Neponset River Estuary

Area of Critical Environmental Concern

Resource Management Plan

March 1996

Massachusetts Executive Office of Environmental Affairs
Department of Environmental Management
Areas of Critical Environmental Concern (ACEC) Program

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Neponset River Acronym List

BNAF	Boston Natural Areas Fund
Boston BOH	Board of Health
Boston CC	Conservation Commission
Boston DPW	Department of Public Works
Boston ED	Environment Department
Boston PD	Parks Department
BRA	Redevelopment Authority
BW&SC	Water and Sewer Commission
DEM	Department of Environmental Management
DEM/ACEC	Areas of Critical Environmental Concern
DEM/CA/SP	Coastal Access/ Sea Path Program
DEP	Department of Environmental Protection
DEP/BRP	Bureau of Resource Protection
DEP/BWSC	Bureau of Waste Site Clean Up
DEP/DWW	Division of Wetlands and Waterways
DEP/OWM	Office of Watershed Management
DFWELE	Department of Fisheries and Wildlife Environmental Law Enforcement
DFWELE/DMF	Division of Marine Fisheries
DFWELE/Riverways	Riverways Program
DFWELE/DFW	Division of Fisheries and Wildlife
DFWELE/DFW/NHP	Natural Heritage Program
DFWELE/PAB	Public Access Board
EOEA	Executive Office of Environmental Affairs
EOEA/OTA	Office of Technical Assistance
EOEA/WRBP	Wetlands Restoration and Banking Program
JBC	Joint Beaches Commission
MAPC	Metropolitan Area Planning Council
MBTA	Massachusetts Bay Transit Authority
MCZM	Massachusetts Coastal Zone Management
MDC	Metropolitan District Commission
MHC	Massachusetts Historical Commission
MHD	Massachusetts Highway Department
Milton BOS	Board of Selectmen
Milton CC	Conservation Commission
Milton DPW	Department of Public Works
Milton PD	Parks Department
Milton Planning	Planning Department
MWRA	Massachusetts Water Resource Authority
NepRWA	Neponset River Watershed Association
NepRWA-FONE	Friends of Neponset Estuary
NepRWA-UM	Urban Monitors
NR Coordinator	Neponset River Coordinator
NRESC	Neponset River Estuary Stewardship Council
NRWCC	Neponset River Watershed Community Council
Quincy BOH	Board of Health
Quincy CC	Conservation Commission
Quincy DPW	Department of Public Works
Quincy PD	Parks Department
Quincy Planning	Planning Department
STH/STB	Save the Harbor/ Save the Bay
TBHA	The Boston Harbor Association
TPL	Trust for Public Lands
TTOR	The Trustees of Reservations
UMass Boston	UMass Boston
USACOE	US Army Corps of Engineers
USFWS	US Fish and Wildlife Service

Preface

In September 1994, the Neponset River Watershed Association and the Boston, Milton and Quincy Conservation Commissions nominated the Neponset River Estuary as an Area of Critical Environmental Concern (ACEC). The intent of the nomination was to engage the Commonwealth in efforts to protect existing natural and cultural resources and to identify methods of restoring degraded resources. An extensive public review and Executive Office of Environmental Affairs (EOEA) interagency review followed. On March 27, 1995, under the authority of Massachusetts General Law Chapter 21A, Section 2(7), Secretary of Environmental Affairs Trudy Coxe designated the Neponset River Estuary an ACEC with an effective date of December 1, 1995 (see Appendix A for the designation document).

The Neponset River Estuary ACEC designation is notable for two reasons. First, it recognizes the critical importance of the natural resources situated in a heavily urbanized area and, second, in making the designation, the Secretary, for the first time, directed the agencies of the Executive Office of Environmental Affairs (EOEA) to collaborate with municipalities, environmental and community groups and organizations, local businesses and residents, and other interested parties to prepare a Resource Management Plan (RMP) for the ACEC.

The purpose of the Neponset River Estuary ACEC Resource Management Plan is to guide implementation of the Neponset River Estuary ACEC designation, i.e., those activities for preserving, restoring, enhancing, using, and managing the resources of the estuary, and to coordinate the activities and interests of federal, state and local agencies and the public and private sectors within the ACEC. The Secretary also required the RMP to address certain regulatory and boundary issues identified in the designation document and to propose, as appropriate, recommendations for amending the designation prior to its December 1, 1995 effective date.

A draft Resource Management Plan (RMP) and proposed amendments to the ACEC designation were distributed for public review and were the subject of a public hearing on November 15, 1995. On December 1, 1995 the Secretary issued her decision to amend the Neponset River Estuary ACEC designation incorporating a technical clarification of the ACEC boundary and providing for limited exemptions for specified environmentally beneficial activities. She also issued the MEPA Certificate asking that the RMP be further developed and refined, particularly in regard to coordination with other on-going planning initiatives, and to include a detailed implementation plan.

Executive Summary

Introduction

On March 27, 1995 the Secretary of Environmental Affairs designated the Neponset River Estuary an Area of Critical Environmental Concern (ACEC) under the authority of Massachusetts General Laws Chapter 21A, Section 2(7). In making the designation, the Secretary also directed the agencies of the Executive Office of Environmental Affairs (EOEA) to collaborate with municipalities, environmental and community groups and organizations, local businesses and residents, and other interested parties to prepare a Resource Management Plan (RMP) for the Neponset River Estuary ACEC.

The purpose of the Resource Management Plan is to guide the implementation of the Neponset River Estuary ACEC and coordinate the activities and interests of federal, state and local agencies and the public and private sectors within the ACEC. As required by the designation, the plan also addresses regulatory and boundary issues identified in the designation document and raised during the public review process leading to the designation.

The Resource Management Plan for the Neponset River Estuary ACEC describes the existing conditions of the natural resources, human uses, and interests of state, local and federal government and citizen advocacy groups. It establishes goals to guide future decisions and actions in the Neponset River Estuary ACEC; identifies issues of resource preservation, restoration, enhancement, and use; and makes recommendations for managing the resources. Section I of the RMP introduces the ACEC program, details the purpose of the RMP, and discusses the associated state, municipal, regional, nonprofit, and federal agencies and programs affecting the Estuary. Section II details the recommended actions and tasks for meeting each goal for each resource feature identified in the ACEC designation. Section III discusses the implementation strategy for the RMP and plan evaluation and schedule for revision of the plan.

Following an extensive review and evaluation of the regulatory analysis and recommendations for amendments to the designation contained in the draft RMP, and based on public hearing testimony and written comments received, the Secretary of Environmental Affairs adopted amendments to the original designation on December 1, 1995. These amendments provide limited exemptions from the ACEC for certain environmentally beneficial activities that are instrumental in the restoration of natural resources within the ACEC. In order to avoid any unnecessary delays in the implementation of these rehabilitation projects and because they provide a net environmental benefit and are consistent with the goals of the ACEC, the Secretary exempted certain activities associated with the closure and capping of the Hallet Street landfill, the remediation of hazardous waste sites, and specified improvement dredging projects. The Neponset River Estuary ACEC is notable for recognizing the critical importance of preserving and managing a highly significant estuarine ecosystem situated in a heavily urbanized area.

The Planning Process

The current Final Resource Management Plan is being submitted to MEPA for a final public review on March 15, 1996, to be noticed in the Environmental Monitor on March 25th. A 30-day public comment period will follow, after which the Secretary will issue her final findings on the plan. At that point the plan becomes a working document to be implemented and revised over time.

This planning process began in September 1994, when the Neponset River Watershed Association and the Boston, Milton and Quincy Conservation Commissions nominated the Neponset River Estuary as an Area of Critical Environmental Concern (ACEC). The intent of the nomination was to engage the Commonwealth in efforts to protect existing natural and cultural resources and to identify methods of restoring degraded resources. An extensive public review of the nomination was conducted by the Executive Office of Environmental Affairs (EOEA). On March 27, 1995, Secretary of Environmental Affairs Trudy Coxe designated the Neponset River Estuary an ACEC with an effective date of December 1, 1995 and requested that an RMP be prepared (see Appendix A for a copy of the ACEC designation document). The Department of Environmental Management (DEM), which administers the Massachusetts ACEC Program, drafted a scope for the RMP and retained consultants to draft the plan under the guidance of a steering committee.

The identification of issues and development of the goals upon which this Resource Management Plan is based was guided by a steering committee representing the four co-nominators of the ACEC designation: the conservation commissions of Boston, Milton and Quincy, and the Neponset River Watershed Association; four representatives of the Executive Office of Environmental Affairs (EOEA): the Coastal Zone Management Program (MCZM), Department of Environmental Management (DEM), the Department of Environmental Protection (DEP), and the Metropolitan District Commission (MDC); and representatives of environmental and community groups.

A draft Resource Management Plan and proposed amendments to the ACEC designation were distributed for public review and were the subject of a public hearing on November 15, 1995. The draft Resource Management Plan also underwent a concurrent review in accordance with the requirements of the Massachusetts Environmental Policy Act (MEPA) regulations. On December 1, 1995, the Secretary issued her decision to amend the Neponset River Estuary ACEC designation incorporating a technical clarification of the ACEC boundary and providing for limited exemptions for environmentally beneficial activities (see Appendix B for a copy of the ACEC Amendments document).

The findings and conclusion of the MEPA review of the draft RMP are presented in the Certificate of the Secretary of Environmental Affairs, EOEA #10516, issued December 1, 1995 (see Appendix B for the designation of amendments and Appendix C for the MEPA Certificate). In the Certificate, the Secretary acknowledged the accomplishments of the draft RMP including the need and justification to adopt the amendments to the ACEC. She also asked that the plan be further developed and refined, particularly in regard to coordination with other on-going planning initiatives and to include a detailed implementation plan. Between December 1, 1995 and March 15, 1996, the steering committee, other state and municipal agencies, nonprofit environmental groups, citizen reviewers, and the consultants continued to revise the plan and identify specific implementation tasks.

Significance of the Neponset River and Resources

The Neponset River flows 27 miles (45 km) from the Neponset Reservoir in Foxboro to Dorchester Bay. The total drainage area of the watershed is 323 square miles. The estuarine section of the river extends from Lower Mills Dam to its mouth at Commercial and Squantum points, an area of approximately 1300 acres. Among its resources are one of the two remaining salt marshes in Boston Harbor, fisheries and wildlife habitat, active and passive recreation, historic and anthropological sites, and beautiful natural and urban vistas. The value of these resources was found to be of regional significance in the ACEC designation for their outstanding natural and cultural characteristics, and for the intrinsic value of the estuarine ecosystem. Urbanization during this century, however, has slowly degraded the resources of the ecosystem making this present restoration and protection effort appropriate.

Important criteria in support of the designation of this area as an ACEC include significant threats to public health through contamination to shellfish beds and water quality; uniqueness of the area through the presence of state-listed rare species; the biological productivity of the estuarine wetlands system; and the potential economic benefits in terms of recreation, tourism and fisheries from a restored and healthy ecosystem.

Goals for the Neponset River Estuary ACEC

The goals for the Neponset River ACEC endorsed by the steering committee were shaped from a draft list of resource management goals and objectives prepared by EOEA which was based on a list originally suggested by the nominators of the Neponset River Estuary ACEC. The draft goals and objectives were distributed for public review and comment during the nomination process. Goals have been developed for each of the resource features identified in the nomination in order to address their restoration, enhancement, preservation, and management.

Overall

Preserve, enhance, restore, manage, and encourage appropriate use of the natural and cultural resources of the estuary of the Neponset River.

Surface Waters and Water Quality

Protect and improve the water quality conditions of the Neponset River Estuary in order to meet, or where possible exceed, state water quality standards.

Estuarine and Freshwater Wetlands

Preserve, protect, and restore wetlands in the Neponset Estuary.

Habitat Resources

Preserve, protect and restore fisheries and wildlife habitat in the Neponset Estuary.

Finfish

Protect, restore, and enhance anadromous fish runs and habitat/breeding grounds for salt water species.

Shellfish

Preserve, protect, and restore shellfish beds to increase the availability of the resource for wildlife and for commercial and recreational use.

Wildlife

Protect and restore the salt marsh, brackish marsh, coastal bank, barrier beach and the vegetated 100 foot buffer zones, as self-regulating systems, in order to support the full range of biological diversity in the Estuary, including rare and endangered species.

Special Use Areas

Protect, enhance, and increase publicly-owned open space in the Estuary for its recreational and educational value.

Cultural, Historical and Archeological Resources

Preserve, protect, enhance, and restore historic and anthropological sites in the Neponset Estuary.

Economic Development

Encourage appropriate land and water uses that provide public benefits and are compatible with sound resource protection and management.

Water-dependent Uses

Preserve and encourage water-dependent uses.

Summary of Major Recommendations of the RMP

The Resource Management Plan contains regulatory and nonregulatory actions for preserving, restoring, enhancing, using, and managing the resources of the Neponset River Estuary ACEC. Viewed collectively, the recommended actions provide a comprehensive plan for protecting the natural value and functions of the Estuary's resources and, where possible, accommodate and encourage appropriate economic and recreational use.

The recommended actions or suggested tasks are presented by resource type and activity. In most cases, each recommended action or task suggests an initial list of *key parties* which are encouraged to coordinate and cooperate in implementing it. A *lead party* has been identified and other parties may need to become involved eventually. Likewise, a suggested *timetable* and *potential resources* needed to accomplish the task are identified. In all cases, every effort has been made to complement and incorporate other planning efforts underway in the river especially the MDC Master Plan—through which many substantial recreation, open space and remediation opportunities will occur.

Three overlying themes emerged from the development of the RMP and its numerous individual tasks. First, the daunting challenge of restoring the water quality of an urban estuary is the determining factor for most of the natural resource related goals, such as salt marsh, fisheries resources, and wildlife habitat restoration. Second, MDC's ongoing Master Plan effort represents an exciting and rare opportunity to achieve well-planned, sustainable recreational use and public access to a rather sizable length of riverfront. Third, given the urbanized nature of this ACEC, several environmental remediation projects need to be undertaken on an expedited basis.

Water quality. Several tasks in the Surface Waters and Water Quality section of the RMP recommend further identification and elimination of point and nonpoint sources of pollution. The water quality of the Estuary has been classified as SB, fishable/swimmable by the DEP, but it is significantly polluted and does not meet those standards. Assessment has indicated

that many of the sources of pollution emanate upriver above the ACEC or are from nonpoint sources in areas adjacent to the ACEC. Therefore, an overriding recommendation of the RMP calls for the implementation of nonpoint source plans and stormwater management plans for the areas immediately adjacent to the ACEC as well as for the entire watershed.

The MDC Master Plan. Due to the significance and scope of the MDC properties and planning processes in the ACEC, and because the MDC Master Plan and Park Design Project for the Lower Neponset River anticipates activities and uses consistent with the goals of the ACEC, the RMP recommends that the Master Plan, once completed, reviewed, and approved by the Secretary of EOEA, become an addendum to the RMP and that its timely implementation be a priority recommendation of the RMP and all involved agencies. The Master Plan will not only address increased public access and recreational activities, but also incorporates several major remediation and restoration projects. A discussion of the Master Plan and most of the RMP's recommendations for implementation of this plan are found in the Special Use section of this plan.

Environmentally beneficial projects. Several recommendations address major landfill closure, hazardous waste site remediation projects and some limited improvement dredging projects. One concern raised in the nomination review process was whether the increased scrutiny and potential for more stringent standards for permitting activities within or affecting the ACEC could hinder or delay the implementation of these projects.

Because the overriding purpose of ACEC designation is to "preserve, enhance, restore, manage, and encourage appropriate use of the natural and cultural resources," the draft RMP recommended that these environmentally beneficial activities be given limited exemptions from the ACEC designation through formal amendments adopted by the Secretary of EOEA. Following public review and EOEA evaluation, the Secretary adopted these amendments on December 1, 1995. These specified activities will continue to be subject to all other requirements of wetland, waterways, and other environmental laws and regulations, and are exempted on the condition that the owner (or its agents) takes all practicable measures to avoid and minimize further degradation of adjacent resources and to mitigate any unavoidable impacts to the greatest extent possible.

The closure and capping of the Hallet Street and Neponset Drive-In landfill sites represents the largest remedial action to improve the environmental quality of the ACEC. Both the review and evaluation process and the ultimate remedial actions will be complex. The process will be conducted under the direction of the Metropolitan District Commission (MDC) as part of the landfill assessment actions (Initial and Comprehensive Site Assessments) and landfill closure construction, as determined through DEP/DSWM's Corrective Alternative Action Analysis (CAAA) process.

Implementation Strategy and Plan Revision

Based on the steering committee and interagency discussions, the recommended process for evaluation of the plan's implementation and periodic revision is as follows.

The overall and most effective mechanism for advancing the goals of an ACEC is cooperation and collaboration among public agencies, nonprofits, the private sector, and the public. These cooperative efforts are realized through increased communication and education, joint efforts toward meeting common objectives, and evaluation of the progress gained through those efforts.

This resource management plan proposes numerous tasks to implement the goals and objectives of the ACEC, all of which depend on a commitment by a collaboration among various government and nongovernmental entities. The implementation of the tasks suggested in this plan will occur over time as the agencies deemed responsible and cooperating parties are able to incorporate the tasks into their yearly work plans. The plan provides a reference document as well as a working blueprint for improvements to the Estuary.

As a state designation, an ACEC requires agencies of the Executive Office of Environmental Affairs (EOEA) to take actions to preserve, restore, and enhance the resources of the ACEC. This ACEC resource management plan recommends various tasks that state agencies can cooperatively implement. Many state agency representatives would also be involved through participation in the Neponset Estuary ACEC Stewardship Council, discussed below, and resource management plan revisions.

EOEA's Neponset Watershed Project, conducted in conjunction with the Neponset River Watershed Association provides a framework for the extensive cooperation and coordination required to effectively implement this RMP. The ACEC designation highlights the estuarine ecosystem within this larger watershed initiative. However, all tasks in this RMP are recommended with the expectation that they be closely aligned and integrated with the management strategies and plans being developed by other major planning initiatives within this watershed and estuary. These include the MDC Master Plan, the Friends of the Neponset Estuary Action Plan, the BNAF/TPL Neponset Greenway Plan, the Neponset River Watershed Action Plan, the Plan for the Future of Boston Harbor Beaches, and the EOEA Watershed Wetlands Restoration Plan.

The RMP recommends that an ACEC Stewardship Council be organized for the purpose of periodically reviewing and evaluating the progress made in implementing the RMP, building consensus, and recommending further actions or changes to the RMP. It is also recommended that this process be conducted at meetings twice each year by all interested parties, including the ACEC nominators, municipal, state agency, and nonprofit environmental group representatives, local businesses, and citizens.

In order to facilitate the Council's actions, the RMP recommends creation of a position of Neponset River Coordinator, housed in the community at the Neponset River Watershed Association, who would be primarily responsible for coordination, public outreach and technical assistance. With several initiatives currently active in the Neponset River, a single point of contact and coordination would be beneficial to all, especially the citizens who have been active in many of these programs.

It is envisioned that the Stewardship Council will hold semiannual meetings in September and March and other meetings as deemed necessary. An annual update report would be prepared by the Neponset River Coordinator based on these meetings and for the review and approval by the ACEC Stewardship Council. The report would describe the status and updated timetable for each implementation task in the RMP and would provide other updates and additions. Achieving the goals of the ACEC will be an iterative and dynamic process, and the Stewardship meetings and annual report will help focus and evaluate the numerous activities that will be involved.

If future meetings and evaluations reveal the need for plan revisions to address Chapter 91 Waterways Regulations requirements for private docks and piers, formal review and approval by the Secretary of Environmental Affairs will be required. The Neponset River Coordinator would consult DEM's ACEC Program for guidance. The process is outlined in EOEA's "Policy Guidelines for the Review and Approval of ACEC Resource Management Plans."

Future plan updates and the results of other ongoing planning efforts within the ACEC may also involve proposals for further amendments to the designation. The procedures for amending the ACEC designation itself are contained in the regulations of the Executive Office of Environment Affairs (301 CMR 12.00). Changes to the boundary or provisions for further improvement dredging projects not specified in the currently designated ACEC, are examples of changes that would require formally amending the ACEC designation. Such proposals should first be considered and endorsed by the Stewardship Council, and be brought to DEM's ACEC Program for review before being formally submitted to the Secretary for consideration.

Conclusion

The rich and varied resources of the Neponset Estuary ACEC have been shaped by the interaction of complex natural processes and intense human activities. Its present highly stressed condition is troublesome. The potential for restoration and enhancement of its environmental quality and economic viability is substantial; but the challenge can be daunting. The first steps have been taken. The citizens have clearly voiced their concern and desire for improvements. The ACEC designation has focused responsible agencies and individuals' attention on the critical issues and goals. Now, the Resource Management Plan provides the first set of strategies and tasks needed to achieve these goals. Every task will require significant coordination and collaboration. The RMP, itself a product of wide collaboration among the interested parties, needs to be viewed as a dynamic mechanism that is implemented immediately, re-evaluated periodically, and adjusted as issues arise.

I. Introduction

The ACEC Program

The Massachusetts Areas of Critical Environmental Concern (ACEC) program is designed to promote the long-term preservation, management, and use of natural and cultural resources that have been determined to be of regional, state, or national significance. Resources of importance include fisheries, coastal geologic features, salt and fresh water wetlands, surface waters and water supplies, natural hazard areas, historical and archeological resources, wildlife habitat, and special use areas such as public recreation areas.

Areas that combine four or more of these features may be nominated by citizens, municipal or state agencies or the Governor for designation as an ACEC. A decision by the Secretary of Environmental Affairs to designate an area as an ACEC carries with it a requirement that all state environmental agencies acquire information about the resources of the ACEC; preserve, restore or enhance the resources of the area; and ensure that activities within the ACEC minimize adverse effects on the natural and cultural values of the designated area.

State agencies carry out this charge through coordinated regulatory review and revision, integrating policy and planning, and by assisting in the preparation of ACEC resource management plans which establish goals for resource protection and use and an implementation strategy.

For a detailed description of the ACEC program, the reader is referred to the Massachusetts Department of Environmental Management's (DEM) *ACEC Program Guide* (1993).

The Purpose and Structure of the Resource Management Plan

An ACEC resource management plan is a collaborative effort between Executive Office of Environmental Affairs (EOEA) agencies and municipalities, environmental and community groups and organizations, local businesses and residents, and other interested parties. A resource management plan is meant to develop resource management goals and implementation plans for the preservation, restoration, enhancement, use and management of the resources of an ACEC. The resource management plan, to the greatest extent possible, will guide the implementation of the ACEC designation and coordinate the activities and interests of federal, state and local agencies and the public and private sectors. Relevant regulatory and planning programs and certain collaborative programs are discussed below. Section II, Resource Management of the Neponset River Estuary, includes an inventory and assessment of the resources, and recommended guidance and tasks for accomplishing the goals of the plan.

In addition to providing a management structure for an ACEC, a resource management plan may address certain activities which are prohibited by state regulation in an ACEC in the absence of such a plan. Specifically, 310 CMR 32(1)(e)(4), DEP Waterways Regulations, prohibits construction of new privately-owned docks and piers in an ACEC unless provided for in a resource management plan adopted by the municipality and approved by EOEA. The

role of the resource management plan in this regard is to provide an analysis of the potential impact of such structures on the resources of the ACEC, and to provide a context and recommendation for the review and permitting of these types of structures.

Because the Neponset Estuary is a highly urbanized ACEC, it is characterized by extensive waterfront development, important public recreation lands owned and managed by the MDC, accumulated negative environmental impacts on water quality, salt marshes, fisheries and wildlife habitat, and critical environmental resource restoration needs and opportunities. In response to these circumstances, several regulatory issues were raised during the public review of the nomination. These issues, which included a reevaluation of the boundary and an assessment of the impact of ACEC designation on several major environmentally-beneficial projects, were examined in the October 1995 draft Resource Management Plan. Regulatory amendments drafted in conjunction with and supported by that plan were adopted by the Secretary of Environmental Affairs in December 1, 1995 following public review and hearing. As stated in the Secretary's Certificate on the Neponset River Estuary ACEC Resource Management Plan (EOEA #10516), "The Wetlands Protection Act, the Chapter 91 Waterways regulations and the MEPA regulations require stricter standards and a more sensitive review of projects within an ACEC. However, stricter standards and more sensitive review are not necessarily needed when an activity is designed to enhance the environment, especially when there is consensus that the existing environment is not pristine. Therefore, the . . . amendments exempt such beneficial activities from the ACEC designation, so that they may go forward without being subject to the ACEC-related standards." Those amendments pertain to regulatory provisions for landfill closures cleanup of hazardous waste (21E) sites, and future improvement dredging projects (see Appendix B).

The resource management plan is also meant to:

- provide the public with an outline of regulatory requirements and agency roles within the ACEC; at the same time establish a mechanism to integrate resource conservation and restoration objectives into the planning, management, and regulatory activities of the federal, state, and local governments;

- work towards improved decision making by recommending that the assessment of resource values and of cumulative impacts of estuarine development be undertaken in advance of individual project review;

- promote increased coordination and cooperation among the several municipalities, state and federal agencies, nonprofit groups and citizens in gathering and sharing information, considering future land and water use, reviewing proposed development, and in designing and implementing specific solutions to problems;

- streamline regulatory reviews through advance planning, inventory and research, and public/private cooperative efforts.

The resource management plan is meant to be an evolving document. It sets up a structure for on-going implementation and includes mechanisms for evaluating and amending the document (see Section III).

The Neponset River Estuary and the Significance of its Resources

The Neponset River flows 27 miles from the Neponset Reservoir in Foxboro to Dorchester Bay. The total drainage area of the watershed is 323 square miles. The Neponset River estuary is that segment where the flow of the Neponset River meets the coastal waters of Dorchester Bay. It extends from the Lower Mills Dam to the mouth of the river between Commercial and Squantum points and is within the cities of Boston and Quincy and the town of Milton (see Figure 1). The Neponset River Estuary ACEC covers an area of approximately 1300 acres.

Among its resources are one of the two remaining salt marshes in Boston Harbor, fisheries and wildlife habitat, active and passive recreation, historic and anthropological sites, and beautiful natural and urban vistas. The estuary has been fortunate in that some level of protection of its natural assets has been in place for a century, thus preserving its marshlands from the negative impacts of drainage and development. Urbanization, however, has slowly degraded the ecosystem, making this present effort at protection and restoration appropriate.

The estuary is also an economic resource. A variety of industrial, commercial and residential uses and infrastructure exist within and alongside the natural resources. These human uses of the estuary are important and this plan attempts to provide a management framework for both preserving, enhancing, and restoring natural and cultural resources and encouraging and integrating appropriate human uses.

The document designating the Neponset River Estuary an ACEC identified the following interests in support of the nomination of the Neponset River Estuary for protection under the ACEC program. It is useful to review them in the context of the resource management plan, as they set up the context for management planning and implementation in the estuary:

(1) Threats to Public Health Through Inappropriate Use

Much of the ACEC is floodplain, a natural hazard area. Although much of the upland portions of the ACEC are already developed, it was found that potential future inappropriate development in sensitive areas, increased impervious surfaces, and inadequately designed and constructed storm water measures constitute a threat to the resources of the ACEC and to public health and safety.

Contaminated shellfish beds due to poor water quality resulting from inappropriate development also constitute a potential threat to public health and safety. Although shellfish harvesting is restricted, attempts to harvest shellfish threaten public health. In addition, poor water quality threatens public health through the public use of beaches and swimming areas.

Finally, there is a threat to public health resulting from the location of at least 13 potential hazardous waste sites (also known as 21E sites) listed by the Department of Environmental Protection (DEP) as located within the nominated area as of December 16, 1994. This number includes the former Neponset Drive-In site owned by MDC.

(2) Quality of the Natural Characteristics

The undeveloped Neponset marshes are an outstanding natural characteristic significant to the region, and the recreational opportunities afforded by the river for boating, swimming and fishing, and by MDC lands and other open space areas for other forms of recreation strongly support ACEC designation.

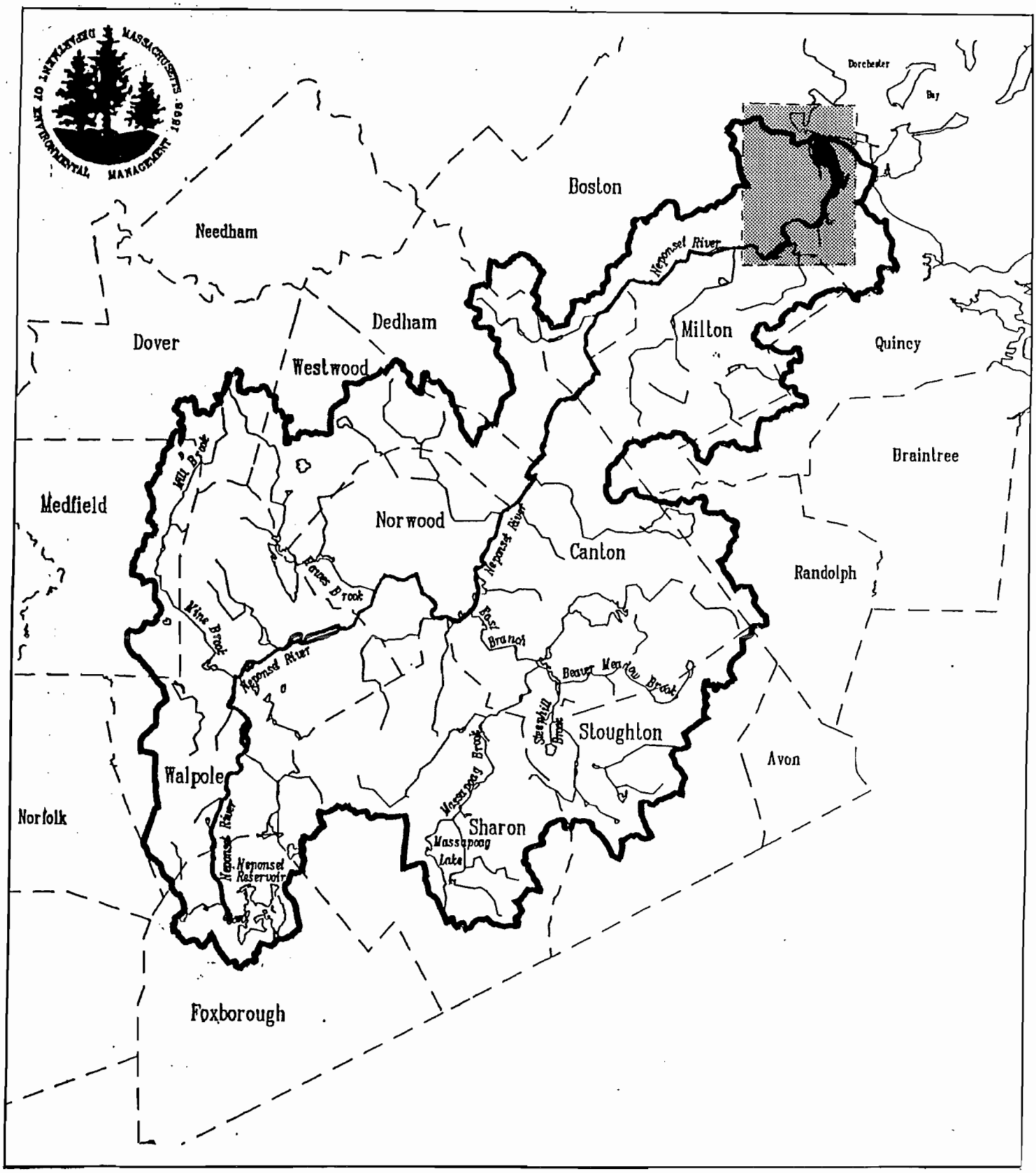


Figure 1: Map of the Neponset River Watershed (from Neponset River Basin Plan, Mass. DEM-Office of Water Resources) with the estuary indicated by shaded box.

(3) Productivity

Estuarine wetland systems are among the richest and most biologically productive ecosystems on earth, and the Neponset River estuary is no exception. Comments from the Massachusetts Division of Marine Fisheries and the Natural Heritage & Endangered Species Program underline the significance of the area regarding biological productivity and diversity of wildlife.

(4) Uniqueness of Area

The uniqueness of the area is defined from a regional, state or national perspective, considering features such as endangered plant and animal species, archaeological/historic/cultural resources, or other resources of educational value. The uniqueness of this area supports ACEC designation, through the presence of state-listed rare species and archaeological and historic resources, and the educational value this riverine, salt marsh ecosystem to the Boston metropolitan area.

(5) Irreversibility and Magnitude of Impact, and Imminence of Threat to the Resources

The resources of the Neponset River Estuary are subject to heavy historical and current development pressures that threaten their continued viability as a healthy and productive ecosystem. The condition of and threats to resources are similar if not identical to those described in the designation document for the Fowl Meadow and Ponkapoag Bog ACEC: "Historically, discharges to the Neponset River from a variety of sources resulted in extremely poor water quality. Water quality has improved since the passage and implementation of the Clean Water Act, but according to recent information from the DEP Bureau of Resource Protection (BRP), the river does not meet Class B standards. According to BRP, 'Through the discharge permit and construction grant programs, point sources have largely been cleaned up, but unless nonpoint sources are addressed, the river will not meet Class B standards. The river does not meet its designated uses because of high coliform bacteria counts, nutrient enrichment, and low dissolved oxygen levels. The sources of these pollutants are CSOs (Combined Sewer Overflows), exfiltration, urban runoff and septic systems . . .'"

It is essential that these kinds of conditions, combined with continued urban use and development pressures, do not result in irreversible environmental degradation of the Neponset River estuary. Therefore, the Neponset River Estuary ACEC designation is warranted to protect the resources from imminent threats, and highly significant, adverse and irreversible impacts.

(6) Economic Benefits

Economic benefits are described in the ACEC Regulations in terms of intrinsic values important to a region's economic stability, such as recreation, tourism, and fisheries development. Recreation values of the area associated with the Neponset River, and the extensive public recreation and open space areas, strongly support designation. Fisheries development supporting designation is also clearly documented.

(7) Supporting Factors

Over 70 comments were received regarding the nomination. Written or oral testimony was received from three state legislators; five municipal boards and commissions; 16 environmental and community organizations; three businesses; ten federal and state agencies; and over thirty citizens. Although not all comments supported ACEC

designation, and many expressed concerns or reservations regarding designation, the large majority of comments recognized the intrinsic value and importance of the area.

An ACEC designation requires higher standards of review by state agencies of certain proposed activities and encourages coordination of programs, plans and activities to achieve the goals of the designation.

The nomination process has pointed out the large number of conflicting visions that exist for parts of the Neponset River Estuary and, without a context for resolution of these differences, it is unlikely they will be resolved adequately or acceptably. The designation highlights the importance of the estuary's resources and focuses attention on issues of resource values, function, degradation and use. The designation of this ACEC, accompanied by the requirement to prepare a resource management plan, will prove to be an effective means for advancing the natural resource and human use values of this estuary.

A major value of ACEC designation is the educational opportunity it provides. The ecosystem orientation, the emphasis on coordination among government, nonprofit organizations, and the public, and the collaborative efforts to develop resource management goals make everyone more aware of the critical nature of the assets that are to be protected. An informed and engaged constituency is more likely to work to improve an ecosystem's environmental and human values.

The Boundary of the Neponset River Estuary ACEC

The boundary of the Neponset River Estuary ACEC, as designated, can be generally described to include the following:

1) the wetland resource areas of the Neponset River marshes and estuary, as defined by the Wetlands Protection Act regulations. The boundary generally follows the jurisdiction of the Wetlands Regulations, including the edge of the resource area and a 100-foot buffer. It does not include the floodplain where, in several locations, it extends beyond the 100-foot buffer of these resource areas.
2) adjacent public open space and historic districts.

The approximate boundary is shown on a GIS map produced by the Department of Environmental Management (Figure 2). Actual delineation of the 100-foot buffer zone of the wetlands resource areas would be made by the conservation commission during its review of a Request for Determination of Applicability or Notice of Intent using the procedures specified by the Wetlands Protection Act, M.G.L. Ch. 131, sec. 40, and DEP in the Wetlands Protection Regulations, 310 CMR 10.00.

The official document designating this ACEC contains the legal description of the boundary (Appendix A) with one technical clarification adopted as part of the amendments to the Neponset River Estuary ACEC (Appendix B).

Boundary Issues Raised in Original ACEC Nomination Review

The designation document for the Neponset River Estuary ACEC stipulated that the boundary as described therein be reevaluated during the preparation of the resource management plan and that any recommendations for amending the boundary be proposed prior to the December 1, 1995 effective date of the designation.
The boundary proposed in the *nomination* of the Neponset River Estuary utilized a number of types of features including roads, county line, zoning district lines, property lines, natural

Neponset River Estuary ACEC

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Scale 1:20,000

0 1 mile

0 1 kilometer

DEM/MassGIS, March 1996

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Legend

Neponset River Estuary ACEC boundary

This map is for planning and illustrative purposes only. It represents the best available digital statewide data for a given theme. It is not to be used by itself for legal boundary definition or regulatory interpretation. See the Neponset River Estuary ACEC designation document, as amended December 1, 1995, for the legal boundary description.

BOSTON

QUINCY

MILTON

203

3a

Figure 2: Map of the Neponset River Estuary ACEC boundary.

resources, setbacks and straight line distances between two points. While this kind of "architectural boundary" is for the most part readily identifiable on maps or in the field, it did raise a number of concerns about consistency and rationale for the boundary. Additional comments related to including floodplain areas, additional open water at the mouth of the river, and acreage around Commercial Point.

After consultation with the nominating parties, the Secretary selected a resource-based boundary, as described above, for the designated ACEC.

Several issues arose as a result:

A freshwater wetland on an undeveloped parcel of privately-owned land, excluded under the nominated boundary, was included. The property owner was concerned with additional restrictions on development potential.

Portions of developed single-family residential properties whose rear lot lines are coterminous with the saltmarsh border were included in the boundary by virtue of the 100-foot setback from the resource. Under the MEPA regulations, within an ACEC, an appeal to DEP of a conservation commission's approval of a regulated activity within the 100-foot buffer zone would require the proponent to prepare and file an Environmental Notification Form (since DEP's role would constitute a "state action"). This situation led to a concern that in some cases a single-family homeowner could be subject to an additional procedural requirement with perhaps little potential that increased environmental protection will be gained.

During the process of preparing the RMP, the ACEC boundary was reviewed on a parcel-by-parcel basis (including the Lower Mills historic district and the open space boundaries), boundary issues raised during the public review of the designation were thoroughly evaluated, and interviews were conducted with several affected property owners.

For all of the following reasons it was concluded that the resource-based boundary is the best delineation. It (1) encompasses the most critical natural resources, (2) reflects the ecosystem orientation of the ACEC program, (3) is consistent and equitable, and (4) provides a reasonable boundary for the three municipalities in which the ACEC exists and one that is already utilized by the local conservation commissions and DEP in administering the Wetlands Protection Act.

The freshwater wetlands on Squantum Point are an important component of the diverse habitat found at this location. This variety of habitat types in a relatively small area is one of the primary reasons for the unusual abundance of birds (including several state-listed rare species) and high diversity of species found on Squantum Point (see Appendix E). Including these freshwater wetlands within the boundary is consistent with the habitat protection goals of the ACEC.

The resource management plan recommends no changes to the resource-based boundary definition of the designation document. One technical revision to clarify a potential misinterpretation of the boundary was recommended and adopted by the Secretary as an amendment to the designation. Specifically, the explanatory note following the eleventh paragraph in the "Final Boundary Description of the Neponset River Estuary ACEC" contained in the designation document was revised to read:

> [Explanatory note: By following the 100-foot wetlands buffer two "islands" of upland are not included within the ACEC boundary. The first lies within property known as No. 2 Granite Avenue, Milton, and the second is the general

area surrounding the intersection of Granite Avenue and the Southeast Expressway.]

