 Causeway Street, Suite 800	
Municipality: Boston		State: MA	Zip Code:02114-2136
Phone: 508 291-3625 ext. 20	Fax: 508 291-3628	E-mail: david.janik@state.ma.us	

In 25 words or less, what is the project change? The project change involves A NOTICE OF PROJECT CHANGE FOR LAPSE OF TIME (see 301 CMR 11.10(2)) See project background included in Attachment 1.

See full project change description beginning on page 3.

Date of publication in the Environmental Monitor:: March 22, 1995

Was an EIR required? Yes No; if yes,
 was a Draft EIR filed? Yes (Date:) No
 was a Final EIR filed? Yes (Date:) No
 was a Single EIR filed? Yes (Date:) No

Have other NPCs been filed? Yes (Date(s)Noticed in Environmental Monitor March 25,1998:) No

If this is a NPC solely for lapse of time (see 301 CMR 11.10(2)) proceed directly to "ATTACHMENTS & SIGNATURES" on page 4.

PERMITS / FINANCIAL ASSISTANCE / LAND TRANSFER

List or describe all new or modified state permits, financial assistance, or land transfers not previously reviewed:

Are you requesting a finding that this project change is insignificant? (see 301 CMR 11.10(6))
 Yes No; if yes, attach justification.

Are you requesting that a Scope in a previously issued Certificate be rescinded?
 Yes No; if yes, attach the Certificate

Are you requesting a change to a Scope in a previously issued Certificate? Yes No; if yes, attach Certificate and describe the change you are requesting:

Summary of Project Size & Environmental Impacts	Previously reviewed	Net Change	Currently Proposed
LAND			
Total site acreage			
Acres of land altered			
Acres of impervious area			
Square feet of bordering vegetated wetlands alteration			
Square feet of other wetland alteration			
Acres of non-water dependent use of tidelands or waterways			
STRUCTURES			
Gross square footage			
Number of housing units			
Maximum height (in feet)			
TRANSPORTATION			
Vehicle trips per day			
Parking spaces			
WATER/WASTEWATER			
Gallons/day (GPD) of water use			
GPD water withdrawal			
GPD wastewater generation/ treatment			
Length of water/sewer mains (in miles)			

Does the project change involve any new or modified:

1. conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97? Yes No

2. release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction? Yes No

3. impacts on Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities? Yes No

4. impact on any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes No; if yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? Yes No

5. impact upon an Area of Critical Environmental Concern? Yes No

If you answered 'Yes' to any of these 5 questions, explain below:

PROJECT CHANGE DESCRIPTION (attach additional pages as necessary). The project change description should include:


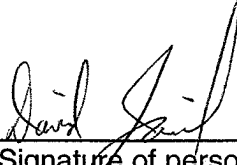
- (a) a brief description of the project as most recently reviewed
- (b) a description of material changes to the project as previously reviewed,
- (c) the significance of the proposed changes, with specific reference to the factors listed 301 CMR 11.10(6), and
- (d) measures that the project is taking to avoid damage to the environment or to minimize and mitigate unavoidable environmental impacts. If the change will involve modification of any previously issued Section 61 Finding, include a proposed modification of the Section 61 Finding (or it will be required in a Supplemental EIR).

ATTACHMENTS & SIGNATURES

Attachments:

1. Secretary's April 24, 1998 Certificate
2. Secretary's May 10, 1995 Certificate
3. Project Background for NOPC including Figures 1-1, 1-2, 1-3
4. List of all agencies and persons to whom the proponent circulated the NPC, in accordance with 301 CMR 11.10(7)

Signatures:

4/12/05		4/13/05	
Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing NPC (if different from above)
	<i>For SCC</i>		

<u>Susan Snow-Cotter</u>	<u>Dave Janik</u>
Name (print or type)	Name (print or type)
<u>Office of Coastal Zone Management</u>	<u>Office of Coastal Zone Management</u>
Firm/Agency	Firm/Agency
<u>251 Causeway Street, Suite 800</u>	<u>251 Causeway Street, Suite 800</u>
Street	Street
<u>Boston, MA 02114-2136</u>	<u>Boston, MA 02114-2136</u>
Municipality/State/Zip	Municipality/State/Zip
<u>617 626-1200</u>	<u>508 291-3625 ext. 20</u>
Phone	Phone

ATTACHMENTS

to 2005 Notice of Project Change



ARGEO PAUL CELLUCCI
GOVERNOR
TRUDY COXE
SECRETARY

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street, Boston, MA 02202

1-24-98
FILE COPY

Tel: (617) 727-9800
Fax: (617) 727-2754

<http://www.magnet.state.ma.us/envir>

April 24, 1998

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME : Buzzards Bay Disposal Site
PROJECT MUNICIPALITY : Falmouth
EOEA NUMBER : 10284
PROJECT PROPONENT : Department of Environmental Management
and Massachusetts Coastal Zone
Management Office
DATE NOTICED IN MONITOR : March 25, 1998

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c.30, ss.61-62H) and Section 11.17 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) submitted on this project and hereby determine that it **continues to require** the preparation of an Environmental Impact Report.

As proposed in 1995, the project involved evaluation and designation of a site in Buzzards Bay for disposal of clean, medium to coarse-grained dredge material at the formerly used Cleveland Ledge site. A 500-yard diameter circle in 30 to 40 feet of water 1.4 nautical miles west of Chappaquoit Point in Buzzards Bay was proposed.

