

BUZZARDS BAY
Comprehensive Conservation and
Management Plan

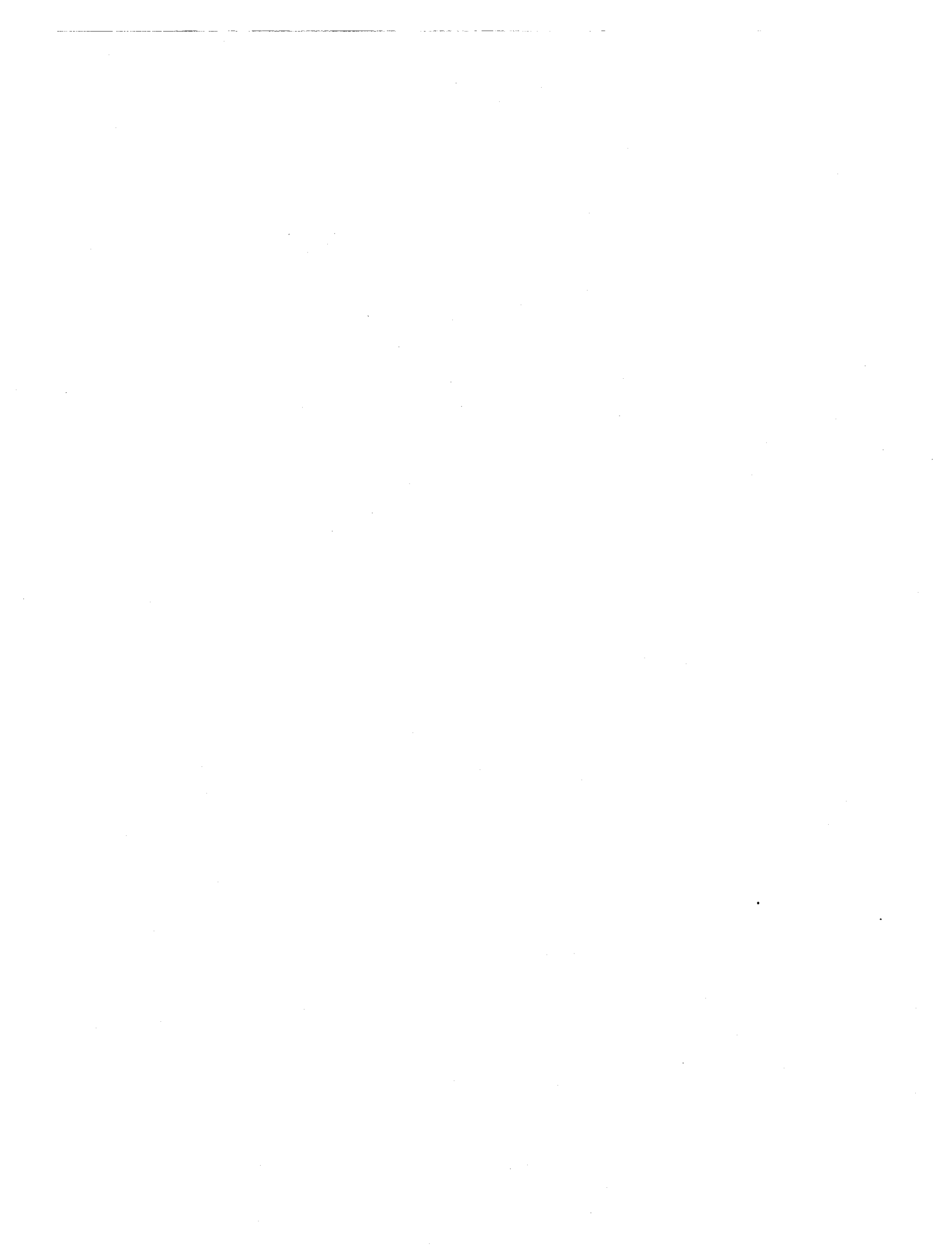
Executive Summary

BUZZARDS BAY PROJECT

U. S. Environmental Protection Agency

Massachusetts Executive Office of Environmental Affairs

Final 8/91



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Introduction

In 1985, the Buzzards Bay Project was established with the goal of developing and implementing management recommendations that would preserve and protect water quality and living resources in Buzzards Bay. This Comprehensive Conservation and Management Plan (CCMP) represents the vehicle to achieve that goal, and articulates a vision for the future of Buzzards Bay. It is based on the scientific and technical information gathered by the Buzzards Bay Project over the past six years and an analysis of the present regulatory programs designed to protect the Bay.

