

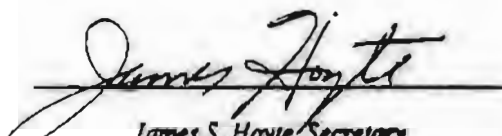
BUZZARDS BAY ESTUARY


State/EPA Conference Agreement for National Estuary Program
Designation Under the Water Quality Act of 1987

We recognize the need for a Management Conference on the Buzzards Bay to better define the environmental concerns in the system; to address the extent, complexity and sources of pollutants; and to develop a comprehensive conservation and management plan for action. We further recognize that the State and EPA share the responsibility for management decisions and resources regarding priority issues in the system.

In signing this agreement, we are committing to products and schedules which will: assess trends in water quality, natural resources and uses; determine the causes of change through data collection, characterization, and analysis; evaluate point and non-point loadings and relate them to observed changes; write a comprehensive conservation and management plan which includes recommendations for priority actions; develop plans to coordinate implementation of a comprehensive plan with federal, state and local agencies; provide monitoring to assess the effectiveness of the implementation actions; and review Federal financial assistance programs and Federal development projects for consistency.

We also agree that the statutory requirements for Management Conference membership have been met and that we will participate in that Conference. Further, we commit that the statutory requirements for matching funds will be met to complete the characterization of priority problems and develop the comprehensive conservation and management plan.


James S. Hoyle, Secretary
Massachusetts Executive Office
of Environmental Affairs


Michael R. Deland
Regional Administrator
U.S. Environmental Protection Agency
Region I

Dated this 20th day of December, 1987

BUZZARDS
BAY PROJECT

THE BUZZARDS BAY PROJECT

US Environmental Protection Agency
WQE
John F. Kennedy Federal Building
Boston, MA 02203

Massachusetts Executive Order
Environmental Affairs
100 Cambridge Street
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State/EPA Cooperative Agreement for National Estuary Program
Designation Under the Water Quality Act of 1972

We recognize the need for a Management Ordinance in the Buzzards Bay to better define the environmental resources in the estuary and to ensure the state, community and federal cooperation and to develop a cooperative management and implementation plan for the area. We further recognize that the State and EPA share the responsibility for management decisions and resource planning priority areas in the estuary.

In preparing this agreement, we are committed to providing the highest quality of water and to ensuring that the estuary resources are protected and managed in a way that is consistent with the state and federal laws and regulations. This includes the development of a management plan for the estuary that is consistent with the state and federal laws and regulations. The plan should include a comprehensive plan with detailed, and not just general, provisions for the protection of the estuary. The plan should also include provisions for the protection of the estuary's resources and the development of a management plan for the estuary.

BUZZARDS BAY DESIGNATION PACKAGE

December 3, 1987

We also agree that the state and federal agencies in the Buzzards Bay estuary management plan will be responsible for the estuary. Further, we agree that the state and federal agencies will be responsible for the development of the management plan and for the development of the estuary's resources and the development of a management plan for the estuary.

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This process has now been completed for Buzzards Bay, Massachusetts. Through this document, the Buzzards Bay Project is used to refer to both the Conference Memoranda as well as the EPA National and State Progress Reports supporting this process. This document has been organized to document the need to convene a Management Conference (Part I) to outline the overall requirements of the legislation (Part II) and also to delineate the tasks to be accomplished by the project (Part III). Appendices contain documents providing further information.

The Buzzards Bay Project Office has been organized to justify the convening of a Management Conference for Buzzards Bay, and established dates for meeting the purposes and requirements of the 1989 Water Quality Act. We have documented our accomplishments to date through this document. We are committed to fulfilling all remaining purposes.

PREFACE

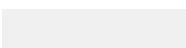
The National Estuary Program was officially recognized by the Water Quality Act of 1987. The Act authorizes the Administrator of the Environmental Protection Agency to convene Management Conferences to develop Comprehensive Conservation and Management Plans (CCMP) for estuaries of national significance. Section 320 of the Act outlines the estuary designation process and the purposes of a management conference. Prior to passage of the Water Quality Act, Congress and the EPA had recognized six estuaries as needing priority attention, including Buzzards Bay.

EPA's Office of Marine and Estuarine Protection (OMEP), in concert with the associated EPA Regional staff and States, developed a guidance document to carry out the requirements and purposes of the new Water Quality Act. This guidance was intended to structure commitments for new estuaries being added to the national program, and to ensure existing programs were consistent with the intent and spirit of the Act. This would be accomplished by evaluating the progress to date for each program and negotiating the remaining commitments.

This process has now been completed for Buzzards Bay, Massachusetts. Throughout this document, the term Buzzards Bay Project is used to refer to both the Conference Membership as well as the EPA Regional and state program staff supporting this process. This document has been organized to document the need to convene a Management Conference (Part I), to outline the overall requirements of the legislation (text, Part II) and also to delineate the tasks to be accomplished by the Project (charts, Part II). Appendices contain documents providing clarifying information.

The Buzzards Bay Project submits this document to justify the convening of a Management Conference for Buzzards Bay, and establishes dates for meeting the purposes and requirements of the 1987 Water Quality Act. We have documented our accomplishments to date toward attaining the statutory purposes, and our commitment to fulfilling all remaining purposes.

THE EAST COAST DEVELOPMENT PROJECT



Business Day is an activity in transition. Research since colonial times for the mining and fishing industries, concentrated along the western coast and part of an economically depressed region in Massachusetts. Water from industries now accumulated in the sediments of the adjacent river valley and we believe water retained in the development of that area as a business site. Along the eastern shore, the burgeoning development of residential communities and the growth of commerce in Cape Cod has made business a part of the fastest growing centers in New England. The legacy of industrial pollution from the west and accelerated development on the east leading to division the spirit of business day.

Business Day is an activity about 30 miles long and 10 miles wide, nestled between Cape Cod and the northeastern edge of Massachusetts. Business Day's projects are representative of existing or potential problems in situated around the country. The Bay's heavily industrial coastline stretches over 110 miles, including 11 miles of water which just thousands of tourists from Massachusetts and other coastal states. The bay is heavily used by recreational boaters (4,000 slips and moorings along the bay) and fishermen, commercial fishing fleets on routes to George Bank, and commercial shrimpers bringing through the Cape Cod Canal. Over 50,000 vessels pass through Business Bay each year in transit through Cape Cod Canal, carrying over 10 million tons of commercial cargo including most of the oil used in New England. Business Day has become an important site for scientific research, used by marine scientists from Woods Hole Oceanographic Institution (WHOI), Northeastern Massachusetts University (UM), the Marine Biological Laboratory, the U.S. Geologic Survey (USGS), and laboratories of the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA/NMFS).

Cape Cod acts as a northern directional boundary for many marine resources, and recreational fishermen pursue such diverse species as bluefish, winter flounder, scup, striped bass, and striped bass. Business Bay has been

PART I: ESTUARY DESIGNATION JUSTIFICATION

INTRODUCTION

Buzzards Bay is an estuary in transition. Renowned since colonial times for its whaling and fishing industries, communities along its western shores are part of an economically troubled region in Massachusetts. Wastes from industries have accumulated in the sediments of the Acushnet River Estuary and New Bedford Harbor resulting in the designation of that area as a Superfund site. Along its eastern shores, the burgeoning development of retirement communities and the spread of commuters to Cape Cod has made Barnstable County one of the fastest growing counties in New England. The legacy of industrial pollution from the west and accelerated development on the east combine to threaten the health of Buzzards Bay.

Buzzards Bay is an estuary about 30 miles long and 10 miles wide, nestled between Cape Cod and the southeastern edge of Massachusetts. Buzzards Bay's problems are representative of existing or potential problems in estuaries around the country. The Bay's heavily indented coastline stretches over 210 miles, including 11 miles of beaches which lure thousands of tourists from Massachusetts and other coastal states. The bay is heavily used by recreational boaters (4,300 slips and moorings along the bay) and fishermen, commercial fishing fleets en route to Georges Banks, and commercial shippers travelling through the Cape Cod Canal. Over 20,000 vessels pass through Buzzards Bay each year in transit through Cape Cod Canal, carrying over 19 million tons of commercial cargo including most of the #2 fuel oil used in New England. Buzzards Bay has become an important site for estuarine research, used by marine scientists from Woods Hole Oceanographic Institution (WHOI), Southeastern Massachusetts University (SMU), the Marine Biological Laboratory, the U.S. Geologic Survey (USGS), and laboratories of the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA/NMFS).