Further, to relieve property owners of the potential requirement to file an ENF in the wetlands appeal situation described above, the plan recommends that the MEPA regulations be evaluated and potentially revised to eliminate this requirement in these types of cases, where MEPA review would be duplicative or unnecessary. In the interim, the Secretary of Environmental Affairs has issued a letter of assurance that such cases reaching MEPA will be expedited consistent with this objective.

Several technical revisions to the GIS map presented during the public hearing in January 1995 are required. These are needed only so the map accurately represents the boundary as described in the designation document.

Planning, Programmatic and Regulatory Framework

There is a substantial amount of attention and resources now being directed at the Neponset River. Six major efforts have direct application to areas within the estuary and the ACEC (these are described more fully at the end of this section).

(1) In 1994 the Secretary of Environmental Affairs selected the Neponset River as the pilot watershed for the Executive Office of Environmental Affairs' Watershed Initiative, an integrated public and private approach to the protection of surface and groundwater.
(2) With support from the Riverways Program, the Neponset River Watershed Association spawned five subwatershed groups as Stream Teams, one of which is the estuary, to identify issues and problems in the subbasin and propose an action plan for addressing the issues.
(3) The Metropolitan District Commission is nearing completion of a Master Plan and Park Design for its properties along the lower Neponset River from Mattapan Square to the mouth of the river.
(4) The Boston Natural Areas Fund, which has long been involved with the Neponset River, recently enhanced its community action and educational programming for the Boston shore of the Neponset River with a grant from the Lila Wallace-Reader's Digest Fund. As a partner in this project, the Trust for Public Land is developing a plan identifying potential acquisitions along the river that would help achieve the objectives of the Neponset River Greenway.
(5) The Joint Commission's Plan for the Future of Boston Harbor Beaches (1993) made a number of recommendations, to be implemented over the next several years, for improving the condition of and access to and between Tenean Beach and adjacent beaches.
(6) EOEA's Wetlands Restoration & Banking Program is preparing a "Neponset River Watershed Wetlands Restoration Plan" as model for the state's other watersheds.

The objective of ACEC designation is the long-term preservation, management and use of the resources. Beyond special initiatives focusing on Neponset resources such as those above, the objectives of ACEC designation can be advanced through the authorities, responsibilities, and efforts of federal, state, and regional agencies; municipal boards, commissions, and departments; and civic and environmental associations and organizations. The following is a review of these agencies and organizations.

Agencies of the Executive Office of Environmental Affairs

The ACEC regulations, 301 CMR 12.00, direct all agencies within the Executive Office of Environmental Affairs to take actions, administer programs, and review regulations to preserve, restore, and enhance the resources of ACECs. EOEA agencies are also required to subject projects under their jurisdiction "to the closest scrutiny" to meet these objectives. Therefore, guidelines for implementing ACEC designation are not found in one set of laws or regulations, but are embodied within a variety of regulations and programs of state agencies.

A listing and summary of each state agency, program, and regulation that specifically addresses ACECs is presented in the *ACEC Program Guide* produced by EOEA's Department of Environmental Management in 1993. This guide is updated periodically. Another good source of this information for coastal ACECs, such as the Neponset River Estuary, is *EOEA and the Coastal Program* by the Massachusetts Coastal Zone Management Office. The following is a list identifying relevant state agencies and programs.

Regulatory Agencies and Programs

The following list identifies relevant state agencies and programs:

Massachusetts Environmental Policy Act Unit (MEPA)
DEP-Division of Wetlands and Waterways

- Wetland Protection Program
- Waterways Regulation Program
- 401 Water Quality Certification Program

DEP-Bureau of Waste Site Cleanup

- Hazardous Waste Site Cleanup (M.G.L.c.21E)

DEP-Division of Solid Waste Management

- Landfill Closure

Resource Assessment or Planning Agencies and Programs

State agencies, programs, and authorities that conduct resource assessments and/or planning in the estuary include:

Coastal Zone Management Program
Department of Environmental Management

- ACEC Program
- Office of Water Resources

Department of Environmental Protection

- Office of Watershed Management
- Wetlands Conservancy Program (mapping of wetlands and eelgrass beds)

Department of Fisheries, Wildlife, & Environmental Law Enforcement

- Division of Marine Fisheries
- Riverways Program (shoreline surveys)

Executive Office of Environmental Affairs, Wetlands Restoration and Banking Program
Massachusetts Bays Program (see below)
Massachusetts Historical Commission
Massachusetts Water Resources Authority (sampling and assessment of water and sediment quality)
Metropolitan District Commission

Municipal Boards and Agencies

Planning and Zoning

The municipalities regulate land use, density and dimensions of development through local zoning by-laws. Each city and town in the estuary in accordance with Massachusetts Home Rule Provisions has enacted local zoning and resource protection ordinances, bylaws and regulations. The Home Rule Amendment of 1966 granted broad governing powers to the municipalities. This means that each community has autonomous local land use control of the shoreline and lands within the ACEC. In the future, each community may also be able to exercise greater flexibility in zoning revisions and adoption of innovative zoning concepts for resource protection without legislative authorization.

Boston revised much of its zoning for the Neponset River/Dorchester Bay waterfront during the process of preparing and adopting the Harborpark Plan in 1990. The final permanent zoning for this area is contained in Article 42A of the Boston Zoning Code.

The zoning adopted for Neponset River/Dorchester Bay features several large shoreland open space districts covering areas of natural shoreline and beach. This district ensures minimal development for these resources. There are also several subdistricts on developed or developable land designed to promote the city's policy of balanced development, including water-dependent industrial activity, waterfront commercial and related uses, as well as residential use. Boston's regulations contain requirements for public access to be incorporated into private development on waterfront property.

South of the Neponset Avenue bridge, the shoreline is zoned open space except for a residential district at the Keystone Apartments and a waterfront manufacturing district covering the T Construction Corp. and Schlager Auto Body sites. The zoning for Port Norfolk solidifies the core residential use and establishes a waterfront service subdistrict to preserve water-dependent uses, particularly for the repair, service, storage, and sale of commercial and pleasure boats and boating supplies.

In Milton, the shoreline is zoned primarily single-family residential with lot sizes ranging from one acre to one-fifth of an acre, with business districts at Lower Mills and at No. 2 Granite Avenue. The zoning map for Milton has a notation on publicly-owned properties (including the saltmarsh of the Neponset River Reservation) that they are not available for residential development.

Quincy's zoning of the waterfront from Squantum Point to the Milton line includes Planned Unit Development (PUD), business, residential, and open space districts, the latter on public parkland. Portions of the PUD and business districts on Squantum Point have not been built out and constitute the greatest area of potential new development within and adjacent to the ACEC.

Wetlands Protection

The Wetlands Protection Act (MGL Chapter 131, Section 40) through the Wetlands Protection Program requires local Conservation Commissions to examine and regulate development activities which may alter wetlands, and to issue or deny permits based on whether the proposed activity is consistent with the requirements of the Wetlands Protection Act and DEP regulations. DEP's responsibilities under the program are to consider appeals of local conservation commission decisions, review requests for variances, and provide enforcement and technical assistance.

The conservation commissions in Boston, Milton, and Quincy regulate activities within their jurisdictions in resource areas under the authority of the Wetlands Protection Act and, in the case of Quincy and Milton, under municipal ordinance or by-laws. Regulated areas include coastal wetlands, mudflat, bank, land subject to tidal action and coastal storm flowage, land subject to flooding, and in a zone extending 100 feet landward of any of these resource areas. Regulated activities include dredging, filling, removing, altering, or building in the areas identified above. The commissions' concern is to protect public health and safety from flooding, minimize the impact of coastal storms, maintain the natural flow pattern of water courses, and protect the wetlands areas.

The City of Quincy's Wetlands Protection Ordinance is adopted under the Home Rule provisions, independent of the Wetlands Protection Act and its regulations. This ordinance establishes procedures for applicants and commission review of proposed activities.

Applications under the Quincy ordinance are identical to a Notice of Intent filed pursuant to the Wetlands Protection Act. Public hearings are generally noticed and held concurrently and decisions reference both the local ordinance and the state authority, though conditions on approvals may specifically reference one or the other authority. Under the local ordinance, the area subject to the Quincy Conservation Commission's jurisdiction includes a 100-foot buffer zone around land subject to flooding.

Milton's Wetlands Bylaw is Chapter 15 of the Town's Bylaws. Like Quincy's ordinance, the bylaw establishes procedural requirements for applicant's and commission review and includes the 100-foot buffer zone around land subject to coastal storm flowage, flood or inundation. The Conservation Commission recently adopted a Non-Disturbance Zone regulation. The regulation states that in order to preserve the quality of certain wetland resources it is necessary to restrict or limit activity adjacent to them. Adjacent to any bank, land under water or bordering vegetated wetlands the zone of non-disturbance shall be a distance of 25 feet from the edge of the resource area wherein no alternation will be permitted. The non-disturbance zone does not apply to activities that are inherently water-dependent including, but not limited to marinas, docks and wharves. Relief from this provision is possible upon vote of the commission.

The Boston Conservation Commission has not adopted a city ordinance, but exercises its authority under M.G.L. Chapter 131, Section 40.

Water Supply, Stormwater and Sanitary Sewage Collection

The Boston Water and Sewer Commission has responsibility for the construction, operation and maintenance of the water and sewage infrastructure throughout the city. The commission operates three combined sewer overflows and nine stormwater outfalls within the ACEC (see Figure 3). As an active partner in efforts to improve the water quality of the Neponset River, the Commission has launched an ambitious CSO control program consisting of: separation of combined sewer areas by separate sanitary sewers and storm drains; an inspection, maintenance and rehabilitation program for tidegates and regulators; relocation of catch basins from combined sewers to storm drains; and manhole rehabilitations; removal of infiltration/inflow to increase capacity of sewer system.

The Commission has developed a Stormwater Management Program emphasizing best management practices, protecting the structural integrity and hydraulic capacity of the drainage system, and control of discharge of pollutants to storm drains, use of grit and oil separators, and public education campaigns.

The Commission has recently completed an investigation of the Pine Neck Creek Storm Drain to identify sources of bacterial contamination to the drain and to develop remediation measures. It is anticipated that some dredging in the creek may be a necessary part of the remediation plan.

The Quincy Department of Public Works is responsible for the city's stormwater and sanitary sewer collection system. Stormwater and sanitary sewers are separate in Quincy. There are a number of stormwater outfalls to the Neponset River estuary. The DPW has an comprehensive program for managing stormwater and controlling the effects of discharges.

The Milton Department of Public Works, Water and Sewer Division is responsible for the public water supply and collection system. All of Milton is served by public water and, within the ACEC, only the residences in the Forbes Road neighborhood have on-site septic systems. A water quality problem has been identified in this area and sewering of the area is being considered by the town.

Regional Agencies and Organizations

Metropolitan Area Planning Council (MAPC)

The Metropolitan Area Planning Council is the regional planning agency for the 101 cities and towns surrounding Boston. MAPC conducts analyses and planning studies of the region, reviews regional impacts of major projects, and provides technical assistance to communities with a range of planning and community development issues including land use controls, water quality, and transportation.

In the Fall 1995, MAPC began a demonstration project in the Neponset River Basin designed to address stormwater runoff from urban areas (a nonpoint source of pollution) by providing technical assistance to the communities in the management and prevention of nonpoint sources. The project involves computing estimated current and future (2020) nonpoint source pollution loads in three selected subbasins of the watershed using a water quality model (P8). One of the selected subbasins is the estuary below the Lower Mills dam. Existing bylaws, regulations, and practices of the communities in the study will be reviewed and evaluated for their effectiveness in managing stormwater runoff and water quality impacts. A model stormwater bylaw/regulation will be developed and presented by MAPC during a workshop by local board members.

Nonprofit Groups

Neponset River Watershed Association (NepRWA)

One of the nominators of the Neponset River Estuary ACEC, NepRWA is a nonprofit citizens organization established in 1967 to work for improved water quality, enhanced access, and protection of open space in the Neponset River watershed. It organizes and supports public educational opportunities and other efforts to increase understanding of and focus attention on the resources of the Neponset River watershed. NepRWA is a central component of the collaborative Neponset River Watershed Pilot Project (described below).

An estuary subgroup, Friends of the Neponset Estuary, has been formed within the Association. This subgroup, with the assistance of DFWELE's Adopt-A-Stream program has conducted a shoreline survey and monitored river flow at the gauge at the Lower Mills Dam in

Neponset River Estuary ACEC

Storm Drains & Combined Sewer Overflows

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Combined Sewer Overflows (CSOs): Massachusetts Water Resources Authority; automated by Metcalf & Eddy.

Boston Storm Drains: Boston Water & Sewer Commission; automated by Rizzo Associates.

Scale 1:20,000

0 1 mile

0 1 kilometer

N W E S

DEM/MassGIS, March 1996

Legend

- Combined sewer overflows
- Boston storm drain outfalls
- Neponset River Estuary ACEC boundary

This map is for planning and illustrative purposes only. It represents the best available digital statewide data for a given theme. It is not to be used by itself for legal boundary definition or regulatory interpretation. See the Neponset River Estuary ACEC designation document, as amended December 1, 1995, for the legal boundary description.

BOS089
BOS088
BOS090
12M091
BOS093
BOS095
9K100
9K16
BOSTON
QUINCY
MILTON
203
3a

Figure 3: Map of storm drains and combined sewer overflows.

support of restoring smelt spawning in the estuary. The subgroup has been designated an official Adopt-A-Stream group by DFWELE.

Boston Natural Areas Fund (BNAF)

BNAF is a nonprofit corporation founded in 1977 to work with residents to preserve, protect, and improve urban open space in Boston. BNAF is a membership organization, focusing on Urban Wilds (places of natural beauty and environmental significance) and community gardens, of which it owns 30 throughout the city. BNAF, with the Trust for Public Land, is currently involved in a four year initiative, "Greenways to Boston harbor: the Neponset River Greenway and the East Boston Greenway," a community based project to build constituencies and stewardship for the Greenways and to demonstrate their recreational, environmental and educational potential. On the Neponset, the project is planned, implemented and evaluated by the 40 member Neponset Greenway Coordinating Council consisting of residents of Hyde Park, Mattapan and Dorchester. The Neponset Greenway Project includes support for community advocacy, educational programs for all ages, summer and weekend environmental jobs for youth and special events.

Save the Harbor/Save the Bay (STH/STB)

Save the Harbor/Save the Bay is a nonprofit organization whose mission is to foster a positive vision of Boston Harbor and Massachusetts Bay and to build a constituency to promote restoration and protection of these valuable resources. STH/STB is sponsoring an effort to have citizens become involved in monitoring water quality in the estuary.

The Boston Harbor Association (TBHA)

The Boston Harbor Association is a nonprofit, public interest organization founded in 1973 to promote a clean, alive, and accessible Boston Harbor. The Association has been working with state agencies and others on educating the public on water quality issues. TBHA was designated by the Joint Commission on the Future of Boston Harbor Beaches to monitor MDC's implementation of that plan to restore the Boston Harbor beaches.

Federal Agencies

U.S. Army Corps of Engineers

Section 404, of the Clean Water Act authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material into all waters (including wetlands) of the U.S. The limit of jurisdiction is the high tide line in tidal waters. Regulated activities include the placement of fill for construction, site-development fill, riprap, seawalls, and beach nourishment.

Section 10 of the Rivers and Harbors Act of 1899 authorizes the Corps to regulate structures and work in navigable waters of the U.S. Jurisdiction extends shoreward to the mean high water line. Regulated activities include construction of piers and wharves, permanent mooring structures such as pilings, intake and outfall pipes, boat ramps, and dredging or disposal of dredged material, excavation, and filling.

Federal Emergency Management Agency (FEMA)

FEMA administers the National Flood Insurance Program (NFIP) which enables property owners to purchase insurance protection against losses from flooding. Participation in the NFIP is based on an agreement between local communities and the federal government which

states that if a community will implement and enforce measures to reduce future flood risks to new construction in special flood hazard areas, the federal government will make flood insurance available within the community.

Current planning projects in the estuary

In addition to this ACEC Resource Management Plan, there are a number of other planning and management projects underway currently in the Neponset River Estuary:

EOEA's Watershed Initiative

EOEA's Watershed Initiative, begun in 1994, is the Commonwealth's commitment and effort to develop a watershed management model to "institute community-based environmental decision making by using small watersheds as functional systems to integrate/coordinate regulatory and nonregulatory activities at the local, state and federal levels." The initiative is guided by a steering committee whose members are drawn from state and federal agencies, watershed associations, environmental nonprofits, industry, and citizens. This initiative will establish the direction and form for integrated management of the Commonwealth's water resources.

Neponset River Watershed Pilot Project

The Neponset Watershed Project is the Watershed Initiative's pilot project to demonstrate the watershed approach to addressing environmental concerns. In 1994 the Secretary of Environmental Affairs selected the Neponset River as the pilot watershed for the Executive Office of Environmental Affairs' Watershed Initiative, an integrated public and private approach to the protection of surface and groundwater. DEP's Office of Watershed Management, with the support and participation of civic organizations, businesses, local governments, citizens, and state and federal agencies, will work together within the watershed's boundaries to manage the activities that affect water quality and the health of the watershed. The project's implementation plan features the following milestones:

Final Resource Assessment Report	September 1995
Watershed Management Plan	April 1996
Basin-wide permitting	September 1996
Water resource grant targeting	September 1996-January 1999

Under this project, and with the active leadership of NepRWA and EOEA's Riverways Program, six subwatershed groups were formed to do shoreline surveys and develop actions plans for each subwatershed. The recommendations from the Action Plan of the Friends of the Estuary Subwatershed Group are incorporated in this ACEC Resource Management Plan as an Addendum (see Addendum A).

Friends of the Neponset Estuary Action Plan

The Friends of the Neponset Estuary is the subwatershed group focused on the Neponset River Estuary. As a participant in the Riverways Program's (Massachusetts Department of Fisheries, Wildlife, & Environmental Law Enforcement) Adopt-A-Stream Program, the Friends have been studying various issues of the estuary, conducted a shoreline survey, and prepared an Action Plan for the Neponset Estuary. The Action Plan presents goals, objectives, and specific future actions for the group and others to take to improve conditions of the estuary. Because of its important role in advancing the objectives of the ACEC, the Action Plan is an addendum to this ACEC resource management plan.

MDC's Master Plan and Park Design Project for the Lower Neponset River Reservation

The Metropolitan District Commission's Neponset River Estuary Master Plan is part of MDC's ongoing planning effort within and adjacent to the Neponset River Reservation. The planning effort is part of the MDC's long-standing goal to provide continuous public access from Castle Island in Boston Harbor to the Blue Hills in Milton. The geographic scope of the Master Plan area includes both sides of the river from its mouth at Squantum and Commercial Points to Mattapan Square, with a cursory examination of the River up to Paul's Bridge. The area includes the communities of Quincy, Boston, and Milton and both existing and potential MDC public parkland.

While this phase of planning within the Neponset region will be completed in May, 1996, the MDC has been conducting planning efforts for over four years. Given the focus of the Executive Office of Environmental Affairs, various non-profit, and local entities upon the Neponset River Basin, it is anticipated that the MDC's Master Plan will play a significant role in the process of implementing the ACEC resource management plan. The MDC Master Plan is described more fully in the Special Use Areas section and is intended to be incorporated into this ACEC plan as an addendum after review and approval of the MDC Plan by the Secretary of EOEA.

Greenways to Boston Harbor: The Neponset River Greenway

The Boston Natural Areas Fund (BNAF) and the Trust for Public Land (TPL), with funding from the Lila-Wallace Reader's Digest Fund, is conducting a four-year project "Greenways to Boston Harbor: The Neponset River Greenway (and the East Boston Greenway)." The project will enable the TPL to assist public agencies, including the MDC and the city, with plans to acquire, transfer and develop land for new parks.

The BNAF, along with several other organizations, sponsored a citizens participatory planning workshop on the Neponset (and East Boston) Greenway on May 5 and 6, 1995. Participation was drawn from the Neponset Greenway Coordinating Council, a grassroots citizen's organization formed by BNAF. The workshop generated written and graphic materials representing existing conditions and concepts for the future of the Neponset River. Recommendations from that workshop are incorporated in Section II of this plan.

Plan for the Future of Boston Harbor Beaches

The Joint Commission on the Future of Boston Harbor Beaches was established in 1991 by executive order of Governor Weld and then Boston Mayor Flynn to "coordinate, develop, and recommend a plan for the restoration of the beaches of Boston Harbor." In June 1993, following a two-year planning process that involved broad public participation, the Commission issued its plan for improving the physical condition and environmental quality of and accessibility to the Boston Harbor beaches. Follow-up studies and design of the plan's proposals for individual beaches, including Tenean Beach, are now underway. The Boston Harbor Association has been designated by the Commission to monitor and guide implementation of the plan.

The Massachusetts Wetlands Restoration & Banking Program

The Massachusetts Wetlands Restoration & Banking Program (WRBP) is currently working with the US Army Corps of Engineers to assess the condition of a number of wetland areas around the state, including the Neponset marshes. It is anticipated that a draft Watershed Wetlands Restoration Plan (WWRP) for the Neponset watershed will be made available for

public review by the fall of 1996. The WWRP will provide an inventory of wetlands restoration sites prioritized based on their capability to improve the watershed's flood storage, water quality, and fish and wildlife habitat, as well as providing information that can be used for land use planning and management purposes beyond wetlands restoration (Wetlands Restoration & Banking Program, 1995).

In the Neponset River estuary, the WRBP is working with the MDC and examining the possible restoration of the Metropolitan District Commission's Neponset Marshes and degraded wetlands at Granite Avenue in Milton. Part of the assessment of the health of the marshes and potential for restoration will include soils assessment for potential contaminants, particularly in filled areas.

In addition to the projects and programs described above, EOEA is involved in several other collaborative programs relevant to the Neponset River Estuary. Among these are:

Shellfish Bed Restoration Program

Shellfish Bed Restoration Program is a collaboration of the Massachusetts Division of Marine Fisheries (DMF), Massachusetts Association of Conservation Districts (MACD), Natural Resource Conservation Service (NRCS), Massachusetts Department of Environmental Protection, and the Massachusetts Bays Program (MBP) to identify and mitigate nonpoint source pollution from specific storm drains which are now causing shellfish bed closure or threatening open beds. Administered with the help of Regional Planning Agency technical assistance staff and a full-time program manager with funding from MBP, this program enhances the capacity of local communities to address their pollution problems.

Massachusetts Bays Program

Massachusetts Bays Program (MBP) is a partnership of federal, state, and local governments that is about to complete a five year assessment and planning effort that will conclude with a Comprehensive Conservation and Management Plan for Massachusetts and Cape Cod bays. That plan is meant to serve as a blueprint for coordinated action aimed at restoring and protecting water quality and the diverse natural resources of the Massachusetts Bays. The goals and management strategies of the CCMP and this RMP are quite similar. The smaller geographic scale of the 1,260-acre Neponset Estuary ACEC allows for the assessments and recommendations included in this plan to be more specific than those of the CCMP.

II. Resource Management of the Neponset River Estuary

The goals for the Neponset River ACEC endorsed by the steering committee were shaped from a draft list of resource management goals and objectives prepared by EOEA which was based on a list originally suggested by the nominators of the Neponset River Estuary ACEC. The draft goals and objectives were distributed for public review and comment during the nomination process. The following are the goals for the Neponset River Estuary ACEC:

Overall goal for the Neponset River Estuary

Goal: Preserve, enhance, restore, manage, and encourage appropriate use of the natural and cultural resources of the estuary of the Neponset River.

Objectives:

- Integrate state agency project review in ACEC
- Coordinate federal, state, and local planning and regulatory review
- Provide public education regarding the benefits of the ACEC and long range planning

Surface Waters

Goal: Protect and improve the water quality conditions of the Neponset River estuary in order to meet, or where possible exceed, state water quality standards.

Objectives:

- Identify and reduce point and nonpoint sources of pollution
- Identify areas of contaminated sediments and sources of this contamination
- Ensure that all sponsors and proponents of activities in the ACEC employ best management practices

Estuarine and Freshwater Wetlands

Goal: Preserve, protect, and restore saltmarsh and wetlands in the Neponset Estuary.

Objectives:

- Identify filled or degraded wetlands and consider appropriate means of restoration
- Maintain floodplain storage and prevent coastal hazards.
- Prepare a baseline assessment of the health of the saltmarsh in the ACEC
- Educate owners of residential and commercial properties containing or abutting wetlands on the value of the resources and potential impacts

Habitat Resources

Goal: Preserve, protect and restore fisheries and wildlife habitat in the Neponset Estuary.

Finfish

Goal: Protect, restore, and enhance anadromous fish runs and habitat/breeding grounds for salt water species.

Shellfish

Goal: Preserve, protect, and restore shellfish beds to increase the availability of the resource for wildlife and for commercial and recreational use.

Objectives:

- Evaluate status of fisheries habitat.
- Catalog plant and animal species and map habitats

  Assess anthropogenic impacts on species composition and habitat distribution

  Assess feasibility/desirability of habitat restoration including shellfish beds and fish ladders.

  Identify point sources of pollution in the watershed that can be targeted for remediation

Wildlife

Goal: Protect and restore the salt marsh, brackish marsh, coastal bank, barrier beach and the vegetated 100 foot buffer zones, as self-regulating systems, in order to support the full range of biological diversity in the estuary, including rare and endangered species.

Objectives:

- Evaluate status of wildlife habitat
- Catalog plant and animal species and map habitats including upland species and rare species
- Assess anthropogenic impacts, species composition and habitat distribution, including wildlife corridors and open space buffers
- Evaluate effect of land uses on habitat
- Assess potential future impacts of land use on habitat through analysis of municipal zoning bylaws
- Assess stream flow for adequate habitat requirement
- Restore degraded habitats; protect unprotected habitats; maintain existing open space.
- Direct active recreation away from sensitive areas

Economic Development

Goal: Encourage appropriate land and water uses that provide public benefits and are compatible with sound resource protection and management.

Objectives:

- Develop and implement a plan for sustainable development of ACEC resources.
- Identify opportunities for and work towards integrated permit review
- Establish a procedure for identifying and evaluating cumulative impacts

Water-dependent Uses

Goal: Preserve existing water-dependent uses.

Objectives:

- Develop and implement a plan for sound water-dependent uses
- Develop maintenance dredging and disposal plan with municipal government agencies, DEM, DEP, CZM and the U.S. Army Corps of Engineers.
- Identify sites of previous dredging and for future dredging
- Compile and assess all sediment data from studies and permit files

Historical and Archaeological Resources

Goal: Preserve, protect, enhance, and restore historic and anthropological sites in the Neponset Estuary.

Objectives:

- Make anthropology/history of the Neponset Estuary publicly available
- Incorporate historic interpretation in planning processes
- Increase public access where appropriate and interpret these resources for the public

Special Use Areas

Goal: Protect, enhance and increase publicly-owned open space in the estuary for its value as recreational and educational resources.

Objectives:

- Coordinate the objectives of this RMP and the MDC's Park Master Plan for the Lower Neponset and with municipal recreation plans
- Encourage collaboration among public agencies, nonprofits, and private sector in prioritizing and acquiring open space
- Improve water quality for swimming, boating and fishing
- Develop plan to ensure public access to the Neponset Estuary
- Protect view sheds and make them publicly accessible
- Make use of the estuary as a laboratory and classroom for study of estuarine environments, environmental impacts, and cultural resources
- Remediate hazardous waste sites

For each category of resources and uses in the estuary, the following sections present an inventory of the existing conditions, an assessment of those conditions and existing management, and an implementation strategy. The implementation strategy begins with an identification of the issues followed by a number of specific tasks for addressing those issues and promoting the goals and objectives of ACEC.

Listed for each task are: cooperating parties, a time table, and resources for accomplishing the task. The identified agencies, organizations, or individuals under each task are those that

exercise authority or are capable and interested in contributing to the task; the entry in bolded type would have lead or coordinating responsibility. The time table entries indicate the estimated period of time in which the task would be tackled; the time frames are variously based on availability of resources, the schedule established by the lead agency, complexity of the task, and/or sequencing of tasks. Most of the tasks are projected to be completed within the five-year implementation schedule of this resource management plan. Entries under resources for accomplishing the task identify the commitment of human and financial resources needed to support the task, with specific sources identified in some cases.

Key for entries under Tasks
- Cooperating parties: lead party in bold typeface, other are cooperators
- Time table: based on the plan's five-year implementation schedule.
  - Immediate = within one year; Short-term, 1 to 3 years; Long-term = 3 to 5 years.
- Resources to accomplish the task: identifies type of resources needed and possible sources.

Surface Waters and Water Quality

Goal: Protect and improve the water quality conditions of the Neponset River Estuary in order to meet, or where possible exceed, state water quality standards

Inventory

Within the Neponset River Estuary Area of Critical Environmental Concern (ACEC), the Neponset River flows from the Lower Mills Dam to its mouth at Commercial Point and Squantum Point, a distance of 4.2 tidally-influenced miles. The surface area of open water is approximately 84 acres. Portions of Gulliver Creek in Milton, Sagamore Creek in Quincy, and Pine Neck Creek and Davenport Creek in Boston flow into the Neponset River within the ACEC.

The waters of the Neponset River Estuary are classified SB-Fishable / Swimmable with restricted shellfishing in the Department of Environmental Protection's Surface Water Quality Standards (314 CMR 4.00). Class SB waters are designated as habitat for fish, other aquatic life, and wildlife; support primary and secondary recreation; and have good aesthetic quality. Factors that contribute to the attainment or non-attainment of SB water quality include point and non-point sources of pollution, sediment quality, stream flow, and diverse biota. Potential contaminants include bacteria, metals, PAHs, PCBs and other toxic products of 20th century technology. It is important to note that while this section of the river has been classified as SB it has not attained all water quality standards required for that classification. Similarly, while classified under Surface Water Quality Standards as a Restricted Shellfish Area (shellfish harvesting allowed with depuration), the entire estuary is classified as Prohibited by the Division of Marine Fisheries.

Sources of Pollution

The water quality in the estuary is significantly impacted by upstream sources. A Massachusetts Water Resources Authority (MWRA) study found the highest levels of fecal coliform, biochemical oxygen demand, total suspended solids and zinc and copper coming into the estuary from above the Lower Mills dam (MWRA, 1994). A study in 1993 indicated that upstream problems are due to a number of sources of sewage along the river (Rex, 1993). Several storm drains above the Lower Mills Dam were found to be contaminated with sewage in Boston Water & Sewer Commission (BWSC) dry-weather screening (MWRA, 1994; BWSC 1993, 1991).

The estuary itself is within a highly urbanized area with high density housing, industrial and commercial activities impacting water quality through point and non-point source pollution. One CSO treatment facility at Commercial Point (BOS090) and two other CSOs (BOS093 and BOS 095) discharge in the estuary (see Figure 4). Based on monitoring of the CSOs conducted by the MWRA in 1992, overflow of one CSO requires one-half inch of rain or greater and the others will overflow after 0.1 inches of rain. NPDES discharge permits in the estuary have been issued for the U.S. Army National Guard Armory in Dorchester (Permit #MA0030252, for intermittent discharge of vehicle washwater; and the BWSC CSOs identified above (Permit #MA0101192) (DEP, 1995). Additional known sources of fecal coliform pollution in the estuary are the failing septic systems in the Forbes Road neighborhood in Milton and Unquity Brook/Gulliver's Creek. About 60 storm drains from developed land in

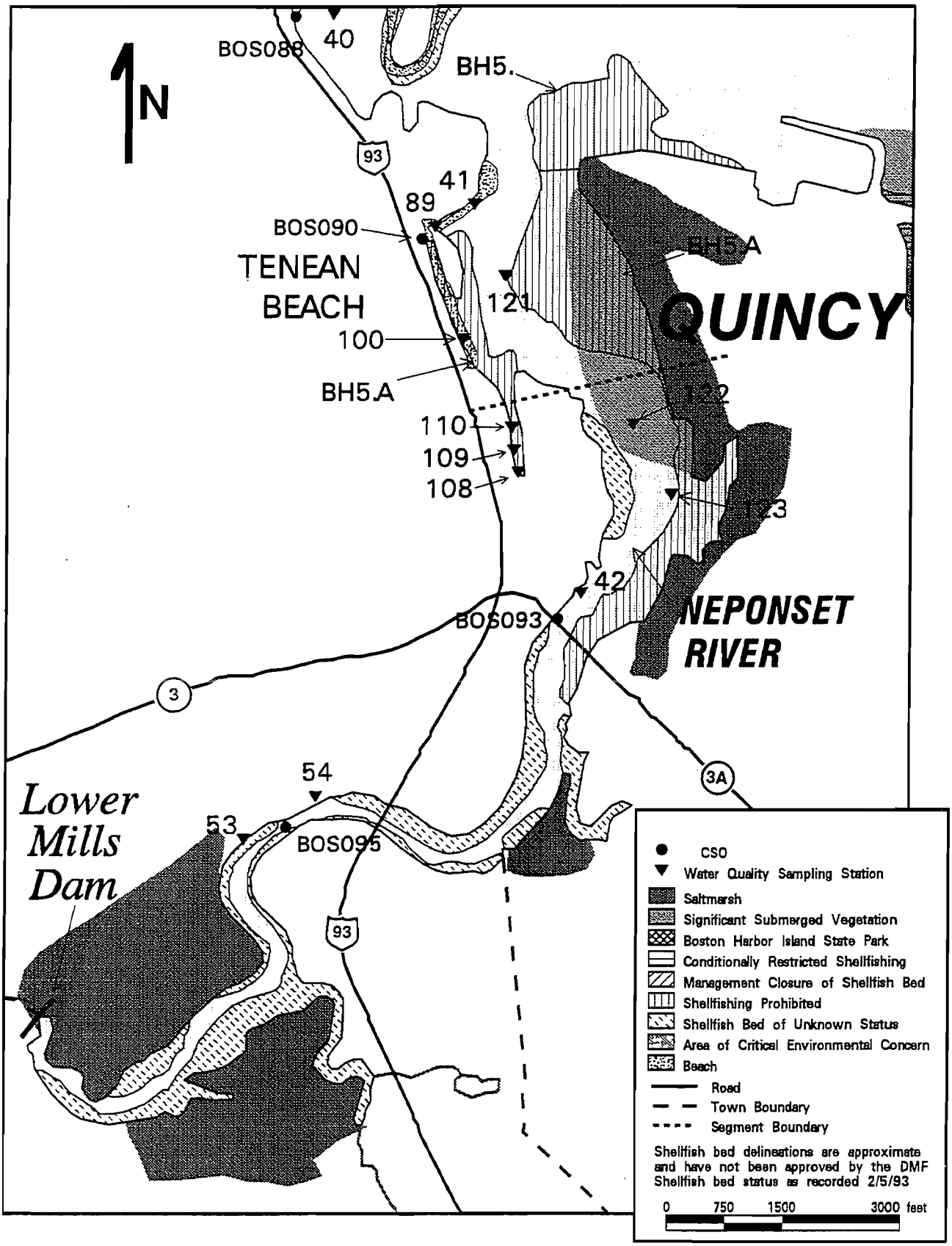


Figure 4: Map of point source discharges, sampling stations, and resources impacts by water quality (from MWRA Baseline water Quality Assessment, Figure 16-1).

Boston bordering the estuary and from area highways discharge in the estuary; and, a yet to be determined number of storm drains exist in Milton and Quincy.

Other sources of pollution are more difficult to quantify; but certainly adding to the pollutant loadings, include the non-point sources of pollution from lawn applications of fertilizers, herbicides, and pesticides, animal waste, boat discharges, and sediments from erosion and stormwater runoff.

Assessment

Some of the more recent water quality assessments include studies by the MWRA and the DEP. The Massachusetts Water Resources Authority conducted a Baseline Water Quality Assessment of Boston Harbor and its major tributaries in support of the *System Master Plan (SMP) and Combined Sewer Overflow (CSO) Control Plan for Boston Harbor*. The results and conclusions of the data collection and analysis for the assessment were published by the MWRA in August 1994. This work was the basis for the characterization of the estuary provided in *The Neponset River Watershed 1994 Resource Assessment Report* prepared by DEP's Office of Watershed Management (DEP, 1995).

These assessments show that upstream river flow and stormwater from the adjacent land are the major sources of pollution to the Estuary, resulting in non-attainment of water quality standards. Although two untreated CSO's and one treated CSO at Commercial Point discharge into the Neponset River, they contribute a small percentage of fecal coliform bacteria, nutrients and toxins to the total pollutant load, as shown in Table 1 (from MWRA, 1994).

As part of the effort to evaluate the effects of CSO improvements, the MWRA has been monitoring several water quality parameters, including fecal coliform bacteria, pyrene, and total suspended solids since 1985. The most recent data, characterized in the DEP Office of Watershed Management study (Oct.1995), indicate that the estuary's waters fully support secondary recreation such as boating, partially support swimming at Tenean Beach and aquatic life, and do not support restricted shell fishing. In other words, the river does not meet its current classification of SB.

The Massachusetts Department of Environmental Protection (DEP) has recently completed its detailed assessment of Neponset River water quality (DEP, October, 1995) which will be used as the basis for a basin-wide planning document. Included in the evaluation were detailed water chemistry studies, sediment sampling, and biological assessments. Due to technical constraints, however, DEP did not include the saline estuarine environment in its evaluation of the Neponset but relied on MWRA data for that region. It does not expect to collect any additional information on the estuary in the final basin planning document. However, the plan will have basinwide as well as subwatershed water quality issues identified with suggested means to resolving the issues, and the Estuary is included in the plan.

As part of the Boston Harbor clean-up and because a number of critical use activities like swimming and shellfishing have been identified in this area, the Massachusetts Water Resources Authority (MWRA) and the Boston Water and Sewer Commission (BWSC) have undertaken a number of projects to remediate stormwater discharges and combined sewer overflows in the Neponset estuary. System improvements made between 1988 and 1992 have significantly decreased CSO volumes throughout the MWRA system and the Final CSO Plan proposes complete separation of the Neponset stormwater discharges from the sewerage system by 2008.

As part of the Boston Water & Sewer Commission's ongoing programs, it corrected 30 illegal connections in the Neponset Basin in 1995; and has identified 2 remaining illegal connections

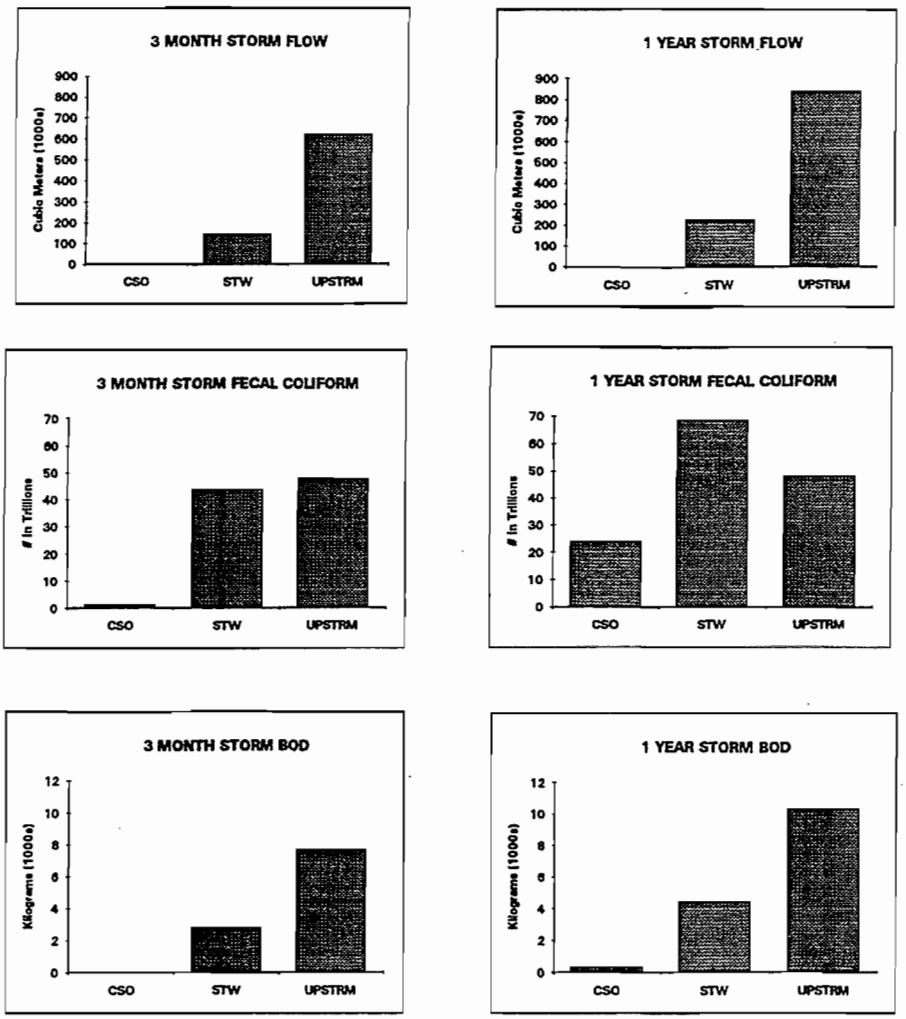


FIGURE 16-3. FUTURE PLANNED FLOWS AND LOADS FOR THREE MONTH AND ONE YEAR STORM EVENTS - NEPONSET RIVER

Table 1: Pollutant Flows and Loads in the Neponset River (from MWRA Baseline Water Quality Assessment, August 1994). Key to notation of X-axis: CSO = combined sewer overflows; STW = storm drains; UPSTRM = upstream.