The CCMP has been finalized subsequent to the review of a draft plan circulated in May, 1990. The public as well as local, regional, state, and federal agencies all commented on the draft plan.

The Buzzards Bay CCMP is a three-volume document. The main document is the Management Recommendations and Action Plans. It contains a synopsis of the problems facing the region and 11 detailed action plans on how to protect and preserve water quality and living resources in Buzzards Bay. The document also identifies what actions need to be taken and who should take them. Two volumes complement the Management Plan — the CCMP Financial Plan and the CCMP Monitoring Plan.

Environmental protection costs money and uses human resources. The Financial Plan identifies the costs associated with management actions recommended in the CCMP and financial strategies for meeting them. Environmental management also requires a coherent and effective monitoring strategy to determine if actions taken are effective and warrant further expenditures. These needs are addressed in the Monitoring Plan, which contains the overall monitoring goals for Buzzards Bay, the specific environmental quality questions being asked, and the methods and approaches to answer those questions.

Those seeking detailed information on various aspects of the Project will have access to other documents, including a Pollution Characterization Report; a Report on Living Resources of Buzzards Bay; and the Buzzards Bay Project Technical Report Series, which contains technical and scientific papers on issues and problems facing Buzzards Bay.

Problems Affecting Buzzards Bay

Buzzards Bay is a relatively healthy estuary. It does not suffer from many of the system-wide problems found in other estuaries such as Chesapeake Bay, Narragansett Bay, and Long Island Sound. However, the health of the Bay is in jeopardy from pollution associated with continuing growth and development in its drainage area. The Buzzards Bay Project has identified three major environmental and public health problems that need management attention:

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- Closure of shellfish beds and swimming beaches due to the presence of disease-causing organisms
- Excessive nutrient inputs to the Bay, and their potential for causing water quality degradation and loss of habitat
- Contamination of fish, shellfish, and lobsters by toxic substances such as trace metals, hydrocarbons, and polychlorinated biphenyls (PCBs).

The Buzzards Bay basin comprises significant parts of 17 municipalities in Massachusetts¹ (Figure 1). The Buzzards Bay ecosystem includes a number of small embayments bordering residential areas and one major industrialized harbor, New Bedford Harbor. Because pollution sources and recommended actions associated with the New Bedford area are of a different type and magnitude than those for the smaller embayments, New Bedford is discussed separately.

New Bedford

The New Bedford area contains over 60% of the people living in the Buzzards Bay drainage basin. The Acushnet River, which flows through the city, is the only truly urbanized and industrialized watershed in the Buzzards Bay area. This intensive use has resulted in severe contamination of New Bedford Harbor and the adjacent areas of Buzzards Bay.

New Bedford Harbor contains high levels of PCBs and other toxic wastes from industrial activities in the area. The entire Inner Harbor and portions of the Outer Harbor have been closed to shellfishing, fishing, and lobstering since 1979. The Harbor is one of the few marine sites in the country that has been designated for cleanup under the Superfund program of the U.S. Environmental Protection Agency (EPA). In addition, the New Bedford municipal wastewater treatment plant discharges approximately 30 million gallons per day (MGD) of poorly treated sewage, industrial waste, and stormwater into the Outer Harbor. It is the largest single wastewater discharge to Buzzards Bay, and its substantial industrial waste component makes it the largest single source of toxic contaminants reaching the Bay. New Bedford is also the only municipality in Buzzards Bay to discharge untreated sewage, industrial waste, and stormwater from combined sewer overflows (CSOs). In all, New Bedford has 38 CSOs with an average volume of 4 MGD. Most CSOs discharge only during rain events, but improperly functioning CSOs discharge continuously. The Superfund site, treatment plant, and CSOs in New Bedford are some of the most significant threats facing Buzzards Bay.

These problems have been recognized by federal and state agencies, particularly EPA and the Massachusetts Department of Environmental Protection (DEP). Discharges from the treatment plant and the CSOs violate the Clean Water Act, and New Bedford is under court order to correct the violations and to reduce toxic inputs to the Harbor.

¹ The Buzzards Bay basin includes small portions of two additional communities in Massachusetts and portions of two communities (Tiverton and Little Compton) in Rhode Island. Refer to Appendix B in the Management Recommendations and Action Plans for more details.