Cape Cod acts as a northern distributional boundary for many marine species, and recreational fishermen pursue such diverse species as winter flounder, scup, tautog, bluefish, and striped bass. Buzzards Bay has been

closed to commercial finfishing for 100 years in order to protect fish stocks for southern New England. Commercial and recreational fisheries for quahogs, soft-shell clams, scallops, and oysters averaged 86,000 bushels of reported harvests from 1967 to 1985. In 1985, reported harvests, by conservative estimates, exceeded 140,000 bushels (wholesale landed value over \$6.5 million). In the last two decades, the Bay's lobster fishery has suffered a major decline to 600,000 pounds in 1985 commercial landings, forcing many fishermen to pursue other employment. Overfishing and the closure of 18,000 acres in New Bedford Harbor have contributed to this decline. Buzzards Bay remains a major nursery area for lobster larvae, contributing to lobster recruitment throughout the region.

The primary goals of the Buzzards Bay Project are to protect water quality and the health of living resources in the Bay. The project is working to achieve these goals by:

- o Identifying water quality problems in the region;
- o Investigating the causes of these problems; and
- o Recommending actions that will protect valuable resources from further environmental degradation.

BUZZARDS BAY DESIGNATION JUSTIFICATION

Water quality in Buzzards Bay is affected by discharges from a number of point and non-point sources. There are 30 point-source dischargers, the major ones being the sewage treatment facilities in New Bedford, Dartmouth, Fairhaven, Wareham, and Marion. Major industrial dischargers are Canal Electric, Commonwealth Electric-Cannon, and Cornell Dubilier Electric Corp. Non-point pollution sources include stormwater runoff, marinas, fertilizers and pesticides applied to agricultural croplands and golf courses, and manure from pastures and feedlots along the tributaries to the Bay. Combined sewer overflows in New Bedford add to water quality problems there, and street run-off is emerging as a significant issue in coastal areas, including unsewered communities. Another non-point source of potentially very large significance is groundwater discharge, which dominates the freshwater input on the Cape Cod side of the Bay. Leachate from septic tanks can move very quickly through the porous soils which border much of the Bay adding nutrients and pathogens to coastal embayments. These non-point sources contribute to the growing number of shellfishing and beach closures. A major source of toxic pollutants to Buzzards Bay is the transport of contaminated sediments from the New Bedford Superfund site.

The Buzzards Bay Project is concentrating on three priority problems: (1) closures of shellfish beds due to pathogens, (2) contamination of fish and shellfish by toxic metals and organic compounds, and (3) high nutrient inputs and their potential effects. Other problems may loom in Buzzard Bay's future including shipping spills, coastal erosion and sea-level rise. The managers, citizens, and scientists who are represented on the Buzzards Bay Project Committees, agreed that the first three problems are the highest priority for the Buzzards Bay Project.

Shellfish bed closures: Shellfishing is important to the Buzzards Bay community both economically and as an index of the "quality of life" along the Bay. At the same time that shellfish beds are closed with increasing frequency due to high levels of coliform bacteria from point and non-point sources, communities along Buzzards Bay are facing phenomenal development pressures. Non-point sources may be responsible for 90% of the shellfish closures on Cape Cod include stormwater runoff, septic systems, marinas, and agricultural runoff. Additional contamination from natural sources, including waterfowl and

marshes, complicate the situation. At present, over 11,000 acres of shellfish beds are closed due to high coliform levels. Many of the same sources contribute to the large loads of nutrients entering the Bay. How to permit coastal development without threatening the health of the Bay is a major issue.

Toxic contamination: New Bedford's historic industrial activity has left sediments contaminated by copper and nickel from the metal finishing industry and PCBs from the electronic capacitor manufacturers. EPA has placed New Bedford Harbor on its Superfund listing due to the extensive PCB contamination in sediments with astonishingly high concentrations reaching over 100,000 parts per million in places. PCBs have been exported from the Acushnet River to Buzzards Bay where contamination has resulted in restricted fishing activities in approximately 18,000 acres of the estuary. Lobsters living in the New Bedford Harbor region and neighboring sections of Buzzards Bay have a high incidence of gill and shell disease, which may be associated with the high levels of industrial contamination. While options are being considered to remove the PCBs in the most grossly contaminated areas, New Bedford Harbor could possibly export contaminants to the surrounding Bay for years in the future. Dredging projects could also mobilize toxic contaminants from the sediments. The long-term problem of toxic contamination is a major environmental concern to commercial and recreational fishermen and to all who consume fish. It is also a major economic concern as waterfront development is slowed because of the contamination.

Coastal eutrophication: The third major growing concern in Buzzards Bay is nutrient enrichment and its effects on the Bay's health. Nutrients enter the Bay from a variety of sources, including discharge from sewage treatment plants, runoff from residential and agricultural land, and groundwater flow carrying effluent from septic tanks into the Bay. High nutrient discharges to the Bay reduce water quality as reflected by algal blooms, eel grass declines, and low dissolved oxygen.

These three priority problems are widespread in Buzzards Bay, affecting nearshore waters around the entire margin of the Bay. They are presently restricted to shallow-water embayments; central deeper waters of the Bay are not yet strongly affected. It was agreed early in the Buzzards Bay Project that since the principal problems of concern are concentrated on nearshore waters, that expenditure of funds should be chiefly for collection of data in embayments rather than offshore in Buzzards Bay.

The need for pollution controls beyond existing ones is discussed in the Project's FY85 Workplan. While the issue of cleaning up toxic contamination in New Bedford Harbor is being addressed by EPA's Superfund study, there are no control programs presently in place to assess and control potential hazards

posed by the migration of fish and lobster and the export of toxics from the harbor to the surrounding Bay. Phenomenal shoreline development has overwhelmed existing programs for sanitary surveys and septic tank inspections and has contributed to shellfish bed closures. 11,000 acres of beds were already closed in 1986, and continued development is expected to exacerbate the situation. Other non-point sources that contribute to shellfish closures have been largely overlooked by regulatory programs. Finally, no satisfactory mechanism presently exists for coordinating the activities of the plethora of local regulatory authorities (conservation commissions, planning boards, shellfish wardens, and boards of health) who have much authority for protecting water quality under Massachusetts' system of strong local rule. The Buzzards Bay Project can be a coordinated and systematic source of high quality, understandable technical information required for the varying local authorities to make effective environmental decisions.

MANAGEMENT CONFERENCE MEMBERSHIP

The Buzzards Bay Project's organizational structure fulfills the Management Conference Membership prescribed by the Water Quality Act. As detailed in the Act, membership should include as appropriate:

- o The Administrator of the EPA, and
- o Representatives of
 - each State and foreign nation located in whole or in part in the estuarine zone of the estuary for which the conference is convened;
 - international, interstate, or regional agencies or entities having jurisdiction over all or a significant part of the estuary;
 - each interested Federal agency, as determined appropriate by the Administrator;
 - local governments having jurisdiction over any land or water within the estuarine zone, as determined appropriate by the Administrator; and
 - affected industries, public and private educational institutions, and the general public, as determined appropriate by the Administrator.

The Buzzards Bay Project originally organized four committees in order to accommodate the variety of interests, the diversity of expertise, and the numerous organizations, perspectives, and agendas critical to a successful project. A new organization, the Coalition for Buzzards Bay, was recently formed. The committees and their memberships are:

- o **Policy Committee:** The Policy Committee sets the overall policy of the Buzzards Bay Project and ensures that a coordinated federal-state effort is made to address resource management decisions in Buzzards Bay. - Its members are the U.S. Environmental Protection Agency's Regional Administrator for Region I and the Secretary of the Executive Office of Environmental Affairs in the Commonwealth of Massachusetts.
- o **Management Committee:** The Management Committee directs program activities for the Buzzards Bay project. Membership includes a representative from each of the state and federal agencies and regional planning commissions that have a responsibility for coastal environmental quality in and around the Bay. The chairpeople from the Technical Advisory Committee and Citizens Advisory Committee and a representative from the Coalition for Buzzards Bay also are members of the Management Committee.
- o **Technical Advisory Committee:** The Technical Advisory Committee (TAC) serves as a forum for technical expertise on Buzzards Bay. Membership is drawn from the several academic institutions and agencies around the Bay and elsewhere that are active in research, monitoring, and resource assessment/management.
- o **Citizens Advisory Committee:** A Citizens Advisory Committee (CAC), made up of representatives of local and regional government, appointed and elected officials, local resource managers, educational institutions, and other user groups, was organized at the beginning of the Buzzards Bay Project. The CAC, guided by the CAC Steering Committee, is a conduit for public concerns to the Management Committee regarding Buzzards Bay resources and a mechanism to disseminate research results to local decision-makers. The CAC is currently in transition after the formation of the Coalition for Buzzards Bay.