The project required the preparation of an Environmental Impact Report pursuant to Section 11.25 (2) of the MEPA regulations because it is a non-residential project involving alteration of more than 10 acres (40.6 acres) of land under the ocean and requires the following state agency actions: management and monitoring of the site by the Department of Environmental Management and; issuance of Water Quality Certification from the Department of Environmental Protection (DEP). Because the project is being pursued by an agency of the Commonwealth, MEPA jurisdiction extends to all aspects of the project that might have a significant impact on the environment. The scope of the required EIR was established in the ENF Certificate issued May 10, 1995.

EOEA #10284

NPC Certificate

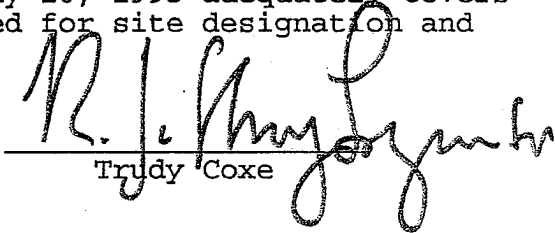
April 24, 1998

The Notice of Project Change describes a change in proponent, a change in the size of the area being considered for site designation, and consideration of designation of the site for fine-grained dredge material as well.

The site being evaluated for a disposal site is being expanded to approximately 1500 yards by 2000 yards, extending 500 yards further inland and about 1000 yards seaward and south of the original 500 yard diameter site.

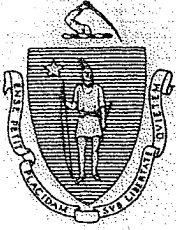
I conclude that the scope issued May 10, 1995 adequately covers the issues that need to be evaluated for site designation and management.

April 24, 1998
DATE


Trudy Coxé

Comments received : DEP - 4/14/98

TC/DES/ds



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
 100 Cambridge Street, Boston, 02202

WILLIAM F. WELD
 GOVERNOR
 ARGEO PAUL CELLUCCI
 LIEUTENANT GOVERNOR
 TRUDY COXE
 SECRETARY

May 10, 1995

5/12/95
 Tel: (617) 727-9800
 Fax: (617) 727-2754
 FILE COPY

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
 ON THE
 ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Buzzards Bay Disposal Site
 PROJECT LOCATION : Falmouth
 EOE NUMBER : 10284
 PROJECT PROPONENT : Department of Environmental Management
 DATE NOTICED IN MONITOR : March 22, 1995

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62H) and Sections 11.04, 11.06 and 11.18 of the MEPA regulations (301 CMR 11.00), I hereby determine that the above project requires the preparation of an Environmental Impact Report (EIR).

Project Description

The project involves designation of the formerly used dredge disposal site, the Cleveland Ledge, as the Buzzards Bay Disposal Site for disposal of clean, medium to coarse-grained dredge material with 20% or less fine-grained silt/clay fractions. More contaminated Category II or III material that has passed bio-assay and/or bio-accumulation testing may be allowed if test mortality rates and/or tissue analysis results meet existing standards. The site is a 500 yard diameter circle in 30 to 40 feet of water approximately 1.4 nautical miles west of Chappaquoit Point in Buzzards Bay. The site is under the jurisdiction of the Falmouth Conservation Commission. The Department of Environmental Management (DEM) will manage the site and monitor it in cooperation with the U.S. Army Corp of Engineers (COE). At the request of the proponent, the MEPA review was extended two weeks in order to consider additional comments.

Categorical Inclusion

The project requires the preparation of an Environmental Impact Report by MEPA regulation since more than 10 acres (40.6 acres)

of land under the ocean would be altered by use of the site (301 CMR 11.25 (2)).

Jurisdiction

MEPA jurisdiction exists for the project since it is proposed by a state agency, DEM, and requires: (1) approvals pursuant to the Waterways Chapter 91 program and Water Quality Certification by the Department of Environmental Protection (DEP); (2) consistency determinations by the Massachusetts Coastal Zone Management office; and (3) approval(s) pursuant to the Wetlands Protection Act from the Falmouth Conservation Commission and/or DEP.

Waiver Request

DEM has requested a waiver of the categorically included status on the basis that the COE has studied the site (Buzzards Bay Disposal Site Baseline Study, March 1990, dated February, 1991 and Buzzards Bay Disposal Site Literature Review, dated April, 1989) and that the studies provide the information that an EIR would require. The DEM maintains specifically that: (1) the request is supported by the substantial baseline studies; (2) the reports characterize existing bottom sediments, benthic habitats and finfish/shellfish species found at the site and its environs; and (3) the gathering of additional information and preparation of an EIR is unlikely to provide information that expands substantially the information that exists in the baseline study reports. The COE determined that there may be an annual regional need for disposal of as much as 17,000 cubic yards of dredged material, some of which would be appropriate for disposal at the site. In an earlier decision on the designation and management of the Cape Cod Bay Disposal Site (CCDS), this office determined that DEM is the most appropriate agency to manage and monitor regional dredge disposal sites since it has considerable expertise in open-water dredge material management issues.

Several state agencies have suggested that I consider a two year use of the site as a Phase I waiver while further information and analysis is prepared for the continued use of the site.

Criteria for Waiver

The MEPA Regulations (301 CMR 11.18) provide that a waiver may be granted upon a finding that strict compliance with the regulations will result in undue hardship and will not serve to minimize or avoid damage to the environment. These findings shall be based on one or more of the following circumstances: 1)

the impacts of the project are insignificant; 2) the aspects of the project that cause it to be categorically included are not within the subject matter jurisdiction of MEPA; 3) ample and unconstrained infrastructure exists to support the project; and 4) the terms agreed to as a condition of the waiver will bring about benefits in excess of those that could be achieved in the absence of a waiver.