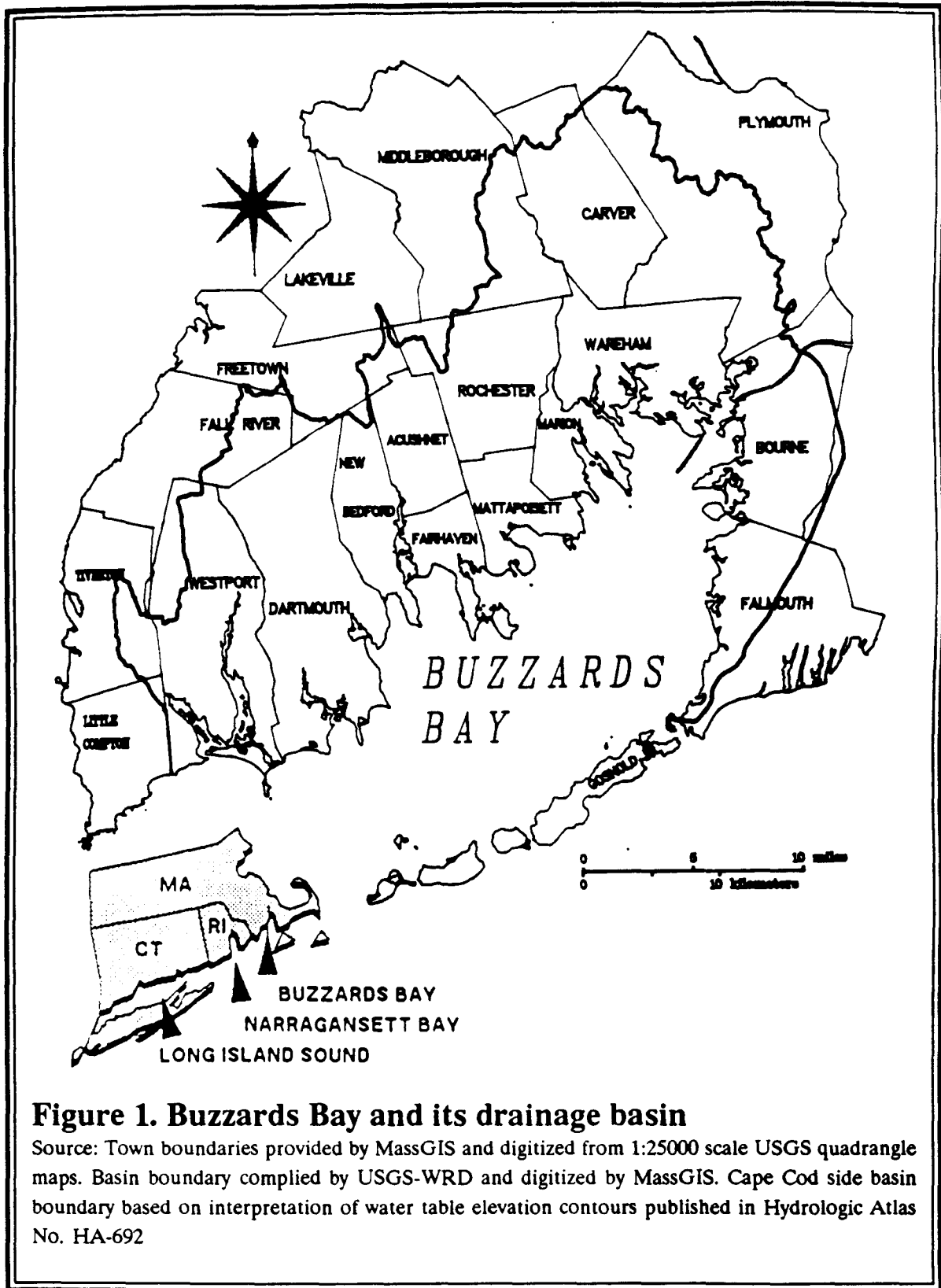


Figure 1. Buzzards Bay and its drainage basin

Source: Town boundaries provided by MassGIS and digitized from 1:25000 scale USGS quadrangle maps. Basin boundary compiled by USGS-WRD and digitized by MassGIS. Cape Cod side basin boundary based on interpretation of water table elevation contours published in Hydrologic Atlas No. HA-692