- o **Coalition for Buzzards Bay:** The Coalition is a citizens' group consisting of nonprofit organizations, individuals with municipal affiliations, and the general public. Its purpose is to promote public participation in the protection and restoration of the environment of Buzzards Bay.

RESTRICTION

The need to conduct a Management Conference in Buzzards Bay has been documented in Part 1 of this report.

This section summarizes the Conference's findings of success. The Conference was held on August 1, 1984. The attendance report of a Management Conference and identifies for each one whether it has been accomplished. The Conference for each area and various input from the participants of the 1st as outlined in the Guidance Manual by EPA's Office of Marine and Estuarine Protection (OMEP). The input from the Buzzards Bay Project to accomplish these activities is summarized in the concluding text and charts. For activities not yet completed, the Buzzards Bay Project is agreeing to fulfill the requirements according to the negotiated timelines presented in the charts in this section. The tasks and responsible agencies are also summarized in Appendix 2.

According to EPA's guidance, the process for Purpose 1 (Overall Goals) and National Trends for Priority Programs and 2 (Identify Problems Caused by Environmental Problems) will be two separate reports, each addressing a different program. The Buzzards Bay Project and EPA have agreed that instead, the Project will produce separate reports that address individual priority problem categories, causes, and treatments, with each report addressing the combined requirements of Purpose 1 and 2. The Buzzards Bay Project and EPA agreed on the changes under Purpose 2: (i) The existing working change from "Developing Alternative Solutions Between Local and Federal Users" to "Develop Alternative Solutions Between Federal, State, and Local Users" and (ii) the Project will produce two reports on this subject -- the first focused on a specific problem in an individual management category in Buzzards Bay and the second encompassing all three priority programs as they affect Buzzards Bay.

PART II: BUZZARDS BAY SELF-EVALUATION

INTRODUCTION

The need to convene a Management Conference in Buzzards Bay has been documented in Part I of this report.

This section establishes the Conference's likelihood of success. It details, purpose by purpose, the milestones required of a Management Conference and identifies for each one whether it has been accomplished. The narrative for each step and purpose begins with the requirements of the Act as outlined in the Guidance drafted by EPA's Office of Marine and Estuarine Protection (OMEP). The approach taken by the Buzzards Bay Project to accomplish those milestones is summarized in the concluding text and charts. For milestones not yet completed, the Buzzards Bay Project is agreeing to fulfill the requirements according to the negotiated timelines presented in the charts in this section. The tasks and responsible agencies also are summarized in Appendix 2.

According to OMEP's guidance, the products for Purposes 1 (Develop Spatial and Temporal Trends for Priority Problems) and 2 (Identify Probable Causes of Environmental Problems) would be two separate reports, each addressing all priority problems. The Buzzards Bay Project and EPA have agreed that, instead, the Project will produce synthesis reports that address individual priority problems (pathogens, toxics, and nutrients), with each report addressing the combined requirements of Purposes 1 and 2. The Buzzards Bay Project and EPA agreed on two changes under Purpose 3: (1) the phrasing would change from "Develop Relationship Between Loads and Potential Uses" to "Develop Potential Relationship Between Pollutant Sources and Impacts on Resources" and (2) the Project will produce two reports on this subject -- the first targeted to a specific problem in an individual embayment (pathogens in Buttermilk Bay) and the second encompassing all three priority problems as they exist throughout Buzzards Bay.

The draft Comprehensive Conservation and Management Plan (CCMP) required under Purpose 4 will be completed and reviewed by December, 1989. The CCMP will be developed by the Project using the Massachusetts Department of Environmental Quality and Engineering (DEQE) Basin Management Plan (BMP), the data synthesis reports and the final reports generated by funded projects. Although the BMP is a major component of the CCMP, the CCMP will be an inter-agency effort with a broader purpose than the BMP. Final document preparation will be completed by March, 1990. The major products for Purposes 5 (Develop Coordinated Plans for Implementation of the CCMP) and 6 (Monitor Effectiveness of Actions) will be included in the CCMP. The Purpose 6 product is the monitoring plan.

Purpose 7 (Review Federal and State Assistance Programs for Consistency) represents a new requirement for which the Project had not planned. All milestones under this Purpose will be addressed in parallel and one report produced.

As noted, the CCMP for Buzzards Bay will be finalized early in 1990 and its major recommendations will be presented for implementation in the following years. However, several management recommendations have emerged during the first three years of the Program. These are being acted upon now.

Local Boards of Health, Planning Boards, and Conservation Commissions around the Bay have need for technical assistance on issues related to water quality. The Buzzards Bay Project is funding (FY87) a position with Massachusetts Coastal Zone Management to provide assistance and information about the Buzzards Bay Project's findings to the towns around the Bay. Two workshops for local board members were held in 1987 to provide technical information on planning and health issues. Model bylaws on groundwater protection, subdivision regulations with nutrient loading provisions, earth removal, and harbor use are being developed.

The case study of coliform sources in Buttermilk Bay led to a proposed action plan for reducing coliform inputs. A proposal to develop a demonstration project on stormwater controls, provide public education, and

develop local regulations has received implementation funding from EPA. These activities will begin in 1987 and be completed in 1989.

will be developed by the project using the Massachusetts Department of Environmental Affairs and Engineering (DEAE) State Management Plan (SMP). The data synthesis reports and the final reports generated by funded projects. Although the SMP is a major component of the CDP, the CDP will be an inter-agency effort with a broader scope than the SMP. Final document preparation will be completed by March, 1987. The water projects for Purposes 2 (Develop Guidelines Plan for Implementation of the CDP) and 3 (Monitor Effectiveness of Actions) will be included in the CDP. The Purposes 2 project is the monitoring plan.

Purpose 1 (Review Federal and State Assistance Programs for Cost-effectiveness) is a new requirement for water and project cost sharing. All activities under this purpose will be assessed in general and one report produced.

As noted, the CDP for Purposes 2 and 3 will be completed in 1987 and the water recommendations will be presented for implementation in the following years. However, several ongoing recommendations have started during the first three years of the program. These are being added soon now.

Local boards of water, planning boards, and Conservation Commission around the Bay have need for technical assistance as issues related to water quality. The boards for project is funding (PWT) a section with Massachusetts Coastal Zone Management to provide assistance and information about the boards for project's findings to the state around the Bay. Two workshops for local board members were held in 1987 to provide technical information on planning and policy issues. Other efforts on groundwater protection, sedimentation, riparian zone, and wetlands, and water quality removal, and water use are being developed.

The case study of water quality in Barnstable Bay led to a process action plan for reducing water quality. A proposal to develop a demonstration project on wastewater control, provide public education, and

STEPS FOR A MANAGEMENT CONFERENCE

STEP A: PRIORITY PROBLEM IDENTIFICATION AND RANKING

The requirements under Step A, as stated in the EPA Guidance, are as follows:

Milestone 1: Solicit list from public, scientific community, and state agencies of perceived, persistent problems affecting large areas of the estuary and submit a copy to Region for review and comment.

Milestone 2: Collect written comments to the draft lists.

Milestone 3: Region/OMEP review, negotiate and develop a prioritized list of the problems using, as a minimum, the following criteria:

- o those that are a major threat to beneficial uses
- o those that have a reasonable prospect of solution
- o those that are estuary system-wide and/or pervasive and not localized with limited effect only
- o those problems where causes are known

Milestone 4: Collect written comments to the prioritized list.

Milestone 5: Complete and disseminate the final list of priority problems and provide information copies to Region/OMEP.

The Buzzards Bay Project has completed these Step A requirements in the following manner:

The Project actively solicited input of representatives of other Federal agencies, including the National Oceanic and Atmospheric Administration, the Food and Drug Administration, and regional and state agencies. Meetings were held around Buzzards Bay to solicit the input, advice, and recommendations of the region's academic community and local public interest groups regarding critical water quality problems and concerns related to Buzzards Bay.