Further, when a proponent seeks to proceed with Phase I of a project pending the preparation of an Environmental Impact Report, additional considerations include: Phase I is severable and does not require the implementation of future phases or restrict the ways in which impacts of future phases may be mitigated; the impacts of Phase I, taken alone, are insignificant; the proponent commits to a schedule for completion of an EIR for the entire project; and the project is conditioned such that MEPA compliance is assured before later phases are commenced.

Findings

Upon review of the ENF and its supporting material, consultation during the MEPA review and review of the comment letters, I reach the following findings:

The Commonwealth has yet to develop site designation criteria applicable to the selection of permanent dredged materials disposal sites.

The 13 page baseline study and 11 page literature review fail to describe important elements of the site such as lobster and finfish density at the site, and use of the project area for fishing, shellfishing and lobstering.

The project commitments do not provide the necessary biological window, as required by the habitat protection provisions of the Atlantic States Marine Fisheries Commission winter flounder management plan, to protect the flounder during its spawning period.

No consultation has occurred with the National Marine Fisheries Service to address the status of the three endangered turtle species which may exist in the project area.

The proposal by DEM to install and maintain a site

marker, keep a record of all disposal activities, acquire copies of all relevant permits, and require that an inspector and marine mammal observer be present during all disposal activities does not comprise an adequate site management plan. (For example, the management plan for the CCDS included procedures to assure that dredge materials meet state and federal guidelines and are actually deposited at the proposed location; and that endangered marine species would be protected.)

No project has been identified that has an urgent need to use the site in the near future.

The potential impacts from the project or from Phase I are not insignificant.

The preparation of an EIR is necessary to develop additional commitments to measures that will avoid or minimize impacts to the environment.

Based on these findings, it is my judgment that the waiver request fails to meet the criteria established in 301 CMR 11.18, and would not serve to advance the interests of the Massachusetts Environmental Policy Act. Therefore, I deny the waiver and issue the following scope for an EIR.

The EIR should utilize existing data to the extent possible. For that purpose, I encourage close consultation with the EOEADredging Work Group and all other agencies which must approve the siting and site use. For example, the COE baseline study and the literature review discussed at the scoping meeting appear to contain much useful data. It may be necessary to confirm that the existing data and analysis reflect current site conditions.

SCOPE

I. Preliminary Needs Analysis - Evaluate the regional need for the disposal site and the types and quantities of dredged material likely to be disposed of at the site. Include a discussion of local, regional and state dredge material use/disposal policies.

II. Alternatives - The EIR must evaluate the potential

environmental benefits/drawbacks of opening an historic disposal site versus identifying a new site. Also, discuss why the two existing designated disposal sites, the Massachusetts Bay Disposal Site (MBDS) and the CCDS cannot be used.

III. Physical Site Characteristics - For the site and reference sites, provide at least the following data and analyses:

- a) A detailed bathymetry study to determine bottom contours;
- b) Grain size analysis;
- c) Chemical analysis of sediment samples at three locations within each site, to establish baseline chemical conditions. The analysis should include an evaluation of the level of contaminants listed in the New England Guidance document at Table IA (heavy metals, total polychlorinated biphenols (PCBs), pesticides, polycyclic aromatic hydrocarbons (PAHs) and total organic carbon) and the 16 aromatic hydrocarbons listed at Table IB;
- d) A bottom current study which evaluates the impact of currents and storm events on the site. The study should evaluate the depositional/erosional character of the area to determine how sediment is likely to be contained or dispersed at the site; and
- e) Basic water column chemistry including conductivity, temperature and depth.

IV. Habitat Analysis - For the site and reference sites, evaluate the following:

- a) the benthic community; and
- b) the fisheries communities.

V. Biological Assessment - The EIR must also assess the significance of the site in terms of use by any rare or endangered species. This analysis must be consistent with the format required by the National Marine Fisheries Service (NMFS).

Consultation with NMFS during preparation of the EIR should assure that the analysis will satisfy the State's obligation under Section 7 of the Federal Rare and Endangered Species Act.

VI. Competing Site Use - Evaluate the impacts on recreational and commercial fishing and lobstering use of the site.

VII. Disposal Site Impacts - Evaluate the physical/chemical behavior and biological fate of disposal material and potential impacts the material may have on the biological resources found at the site and the surrounding area.

VIII. Project Mitigation - Evaluate mitigation opportunities for identified impacts which cannot be avoided. Identify the specific measures and strategies to be implemented and the parties responsible for funding and implementation.

IX. Permitting Requirements - The EIR must identify all local, state and federal permits or approvals required for the site designation and its use. Identify the requirements for each of the permits or approvals and show how the project by its siting, design and management will meet those requirements.

X. Management/monitoring Plan - A management/monitoring plan must be prepared for the site which includes provisions for periodic reporting on the use and condition of the site.

XI. Section 61 Finding - A draft Section 61 Finding must be included in the FEIR.

The EIR should conform to MEPA regulation 11.07 as modified by the scope and must address the issues raised in the enclosed comment letters. The EIR must be circulated to the following:

EPA
NMFS
COE
DEP/WW/Boston
DEP/SE
DEM/Ocean Sanctuaries
Division of Marine Fisheries/Boston
Division of Marine Fisheries/Sandwich
Natural Heritage Program
MCZM
Cape Cod Commission
Mass Audubon

EOEA #10284

ENF Certificate

May 10, 1995

MACC
Falmouth Conservation Commission
Falmouth Planning Board
Falmouth Selectmen
Falmouth Public Library

Ten additional copies must be available on request.