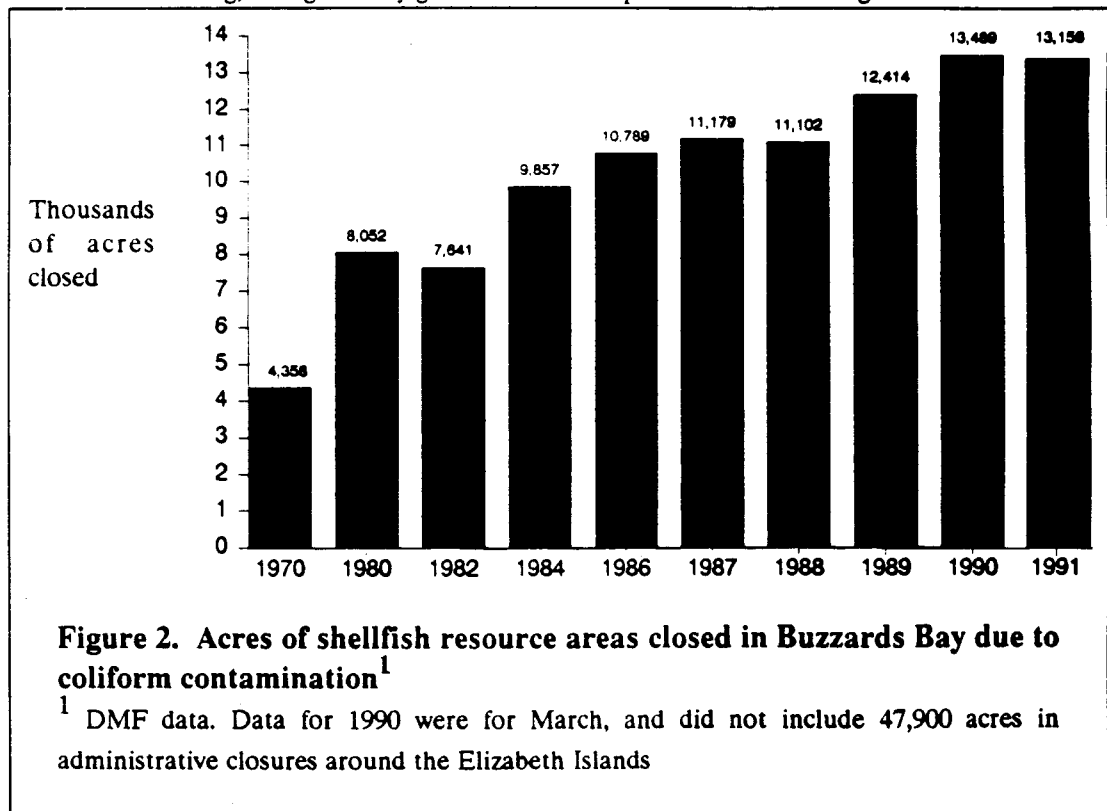
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In addition, the City of New Bedford, along with other potentially responsible parties, is the subject of an EPA Superfund enforcement action for cleanup of the PCB contamination in New Bedford Harbor. The Buzzards Bay Project strongly supports the goals of these enforcement actions, which are consistent with the goals of the Project.

Although New Bedford contains most of the population, it encompasses only a fraction of the total drainage basin. Fortunately, the pollution sources associated with New Bedford are not typical of the rest of Buzzards Bay. The rest of the Bay is characterized by suburban and rural communities that exhibit little industrial development and the attendant toxic pollution. The harbors and embayments in these areas are relatively healthy, but many are showing signs of stress due to nutrient and coliform inputs. This is most evident in the dramatic baywide increase in shellfish closures in recent years (Figure 2).

Land-Use Control

Coastal development is the underlying cause of most shellfish closures and the general decline in water quality throughout the Bay. Between 1951 and 1985, residential land use rose 100% in Buzzards Bay communities. Residential development brings with it small yet cumulatively significant sources of pollution such as septic systems and stormwater runoff. These are generally referred to as nonpoint sources of pollution because they are generated over a wide area and are not discharged from one distinct pipe. Nonpoint sources of pollution, including pathogen contamination and nitrogen loading, brought on by growth and development are the leading cause of habitat loss



and water quality declines in most of the Bay. Adequate management of these sources will determine the future health of Buzzards Bay.

In Massachusetts, local government has traditionally been responsible for nonpoint-source control through land use and growth management. This is because of the Commonwealth's strong legacy of home rule as well as the fact that state and federal agencies do not have the manpower to handle these smaller, yet cumulatively important, problems. Federal and state resources are predominantly devoted to larger point-source problems such as those in New Bedford.

To date, Buzzards Bay municipalities have been generally unsuccessful in controlling and directing growth, as demonstrated by the ever-increasing number of shellfish bed closures. This is due in large measure to a lack of planning for the protection of critical coastal resource areas prior to implementing zoning restrictions. The Massachusetts Zoning Act compounds the problem by making it very difficult for a community to protect an area once it has been inappropriately zoned. Inadequate municipal response is also related to the fragmented manner in which water quality issues are managed at the local level and the difficulty of transferring up-to-date scientific information in a meaningful way.