FIGURE 16-4. FUTURE PLANNED ANNUAL FLOWS AND LOADS - NEPONSET RIVER
(b) FLOWS, TOTAL PHOSPHORUS, NITRATE,AMMONIA, TOTAL KJELDAHL NITROGEN

FIGURE 16-4. FUTURE PLANNED ANNUAL FLOWS AND LOADS - NEPONSET RIVER
(a) FLOWS, BIOCHEMICAL OXYGEN DEMAND,TOTAL SUSPENDED SOLIDS, COPPER, ZINC

Table 1 (con't): Pollutant Flows and Loads in the Neponset River (from MWRA Baseline Water Quality Assessment, August 1994). Key to notation of X-axis: CSO = combined sewer overflows; STW = storm drains; UPSTRM = upstream.

on the Neponset River, upstream of the ACEC, that will be corrected in the Spring of 1996. Evaluation of storm drains on the Boston side by the Boston Water and Sewer Commission identified only one discharge point in the lower river which may have contamination with debris and/or oil (MWRA, 1994; BWSC 1993, 1991). The BW&S' Harbor Quality Department has proven to be productive and effective in addressing illegal sanitary sewage connections to storm drains. An effective stormwater management program will also need to address sediment loading from roadway runoff. In particular, the area below Lower Mills Dam and the Adams Street Bridge needs monitoring for the smelt spawning habitat there (see Habitat Resources section for more information).

Tenean Beach Water Quality Monitoring

Regular monitoring of water quality at Tenean Beach has been conducted by the MDC. Bacteriological testing shows considerable improvement in conditions in recent years with the bacteriological conditions at the beach exceeding standards by 47 percent in 1989 and declining to two percent in 1992. The decline in bacteriological contamination is believed to be due to the operation of the Fox Point CSO (nearby the ACEC) and Commercial Point CSO treatment facilities (within the ACEC)which began operations in 1990 and 1991, respectively. These treatment facilities provide solids separation and chlorination prior to discharge of overflow water to the harbor (Lane, Frenchman 1993).

The Boston Water and Sewer Commission recently completed an investigation of the sources of bacterial contamination to the Pine Neck Creek storm drain, which discharges south of Tenean Beach (BWSC,1996). The investigation included smoke and dye testing, as well as television inspection of all storm drains and sanitary sewers in the area. Wet and dry weather water quality sampling of the drain and its receiving waters was also conducted.

The investigation revealed no significant sources of sanitary contamination to the drain. Review of existing data and data collected as part of the investigation indicate that although bacterial concentrations in the drainage system are high, they are consistent with concentrations in storm drainage from similar urbanized locations. The sources of bacteria in stormwater samples appears to be stormwater runoff, likely due to contact with accumulated pet and other animal waste deposits and street litter. Elevated bacterial contaminations measured in dry weather samples, in conjunction with a correlation between higher concentrations and low tide, suggest that accumulated sediments in the drain and in receiving waters may be providing an ongoing source of bacteria to the overlying water column.

Impacts from Recreational Boating

Recreational boating has the potential to degrade water quality through improper discharge of boat waste and motor oil, and boat maintenance activities. There are two pump-outs in the vicinity of the estuary, located at Marina Bay and Thomas Marine. The ratio determined by an interagency team that developed the Massachusetts boat pumpout program is one pumpout per 300 moorings and slips. Though that ratio is exceeded in the estuary, the majority of berths are in the two facilities with pumpouts.

Implementation Strategy

Management Issues

The Neponset River is polluted from a variety of sources including upstream sources, nonpoint sources, storm drains, and CSOs. The river upstream is a major source of bacteria. Upstream problems are due to a number of sources of sewage along the river. Illegal sanitary sewage

connections to storm drains are a source of untreated sewage to the Neponset River. Stormwater discharging into the Neponset estuary is collected from a broad, heavily urbanized land area as well from several highways. Several storm drains above the Lower Mills Dam were found to be contaminated with sewage in dry-weather screening. Continued monitoring and detection of other sources of pollution is necessary to develop the most cost-effective remediation of water quality in the Neponset River estuary.

Its urban location and the presence of numerous transportation systems presents both a management challenge and opportunity for the ACEC. Certain activities such as the maintenance and repair, but not substantial enlargement, of the storm drainage systems on public roadways, maintenance activities related to the upkeep of the roadway surface (such as, repaving, line painting, bridge deck repair), the repair of structural components of bridges (such as railing, trusses, stone masonry, etc.), and, maintenance of guardrail, signs, signals and delineators could proceed without additional individual regulatory review on the condition that project proponents (and their agents) adopt best management practices (BMP's) that take all practicable measures to avoid and minimize degradation of adjacent resources and to mitigate any unavoidable impacts to the greatest extent possible. The MEPA review process could provide a reasonable environmental review process for transportation system maintenance and operation related activities that may affect the ACEC. The adoption of BMP plans could be the basis and rationale for an appeal to MEPA that could reduce the existing threshold levels which would trigger a MEPA review of these activities proposed by the project proponents.

Tasks

1. Some data about the water quality, sediment quality, and biological health of the Neponset River estuary is available, as indicated above. A more complete inventory of water quality sediment and biological data for the Neponset River estuary is needed.

Cooperating parties

Neponset River Coordinator
coordinate and assemble data
MWRA
source of information
BWSC, Milton and Quincy DPWs
source of information
DEP Office of Watershed Management
source of information
MDC
source of information
University of Massachusetts Boston
source of information and technical assistance
Massachusetts Bays Program
source of information

Time table for completion

Immediate

Resources to accomplish the task

Staff time

2. Identify additional sources of point and nonpoint pollution, bacterial and chemical contaminants in the Neponset River estuary by continued, expanded and coordinated monitoring and detection programs.

Cooperating parties

Friends of the Neponset Estuary (NepRWA subwatershed group)
field surveys and sampling
Save the Harbor/Save the Bay
training of volunteers
Urban Monitors (NepRWA, subwatershed group)
field sampling
DEP Office of Watershed Management
coordination of sampling protocols
BWSC, Milton and Quincy DPWs
source of information, technical assistance and field sampling
Municipal Boards of Health
source of information

Time table for completion

Ongoing

Resources to accomplish the task

Funding support from proposed marine monitoring program.
Volunteer time and materials

3. Recommend accurate identification and mapping of stormwater outfalls and outfall drainage areas be done by each of the three communities in the ACEC and, ideally, all communities in the watershed that discharge stormwater to the Neponset River; and identify and eliminate all illegal sanitary sewage connections to stormwater outfalls.

Cooperating parties

Municipal water and sewer authorities and DPWs
identification and mapping
BW&SC
technical assistance

Time table for completion

Short-term

Resources to accomplish the task

Commitment of municipal staff
Possible Funding from Coastal Pollutant Remediation (CPR) Program
Section 319 funds

Key for entries under Tasks
Cooperating parties: lead party in bold typeface, other are cooperators
Time table: based on the plan's five-year implementation schedule.
Immediate = within one year; Short-term, 1 to 3 years; Long-term = 3 to 5 years.
Resources to accomplish the task: identifies type of resources needed and possible sources.

4. Citizen monitoring should be encouraged to supplement MWRA/MDC/DEP assessments. A long term citizen monitoring program and strategy be established at the Neponset River Watershed Association focused on efforts to pinpoint sources of bacterial contamination and storm water monitoring. Encourage MWRA to maintain and expand its existing commitment to support volunteer citizen water quality monitoring with in-kind laboratory services.

Cooperating parties

NepRWA
coordination of various citizen groups
Friends of the Neponset Estuary
field sampling by volunteers
Save the Harbor/Save the Bay
training of volunteers
BNAF
field sampling by volunteers
MWRA
support with in-kind laboratory services

Time table for completion

Immediate

Resources to accomplish the task

MWRA in-kind services

5. Implement the recommendation of the Final CSO Conceptual Plan and System Master Plan for complete sewer line separation in the area, which will eliminate all CSO discharges.

Cooperating parties

BW&SC
engineering design and construction
MWRA
planning and funding

Time table for completion

Long-term

Resources to accomplish the task

MWRA capital funds

6. Develop and implement a municipal and regional stormwater management program which share objectives and techniques. The three communities, along with technical support staff from appropriate state agencies could form an informal Estuary Stormwater Management Committee to further pursue recommendations regarding assessment, remediation, and prevention of stormwater pollution and the development of a stormwater outreach program.

Cooperating parties

DEP & MCZM Nonpoint Source Program
coordination and tech. assistance
BW&SC
source of information and implementation

Milton Department of Public Works
source of information and implementation
Quincy Department of Public Works
source of information and implementation
NepRWA
local education and information

Time table for completion

Short-term

Resources to accomplish the task

Commitment of staff

7. Implement a solution to the septic system problem in the Forbes Road neighborhood in Milton.

Cooperating parties

Milton Board of Selectmen
overall coordination
Milton Board of Health
technical assistance and permitting
DEP
review, evaluation and permitting, funding approval

Time table for completion

Short-term

Resources to accomplish the task

Municipal and state funds for sewer construction

8. Develop Maintenance and Operations Plans for the sections of highway, road, and transit routes that traverse the ACEC. These plans could be developed cooperatively with other agencies and feature the best management practices available for controlling stormwater, reducing the of use of toxic materials, contingency planning for oil and hazardous spills, and other measures to avoid and or mitigate any impacts, including those associated with ongoing maintenance.

Cooperating parties

Massachusetts Highway Department
coordination and training
EOEA
policy and regulatory review
Municipal departments of public works
source of information and practices
MBTA
source of information and practices

Time table for completion

Short-term

Resources to accomplish the task

Commitment of staff

9. Review the operational procedures and activities of all marinas and yacht clubs to identify and implement steps that can be taken to minimize any negative impacts on the river. These steps may include adopting an oil spill response plan, reducing the amount and types of toxic materials used around the facility, better management of stormwater run-off, recycling options, etc.

Cooperating parties

DMF
coordination and technical assistance
MCZM Harbor Management Program
technical assistance
Marinas and yacht clubs
source of information
DEP
technical assistance
Municipal boards of health
review of health by-laws

Time table for completion

Short-term

Resources to accomplish the task

Commitment of staff

10. Assess the need for an additional pump-out in the estuary and work with marinas and yacht clubs to site it. Alternatively, determine how to make maximum use of the facilities at Marina Bay and Thomas Marine.

Cooperating parties

DMF
coordination and technical assistance
MCZM Harbor Management Program
technical assistance
Neponset ACEC Stewardship Council
review and evaluation

Time table for completion

Short-term

Resources to accomplish the task

Commitment of staff
Funds from Coastal Pollutant Remediation (CPR) Program

11. Present the conclusions of the shoreline survey completed by the Friends of the Neponset Estuary to the Conservation Commissions and Departments of Public Works of each of the three communities, and the Massachusetts Highway Department and the MBTA. Submit the findings to the Division of Marine Fisheries for their use in evaluating water quality related to shellfish resources.

Cooperating parties

Friends of the Neponset Estuary
source of information

Interested parties and agencies
partial list above

Time table for completion

Immediate

Resources to accomplish the task

Commitment of staff

12. Regularly assess overall water quality and management concerns in the Neponset estuary. After review of the assessment by EOEA agencies, Neponset River Estuary Stewardship Council, and other appropriate parties and identify new mechanisms to bring the Neponset estuary to SB quality, including specific tasks, responsible parties, and time tables.

Cooperating parties

Neponset River Estuary Stewardship Council
coordination, review and evaluation

Time table for completion

Short-term

Resources to accomplish the task

Commitment of EOEA agency staff

Estuarine and Freshwater Wetlands

Goal: Preserve, protect, and restore wetlands in the Neponset Estuary

Inventory

The predominant ecological and visual features of the Neponset River Estuary ACEC are the extensive salt marshes. According to GIS data, salt marsh comprises approximately 320 acres, or 26 per cent of the total area of the ACEC. Salt marsh is valuable as a major source of carbon and nitrogen for the marine food chain, nursery habitat for juvenile marine species, habitat for diverse plant, bird and wildlife species, and serve as efficient filters for contaminants from upland discharges and urban runoff thereby helping to maintain water quality. In addition, salt marsh provides flood control and protection of uplands from storm damage, and is a valuable recreational resource. The marshes of the Neponset River Estuary are the second largest remaining salt marsh in Boston Harbor.

Within the ACEC, large expanses of salt marsh are located below the Lower Mills Dam in Boston and Milton, along the south shore of the Neponset at the Milton and Quincy municipal boundary, and in Quincy north of the Conrail bridge to Squantum Point (see Figure 5).

Freshwater wetlands are located at Squantum Point and within the area of the Presidents' Golf Course. According to the Massachusetts Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program, Squantum Point "provides habitat for a tremendous diversity of bird species and is one of the most important wildlife habitats in the urbanized Boston area" (communication, February 1995). The importance of this area is described further under Habitat Resources.

The combined acreage of open water at high tide, estuarine wetlands, and other wetland resource areas totals approximately 830 acres, or 66 per cent of the total area of the ACEC. In addition, floodplains overlay most of the ACEC, especially the wetlands. Floodplains cover approximately 1,005 acres or 80 per cent of the ACEC (Figure 6). This estuarine wetland system is a highly productive ecosystem, supporting important marine fisheries and diverse wildlife habitat. It is unique in its size and proximity to a highly urbanized area.

In designating the Neponset River Estuary as an Area of Critical Environmental Concern (ACEC), the Secretary found that the wetland resource areas included in the Neponset River Estuary are significant to the prevention of pollution, flood control, the prevention of storm damage, the protection of fisheries, the protection of land containing shellfish, and the protection of wildlife habitat - all of which are public interests defined in the Wetlands Protection Act and its regulations.

Over time, much of the marshland has been engineered. Fill has been placed in the wetlands of the Neponset Estuary from a variety of activities: disposal of sediment dredged from the navigation channel of the Neponset River, a solid waste landfill at Hallet Street, fill to create usable land for building or recreational purposes, disposal from construction activities, and the accumulation of tidal flotsam. Industrial activities have taken place at the edges of and in the wetlands, filling salt marsh and leaving deposits of hazardous materials behind. Flood control dikes have been constructed and parts of the marsh have been ditched to promote drainage and control mosquitoes. A number of these activities have altered the marsh in ways that promote the growth of the invasive phragmites species over native salt marsh species.

Point and nonpoint sources of pollution to the estuary affect both water quality and the health of the marshes. (See more about nonpoint source pollution abatement under Surface Waters and Water Quality.)

Assessment

The Massachusetts Wetlands Restoration & Banking Program (WRBP) is currently working with the US Army Corps of Engineers, along with local citizens and officials to assess the condition of a number of wetland areas around the state, including the Neponset marshes. It is anticipated that a draft Watershed Wetlands Restoration Plan (WWRP) for the Neponset watershed will be made available for public review by the fall of 1996. The WWRP will provide an inventory of wetlands restoration sites prioritized based on their capability to improve the watershed's flood storage, water quality, and fish and wildlife habitat, as well as providing information that can be used for land use planning and management purposes beyond wetlands restoration (Wetlands Restoration & Banking Program, 1995).

In the Neponset River estuary, the WRBP is working with the MDC and examining the possible restoration of the Metropolitan District Commission's Neponset Marshes and degraded wetlands south of Granite Avenue in Boston. Part of the assessment of the health of the marshes and potential for restoration will have to include soils assessment for potential contaminants, particularly in filled areas.

There are no regulatory prohibitions on marsh (including tidally-impaired marshes) restoration activities. Salt marsh restoration or rehabilitation projects, however, must ensure that there are no adverse effects to public or private water supplies, and that the projects avoid or, where avoidance is not practicable, minimize and mitigate any impacts to resource areas. Additionally, the restoration projects should: use best management practices to minimize erosion and siltation of adjacent resource areas; avoid, minimize or mitigate flooding impacts; and avoid placement of fill or structures in resource areas.

The Wetlands Conservancy Program, in cooperation with the Massachusetts Coastal Zone Management Program (MCZM) and the National Marine Fisheries Service (NMFS), has begun a three-year program to accurately inventory the state's submerged rooted vascular plant (SRV) resources. The project involved acquisition and interpretation of aerial photography at 1:20,000 scale followed by fieldwork and underwater survey work to accurately delineate and classify the SRV resources which are then depicted on photomaps. Aerial photographs of the Neponset estuary have been taken, and it is projected that the process to produce maps of the area will be completed during 1996.

Implementation Strategy

Management Issues

While some information is already available regarding the condition and restoration potential of Neponset ACEC wetlands, the WWRP will provide comprehensive data on location of sites and preliminary data on condition and restorability. Large sections of the salt marsh in the estuary have been invaded by phragmites. It is known that the placement of dredge material on areas of the marsh is partially responsible, although other causes may be present as well, e.g., tide gates.

The MDC Master Plan for the Lower Neponset River will discuss on-going collaborative efforts with WRBP and the historic nature of the marshes and their flora/fauna components,

Neponset River Estuary ACEC

Wetlands

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Wetlands: Automated by Applied Geographics from DEP 1:5000 orthophoto maps.

Scale 1:20,000

0 1 mile

0 1 kilometer

N W E S

DEM/MassGIS, March 1996

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Legend

- Salt marsh
- Freshwater wetlands
- Tidal Flat
- Neponset River Estuary ACEC boundary

This map is for planning and illustrative purposes only. It represents the best available digital statewide data for a given theme. It is not to be used by itself for legal boundary definition or regulatory interpretation. See the Neponset River Estuary ACEC designation document, as amended December 1, 1995, for the legal boundary description.

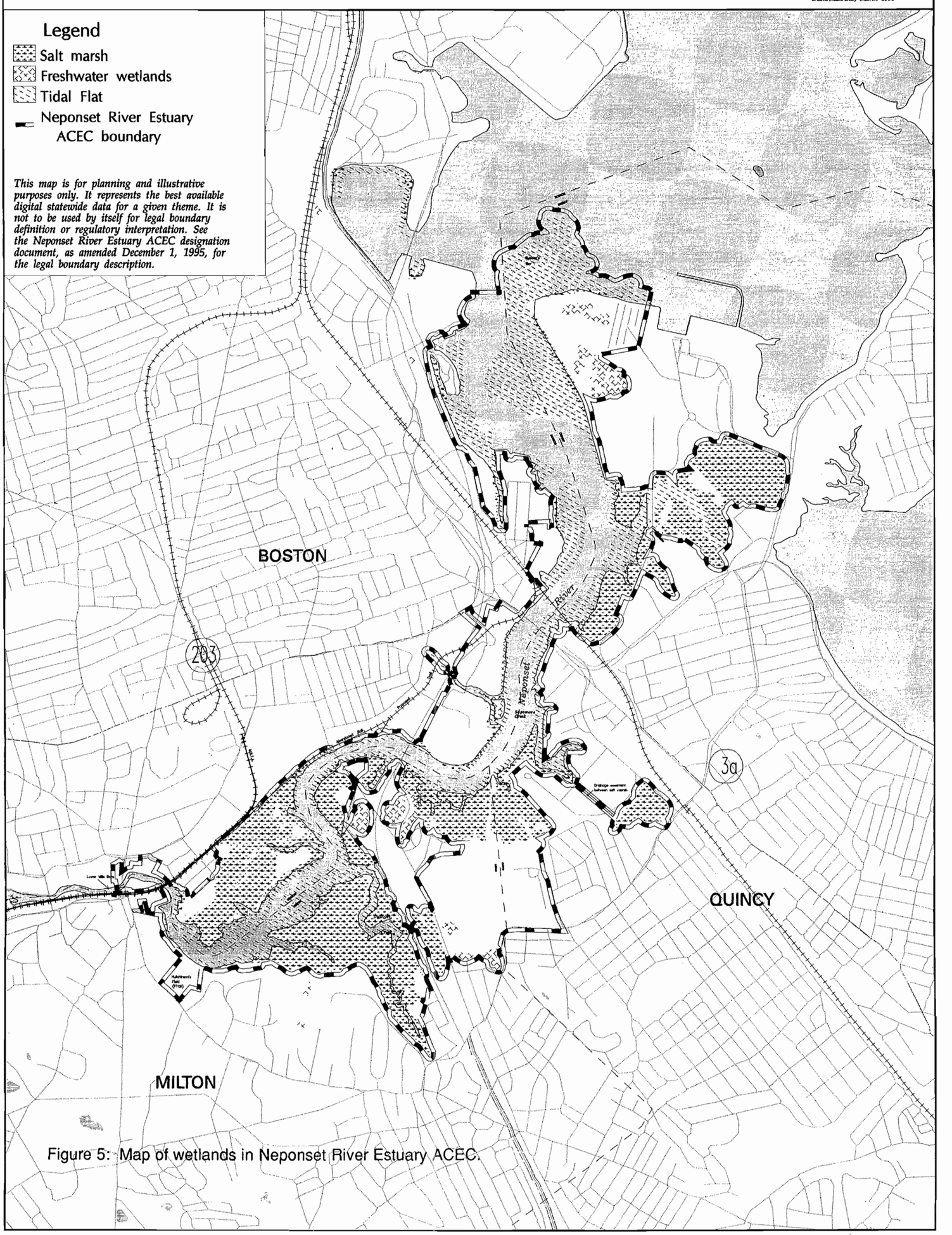


Figure 5: Map of wetlands in Neponset River Estuary ACEC.

Neponset River Estuary ACEC

Floodplains

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Floodplains: Compiled onto 1:7500 basemap & automated by DEM from US Federal Emergency Management Agency data.

Scale 1:20,000

0 1 mile

0 1 kilometer

N W E S

DEM/MassGIS, March 1996

Legend

Floodplain, 100-year

Neponset River Estuary ACEC boundary

This map is for planning and illustrative purposes only. It represents the best available digital statewide data for a given theme. It is not to be used by itself for legal boundary definition or regulatory interpretation. See the Neponset River Estuary ACEC designation document, as amended December 1, 1995, for the legal boundary description.

BOSTON

203

3a

QUINCY

MILTON

Figure 6: Map of the floodplain in the area of the Neponset River Estuary ACEC.

and make recommendations for next steps to be followed in regard to the marshes. The potential for restoring the MDC-owned marshes should be reflected in the plan and be consistent with the recommendations of the WWRP, e.g., potential for restoration of marsh area filled with dredge material. An analysis of potential soil contamination is expected to be part of the assessment of the potential for restoration at this site.

The construction of the State Street Bank Complex physically severed a substantial section of the marsh system along the river. The health of this marsh depends on the conduit running through the parking lots of the complex. The run-off inevitably carrying a cumulative load of pollutants stresses the system further.

Tasks

1. Complete watershed-level assessment (WWRP and MDC Master Plan) of Neponset wetlands.

   Cooperating parties

   WRBP and community sponsors
   complete assessment and WWRP
   Metropolitan District Commission
   complete Master Plan for Lower Neponset River
   NepRWA/Friends of the Estuary
   provide information and public review
   Boston, Milton, Quincy conservation commissions
   provide information and participate in restoration projects
   Neponset River Estuary Stewardship Council
   upon completion of the WWRP, incorporate appropriate Estuary sections into this ACEC resource management plan by reference or as an appendix

   Time table for completion

   Immediate (Fall, 1996) Watershed Wetlands Restoration Plan
   Immediate (April, 1996) MDC Master Plan for the Lower Neponset River

   Resources to accomplish the task

   Commitment of EOEA to these programs

2. Begin implementation of the WWRP by developing and carrying out recommended site-specific restoration plans to improve the quality and functions of the Neponset estuary wetlands.

   Cooperating parties

   WRBP
   coordination, sponsor, and technical assistance

Key for entries under Tasks
Cooperating parties: lead party in bold typeface, other are cooperators
Time table: based on the plan's five-year implementation schedule.
Immediate = within one year; Short-term, 1 to 3 years; Long-term = 3 to 5 years.
Resources to accomplish the task: identifies type of resources needed and possible sources.

DEP
permitting and technical assistance
MDC
conduct soil assessments, as necessary, to determine potential for restoration of marsh filled with dredge material; implement restoration projects proposed in Master Plan.
U.S. Army Corps of Engineers
potential participant in wetlands restoration
Public and private project sponsors (municipal conservation commissions, Quincy DPW, Milton Board of Selectmen, private property owners)
potential sponsors of or participants in implementation of site-specific plans
DEP-DWW
permitting and technical assistance

Time table for completion

Short-term

Resources to accomplish the task

Commitment of sponsor(s)
Funds (see List of Funding Sources in WRBP's Watershed Wetlands Restoration Planning Guidance Document)

3. Upon completion, incorporate the Wetlands Conservancy Program's mapping of SRV resources (eelgrass) into this plan and into decision making in the ACEC, e.g., in permitting activities such as boating facilities.

Cooperating parties

DEP's Wetlands Conservancy Program
complete SRV mapping
Neponset River Estuary Stewardship Council
incorporate information into this ACEC resource management plan

Time table for completion

Immediate

Resources to accomplish the task

Funds from the National Marine Fisheries Service
Funds to support assessment. Possible sources include: Open Space Bond Issue, Mass. Water Resources Authority, Mass Bays Program

4. Educate landowners bordering the salt marsh and freshwater wetlands regarding the types of activities, such as disposal of brush and clippings, use of pesticides and fertilizers, that adversely impact the marsh.

Cooperating parties

NepRWA/Friends of the Estuary/Neponset River Coordinator
clearinghouse of information; educational programming
WRBP
WWRP will provide landowner outreach and education
Municipal conservation commissions and staff
disseminate information and enforce regulations
BNAF
educational programming

Massachusetts Bays Program
implementation of CCMP includes education; possible source of future funding

Time table for completion

Short-term

Resources to accomplish the task

Commitment of staff resources
Funding to support continued public educational efforts of nonprofits active in the estuary
Neponset River Coordinator

5. Educate the public of the role, function, and importance of wetlands.

Cooperating parties

NepRWA/Friends of the Estuary/Neponset River Coordinator
coordination, clearinghouse
MDC
Include interpretive environmental education as part of the program/facilities of the Lower Neponset River park; Neponset Rangers will contribute
BNAF
clearinghouse; public educational programming

Time table for completion

Ongoing

Resources to accomplish the task

Neponset River Coordinator
Funds for programming (see List of Funding Sources in WRBP's Watershed Wetlands Restoration Planning Guidance Document)

6. Identify, prioritize, and seek to acquire ownership—fee or easements—of significant wetland parcels within or contiguous to the ACEC.

Cooperating parties

MDC, municipal conservation commissions
fee acquisition or conservation easement
BNAF/Trust for Public Land
assist in identifying and prioritizing sites and in acquisitions

Time table for completion

Long-term

Resources to accomplish the task

Acquisition funds: 1996 Open Space Bond

7. Assess the condition and health of the isolated salt marsh at the State Street Bank complex in Quincy, and develop and implement measures for restoration.

Cooperating parties

WRBP
initiator and technical assistance

State Street Bank
implementation of measures to improve condition of marsh

Time table for completion

Long-term

Resources to accomplish the task

Commitment to public/private partnership
Restoration funds

8. Conduct a review and evaluation of municipal regulations, policies, and procedures (notices, etc.) and consider certain common regulatory provisions for improved protection of the wetlands resources. Boston and Quincy might consider adopting, as a policy or regulatory provision, a non-disturbance buffer zone contiguous to wetlands resources.

Cooperating parties

Boston, Milton, and Quincy conservation commissions
adopt local regulations, as appropriate

Time table for completion

Short-term

Resources to accomplish the task

Commitment of commission and staff

Habitat Resources

Goal: Preserve, protect and restore fisheries and wildlife habitat in the Neponset Estuary

FINFISH

Inventory

According to the Massachusetts Division of Marine Fisheries (DMF), the Neponset River supports valuable anadromous fish populations, including one of the largest smelt runs in Massachusetts Bay (Coates, 1995; Chase, 1996). This run supports a hook and line, recreational fishery in the fall and winter. The river provides suitable spawning habitat for blueback herring and a viable population exists in the estuary. Blueback herring are valued for bait and roe harvest and are an important forage species in the Bay. American shad have been observed by biologists below the Lower Mills Dam, and are believed to be members of a remnant population (personal communication, Phil Brady, DMF). Larval cod were present in ichthyoplankton samples taken in 1989 in the river near Granite Avenue (Chase, 1996).

DMF recognizes important fisheries habitat areas within the ACEC and notes, in particular, the magnitude of these resources relative to other locations in Massachusetts Bay. Numerous fish species enter the Neponset River estuary as seasonal migrants for feeding purposes, with striped bass, bluefish and winter flounder considered significant for commercial and recreational importance. During Autumn 1994 and Spring 1995, DMF completed a suitability assessment of the Neponset River above the Lower Mills dam and concluded that the waterway and substrate are suitable for shad and blueback herring spawning for a distance of 15.5 miles above the dam.

Assessment

The presence of the dam at Lower Mills, close to the tidal reach of the river acts as an upstream limit to smelt and blueback herring spawning habitat. There is no fish passage at the dam, thus preventing bluebacks from utilizing upstream habitat. Smelt are not jumpers by nature and do not use fish ladders. Smelt lay eggs on rocks below the dam and when the tide recedes, the eggs that are exposed dry out. This problem has existed since the dam was constructed, and although it may limit the population size, a sustainable population continues to support a popular fishery.

Restoration of anadromous fish runs in the Neponset River requires fish ladders to be constructed at the Lower Mills dam and the Tileston dam. A fishway project is underway involving DEP's Office of Watershed Management, in collaboration with Department of Fisheries, Wildlife and Environmental Law Enforcement (DFWELE), DMF, DEP, MDC, and the U.S. Fish and Wildlife Service. The project is using Section 319 funds (from the base funding of the Watershed Resources Restoration Project) to do preliminary design of the fish ladder and install a permanent gauge at the Lower Mills dam. The flow gauge at this location is needed to determine flow requirements for spawning smelt and bluebacks and future needs for passage with the new ladders.

Implementation Strategy

Management Issues

Fish ladders at the Lower Mills dam (and at the Tileston dam further upstream) are needed to provide the blueback herring and shad with access to more area of river to spawn, allowing those populations to increase.

The flow of the Neponset River is impacted by diversions and groundwater withdrawals throughout the watershed raising general concerns about the need for water conservation measures and the cumulative impact of municipal withdrawals. In particular, the adequacy of river flow in the vicinity of the Lower Mills dam needs to be assessed. Stream flow gauges are located in the upper reaches of the Neponset. As a provision of the Interbasin Transfer Act decision on the Dedham-Westwood Water District by the Water Resources Commission, there is a water depth requirement of one foot below the dam to protect anadromous fish spawning; a temporary wire gauge was installed at the Lower Mills dam for this purpose. The gauge was read by a group of volunteer "Smelt Stewards" during the Spring and Summer 1995 and will be done again this year.

Sand and sediment carried by storm drains discharging to the upper estuary can impact smelt spawning by covering the eggs laid on the river bottom below the dam (see the Surface Waters and Water Quality section for more information on stormwater management).

Current data on the finfish resources of the Neponset estuary is lacking. The last comprehensive report, *A Study of the Marine Resources of Dorchester Bay*, was done by DMF in 1971. DMF did recently complete and publish an assessment of the smelt resources of the estuary (Chase, 1996).

Water quality and forage quality need to be improved to increase commercial and recreational fish species. Water quality problems in rivers can degrade spawning habitat for certain species thereby limiting recruitment and affecting species abundance. A diminished forage base can decrease growth, both individual and population (personal communication, Brad Chase, DMF).

Tasks

1. Complete an inventory of fishery resources and an analysis of their current status. This should be done by the Division of Marine Fisheries as an updating of its 1971 document, *A Study of the Marine Resources of Dorchester Bay*.

Cooperating parties

DMF
organize, coordinate, and conduct the study
Smelt Stewards (Friends of the Estuary subwatershed group)
source of information

Key for entries under Tasks
Cooperating parties: lead party in bold typeface, other are cooperators
Time table: based on the plan's five-year implementation schedule.
Immediate = within one year; Short-term, 1 to 3 years; Long-term = 3 to 5 years.
Resources to accomplish the task: identifies type of resources needed and possible sources.

Time table for completion

Short-term

Resources to accomplish the task

Commitment of existing staff and resources
Grant funds for Dorchester Bay/Neponset River Estuary study or seek appropriation from legislature for comprehensive study of the estuarine and near shore marine resources of Massachusetts

2. Support the fishway project being planned by state and federal agencies. This could involve identifying and securing a cash or in-kind contribution to match possible federal funds to continue the project through construction. Explore sources for this match among the active nonprofits, state and municipal agencies, and the private sector.

Cooperating parties

DEP OWM
coordination
DMF
lead in construction of fish ladder
US F&WS
technical assistance
MDC
potential source of match
NepRWA/Friends of the Estuary/Neponset River Coordinator
seek funding

Time table for completion

Short-term

Resources to accomplish the task

Commitment of existing staff and resources
Funding

3. Recommend, as required by the Water Management Act permit, that the Dedham/Westwood Water District, install a permanent stream flow gauge at the Lower Mills dam to acquire the necessary flow data in support of the fish ladder.

Cooperating parties

Dedham/Westwood Water District
install gauge
DEP-OWM, DMF
technical assistance
Friends of the Neponset Estuary
monitor gauge

Time table for completion

Immediate

Resources to accomplish the task

Commitment of staff and volunteer resources

4. To ensure upstream activities do not diminish flow at critical spawning times, DEP should carefully consider the potential impact of diminished flows on efforts to restore the anadromous fish runs in its assessment of proposals for new or increased withdrawals upstream. New withdrawal permits issued by DEP, in consultation with DMF, should contain a condition that withdrawals are reduced at such times as successful spawning, rearing, or migration would be threatened by low flow conditions.

Cooperating parties

DEP
permit review
DMF
technical assistance with permit decisions

Time table for completion

Ongoing

Resources to accomplish the task

Commitment of existing staff

SHELLFISH

Inventory

With regard to shellfish resources, DMF states that there are substantial soft-shell clam beds at the mouth of the Neponset River. A limited survey of Buckley's Bar was conducted in 1989 and found very high densities of soft-shell clams, with a potential yield of 68 clams per square foot. DMF estimates that the 50 acres of Buckley's Bar could produce approximately 12,500 bushels per year, with a current market value of $1 million per year to local harvesters. However, recent water samples from this area found continued high levels of contamination, with DMF concluding that "open shellfish harvest is not likely in the near future for this area, although restricted classification (harvest by permitted master diggers followed by depuration) is a feasible goal, especially with plans underway to improve water quality in Boston Harbor and the Neponset River." See Surface Waters/Water Quality section for discussion of existing conditions and measures being taken to improve water quality.

Figure 7 is a map produced by DMF of lower Neponset River/Upper Dorchester Bay showing shellfish growing areas, classification areas and types, and monitoring stations (for classification). Growing area refers to a geographical area, one of 303 areas into which the Commonwealth's intertidal and subtidal area has been divided for administrative purposes. The Neponset River Estuary ACEC includes growing area number GBH3.

All of the coastal waters within the Neponset River Estuary ACEC are classified as prohibited for shellfishing because water quality data has, for many years, indicated high concentrations of fecal material. Before any closed area can be opened there must be a sanitary survey conducted by DMF which documents and assesses all sources of potential pollution to an area.

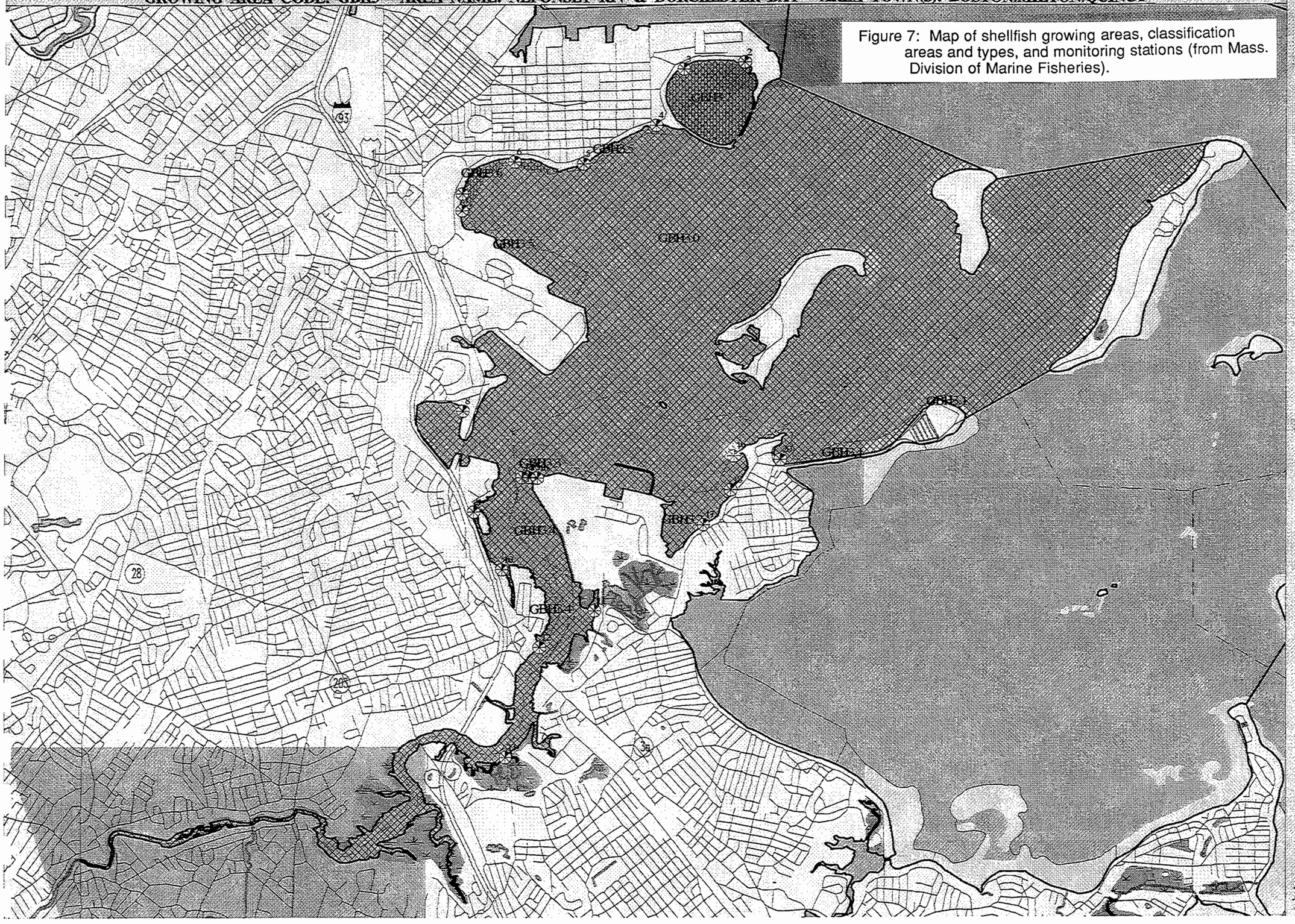
Assessment

Buckley's Bar is not included in the EOEA/MassBays Shellfish Restoration project. Sites for this project were selected based on an assessment of the feasibility of making significant improvements to the beds with the application of limited resources. In most cases, this has

MASSACHUSETTS DIVISION OF MARINE FISHERIES – DESIGNATED SHELLFISH GROWING AREA

GROWING AREA CODE: GBH3 - AREA NAME: NEPONSET RIV & DORCHESTER BAY - AREA TOWN(S): BOSTON/MILTON/QUINCY

Figure 7: Map of shellfish growing areas, classification areas and types, and monitoring stations (from Mass. Division of Marine Fisheries).