May 10, 1995
DATE

Trudy Coxe
Trudy Coxe

Comments received: DEP/SE - 4/11/95
DEP/WW - 4/11/95
DMF - 4/13/95
CCC - 4/10/95
Coalition for BB - 4/7/95
D. Dow - 4/8/95
MCZM - 4/14/95
EOEA Dredge Working Group - 5/1/95

TC/DES/ds

Attachment 3

Background for Notice of Project Change April 15, 2005

Proposed Identification and Designation of a Buzzards Bay Disposal Site for Suitable Dredged Material EOEA No. 10284

BACKGROUND: No current cost-effective disposal site is designated in the Buzzards Bay area for clean dredged material (CDM). Designation of a Buzzards Bay Disposal Site (BBDS) is necessary to provide a disposal alternative for CDM to public and private interests in the region, particularly because upland disposal and beneficial use alternatives are limited. Having such a disposal site helps to ensure that recreational and commercial use of the Commonwealth's waterways is maintained. Based on extensive past use of the historic Cleveland Ledge Disposal Site (CLDS) and the former BBDS in eastern Buzzards Bay for disposal of dredged material (Figures 1-1 and 1-2), the Commonwealth believes that designation of a new BBDS in this area should be considered before detailed investigations of other potential sites are undertaken.

Pursuant to the advance disposal site identification provisions of the Clean Water Act (CWA) (40 CFR Part 230.80), the Massachusetts Office of Coastal Zone Management (CZM) is the project proponent for site designation. The Massachusetts Department of Conservation and Recreation (DCR), formerly the Department of Environmental Management, was the original project proponent and will assume responsibility for maintenance and monitoring of any site following designation. The original ENF was filed on March 8, 1995, for re-designation of the former BBDS (Figure 1-2) for the disposal of clean, coarse-grained dredged material (20% or less fine-grained silt/clay fraction). The project was posted in the Environmental Monitor on March 22, 1995, with file number 10284. Following regulatory response and public comment, a Certificate from the Secretary of Environmental Affairs was issued on May 10, 1995, requiring the preparation of an Environmental Impact Report (EIR) pursuant to the Massachusetts Environmental Policy Act (MEPA).

In response to the ENF, several agencies expressed concerns over the use of the proposed area for the disposal of dredged material. The primary concern raised was potential impacts on the marine fisheries resources in Buzzards Bay, particularly spawning habitat for winter flounder. In addition, the potential resuspension of material by bottom currents was also cited as a concern. The Cape Cod Commission raised concerns that the proposed site does not address the long-term needs of the region, and that the designation of such a site may hinder beneficial environmental goals if open-water disposal costs are cheaper in comparison. A DEIR is being completed with the intent of including sufficient information to address these issues, as directed by the MEPA scope. Pursuant to 301 CMR 11.10(2), this Notice of Project Change is being filed due to the elapsed time since the ENF was published.

The original ENF indicated that the dredged material to be disposed at the BBDS would be restricted to coarse-grained sediment. The restriction was included because clean, coarse-grained sediment was generally considered to have limited impacts on the marine environment, and DEM was requesting a waiver for the EIR requirement. Following public and regulatory comment, the waiver was denied. Consequently, CZM assumed the role of project proponent and filed a Notice of Project Change in March 1998, proposing to designate the site for all physical categories of clean material suitable for unconfined open-water disposal, from fine- to coarse-grained, subject to all applicable state and federal chemical and biological testing protocols. This document, therefore, addresses use of the site for all physical categories of clean material.

Initial field data collected for the former BBDS indicated that more appropriate locations for dredged material disposal existed adjacent to the BBDS and overlapping and adjacent to the CLDS. As a result, the March 1998 Notice of Project Change indicated a change from the original project description to designate the former BBDS (the circular area located inside the boundary of the former CLDS as shown in Figure 1-2), to investigation of a larger area for a potential designation site, within and adjacent to the historic CLDS. Subsequent investigations have identified two rectangular areas most promising for a possible dredge material disposal site. These two rectangular areas possess greater water depths and are depositional in nature, and therefore have increased capacity to accept and retain dredged material; they have been identified as candidate sites 1 and 2 (Figure 1-3). A full suite of field investigations was undertaken at these locations. These two sites will be discussed in greatest detail in the DEIR document, and a preferred site for designation as the new BBDS will be identified.