The CCMP suggests several planning tools as well as regulatory and nonregulatory management approaches that local boards can use to help manage growth and protect critical areas. Planning boards should take the lead in altering inappropriately zoned areas. However, because of the extensive protection afforded to landowners through the state zoning law, regulatory programs administered by boards of health should also be considered. The urgent need to adopt growth controls makes this regulatory approach possibly the most effective local land-use management strategy. The CCMP also strongly promotes the use of nonregulatory options for the protection of critical resources — the best strategies involve tax incentives and conservation easements. These nonregulatory approaches are currently grossly underutilized, but offer major benefits for protecting valuable resource areas. Because much of the Bay's coastline is already developed, considerable regulatory and nonregulatory effort must be directed toward mitigating existing impacts.

Embayment Management

Buzzards Bay communities must develop strategies that provide important resource areas with an extra level of protection. This is particularly true for the localized embayments that surround Buzzards Bay. The Buzzards Bay Project demonstrated that controlling the nonpoint sources of pollution associated with growth is an effective embayment management strategy.

Buttermilk Bay was chosen as a case study to illustrate embayment management because of its value to both Bourne and Wareham as a shellfish and bathing area. Shellfish beds in this Bay had already been closed and swimming beaches were threatened by increasing levels of fecal coliform bacteria (indicators of disease-causing organisms) from unidentified sources. The overall health of the embayment was also threatened by elevated levels of nitrogen.

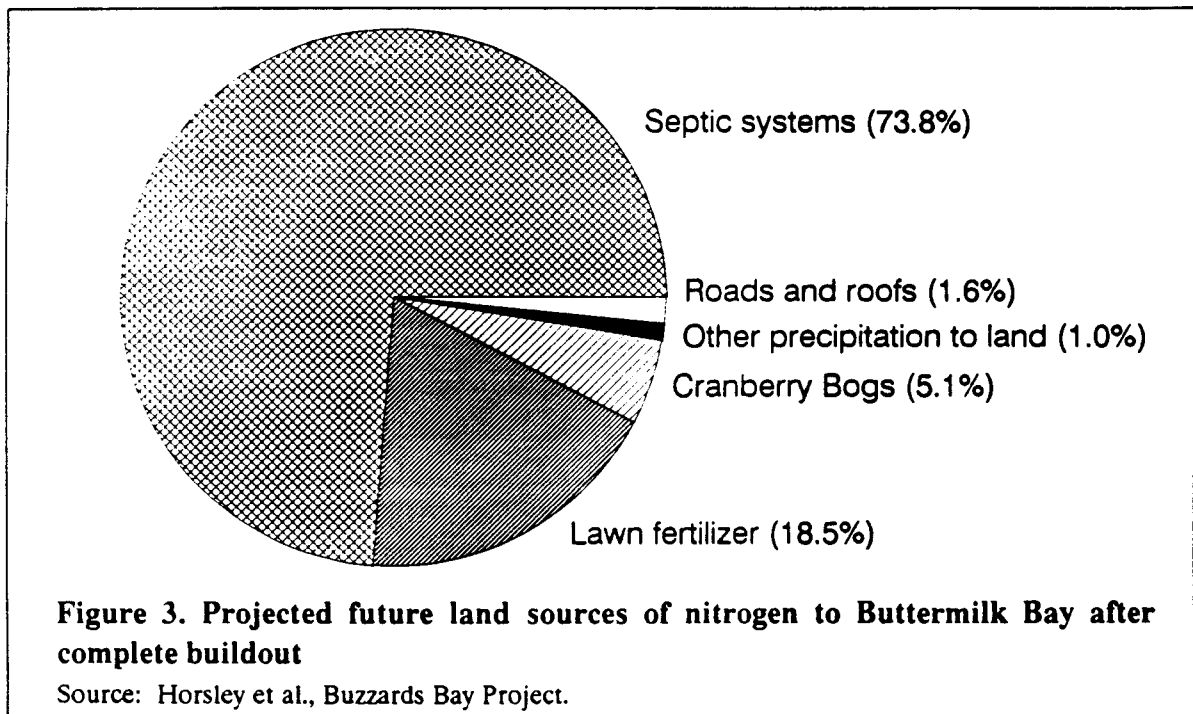
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Bacteriological monitoring determined that stormwater discharges were the most important factor causing the closure of shellfish beds in Buttermilk Bay. A remedial program was implemented to correct two of the storm drains responsible for most of the contamination. In fact, one of the treatment systems installed has been overwhelmingly successful, eliminating over 98% of the fecal coliform bacteria. In addition, regulatory approaches were designed to help the towns manage the effects, especially of septic systems and stormwater runoff, that may result from future development.