0 1 MI.

0 1 KM

STATION TYPE

- CLASSIFICATION
- POLLUTION SOURCE
- AD-HOC
- PRIMARY PSP
- SECONDARY PSP
- TERTIARY PSP
- CHEMICAL
- MARINA

BOUNDARY LINES

- GROWING AREA
- CLASSIFICATION AREA
- TOWN BOUNDARY

CLASS AREA TYPE AS OF 01/01/95

- APPROVED
- CONDITIONALLY APPROVED
- CONDITIONALLY RESTRICTED
- RESTRICTED
- MANAGEMENT CLOSURE
- PROHIBITED

This product is for planning and educational purposes only. It is not to be used by itself for legal boundary definition or regulatory interpretation.

meant that sites were selected where a single point source of pollution could be identified and repaired. At Buckley's Bar, there are numerous point and non-point sources of contamination, making restoration a difficult and challenging task.

As the Boston Harbor cleanup proceeds toward completion, the degree to which bacterial loading from upstream and from CSOs and sewer lines is mitigated will ultimately determine future shellfishing opportunities in Dorchester Bay and the Neponset Estuary. According to DMF, information generated over the last 5 to 7 years generally shows the Neponset River/Dorchester Bay to be seriously contaminated with little or no chance to be reopened to the harvest of shellfish for human consumption (correspondence from D. Roach, DMF, Nov. 1995).

One positive occurrence in the vicinity (outside the ACEC at the northern tip of Squantum) was the reclassification upgrade of Nickerson Beach to Conditionally Restricted for controlled purification in July 1995. Since then, Nickerson Beach has produced 2,307 bushels of soft shell clams for controlled depuration. However, the sanitary evaluation conducted at that time found rainfall triggered pollution events to be persistent for a minimum of five days even under average rainfall conditions (i.e., 0.5"). It is believed these protracted contaminating episodes reflect adverse impacts emanating from the Neponset River (correspondence from D. Roach, DMF, Sept. 1995)

Implementation Strategy

Management Issue

The restoration of shellfishing in the Neponset River estuary appears to be a long term proposition. A better understanding of the sources of pollution is needed so that efforts at restoration can begin as soon as practicable.

1. Assess feasibility of opening Neponset estuary shellfish beds for harvesting following significant water quality improvements (see Surface Waters and Water Quality section).

Cooperating parties

DMF
source of information and technical assistance
Boston, Milton and Quincy Boards of Health
source of information and technical assistance
MWRA/BWSC, Milton and Quincy DPWs
source of information and technical assistance
Mussel Watch
source of information
MassBays/Shellfish Restoration Program
technical assistance and recipient of assessment
MassBays Program
source of information and possible source of funding

Time table for completion

Long-term

Resources to accomplish the task

Commitment of existing staff and resources
Funding for Neponset River Coordinator

2. Identify potentially valuable shellfish beds in the ACEC. This could be done as part of an updating of the 1971 document, *A Study of the Marine Resources of Dorchester Bay*. This information will be useful to support long-term efforts to restore shellfishing in the estuary and in the regulatory review of proposed projects in these areas.

Cooperating parties

DMF
technical assistance
DEP
condition maintenance dredging permits to require shellfish survey, as appropriate
Friends of the Estuary/Neponset River Coordinator
compile existing knowledge and new data as produced
Boston, Milton, and Quincy Conservation Commissions
coordinate permit requirements/conditions with DEP

Time table for completion

Long-term

Resources to accomplish the task

Commitment of existing staff and resources
Funding for Neponset River Coordinator

3. Identify mechanisms to restore the Neponset estuary shellfish beds, including time tables, responsible parties, and financial resources.

Cooperating parties

Neponset River Estuary Stewardship Council
initiate, organize, and coordinate strategy
DMF
perform sanitary survey, when appropriate, such as after point sources of contamination are abated

Time table for completion

Long-term

Resources to accomplish the task

Commitment of staff and resources

WILDLIFE

Inventory

Comments regarding the nomination provided by the Massachusetts Natural Heritage & Endangered Species Program (NHP), Division of Fisheries and Wildlife, dated February 1, 1995 focus on state-listed rare species and non-game wildlife in the Squantum Point area, in Quincy. According to NHP, this area "provides habitat for a tremendous diversity of bird species and is one of the most important wildlife habitats in the urbanized Boston area."

NHP goes on to state that, "For over 30 years, Squantum Point has been known as a feeding area, roosting area, and migratory stopover for over 200 species of birds. State-listed rare species known to utilize this area are the Short-eared Owl (Asio flammeus), Northern Harrier

(Circus cyaneus), and Least Tern (Sterna antillarum). A list of bird species sighted in the Neponset River Estuary marshes and at Squantum Point is presented in Appendix E. Other bird species that use this area, and are uncommon but not state-listed, include the Snowy Owl, Great Blue Heron and Osprey among many others."

In regard to the wildlife habitat of this area, NHP explains that, "One of the primary reasons that Squantum Point supports both an unusual abundance of birds and a high diversity of species is the variety of habitat types occurring within a relatively small area. This area includes mudflats, sandy beaches, saltmarshes, freshwater wetlands and shrubby upland." Another reason for the heavy use by birds is because so few suitable areas exist in the greater Boston area. NHP recommended including all of these habitats within the boundary of the ACEC, and designating the area as an ACEC to help "protect an area that is unique because it is one of the few remaining natural ecosystems in our urban environment."

Assessment

The diversity of resources in the estuary—the river, its tributaries, the mudflats, salt marshes, freshwater wetlands, and vegetated open spaces—are important habitat for a variety of wildlife and fish species. The large expanse of these resources and the connection this area provides with contiguous natural areas upriver and towards the bay add to its habitat value. However, the natural resources of the Neponset estuary have been reduced and impacted by decades of urban development.

Public ownership and, more recently, regulatory and nonregulatory programs have provided protection for saltmarsh and intertidal areas. Other resources, such as freshwater wetlands and upland areas fringing on wetlands, which contribute important habitat diversity, would benefit from better protection through public acquisition (fee simple or conservation easement) and/or a higher standard of regulatory review at both the local and state levels.

Implementation Strategy

Management Issues

The tremendous efforts at reducing point and nonpoint sources of pollution and a recognition of the importance of urban green space have renewed an interest in restoring the habitat value of currently degraded natural resources.

More information needs to be acquired on the importance and quality of the various aquatic and terrestrial habitats and on the effects of development. maintaining and restoring a diversity of habitat—wetlands and fringing upland—is necessary to support needs of a range of species. The MDC planning process currently underway will produce some data, the Notices of Intent filed with the municipal conservation commissions also contain useful information, as do site evaluations done by the nonprofits active in the watershed and bird and wildlife enthusiasts.

Tasks

1. Identify sources of information to complete wildlife inventory.

Cooperating parties

Friends of the Estuary (NepRWA subwatershed group):
organize project, coordinate, source of information,
Neponset River Coordinator:
staffing

Mass. Natural Heritage & Endangered Species Program (NHP)
source and repository of information and mapping
DFWELE
source of information and technical assistance
Metropolitan District Commission (MDC)
source of information
Boston, Milton, and Quincy conservation commissions
source of information
Boston Natural Areas Fund (BNAF)
source of information

Time table for completion

Short-term

Resources to accomplish the task

Commitment of existing staff and resources
Funding for Neponset River Coordinator

2. Prepare a comprehensive assessment of the quality of wildlife habitat in the Neponset Estuary. Include identification of degraded upland and buffer areas in the ACEC. Compile and assess information from existing sources.

Cooperating parties

Friends of the Neponset Estuary (NepRWA subwatershed group):
serve as steering committee, coordinate, draft sections
Neponset River Coordinator
prepare and produce product
technical assistance and mapping
DFWELE, NHP, DEP, and MassGIS
technical assistance
Boston, Milton, and Quincy conservation commissions and staff
provide information and technical assistance

Time table for completion

Long-term

Resources to accomplish the task

Commitment of existing staff and resources

3. Prepare proposals for funding for restoring degraded habitat in the estuary. Possible sources include: Section 604(b) Planning and Assessment funds available to the regional planning agency (MAPC) and other substate units for projects relating to water supply, wetland restoration and banking, and identifying nonpoint sources of pollution; Section 319 grants available for projects addressing problems of nonpoint source pollution.

Cooperating parties

NepRWA/Friends of the Estuary/Neponset River Coordinator
research sources of funds and prepare proposals
MAPC
prepare proposals
Boston, Milton, and Quincy conservation commissions
identify areas in need of restoration

Time table for completion

Short-term

Resources to accomplish the task

Commitment of existing staff and resources
Neponset River Coordinator

4. Based on analysis above, develop a plan with specific actions to protect and improve the wildlife habitat of the Neponset Estuary. Such plan may include recommendations: for municipalities to adopt flexible zoning techniques to protect wildlife habitat on developable property; wetlands conservation restrictions on areas bordering sensitive resources; consideration of public acquisition of privately-held freshwater wetlands that are part of a larger wetland system. The plan should include time tables, responsible parties, and necessary financial resources.

Cooperating parties

NepRWA/Friends of the Estuary/Neponset River Coordinator
Organize, coordinate, prepare
BRA, Milton Planning Board, Quincy Planning Board
consider adopting appropriate regulations, and through permitting authorities, protecting habitat resources
Boston, Milton and Quincy conservation commissions
consider adopting appropriate regulations and, through permitting authorities, protecting habitat resources
DFWELE, NHP, DEP
technical assistance
MDC
implementation of habitat restoration projects

Time table for completion

Long-term

Resources to accomplish the task

Commitment of existing staff and resources

Economic Use and Development

Goal: Encourage appropriate land and water uses that provide public benefits and are compatible with sound resource protection and management.

Inventory

While the preponderance of area within the Neponset River Estuary ACEC is salt marsh, intertidal flats and open water, these natural resources are interspersed with and surrounded by a mix of commercial, industrial, residential, and recreational land uses typical of an urban area.

Land use in the ACEC is presented in Table 2. The data is 1985 land use interpreted from 1:25,000 aerial photography and classified into 21 categories. This is the most recent available data for this area. Figure 8 depicts this same land use information, though aggregated into major categories. This classification system describes the nature of the land, the vegetation, and land use. Most notable from this data is that the ACEC is 33% saltmarsh, 10% open water, and another 20% is recreational land.

Land use at the northern end of the ACEC (mouth of the Neponset River) is primarily industrial, commercial, transportation-related, and publicly-owned open space. Industrial uses include the storage facility of Boston Gas at Commercial Point and the former Jordan Marsh warehouse on Squantum Point. Between this latter use and the commercial marina at Marina Bay is a large parcel of open space recently purchased by the MDC. Water transportation facilities include the pier and parking lot for the MWRA's ferry to its Deer Island facility.

Port Norfolk is a mixture of commercial and residential uses, a yacht club and a large undeveloped MDC park parcel (formerly the site of the Shaffer Paper Company). The Quincy side of the river is dominated by saltmarsh and mudflats owned by the MDC. On the Boston side, beyond the bridges for the MBTA's red line and Route 3A, are the former Neponset drive-in Theater and the Hallet Street landfill, now being planned for recreational open space by the MDC (see Special Use section). Opposite this on the Quincy side are commercial uses, including the State Street Bank office complex and, further up the river, saltmarsh backed by the President's Golf Course has been acquired by the City and will be rezoned to Open Space.

The next segment of the river is bracketed by the bridge crossings of the Southeast Expressway and Granite Avenue. On the Boston side are the Keystone Apartment building, a converted industrial building, and two industrial uses: Schlager Auto Body and T Construction Corp., whose property is used primarily for storage of materials. Remnants of piers exist at both of these properties, with fishing boats tied up along the structure at T Construction Corp. On the opposite side of the river, in Milton, is the skeleton of a partially built commercial building, a victim of the downturn in the real estate market that began in the late 1980's.

South of the Granite Avenue Bridge the river flows between large expanses of saltmarsh. Publicly-owned open space and residential uses border the marshes. The MBTA rail line crosses the river at the point where the commercial uses of the Lower Mills area begin. Lower Mills features a complex of historic buildings which housed Baker Chocolate until 1965.

Table 2: Land Use in the Neponset River Estuary ACEC, 1985 (from MassGIS)

Land Use	Acres	Percentage
Pasture	3.32	0.37
Forest	41.91	4.63
Open Areas with no vegetation	35.98	3.97
Participation Recreation	177.86	19.65
Spectator Recreation	14.64	1.62
Water-based Recreation	19.58	2.16
Multifamily Residential	4.03	0.45
High Density Residential	26.83	2.96
Medium Density Residential	0.02	0.00
Low Density Residential	2.40	0.27
Saltwater wetland	301.26	33.28
Commercial	32.26	3.56
Industrial	47.98	5.30
Urban open	68.14	7.53
Transportation	44.85	4.95
Waste disposal	0.50	0.06
Water	83.62	9.24
TOTAL	905.16	100.00

The Neponset River ACEC is criss-crossed throughout by several major north-south transportation corridors including the Southeast Expressway (with its new High Occupancy vehicle lane), the MBTA Red Line, the Old Colony railroad and several road bridges. These important regional linkages also attract and support the diverse range of land uses. These numerous transportation routes not only reflect the history of human use of this area; but also, distinctly shape the dynamics and dimensions of this urban ACEC. These major public investments provide access through the ACEC as well as direct access to specific resource areas and public recreational sites.

Assessment

The upper estuary is characterized by saltmarsh and mudflats and is in a much more natural condition than the lower estuary. Very little of the shoreline is privately owned, and where it is privately owned—as at the commercial district of Lower Mills—limited opportunity exists for utilizing the river due to the steep shoreline banks and/or the shallowness and narrowness of the river.

The heart or central node of the ACEC is located in the vicinity of the Granite Avenue Bridge. This area, approximately in the middle of the estuary, provides dramatic views of the estuary,

especially its upper reaches, has great potential for increased public access, and marks a transition from the open estuarine system to a more natural river marsh system.

The lower estuary is and has been the site of considerable commercial and industrial use. Past dredging has been done in a number of locations, (including a federal navigation channel up to the Neponset Avenue bridge), shorelines have been altered, and structures have been built in support of water-dependent uses. This section of the estuary offers far more opportunity and is better suited for water-dependent uses, including public recreation.

The Neponset River Estuary has in the past supported major industrial and commercial uses and continues to do so. The designation of the estuary as an ACEC does not preclude new development or the expansion of existing residential, commercial or industrial uses. However, the amount of privately-owned upland in the ACEC is rather limited. Further, natural resources such as saltmarsh and mudflats limit the water-dependent use potential of many properties.

The efficient and safe operation of the numerous transportation systems that criss-cross the ACEC is a regional priority and transportation agencies are concerned about the effect of the ACEC on new construction and ongoing maintenance. However, proposed improvements to mass transportation can reduce air and water pollution within the ACEC; and likewise, properly maintained storm drainage systems and the adoption of best management practices for all operations will help minimize impacts on the natural resources of the ACEC(see Surface Water and Water Quality section).

Throughout this very urban ACEC, the impacts of many decades of human uses create a priority for restoration projects and add an extra measure of complexity to the management of the natural resources. This is especially evident in the lower estuary where environmentally beneficial projects like the closure of the landfill and remediation of several hazardous waste sites are critical elements of the Resource Management Plan (RMP).

Based on this assessment in the draft Neponset Estuary ACEC RMP, the Secretary of Environmental Affairs, on December 1, 1995, amended the ACEC designation to provide for limited exemptions from the ACEC for specific actions required for landfill closures as part of the landfill assessment actions (Initial and Comprehensive Site Assessments) and landfill closure construction, as determined through DEP/DSWM's Corrective Alternative Action Analysis and/or the Massachusetts Contingency Plan. A detailed listing of such actions is contained in the December 1, 1995 amendments (see Appendix B).

Similarly, exemptions were granted from the ACEC designation for responses performed in compliance with M.G.L. Ch. 21 E and the Massachusetts Contingency Plan for the assessment and remediation of releases of oil and/or hazardous material located within the boundaries of the ACEC (see Figure 9). All exemptions for these environmentally-beneficial activities were issued on the condition that all practicable measures would be taken to avoid, minimize and mitigate impacts that would further degrade the resources of the ACEC.

Implementation Strategy

Management Issues

There is a need to develop and implement a plan for sustainable development of ACEC resources. This requires an understanding of the potential of existing land use and new development (and redevelopment) to encroach upon or otherwise impact valuable natural and

Neponset River Estuary ACEC

Land Use

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Land Use: UMass Amherst 1:25,000 interpreted from 1985 aerial photography.

Waste Disposal: Department of Environmental Protection, 1:25000.

Scale 1:20,000

0 1 mile

0 1 kilometer

N W E S

DEM/MassGIS, March 1996

Legend

- Unvegetated Open
- Vegetated Areas
- Recreation
- Residential
- Commercial, Industrial, Trans.
- Waste Disposal
- Neponset River Estuary ACEC boundary

This map is for planning and illustrative purposes only. It represents the best available digital statewide data for a given theme. It is not to be used by itself for legal boundary definition or regulatory interpretation. See the Neponset River Estuary ACEC designation document, as amended December 1, 1995, for the legal boundary description.

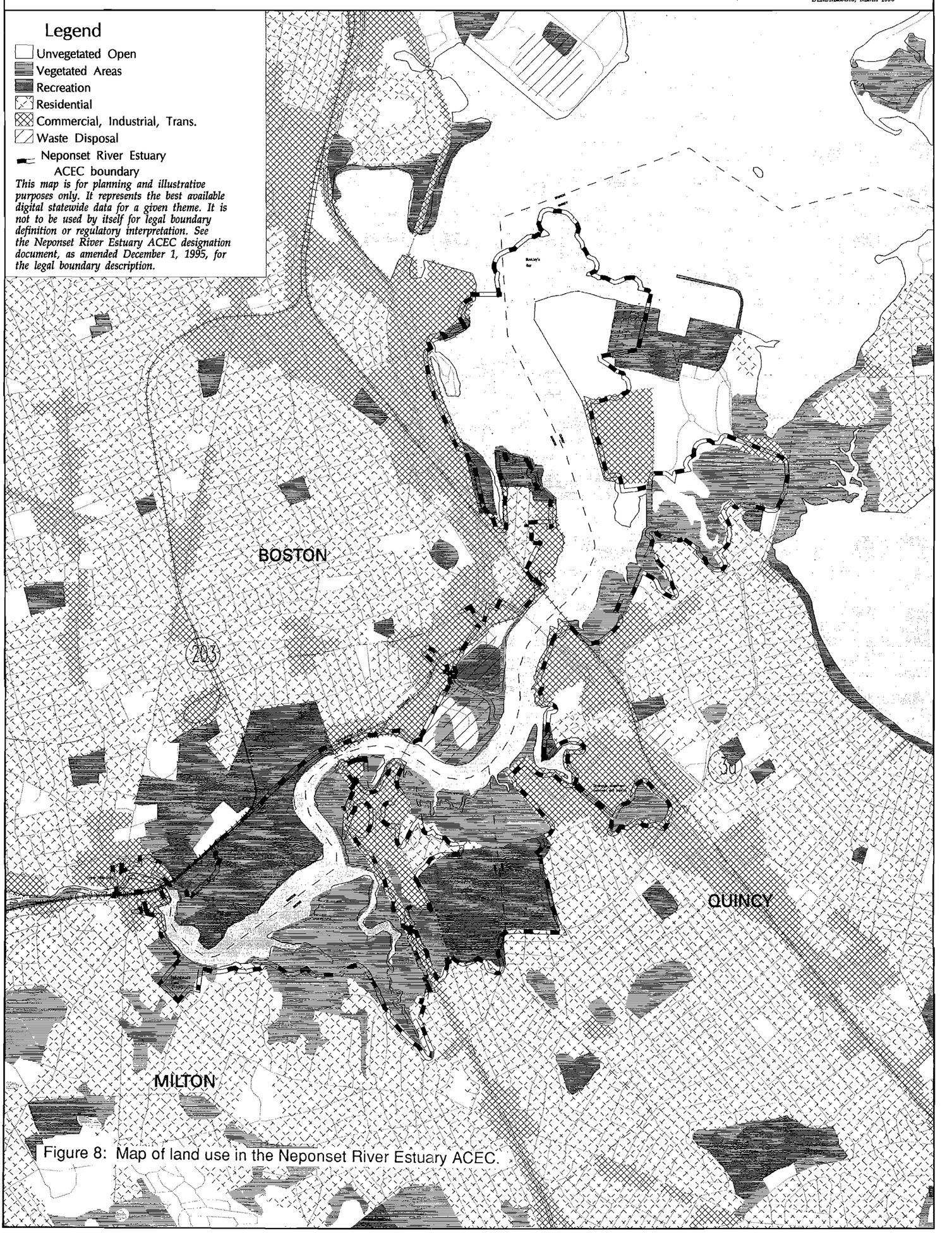


Figure 8: Map of land use in the Neponset River Estuary ACEC.

Neponset River Estuary ACEC

Hazardous Waste Sites

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Hazardous Waste Sites: Mass. General Laws Chapter 21E Sites listed in Department of Environmental Protection, Bureau of Waste Site Cleanup's SITES Database. Points located by address matching and GPS by DEP/MassGIS, February 1995.

Scale 1:20,000

0 1 mile

0 1 kilometer

N W E S

DEM/MassGIS, March 1996

Legend

- Hazardous Waste (21E) Sites (Confirmed sites and sites to be investigated)
- Neponset River Estuary ACEC boundary

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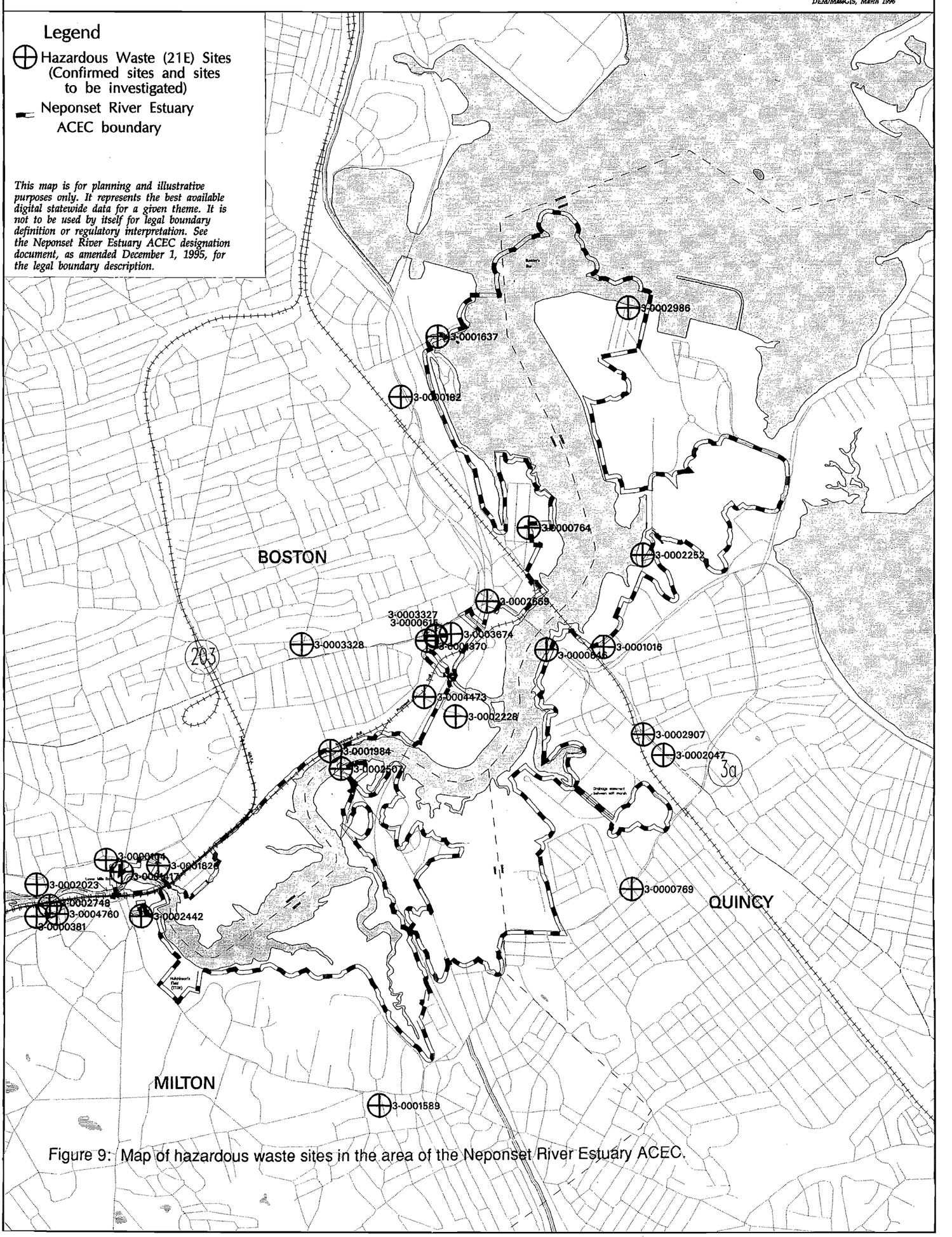

Figure 9: Map of hazardous waste sites in the area of the Neponset River Estuary ACEC.

cultural resources of the ACEC. It also requires as an understanding of the capability of the land and water resources of the ACEC to support desired economic uses.

Certain maintenance and repair activities associated with the extensive transportation networks within the ACEC should not be impaired by the designation and should proceed without additional regulatory review based on the condition that all practicable measures to avoid and minimize degradation of adjacent resources and to mitigate any unavoidable impacts are taken. Similarly, cooperative plans should be developed to incorporate best management practices for controlling stormwater, reducing levels of toxic materials, and contingency planning for oil and hazardous material spills.

Tasks

1. Complete a parcel-by-parcel inventory of land use in the ACEC. The use of each of the nearly 250 parcels identified as being at least partially within the ACEC should be aggregated into a land use classification system relevant to the management needs of the ACEC. This should be designed as a subclassification so as to remain compatible with the MassGIS classification scheme. Categories might include:

water-dependent commercial	low-density residential
water-dependent industrial	medium-density residential
nonwater-dependent commercial	high-density residential
nonwater-dependent industrial	protected open space
institutional	active recreation (water-dependent and nonwater-dependent)
vacant	

Sources of information:
- Neponset River Estuary ACEC data base
- MassGIS data base
- Municipal assessors records
- 1: 5,000-scale wetlands classification
- Municipal inventories and plans
- Wetlands Conservancy Maps

Cooperating parties

Neponset River Coordinator
assemble and organize information
Municipal planning staffs
source of information
Mass GIS
assistance with data management and mapping
MAPC
source of information

Time table for completion

Immediate

Key for entries under Tasks
Cooperating parties: lead party in bold typeface, other are cooperators
Time table: based on the plan's five-year implementation schedule.
Immediate = within one year; Short-term, 1 to 3 years; Long-term = 3 to 5 years.
Resources to accomplish the task: identifies type of resources needed and possible sources.

Resources to accomplish the task

Commitment of existing staff time
Funds for full time Neponset River Coordinator

2. Review and assess municipal zoning ordinances (Boston, Milton, Quincy) for allowable use/natural resource conflicts, adequacy of setback, minimum non-wetland lot area, and similar requirements for protection of natural resources. Recommend additional measures as appropriate.

Sources of information may include:
Municipal zoning ordinances and maps

Cooperating parties

MAPC
coordination, analysis and recommended models
Municipal planning staffs
source of information, analysis and recommendations
Neponset River Coordinator
public information

Time table for completion

Short-term

Resources to accomplish the task

Commitment of existing staff time
Funds to support Neponset River Coordinator

3. Based on the inventory and assessment above, develop economic development/land use plan which resolves natural resource/economic use conflicts in the Neponset estuary. Revise local zoning, as needed. Include time tables, responsible parties, financial resources/constraints.

Cooperating parties

MAPC
coordination and plan development
Municipal planning staff
source of information, analysis and recommendations
Neponset River Coordinator
public information
Neponset River Estuary Stewardship Council
review and evaluation

Time table for completion

Long-term

Resources to accomplish the task

Funding for ACEC Coordinator
Planning funds ($10,000); seek funding from the State's Municipal Incentive Grants Program.

Water-dependent Uses

Goal: Preserve and encourage water-dependent uses.

Inventory

Water-dependent uses

The number of water-dependent uses along the Neponset River Estuary has decreased from earlier decades, but the river still supports several recreational, commercial, and industrial uses dependent on waterfront locations. There are currently four yacht clubs, two marinas and several commercial properties that accommodate vessel berthing. There are only two water dependent facilities in the upper estuary, i.e., the area south of the Granite Avenue Bridge. The lower estuary, however, features many more water-dependent facilities and, by reason of past alteration of the resources and proximity to the open waters of the bay, is more suitable for these uses.

As discussed above, a number of private water-dependent uses exist in the ACEC. The estuary has a long history of commercial and industrial water-dependent uses, and the remnants of structures used for these purposes are still in existence along the riverfront. The locations of these structures are shown on Figure 10 and identified in Table 3. Permit information on these structures is contained in Appendix D.

Upper estuary: South of Granite Avenue Bridge

Milton Yacht Club

Milton Yacht Club is situated at the upper end of the estuary, near the tidal reach of the river, and at the head of the main dredged navigational channel. The property occupied by the club is leased from the town which also owns the fixed dock and other waterfront structures. The yacht club owns the floating dock and maintains the entire property. The club has about 130 members (100 regular member, 30 associate members), half of which are from Milton. The size of the club is limited in the by-laws to the number of boats that can be stored in the yard.

There are no slips; all boats are at two strings of moorings, one on each side of the dredged channel. There are approximately 30 moorings and boats are reached by dinghies kept at the dock. The fleet consists almost entirely of power boats, averaging about 32' in length, and drawing 2.5 to 3.0' of water. At low tide the navigable portion of the river is extremely narrow, some moored boats rest on mud. The area was last dredged in 1984 and, according to club members, is in serious need of dredging. The club does not anticipate expansion, but requires maintenance of its past and present facilities.

Much of the water frontage is a parking lot owned by H.P. Hood, but is used by the yacht club and the public. The northern corner of the parking lot is a popular location for launching canoes. While this arrangement has apparently worked well, changes in the private ownership of the land could disrupt and possibly diminish the amount of access and use currently enjoyed at this location.

Table 3: Previously authorized waterfront structures in the Neponset River Estuary ACEC

Location	Structures	Fig. 10 Map Ref.
Milton Yacht Club		1
224 Adams Street, Milton	build and maintain a pier and float; asphalt boat launching ramp extending 95' into tidewaters	2
T Construction Corp	piles and floats	3
Shlager Auto Body	fixed pier	4
2 Granite Avenue	piles for fixed pier	5
Neponset Valley Yacht Club	fixed pier, floating docks, boat launch ramp	6
Sagamore Creek at Walnut Street	maintain existing concrete platform and timber bulkhead and remove 5 piles	7
2 Hancock Street, Quincy	4 commercial floats 10'X30'; maint of existing pier construct fixed pier fill shoreline	8
Taylor Street, north of MBTA bridge	construct and maintain pile-supported piers and walkways, travel-lift slip and dock, steel sheet piling, timber pile breakwater; removal of steel barge;	9
Bay State Road	construct storm drain, tide gate and stone headwall for shoreline stabilization and flood control	10
Port Norfolk Condominiums, Boston	construct multi-unit residential buildings and site work, construct public waterfront walkway, viewing platform, place granite block seawall in and over existing filleds tidelands	11
Port Norfolk Yacht Club, 179 Walnut Street	concrete boat ramp, marine railway, retaining wall, floating docks, timber pier	12
Ericsson and Walnut Street, Boston	construct 36" strom drain outfall, associated riprap	13
Old Colony Yacht Club	place timber piles, floats, and steel barge bulkhead	14
Victory Road Park	place 135 l.f. of rip-rap, construct 60' timber bridge	15
MWRA Pier, west of Marina Bay, Quincy	construct a pier, ramp, floating dock, shore protection, and parking facility	16
Marina Bay, Quincy	pile-supported pier to support floats; pile-held dock extension for commercial boating facilities; wood wharf; wooded decks	17
Surrounding Harborside Condominiums, Quincy		18

Neponset River Estuary ACEC

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Scale 1:20,000

0 1 mile

0 1 kilometer

N W E S

DEM/MassGIS, March 1996

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Legend

Neponset River Estuary ACEC boundary

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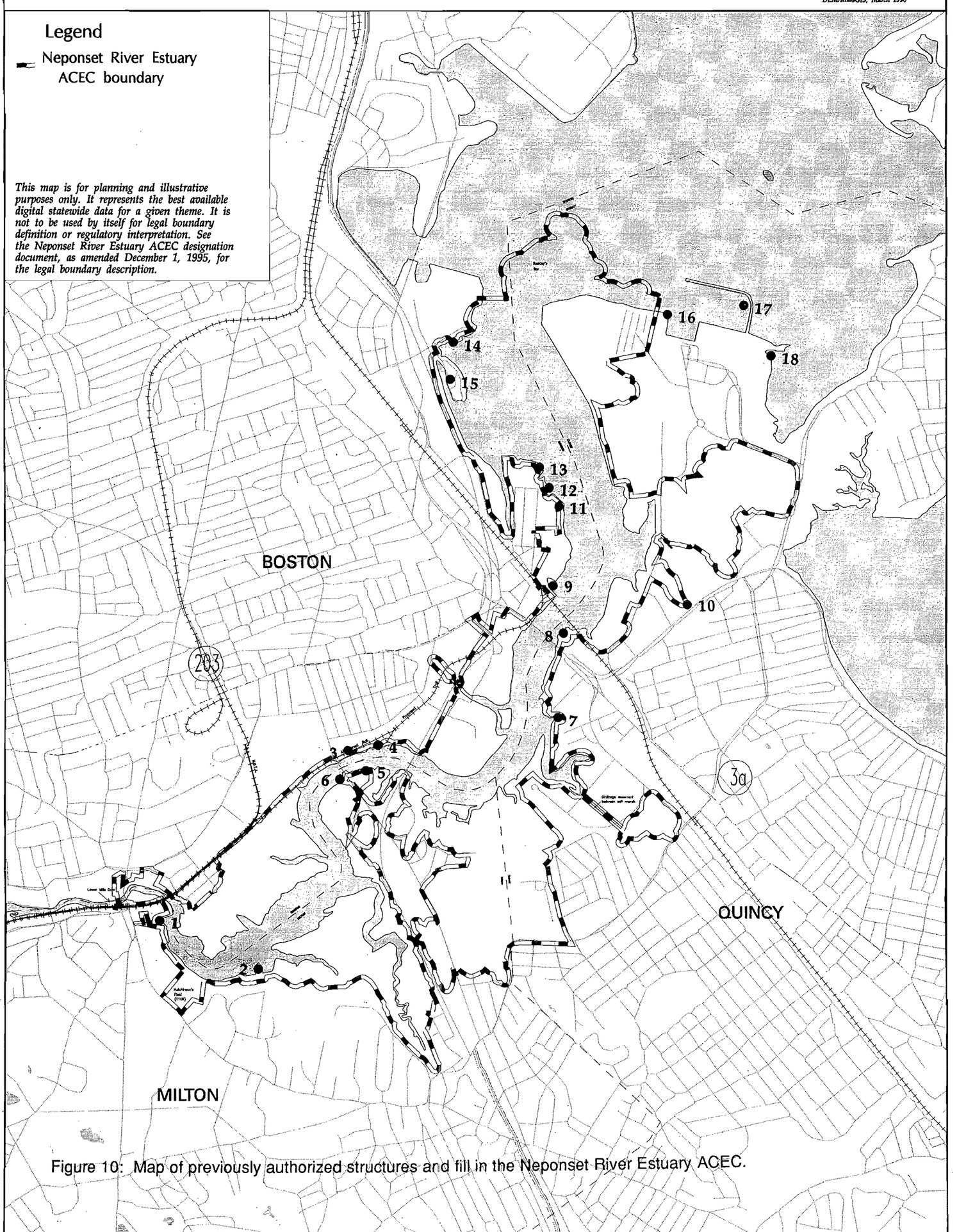


Figure 10: Map of previously authorized structures and fill in the Neponset River Estuary ACEC.

Neponset Valley Yacht Club

Neponset Valley Yacht Club is situated on MDC property just south of the Granite Avenue Bridge. It has 40 members and 20 boats on moorings accessed by dinghies from a fixed dock with floats. There is a boat launch ramp useable only at mid-tide or higher. The public occasionally uses the ramp to launch canoes, but yacht club members are wary because of the possibility of injury and liability. The entire property floods periodically at extreme high tides making any substantial improvements or permanent additions to this site ill-advised.

Mid Estuary: Neponset River Bridge to Granite Avenue

The area between the Neponset River Bridge and the Granite Avenue Bridge delineates the middle section of the Neponset Estuary ACEC. On the north side of the river is the former Hallet Street landfill and the former Neponset Drive-in Theater, both now owned by the MDC. These properties are the future site of Pope John Paul II Park. The south side of the river has extensive saltmarsh acreage with the President's Golf Course rising on the hills beyond. The State Street Bank office complex fronts a portion of the Quincy riverfront and the Southeast Expressway crosses the ACEC in this section. Currently, there is no water-dependent use in this area.

Lower Estuary: North of Neponset Avenue Bridge

While there are a number of sites of former water-dependent commercial or industrial uses in the upper and middle section of the estuary, the existing marine uses are concentrated in the lower part of the estuary, north of the Neponset Avenue Bridge (Route 3A). These sites represent the preferred areas for limited expansion for economic development rather than impacting new undeveloped areas of the ACEC. At the same time, these fairly intensive uses and operations at these sites represent continuous and cumulative impacts on the natural resources such as nonpoint pollution, boating discharges and accidental spills.

Cashman Marine

Cashman Marine is a water-dependent industrial property on the Quincy shoreline between the Neponset Avenue bridge and the MBTA Red Line bridge. The site is used for loading/unloading earth materials between trucks and barges.

Port Norfolk Yacht Club

Port Norfolk Yacht Club has approximately 85 slips and boats. The boat basin and upland have been created and modified through a series of dredging, filling, and structures authorizations (see Appendix D).

Thomas Marine

Formerly called Norwood Marine, this marina has slips for 100+ boats, travel lift, pump out, upland boat storage, boat maintenance facilities, and offers sale of marine supplies. The owner is planning work to improve some structural conditions and, possibly, reconfigure the boat basin.

Old Colony Yacht Club

Old Colony Yacht Club is located in a tight area adjacent to and surrounded by the former landfill, now Victory Road Park, the Commercial Point CSO outfall, and the Boston Gas facility. Repairs to bulkheading and some maintenance dredging have been completed recently.

MWRA Water Transportation Facility

Squantum Point supports one of the mainland ferry terminals for transporting MWRA workers to Deer Island and is an MDC park. This area offers potential for more public access and as a passenger water transportation facility after the MWRA completes it work in 1999.