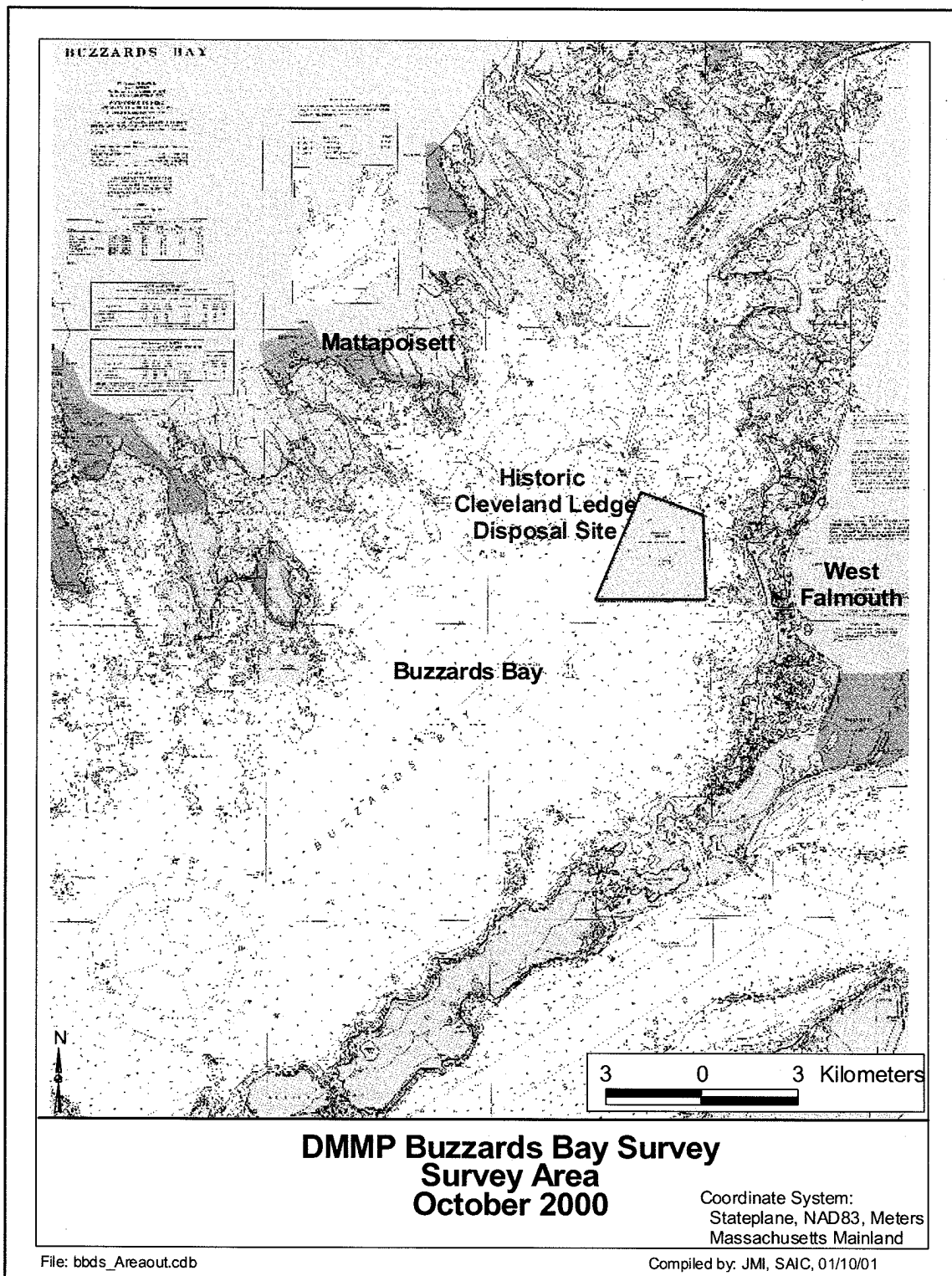


Figure 1-1 Map of Buzzards Bay showing the location of the historically-used CLDS off of West Falmouth (from NOAA Nautical Chart 13229).

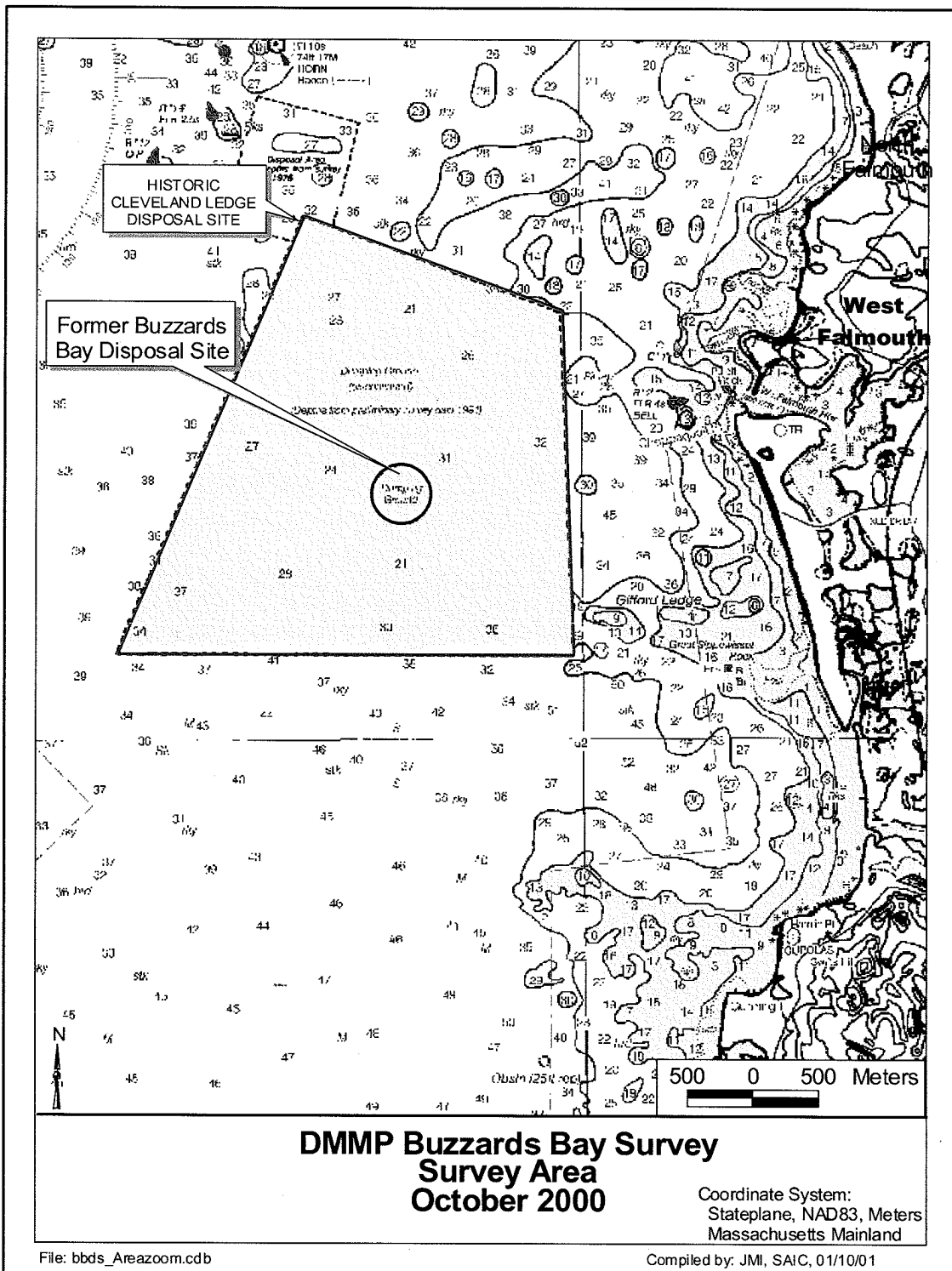


Figure 1-2 Map of the historic CLDS showing the location of the former BBDS.