Existing and future inputs of nitrogen from the Buttermilk Bay basin to the Bay were assessed (Figure 3). Investigations in Buttermilk Bay showed that although conditions in the Bay today are still good, additional development will eventually exceed the Bay's capacity to assimilate excess nitrogen, resulting in critical impacts such as excessive algal growth, habitat loss, and potential fish kills. A developable-lot survey, or "buildout analysis," predicted a possible 130% increase in the amount of nitrogen reaching Buttermilk Bay under full build-out conditions.

Because the drainage basin for Buttermilk Bay encompasses parts of three towns (Bourne, Wareham, and Plymouth), the Buzzards Bay Project recommended a tri-town overlay protection district for the basin with a requisite reduction in zoning density.

Within the overlay district, two of the towns, Bourne and Plymouth decreased their zoning densities. By doing this they eliminated over 400 potential house lots (with their accompanying nitrogen contributions). Wareham already had large sized lots



which did not require a zoning change. However, Wareham did adopt the overlay district with strong language that discouraged the granting of variances that could increase the nitrogen load. This is the first time that an overlay district with scientifically-derived zoning has been used to protect a coastal embayment from eutrophication.

The water quality problems in Buttermilk Bay and other coastal embayments around Buzzards Bay have been developing for decades and are the result of hundreds of public and private land-use decisions. Remedies to these problems will require cooperation of local boards and the involvement by regional authorities and state agencies.

Local Implementation

Local governments will be responsible for implementing most of the recommendations in the CCMP. As already mentioned, this is due to the nature of the problems affecting most of the Bay and the fact that state and federal agencies do not have the resources to play a significant role. The Buttermilk Bay Overlay District is the first major implementation success. In addition, most of the municipalities surrounding Buzzards Bay have agreed to pursue initiatives recommended in CCMP Action Plans. These actions include:

- Develop nitrogen loading strategies (Dartmouth, Westport, Bourne, and Falmouth)
- Identify and correct illegal discharges affecting shellfish areas (Dartmouth, Mattapoisett, Bourne, and Falmouth).
- Designate a public health official to assist the Division of Marine Fisheries (DMF) in classifying shellfish areas (Fairhaven, Wareham, Bourne, and Falmouth).
- Work with DMF on expansion of the "conditional approval" program for shellfish areas (Dartmouth and Fairhaven).
- Adopt subdivision bylaws that require best management practices for stormwater runoff (Marion, Wareham, and Bourne).
- Construct a boat pumpout facility and develop a management plan for ensuring its use (Westport and Dartmouth).
- Amend the local sanitary code to increase the setback of septic systems from resource areas and private wells (Westport, Wareham, Marion, Bourne, and Falmouth).
- Appoint an oil spill coordinator who is fully cognizant of the local contingency plan and prepared to handle necessary response activities (Westport, Fairhaven, Mattapoisett, Marion, Wareham, Bourne, and Falmouth).
- Implement a program that ensures boatyards and marinas have specified spill response equipment on site (Marion).
- Develop watershed zoning bylaws (Dartmouth).

Communities that have not agreed to pursue many of the actions listed above will be encouraged to do so in future years. The action plans include other recommendations for new or tougher local bylaws to protect critical resources from degradation. The following list summarizes regulatory measures recommended for each of the

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municipalities that will also be pursued by the Buzzards Bay Project and the Buzzards Bay Action Committee, an association of municipal officials.

- Amend zoning and subdivision bylaws where possible to incorporate the results of a buildout analysis and better land-use management.
- Adopt non-zoning wetlands bylaws and regulations to give better protection to isolated wetlands and wetland buffer zones.
- Develop performance standards for oil and grease removal from catch basins.
- Develop regulations governing management practices for fueling of vessels in harbors.
- Develop regulations requiring oil-spill-response equipment at marinas.
- Develop coastal construction setbacks from resource areas such as wetlands, and more stringently regulate construction in areas subject to sea-level rise and shoreline erosion.
- Develop regulations banning the use of septic-system cleaners that contain carcinogens.