Based on results from these meetings and from related activities, a list of potential problems was compiled and primary goals identified. A focused approach was then proposed which served to prioritize the problem list. This focus is intended to reflect the primary goals of protection of public health and the environment, and is coupled to the goal of critical issues investigations for which new information regarding abatement action is essential. Considering the extent to which Buzzards Bay is an extensive source of recreational and commercial fishing and shellfishing, the Project's focus is on the management of pollutants (pathogens, toxics and nutrients) in Buzzards Bay and the necessary remedial actions to preserve the Bay's living resources. Essential to these critical issues is the development of a means to effectively transfer technical information to local agencies and the general public to facilitate the implementation of measures to clean up and preserve Buzzards Bay.

As stated in Part I, the Buzzards Bay Project's priority problems are (1) closures of shellfish beds due to bacterial contamination, (2) toxic contamination of fish and shellfish, and (3) high nutrient inputs and their potential effects. The Project developed a workplan (FY85 workplan) that reviewed the problems and proposed activities to address them. The workplan was circulated widely for review and comment and approved by the Management Committee.

Through the development of annual workplans the Project reassesses and distributes for review each year the priority problems and plans for studying them. The Project also produced an Annual Report in 1986 that described the priority problems that have been the focus of research and management activities in Fiscal Years 1985 and 1986.

Workplan 1: Review and update the needs and conditions of the system...
Workplan 2: Create system design and develop technical...
Workplan 3: Regional review and negotiation of the scope of the...
Workplan 4: Develop the final report on the approved system...
Workplan 5: Information codes are identified to...

Workplan 6: Implementation of the OHS system, as approved...
The Bureau for Project has completed, or will complete, these five...
requirements in the following manner:
All technical data produced by the Bureau for Project will be organized...
in a more systematic manner and will be readily available to all agencies...
involved in the project development process. The Bureau for Project and...

STEP B: DEVELOP A DATA AND INFORMATION MANAGEMENT SYSTEM (DIMS)

The requirements under Step B, as stated in the EPA Guidance, are as follows: -

- Milestone 1: Poll user community for needs and complete a needs assessment report. Minimum needs of the system include: analytical capability for characterization, long term archive, analytical capability for assessing the effectiveness of corrective actions, and continuous system and data maintenance and up-dating.
- Milestone 2: Examine system options and complete technical feasibility report which includes an inventory of existing available systems, and submit a copy to the Region for review and comment.
- Milestone 3: Regional review and negotiation of the scope of the data management system configuration.
- Milestone 4: Develop the final report on the approved system configuration (i.e., hardware, software, memory capability, etc.), implementation schedule and funding. Information copies are submitted to Region/OMEPA.
- Milestone 5: Implementation of the DIMS system, as approved.

The Buzzards Bay Project has completed, or will complete, these Step B requirements in the following manner:

All technical data produced by the Buzzards Bay Project must be organized in a more systematic manner and made more readily available to all agencies. Early in the project development process, the Buzzards Bay Project and EPA

agreed that all data collected under the Project would be stored on EPA's computer at the National Computing Center. This database continues to be the temporary archive for project data.

Development of a more extensive statewide data management system, of which a Buzzards Bay database could be one part, currently is in the early planning stages within the Massachusetts Executive Office of Environmental Affairs (EOEA). It is anticipated that this system could support longer-term data analysis, particularly in support of monitoring. System planning and design, however, will not be completed for approximately three to five years. Through 1990 CCMP development, EPA commits to be the primary, but interim, storer of data.

In the meantime, the Project is developing an extensive collection of data. An important project currently underway with the U.S. Geological Survey is the preparation of a digital baseline map of the Buzzards Bay drainage basin. The minimum spatial scale of the baseline map is 1:24,000. The digital map will permit construction of data overlays which could display Project-derived data on topography, bathymetry, shellfish beds, and point source dischargers, among other things. Contingent upon continued funding, the Buzzards Bay Project will continue data collection and digitization to support these mapping overlays.

PURPOSES FOR A MANAGEMENT CONFERENCE

The Water Quality Act requires all Management Conferences to meet seven purposes. These are:

- (1) assess trends in water quality, natural resources, and uses of the estuary;
- (2) collect, characterize, and assess data on toxics, nutrients, and natural resources within the estuarine zone to identify the causes of environmental problems;
- (3) develop the relationship between the in-place loads and point and nonpoint loadings of pollutants to the estuarine zone and the potential uses of the zone, water quality, and natural resources;
- (4) develop a comprehensive conservation and management plan that recommends priority corrective actions and compliance schedules addressing point and nonpoint sources of pollution to restore and maintain the chemical, physical, and biological integrity of the estuary, including restoration and maintenance of water quality, a balanced indigenous population of shellfish, fish and wildlife, and recreational activities in the estuary, and ensure that the designated uses of the estuary are protected;
- (5) develop plans for the coordinated implementation of the plan by the States as well as Federal and local agencies participating in the conference;
- (6) monitor the effectiveness of actions taken pursuant to the plan; and

(7) review all Federal financial assistance programs and Federal development projects in accordance with the requirements of Executive Order 12372, as in effect on September 17, 1983, to determine whether such assistance programs or projects would be consistent with and further the purposes and objectives of the plan prepared under this section.

The following section expands the discussion of those milestones for each purpose that have been completed and presents a timeline for fulfilling the milestones that have not been completed. The timelines show negotiated deadlines for sequential tasks and products. To the extent that interim steps may change, these timelines may be renegotiated at a future date. Through past accomplishments, the Buzzards Bay Project has clearly demonstrated a long-term commitment to addressing the environmental concerns of the estuary and developing a comprehensive management program.

PURPOSE 1: DEVELOP SPATIAL AND TEMPORAL TRENDS FOR PRIORITY PROBLEMS

The requirements under Purpose 1, as stated in the EPA Guidance, are as follows:

Milestone 1: Key items for status and trends characterization of priority problems negotiated with Region/OMEP. Key items may include:

- o Water quality (nutrients, toxics, pathogens, turbidity, dissolved oxygen)
- o Physical alteration (flow, dredging, circulation)
- o Resources (habitats, living resources)
- o Uses (water supply, navigation/commerce, tourism, commercial/recreational fishing)
- o Loads (population, land use, toxics, nutrients)
- o Monitoring protocols and baseline monitoring (for use in characterization and for future monitoring for effectiveness)
- o Inventory of other assistance programs (Federal, state, and local) which affect Water Quality, Uses, Loads, and Resources in the estuary.

Milestone 2: For each key item, develop a list of optimal data sets (historical and current) for each category identified in (1) above, and potential sources for each data set.

Milestone 3: Send list of optimal data sets to potential sources including Region/OMEP and prepare a final list of optimal data sets based on information received from potential sources.

Milestone 4: Prioritize the available data sets based on following criteria as a minimum:

- o Critical to the characterization of priority problems identified in Step A or key items identified in (1) above.
- o Indicative of temporal (i.e., 5-10 year continuous sampling) or spatial (i.e., areawide sampling) trends
- o Readily able to be converted into DIMS data format
- o QA/QC of the data sets
- o Compatibility with data sets of similar parameters on a spatial or temporal basis
- o Necessary for the basic understanding of the estuary system dynamics (i.e., hydrologic, demographic, physical/chemical, socioeconomic information, etc.)

Milestone 5: Develop a schedule for the entry or access of the priority data sets, analysis, and completion of the characterization and status and trends report based on the results of negotiation of (1) above.

Milestone 6: Transmit draft reports to Region for review and comment, which includes a section on each key item.

Milestone 7: Disseminate Final Status and Trends Report to publics and Region/OMEP for information.

The Buzzards Bay Project has completed or will complete, these Purpose 1 requirements in the following manner:

Milestones 1-3: Milestones 1 through 3 are substantially complete. It was agreed that all parameters listed would be considered as key items, except the following: flow, dredging, circulation, water supply, navigation, and tourism. Monitoring protocols and inventory of government assistance programs lag behind the other key items because they are new requirements. The excepted key items may deserve increased discussion in future funding years.

A number of reports have been or will soon be completed which identify and evaluate data sets. These include: "Final Report on Identification and Collection of Historical Data for Buzzards Bay, Massachusetts," "Shellfish in Buzzards Bay: A Resource Assessment," and "The Finfish Resources of Buzzards Bay." Reports on lobster catch data, land and water use, nutrients and coliform data and eelgrass distribution currently are underway. The completed reports are being circulated for review and comment and will be publicly available.

Prioritization of the identified data sets is occurring through use of the data sets in the preparation of problem-specific synthesis reports. These reports will evaluate status and trends as well as inputs and fates of contaminants in the Buzzards Bay system.