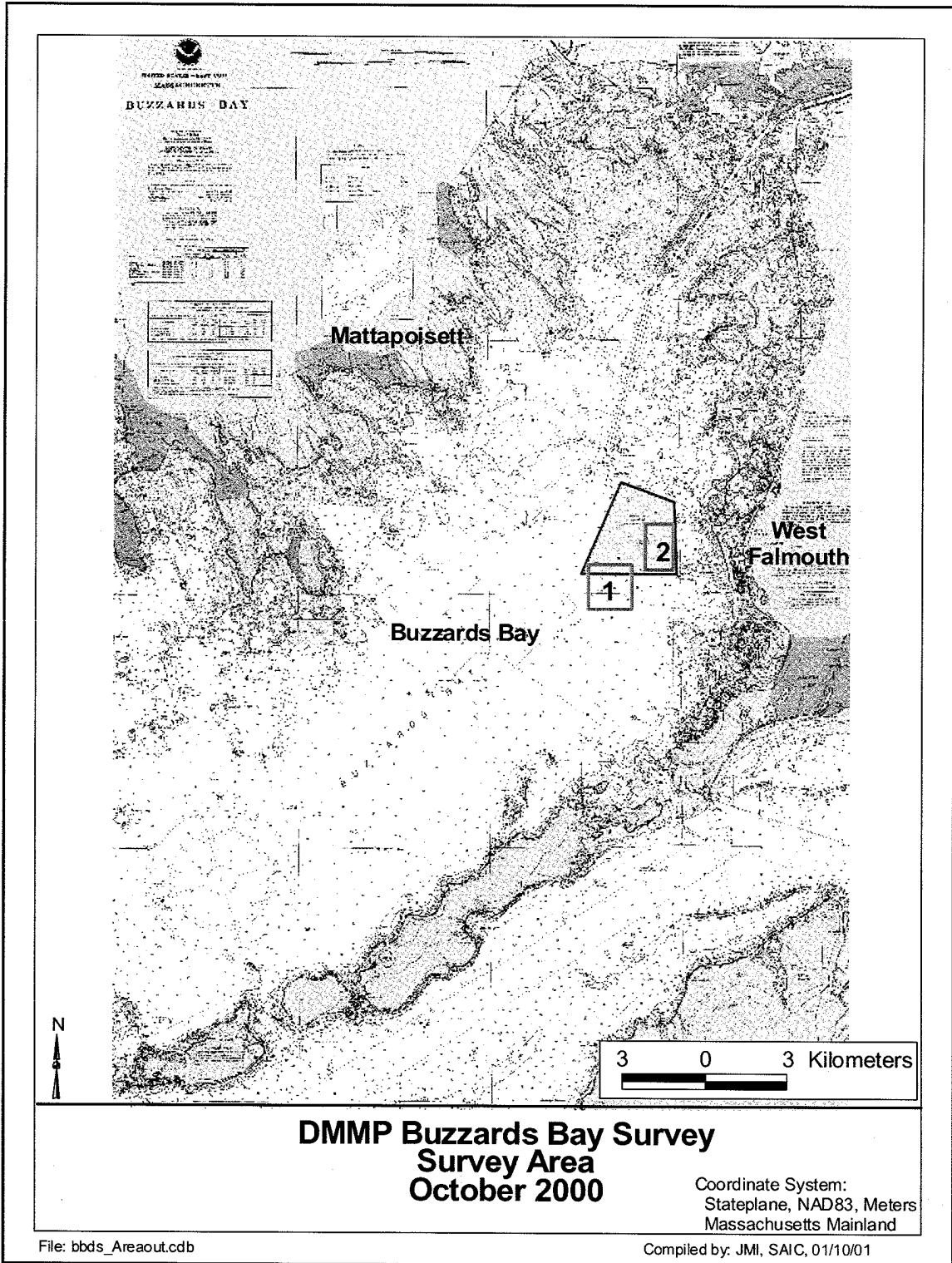


Figure 1-3 Map showing the location of candidate sites 1 and 2 in relation to the historic CLDS and former BBDS.

Attachment 4

NOPC for: Identification and Designation of a Buzzards Bay Disposal Site for Suitable
Dredge Material

EOEA #:10284

List of all agencies and persons to whom the proponent circulated the NPC, in
accordance with 301 CMR 11.10(7)

Recipient
Secretary of Environmental Affairs Executive Office of Environmental Affairs 100 Cambridge, 9th Floor Boston, Massachusetts 02114
Project Review Coordinator Coastal Zone Management 251 Causeway Street, Suite 800 Boston MA 02114-2136
Office of Waterways Department of Conservation and Recreation 349 Lincoln Street, Building 45 Hingham, MA 02043
Massachusetts Department of Environmental Protection Southeast Regional Office 20 Riverside Drive Lakeville, MA 02347
Yvonne Unger, Environmental Analyst, DEP-DWW, Boston Office, One Winter Street, Boston, MA 02108
Mike Gildesgame /Ocean Sanctuaries Program Department of Conservation and Recreation 251 Causeway Street, Suite 600 Box 02114
Secretary of the Commonwealth Massachusetts Historical Commission 220 Morrissey Boulevard Boston, MA 02125-3314