Only 10 of the 17 municipalities within the Buzzards Bay drainage basin are on the coast, and not all action plans are relevant to the inland communities. In addition, some action plans address subjects, such as sewage treatment plants, that will apply only to certain communities. Table 1 assists municipalities in determining their priorities for acting on CCMP recommendations. It also indicates communities that have agreed to pursue CCMP recommended actions or have already taken action. Table 2 lists the boards that have the lead responsibilities for implementing specific action plans. It also indicates regional, state, and federal agencies that share these responsibilities.

Regional Perspective

The protection of a resource the size and complexity of Buzzards Bay requires cooperation among the communities sharing the resource as well as among the local institutions responsible for proper land-use control. Even with a full commitment by individual local governments, proper land use and growth management in Buzzards Bay requires a regional view. Resource areas often cross town boundaries and one town acting alone may not be sufficient. In a larger sense, full protection of the Bay and its associated resources demands a consistently high level of management attention from all municipalities in the Buzzards Bay drainage basin. Historically, Buzzards Bay has not been viewed from a regional perspective; each community regulated only what was within its own municipal boundaries.

Realizing the importance of a regional organization to the future of Buzzards Bay, the Buzzards Bay Action Committee (BBAC) was created in September, 1990. The BBAC is actually an outgrowth of the Buzzards Bay Advisory Committee which was formed through the auspices of the Buzzards Bay Project to allow municipal officials a role in the direction of the Project. However, the BBAC has now evolved into an independent voice speaking for Buzzards Bay towns. The first major step in the evolution was hiring an executive director with the primary responsibility of promoting implementation of

Table 1. Action plan relevance for protecting Buzzards Bay water quality and resources

Action Plan	Community in Buzzards Bay Drainage Basin																
	A ¹ cushn	B ourne	C ¹ arver	D artmo	F airha	F ¹ allri	F almou	F ¹ reeto	G osnol	M arion	M attap	M ¹ iddle	N ewBed	P ¹ lymou	R ¹ oches	W araha	W estpo
Managing N-Sensitive Embayments		• ²	§	• ²	•	§	• ²	§	§	•	•	§	§	§	§	•	• ²
Protecting Shellfish Resources		• ²		• ²	• ²		• ²		§	•	• ²		§			• ²	•
Controlling Stormwater Runoff		• ²		•	•		•		•	• ²	•		§			• ²	•
Managing Boat Waste		•		• ²	•		•		•	•	•		§			• ²	• ²
Managing On-Site Systems		• ²	§	•	•		• ²		§	• ²	•	§		§	§	• ²	• ²
Preventing Oil Pollution	§	• ²		•	•		• ²		•	• ²	• ²		•			• ²	• ²
Protecting Wetlands and Marine Habitat	•	•	§	• ²	•	§	•	§	•	•	•	§	§	§	§	•	•
Planning for Shifting Shorelines	§	•		•	•		•		•	•	•		•			•	•
Managing Sewage Treatment Facilities	§			•	•		•			•			•			•	
Reducing Toxic Pollution		§		•	•		§		§	§	§		•			•	§
Managing Dredging and Dredged Material	•	§		§	•		§			§			•			§	§

Key
 • = high
 § = moderate
 = little or none

¹ These municipalities have little or no coastline on Buzzards Bay, therefore marine water-based action plans to protect Buzzards Bay water quality and coastal resources do not apply. Because Plymouth and Fall River have significant coastlines not on Buzzards Bay, many water-based action plans will be of interest to these communities. Some water quality action plans apply to inland communities traversed by major streams or rivers.
² These municipalities have agreed to pursue CCMP recommended actions or have already taken action.

Table 2. Direct applicability of action plans to local, state, and federal authorities

Action Plan	Local				State			Federal	
	Reg ¹ Agn	BOH	Pln Brd	Con Com Other	EOEA	DEP	Other	EPA	Other
Managing N-Sensitive Embayments	T,P	R	R			MEPA:P	P,R		
Protecting Shellfish Resources		R						DMF: F,T	T FDA:T,P
Controlling Stormwater Runoff	P	R	R	R			R	DPW:P	R SCS:T,F
Managing Boat Sewage		R			Harb:P,R,T	P;CZM:P	R		
Managing On-Site Systems	P	R					P,R		
Preventing Oil Pollution	T				Fire:P,R,T Harb:P,R,T	P,R;CZM:T	R		USCG:T,R
Protecting Wetlands and Marine Habitat	P			R	Selectm:P		R,T		COE:P,R
Planning for Shifting Shorelines		R	R	R		CZM:P,T	R		
Managing Sewage Treatment Facilities		R			Selectm:P	P	R	DEM:T	
Reducing Toxic Pollution		R			Selectm:P	CZM:P	R		T SCS:T
Managing Dredging and Dredged Material							P,T		COE:T

Key

R=Regulation/Implementation
P=Policy
F=Finance
T=Technical

¹The Southeastern Regional Planning and Economic Development Distric has planning functions and the T represents their activities. The Cape Cod Commission has both planning and regulatory authority, P represents their activities. The regulatory authority will be used to set policy in specific areas for towns.