Milestones 4-7: These milestones have not been completed by the Buzzards Bay Project. The negotiated schedule for completion is shown on the following charts. Tasks and task assignments for completing the milestones are outlined in Appendix 2.

Purpose 1: Develop Spatial and Temporal Trends for Priority Problems Negotiated Milestone Timelines: Buzzards Bay

(Product: Status and Trends and Probable Causes of Environmental Problems Reports.)

Milestone	Timeline
<p>PURPOSE 1</p> <p>1. Key items for status and trends characterization of priority problems negotiated with Region/CHRP. Specify the agreement reached on each of the following:</p> <ul style="list-style-type: none"> a. Water quality (nutrients, toxics, pathogens, turbidity, dissolved oxygen) b. Physical alteration (flow, dredging, circulation) c. Resources (habitat, living resources) d. Uses (water supply, navigation/commerce, tourism, commercial/recreational fishing) e. Loads (population, land use, toxics, nutrients) f. Monitoring (protocols & methods monitoring for both characteristics & possible antecedents) g. Inventory of Federal, State, Local assistance programs that affect key environmental items. 	<p style="text-align: center;">Completed</p>
<p>2. Optimal data sets (biological & chemical) and their sources are identified for each key item listed above (indicate for which item the milestone is satisfied).</p>	<p style="text-align: center;">Completed</p>
<p>3. Data set list distributed to potential sources; final list prepared based on comments received.</p>	<p style="text-align: center;">Completed</p>

Issues/Comments

- Milestone 1: Based on priority problems identified in Buzzards Bay, the Program does not plan to assess Physical alteration parameters, commercial/recreational fishing in the only Use parameter to be addressed.
- Technical reports for Milestone 1 parameters are scheduled to be completed as follows:
 - Water quality, nutrients and coliforms, odorous distribution) Living resources (lobster crabs)
 - Land and Water Use, Assistance program inventory, 9/88
 - Monitoring, 12/88
 - Load assessment, 1/89

Purpose 1: Develop Spatial and Temporal Trends for Priority Problems Negotiated Milestone Timelines: Buzzards Bay, cont.

(Product: Status Trends and Probable Causes of Environmental Problems Reports.)

Milestones	Timeline (1997-1998)
<p>4. Data bases prioritized based on following criteria:</p> <ul style="list-style-type: none"> a. Critical to characterization of priority problem b. Indicative of temporal (5-10 yr. sampling) or spatial (available sampling) trends c. Readily convertible to DMS data format d. Data sets subject to subsequent QA/QC e. Data sets w/ similar parameters on spatial or temporal basis f. Necessary for understanding system dynamics g. Other (specify) 	
<p>5. Schedule for entry or access of priority data sets, data analysis, and completion of characterization and status and trends report is developed, based on agreement reached under Milestones 1. Report includes sections on each key item.</p>	
<p>6. Draft report sent to Region for review and comment.</p>	
<p>7. Final Status and Trends Report distributed to public and Region/O&MP.</p>	

Issues/Comments

- Three systems reports will be produced to fulfill the combined reporting requirements of Purposes 1 & 2. Each will address one of the three priority problems: cobblestone, toxics, and nutrients.

PURPOSE 2: IDENTIFY PROBABLE CAUSES OF ENVIRONMENTAL PROBLEMS

The requirements under Purpose 2, as stated in the EPA Guidance, are as follows:

Milestone 1: Management Conference (MC) and Region/OMEP review and reassess priority problems identified in Step A based on work in progress under Purpose 1.

Milestone 2: Construct a list of probable natural and anthropogenic causes of trends observed in "Spatial and Temporal Trends" (Purpose 1) (at a minimum -- Water Quality, Uses, Resources, Loads, Physical Alteration)

Milestone 3: Substantial review and comment by the scientific and regulatory communities is completed. Develop a schedule to study proposed list of causes which will be investigated and submit to Region for review and comment.

Milestone 4: Develop the list of tasks and schedule for completion and submit a copy to the Region.

Milestone 5: Transmit draft final report to Region for review and comment.

Milestone 6: Disseminate report on "Probable Causes of Environmental Problems" to public with information copies to Region/OMEP.

The Buzzards Bay Project has completed, or will complete, these Purpose 2 requirements in the following manner:

Milestones 1-4: Milestones 1 through 4 are substantially complete. The Management Committee, which includes Region I representatives, has reviewed the list of priority problems in the development of each annual workplan. The priority problems also received a final extensive review through the publication of the 1986 Annual Report.

Based on historical data sets and the work currently underway, the Management Committee has completed a preliminary identification of probable causes of priority problems. As previously discussed, parameters under physical alteration and uses (except fishing) are not currently being addressed. The annual workplans list the suspected causes and propose projects to study further these problems and their causes. These workplans also include proposed schedules for undertaking these tasks. The workplans are widely distributed and readily available for public review.

Milestones 5 and 6: These milestones have not been completed by the Buzzards Bay Project. The negotiated schedule for completion is shown on the following chart. Tasks and task assignments are outlined in Appendix 2.

Purpose 2: Identify Probable Causes of Environmental Problems Negotiated Milestone Timelines: Buzzards Bay

(Product: Status and Trends and Probable Causes of Environmental Problems Reports)

Milestone	10/87	11/87	12/87	1/88	2/88	3/88	4/88	5/88	6/88	7/88	8/88	9/88	10/88	11/88	12/88	1/89	2/89	3/89	4/89	5/89	6/89	7/89	8/89	9/89	10/89	11/89
PURPOSE 2																										
1. Priority problems identified in Step A reviewed and reassessed by MC and Region/OMEP based on work in progress under Purpose 1.	Completed.																									
2. A list of probable natural and anthropogenic causes of trends observed from the spatial and temporal trends analysis (Purpose 1) is developed. Key items to be included are: a. Water quality b. Uses c. Resources d. Loads e. Physical alteration	Completed.																									
3. List of probable causes is subjected to extensive review by the scientific and regulatory community. Based on comments, a schedule for studying proposed causes is developed and submitted to Region for review and comment.	Completed.																									
4. List of tasks and schedule for completion is developed and submitted to Region.																										
5. Draft final report on the causes of environmental problems is submitted to Region for review and comment.																										
6. Final report, "Probable Causes of Environmental Problems," is distributed to public.																										

Issues/Comments:

- Three synthesis reports will be produced to fulfill the combined reporting requirements of Purposes 1 & 2. Each will address one of the three priority problems: pathogens, toxics, and nutrients. The reports will describe the current status of the problem and summarize available information pertaining to the probable causes.

PURPOSES 3 TO 7

The following section lists the purposes that the Buzzards Bay Project has not yet completed. A brief description of the activities the Project is undertaking to fulfill these purposes is included. Additional information on tasks to complete each purpose is outlined in Appendix 2.

Purpose 3: Develop Relationship Between Pollutant Sources and Impacts on Resources

Under Purpose 3, preferred use options will be identified in a goal-setting workshop (contingent upon additional funding) and matched with the probable causes for environmental problems developed in Purpose 2 activities. A list of tasks and a schedule for defining the transport and fate relationship between pollutant loads and effects on the preferred uses will be developed based on Synthesis Reports completed under Purposes 1 and 2.

The final product will consist of two reports: (1) a prototype report, for public use, on coliforms in Buttermilk Bay (scheduled for 12/88 completion); and (2) a report (to be included in the Buzzards Bay Annual Report - 8/89) describing the qualitative relationships between pollutant sources and the impacts on resources, as well as relating the preferred uses to the sources and impacts.

Purpose 4: Develop Comprehensive Conservation and Management Plan

Purpose 4 activities will result in a complete CCMP. An annotated outline will be produced initially, listing the key sections of the CCMP based on preferred uses. Potential futures, corrective actions, and cost impacts for each preferred use will be defined, in addition to the development of priority action plans to attain and maintain each preferred use (including a compliance schedule). The final CCMP is scheduled for March, 1990.

Purpose 5: Develop Coordinated Plans for Implementation of CCMP

Tasks under Purpose 5 (coordinated with Purpose 4 activities) will identify the levels of authority for carrying out corrective actions, also showing where regulatory and legislative inconsistencies and voids occur. The list of regulatory inconsistencies will be included in the comprehensive report produced under Purpose 7.

As a final product, a report on the coordinated plan for implementation of the CCMP will be included with the CCMP. Subsequent reports will be included in the biennial reports.