Division of Marine Fisheries Headquarters
251 Causeway Street, Suite 400
Boston, MA 02114-2152

Division of Marine Fisheries
Pocasset Office
50A Portside Drive
Pocasset, MA 02559

Natural Heritage & Endangered Species
Program
c/o Division of Fisheries and Wildlife
100 Cambridge Street, 19th Floor
Boston MA 02202

Regulatory Office
New England District
US Army Corps of Engineers
696 Virginia Road
Concord MA 01742-2751

Environmental Protection Agency
Permit Section
One Congress Street
Boston, MA 02114-2023

National Marine Fisheries Service, NOAA
Northeast Region
One Blackburn Drive
Gloucester, MA 01930 – 2298

MACC Main Office
10 Juniper Rd.
Belmont, MA 02478

Buzzards Bay Project
National Estuary Program
2870 Cranberry Highway
E. Wareham, MA 02538

The Coalition for Buzzards Bay
620 Belleville Avenue
New Bedford, Massachusetts 02745

Cape Cod Commission 3225 Main Street Barnstable MA 02630 -0226
Falmouth Conservation Commission 59 Town Hall Square Falmouth, MA 02540
Falmouth Planning Board 59 Town Hall Square Falmouth, MA 02540
Falmouth Selectmen 59 Town Hall Square Falmouth, MA 02540
Falmouth Public Library Katherine Lee Bates Rd. Falmouth, MA 02540
Executive Office of Communities and Development State Clearinghouse 100 Cambridge Street, 9 th Floor
John Jacobson Barnstable Dept. of Public Works 367 Main Street Hyannis, MA 02601
Massachusetts Audubon 208 South Great Road Lincoln, MA 01773
Massachusetts Sierra Club / Cape Cod Group 100 Boylston Street Boston, MA 02116

EXECUTIVE SUMMARY

This Draft Environmental Impact Report (DEIR) evaluates the proposal by the Commonwealth of Massachusetts (Commonwealth) to designate the Buzzards Bay Dredged Material Disposal Site (Buzzards Bay Disposal Site, or BBDS) located in Falmouth, Massachusetts. The purpose of the project is to provide state designation of a disposal site in Buzzards Bay for dredged material determined to be suitable for such open-water disposal (hereinafter referred to as “clean dredged material” or CDM).

This DEIR follows the Scope specified in the Environmental Notification Form (ENF) Certificate issued by the Secretary of the Executive Office of Environmental Affairs (EOEA) on May 10, 1995, as well as additional comments specified in two Notice of Project Change (NPC) Certificates issued by the Secretary on April 4, 1998 and May 23, 2005. The 1998 NPC included consideration of two specific changes: (a) modifying the proposed site use to include disposal of dredged material of all grain sizes, rather than only medium to coarse grained material as originally proposed; and (b) modifying the actual disposal site location to consider two candidate disposal sites in close proximity to the historically-used BBDS that provide adequate capacity for long-term use consideration (20 years, consistent with State-wide Dredged Material Management Plan objectives). The 2005 NPC was filed due to lapse of time and did not include any significant changes to the project.

This DEIR includes an estimate of the quantity and type of dredged material suitable for open water disposal in the Buzzards Bay region over the next 20 years; an evaluation of alternative disposal sites; physical, biological, and human use characterizations of the two candidate disposal sites; assessment of potential impacts from disposal at the candidate sites; and a recommendation of the preferred candidate site for state designation. Also included are a summary of the permitting requirements for open water disposal in the Commonwealth, a draft Site Management and Monitoring Plan (SMMP), draft Section 61 findings, and responses to comments raised in response to the ENF and subsequent NPCs.

Purpose and Need for BBDS. Estimates of future dredging needs were derived from historical records of dredging projects for the period 1920 to 1993 for Buzzards Bay, the Cape Cod Islands (Cuttyhunk and Nantucket), and the Cape Cod Canal. The potential volume of CDM to be dredged to create the New Bedford Harbor confined aquatic disposal (CAD) cells was also included in the 20-year projected volume of material. From this estimate, the projected volume of dredged material that is expected to be disposed through selection of the open water alternative in the Buzzards Bay region over the next 20 years is 1,613,761 cubic meters (2,110,720 cubic yards).

Policy Regarding Open Water Disposal. Federal and state regulatory programs with jurisdiction over dredging and open water disposal require individual review of each potential disposal activity at the proposed state-designated site, including an evaluation of alternative disposal options. Beneficial beach nourishment and upland disposal/reuse are two options currently considered as alternatives to open water disposal of CDM in the Commonwealth. The regulatory framework also includes a tiered testing protocol to determine whether the material to

be dredged is clean with respect to chemical contaminants and therefore suitable for open water disposal (i.e., adverse impacts on the aquatic ecosystem are unlikely). Therefore, the site designation process does not constitute authorization for specific disposal activities at the designated site. Rather, it provides a designated open water disposal site that can be included for consideration in the range of alternatives that may be available for individual dredging projects.