Venetia Restaurant

The Venetia Restaurant is located on the waterfront between Thomas Marine and the Port Norfolk Yacht Club. There are several slips, moorings and old pilings located nearby.

Dredged Areas

Lower Estuary: Navigation channel north of Neponset Avenue Bridge

A channel provides navigable water through Dorchester Bay from the main ship channel (President Roads) in Boston Harbor up to the Neponset Avenue Bridge (see Figure 11b and c). This channel was authorized by Congress in 1907 and last dredged in 1966-67 to a depth of fifteen feet (MLW) by 100' wide. Later plans (see Appendix D) to increase the depth and breadth of the channel have since been deauthorized (personal communication, ACOE).

Mid and Upper Estuary: Navigation channel south of the Neponset Avenue Bridge

The reach of the river south of the Neponset Avenue Bridge to the Milton Yacht Club is navigable by recreational boats. While no specific record of a navigation channel being dredged *throughout* this section has been obtained, a condition of the Army Corps of Engineers' agreement to dredge the channel north of the Neponset Avenue Bridge was that the state was to dredge and maintain this reach to a depth of -6.0 feet (MLW). The Corps condition survey report of 1978 notes that this condition has been fulfilled (see Appendix D). Commonwealth records do indicate that the state has dredged two section of this reach: one in the vicinity of the Neponset Valley Yacht Club and the other at and below Milton Yacht Club (Figure 11 a and b).

In 1982 DEQE's Division of Waterways commissioned a feasibility study for the dredging of this portion of the Neponset River. The study recommended the (federal) channel width of one hundred feet be extended upstream to the Milton Town Landing with the following depths: ten feet (MLW) from the upstream terminus of the federal channel to the Granite Avenue Draw Bridge; a tapering depth of ten feet to six feet (MLW) through the mooring area of the Neponset Valley Yacht Club to a point about 1050 feet upstream of the Granite Avenue Bridge; and from this point to the Milton Town Landing, a proposed depth of six feet (MLW). This project was not implemented as described due to lack of funding and permit concerns about dredging and disposal impacts, but maintenance dredging by DEM did take place in the area of Milton Yacht Club.

Figures 11(a), (b), and (c) depict areas in the ACEC which have been dredged in the past and Table 4 identifies each site. Additional information on the extent of work authorized for each site is contained in Appendix D, a comprehensive listing of permits and licenses issued in the Neponset Estuary. It should be noted that several entries in Figure 11, Table 4, and Appendix D are for locations that, based on former and current use, have been dredged in the past, but for which dredge permits have not been located.

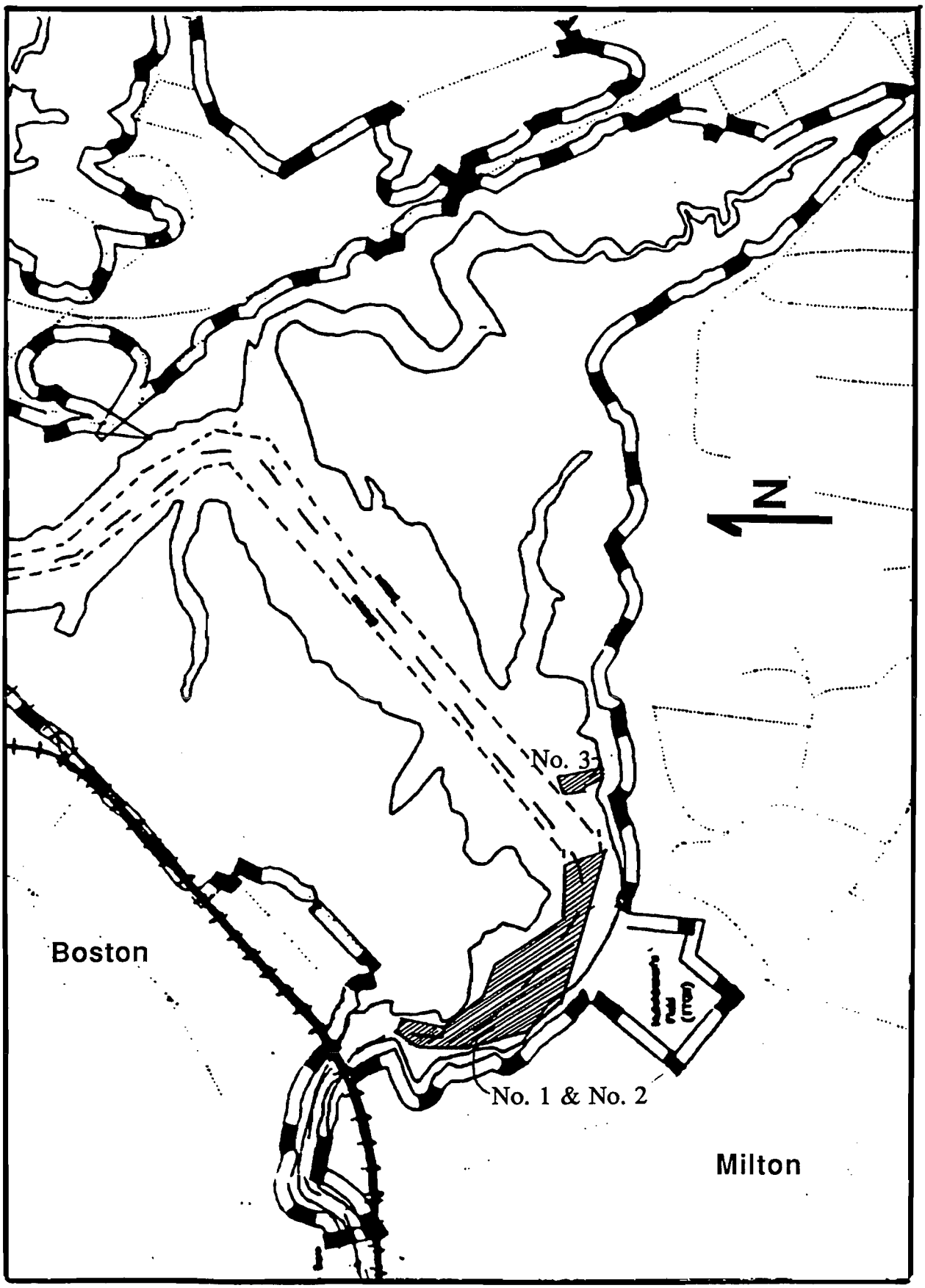


Figure 11 (a): Map of previously authorized dredging in the upper Neponset River Estuary ACEC.

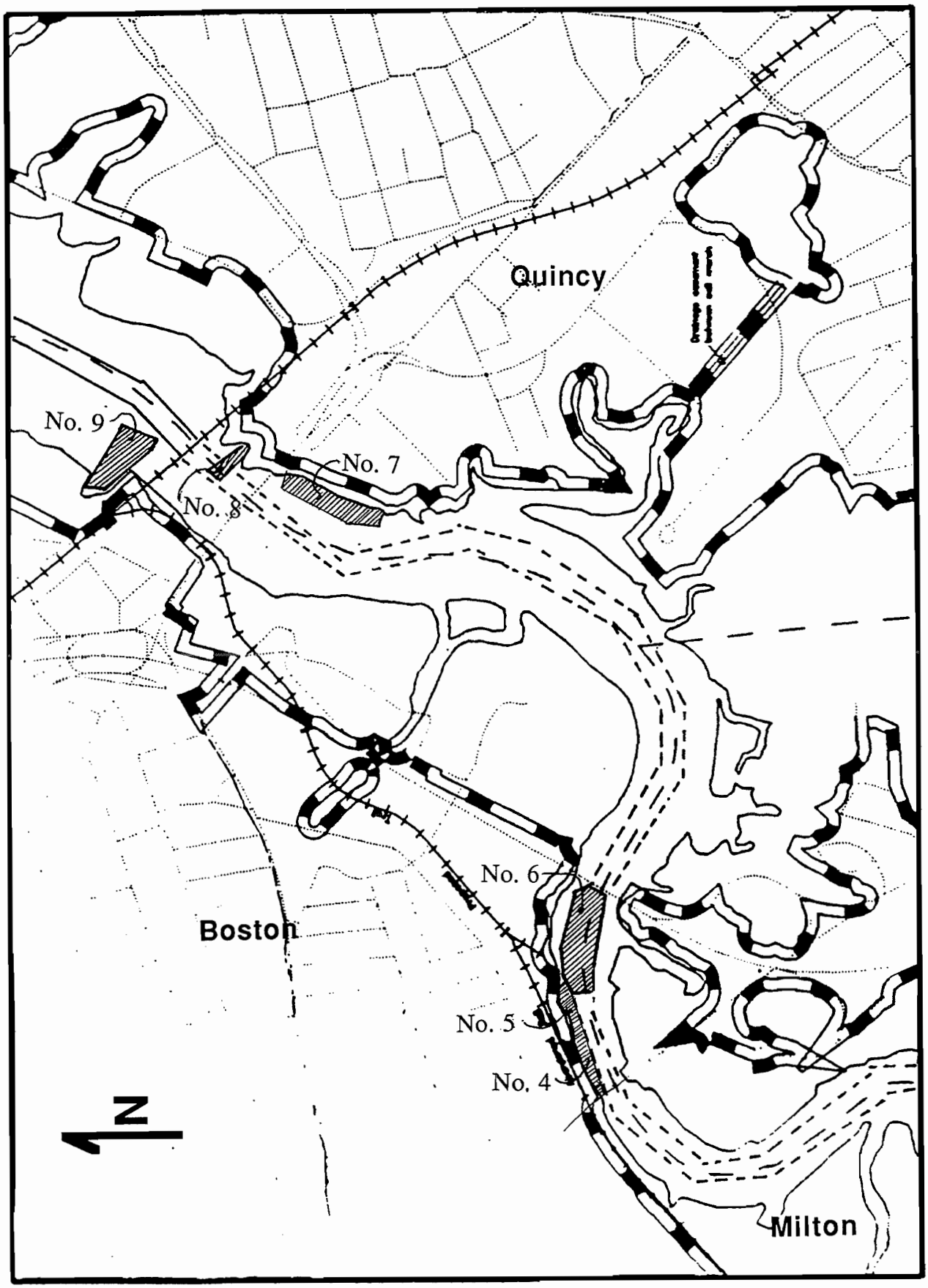


Figure 11 (b): Map of previously authorized dredging in the mid Neponset River Estuary ACEC.

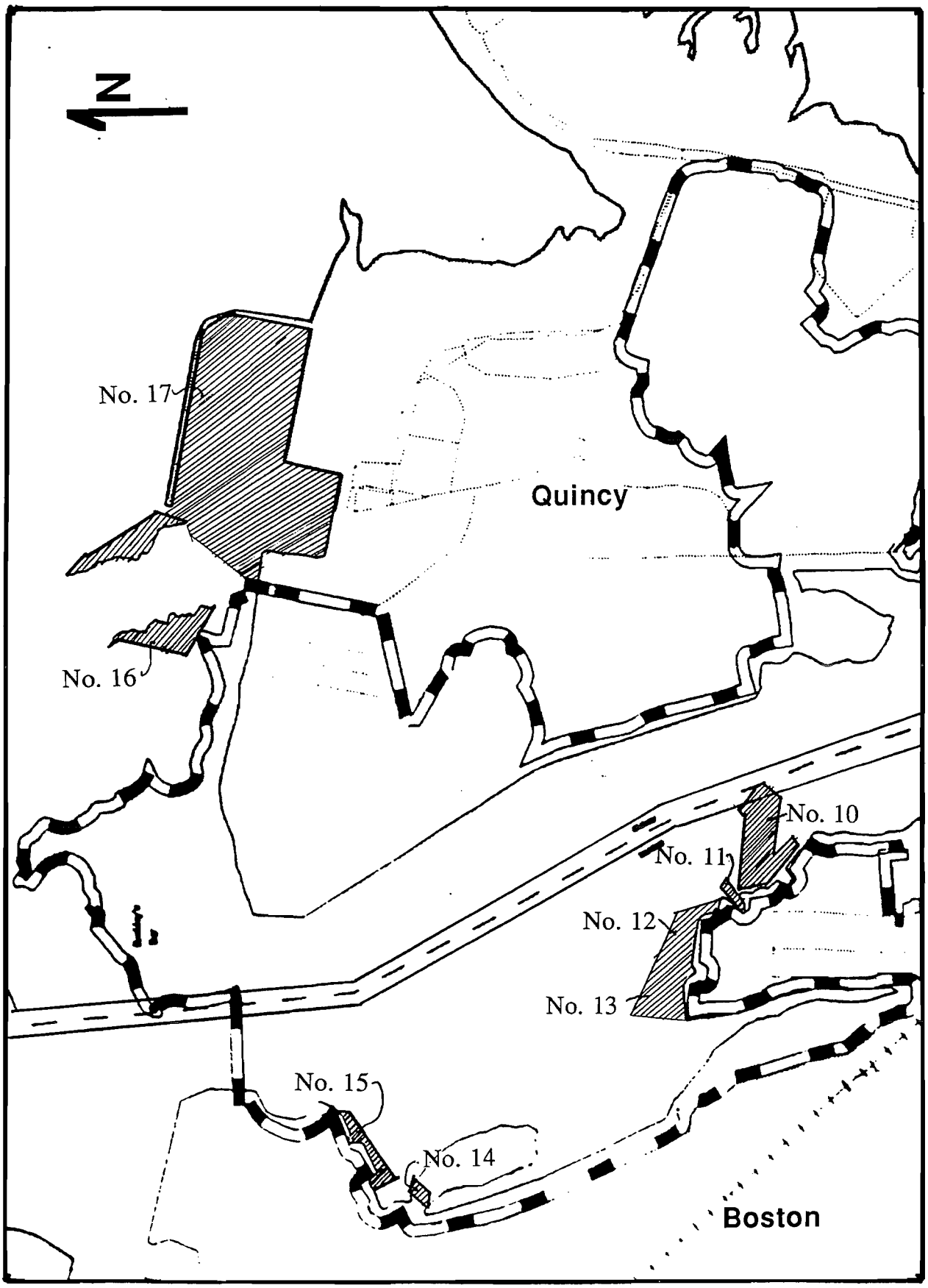


Figure 11 (c): Map of previously authorized dredging in the lower Neponset River Estuary ACEC.

4) Privately-owned structures for a water-dependent use below the high-water mark, provided that:
    a) the proposed use is not industrial and is located within the footprint of existing previously authorized pile-supported structures. Example: a new commercial dock in area of former industrial pier;
    b) such structures are necessary to accommodate infrastructure facilities, and are designed to minimize encroachment in the water. Infrastructure facilities are those that produce, deliver or provide electric, gas, water, sewage, transportation, or telecommunications services to the public.
    c) such structures consistent with a Resource Management Plan adopted by the municipality and approved by the secretary.

Beyond those described above, the few limited circumstances described in the Ch.91 regulations in which fill or structures may be allowed in the ACEC (provided that reasonable measures are taken to avoid, minimize, and mitigate any encroachment in the waterway) include:

1) shoreline stabilization or rehabilitation of an existing shore protection structure;
2) installation of drainage, ventilation, or utility structures, or placement of minor and incidental fill necessary to accommodate any modification to existing *public* roadways or railroad track and/or rail bed; or
3) improvement or rehabilitation of existing *public* roadways or railroad track and/or rail bed, provided that any net encroachment with respect to public roadways is limited to widening by less than a single lane, adding shoulders, and upgrading substandard intersections.

None of the above effects or restricts the continuation, maintenance, or replacement of existing and/or licensed water-dependent use structures, nor limits structures otherwise eligible for licensing. An important provision in the Chapter 91 regulations allows for the permitting of new privately-owned structures below the high-water mark if they have been provided for in a Resource Management Plan that has been approved by the Secretary of EOEA and adopted by the local municipality (see above).

Under ACEC provisions, new or improvement dredging is not allowed; and only in those areas where previous dredging can be verified will maintenance dredging be permitted.

Upper Estuary: South of Granite Avenue Bridge

The existing boating facilities are appropriate in scale and strike a reasonable balance between the requirements of operations and maintenance vs. equitable access; however, there appears to be significant interest in more recreational/educational use in this end of the Neponset River estuary. The types of use most frequently mentioned include canoeing, kayaking and hiking/birding.

The general area around the Granite Ave. bridge could provide opportunities for increasing these kinds of uses. Neponset Valley Yacht Club site is well situated and physically suited for launching of canoes, kayaks and small boats. The property has existing parking and easy access off Granite Avenue. If planned in conjunction with similar or related activities around the perimeter of the No. 2 Granite Avenue building and possible long range public improvements at the Schlager site, it could serve as a highly visible recreational center of the estuary especially if coordinated with the MDC Plan.

Mid-estuary: Granite Avenue Bridge to Neponset Avenue Bridge

There exists the opportunity to reestablish waterfront structures and boating access in this transition area between the more natural environment to the south and the developed area of the lower estuary. Redevelopment of the T Construction Corp. and/or Schlager sites could accommodate restored structures for commercial or recreational boating. The waterfront of these sites has been engineered and the existence of former waterfront structures provide the opportunity under DEP Waterways Regs. 310 CMR 9.32(1), also called Ch.91 Regs, to permit new privately-owned structures for *commercial* use.

Lower Estuary: North of Neponset Avenue Bridge

This section of the ACEC contains the largest concentration of water-dependent uses including existing marinas, yacht clubs, restaurants and water transportation facilities.
An expansion of water-dependent uses is best accommodated in this area where necessary infrastructure investments have already been made, the channel is more navigable, a more pristine areas will not be impacted.

Given strict prohibitions concerning the alteration of saltmarsh and physical limitations due to shallow water depths in the upper estuary, and the potential use or reuse locations previously authorized or historically used for water-dependent structures, the construction of new privately-owned water-dependent use structures in locations not previously authorized or historically used is not recommended within the Neponset Estuary ACEC.

Dredging

The natural sedimentation processes that occur within a riverine estuary often result in the reoccurring shifting and shoaling of areas within the ACEC. This has repeatedly caused navigational problems for the numerous types of boating, shipping and economic activities that have historically utilized the Neponset River. The ACEC designation brings several regulatory provisions into effect that address the issue of dredging. These provisions relate to maintenance dredging vs. improvement dredging.

Maintenance dredging can be conducted in the ACEC upon approval of necessary permits. Maintenance dredging refers to the dredging of areas that have in the past been authorized for dredging regardless of whether or not dredging has ever been done. The areal extent and depth of maintenance dredging eligible for permitting is as described and shown in existing authorizations. Table 4, Appendix D and Figure 11 list and depict previously dredged areas within the Neponset River Estuary ACEC. The sites listed in Table 4, Appendix D and on Figure 11 include those identified through previous permits as well as those for which permits have not yet been located but, based on former or current use, it is apparent that dredging has been done in the past.

Improvement dredging, that is, new dredging, is prohibited in the ACEC except for the sole purpose of fisheries or wildlife enhancement. Improvement dredging is defined as dredging of an area that has not been authorized previously.

Consultations with owners of existing marinas and marine businesses and with board members of existing yacht clubs in the ACEC revealed no immediate or short term expansion plans that include the need for improvement dredging. In some cases, representatives of these facilities explained that there may be places within or at the perimeter of their boat berthing areas that have not been included in previous authorizations, but that if eligible for dredging, could improve the functioning and capacity of the existing facility without encroaching on contiguous resource areas.

This kind of improvement dredging would be consistent with another stated goal of increasing public access and recreational and educational opportunities. Nevertheless, if improvement dredging is to be allowed within the ACEC, it should be done under strict conditions to avoid and minimize any negative effects of the resources (see Appendix B, page 8, regarding the specific language of the December 1, 1995 amendments describing limited exemptions for certain improvement dredging projects). Those conditions could include the use of a tight closing environmental dredge bucket, seasonal prohibitions to avoid spawning and migration periods, no disposal in Massachusetts waters and preferably in containment sites for any contaminated sediment. The disposal of dredged material is prohibited in coastal tidelands unless for the express purpose of beach nourishment, dune construction or stabilization with vegetative cover, or the enhancement of fishery or wildlife habitat.

Implementation Strategy

Water-dependent Uses

Management Issues

Generally, throughout the entire ACEC tidelands area, all structures should now have a license under the Ch.91 regulations administered by DEP. All unlicensed structures in the ACEC should file for a Chapter 91 license under the Amnesty Program by October 4, 1996. The Amnesty Program provides a simple, low cost opportunity for all existing structures to obtain required permits before the new provisions of the law go into effect.

In the upper estuary south of the Granite Street Bridge, very limited expansion of water dependent uses or any other structures is appropriate. Any reconfiguration or limited expansion of existing (including previously authorized or built) privately-owned water-dependent use structures may be permitted in conformance to the following guidelines:

- requires no new (improvement) dredging
- reconfigured structure is no closer than 25' from tidal wetlands
- reconfigured structure is no closer than 10' from navigation channel

Any new publicly-owned structures may be permitted in conformance with the following guidelines:

- structures minimize encroachment into navigable waterway
- structures built over mudflat and saltmarsh be designed and constructed to avoid and minimize impacts
- planning for new structures be coordinated with that of other municipal, state, and citizen groups

Given strict prohibitions concerning the alteration of saltmarsh and physical limitations due to shallow water depths in the upper estuary, and the potential use or reuse locations previously authorized or historically used for water-dependent structures, the construction of new privately-owned water-dependent use structures in locations not previously authorized or historically used is not recommended within the Neponset Estuary ACEC.

Appropriate water dependent uses in this section of the ACEC would be those with low impact such as canoeing, kayaking, birding, hiking and educational and interpretative programs. All boats should observe the no wake (5 mph) speed limit to prevent damage to the saltmarsh.

The middle section of the estuary offers substantial potential to increase the opportunities to maximize the opportunities to promote water-dependent uses, including boating and public access, as new land uses occur in this area. A detailed and coordinated planning study should assess the current, planned and potential uses of this transition area. For example, a public pedestrian/fishing structure or a dock for a water transportation service would be an appropriate reuse of the remnant pile field at No. 2 Granite Avenue in accordance with 310 CMR 9.32(1). If the Granite Avenue site is redeveloped for commercial use, coordinate the state and municipal reviews to achieve the most appropriate use of the waterfront. Again, use of this section of the river should complement activities and uses envisioned by the MDC Plan.

In the lower estuary section of the ACEC, limited expansion/improvement of existing facilities is anticipated and endorsed by this plan. This pertains only to proposed improvements:

- contiguous to existing facilities and/or
- in areas previously used for water-dependent activities that have not returned to a natural state.

Sites of previous dredging, fill and structures are identified on Figures 10 and 11 and in Tables 3 and 4, and detailed in Appendix D.

Tasks

1. Prepare a more detailed and comprehensive plan for public and private water-dependent uses in the estuary.

Cooperating parties

Neponset River Coordinator
coordination and plan development
MDC
source of information and plan review
DEP-DWW
source of information and plan review
Municipal planning and conservation commission staff
source of data and review

Time table for completion

After completion of the MDC's Master Plan

Resources to accomplish the task

Funding for Neponset River Coordinator
Planning funds ($10,000); seek funding from the State's Municipal Incentive Grants Program.

Key for entries under Tasks
Cooperating parties: lead party in bold typeface, other are cooperators
Time table: based on the plan's five-year implementation schedule.
Immediate = within one year; Short-term, 1 to 3 years; Long-term = 3 to 5 years.
Resources to accomplish the task: identifies type of resources needed and possible sources.

2. Conduct a detailed and coordinated planning study focused on the current, planned and future uses of the critical transition area in the middle section of the ACEC, from the Neponset Valley Yacht Club to the Keystone Building, to determine the most appropriate use of this waterfront and to suggest activities and uses that would be complementary to those envisioned by the MDC Master Plan.

Cooperating parties

MDC
coordinate and provide information
DEP/DWW
information and plan review
Milton Planning Board
source of information and develop plan
Boston Redevelopment Authority
source of information and develop plan
MCZM
source of information and technical assistance
DEP-DWW
source of information and plan review
BNAF
source of information
Boston Conservation Commission
source of information

Time table for completion

Immediate

Resources to accomplish the task:

Commitment of staff time
Agency staff and information

Dredging

Management Issues

Consistent with this RMP's goals and objectives for economic development, special use areas, and the several intertidal and subtidal resource, future dredging for water-dependent uses should be limited essentially to those areas that have been dredged previously, i.e., maintenance dredging. See also task 2, below.

However, improvement dredging should be limited to specific areas where public projects are undertaken to promote public health, public recreation and environmental quality improvements. Regarding the exemption for dredging or trenching for potential utility crossings, this exemption should be considered only in the case where there is a clearly defined, compelling and urgent public need, and after a thorough alternatives analysis and public environmental review that has demonstrated that there are no other feasible alternatives. Specifically, exemptions have been granted from the Chapter 91 prohibitions regarding improvement dredging in the December 1, 1995 Amendments to the Neponset River Estuary ACEC (see Appendix B), as follows:

1. Improvement dredging associated with the stormwater outfalls at Tenean and Lawley Streets and Pine Neck Creek, Boston;
2. Dredging and sediment removal to allow for the installation or modification of stormwater outfalls necessary to allow the MWRA and the Boston Water & Sewer Commission to separate the existing combined sewers located in the ACEC;
3. Sediment removal and resanding at Tenean Beach,
4. Dredging necessary to access recreational boating facilities (launch ramps and docks) included in the MDC Neponset River Estuary Master Plan, as reviewed and approved by the Secretary of EOEA;
5. Dredging or trenching that may be necessary for utility crossings;
6. Dredging necessary for marina facilities provided the marina owners work with (DEP) Chapter 91 Waterways staff and EOEA agencies to delineate work areas.

A maintenance and improvement dredging and disposal plan is needed for the estuary to guide these activities in the future. It should include a complete record of the condition of the sediments throughout the estuary; accurate descriptions of previous dredging; and better delineation of new or expanded structures or dredging (see task 2, below).

Tasks

1. Assemble and synthesize all data contained in planning documents, academic research, municipal and state authorizations, licenses and permits which is related to analysis of contaminated soils.

Cooperating parties

NepRWA
assemble and analyze data
DEP/DWW
source of information, e.g., 401 Water Quality Certification
U.S. Army Corps of Engineers
source of information
University of Massachusetts Boston
source of information and analysis

Time table for completion

Immediate

Resources to accomplish task

Commitment of EOEA staff time
Funds from DEP research programs

2. Develop a dredge management and disposal plan for the estuary that will determine acceptable project areas for dredging and disposal. Results from task #1 will be part of the basis for this plan.

Cooperating parties

MCZM Harbor Management Program
coordination and planning
DEP-DWW
source of data and regulatory review
Owners/operators of water-dependent use facilities
source of data, planning

Municipal conservation commissions and staff
planning and review

Time table for completion

Short-term

Resources to accomplish the task

Commitment of state and municipal staff time

3. In several cases within the ACEC (see Appendix D), authorizations for dredging of sites that clearly have been dredged in the past, have not been located. In the short term, if necessary, it is recommended that these areas be considered as "maintenance dredging" areas. All authorizations should be located and compiled into the existing DEP data base.

Cooperating parties

DEP-DWW
regulatory review
DEM, Waterways
source of information
U.S. Army Corps of Engineers
source of information
Municipal Conservation Commission staff
source of information and review
Owners of dredge sites
source of information

Time table for completion

Immediate

Resources to accomplish the task

Commitment of staff time

4. Compile a set of standard and special conditions on dredging should be compiled from federal, state, and municipal agencies that issue permits for dredging to provide a consistent and predictable framework for dredging projects.

Cooperating parties

MCZM
coordination and model standards
U.S. Army Corps of Engineers
source of information and regulatory review
Municipal Conservation Commission staff
source of information

Time table for completion

Immediate

Resources to accomplish the task

Commitment of agency staff time

Historical and Archaeological Resources

Goal: Preserve, protect, enhance, and restore historic and archaeological sites in the Neponset Estuary.

Inventory

The geographical location and ecological richness of the Neponset River has attracted human use and settlement for 10,000 years. As summarized in the 1989 MDC publication, *A History and Guide to the Restoration of Dorchester Shores,* "the area is well endowed with abundant natural resources, and during the 10,000 years that humans have occupied the Boston Basin, the Neponset River would have been utilized during different seasons, and at different levels of intensity throughout prehistory." At the time of the first European contact with the region, Lower Falls was the seat of the Neponset tribe of the Massachusetts Indians.

The Neponset estuary was used by the Neponset Indians in the warmer seasons as a source of food. In the spring and fall, shad and herring were captured at the falls now known as Lower Mills. The earliest European settlers in Dorchester report that the Native Americans cultivated corn in an area known as the Massachusetts Fields on the Milton side of the estuary. Evidence of native encampments in the upper reaches of the estuary has been identified. The tribe was believed to have moved up-river to hunt and camp in the cooler months. Layers of archaeological and historical resources are concentrated in the area of the Neponset River estuary. At least nine archaeological sites have been recorded along the lower Neponset River.

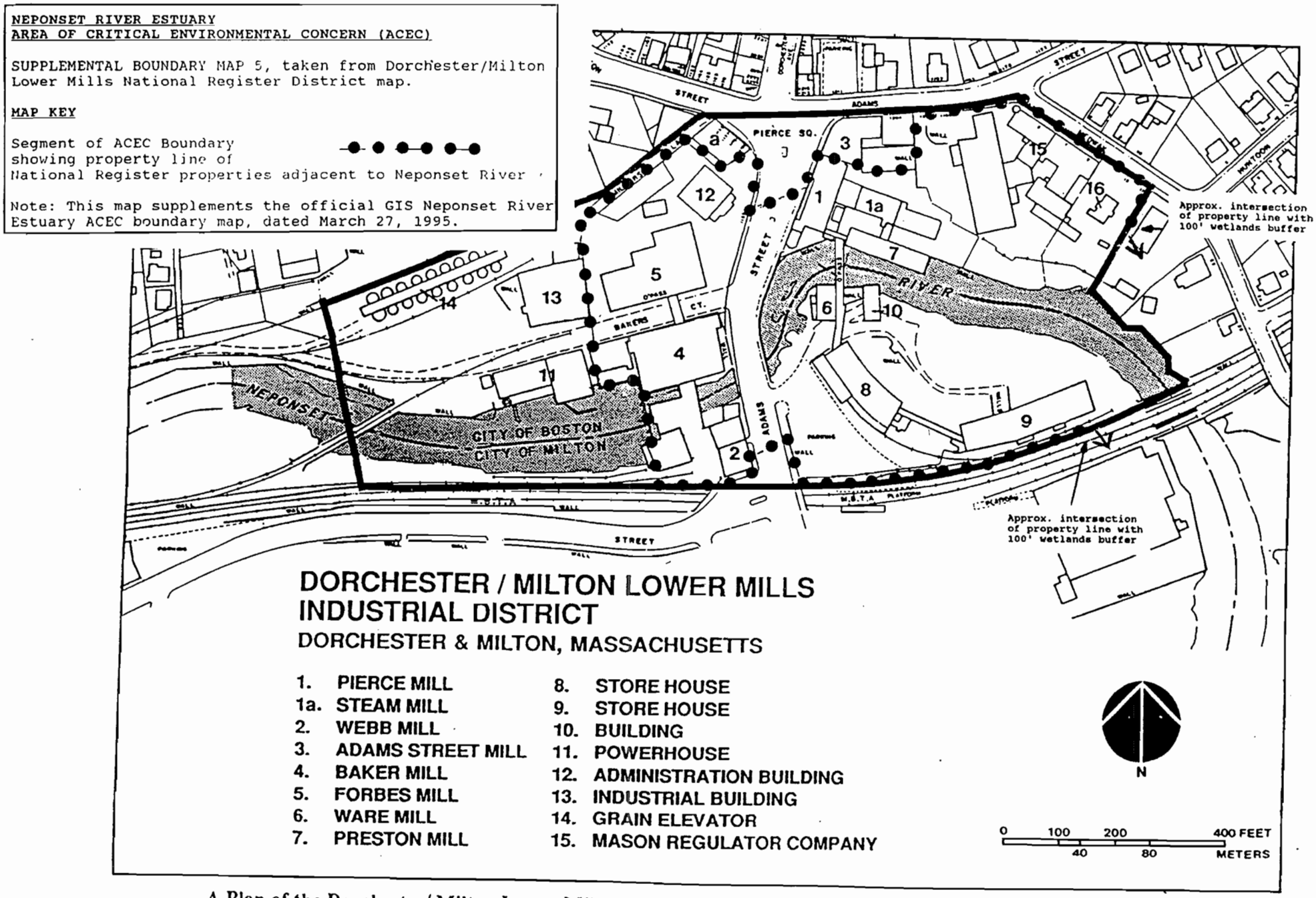
The falls at Lower Mills were one of the earliest sources of hydropower on the North American continent. Because the power of the Neponset River could be harnessed without the major capital investment required to tame larger streams, the Industrial Revolution came early to the Neponset. During the first half of the eighteenth century, the lower falls powered gun powder mills, saw mills, grist mills, a fulling mill, a paper mill and a snuff mill. In 1765, chocolate manufacturing was begun in an existing saw mill.

Intense industrialization continued as long as water power was an efficient source of energy. The Walter Baker Chocolate Company expanded throughout the nineteenth century to become the principal industry of the village of Lower Mills. Many buildings of that complex remain and their significance has been recognized as the Dorchester/Lower Mills Industrial District, listed on the National Register of Historic Places in 1980 (Figure 12).

The MDC publication mentioned above further describes colonial settlement and evolving historical development and industrial use of the area. The Lower Mills and Neponset marshes area, Port Norfolk and Commercial Point are highlighted in the narrative. Visible reminders of the colonial and industrial periods remain, but much of this history, is not readily apparent without guides such as the MDC publication or longtime residents of the area.

Assessment

The MDC publication, *A History and Guide to the Restoration of Dorchester Shores*, May, 1989 contains specific chapters on Lower Neponset, Port Norfolk, and Lower Mills. It's bibliography provides an extensive list of other historical and archeological research focused on the Neponset River and adjacent areas. It contains some of the most convincing documentation of the scope and value of such resources within the ACEC.



A Plan of the Dorchester/ Milton Lower Mills National Register District. Boston Landmarks Commission.

Figure 12: Map of the Lower Mills Historic District (source as noted).

Implementation Strategy

Management Issues

The historical and archeological significance of the Neponset River Estuary is very important and needs to be understood and incorporated into public planning and decision making processes. To achieve this goal efforts should be made to increase public understanding and awareness of these resources through educational and interpretive programs and by providing reasonable access to these resources.

Tasks

1. Complete inventory of available information on historic and archeological resources.

Cooperating parties

Neponset River Coordinator
assemble and organize inventory
Massachusetts Historical Commission
review and technical assistance
MDC
source of information
Historical societies
source of information

Time table for completion

Short-term

Resources to accomplish the task

Staff commitment
Funds to support Neponset River Coordinator

2. Assess appropriate integration of historical and archeological information in land use planning in the Neponset River Estuary.

Cooperating parties

Municipal planning agencies
access information and incorporate in existing municipal planning process
MDC
source of information
Massachusetts Historical Commission
source of information and tech. assistance
Historical societies
source of information

Time table for completion

Short-term

Resources to accomplish the task

Staff commitment

3. Make reference material available to those responsible for planning and decision making in the estuary. Catalog and distribute a Neponset River Estuary bibliography.

Cooperating parties

Neponset River Coordinator
public information and education
Massachusetts Historical Commission
public information and education

Time table for completion

Short-term

Resources to accomplish the task

Staff time and publication costs

4. Prepare designs for the reconstruction of the Adams Street bridge in Milton Lower Mills to reflect and enhance the historic character of the area, accommodate pedestrians, and provide opportunities for viewing the river, and avoid and minimize adverse impacts on water quality, wetland resources, fisheries, and wildlife habitat.

Cooperating parties

Massachusetts Highway Department
planning and design decisions
Massachusetts Historical Commission
project review and evaluation

Time table for completion

Immediate

Resources to accomplish this task

State and federal highways funds

Special Use Areas

Goal: Protect, enhance and increase publicly-owned open space in the estuary for its value as recreational and educational resources.

The ACEC regulations define "special use areas" as "undeveloped natural areas, public recreational areas, or significant scenic site(s)." The Neponset River Estuary ACEC is rich in this category of resources, notably, 1) scenic sites and views of the river and estuary from a number of locations, 2) the undeveloped and scenic nature of the salt marshes, and 3) the large proportion of public lands for recreation (Figure 13). The MDC owns a large amount of the riverfront property in the estuary which imposes on it a major responsibility for stewardship of the resources.

Inventory

According to the Metropolitan District Commission (February 16, 1995 letter to EOEA Secretary), the MDC owns approximately 490 acres in the ACEC, representing 39 percent of the total ACEC acreage. MDC's Neponset River acquisition program began in response to Charles Eliot's concept of a metropolitan park system for Boston at the turn of the century. Between 1896 and 1905, the MDC acquired approximately 270 acres of marsh between the Lower Mills dam and the Granite Avenue Bridge, an area now known as the Neponset River Reservation. In the one hundred years since, the MDC has acquired additional large parcels in the estuary: Squantum Point Park in North Quincy, the former Hallet Street landfill and Neponset Drive-In sites (Pope John Paul II Park), the former Conrail right-of-way, and the site of the former Shaffer Paper Company site on the shoreline of Port Norfolk. The MDC also owns other properties within the ACEC developed as parkland: Victory Road Park, Tenean Beach, and Ventura Street playground. These properties total another 220 acres. The most recent MDC purchase was wetlands acreage adjacent to the Jordan Marsh warehouse on Squantum Point.

MDC divides these properties into three categories: natural areas like the Neponset Marshes and portions of Squantum Point Park; developed sites such as Ventura Park Playground, Tenean Beach, and Victory Road Park; and undeveloped sites such as Pope John Paul II Park, portions of Squantum Point Park, the Shaffer site, and the former Conrail line, which need recreational access and enhancement and environmental reclamation and restoration (Table 5). Several of the MDC properties, i.e., the former sites of the Hallet Street landfill and Shaffer Paper, will require environmental remediation before they can be developed as recreational facilities (see discussion below and in the Economic Development section).

In addition to MDC lands, other publicly-owned recreation and open space areas highly important to local residents and the region include: The Trustees of Reservations' Governor Hutchinson's Field in Milton (9.6 acres), the Milton Town Landing, the President's Golf Course (35 acres) in Milton and Quincy, and expanse of salt marsh (25 acres) owned by the Town of Milton (Figure 13).

Table 5: MDC ownership in the Neponset River Estuary ACEC.

Site	Present Use
Neponset Marshes, Milton and Quincy	natural area
Squantum Point Park, North Quincy	natural area
Ventura Park Playground, Boston	developed
Tenean Beach, Boston	developed: sandy beach, play lot, basketball
Victory Road Park, Boston (former Troy landfill)	developed: passive rec., fishing
Pope John Paul II Park (Hallet Street/Neponset Drive-In site), Boston	undeveloped
former Conrail right-of-way, Boston	undeveloped
former Shaffer Paper Company site, Boston	undeveloped

Open Space and Recreation Planning in the Estuary

MDC's Master Plan and Park Design Project for the Lower Neponset River Reservation: The MDC is currently engaged in a master planning effort for the Lower Neponset River which is scheduled for completion in Spring 1996. The planning effort is part of the MDC's long-standing goal to provide continuous public access from Castle Island to the Blue Hills. The geographic scope of the Master Plan area includes both sides of the river from its mouth at Squantum and Commercial Points to Mattapan Square, with a cursory examination of the River up to Paul's Bridge. The area includes the communities of Quincy, Boston, and Milton and both existing and potential MDC public parkland. This planning area encompasses virtually the entire ACEC.

Due to the significance of MDC properties and planning in the ACEC, the completed MDC Master Plan is intended to be incorporated as an addendum to the ACEC Resource Management Plan after the completed MDC plan is reviewed and approved by the Secretary of EOEA. Full public review of MDC's plan should ensure the opportunity for public and agency comment for both recreational and environmental concerns. As the major steward of the ACEC, MDC has the opportunity to model environmentally sustainable design and development, best management practices in remediation, long-term vision for the restoration, preservation, and enhancement of critical resources, and the public benefits of coordinated recreation and environmental education.