Purpose 6: Monitor Effectiveness of Actions

Purpose 6 requires the inventorying of existing monitoring programs. This inventory will contribute to the development of a monitoring plan for measuring management action effectiveness -- the plan will be included in the CCMP.

Biennial reports on management action effectiveness will be produced, with the first one scheduled for completion in March, 1992.

Purpose 7: Review Federal Financial Assistance and Development Programs for Consistency

Under Purpose 7 activities, a comprehensive report will be produced including such information as:

- o An inventory of relevant Federal and State programs

o Program information on

- land use
- permit issuance, compliance and enforcement
- living resource management
- water quality planning and standards
- ambient monitoring
- Superfund
- nonpoint sources

o Identification of potential contributions from other Federal and State agencies that could further the purposes and objectives of the CCMP

o Specification of means to secure commitments to participate

o Concluding section on the resolution of Federal and State Program Inconsistencies and Inter-Agency Agreements.

The negotiated timelines for activities under Purposes 3 through 7 are included in the following pages.

Purpose 3: Develop Relationship Between Pollutant Sources and Impacts on Negotiated Milestone Timelines: Buzzards Bay

(Product: Relationship Between Pollutant Sources and Impacts on Resources Reports)

Milestone	10/87	11/87	12/87	1/88	2/88	3/88	4/88	5/88	6/88	7/88	8/88	9/88	10/88	11/88	12/88	1/89	2/89	
PURPOSE 3	—————																	
1. Preferred use options selected from Status and Trends Report, transmitted to Region for information	—————▲ (6/88)																	
2. Use options are matched with probable causes for environmental problems (identified under Purpose 2).	—————▲ (6/88)																	
3. List of tasks and a schedule for defining transport and fate relationship between pollutant loads and effects on preferred uses are negotiated with Region. (Indicate how the transport and fate relationship was defined, e.g., by mass balance technique or modeling)	—————▲ (12/88)																	
4. Draft final report transmitted to Region for review and comment.	—————																	
5. Final report, "Relationship Between Pollutant Sources and Impacts on Resources," distributed to public and Region/OMEP.	—————▲ (12/88)																	

Issues/Comments:

- Milestone 1: Contingent upon additional funding, a goal-setting work shop will be held to identify preferred use options.
- Milestone 3 will be based on Synthesis Reports completed under Purposes 1 & 2.
- Milestone 5: two reports will be completed - a prototype report, for public use, on coliforms in Buzzards Bay, 12/88. A second report to be included in a Buzzards Bay Synthesis Report, "Relationship Between Pollutant Sources and Impacts on Resources, and relate the goal (Milestone 1) to the sources and impacts. This will satisfy the goal "Relationship Between Pollutant Sources and Impacts on Resources".
- Management Conference will make decisions as to whom will do what, and what the specific products will be, throughout the next three to five fiscal years.

**Purpose 4: Develop Comprehensive Conservation and Management Plan
Negotiated Milestone Timelines: Buzzards Bay**
(Product: Comprehensive Conservation Management Plan.)

	Milestones
<p>PURPOSE 4</p> <p>1 Key sections of Comprehensive Conservation and Management Plan (CCMP), based on preferred uses, are negotiated with Region/OAEP. Identify which of the following sections are included and means for inclusion, if applicable:</p> <p>a. Potential futures for each preferred use</p> <p>b. Recommended corrective actions for:</p> <ul style="list-style-type: none"> - point source controls - land use - living resources management - in-place pollution <p>c. Costs for corrective action plans for each preferred use and compliance schedule for each</p>	<p>Timeline for Purpose 4: A horizontal axis from 1989 to 2000. Milestones are marked with triangles: 11/89, 5/89, and 12/89.</p>
<p>2 Potential futures, corrective actions, and cost inputs for each preferred use are defined in consultation with State and Local Jurisdictions</p>	<p>Timeline for Milestone 2: A horizontal axis from 1989 to 2000. A milestone is marked with a triangle at 5/89.</p>
<p>3 Priority action plan to attain/maintain each preferred use is developed.</p>	<p>Timeline for Milestone 3: A horizontal axis from 1989 to 2000. A milestone is marked with a triangle at 12/89.</p>
<p>4 Compliance schedule for action plans developed</p>	<p>Timeline for Milestone 4: A horizontal axis from 1989 to 2000. A milestone is marked with a triangle at 12/89.</p>
<p>5 CCMP prepared according to outline and results from preceding milestones; distributed to Region/OAEP.</p> <p>Issues/Comments:</p> <ul style="list-style-type: none"> • Milestone 1 will produce an annotated CCMP outline. The Program does not anticipate including physical alteration. The New Bedford Superfund Site will be addressed briefly in the CCMP as an in-place pollution. • Costs for corrective actions will be addressed under Milestone 2. Rough estimates for each action will be provided and a basis for estimating cost per embayment developed. 	<p>Timeline for Milestone 5: A horizontal axis from 1989 to 2000. A milestone is marked with a triangle at 3/90.</p>

BAYBORD 3. DEVELOP COMPREHENSIVE CONSERVATION AND MANAGEMENT PLAN

**Purpose 5: Develop Coordinated Plans for Implementation of CCMP
Negotiated Milestone Timelines: Buzzards Bay
(Product: Report on Coordinated Plans for Implementation of CCMP.)**

Milestones	Timeline (12/99 and beyond)
<p>PURPOSE 5</p>	<p>(12/99)</p>
<p>1. Potential future, corrective actions, and cost impacts for each preferred use are developed in consultation with Regional, State, and Local jurisdictions.</p>	<p>(5/99)</p>
<p>2. Levels of authority to carry out corrective actions are identified, list of regulatory/legislative instruments and funds is developed, funding capabilities and prospects are provided in cooperation with Regional, State, and Local jurisdictions.</p>	<p>List of regulatory inconsistencies (12/99)</p>
<p>3. Institutional and financial commitments and arrangements for the priority action plans and compliance schedule are secured from the Regional, State, and Local jurisdictions.</p>	<p>(12/99)</p>
<p>4. Report on the coordinated plans for implementation of the CCMP is prepared and sent to Regional/CCMP.</p>	<p>(12/99 and beyond)</p>

Notes/Comments:

- Milestones under Purpose 5 are coordinated with Purpose 4 milestones.
- Milestone 4: the final report produced under Milestone 4 will be included with the CCMP. Subsequent reports will be included in the biennial reports.
- Milestone 2: the list of regulatory inconsistencies will be combined with Milestone 2 under Purpose 7.

Purpose 6: Monitor Effectiveness of Actions Negotiated Milestone Timelines: Buzzards Bay

(Products: Monitoring Plan, Biennial Report on the Effectiveness of Actions Taken.)

Milestone	
PURPOSE 6	
<p>1. Inventory of existing monitoring programs developed.</p>	
<p>2. Monitoring plan for measuring management action effectiveness developed in consultation with Regional, State, and Local jurisdictions. Plan includes</p> <ul style="list-style-type: none"> a. Management questions to be addressed b. Funding requirements and sources c. Schedule d. Monitoring parameters and frequency e. Process for archiving data in DDBAS 	
<p>3. Biennial report on management action effectiveness prepared and distributed to public.</p>	

Issues/Concerns:

- This Purpose is a new requirement. Timely completion of milestones will depend on additional funds.
- A monitoring plan will be included in the COMF.
- First biennial report is scheduled for 3/92, it is likely that this requirement will be incorporated in 306(b) reports.