Alternatives Analysis. In examining the need for an open-water disposal site, this DEIR includes an evaluation of alternative disposal options. The analysis of upland/reuse alternatives that was prepared for the Buzzards Bay region as part of the Environmental Impact Statement (EIS) for New Bedford/Fairhaven was recently certified by the Secretary and has been summarized and applied herein. The aquatic disposal alternatives screening includes an evaluation of dredged material disposal at historic Buzzards Bay sites and the feasibility of using the historically used site; the feasibility of using one or both of the existing open water disposal sites in Massachusetts [Cape Cod Bay Disposal Site (CCDS), and Massachusetts Bay Disposal Site (MBDS)]; as well as the feasibility of using a federal designated site in Rhode Island Sound (Rhode Island Region Long-Term Dredged Material Disposal Site, Site W). A bay-wide analysis of potential new disposal site locations in Buzzards Bay is presented leading to an evaluation of the potential impacts associated with designation of either of two candidate disposal sites located in close proximity to the historical BBDS and Cleveland Ledge Disposal Site (CLDS).

Justification of the need for an open-water disposal site was drawn from several recent, large-scale studies of dredging and dredged material disposal in the Commonwealth and the wider surrounding region [state-wide DMMP evaluations, the Boston Harbor Navigation Improvement Dredging Project (BHNIP), and the Providence River and Harbor Maintenance Dredging Project (PRMP)]. These projects have included detailed evaluations of disposal alternatives throughout eastern Massachusetts, Rhode Island and a portion of eastern Connecticut. These studies indicate the lack of availability of a single upland site, or several smaller suitable upland sites, capable of accommodating disposal of a substantial volume of material.

The historically used BBDS is located in relatively shallow water, and portions of the site experience active sediment transport as evidenced by observations of sand waves in images of the bottom obtained using side-scan sonar. Additionally, the site is relatively small (about the diameter of a typical disposal mound) and does not have adequate capacity for the 20-year projected time period being planned for by the Commonwealth through the state-wide DMMP process. Use of the existing CCDS and/or MBDS for open water disposal is prohibitively expensive based on the transit distances between Buzzards Bay dredging sites and these two disposal locations.

Because the historically-used BBDS was determined not to be the ideal location for state site designation, two candidate disposal sites, candidate site 1 and candidate site 2, are evaluated in this DEIR to assess and compare potential impacts and suitability for long-term disposal site designation.

Candidate site 1 is 1,600 meters by 1,600 meters (1 square mile) located approximately 500 meters southwest of the historically used BBDS. Roughly 300 meters of the northern section of candidate site 1 is contained within the historic CLDS boundary. Candidate site 2 is a

rectangular area that is 1,000 meters by 1,700 meters (0.66 square mile) in size and centered immediately east of the BBDS (and slightly overlapping the BBDS boundary). Candidate site 2 is contained entirely within the boundary of the historic CLDS. Most of the area encompassed by each site has a water depth of 12 meters (39 feet) or greater, thereby providing significantly greater capacity to accommodate the anticipated volume of dredged material compared to the former BBDS. Both sites have more than adequate capacity to accommodate projected 20-year estimates of the amount of material that may require open water disposal.

Site Characterization. The characteristics of candidate sites 1 and 2 are described using available references, past surveys of the historical BBDS, and surveys conducted specifically to evaluate existing conditions within and around each site. Bathymetry, site accessibility, site capacity, sediment grain size and chemistry, hydrodynamic conditions and water column chemistry, biological conditions (benthic community and fishery resources), wildlife habitat (including rare and endangered species habitat areas), wetlands and other resource areas, historical and archaeological resources, and human use characteristics of each site are evaluated. Once evaluated, characteristics of candidate site 1 are compared to those of site 2.

Potential Impacts. Potential impacts to the site characterization features listed above are evaluated in the DEIR, including a comparison of the suitability of candidate site 1 and candidate site 2 with respect to each of the factors described above. While both sites could be deemed suitable for designation, a conservative recommendation favors candidate site 1 over candidate site 2 for several reasons. Candidate site 1 consists of a relatively broad, flat area without any substantive obstructions to navigation, while candidate site 2 is closely bordered by two shallow areas (Gifford Ledge to the east and a historical disposal mound to the west) that may hinder safe barge maneuvering.

Existing grain size information suggests that candidate site 2 experiences slightly greater hydrodynamic conditions than candidate site 1 (based on the prevalence of slightly coarser substrate at candidate site 2 and predominance of sand to a greater water depth, 13 meters, than at candidate site 1, 12 meters). Therefore, while both sites have depositional basins featuring no net transport of fine-grained substrates and adequate capacity for dredged material disposal, a conservative recommendation favors candidate site 1 because it appears to provide increased sediment stability and decreased potential for sediment reworking and erosion of fines.

Gifford Ledge and the historical disposal mound that border candidate site 2 are features that provide enhanced habitat areas for finfish, shellfish, lobster, and other wildlife such as waterfowl that feed in the area. While biological surveys do not indicate any significant differences in the habitat characteristics of candidate site 1 compared to candidate site 2, and both short- and long-term impacts from disposal activities beyond the disposal site boundary are anticipated to be negligible, a conservative recommendation favors candidate site 1 because it is located further from Gifford Ledge.

Based on these conservative recommendations, the overall site suitability evaluation favors designation of candidate site 1.

Project Mitigation. Detailed site management measures to ensure that no adverse environmental impacts occur from disposal activities are described in the draft Site Management and Monitoring Plan (SMMP) included in the DEIR. Detailed monitoring is proposed to ensure adverse impacts are negligible and/or are identified as soon as possible following disposal activities to allow appropriate and timely management actions.

Public Comment Process. This DEIR represents a key milestone in the MEPA (Massachusetts Environmental Policy Act) review process for public comment. Upon notification of receipt of this DEIR by the Secretary of Environmental Affairs, in the *Environmental Monitor*, there will be a review and public comment period from the date of notification of the availability of the report. Comments on the Buzzards Bay BBDS should be directed to the MEPA office:

Secretary
Executive Office of Environmental Affairs
Attention MEPA Office
EOEA No. 11534
251 Causeway Street, Suite 900
Boston, MA 02114-2150