The one-year master planning effort will produce construction documents for a multi-use pathway for connecting various public spaces within and adjacent to the Reservation. Based on an ongoing series of public meetings, public input and comment, the Master Plan will also produce schematic-level designs for various areas within the Master Plan area. The MDC is responsible for filing for any appropriate MEPA (Massachusetts Environmental Policy Act) reviews and for securing all necessary permits, e.g., Chapter 91, Orders of Conditions, 401 Water Quality Certification, prior to constructing the park improvements.

The planning process has been guided by a Citizens Advisory Committee (CAC) which has met for over four years. The CAC meets periodically to offer suggestions and comment on alternatives for future use of the properties. A number of public meetings have been held in the neighborhoods surrounding the river to gather input and comments.

Neponset River Estuary ACEC

Protected & Recreational Open Space

For more information, write or call: ACEC Program, Massachusetts Dept. of Environmental Management, Div. of Resource Conservation, 100 Cambridge St., Room 1404, Boston, MA 02202 617-727-3160

Base Map: USGS 1:25,000 topographic maps; USGS-NMD 1:100,000 hydrography enhanced by MassGIS at 1:25,000.

ACECs: ACEC boundary compiled and automated by Mass. Dept. of Environmental Management (DEM).

Protected & Recreational Open Space: Data from MassGIS at 1:25,000 in an ongoing update program. MDC and TTOR parcels from MDC 1:5000 data.

Scale 1:20,000

0 1 mile

0 1 kilometer

N W E S

DEM/MassGIS, March 1996

Legend

- Metropolitan District Commission property
- Other protected & recreational open space
- Boat ramp
- Marina
- Neponset River Estuary ACEC boundary

This map is for planning and illustrative purposes only. It represents the best available digital statewide data for a given theme. It is not to be used by itself for legal boundary definition or regulatory interpretation. See the Neponset River Estuary ACEC designation document, as amended December 1, 1995, for the legal boundary description.

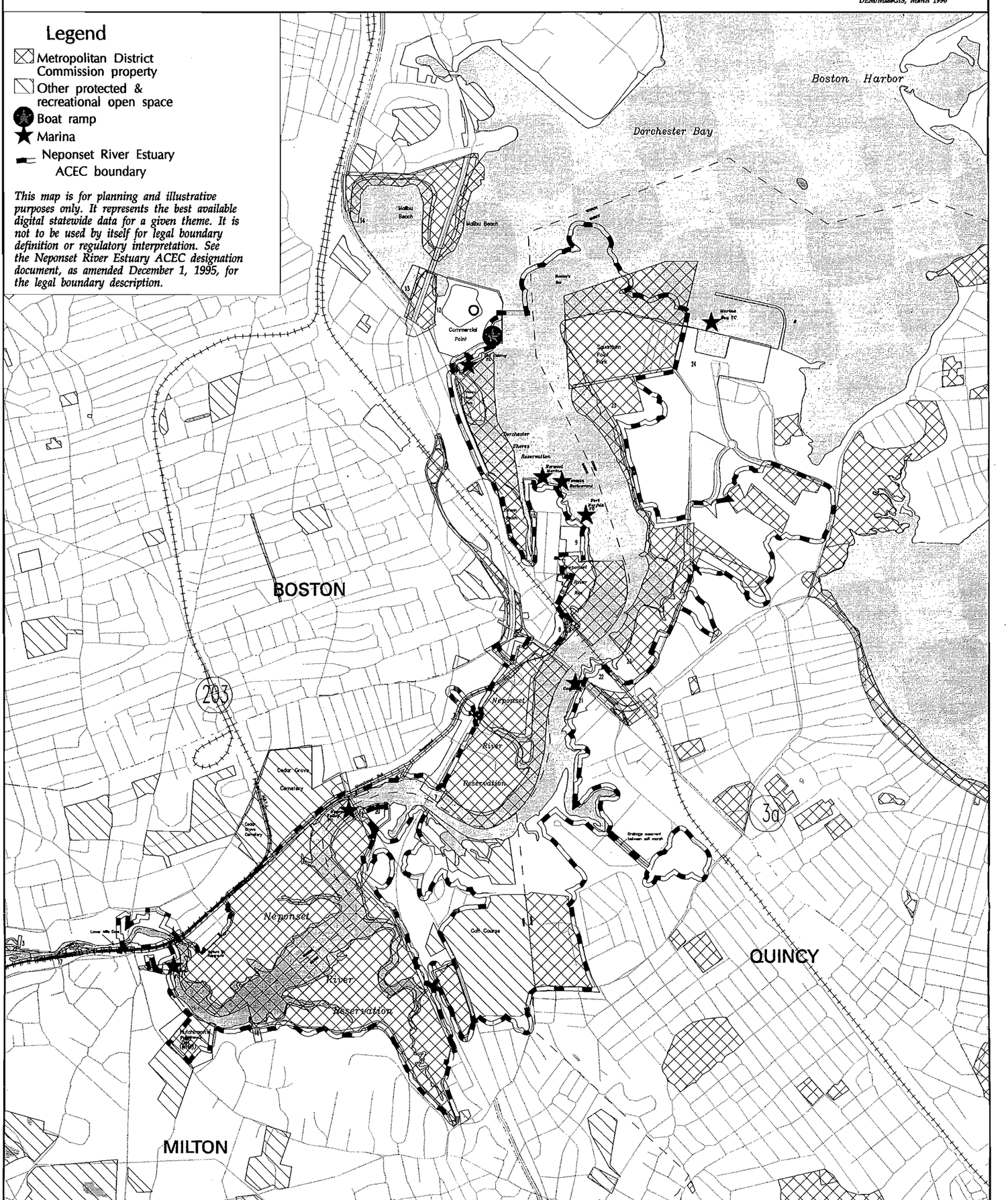


Figure 13: Map of protected and recreational open space in the area of the Neponset River Estuary ACEC.

Proposals presented to the CAC to-date for consideration include, for the area north of the Southeast Expressway:

- overlooks of the river from structures to be built on opposite shores
- boating facilities ranging from to launch ramps to a community boating facility renting small boats
- riverfront promenade
- fishing piers
- fields for organized team sports, playgrounds, and passive open space

For the area between Lower Mills and the Southeast Expressway to the north:

- "put-in" areas for canoes and other small craft
- walking paths through the marsh, following previously filled areas
- bird blinds in the marsh for bird and wildlife observation
- fishing spots
- overlooks of the river

Other products of the MDC's master plan process include, but are not limited to:

- Completion and submittal to DEP of a Comprehensive Site Assessment for the former Hallet St./Drive-In sites;
- an inventory and analysis of the entire Master Plan area;
- recommendations for: interpretive programming, pedestrian, bicycle, and other non-motorized accessways to, from, and within the Master Plan area;
- interim and final signage;
- recommendations for a comprehensive safety strategy, including lighting, rangers, police, and foot, bicycle, and/or mounted patrols;
- Recommendations for potential acquisitions of property or easements for access;
- Survey of the route of the multi-use pathway, etc.

As the largest owner of properties within the ACEC, the MDC intends the master plan process to focus upon the means of developing the Neponset River Reservation for the public benefit while maintaining the unique natural qualities of the area. Funding for construction of the improvements in the final MDC master plan is included in the 1996 Open Space Bond Bill.

The estimated schedule for completion of the final master plan is May 1996. Site design drawings for the multi-use path are to be completed a month later. The creation of recreation facilities on the Pope John Paul II Park site follows the remediation and closure of the former landfill which will take several years.

Greenways to Boston Harbor: The Neponset River Greenway: The Boston Natural Areas Fund and the Trust for Public Land (TPL), with funding from the Lila-Wallace Reader's Digest Fund, is conducting a four-year project "Greenways to Boston Harbor: The Neponset River Greenway [and the East Boston Greenway]." This is a community-based project to build constituencies and stewardship for the greenways and to demonstrate their recreational, environmental and educational potential. The Neponset project is planned, implemented, and evaluated by the 40 member Neponset Greenway Coordinating Council

consisting of residents of Hyde Park, Mattapan, and Dorchester. The Neponset Greenway Project also includes support for educational programs for all ages, summer and weekend environmental jobs for youth and special events, and community advocacy.

TPL's role in this initiative is to develop a plan identifying potential acquisitions along the river, from Pauls Bridge to the mouth of the estuary, that would help achieve the objectives of the Neponset River Greenway. Goals and prioritization criteria are being drafted jointly by TPL, BNAF, greenway council members, and MDC. The project aims to create a continuous 50' to 100' wide green corridor along the banks of the Neponset River by acquiring and protecting new land which links and/or widens existing segments of MDC's Neponset River Reservation. This greenway will provide physical and visual access to the river, improve additional opportunities to engage in recreational activities, improve water quality, protect natural and cultural resources and endangered species, and promote community revitalization. TPL's land protection plan will assist public agencies, including the MDC and the City of Boston, with plans to acquire, transfer and develop land for new parks.

Plan for the Future of Boston Harbor Beaches: The Joint Commission on the Future of Boston Harbor Beaches was established in 1991 by executive order of Governor Weld and then Boston Mayor Flynn to "coordinate, develop, and recommend a plan for the restoration of the beaches of Boston Harbor." Considerable public investment in and effort to eliminate sources of pollution to Boston Harbor have resulted in significantly improved water quality and renewed interest in restoring the beaches. In June 1993, following a two-year planning process that involved broad public participation, the Commission issued its plan for improving the physical condition and environmental quality of and accessibility to the Boston Harbor beaches. The Boston Harbor Association has been designated by the Commission to monitor and guide implementation of the plan.

Tenean Beach in Dorchester, the only developed recreational beach in the ACEC, is included in the Commission's plan. The Tenean Beach property features a 150 space parking lot, tot lot, picnic shelter, viewing tower, a sanitary facility, tennis courts, furnishings and lighting. The beach is about 100,00 square feet in size and separated from the water by a relatively steep berm. Salt marsh vegetation is growing at both ends of the beach.

Monitoring of water quality at Tenean Beach is the responsibility of the MDC. MDC's Beach Testing Program takes and tests water samples for both Enterococcus and Fecal Coliform every Wednesday during the summer months for purposes of determining suitability for swimming. The Massachusetts DEP bacteriological standard for swimming beaches in Class SB waters (the classification of this area) is 200 fecal coliform bacteria per 100 milliliters of water. The US Environmental Protection Agency uses a standard for Enterococcus bacteria of 104 bacteria per 100 milliliters of water.

Bacteriological testing by the MDC shows a general improvement in conditions in recent years. Bacteriological conditions at the beach exceeded standards by 47 percent in 1989 and declined to two percent in 1992. This decline is believed to be due to the operation of the Fox Point and Commercial Point CSO treatment facilities which began operations in 1990 and 1991, respectively.

Chemical analyses of sediment samples taken near Tenean have found metal concentrations to be low, and concentration of organics low or below the detection limit. Sampling and analyses of sediments for PAH compounds, commissioned by the Joint Beaches Commission, indicated none detected (laboratory results appear in Appendix B of the Joint Beaches Commission report).

Thirty million dollars for implementation of the Joint Commission's plan was approved in 1994. This money is currently funding a long-term site design for Tenean Beach improvements as recommended by the Beaches Plan. Among the plan's recommendations for Tenean Beach being studied by the consultant are:

- regrading the beach to provide gentler slope and renourishment;
- replacing existing salt marsh vegetation (will require a variance from DEP and replacement of marsh);
- upgrading the recreational facilities and the sanitary facilities and landscaping;
- screen expressway with heavy landscaping;
- design and install an interpretive feature;
- develop the planned shoreline connection to Victory Road Park;
- complete planned pedestrian/bicycle connection to the Neponset River Reservation;
- continue an annual beach cleanup and raking to remove refuse and debris.

Assessment

The long-term commitment of the MDC to purchase open space along the shores of the Neponset River provides, today, an abundance of public property with great potential to provide active and passive recreational opportunities and to preserve and enhance natural habitat.

Several of the most prominent sites require extensive site preparation and/or suffer from environmental problems that will take time and money to remediate. A significant portion of the Pope John Paul II Park property is affected by years of use as a municipal landfill and must be capped and closed consistent with DEP regulations. The next steps are completion of a Comprehensive Site Assessment, a Closure Alternative Analysis, and a Closure Plan. The necessary measures to control leachate and rehabilitate the property are expensive and time consuming, but will greatly improve environmental quality, resource protection, and opportunities for public use. The amendments to the Neponset River Estuary ACEC adopted by the Secretary of EOEA on December 1, 1995 provide exemptions from the ACEC designation for all activities required to be undertaken as part of the landfill closure (see Appendix B).

The MDC is presently conducting a planning process that includes considerable public participation for determine the most desired and appropriate use of the open space resources in the Lower Neponset River. The process will produce a conceptual master plan for MDC's Neponset River properties and detailed plans for a pedestrian walkway/bikeway along the shore of the Neponset providing improved access to the river. The planning effort includes a complete inventory of open space and recreational sites and an assessment of the open space and recreational management needs of the lower Neponset River.

Preliminary plans of the Beaches Commission and the MDC show a limited number of locations in the ACEC where improvement dredging below the high tide line may be necessary. These include the proposal to improve conditions at Tenean Beach and to access recreational boating facilities such as launch ramps and docks(see Task 8 below for proposed locations). These limited improvement dredging activities also received an exemption from the ACEC designation in the December 1, 1995 amendments. Among the other recommendations of the Beaches Commission plan, the proposal to replace existing salt marsh vegetation at Tenean beach will require a variance from DEP and replication of the marsh.

The Neponset Greenway Project being conducted by BNAF and TPL will contribute to increasing access to the river and restoring some of the natural character of the area. Its efforts

to build a constituency for the Neponset will contribute to long-term stewardship of the resources.

Though MDC testing indicates that water quality at Tenean Beach has improved since the early 1990s, MDC still feels the beach has water quality problems.

Implementation Strategy

Management Issues

A large percentage of publicly-owned open space has not yet been improved or maintained for recreational use. A number of the MDC properties are sites of former industrial or commercial uses that the MDC purchased to redevelop for recreational use. Other properties have been held in their natural state for habitat and open space purposes.

Much of the publicly-owned property along the river is salt marsh or rimmed by fringe marsh or mudflats. These resources should be protected in the overall plans to improve recreational use.

The MDC Master Plan includes proposals for publicly-owned structures for recreational boating, pedestrian access and fishing. In addition to any applicable regulatory guidelines, the MDC should observe the EOEA's Small Dock and Pier Guidelines and Policy for the location and design of these structures. The guidelines emphasize avoiding and minimizing impacts on wetlands and shellfish resources. In the middle and upper estuary in particular, dock and launching facilities should be sited in areas that have been used historically to minimize alteration of natural areas.

Existing sites suitable for launching of small boats, canoes and kayaks are limited and not improved.

Tasks

1. Continue to facilitate remediation and closure of the landfill sites at Pope John Paul II Park and appropriate redevelopment for recreation in future review processes. The regulatory provisions under which this project will be conducted, from MEPA to CAAA, to actual permitting, should provide adequate levels of environmental protection.

   Cooperating parties

   MDC
   owner and project proponent
   MEPA
   review and evaluation and certification of project
   DEP
   review, evaluation, and permitting
   City of Boston and nonprofits
   advocacy for park improvements

Key for entries under Tasks
Cooperating parties: lead party in bold typeface, other are cooperators
Time table: based on the plan's five-year implementation schedule.
Immediate = within one year; Short-term, 1 to 3 years; Long-term = 3 to 5 years.
Resources to accomplish the task: identifies type of resources needed and possible sources.

Time table for completion

Long-term

Resources to accomplish the task

Commitment of agency staff resources
Funds from the 1996 Open Space Bond

2. Support timely implementation of the MDC Master Plan for the Lower Neponset River by promoting priority of the project—for its importance to the goals of the Neponset Rive Estuary ACEC—among the commitments of EOEA in the 1996 Open Space Bond.

Cooperating parties

Neponset River Watershed Community Council/Neponset River Estuary Stewardship Council
incorporate recommendations into watershed management plan
DEM, MDC, MCZM
incorporate in agencies' bond funding priorities

Time table for completion

Immediate

Resources to accomplish the task

Commitment of agency and citizen efforts

3. Coordinate and integrate all governmental and citizen-based open space and recreational planning, including acquisition strategies, for the estuary. This includes the MDC's Master Plan for the Lower Neponset River, Joint Beaches Commission Plan, the Neponset Greenway Project, and municipal open space plans.

Cooperating parties

MDC, BNAF, and the Neponset River Estuary Stewardship Council
continue broad coordination and participation in recreational and land acquisition planning with other cooperating parties
Trust for Public Land
technical assistance
Joint Beaches Commission/TBHA
develop Tenean Beach proposals consistent with goals of ACEC
Boston, Quincy, Milton Parks and Recreation Departments and Conservation Commissions
continue to participate in watershed and estuary projects
DEP/BRP
encourage baseline site assessments for proposals to acquire additional parcels; review plans

Time table for completion

Short-term

Resources to accomplish the task

Commitment of agency and citizens groups

4. Identify and develop proposals for improving access to the riverfront. Preliminary proposals in the MDC Master Plan for pedestrian viewpoints or for bird watching include:
   a) Hutchinson Field
   b) Ventura Park shoreline
   c) MWRA right-of-way through marsh near Butler Street
   d) Granite Railroad pier
   e) at MDC right-of-way just south of the Granite Avenue bridge
   f) Pope John Paul II Park
   g) at the embankment through the marsh on the Milton/Quincy line
   h) at the end of Victory Road
   i) at Squantum Point

   Cooperating parties

   MDC and BNAF
   Continue to develop proposals for improving public access, and work with other cooperating parties to implement completed MDC Master Plan, as reviewed and approved by the Secretary of EOEA.

   Time table for completion

   Immediate

   Resources to accomplish the task

   Neponset River Coordinator

5. The work required to close the landfill(s) at Pope John Paul II Park may provide an excellent opportunity for waterfront improvements to provide the public with direct access to the river. Support concepts in the proposed MDC plan to create riverfront walkways, small boat access, ramps and/or docks, and fishing access that avoid and minimize impacts on wetlands and shellfish resources.

   Cooperating parties

   MDC and Neponset River Estuary Stewardship Council
   develop and/or review proposals to ensure consistency with ACEC plan
   DEM, MCZM, DEP-SWM, Wetlands and Waterways
   review and evaluate plans; provide technical assistance

   Time table for completion

   Short-term

   Resources to accomplish the task

   Funds to complete Comprehensive Site Assessment
   Commitment of agency resources
   Funds to support Neponset River Coordinator

6. If feasible and compatible with the MDC's plan, improve the waterfront at the Keystone Apartments to provide a public pedestrian connection between the Hallet Street landfill site and the railroad right-of-way. This concept was part of the municipal regulatory review at the time the property was converted to residential use.

   Cooperating parties

   MDC
   incorporate into Master Plan

BNAF
promote through Greenways project
City of Boston Conservation Commission
work with property owner
DEP-Wetlands and Waterways
review proposal

Time table for completion

Long-term

Resources to accomplish the task

Funds (MDC, City, private) for physical improvements

7. Investigate possibilities for constructing a community boat house to shelter canoes at one or more locations on the river.
   - Work with the state Public Access Board to identify a site(s)
   - Evaluate MDC and municipal properties, particularly south of the Neponset Avenue Bridge.

Cooperating parties

MDC
consider as proposal in Master Plan
State Access Board
assist in identifying sites
Town of Milton, City of Quincy, City of Boston
identify potentially appropriate municipal property
DEP-DWW
technical assistance and permit review

Time table for completion

Short-term

Resources to accomplish the task

Commitment of public agency staff resources
Funds (Open Space Bond, municipal, private) for construction

8. Provide increased opportunities for the public to launch small boats by constructing new public boat launch ramps or put-in areas. These facilities will contribute to improved recreational fishing opportunities. Among areas being evaluated by the MDC are:
   a) Milton Town Landing
   b) Ventura Park
   c) Hutchinson Field
   d) Neponset Valley Yacht Club
   e) MWRA right-of-way through the marsh near Butler Street
   f) Pope John Paul II Park
   g) MDC marsh east of Commander Shea Boulevard
   h) at MDC's Squantum Point property

Cooperating parties

MDC
evaluate and include in Master Plan as appropriate

State Access Board
assist in identifying sites
Town of Milton, City of Quincy, City of Boston
identify potential sites
DEP-Wetlands and Waterways
provide technical assistance and review permits
TTOR
consider such improvement

Time table for completion

Short-term

Resources to accomplish the task

Funding from 1996 Open Space Bond, Coastal Facilities Improvement Fund, enterprise fund

9. Assess utilizing public street ends for access to the river, primarily by neighborhood residents. One of the nonprofit river advocacy groups could conduct an initial evaluation of suitability and feasibility. Volunteers from the neighborhood could take on the project with technical assistance from state or municipal staff*Cooperating parties*

NepRWA/Friends of the Neponset Estuary
promote idea among neighborhood groups
BNAF
evaluate possibility through Greenways project
Town of Milton, City of Quincy, City of Boston
participate in implementation
Neighborhood groups
participate in planning and implementation
MDC, DEM, MCZM
technical assistance

Time table for completion

Short-term

Resources to accomplish the task

Commitment of citizen groups
Commitment of agency and municipal staff resources
Funds for improvements

10. Investigate improvements to the following areas to increase opportunities for recreational fishing:
    a) between the MBTA and Hancock Street Bridge
    b) south of Hancock Street Bridge
    c) railway ROW to west of Neponset Valley Yacht Clubd) near Lower Mills dam

Cooperating parties

NepRWA/Friends of the Neponset Estuary
evaluate these sites and identify others
MDC
evaluate and incorporate these and other sites into Master Plan as appropriate
DMF
provide technical assistance

DEP-DWW
technical assistance and permitting

Time table for completion

Short-term

Resources to accomplish the task

Commitment of citizen groups
Commitment of agency and municipal staff resources
Funds for improvements (1996 Open Space Bond)

11. Identify and evaluate potential sites for acquisition for conservation and recreation purposes, as part of an overall strategy to implement the purposes of ACEC designation and the goals of the Resource Management Plan. All plans to acquire property should include baseline site assessments. Potential sites include, but are not limited to:
    a) The adjoining sites of T Equipment Corp. and Schlager Auto Body on the Boston side of the river just north of the Granite Avenue bridge.
    b) All or a portion of No. 2 Granite Avenue in Milton, if an appropriate development option does not materialize.
    c) An area of freshwater wetlands located on the parcel north of the former Jordan Marsh warehouse.

Cooperating parties

MDC
evaluate these sites and identify others for acquisition
BNAF/TPL
includes "promotes ACEC designation and goals of resource management plan" as criterion for prioritizing potential acquisition sites
DEP
technical assistance with and review of potential site contamination

Time table for completion

Short-term

Resources to accomplish the task

Commitment of agencies and advocacy groups
Acquisition funds

12. Management plans for open space should be developed following the MDC's master planning effort and BNAF's Greenway Project.

Cooperating parties

MDC
develop management plan for MDC Neponset River properties and coordinate with BNAF for overall greenway plan.

BNAF
develop management plan for greenway in cooperation with MDC

Time table for completion

Short-term

Resources to accomplish the task

Commitment of agency and organizations
Funding

13. Remove billboards adjacent to Granite Avenue.

Cooperating parties

MDC
remove billboards

Time table for completion

Short-term

Resources to accomplish the task

Commitment of agency resources, municipal and legislative support

14. Encourage annual cleanups by citizens organizations and river users.

Cooperating parties

Massachusetts Bays Program
coordination
NepRWA and BNAF
sponsor clean-ups and educational programs

Time table for completion

Immediate

Resources to accomplish the task

Commitment of program and advocacy groups

15. Make use of the estuary as a laboratory and classroom for study of estuarine environments, environmental impacts, and cultural resources.

Cooperating parties

NepRWA
clearinghouse of educational programming
MDC, BNAF, STH/STB
educational programming and facilities on environmental and cultural resources
Public School systems
integrate into curriculum

Time table for completion

Ongoing

Resources to accomplish the task

Continued commitment of advocacy groups and agencies
Educational grant funds (MassBays, EPA, foundations)

III. Management Structure and Plan Revision

A. Implementation Strategy

The overall and most effective mechanism for advancing the goals of an ACEC is cooperation and collaboration among public agencies, nonprofits, the private sector, and the public. These cooperative efforts are realized through increased communication and education, joint efforts toward meeting common objectives, and evaluation of the progress gained through those efforts.

1. Plan Implementation

This resource management plan proposes numerous tasks to implement the goals and objectives of the ACEC, all of which depend on a commitment by an collaboration among various government and nongovernmental entities. The implementation of the tasks suggested in this plan will occur over time as the agencies deemed responsible and cooperating parties are able to incorporate the tasks into their yearly workplans.

The basic tools for achieving the purposes of an ACEC involve actions of state environmental agencies, local and regional planning and management, and education and research. The first tool is the requirement in the ACEC regulations that state environmental agencies administer programs, revise regulations, and review projects subject to their jurisdiction so as to preserve, restore, and enhance the resources of the ACEC. The second is local and regional cooperation and the coordination of private organizations, the citizens are encouraged to apply high environmental standards to proposed development and to the management of critical resources. The third tool is education and research which promotes understanding and raises consciousness about the environmental significance of the area.

The implementation of this resource management plan is expected to enhance these stewardship tools with recognized products and public benefits in response to identified needs and solutions to current problems. The plan provides a reference document as well as a working blueprint for improvements to the Estuary.

2. EOEA Implementation Strategies

As a state designation, an ACEC requires agencies of the Executive Office of Environmental Affairs (EOEA) to take actions to preserve, restore, and enhance the resources of the ACEC. This ACEC resource management plan recommends various tasks that state agencies can cooperatively implement. Many state agency representatives would also be involved through participation in the Neponset Estuary ACEC Stewardship Council and resource management plan revisions.

EOEA also has several ongoing statewide strategies that may receive higher priority within an ACEC, including integrated permit review, cumulative impact evaluation, and public participation in project review and planning. These are incorporated in the individual agency permitting and planning processes, and through the MEPA environmental review process.

EOEA has also instituted a watershed approach to environmental assessment, planning, and decision making for the protection and restoration of environmental quality. This regional perspective incorporates involvement and collaboration of municipal governments, businesses, watershed and other environmental organizations, and citizens with the state and federal governments.

Specific objectives of the watershed approach to environmental management include:

- streamlined and coordinated assessment, planning, and implementation;
- a community-based collaborative process of local prioritization of environmental problems and solutions to guide government decision making;
- increased public awareness and understanding of watershed systems; and
- measurable environmental results from public and private funding of these objectives.

One of the key features of the watershed approach is using a subwatershed focus to identify problems and develop an Action Plan to highlight those problems or recommend solutions. The Neponset Estuary is one of those subwatersheds and the Friends of the Estuary is the group that works locally to assess the quality of the river and its shoreline and suggest needed actions. This ACEC resource management plan incorporates many of their suggestions for action.

An overall framework for cooperation throughout the Neponset River basin is being promoted through the Secretary of Environmental Affairs' Neponset Watershed Project, the pilot project for EOEA's Watershed Initiative (see Section I). Conducted in partnership with the Neponset River Watershed Association, this ongoing initiative involves all 14 communities along the river in an effort to forge a new model of environmental management that emphasizes local involvement and cooperative alliances. Representatives of several state agencies and citizen groups have been contributing to the effort which, as of this date, has completed the resource assessment of the watershed and is preparing a Watershed Management Plan, including implementation strategies.

The Neponset River Estuary ACEC exists within this larger framework and alongside the several other ongoing planning efforts in the watershed. It is recommended that management of the ACEC and implementation of the ACEC Resource Management Plan be closely aligned and integrated with the management process being developed for the Neponset Watershed Project. This approach promotes efficiency and coordination and minimizes the potential for duplication and delays.

3. Intergovernmental Coordination

ACEC designation highlights the fact that the estuary is part of a single ecosystem. Management of the estuary is, however, divided among many jurisdictions. Providing suggestions to increase coordinated and consistent decision making at the local and state levels in order to achieve greater resource protection is one of the objectives of this RMP.

Tasks recommended in Section II frequently include intermunicipal collaboration, and it is up to the local boards and commissions to determine how they might implement the recommendations of this plan. The following paragraphs offer some suggestions for increased intermunicipal coordination.

As described in Section I of this plan, the land and water resources within the ACEC are subject to regulation by a number of government agencies at the state and federal levels as well

as by several commissions and departments in three municipalities. Though the objectives, standards, and procedures of each regulatory program are based on specific legal authorities that must be adhered to, there are opportunities to increase coordination in the interest of ensuring consistent decisions and the highest level of protection.

It is recommended that the three municipalities review and institute changes, if necessary, in their notification systems on projects in the estuary. Planning boards, conservation commissions, and departments of public works could send the notices of their public hearings and notices of decisions to the corresponding boards in the other two municipalities. This would be an initial step in coordinating review of pending proposals, decisions, and changes in rules or regulations. Another way to raise the awareness of the Estuary's resources at the local permit level is by a simple checklist. Checklists used by municipal boards (and staff) to guide preparation and review of applications could add a field for "Neponset River Estuary ACEC" so applicants and reviewers are conscious of the designation.

4. Community and Environmental Groups, Businesses, Citizens

A critical component of the ACEC is the role and contributions of the non-governmental groups and citizens. In the Neponset ACEC, these community and environmental groups, businesses, and citizens continue to be active and invaluable contributors of time, energy, information and ideas. Several implementation tasks rely on volunteer groups to continue their water quality monitoring and sampling programs. Businesses are encouraged to adopt best management practices whenever possible and to concentrate physical improvements and expansions in already developed areas rather than impact the remaining undisturbed areas. Citizens are encouraged to actively participate in the educational programs and advisory committees that deal with ACEC related issues. Perhaps, most importantly, these same nongovernmental groups and citizens who helped initiate the ACEC process, need to carefully monitor the progress of the implementation of tasks and responsibilities identified in the RMP and continue to voice support for all efforts to restore and protect this valuable area.

5. Resolution of Conflicting Goals/Strategies

There will be situations in which there are conflicting visions of the future of the Neponset River Estuary, as well as conflicts among users of the estuary. Many opportunities exist for conflict resolution and proactive citizen input to avoid conflicts, within the local and state permitting processes, within public advisory groups, and other public participation models. Conservation Commissions hold public hearings for their review of applications for permits to undertake activities in wetlands and the wetland buffer zone. Should a dispute arise for an Order of Conditions issued by the Conservation Commission, an appeal to the regional office of DEP is provided for in the DEP Wetlands Regulations. Within the Estuary, several public advisory groups already exist for input into the future public use of the area, including the Citizens' Advisory Committee for the MDC Master Plan for the Lower Neponset River, and the BNAF Neponset Greenway Council. Citizens can make their voice heard through voting and attendance at a variety of municipal meetings and hearings. These are all proactive ways for the public to participate in seeking to resolve issues without conflict.

Where new issues arise that are not already addressed in the existing process, one recommendation is to try focus group discussion to resolve potential conflicts among Neponset Estuary stewards and other involved local, regional, or state agency representatives. The process outlined below for a Neponset Estuary ACEC Stewardship Council provides for this mechanism.

For conflicts that may involve several parties, such as municipal, state, or federal agencies, and businesses or private individuals, and especially regarding environmental disputes over land

use of regulated activities, an alternative approach to legal action is offered through mediation by the Massachusetts Office of Dispute Resolution . This state agency has a unique public-private partnership that offers fee-for-service mediation, training, and conflict resolution services. In cooperation with the DEP, their Wetlands Appeals Mediation Program and Hazardous Waste Site Cleanup Mediation Program help to expedite hazardous waste site cleanups, environmentally sensitive areas, and involve people in creating collaborative and efficient solutions to environmental problems. This approach appears so effective that recent amendments to the state superfund law (MGL Ch. 21E, Sec. 4A) requires parties involved in hazardous waste site cleanups to try to resolve their disputes through negotiation.

B. Plan Evaluation and Revisions

The Steering Committee guiding the development and revision of this RMP recommends that a Neponset River Estuary ACEC Stewardship Council become the operating process for evaluating the implementation of this plan. One definition of a council is "an assembly of persons called together for consultation, deliberation, or discussion (American Heritage Dictionary).

1. Neponset River Estuary ACEC Stewardship Council

It is recommended that the ACEC Stewardship Council be organized and function in a manner similar to the Neponset River Watershed Community Council (WCC) established under EOEA's Neponset Watershed Project. The WCC exists not as a structured group, but as a process in which the stakeholders come together periodically at a series of working sessions to contribute to the development of the basin-wide plan, seek consensus, and coordinate actions. Membership of the WCC is open and fluid, which provides for a diversity of participation from stream team, municipal, nonprofit, business, and agency interests.

Participation in the ACEC Stewardship Council will be sought from the nominators of the Neponset River Estuary ACEC, the ACEC Resource Management Plan Steering Committee members, Friends of the Estuary, and representatives of other associated nonprofit, neighborhood, municipal, and state agencies, the business and development community, and other with scientific/technical expertise. However, anyone with an interest in the estuary and/or the ACEC will be eligible and welcome to participate in the Council. Similar to the WCC, the work of the ACEC Stewardship Council would be done through a process of schedules (semiannual) Council meetings to review and advise on implementation of the resource management plan. The Council would also consider general issues of the ACEC, supplemented, as and when necessary, with specialized ad hoc subcommittee meetings to respond to pending issues.

In order to evaluate the implementation of the plan, the Council will review task tables to update the status of tasks due to be implemented each year. The tasks enumerated in the plan (and summarized in the "Action Table") all include a time table for completion. This time table is intended to serve as an evaluation agenda for the Council's meeting. Based on its review, the Council (with support from the Coordinator) will direct appropriate action, e.g., review the completed products, adjust the scopes of tasks suggest alternative approaches, request additional resources, or extend a time table. Brief annual reports would be written based on these status decisions.

2. Neponset River Coordinator

With several significant initiatives ongoing in the watershed—ACEC, Neponset Watershed Project, MDC Master Plan, Neponset Greenway Plan, Joint Beaches Commission—and the active involvement of numerous neighborhood associations and subwatershed groups, there is a real need for a single point of coordination. A Neponset River Coordinator would provide the function of a clearinghouse of information from all projects as well as provide needed support and technical assistance for particular efforts. Since all of these efforts promote river-based planning and decision making and all feature considerable involvement of the citizens in the watershed, it makes the most sense for this function to be situated within the watershed and at an independent organization.

An ideal location for the coordinator is within the watershed, logically at the Neponset River Watershed Association. Since EOEA is sponsoring or involved in some capacity with all of the projects, it would be a prudent and effective investment for EOEA to provide funding to support this full-time position. NepRWA's contribution would be to provide office space and overhead support.

Proposed responsibilities of the Coordinator could include:

Neponset Estuary ACEC RMP revisions

- convene and facilitate meetings twice a year for the Neponset River Estuary ACEC Stewardship Council
- convene issues or focus groups during the year as needed
- call and correspond with cooperating parties identified in the plan for first year tasks
- based on semiannual meetings, update Neponset River Estuary ACEC action tables and mail to distribution list
- produce brief annual report on the plan
- coordinate revision of the plan in 3 to 5 years

Neponset Estuary Public Outreach

- provide a clearinghouse for Neponset Estuary information, coordinating notices of various events, meetings, projects
- create and mail newsletters, meeting announcements, and minutes of meetings
- Neponset Estuary Liaison
- act a coordinating contact person for issues in the Estuary that may need attention from the municipal and state agencies or community and nonprofit groups
- maintain a list of agency and group contacts
-

Potential other duties:

- provide technical assistance to the subwatershed groups
- provide public outreach for the subshed groups
- provide a coordinating role for the Fowl Meadow & Ponkapoag Bog ACEC

3. Plan Revision Schedule

An annual update report will be prepared by the Neponset River Coordinator for review and approval by the Stewardship Council. The report will describe the status and timetable for each implementation task in the RMP and will report on other related activities as well.

It is envisioned that the Stewardship Council will hold semiannual meetings in September and March and other meetings as deemed necessary. Achieving the goals of the ACEC will be an iterative and dynamic process, and the Stewardship meetings and annual report will help focus and evaluate the numerous activities that will be involved.

As tasks are completed, as changes in the natural or built conditions of the estuary occur, or as new information is developed, the Neponset River Estuary ACEC Resource Management Plan should be updated to incorporate or reflect this information. The Certificate of the Secretary of Environmental Affairs on the ENF for the Draft Resource Management Plan (dated 12/1/95) directs that "updates to the plan should be prepared every three to five years in order to address the results of ongoing planning efforts within the ACEC, as well as to incorporate any further amendments or exemptions that may be needed." To accomplish this, the Council, at each of its meetings, should review new information produced or amendments suggested, and determine what additions and revisions to the plan should be proposed. The Coordinator will then consult with DEM-ACEC Program regarding the need for formal review and approval by the Secretary. For example, if the proposal is to revise the plan for Chapter 91 Waterways regulations requirements for private docks and piers, it will need formal review and approval by the Secretary. In instances where Secretarial approval is needed, the process outlined in the "Policy Guidelines for the Review and Approval of ACEC Resource Management Plan" will be followed. Otherwise, the Council should take action to incorporate the changes within an appropriate time frame.

The procedures for amending the ACEC designation itself are contained in the regulations of the Executive Office of Environmental Affairs (301 CMR 12.00). Changes to the boundary, allowance for improvement dredging, or exempting activities from the stricter standard of the ACEC are examples of changes that would require amendment to the designation. Such proposals should first be considered and endorsed by the Stewardship Council before being formally considered by the Secretary.

The rich and varied resources of the Neponset Estuary ACEC have been shaped by the interaction of complex natural processes and intense human activities. Its present highly stressed condition is troublesome. The potential for restoration and enhancement of its environmental quality and economic viability is substantial; but the challenge can be daunting. The first steps have been taken. The citizens have clearly voiced their concern and desire for improvements. The ACEC designation has focused responsible agencies and individuals' attention on the critical issues and goals. Now, the Resource Management Plan provides the first set of strategies and tasks needed to achieve those goals. Every task will require significant coordination and collaboration. The RMP, itself a product of wide collaboration among the interested parties, needs to be viewed as a dynamic mechanism that should be implemented immediately, re-evaluated periodically, and adjusted as new issues arise.

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Appendices

DESIGNATION of the

NEPONSET RIVER ESTUARY

AREA OF CRITICAL ENVIRONMENTAL CONCERN

located in portions of the municipalities of

Boston, Milton, and Quincy

WITH SUPPORTING FINDINGS

Following an extensive formal review required by the regulations of the Executive Office of Environmental Affairs (301 CMR 12.00) including nomination, review, on-site visits, research, public information meetings, a public hearing and written comment period, and evaluation of all public comment and assembled data, I, the Secretary of Environmental Affairs, hereby designate the Neponset River Estuary, located in portions of the municipalities of Boston, Milton, and Quincy, as an Area of Critical Environmental Concern (ACEC). I take this action pursuant to the authority granted me under Massachusetts General Law Chapter 21A, Section 2(7).

I also hereby find that the wetland resource areas included in the Neponset River Estuary are significant to the prevention of pollution, flood control, the prevention of storm damage, the protection of fisheries, the protection of land containing shellfish, and the protection of wildlife habitat - all of which are public interests defined in the Wetlands Protection Act and regulations promulgated thereunder.

In addition, with regard to the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, I recommend that the current Class SB water quality standards and antidegradation provisions continue to be applied to the waters of the Neponset River Estuary ACEC.

Introduction: Effective Date of Designation and Development of Neponset River Estuary ACEC Resource Management Plan

Pursuant to the ACEC Regulations at 301 CMR 12.11(1), which authorize the Secretary to provide the effective date of designation, the effective date of this designation shall be December 1, 1995.