Attachment 2: Draft Monitoring Plan for Submittal to COMF

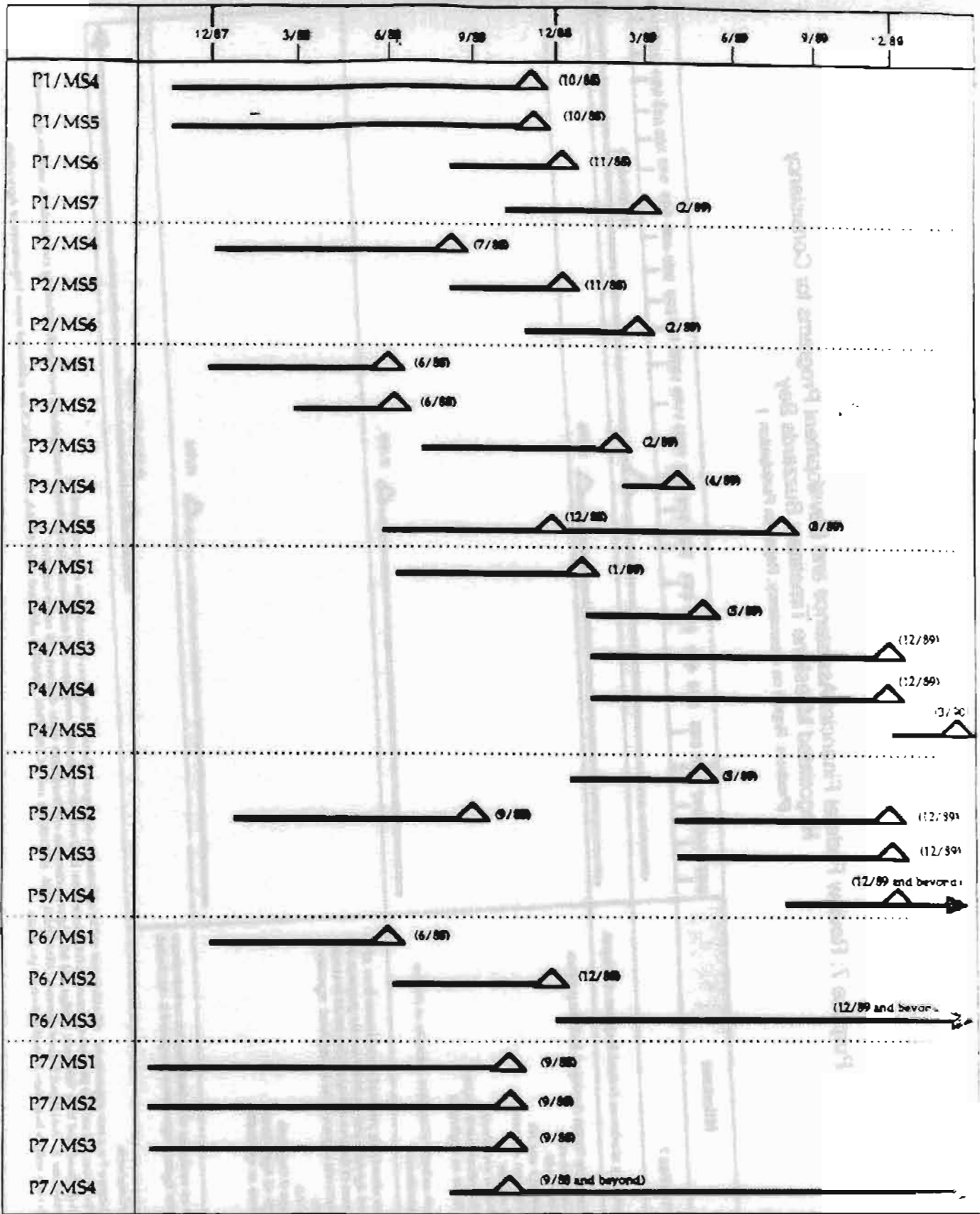
**Purpose 7: Review Federal Financial Assistance and Development Programs for
Negotiated Milestone Timelines: Buzzards Bay**
(Products: Report on Consistency; Report on Participation.)

Milestone	10/87	11/87	12/87	1/88	2/88	3/88	4/88	5/88	6/88	7/88	8/88	9/88	10/88	11/88	12/88	1/89	2/89
PURPOSE 7	_____▲_____																
1 Inventory of relevant Federal Programs developed.	_____▲ 9/88																
2 Consistency Report developed. Includes program information on: a Wetlands b Dredge and fill c Physical alteration d Land use e Permit compliance f Hazardous waste disposal g Others as applicable Report includes alternative remedies to resolve inconsistencies	_____▲ 9/88																
3 Report identifying potential contributions from other Federal Agencies that could further the purposes and objectives of the plan and specifying means to secure commitments to participate is completed. Agencies include: a NOAA b Corps of Engineers c Dept. of Agriculture d Others as applicable	_____▲ 9/88																
4 Report on resolution of Federal Program inconsistencies and Inter-Agency Agreements completed & distributed.	_____▲ 9/88 and beyond																

Issues/Comments:

- Purpose 7 is a new requirement. All milestones will be addressed in one report. Timely completion dependent on additional funding.
- The report will include program information (Milestone 2) on: land use, permit issuance, compliance and enforcement, living resource management, water quality planning, Superfund, and NPS. Wetlands, dredge and fill, physical alteration and hazardous waste disposal will not be included.
- Milestone 3 - Additional Federal agencies: FDA, USCS, NSF, DOD (Navy and ACOE), FWS. NMFS is addressed under NOAA, SCS and ASCS are addressed under DOD.
- Review will include state as well as Federal programs.

Buzzards Bay Negotiated Milestone Timelines Summary Chart



Tasks to be Completed Under Buzzards Bay Management Conference Agreement

I. Steps for forming Management Conference

- A. Priority problem identification and ranking (5 milestones, all completed)
- B. Develop data and information management system (DIMS)

- Buzzards Bay Project (BBP) data stored in EPA's National Computing Center (NCC) Computer (consultant)
- BBP data included in future state system (planned)
- BBP expand U.S. Geologic Survey (USGS) mapping project (USGS)

II. Management Conference Purposes

Purpose 1: Assess status and trends in water quality
(see list of tasks for Purpose 2)

Purpose 2: Identify probable causes of environmental problems

Key items:

- shellfish (Boston University-draft)
- shellfish closures (newly funded)
- eelgrass (Boston University-draft)
- nutrients & coliforms (Battelle-in progress)
- toxics in sediment & biota (to be awarded)
- inventory of monitoring programs (to be awarded)
- inventory of assistance programs (to be awarded)
- inventory of local regulations (Southeastern Regional Planning and Economic Development District (SRPEDD)-draft)
- land & water use (SRPEDD-in progress)
- pollutant loads (Division of Water Pollution Control (DWPC)-basin plan-in progress)

- Identification of data sets (Battelle & other Principal Investors (PI))
 - review of historic data
 - finfish (Southeastern Massachusetts University (SMU) progress)
 - lobster catches (Division of Marine Fisheries (DMF)?)
- Synthesis reports (to be awarded)
 - toxics (metals and organics)
 - shellfish closures & pathogens (bacteria and viruses)
 - nutrients & eutrophication
 - living marine resources (for future discussion)

Purpose 3: Relationship between pollutant sources and impacts on resources

- Goal-setting workshop identifies possible futures (6/88-new)
- Synthesis documents describe transport & fate relationships between pollutant loads & effects on preferred uses (11/88-draft)
- Report for public summarizing Buttermilk Bay work (12/88-new)
- Annual report describing qualitative relationships between pollutant sources and impacts on resources and relating the project goals to sources and their impacts (8/89-new)

Purpose 4: Develop Comprehensive Conservation and Management Plan (CCMP)

- CCMP outline with recommended actions for point source controls, nonpoint source controls, land use, living resources management, in-place pollutants (new, 1/89 - develop from Department of Environmental Quality and Engineering (DEQE) basin management plan, synthesis reports, etc.)
- Recommended corrective actions and generic costs are defined (5/89-new)
- Priority action plans and compliance schedules developed (12/89-new)
- Final CCMP (3/90)

Purpose 5: Develop coordinated plans for implementation of CCMP (to be included in CCMP)

- List of regulatory/legislative inconsistencies and voids (9/88-new)
- Institutional and financial commitments and arrangements for priority action plans and compliance schedule are secured from EPA, state, and local jurisdictions
- Report on implementation of CCMP (12/89 and every 2 yrs after)

Purpose 6: Monitor effectiveness of actions

- Inventory of existing monitoring programs (6/88-new)
- Develop monitoring plan for measuring management action effectiveness (draft 12/88-final-12/89-new, require DEQE input under Executive Office of Environmental Affairs (EOEA) oversight)
- Biannual report on management action effectiveness (1/90 ? beyond Massachusetts EOEA?)

Purpose 7: Review federal financial assistance programs for consistency.
(Massachusetts Coastal Zone Management (MCZM)?)

- Inventory of relevant state and federal programs (9/88-new) list of regulatory inconsistencies and voids
- Consistency report including information on land use; permit issuance; compliance, and enforcement; living resource management; water quality planning and standards; ambient monitoring; superfund; non-point sources (9/88-new)
- Identification of potential contributions from Food and Drug Administration, U.S. Geologic Survey, National Science Foundation, Department of Defense, Fish and Wildlife Service, National Oceanic and Atmospheric Administration, Army Corps of Engineers, Department of Agriculture (9/88-new)
- Report on resolution of federal and state program inconsistencies and completion of inter-agency agreements (9/88 and beyond-new)

Mr. Kim Gorman
U.S. EPA
Office of Marine Environmental Programs
101 M Street, SW
Washington, D.C. 20501

Dear Mr. Gorman:

I am writing to comment on the draft Consistency Agreement prepared by your staff. Your consultant of American Management Systems and my assistant, Bruce Tripod, Overall, I agree with the concept and goals of this draft agreement and endorse the intent to include the Buzzards Bay Project in the newly-reauthorized National Estuary Program.

It is premature at this time to comment in detail on specific tasks or deadlines because these require further definition, clarification and the various divisions that will be responsible for the work. On a first reading by Mr. Tripod and related agency staff, it does appear that the tasks are generally realistic and fairly require increased clarification. Areas of concern requiring better definition include:

- 1) definition of the 15% state match.
- 2) more details regarding content and form of required reports.
- 3) specificity as to which group will be responsible to perform each task, and
- 4) the criteria by which estimates will be selected into the program so that I can be assured that acceptance of Buzzards Bay will not preclude acceptance of Boston Harbor-Massachusetts Bay or Cape Cod Bay. Without this increased definition, my agreement is defined is not possible. For your information, I have enclosed a thumbnail copy of the draft agreement which contains further details.



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

100 Cambridge Street

Boston, Massachusetts 02202

MICHAEL S. CUCKER
GOVERNOR

JAMES S. HOYTE
SECRETARY

September 17, 1987

Ms. Kim Devonald
U.S. EPA
Office of Marine Environmental Programs
401 M Street, SW
WH-556F
Washington, D.C. 20460

Dear Ms. Devonald:

I am writing to comment on the draft Conference Agreement prepared by your staff, your consultant at American Management Systems and my assistant, Bruce Tripp. Overall, I agree with the concept and goals of this draft agreement and endorse the intent to include the Buzzards Bay Project in the newly-authorized National Estuary Program.

It is premature at this time to comment in detail on specific tasks and deadlines because these require further definition, clarification and review by the various Divisions that will be responsible for the work. On a first reading by Mr. Tripp and selected agency staff, it does appear that the tasks are generally realistic and merely require increased clarification. Four broad concerns requiring better definition include:

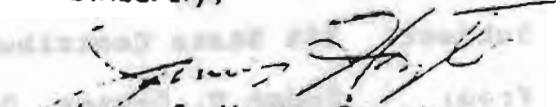
- 1) definition of the 25% state match,
- 2) more precision regarding content and form of required reports,
- 3) specificity as to which group will be responsible to perform each task, and
- 4) the criteria by which estuaries will be selected into the Program so that I can be assured that acceptance of Buzzards Bay will not preclude acceptance of Boston Harbor-Massachusetts Bay, Cape Cod Bay. Without this increased definition, any agreement to deadlines is not possible. For your information, I have enclosed a markedup copy of the draft agreement which contains further detail.

Ms. Kim Devonald
U.S. EPA
Office of Marine Environmental Programs
September 17, 1987
Page 2



A valuable first step has been taken and I encourage the prompt resolution of these questions. I can only participate in this Agreement when I am comfortable that the agencies under my authority understand and agree to the components for which they are responsible. Please continue to work with Bruce Tripp on this issue.

Sincerely,



James S. Hoyte, Secretary
Mass. Executive Office of
Environmental Affairs

JSH/BWT/sla

cc: C. Shea, American Management Systems
W. Wiltse, U.S. EPA Region 1
L. Bridges, Mass DMF
S. Halterman, Mass DWPC
N. Ridley, Mass DPH



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
WATER

OCT 16 1987

MEMORANDUM

Subject: 25% State Contribution for Estuary Programs
 From: Tudor T. Davies, Director *Tudor T. Davies*
 Office of Marine and Estuarine Protection (WH-556F)
 To: Water Management Division Directors
 Regions I, II, III, IV, VI, IX and X

Over the course of the past several months, we have had discussions within OMEP on the definition and interpretation of the language of Section 320 of the Clean Water Act of 1987 regarding a 25% or greater contribution from the state(s) to match the federal funds for estuary programs. This contribution could be used for the third party match requirement for grants or to fund other management conference approved workplan activities.

It is our intent to: 1) demonstrate commitment by the state(s) to the estuary program, and 2) provide as much financial support to each estuary program as possible. To accomplish these objectives, we are requesting that states(s) provide a 25% or greater contribution for the total amount of federal funds made available to an estuary program. The contribution can consist entirely of cash or a combination of cash and in-kind services. Some examples of how the 25% contribution could be used are shown in Attachment I to this memorandum.

The funds provided by the state are to be used first to match each grant and cooperative agreement recommended for funding by the management conference. Applicants, which could be universities, public interest groups, individuals etc. can choose to match the 25% from other sources. If the full amount of the state contribution is not needed to cover match requirements for all grants and cooperative agreements, the remainder should be used to complete other work plan activities approved by the management conference.

The experiences to-date of converting existing programs to management conferences have been very encouraging and show strong state commitment. We expect this memorandum to facilitate the commitment of those states to meet the matching requirement.

Attachment



Examples of use for 25% state contribution

For all examples, assume:

- \$1M Federal Funding
- \$250K State Funding (cash and/or in-kind services)
- 10 or more Projects approved in annual workplan

- A. All 10 projects are funded as cooperative agreements or grants. All federal funds are used. The state has provided cash, through state/grantee agreements to the 10 applicants for the 25% match. Each grant is matched with 25% and the total state contribution is used up.
- B. All 10 projects are funded as cooperative agreements or grants. All federal funds are used. The state provided cash and in-kind services, through state/grantee agreements to the 10 applicants for the 25% match and the total state contribution is used up.
- C. All 10 projects are funded as cooperative agreements or grants. All federal funds are used. The state provided cash to all applicants who requested it through state/grantee agreements. The remainder of the cash provided by the state, if there is any, will be used to support an additional item in the work plan through a state contract to use the 25% contribution.
- D. Nine projects are funded as cooperative agreements or grants. All federal funds are used. The state provided cash or in-kind services to all applicants who requested it through state/grantee agreements. The tenth project was funded wholly by the state with the remainder of the contribution through a state grant or contract. The total would meet the 25% match requirement.
- E. Three projects are funded by cooperative agreements or grants, \$250K of federal funds are used, the applicants match the federal funds on their own not using state funds. The management conference has decided to use \$750K of the federal funds in federal contracts for two of the projects which requires no match. State funds are used to fund one state contract for \$150K. The state provides cash and in-kind services for two public participation projects and two university projects for which no other federal funds are used, but have been approved by the management conference. The cash and in-kind services for these four projects must be at least \$100K. The total cash and in-kind service provided by the state meet the 25% contribution requirement, and the total non-federal share would be equivalent to a 50% contribution.



APPENDIX J
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 31 1987

OFFICE OF
WATER

Bruce Tripp
Buzzards Bay Project Coordinator
100 Cambridge Street
Boston, Massachusetts 02202

Dear Mr. Tripp:

This is in response to your request for information about the process the Environmental Protection Agency (EPA) will use to evaluate nominations by the States of new estuaries for the National Estuary Program (NEP). The current process of designating existing estuary programs, including the Buzzards Bay Project, as Management Conferences under §320 of the Water Quality Act of 1987 is separate from the Agency's proposed process for evaluating nominations of new estuaries. Estuary programs affected by the two processes are not in competition with one another, so in your case, for example, an evaluation of a Governor's nomination for Boston Harbor would not be affected by the designation of the Buzzards Bay Project. In developing a strategy to implement the Act, the Agency determined that since the six estuaries were among the eleven given priority consideration, and these programs are consistent with the intent of the Act and involve substantial federal and state investments in pollution abatement and control activities, it was appropriate to make their continuation under the NEP a first priority. Therefore, Governors' nominations of additional estuaries will not be reviewed and evaluated until national guidance has been developed and until decisions on the existing programs have been made. A Boston Harbor nomination will be judged on its merits, with nominations of other estuaries, under national guidance or regulations governing the additions of new estuaries to the program.

I hope that this information clarifies any concerns you may have had. If you have further questions, please call me at (202) 382-7166 or Tom DeMoss, Director of our Technical Support Division, at (202) 475-7102.

Sincerely,

Cynthia C. Ruppert
Tudor T. Davies, Director
Office of Marine and
Estuarine Protection

cc: D. Fierro, Region I