I am directing the agencies of the Executive Office of Environmental Affairs (EOEA) to collaborate with municipalities, environmental and community groups and organizations, local businesses and residents, and other interested parties to prepare a Resource Management Plan for the Neponset River Estuary ACEC. The resource management plan will address the preservation, restoration, enhancement, use and management of the resources of the Neponset River Estuary ACEC, and address the regulatory and

boundary questions raised in the course of the public review of the nomination (see sections III. Boundary of the Neponset River Estuary ACEC and IV. Discussion of the Criteria for Designation below for additional description of these issues). The resource management plan, to the greatest extent possible, will guide the implementation of the Neponset River Estuary ACEC designation and coordinate the activities and interests of federal, state and local agencies and the public and private sectors.

The resource management plan should be completed by November 1, 1995. The plan should include recommendations for any proposed changes or modifications to this designation that may be needed. Because the ACEC Regulations at 301 CMR 12.13(2) state that an ACEC designation may be amended after one year, if there is a need to amend the designation before this one year period, I will entertain a waiver to the ACEC Regulations as provided for at 301 CMR 12.15.

In addition to directing EOEA agencies to participate in the development of a resource management plan, I hereby direct all EOEA agencies as of the date of this decision to take actions to preserve, restore and enhance the resources of this area, and to subject projects and activities in or impacting the area to the closest scrutiny to assure that they are carried out so as to minimize adverse effects on the resources and values of the ACEC. Furthermore, all EOEA agencies shall work to expedite all environmental restoration projects and other projects beneficial to public health, welfare and safety, such as landfill closures, hazardous waste site clean-ups, wetlands and fisheries habitat restoration, and public park and recreation planning and development.

As EOEA agencies are currently focusing and coordinating many actions and programs in the context of the Governor's Neponset River Watershed Initiative, those activities will further guide and support the directives described above and the purpose of this ACEC designation.

I. Procedures Leading to ACEC Designation

Background, Previous Neponset River ACEC Nominations

In May, 1991 a letter of nomination for a Neponset River Basin-wide ACEC signed by the Neponset River Watershed Association (NepRWA) and twelve Conservation Commissions was submitted to the Secretary. This nomination was a revised and updated version of an original nomination for the Neponset River Basin prepared in February, 1981. Following an initial review, the Neponset River Basin nomination was rejected for full review in July, 1991. This letter recommended that NepRWA and the Conservation Commissions consider potential separate nominations for the Fowl Meadow and the Neponset River Estuary.

A nomination for the Fowl Meadow and Ponkapoag Bog ACEC then was submitted in January, 1992 by NepRWA and the eight Conservation Commissions of cities and towns affected by the potential designation. Following a full review of this nomination pursuant to the ACEC Regulations, the Fowl Meadow and Ponkapoag Bog ACEC was designated in August, 1992.

Neponset River Estuary ACEC Nomination

A nomination for the Neponset River Estuary was submitted to me on September 30, 1994. I acknowledged receipt of the nomination in correspondence dated October 3, 1994, and accepted the nomination for full review in correspondence dated November 8, 1994. Copies of the acceptance letter and a summary of the nomination were sent to the Neponset River Watershed Association and the boards of selectmen, mayors and city councils, conservation commissions, and planning boards in Boston, Milton, and Quincy; state legislators representing the area; regional and state agencies; environmental organizations; and other interested parties. The November 8 correspondence included information regarding the scheduling of four public information meetings to be held in November and December. In addition, this correspondence distributed Draft Resource Management Goals and Objectives for public review and comments. These draft goals and objectives were based upon EOEA's initial review of the nomination and Draft Resource Management Goals prepared by the Neponset River Watershed Association (NepRWA). A copy of the NepRWA draft goals was also included with the November 8 mailing.

An initial series of public information meetings was held on November 29, 1994 at the Dorchester VFW Post in Dorchester; November 30, 1994 at the McKeon VFW Post in Dorchester; December 5, 1994 at the Milton High School in Milton; and December 8, 1994 in the City Council Chambers in Quincy. In EOEA correspondence dated December 22, 1994 public notice was sent to the above-mentioned parties describing two additional public information meetings for January 11 and January 19, 1995; a public hearing for January 25, 1995; and a ten-day written comment period following the hearing. Public notice of the meetings, hearing and comment period was also published in The Patriot Ledger on December 22, 1994, and in the December 23, 1994 issue of the Environmental Monitor. The December 22, 1994 correspondence also included an alternative method of describing the boundary of the nominated area, in response to questions raised in the review process and following discussions with NepRWA. In this correspondence I asked for comments from the nominators, state and municipal agencies, interested parties and the general public regarding this method of delineating a potential ACEC boundary, based more directly upon the resources of the nominated area. I also requested comments regarding draft resource management goals and objectives and commitments for participation in the development of a resource management plan if the area was designated an ACEC.

The last two public information meetings were held on January 11, 1995 at Cunningham Hall in Milton and January 19, 1995 at the Beachwood Community Life Center in North Quincy. A public hearing regarding the nomination was conducted on my behalf by Peter Webber, Commissioner of the Department of Environmental Management (DEM), on January 25, 1995 at the McKeon VFW Post in Dorchester. Twenty-four persons representing individual residents and a variety of groups and organizations presented oral testimony. A ten-day period for the submission of additional written comment followed the public hearing. In response to requests, the comment period was extended from February 6 to February 16, 1995. Notice of the extended comment period was published in The Patriot Ledger, The Dorchester Reporter, and the Milton Record Transcript and in numerous press articles. Throughout the public review process numerous newspaper articles and mailings from NepRWA provided additional information regarding the nomination and the review.

Written testimony was received from numerous individuals, state legislators, private organizations, and public agencies. Copies are on file at the offices of the DEM Division of Resource Conservation in Boston. Over seventy comments were received in the course of the public participation and review process. Additional information regarding these comments is described below in section IV. Discussion of the Criteria for Designation.

II. Description of the Resources of the Neponset River Estuary ACEC

A summary and overview of the resources and their critical interrelationships are provided here. Information, testimony, comments and materials submitted for the review of the nomination, some of which are specifically referenced in this document, are on file with the Department of Environmental Management.

Resource Overview

The central resource features of the Neponset River Estuary ACEC are the Neponset River and portions of its tributaries, the estuary, salt marshes, floodplains, fishery habitat, and diverse wildlife habitat. The ACEC begins at the Lower Mills Dam in Milton and Dorchester, which separates the coastal estuary from the inland fresh water portion of the Neponset, and extends to the mouth of the river at Commercial Point in Boston and Squantum Point in Quincy. Highly significant historical and archaeological resources, recreational areas, and scenic and educational values within this area contribute to the overall significance of the ACEC to the people and communities of the region. Thus the area reflects eight out of eleven of the resource features listed at 301 CMR 12.06.

Surface Waters

As mentioned above, within the ACEC the Neponset River flows from the Lower Mills Dam to its mouth at Commercial Point and Squantum Point. This section of the Neponset River is approximately 4.2 miles in length. The overall length of the Neponset River is approximately 28 miles from its source in Foxborough to its mouth in Dorchester Bay. Portions of Gulliver Creek in Milton and Sagamore Creek in Quincy flow into the Neponset River within the ACEC.

Estuarine Wetlands, Inland Wetlands and Floodplains

The predominant ecological and visual features of the Neponset River Estuary ACEC are the extensive salt marshes that are located along the Neponset River as it winds its way from the Lower Mill dam to Dorchester Bay. According to GIS data, salt marsh comprises approximately 320 acres within the ACEC, or 26 per cent of the total area of the ACEC. Large expanses of salt marsh are located below the Lower Mills Dam in Boston and Milton, along the south shore of the Neponset at the Milton and Quincy municipal boundary, and in Quincy north of the Conrail bridge to Squantum Point. Other smaller areas of salt marsh are found within the ACEC. Important inland wetlands are located at Squantum Point.

Overall, the combined acreage of open water at high tide, estuarine wetlands, and other wetland resource areas totals approximately 830 acres, or 66 per cent of the total area of the ACEC. In addition, floodplains overlay most of the ACEC, especially the wetlands. Floodplains cover approximately 1,005 acres or 80 per cent of the ACEC. This estuarine wetland system is a highly productive ecosystem, supporting important marine fisheries and diverse wildlife habitat. It is unique in its size and proximity to a highly urbanized area.

Fishery Habitat

According to comments regarding the nomination provided by the Massachusetts Division of Marine Fisheries (DMF), dated January 23, 1995, the Neponset River supports valuable anadromous fish populations, including one of the largest smelt runs in Massachusetts Bay. This run supports a hook and line, recreational fishery in the fall and winter. In addition, blueback herring spawn in the Neponset River, and are valued for roe harvest and are an important forage species in the Bay. American shad have been observed by biologists below the Lower Mills Dam. DMF supports ACEC designation in the interest of conserving anadromous fish populations and the potential benefits of future restoration projects.

In regard to shellfish resources, DMF states that there are substantial soft-shell clam beds at the mouth of the Neponset

River. A limited survey of Buckley's Bar was conducted in 1989 and found very high densities of soft-shell clams, with a potential yield of 68 clams per square foot. DMF estimates that the 50 acres of Buckley's Bar could produce approximately 12,500 bushels per year, with a current market value of $1 million per year to local harvesters. However, recent water samples from this area found continued high levels of contamination, with DMF concluding that "open shellfish harvest is not likely in the near future for this area, although restricted classification (harvest by permitted master diggers with depuration) is a feasible goal, especially with plans underway to improve water quality in Boston Harbor and the Neponset River."

DMF comments regarding the ACEC nomination concentrated on anadromous fish and shellfish resources "because there are important habitat areas within the proposed ACEC and because of the magnitude of these resources relative to other locations in Massachusetts Bay." DMF adds that there are numerous fish species that enter the Neponset River estuary as seasonal migrants for feeding purposes, with striped bass, bluefish and winter flounder considered significant for commercial and recreational importance. It is important that water and forage quality be improved for these species, as well as sportfishing access.

Habitat Resources

Comments regarding the nomination provided by the Massachusetts Natural Heritage & Endangered Species Program (NHP), Division of Fisheries and Wildlife, dated February 1, 1995 focus on state-listed rare species and non-game wildlife in the Squantum Point area, in Quincy. According to NHP, this area "provides habitat for a tremendous diversity of bird species and is one of the most important wildlife habitats in the urbanized Boston area."

NHP goes on to state that, "For over 30 years, Squantum Point has been known as a feeding area, roosting area, and migratory stopover for over 200 species of birds. State-listed rare species known to utilize this area are the Short-eared Owl (Asio flammeus), Northern Harrier (Circus cyaneus), and Least Tern (Sterna antillarum).... other bird species that use this area, and are uncommon but not state-listed, include the Snowy Owl, Great Blue Heron and Osprey among many others."

In regard to the wildlife habitat of this area, NHP explains that, "One of the primary reasons that Squantum Point supports both an unusual abundance of birds and a high diversity of species is the variety of habitat types occurring within a relatively small area. This area includes mudflats, sandy beaches, saltmarshes, freshwater wetlands and shrubby upland." Another reason for the heavy use by birds is because so few suitable areas exist in the greater Boston area. NHP recommends including all of these habitats within the boundary of the ACEC, and to designate the area as an ACEC to help

"protect an area that is unique because it is one of the few remaining natural ecosystems in our urban environment."

Historical/Archaeological Resources

Layers of archaeological and historical resources are concentrated in the area of the Neponset River estuary. These resources are described and documented in the 1989 publication of the Metropolitan District Commission, A History and Guide to the Restoration of Dorchester Shores. The geographical location and ecological richness of the area has attracted human use and settlement for 10,000 years. As summarized in the MDC publication, "the area is well endowed with abundant natural resources, and during the 10,000 years that humans have occupied the Boston Basin, the Neponset River would have been utilized during different seasons, and at different levels of intensity throughout prehistory." At the time of the first European contact with the region, Lower Falls was the seat of the Neponset tribe of the Massachusetts Indians. At least nine archaeological sites have been recorded along the lower Neponset River.

The MDC publication further describes colonial settlement and evolving historical development and industrial use of the area. The Lower Mills and Neponset marshes area, Port Norfolk and Commercial Point are highlighted in the narrative. Visible reminders of the colonial and industrial periods remain, but much of this history, like the archaeological resources from native settlement patterns and uses, are not readily apparent without guides such as the MDC publication or longtime residents of the area. High formal recognition has been awarded to the Dorchester and Milton Lower Mills Industrial District, which has been on the State and National Registers of Historic Places. Continued education and interpretation of human history and its interaction with the natural resources of the area are an essential element of preserving and restoring the ecological integrity of this area.

Special Use Areas

According to the ACEC regulations, "special use areas" are defined as "undeveloped natural areas, public recreational area, or significant scenic site(s)." The importance of this category of features to the nominated area is demonstrated by the number of scenic sites and views of the river and estuary available from a number of locations, the currently undeveloped and scenic nature of the salt marshes, and the large proportion of public lands for recreation that are located with the ACEC. Many of these features are linked to the Metropolitan District Commission's ownership of approximately 490 acres within the ACEC (39 per cent of the total acreage).

According to MDC comments regarding the nomination dated February 16, 1995, MDC owns approximately 270 acres known as the Neponset

River. A limited survey of Buckley's Bar was conducted in 1989 and found very high densities of soft-shell clams, with a potential yield of 68 clams per square foot. DMF estimates that the 50 acres of Buckley's Bar could produce approximately 12,500 bushels per year, with a current market value of $1 million per year to local harvesters. However, recent water samples from this area found continued high levels of contamination, with DMF concluding that "open shellfish harvest is not likely in the near future for this area, although restricted classification (harvest by permitted master diggers with depuration) is a feasible goal, especially with plans underway to improve water quality in Boston Harbor and the Neponset River."

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Marshes, and approximately 220 acres that include several other properties - Squantum Point Park in North Quincy, and Ventura Park Playground, Tenean Beach, Victory Road Park, Pope John Paul II Park (the Hallet Street/Neponset Drive-In Site), and the former Conrail right-of-way and Shaffer Paper Company site in Boston. MDC divides these properties into three categories: natural areas like the Neponset Marshes and portions of Squantum Point Park; developed sites such as Ventura Park Playground, Tenean Beach, and Victory Road Park; and undeveloped sites such as Pope John Paul II Park, portions of Squantum Point Park, the Shaffer site, and the former Conrail line, which need recreational access, development and enhancement and environmental reclamation and restoration.

MDC is committed to providing a "green connection" from Mattapan to Castle Island, which traverses the ACEC along the Boston side of the river and includes a bicycle and park corridor connection. To this end MDC has initiated a major master planning program for the Neponset estuary which includes all of the properties described above, located in Boston, Milton and Quincy. According to MDC most of these sites have complicated development and management issues associated with them. MDC stewardship of these areas is an essential element of achieving the goals of ACEC designation, and the MDC master plan is a key element of the larger Neponset River Estuary ACEC resource management plan to be prepared.

In addition to MDC lands, other public recreation and open space areas highly important to local residents and the region include The Trustees of Reservations' Governor Hutchinson's Field in Milton, the Milton Town Landing, and the President's Golf Course in Milton and Quincy.

III. Boundary of the Neponset River Estuary ACEC

Description of Boundary Review Process

The boundary as recommended in the nomination employed several different types of boundary delineation, such as roads, county lines, zoning district lines, property lines, natural resources, setback distances from natural resources, and straight line distances between two points. About ten different types of delineation were used, and the overall sequence of describing the proposed boundary used over thirty changes from one type of description to another.

Several questions were raised in the course of the initial review and the first round of public meetings regarding the proposed method of describing the boundary of the nominated area. In discussions between NepRWA and EOEA staff, it was agreed that alternative methods of delineating a boundary for the proposed ACEC were appropriate for public review. Both the nominators and EOEA staff recognized that by so doing, they were continuing to describe

the same set of resources and the same ecosystem as had been proposed for protection in the nomination.

A method of delineating the boundary, based upon the Wetlands Protection Act Regulations (wetlands resource areas and a 100-foot buffer) plus adjacent public open space and historic districts, was distributed in EOEA correspondence dated December 22, 1994, and at the public information meetings and public hearing in January, 1995, on a geographic information systems (GIS) map. Differences between the nominated boundary and the alternate method of resource-based delineation are relatively few, reducing the total of 1540 acres nominated by fewer than 300 acres, according to GIS calculations. Commercial Point, primarily a gas tank facility, was originally included in its entirety, and is now only affected as to the 100-foot wetlands buffer. Open water between Commercial Point and the tidal flats at Buckley's Bar and the county line which extends northeasterly from Dorchester Bridge is not included in the current boundary. Extensive freshwater wetlands and a smaller saltwater wetland on Squantum Point are included in the resource-based boundary. A tract of commercial, residential, and industrial land in North Quincy outside of the 100-foot wetlands buffer zone is not included within the resource-based boundary. Two other residential areas, and an industrial area between the Southeast Expressway and MDC's proposed rail trail in Boston that were included based on roadway delineation are not included now other than within the 100-foot wetlands buffer. In other words, some properties and portions of properties included in the original proposed boundary due to using roads, property lines and other means are eliminated in the final boundary, and additional resource areas are added.

The consistency and rationale of the resource-based boundary regarding the protection of resources themselves, and the lack of clear consensus concerning boundaries among the nominating parties, municipal boards, and other public comment leads me to choose the resource-based boundary described in detail below. The overriding rationale for this boundary delineation is that it is directly based on and includes the wetland resource areas of the Neponset Estuary, from the mouth of the estuary up to the Lower Mills Dam in Milton and Boston, which divides the coastal estuary from the inland fresh water portion of the Neponset River.

Several comments regarding the proposed boundary, and concerns and suggestions regarding the regulatory effect of ACEC designation on important public environmental restoration and improvement projects were submitted in the course of the public review. These comments ranged from suggestions to exclude certain commercial and residential properties to proposals for language that would expedite landfill closures, hazardous waste site cleanups, and other beneficial environmental restoration and public recreation projects. Many concerns regarding the clean-up, restoration and

recreational development of MDC lands, which comprise approximately 500 acres of the ACEC, were expressed to me.

However, I have not included language in this designation document to exclude or exempt specific properties, activities or projects from the regulatory effects of ACEC designation. The intent of this designation - to preserve, restore and enhance the resources of the ACEC, including the provision of safe public access and recreation on public lands - should guide the actions and regulatory decisions of EOEA agencies. I expect that EOEA agencies, municipalities, community and environmental groups, and local businesses and residents will participate in the development of the Neponset River Estuary ACEC resource management plan over the next several months to address any unresolved issues regarding final boundary delineation and regulatory effects of ACEC designation prior to the effective date of this designation.

The final boundary is based on the wetland resource areas of the Neponset River marshes and estuary, as defined by the Wetlands Protection Act Regulations (Wetlands Regulations). The boundary generally follows the jurisdiction of the Wetlands Regulations, including the edge of the resource area and a 100-foot buffer. However, it does not include the floodplain of this area where the floodplain, in several locations, extends beyond the 100-foot buffer of these resource areas.

The boundary is approximated by that boundary shown on the GIS map produced by the Department of Environmental Management for the review of the Neponset River Estuary ACEC nomination. Actual delineation of the 100-foot buffer of the wetlands resource areas would be made during the course of a request for determination of applicability or notice of intent submitted by a project proponent to the Conservation Commissions of Boston, Milton, and Quincy, following the procedures specified by each Conservation Commission as provided in the Wetlands Protection Act, M.G.L. Ch.131, sec. 40, the Wetlands Protection Regulations, 310 CMR 10.00, and subject to their agreement. It is my intention that the Resource Management Planning process will also serve to identify a better approximation of the boundary on town assessor maps.

The official GIS map at 1:7500 scale and the supplemental maps listed below are on file at the offices of the DEM, Division of Resource Conservation. Reduced versions of the GIS map at a scale of 1:20,000 and copies of the supplemental maps are available upon request.

The GIS map is supplemented by the following maps:
1) City of Boston Planimetric Survey 14N-14E
2) City of Quincy Assessors Map 6143
3) Town of Milton map Roll 10A, Sheet 1
4) Town of Milton map Roll 7, Sheet 1
5) Dorchester/Milton Lower Mills National Register District map

The size of the Neponset River Estuary ACEC, according to GIS data, is approximately 1,260 acres. The respective acreage located in each municipality is as follows:

Boston - 435 acres
Milton - 355 acres
Quincy - 470 acres

Final Boundary Description of the Neponset River Estuary ACEC

Beginning at the bulkhead terminus of the walkway at the end of Victory Road overlooking the estuary at Commercial Point in Dorchester (Boston), as shown on the City of Boston Planimetric Survey 14N-14E, the boundary follows a straight line due east to 100 feet below Mean Low Water (MLW, or the edge of the tidal flats) of the Neponset River Estuary (near the Boston-Quincy municipal boundary) as shown on the DEM GIS map of the Neponset River Estuary ACEC.

It then follows the 100-foot line below MLW in a northerly, northeasterly, southerly, and southeasterly direction to the intersection of the Metropolitan District Commission (MDC) property line on land just west of the Marina Bay complex in Quincy, also shown on the DEM GIS map of the Neponset River Estuary ACEC.

Then southerly and westerly along the MDC property line to the edge of the 100-foot wetlands buffer.

It then follows along the 100-foot wetlands buffer line southeasterly and westerly, and includes the freshwater wetland areas located within and south of MDC's Squantum Point Reservation.

Then along the 100-foot wetlands buffer southerly and easterly towards East Squantum Street, then southerly, westerly, southerly, and westerly, thus including the extensive coastal marsh at the beginning of Squantum Point.

Then along the 100-foot wetlands buffer southerly, easterly, westerly, and southerly, thus including the next coastal marsh area to the south along the Neponset River.

Then along the 100-foot wetlands buffer along the Neponset River southerly, and then along the 100-foot wetlands buffer easterly around Sagamore Creek to the intersection of the drainage right-of-way that joins Sagamore Creek to the salt marsh wetlands to the southeast.

Then along and including the drainage right-of-way to the salt marsh wetlands to the southeast, along the 100-foot wetlands buffer around the wetland, and then back northwesterly along the drainage easement to the 100-foot wetlands buffer of Sagamore Creek.

Then along the 100-foot wetlands buffer northwesterly, southwesterly and southeasterly to the intersection with the President's Golf Course property line in Quincy .

Then southerly and westerly along the President's Golf Course property line (as shown on City of Quincy Assessors Map 6143) across the Quincy-Milton municipal boundary, and southerly along the property line in Milton (as shown on Town of Milton map Roll 10A, Sheet 1) until the intersection with the 100-foot wetlands buffer, thus including the public open space of the golf course.

Then along the 100-foot wetlands buffer in Milton westerly, to include the freshwater wetlands of the golf course, across Granite Ave., and southwesterly and northerly along the 100-foot wetlands buffer, across the Southeast Expressway, and southerly along the 100-foot wetlands buffer to the intersection with the MDC Neponset River Reservation property line, enclosing the saltwater wetlands that drain into Gulliver's Creek.

[Explanatory note: By following the 100-foot wetlands buffer a "pocket" of upland is not included within the ACEC boundary in the approximate area of the intersection of Granite Avenue and the Southeast Expressway.]

Then southerly along either the MDC property line or the 100-foot wetlands buffer, whichever is further from the saltmarsh, then northwesterly and westerly along the 100-foot wetlands buffer until the intersection with the Trustees of Reservations (TTOR) Governor Hutchinson's Field property line, thus enclosing the saltwater wetlands as well as the MDC public open space property.

Then southerly, westerly, southwesterly, northwesterly, and northeasterly around the TTOR property line back to the 100-foot wetlands buffer, thus enclosing the TTOR public access open space parcel.

Then northwesterly along the 100-foot wetlands buffer to the intersection with the Town of Milton's Captain's Landing property, as shown on Town of Milton map Roll 7 Sheet 1.

Then around the Town of Milton's Captain's Landing property line back to the 100-foot wetlands buffer.

Then northwesterly along the 100-foot wetlands buffer to the intersection with the Town of Milton's Town Landing and Town open space parcels, as shown on Town of Milton map Roll 7 Sheet 1.

Then around the Town of Milton's Town Landing and Town open space parcels back to the 100-foot wetlands buffer.

Then along the 100-foot wetlands buffer northwesterly to the Lower Mills Dam across the Neponset River in Milton and Dorchester (Boston), and including any adjacent parcels of the Dorchester/Milton Lower Mills National Register District, as shown on the Dorchester/Milton Lower Mills National Register District map.

Then along and including the Lower Mills Dam structure across the Milton-Boston municipal boundary to the 100-foot wetlands buffer in Boston; along the 100-foot wetlands buffer easterly to the MDC property line along Ventura Street in Boston, and including any adjacent parcels of the Dorchester/Milton Lower Mills National Register District, as shown on the Dorchester/Milton Lower Mills National Register District map.

Then northeasterly along the MDC property line and the 100-foot wetlands buffer to the MDC property line east of the Southeast Expressway.

Then northeasterly, northerly, westerly, southerly, northwesterly, and northeasterly along the MDC property line and the 100-foot wetlands buffer, whichever is further from the Neponset River, back to the intersection of the 100-foot wetlands buffer with the walkway at Commercial Point, as shown on the City

of Boston Planimetric Survey 14N-14E and back to the beginning point of the boundary description, thus including the MDC open space properties, and the wetlands resources, including the tidal inlet west of the Port Norfolk neighborhood.

IV. Discussion of the Criteria for Designation

In the review process leading to the designation of a nominated area, the Secretary must consider the factors specified in section 12.09 of the ACEC Regulations. As stated in the regulations, the factors need not be weighed equally, nor must all of these factors be present for an area to be designated. The strong presence of a single factor may be sufficient for designation.

Based on the information presented in the letter of nomination, at the public hearing, in written comments received throughout the public review process, and in agency research and review, I make the following findings in support of the designation of the Neponset River Estuary ACEC.

(1) Threat to the Public Health Through Inappropriate Use

As mentioned in the above Description of the Resources of the Neponset River Estuary ACEC, much of the ACEC is floodplain, a natural hazard area. Although much of the upland portions of the ACEC are already developed, I find that potential future inappropriate development in sensitive areas, increased impervious surfaces, and inadequately designed and constructed storm water measures constitute a threat to the resources of the ACEC and to public health and safety.

Contaminated shellfish beds due to poor water quality resulting from inappropriate development also constitute a potential threat to public health and safety. Although shellfish harvesting is restricted, attempts to harvest shellfish threaten public health. In addition, poor water quality threatens public health through the public use of beaches and swimming areas.

Finally, there is a threat to public health resulting from the location of at least 13 potential hazardous waste sites (also known as 21E sites) listed by the Department of Environmental Protection (DEP) as located within the nominated area as of December 16, 1994. This number includes the former Neponset Drive-In site owned by MDC. In finding that ACEC designation is appropriate because of threats associated with inappropriate use, I recommend that this ACEC designation be implemented to facilitate and expedite the clean-up of hazardous waste sites located within the ACEC by the DEP, MDC and authorized parties to protect public health and to restore and preserve the resources of the ACEC.

(2) Quality of the Natural Characteristics

The undeveloped Neponset marshes are an outstanding natural characteristic significant to the region, and the recreational opportunities afforded by the river for boating, swimming and fishing, and by MDC lands and other open space areas for other forms of recreation strongly support ACEC designation.

(3) Productivity

Estuarine wetland systems are among the richest and most biologically productive ecosystems on earth, and the Neponset River estuary is no exception. Furthermore, comments from the Massachusetts Division of Marine Fisheries and the Natural Heritage & Endangered Species Program (see above Description of the Resources of the Neponset River Estuary ACEC), underline the significance of the area regarding biological productivity and diversity of wildlife.

(4) Uniqueness of Area

The uniqueness of the area is defined from a regional, state or national perspective, considering features such as endangered plant and animal species, archaeological/historic/cultural resources, or other resources of educational value. Once again referring to section II. above, Description of the Resources of the Neponset River Estuary ACEC, I find that the uniqueness of this area supports ACEC designation, through the presence of state-listed rare species and archaeological and historic resources, and the educational value this riverine, salt marsh ecosystem to the Boston metropolitan area.

(5) Irreversibility and Magnitude of Impact, and Imminence of Threat to the Resources

I find that the resources of the Neponset River Estuary are subject to heavy historical and current development pressures that threaten their continued viability as a healthy and productive ecosystem. The condition of and threats to resources are similar if not identical to those described in the designation document for the Fowl Meadow and Ponkapoag Bog ACEC: "Historically, discharges to the Neponset River from a variety of sources resulted in extremely poor water quality. Water quality has improved since the passage and implementation of the Clean Water Act, but according to recent information from the DEP Bureau of Resource Protection (BRP), the river does not meet Class B standards. According to BRP, 'Through the discharge permit and construction grant programs, point sources have largely been cleaned up, but unless nonpoint sources are addressed, the river will not meet Class B standards. The river does not meet its designated uses because of high coliform bacteria counts, nutrient enrichment, and low dissolved oxygen levels. The

sources of these pollutants are CSOs (Combined Sewer Outflows), exfiltration, urban runoff and septic systems ....'"

It is essential that these kinds of conditions, combined with continued urban use and development pressures, do not result in irreversible environmental degradation of the Neponset River estuary. Therefore, as with the previous ACEC designation of Fowl Meadow and Ponkapoag Bog, I find that the Neponset River Estuary ACEC designation is warranted to protect the resources from imminent threats, and highly significant, adverse and irreversible impacts.

(6) Economic Benefits

Economic benefits are described in the ACEC Regulations in terms of intrinsic values important to a region's economic stability, such as recreation, tourism, and fisheries development. Recreation values of the area associated with the Neponset River, and the extensive public recreation and open space areas described above, strongly support designation. Fisheries development supporting designation is also clearly documented in section II. above, Description of the Resources of the Neponset River Estuary ACEC.

(7) Supporting Factors

Over 70 comments were received regarding the nomination. Written or oral testimony was received from three state legislators; five municipal boards and commissions; 16 environmental and community organizations; three businesses; ten federal and state agencies; and over thirty citizens. Although not all comments supported ACEC designation, and many expressed concerns or reservations regarding designation, the large majority of comments recognized the intrinsic value and importance of the area.

Considering 1) the characteristics of the resources of the area as described above; 2) the significance of the area in the context of the factors supporting designation; 3) that the area is located in three different municipalities without coordinated local control; and 4) that significant portions are owned by public agencies, the recommendations and comments submitted by the Massachusetts Coastal Zone Management (MCZM) Office, dated February 6, 1995, are especially relevant to my decision to designate the Neponset River Estuary as an ACEC.

The following statements paraphrase MCZM's comments and recommendations.

- The Neponset Estuary represents a unique opportunity to protect and restore a suite of valuable resources.
- An ACEC designation requires a coordinated state review of activities proposed in the area designated, and given the incremental nature of the environmental insults to an urbanized

ecosystem, a coordinated review is important to future restoration efforts.

- The nomination process has pointed out the large number of conflicting visions that exist for parts of the Neponset Estuary, and without a context for resolution of these differences, it is likely that they will be settled by default. The resource management plan that is to be a part of the proposed designation process provides an appropriate forum for resolution of these conflicts.
- A major value of ACEC designation is the educational function that it performs. The focus on the ecosystem, the coordinated review process, and the work to develop resource management goals all make the public and government agencies more aware of the critical nature of the assets that are to be protected. An informed constituency is more likely to work to improve an ecosystem's environmental values.

I find that these supporting factors further justify ACEC designation.

Conclusion

Therefore, I am pleased to exercise the authority granted to me pursuant to M.G.L. Chapter 21A, Section 2(7), to designate the Neponset River Estuary as an Area of Critical Environmental Concern.

Trudy Coxe — MARCH 27 1997

Trudy Coxe
Secretary of Environmental Affairs

Date

DESIGNATION OF AMENDMENTS to the

NEPONSET RIVER ESTUARY

AREA OF CRITICAL ENVIRONMENTAL CONCERN

WITH SUPPORTING FINDINGS

Following an extensive formal review required by the regulations of the Executive Office of Environmental Affairs (301 CMR 12.00), including the preparation of a draft resource management plan, acceptance of proposed amendments for public review, public information meetings, a public hearing and written comment period, and evaluation of all public comment and assembled data, I, the Secretary of Environmental Affairs, hereby amend, as described herein, the Neponset River Estuary Area of Critical Environmental Concern (ACEC) as designated on March 27, 1995. I take this action pursuant to the authority granted me under Massachusetts General Law Chapter 21A, Section 2(7).

I. Findings of Fact

1. On March 27, 1995, I designated the Neponset River Estuary, located in portions of the municipalities of Boston, Milton and Quincy, as an Area of Critical Environmental Concern. Furthermore, pursuant to the ACEC Regulations, 301 CMR 12.11(1), which authorize the Secretary to provide the effective date of designation, I determined the effective date of this designation to be December 1, 1995.

2. At the time of designation I also directed the agencies of the Executive Office of Environmental Affairs (EOEA) to collaborate with municipalities, environmental and community groups and organizations, local businesses and residents, and other interested parties to prepare a Resource Management Plan for the Neponset River Estuary ACEC. At this time I stated that the intent of the resource management plan is to address the preservation, restoration, enhancement, use and management of the resources of the Neponset River Estuary ACEC, and regulatory and boundary questions raised in the course of the public review of the nomination, including the preparation of recommendations for any proposed amendments to the designation that may be needed.

3. At the time of designation I also stated that if there was a need to amend the ACEC designation within one year of the date of designation, I would entertain a waiver to the ACEC regulations as provided for at 301 CMR 12.15, since the ACEC regulations at 301 CMR 12.13(2) state that an ACEC designation may be amended after one year.

4. On October 2, 1995 pursuant to 301 CMR 12.15 I issued a Limited Waiver from the Provisions of the ACEC Regulations regarding Amendments to the Neponset River Estuary ACEC Designation (see copy attached), in order to accept for public review proposed amendments to the Neponset River Estuary ACEC Designation developed in the course of the preparation of a draft Resource Management Plan for the ACEC.

5. On October 2, 1995 pursuant to 301 CMR 12.13(2) and 12.07, I accepted for public review proposed amendments submitted to me by the Department of Environmental Management.

6. Public notice of a hearing regarding the proposed amendments and the draft Resource Management Plan was published in the October 14, 1995 editions of the Boston Globe and The Patriot Ledger, and the October 10, 1995 edition of the Environmental Monitor. Copies of the notice were also mailed to affected municipalities and interested parties in correspondence from me dated October 12, 1995. The notice included the scheduling of a November 1 public information meeting in Quincy and a November 15 public hearing in Dorchester, with a 10-day comment period following the public hearing, to November 27, 1995.

7. A concurrent review of the draft Neponset River Estuary Resource Management Plan was undertaken pursuant to the Massachusetts Environmental Policy Act (MEPA) Regulations, following the submission of an Environmental Notification Form (ENF) to the MEPA Unit by the Department of Environmental Management on October 16, 1995. My findings regarding the draft Resource Management Plan are provided separately in the Certificate of the Secretary of Environmental Affairs, EOEA #10516, Neponset River Estuary ACEC Resource Management Plan, dated December 1, 1995, and are hereby incorporated by reference.

8. A public information meeting was held in Quincy on November 1, 1995 and a public hearing was held in Dorchester on November 15, 1995. Written comments were received until the close of the public comment period on November 27, 1995.

II. Decision

After a detailed and thorough evaluation of the information received and the public comment provided, I have decided to amend the Neponset River Estuary ACEC to provide for a technical clarification of the ACEC boundary and limited exemptions for environmentally beneficial activities. These amendments are further explained and described below, III. Amendments to the Neponset River Estuary ACEC Designation.

The language of the amendments is essentially the same that I accepted for public review on October 2, 1995 and subsequently circulated for public review and comment as described herein,

except that the exemption for the Hallet Street and Neponset Drive-in landfills is changed to include all landfill closures; the exemption for hazardous waste sites is expanded to include redevelopment activities undertaken as part of the assessment and remediation of the hazardous waste site located at #2 Granite Avenue in Milton; and additional limited exemptions for improvement dredging are added - for improvement dredging associated with the Pine Neck Creek stormwater outfall; improvement dredging or trenching that may be necessary for utility crossings; and improvement dredging that may be necessary for marina facilities. These changes were proposed and supported by the Metropolitan District Commission (landfill closures), Milton Board of Selectmen (#2 Granite Avenue hazardous waste site) and the Department of Environmental Protection (landfill closures, hazardous waste sites, and additional improvement dredging projects) to promote the purpose and objectives of ACEC designation.

Discussion of the Criteria Specified in Section 12.09 of the ACEC Regulations

In the review process leading to the decision regarding amendments to an ACEC designation, the Secretary must consider the factors specified in section 12.09 of the ACEC Regulations. Based on the information presented in the proposed amendments and in the draft Resource Management Plan, at the public hearing, in written comments received throughout the public review process, and in agency research and review, I make the following findings in support of the amendments described herein:

1. As stated below, the boundary of the ACEC best delineates the most critical natural resources of the estuarine ecosystem. It also provides a reasonable and consistent boundary for the three municipalities in which the ACEC exists and one that is already utilized by local boards in conducting their permitting and planning responsibilities. I find that the delineation of this ACEC boundary is supported by the quality of the natural characteristics and the uniqueness of the area.

2. The limited exemptions for environmentally beneficial activities address the closure of landfills, hazardous waste sites, and improvement dredging for stormwater outfall projects, Metropolitan District Commission recreation facilities located within the boundary of the ACEC, potential utility crossing projects, and marina facilities. I find that these limited exemptions are supported because they will address threats to public health, improve the quality of the natural characteristics of the area, improve or enhance the uniqueness of the area, improve and enhance recreational access and use, and provide economic benefits to the area. The limited exemptions regarding landfill closure, hazardous waste sites and stormwater projects will also address potentially

significant, irreversible or imminent threats to the resources of the area.

3. Supporting factors listed at 310 CMR 12.09(9) also contribute to the adoption of these amendments to the Neponset River Estuary ACEC.

- Approximately 24 comments were received regarding the proposed amendments or the draft resource management plan. Of the comments received regarding the proposed amendments, the large majority supported them, reflecting a public awareness of the value and importance of the area and these environmentally beneficial projects.
- Further, criteria regarding the lack of coordinated local control because the area is located within more than one municipality; ownership of a large portion of the resource area by the state government; and the existence of supplementing management programs in the area all support the need for ACEC designation and the need for limited exemptions to help expedite, streamline and coordinate efforts by municipal and state agencies, and environmental and community organizations, to preserve, restore, enhance, use and manage the natural and cultural resources of this area.
- It is important to add that the public has been informed of the preparation of the Neponset River Estuary Resource Management Plan since last March when the ACEC designation was made. A Steering Committee was formed to help prepare the plan, and meetings and input from the public since June, 1995 have contributed to the development of the draft plan and the proposed amendments.

In summary, I find ample justification to amend the Neponset River Estuary ACEC designation as described herein.

<u>Ongoing Neponset River Estuary Planning and Management and Potential Future Amendments to the ACEC</u>

It is important to state that, at the time of the effective date of the Neponset River Estuary ACEC designation and these amendments, there are several ongoing planning and management activities within this area. These include, but are not limited to, the preparation of:

- the final "Neponset River Estuary ACEC Resource Management Plan;"
- the Metropolitan District Commission (MDC) "Neponset River Estuary Master Plan;"
- the Boston Natural Areas Fund and Trust for Public Land "Neponset River Greenway Project;"
- the Neponset River Watershed Association Estuary Subwatershed Group "Action Plan;"
- the Massachusetts Wetlands Restoration and Banking Program "Neponset River Watershed Wetlands Restoration Plan;" and
- the Department of Environmental Protection "Neponset Watershed Management Plan."

I understand that every effort has been made prior to December 1, 1995 to identify potential amendments to guide and improve the implementation of this ACEC designation. I also understand that the various planning and management efforts underway may identify further amendments to the ACEC that may be needed to implement important recommendations and projects. In particular, the Metropolitan District Commission has commented that the Master Plan currently being developed for the Neponset River Reservation properties may identify further amendments that may be needed for environmentally and recreationally beneficial projects and activities.

The preparation and implementation of ACEC resource management plans and other planning efforts within ACECs should be a dynamic process, and future changes to this ACEC designation should be made where appropriate and where justified and supported by public planning and management efforts. The ACEC Regulations provide a clear and straightforward process for amending ACEC designations, especially where proposed amendments are identified as part of a dynamic and ongoing planning, management, and implementation process.

III. Amendments to the Neponset River Estuary ACEC Designation

1. ACEC Boundary

The final boundary is based on the landward boundary of the wetlands resource areas of the Neponset River marshes and estuary, as defined by the Wetlands Protection Act (Chapter 131, Section 40) and Regulations (310 CMR 10.00) plus a 100' buffer area. This boundary best delineates the most critical natural resources of the estuarine ecosystem. It also provides a reasonable and consistent boundary for the three municipalities in which the ACEC exists and one that is already utilized by local boards in conducting their permitting and planning responsibilities.

However, a technical amendment is necessary regarding ACEC designation maps that show a boundary that appears to be inclusive of all property known as #2 Granite Ave. at the intersection of Route 3/I-93 in Milton. A consistent application of the natural resource based boundary with the 100' buffer, includes the perimeter of this property but leaves a portion of the middle upland outside of the ACEC boundary.

The revised technical boundary language, to replace paragraph two of page 12 of the designation document for the Neponset River Estuary ACEC, is as follows:

[Explanatory note: By following the 100-foot wetlands buffer two "islands" of upland are not included within the ACEC boundary. The first lies within the property known as #2 Granite Avenue,

Milton. The second is in the vicinity of the intersection of Granite Avenue and the Southeast Expressway (Route 3/I-93), Milton.]

2. Limited Exemptions for Environmentally Beneficial Activities

The designation of an urban area, especially the Lower Neponset with its long history of human uses and accompanying impacts, adds an extra measure of complexity to the designation of this ACEC. One strong concern raised by state agencies and other interested parties is that the increased scrutiny and more stringent standards for permitting within the ACEC may unnecessarily delay the implementation of rehabilitation, restoration, and public use projects.

Both the Wetlands Protection Act and the Chapter 91 Waterways regulations set stricter standards for projects in coastal ACECs. The Wetlands regulations allow "no adverse impact" to any coastal wetland from any activity within an ACEC (310 CMR 10.24(5)(b)). For freshwater wetlands, only limited projects are allowed to alter Bordering Vegetated Wetlands (310 CMR 10.53 and 10.54). The Waterways Regulations prohibit improvement (new) dredging in an ACEC except for the sole purpose of fisheries or wildlife enhancement (310 CMR 9.40(1)(b)). These restrictions make sense when applied to activities which adversely impact pristine wetlands or waterways without at the same time having any positive environmental impact. The restrictions do not make sense, however, when an activity to be undertaken within an urban ACEC is designed to enhance the environment or the public's enjoyment of it.

Because the major purposes of ACEC designation are to "preserve, enhance, restore, manage, and encourage appropriate use of the natural and cultural resources" (emphasis added), the following environmentally beneficial activities are exempt from this ACEC designation, so that they may go forward without the ACEC-related permitting restrictions contained in the Wetlands and Waterways Regulations. Such activities will continue, of course, to be subject to all other requirements of wetland, waterways, and other environmental laws and regulations.

Landfill Closures

Exemptions are granted from this ACEC designation for all activities undertaken within the Neponset River Estuary ACEC boundaries which are required to be taken by the owner of any landfill as part of landfill assessment actions (Initial and Comprehensive Site Assessments) and landfill closure construction, as determined through DEP/DSWM's Corrective Alternative Action Analysis (CAAA), process and/or the Massachusetts Contingency Plan. Actions necessary for remediation include, but are not limited to: dredging contaminated sediment from perimeter of landfill in

wetlands or buffer zone and its disposal on upland portions of the site; installation of leachate cut-off walls along perimeter of landfill within wetlands or buffer zone; the collection, treatment and discharge of leachate into wetlands (if the Comprehensive Site Assessment determines discharge is not a significant public health or ecological risk); the placement of grading material and/or cap materials or erosion controls along perimeter of site within wetlands or buffer zone; the installation of boring/monitoring wells; temporary installation/operation of barging facilities at the site; remedial work on bridges and culverts; and any closure/post closure actions required by DEP. These and other associated corrective actions are exempted on the condition that the landfill owner (or its agents) takes all practicable measures to avoid and minimize further degradation of adjacent resources and to mitigate any unavoidable impacts to the greatest extent possible during site assessment and closure activities.

Hazardous Waste Sites

Exemptions are granted from this ACEC designation for response actions performed in compliance with M.G.L. c.21 E and the Massachusetts Contingency Plan 310 CMR 40.0000 for the assessment and remediation of releases of oil and/or hazardous material located within the Neponset River Estuary ACEC boundaries. These activities are also granted an exemption from the ACEC Designation for the purposes of Wetlands and Waterways regulations. These activities include but are not limited to the activities listed under the waiver language for actions required for landfill closures. These activities are exempted on the condition that project proponents (and their agents) take all practicable measures to avoid and minimize further degradation of adjacent resources and to mitigate any unavoidable impacts to the greatest extent possible and that the proponents obtain the applicable approvals pursuant to Wetlands and Waterways regulations.

This exemption shall apply to any future sites that may need to perform response actions under M.G.L. c.21 E and the Massachusetts Contingency Plan within the Neponset River Estuary ACEC. These sites include, but are not limited to, the Bureau of Waste Site Cleanup Disposal Site List and other unpublished lists provided by DEP. These exemptions shall remain in effect for each site until certification by DEP or the Licensed Site Professional overseeing the remediation activities that the remediation process has been satisfactorily completed at which time all provisions of the ACEC designation will be in effect except for any closure/post closure remediation actions required by DEP.

The exemption from the ACEC designation shall also apply to activities related to the redevelopment of the property at #2 Granite Avenue in Milton undertaken as part of the assessment and remediation of the hazardous waste site at this location.

Improvement Dredging

Exemptions are granted from this ACEC designation for the following improvement dredging activities for the purposes of Wetland and Waterways regulations and CZM Federal Consistency Review: improvement dredging associated with the stormwater outfalls at Tenean and Lawley Streets and Pine Neck Creek, Boston; dredging/sediment removal to allow for installation or modification of stormwater outfalls necessary to allow MWRA and the Boston Water & Sewer Commission to separate the existing combined sewers located in the ACEC; sediment removal and resanding at Tenean Beach, Boston; dredging that may be necessary to access recreational boating facilities (launch ramps and docks) included in the MDC "Neponset River Estuary Master Plan", as approved; dredging or trenching that may be necessary for utility crossings; and, dredging that may be necessary for marina facilities provided the marina owners work with Chapter 91 Waterways staff and EOEA agencies to delineate work areas. These activities are exempted on the condition that project proponents (and their agents) take all practicable measures to avoid and minimize further degradation of adjacent resources and to mitigate any unavoidable impacts to the greatest extent possible and that the proponents obtain the applicable approvals pursuant to Wetlands and Waterways regulations and CZM Federal Consistency review.

The effective date of these amendments shall be December 1, 1995.

Trudy Coxe — DEC 1 1995

Trudy Coxe / Date
Secretary of Environmental Affairs

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

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LIMITED WAIVER FROM THE PROVISIONS OF THE ACEC REGULATIONS REGARDING AMENDMENTS TO THE NEPONSET RIVER ESTUARY ACEC DESIGNATION

Findings of Fact

1. On March 27, 1995 I designated the Neponset River Estuary, located in portions of Boston, Milton and Quincy, as an Area of Critical Environmental Concern (ACEC). Furthermore, pursuant to the ACEC Regulations, 301 CMR 12.11(1), which authorize the Secretary to provide the effective date of designation, I determined the effective date of designation to be December 1, 1995.

2. At the time of designation I also directed the agencies of the Executive Office of Environmental Affairs (EOEA) to collaborate with municipalities, environmental and community groups and organizations, local businesses and residents, and other interested parties to prepare a Resource Management Plan for the Neponset River Estuary ACEC. The plan is intended to address the preservation, restoration, enhancement, use and management of the resources of the ACEC, and the regulatory and boundary questions raised in the course of the public review of the plan. Furthermore, the plan should include recommendations for any proposed changes or modifications to the designation that may be needed.

3. A draft Resource Management Plan has been completed, and includes recommendations for amendments to the ACEC designation. A public hearing regarding the Resource Management Plan and the proposed amendments is scheduled for November 15, 1995.

4. The ACEC regulations, 301 CMR 12.13(2) provide that an ACEC designation may be amended at any time after an ACEC has been designated for one year. In order to amend the Neponset River Estuary ACEC designation within one year, a waiver from the ACEC regulations, as provided at 301 CMR 12.15, is required by the Secretary.

Decision

In order to accept for public review the proposed amendments to the Neponset River Estuary ACEC Designation, I hereby grant a limited waiver from the provisions of the ACEC Regulations at 301 CMR 12.13(2) which allow amendments to be made to the designation only after one year from the date of designation. Strict compliance with the provision of 301 CMR 12.13(2) would result in an undue hardship upon the public and municipalities and residents of the area and would not serve to further the intent of M.G.L. c.21, s.2(7).

Trudy Coxe — October 2, 1995

Trudy Coxe
Secretary of Environmental Affairs

Date

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December 1, 1995

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

PROJECT NAME	: Neponset River Estuary ACEC Resource Management Plan
PROJECT LOCATION	: Boston, Milton and Quincy
EOEA NUMBER	: 10516
PROJECT PROPONENT	: Massachusetts Department of Environmental Management
DATE NOTICED IN MONITOR	: October 23, 1995

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that the above project does not require the preparation of an Environmental Impact Report (EIR).

The project consists of the submission of the Draft Neponset River Estuary Area of Critical Environmental Concern (ACEC) Resource Management Plan as prepared for the Massachusetts Department of Environmental Management (DEM). DEM has prepared the draft Resource Management Plan (RMP) in accordance with the Neponset River Estuary ACEC designation and in collaboration with the affected municipalities and other interested parties. The purpose of the RMP is to guide the implementation of the Neponset River Estuary ACEC designation and to address the regulatory and boundary questions raised in the course of the public review of the nomination.

On March 27, 1995, the Neponset River Estuary was designated as an ACEC. However, the effective date of the designation was scheduled to be December 1, 1995. The ACEC area encompasses approximately 1,260 acres in Boston, Milton and Quincy.

As proposed, the draft RMP requires no state permits. However, the Environmental Notification Form (ENF) was submitted for MEPA review in accordance with 301 CMR 11.15(3)(b) for agency planning activities within an ACEC. On November 1, 1995, a MEPA

responsibilities will be coordinated so as to avoid inconsistency or conflict.

According to the comment letter from the Massachusetts Coastal Zone Management (MCZM) office, the recommendations contained in the draft RMP have not yet been formally endorsed by the ACEC Steering Committee. It is important to ensure an opportunity for full review and endorsement of the final RMP and its recommendations by the ACEC Steering Committee. This must be reflected in the schedule for finalizing the RMP.

Under the circumstances, it is clear that additional time is needed to prepare and review a final Neponset River Estuary ACEC RMP. MCZM's comment includes a proposed outline, which I ask the proponent to consider. I have also directed the MCZM office to prepare an Action Plan, which I understand is close to being completed. The Action Plan will specify the data to be collected, analyses to be performed, implementation tasks to be developed or executed, parties responsible for carrying out these tasks, and the timetables for doing so. In addition, the Action Plan will propose mechanisms for coordinating current and future planning efforts and incorporating their results into the RMP.

The final RMP should be responsive to the many thoughtful comments on the draft. It should address ways to further the recreational value of the area as recommended by the NRWA and others. It should present criteria and mechanisms for evaluating the effectiveness of the RMP and its applicability to other ACECs. It should identify an on-going management (coordinating) entity with specific responsibilities and authority to act.

I expect the final RMP to be submitted to me for my review in the Spring of 1996. Updates should be prepared every three to five years in order to address the results of ongoing planning efforts within the ACEC, as well as to incorporate any further amendments or exemptions that may be needed.

I believe that the Designation of the Neponset River Estuary ACEC, as amended, will not slow the momentum of ongoing efforts to protect the Neponset River. Given the amendments and exemptions now available, such efforts as the MDC cleanup of Hallet Street landfill site, the cleanup of other 21E sites, improvement dredging projects and other activities highlighted by concerned commenters do not require further postponement of the designation. Other restoration and rehabilitation projects that are found to have long-term benefits to the resource area can be considered for exemption during the review of RMP updates.

Given that a final RMP will be prepared and that the RMP will serve to protect environmental resources, it is not necessary to require preparation of an EIR. However, it remains important to provide adequate opportunity for input by affected municipalities, agencies, organizations, individuals and the public in general. Accordingly, I require that the final RMP be submitted to the MEPA Unit for notice in the Environmental Monitor, to be followed by a public comment period. I direct the MEPA Unit and the ACEC program to coordinate carefully so as to avoid unnecessary duplicative process or delay. Following the public comment period, I will issue my final findings on the RMP.

December 1, 1995
Date

Trudy Coxe, Secretary

Comments received : MAPC, 11/8/95
Quincy Citizens & Wollaston Park Associations, 11/15/95
New England Power Company & Massachusetts Electric Company, 11/15/95
Katherine Haynes Dunphy, 11/15/95
Melissa Creed, 11/15/95
Ellie Spring, 11/15/95
J.E. Ingoldsby & Assoc., 11/15/95
Robert L. Teagan, 11/16/95
Water Supply Citizens Advisory Committee, 11/21/95
Boston Natural Areas Fund, 11/21/95
Neponset River Watershed Assoc., 11/21/95
Senator Michael W. Morrissey, 11/21/95
Bruce J. Ayers-Quincy City Council, 11/22/95
Save the Harbor Save the Bay, 11/22/95
MDC, 11/24/95
BWSC, 11/24/95
Boston Harbor Assoc., 11/27/95
EOTC, 11/27/95
BED, 11/27/95
MWRA, 11/27/95
MCZM, 11/27/95
Boston GreenSpace Alliance, Inc., 11/27/95
DEP/Boston, 11/28/95

TC/WTG/wg

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
Milton Yacht Club							
5/83	Contract No. 3002	DEQE-Division of Waterways		maintenance dredge channel in Neponset River to -6.0 MLW (min width 100')			COE 404 permit prohibits dredging between March 1 through June 30 for protection of anadromous fishery
7/67	Contract No. 2585	DPW-Division of Waterways	DPW	dredge channel and basin in Neponset River to -6.0 MLW (min width 100'; plan shows wider area)			
Neponset River south of Neponset Avenue Bridge							
8/20/23	Contract No. 84; Authorized by chapter 353 of the Acts of 1923			Neponset Avenue Bridge to Granite Ave bridge: 100' wide, -6.0 MLW Granite Ave. Bridge to Godfrey's Coal Wharf: 75' wide, -6.0 MLW In front of Godfrey's Coal Wharf: not less than 50' Mooring basin in front of Vose's Grove to -6.0 MLW			
				Dredge and maintain a 2 mile reach of channel between the Neponset Bridge and Milton Mills to -6.0 MLW. (This dredging was required of the Commonwealth as a condition of ACOE dredging north of Neponset Bridge in 1907.			Narrative with ACOE's condition survey of 1986 states this dredging was done and has been maintained since 1910.)

APPENDIX D

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity			Conditons
				Dredging	Structures	Fill	
224 Adams Street, Milton							
8/3/84	C. 91 #1098	Marion R. Lynch	DEQE		maintain a pier and float; construct and maintain a boat launching ramp and wall		
12/29/83	WQ Certification #83W-140	Marion R. Lynch	DEQE/DWPC		maintain existing pier and float, construct and maintain a boat launching ramp	remove unauthorized fill	
5/17/76	C. 91 #125	Teresa L. Grogan	DEQE	dredging 37'X75' to depth of -4.0 MLW	build and maintain a pier and float; asphalt boat launching ramp extending 95' into tidewaters		
Neponset Valley Yacht Club							
3/56	Contract No. 1594	DPW-Division of Waterways	DPW	dredge channel to -8.0 MLW (min width 200')			
State Street South							
11/3/80	C. 91 License No. 687	SSB Realty, Inc.	DEQE	construct 400'X18' open channel between Sagamore Creek and existing 18'X10'6" box culvert		with associated filling and excavation in Sagamore Creek	
4/30/80	Water Quality Certificate	SSB Realty	Water Resources Commission/ DWPC			relocate 145' of a channel leading to and place fill in wetlands	

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
10/8/69	License No. 5593	SSB Realty Trust	DPW		Construct 1200' X18'X10'6" box culvert to handle drainage formerly carried by Sagamore Creek.	Fill, pipe, and otherwise relocate and modify the main channel and estuaries of Sagamore Creek. Place solid fill in Sagamore Creek over a distance of 980'.	
	C. 91 License No. 5731 (referenced on Plan 687)						
	C. 91 License No. 3662 (6 plan sheets)	SSB Realty, Inc.				maintain and 8-story office and retail building and 4-story parking garage in and over the filled waters of Sagamore Creek	Licensee shall maintain public walkways and the ground level publicly accessible areas outside the footprint of buildings as shown on the plan. Place 4 benches as shown on sheet 6A. Place appropriate signage
Sagamore Creek at Walnut Street							
10/26/90	C. 91 License No. 2427	Hardwood N.V.	DEP		maintain existing concrete platform and timber bulkhead and remove 5 piles		remove piles within 2 years
Sagamore Creek between Walnut and Newbury Streets							
2/25/59	C. 91 License No. 4196	Charles M. McConaghy	DPW			relocate existing tidal creek and fill existing location of creek	

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
2 Hancock Street, Quincy							
3/30/93	Dredging # 239	Neponset Landing Trust	DEP	maint. dredge 9,000 cy; max depth -7.0 MLW; disposal at MBDS			dredging by mechancal means; no dredging 3/1 - 5/31
1/29/93	WQ certification BRP WP 39, T #22481		DEP/WPC	dredging area 50' to 100' X 460' long			no dredging between 2/1 and 6/15; environmental bucket plus reduced size of hinge openings and flaps covering hinge openings; no dredging within 25' of saltmarsh
	Lic no. 5050 & 5690; pier repair (referenced on No. 239)		DEP?				
12/18/91	Order of Conds. 59-356		Quincy Con Com	dredging	4 commercial floats 10'X30'; maint of existing pier		no dredging 3/16 - 10/14 (dredging to be done 10/15 - 3/15); no vehicles or equipment stored within the 100' coastal bank buffer zone; no servicing of equipment on site; catch basins with gas/oil interceptors, cleaned bi-annually; no storage
Taylor Street, north of MBTA bridge							
3/7/86	1190	National Data Verification Service	DEQE	dredge 24.000 cy; for commercial marina facility	construct and maintain pile-supported piers and walkways, travel-lift slip and dock, steel sheet piling, timber pile breakwater; removal of steel barge;		
12/7/84	Order of Conditions (referenced in 1190)	same	Boston Con Com				

Appendix B

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
10/2/84	Water Quality Certification (referenced in 1190)		DEQE				
Neponset River between Squantum Point and MBTA bridge							
1/11/67	C. 91 License No. 5186	Boston Edison Company	DPW			place and maintain solid fill and stone slope proection; construct and maintain culverts	
	C. 91 License No. 5185	Mass. Bay Transportation Authority				place solid fill with stone faced slope in Neponset River	
Bay State Road							
10/11/89	C. 91 License No. 2075	City of Quincy Department of Public Works	DEP		construct storm drain, tide gate and stone headwall for shoreline stabilization and flood control		

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
Port Norfolk Condominiums, Boston							
	C. 91 #1601	Port Norfolk Condominium, Inc.			construct multi-unit residential buildings and site work, construct public waterfront walkway, viewing platform, place granite block seawall in and over existing filleds tidelands		Public pedestrian accesse walkways leading to and along the site's waterfront area. The walkway along the waterfront of the site shall be a minimum of 6' wide. The permittee shall connect the site's waterfront walkway with future public walkway
2/10/87	Superseding Order of Conditions	Port Norfolk Condominium, Inc.	DEQE				
4/18/86	Water Quality Certificate	Port Norfolk Condominium, Inc.	DEQE/DWPC				
1905	C. 91 License No. 2944		Harbor and Land Commissioner			fill tidelands	
Port Norfolk Yacht Club, 179 Walnut Street							
3/30/93	Dredge Permit No. 243	Port Norfolk Yacht Club	DEP	maintenance dredge 9,200 cy; max depth -6.0 MLW; disposal at MBDS			dredging by mechanical means
	C. 91 Lic no. 4593 (referenced on plan for #243)		DPW		marine railway & filled steel barge		
	Lic no. 2083 (referenced on plan for #243)		DPW		floating dock		
	Lic no. 1596 (referenced on plan for #243)		DEQE		floating docks		

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity			Conditons
				Dredging	Structures	Fill	
1/5/93	WQ cert. BRP WP 39, T # 40204		DEP				silt curtain; no dredging 2/1 to 6/15 to protect winter flounder spawnng and the anadromous (smelt, blue back herring, shad) fish run; modified clamshell bucket; no dredging within 25' of salt marsh
10/17/91	Order of Conds 6-488		Boston Con Com				no dredging from 2/1 to 6/15; no dewatering; waste oil disposal facility; absorption pillows accessible
4/11/90	C. 91 Lic no. 2303 (2023 referenced on plan for #243)	Port Norfolk Yacht Club, Inc.	DEP		construct retaining wall with rip-rap toe apron		
	License No. 3 (reference on Lic. Plan 2303)		Port of Boston		timber pier		
12/18/85	Dredge Permit #150	DEM-Division of Waterways	DEQE	dredge 16,000 cy of subaqueous material from irregularly shaped area			
and 8/2/84	Water Quality Certification 84W-009D	DEM-Division of Waterways	DEQE/DWPC	dredge 16,000 cy of sediment; disposal at MBDS			disposal of material to be capped because of accumulation of PCBs; dredging to be done during the least productive periods of estuarine species, 10/1 to 2/1
7/84	Contract No. 3045	DEM	DEM-Division of Waterways	maintenance dredge basin to -6.0 MLW			
5/3/84	Order of Conditions 6-253	DEM-Division of Waterways	Boston Con Com	dredge 16,000 cy			no dredging between February 1 and May 15
2/19/93	C. 91 License No. 3244	Port Norfolk Yacht Club	DEP		construct a concrete boat ramp		

Ericsson and Walnut Street, Boston

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
4/28/87	C. 91 #1606	Boston Water and Sewer	DEQE	dredge 50 cy material	construct 36" strom drain outfall, associated riprap		
2/17/87	Water Quality Certification No. 86W-242	Boston Water and Sewer Commission			36" storm drain		
Old Colony Yacht Club (and Port Norfolk Yacht Club							
12/18/85	Dredge Permit #150	DEM-Division of Waterways	DEQE	dredge 13,000 cy at the Old Colony YC (see also Port Norfolk YC, dredge 16,000 cy)			
7/84	Contract No. 3045	DEM-Divsion of Waterways	DEM	maintenance dredge basin to -6.0 MLW			
5/3/84	Order of Conditions 6-254	DEM-Division of Waterways	Boston Con Com				no dredging between February 1 and May 15
4/17/84 (Old Colony)	Water Quality Certificate 84W-009D	DEM-Division of Waterways	DEQE/DWPC	dredge 13,000 cy at Old Colony YC; disposal at MBDS; (see also Port Norfolk YC)			Old Colony: no dredging between February 15 and May 15
1982	Section 404 and Section 10 (referenced in WQ cert.)		U.S. ACOE				
	License No. 5736	Old Colony Yacht Club	DPW	dredge area adjacent to seawall to depth of -5.0' MLW	place timber piles, floats, and steel barge bulkhead		

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
Victory Road Park							
6/8/87	C. 91 License No. 1635	Metropolitan District Commission	DEQE	dredge two areas on either side of bridge: 1,900 cy to the east, 1,200 cy to the west; on-site upland disposal	place 135 l.f. of rip-rap, construct 60' timber bridge		
3/18/87		Water Quality Certification	DEQE				
6/13/86	Order of Conditions	MDC	Boston Con Com				
MWRA Pier, west of Marina Bay, Quincy							
10/27/89	Dredge Permit #187	DEM-Division of Waterways	DEP	dredge 51/000 cy to max depth of -10.0' MLW; disposal MBDS			
10/26/89	Water Quality Certification	DEM-Division of Waterways	DEQE/DWPC	dredge channel to -10 feet MLW, 51,000 cy; disposal at MBDS			dredging to be completed by February 15; dredging by tight-closing bucket to reduce sediment resuspension; silt curtain not suitable in this location
9/19/89	Order of Conditions #59-302	DEM-Division of Waterways (and MWRA)	Quincy Con Com				separate NOI required for proposed personnel pier project and all landward activities
5/16/90	C. 91 License No. 2350 (6 plan sheets)		DEP		construct a pier, ramp, floating dock, shore protection, and parking facility		

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
Marina Bay, Quincy							
4/28/87	C. 91 No. 1617 (plan: 3 sheets)		4/23/84		construct pile-supported pier to support floats		
12/3/86	C. 91 License No. 1572	Boston Harbor Marina Company	DEQE		maintain existing pile-held dock extension for commercial boating facilities		
10/22/85	C. 91 License No. 1329	Boston Harbor Marina Co.	DEQE		construct timber open-pile pier, 2 gangways, "U" shaped floating dock, and associated piles for berthing of commercial and private vessels		
2/24/85	Order of Conditions (referenced in C. 91 Lic. No. 1329						
4/23/84	C. 91 #1081	Boston Harbor Marina Co.			install five steel mooring piles with batter piles to provide fixed mooring anchorage for "Edmund Fitzgerald"		
	Water Quality Certification No. 84W-024				5 steel mooring piles		
	Water Quality Certification No. 84W-025	Boston Harbor Marina Co.			construct a 70'X30' timber, open-pile deck adjacent to existing seawall and wood wharf for commercial marina		
10/30/75	C. 91 #54	Boston Harbor Marina, Inc.	DEQE		place and maintain rubber tire breakwater, construct travel lift piers and place pile held floats		

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity: Dredging	Activity: Structures	Activity: Fill	Conditons
	C. 91 License No. 4568 (referenced in license #54)		DPW				
	C. 91 License No. 1082	Boston Harbor Marina Co.	DEQE		construct 2 open-pile wooden deck extensions appurtenant to an existing, previously authorized (Lic. No. 4234) wooden deck for additional commercial docking facilities and waterfront access for transient vessels.		
	C. 91 License No. 4234 (referenced in Lic. 1082)						
Surrounding Harborside Condominiums, Quincy							
8/30/85	C. 91 License No. 1306	Boston Harbor Marina Co.			maintain existing multi-unit residential buildings, associated structures, construct multi-unit residential buildings; construct open-pile access pier and viewing platform; 2 drainage ditch catwalks over filled tidelands		open-pile timber public access walkway, octagonally-shaped viewing platform and catwalks to be constructed within 6 months; pubic access signage; public access easement to Quincy for general public use of 89.5 acres of coastal beach, saltmarsh
Neponset River Dorchester Bay to Neponset Avenue/Hancock Street							

Permits and Licenses for Previous Structures, Dredging and Fill in the Neponset River Estuary ACEC

Date Issued	Permit	Permitee	Agency	Activity			Conditons
				Dredging	Structures	Fill	
completed in 1909	Authorized by the River and Harbor Act in 1907	U.S. Army Corps of Engineers		100' wide channel dredged to -15.0 MLW. Last dredged in 1966-1967. Condition survey in 1978 revealed no hazards to			Commonwealth of Mass must dredge and maintain a 2 mile reach of channel between the Neponset Bridge and Milton Mills to -6.0 MLW

A Checklist of Massachusetts Birds 1990-1995

Observed by Ron Donovan, Steven Donovan, and others
Provided by Massachusetts Natural Heritage and Endangered Species Program

Name of Species	Locality		
	Squantum Point	Neponset River Marshes	Status
Common Loon	M	M	SC
Red-throated Loon	M	M	
Red-necked Grebe	M		
Horned Grebe	M		
Pied-billed Grebe	M	M	T
Northern Fulmar			
Cory's Shearwater			
Greater Shearwater			
Sooty Shearwater			
Manx Shearwater			
Leach's Storm-Petrel			
Wilson's Storm Petrel			
Gannet			
Great Cormorant		M	
Double-crested Cormorant	P.R.	P.R.	
Great Blue Heron	P.R.	P.R.	
Green Heron	M	M	
Little Blue Heron	M	M	
Cattle Egret		V	
Great Egret	M	M	
Snowy Egret	M	M	
Louisiana Heron	M		
Black-crowned Night Heron	P.R.	P.R.	
Yellow Crowned Night Heron	M		
Least Bittern		V	
American Bittern	M	M	E
Glossy Ibis	M	M	
Mute Swan	M	M	
Canada Goose	P.R.	P.R.	
Brant	M	M	
Snow Goose	V	M	
Mallard	P.R.	M	
Ruddy-Sheduck	escaped bird		
Black Duck	P.R.	P.R.	
Gadwall		M	
Pintail	M	M	
Green-winged Teal	M	M	
Blue-winged Teal	M	M	
European Wigeon			
American Wigeon	M		
Northern Shoveler		M	
Wood Duck	M	M	
Redhead		V	
Ring-necked Duck		M	
Canvasback	M	M	
Greater Scaup	M	M	
Lesser Scaup			
Common Goleneys	M	M	
Barrow's Goldeneys			
Bufflehead	M	M	
Oldsquaw			
Harlequin Duck			
Common Eider	M		
King Eider	V		
White-winged Scoter	M	V	
Surf Scoter	M		

KEY M = Migrants; V = Vagrant; F = Formerly more common; P.R. = Permanent resident; breeds = Nesting bird. **Status** E = Endangered; T = Threatened; SC = Special Concern

Name of Species	Locality		
	Squantum Point	Neponset River Marshes	Status
Black Scoter	V		
Ruddy Duck	V		
Hooded Merganser	M	M	
Common Merganser	M	M	
Red-breasted Merganser	M	M	
Turkey Vulture	M	M	
Goshawk	V		
Sharp-skinned Hawk	M	M	SC
Copper's Hawk	M	M	
Red-tailed Hawk	P.R.	P.R.	
Red-shouldered Hawk		M	
Broad-winged Hawk		M	
Rough-legged Hawk	M	M	
Bald Eagle		V	
Northern Harrier	M	M	T
Osprey	M	M	
Peregrine Falcon	M	M	T
Merlin	M	M	
American Kestrel	P.R.	P.R.	
Ruffed Grousse		V	
Bobwhite	M		
Ring-necked Pheasant	P.R.	P.R.	
Turkey			
King Rail	V	V	T
Clapper Rail	M		
Viginia Rail	M	P.R.	
Sora	M	M	
Common Gallinule	V		
American Coot		M	
American Oystercatcher	M		
Semipalmated Plover	M	M	
Piping Plover			

Name of Species	Locality		
	Squantum Point	Neponset River Marshes	Status
Killdeer	P.R. breeds	P.R.	
American Golden Plover	M	M	
Black-bellied Plover	M	M	
Ruddy Turnstone	M	M	
American Woodcock	breeds	M	
Common Snipe	M	M	
Whimbrel	M	M	
Upland Sandpiper	V	M	E
Spotted Sandpiper	M	M	
Solitary Sandpiper	M	M	
Willet	M		
Greater Yellowlegs	M	M	
Lesser Yellowlegs	M	M	
Red Knot	M		
Purple Sandpiper			
Pectoral Sandpiper	M	M	
White-rumped Sandpiper	M	M	
Baird's Sandpiper	M		
Least Sandpiper	M	M	
Yellow Rail		M	
Little Stint	V		
Curlew Sandpiper	M		
Dunlin	M	M	
Short-billed Dowitcher	M	M	
Long-billed Dowitcher	V	M	
Stilt Sandpiper	M		
Semipalmated Sandpiper	M	M	
Western Sandpiper	M		
Buff-breasted Sandpiper	M		
Marbled Godwit			
Hudsonian Godwit	M	V	
Ruff	V		

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Name of Species	Locality		
	Squantum Point	Neponset River Marshes	Status
Sanderling	M		
Red Phalarope	V		
Wilson's Phalarope	M		
Northern Phalarope			
Pomerine Jaeger		dead ad.	
Parasitic Jaeger	V		
Glaucous Gull	M	M	
Iceland Gull	M	M	
Great Black-backed Gull	P.R.	P.R.	
Herring Gull	P.R.	P.R.	
Ringed-billed Gull	P.R.	P.R.	
Black Headed Gull	M	M	
Laughing Gull	M	M	
Bonaparte's Gull	M	M	
Little Gull	V		
Black-legged Kittiwake			
Forster's Tern	M	M	
Common Tern	breeds	M	SC
Arctic Tern			
Roseate Tern	M		E
Least Tern	breeds	M	SC
Caspian Tern	M	M	
Black Tern	M		
Black Skimmer	V		
Razorbill			
Thicke-billed Murre			
Dovekie			
Black Guillemot			
Rock Dove	P.R.	P.R.	
Mourning Dove	P.R.	P.R.	
Yellow-billed Cuckoo	M	M	
Black-billed Cuckoo	M	M	

Name of Species	Locality		
	Squantum Point	Neponset River Marshes	Status
Royal Tern	M		
Gull-billed Tern		V	
Barn Owl	F		SC
Screech Owl			
Great Horned Owl	M	P.R.	
Snowy Owl	M	M	
Barred Owl			
Long-eared Owl			
Short-eared Owl	M	M	E
Saw-whet Owl			
Whip-poor-will			
Common Nighthawk	M	M	
Chimney Swift	M	M	
Ruby-throated Hummingbird	M	M	
Belted Kingfisher	P.R.	P.R.	
Common Flicker	P.R.	P.R.	
Pileated Woodpecker			
Red-bellied Woodpecker		M (V)	
Red-headed Woodpecker			
Yellow-bellied Sapsucker	M	M	
Hairy Woodpecker	M	M	
Downey Woodpecker	P.R.	P.R.	
Eastern Kingbird	breeds	M	
Western Kingbird			
Great Crested Flycatcher	M	M	
Eastern Phoebe	M	M	
Yellow-beillied Flycatcher	M.F.		
Acadian Flycatcher			
Willow Fycatcher	breeds	breeds	
Alder Flycatcher			
Least Flycatcher	M	M	
Eastern Wood Pewee	M	M	

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Name of Species	Locality			Name of Species	Locality		
	Squantum Point	Neponset River Marshes	Status		Squantum Point	Neponset River Marshes	Status
Olive-sided Flycatcher				Blue-gray Gnatcatcher	M	M	
Horned LarK	M	M		Golden-crowned Kinglet	M	M	
Tree Swallow	M	breeds		Ruby-crowned Kinglet	M	M	
Bank Swallow	M	M		Water Pipit	M	M	
Rough-Winged Swallow	M	M		Cedar Waxwing	M	M	
Barn Swallow	breeds	breeds		Northern Shrike	M	M	
Cliff Swallow	M	M		Loggerhead Shrike	M.F.	V	E
Purple Martin		M		Starling	P.R.	P.R.	
Blue Jay	P.R.	P.R.		White-eyed Vireo			
Common Crow	P.R.	P.R.		Yellow-throated Vireo		M	
Fish Crow	M	M		Solitary Vireo	M	M	
Black-capped Chickadee	P.R.	P.R.		Red-eyed Vireo	M	M	
Boreal Chickadee				Philadelphia Vireo		M	
Tufted Titmouse	P.R.	P.R.		Warbling Vireo	M	M	
White-breasted Nuthatch	P.R.	P.R.		Black-and-white Warbler	M	M	
Red-breasted Nuthatch	M	M		Worm-eating Worbler			
Brown Creeper	M	M		Golden-winged Warbler			
House Wren	breeds	breeds		Blue-winged Warbler	M.F.	M	
Winter Wren	M	M		Tennessee Warbler	M.F.		
Carolina Wren	P.R.	P.R.		Orange-crowned Warbler	M	M	
Marsh Wren		breeds		Nashville Warbler	M	M	
Sedge Wren		M		Northern Parula	M	M	T
Mockingbird	P.R.	P.R.		Yelow Warbler	P.R.	breeds	
Gray Catbird	breeds	breeds		Magnolia Warbler	M	M	
Brown Thrasher	breeds	M		Cape May Warbler	M.F.	M	
American Robin	M	M		Black-throated Blue Warbler	M	M	
Wood Thrush	M	M		Yellow-rumped Warbler	M	M	
Hermit Thrush	M	M		Black-throated Green Warbler	M	M	
Swainson's Thrush	M	M					
Gray-cheeked Thrush	M.F.			Blackburnian Warbler	M.F.	M	
Veery	M	M		Chestnut-sied Warbler	M	M	
Eastern Bluebird				Bay-breasted Warbler	M.F.	M	

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Name of Species	Locality			Name of Species	Locality		
	Squantum Point	Neponset River Marshes	Status		Squantum Point	Neponset River Marshes	Status
Blackpoll Warbler	M.F.	M	SC	House Finch	P.R.	P.R.	
Pine Warbler	M.F.			Pine Grosbeak			
Prairie Warbler	M.F.	M		Common Redpoll	M	M	
Palm Warbler	M	M		Pine Siskin		V	
Ovenbird	M	M		American Goldfinch	P.R.	P.R.	
Northern Waterthrush	M	M		Red Crossbill			
Louisiana Waterthrush				White-winged Crossbill			
Connecticut Warbler		M		Rufous-sided Towhee	M	M	
Mourning Warbler	M.F.	M	SC	Savannah Sparrow	M	M	
Common Yellowthroat	P.R.	breeds		Grasshopper Sparrow		M	
Yellow-breasted Chat		M		Sharp-tailed Sparrow	breeds	breeds	
Hooded Warbler				Seaside Sparrow	M	V	
Wilson's Warbler	M	M		Vesper Sparrow		M	
Canada Warbler	M.F.	M		Lark Sparrow		M	
American Redstart	M	M		Dark-eyed Junco	M	M	
House Sparrow	P.R.	P.R.		Tree Sparrow	M	M	
Bobolink	M	M		Chipping Sparrow	M	M	
Eastern Meadowlark	M.F.	M		Field sparrow	M	M	
Redwinged Blackbird	P.R.	breeds		White-crowned Sparrow	M	M	
Orchard Oriole	M.F.			White-throated Sparrow	M	M	
Northern Oriole	P.R.	breeds		Fox Sparrow	M	M	
Rusty Blackbird	M	M		Lincoln's Sparrow	M	M	
Common Grackle	M	M		Swamp Sparrow	M	breeds	
Brown-headed Cowbird	M	M		Song Sparrow	breeds	breeds	
Blue Grosbeak		M		Lapland Longspur		V	
Scarlet Tanager	M.F.	M		Snow Bunting	M	M	
Cardinal	P.R.	M		Henslow's Sparrow	M.F.		
Rose-breasted Grosbeak	M	M		Clay-colored Sparrow		M	
Indigo Bunting	M	breeds					
Dickelssel	V	M		Total Number	231	223	
Evening Grosbeak		M(V)					
Purple Finch	V	V					

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Addenda

A. Action Plan of the Friends of the Estuary Subwatershed Group

B. MDC Master Plan for the Lower Neponset River

Note: The Resource Management Plan (RMP) for the Neponset River Estuary ACEC refers to these two plans, and the implementation of important aspects of the RMP depends on the implementation of these plans. The Action Plan, including a detailed shoreline survey of the Estuary, is incorporated into the RMP as an addendum. To obtain a copy, call the Neponset River Watershed Association at (617)575-0354. The MDC plan, scheduled to be completed after the completion of this RMP, is intended to be incorporated in the RMP as an addendum after the completed MDC plan is reviewed and approved by the Secretary of EOEA. To obtain a copy, call the MDC at (617)727-9693 ext. 264.