NOTE: Reg Agn = regional agency, BOH = board of health, Pln Brd = planning board, Con Com = conservation commission, EOEA = Massachusetts Executive Office of Environmental Affairs, CZM = Massachusetts Office of Coastal Zone Management, DEP = Department of Environmental Protection, EPA = U.S. Environmental Protection Agency, Fire = fire department, Harb = harbor master, Selectm = selectmen, MEPA = Massachusetts Environmental Policy Act, DMF = Division of Marine Fisheries, DPW = Massachusetts Department of Public Works, FDA = U.S. Food and Drug Administration, SCS = U.S. Soil Conservation Service, USCG = U.S. Coast Guard, COE = U. S. Army Corps of Engineers

the CCMP by organizing local action and developing regional approaches to common local problems.

The initial accomplishment of the BBAC was the unanimous agreement of all 12 member communities to sign the Buzzards Bay Action Compact. This includes all 10 coastal communities plus Rochester and Acushnet which do not have coastline but are within a few miles of the Bay. The Compact's major features are: 1) agreement to exchange information and ideas to expedite the region's ability to implement sound environmental regulations and enhance Buzzards Bay and; 2) agreement to review and update town regulations in support of the action plans contained in the CCMP. The Compact was signed by the Mayor of New Bedford and the leading Selectman from each of the other 11 towns on January 11, 1991. Since the signing of the Compact, Plymouth has also joined the BBAC. The 4 additional towns that lie in the outer reaches of the Buzzards Bay drainage basin are presently being approached to become member communities. The evolution of the BBAC into an action-oriented organization and the adoption of the Buzzard Bay Compact are major achievements for an area with no history of conducting regional programs.

Ultimately, the success of the BBAC will hinge upon the continued ability to fund an executive director. EPA Region I has provided funding for 2 years, and it is hoped that the member communities will combine to appropriate funds each year after that.

State and Federal Implementation

Although most of the activities necessary to protect Buzzards Bay will occur at the local level, much can be achieved by state and federal agencies as well. State and federal agencies have important roles including expanding existing nonpoint-source and stormwater control programs, and providing adequate technical assistance and funding to local governments.

In Massachusetts, EPA has primary responsibility for issuing wastewater discharge permits under the National Pollutant Discharge Elimination System (NPDES), although most permits are issued jointly with DEP. EPA is expanding its authority toward the permitting of stormwater discharges. Preliminary steps have already been taken to develop a process for permitting those discharges that are causing the closure of significant shellfish resource areas.

The action plans contain several recommendations that call for new or amended state regulations and standards. In Massachusetts, DEP is the major regulatory authority for environmental protection, and as such will have responsibility for several of the recommendations. In addition to working cooperatively with EPA in establishing a policy for stormwater permitting, DEP agreed to cooperate in several key areas that have been highlighted in CCMP Action Plans. These include:

- Adopting nitrogen criteria for nitrogen-sensitive embayments in 1993 revisions to state water quality standards.
- Developing a policy in cooperation with EPA and the Buzzards Bay Project for better utilizing the antidegradation provisions of state water quality standards with regard to nitrogen loads to sensitive marine waters.

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- **Expanding the Wetlands Conservancy Program to protect existing wetlands in most Buzzard Bay towns.**

An important part of any environmental management program is monitoring the effectiveness of management actions. In this respect, monitoring the long-term status and trends of water quality and living resources, particularly by state agencies, will be critically important in evaluating the success of the CCMP. For this reason, a focused and well-defined monitoring program must be developed and implemented for Buzzards Bay. The data collected by this monitoring program must be able to answer specific management questions and be accessible to environmental managers. The CCMP's Monitoring Plan is the first step in this direction, but DEP and other state agencies will need to implement the plan.

Institutionalizing The CCMP

The Buzzards Bay Project has determined that it is in its best interest to delegate the function of overseeing proposed actions or projects for their consistency with the CCMP to the Massachusetts Coastal Zone Management Office (MCZM). This will be accomplished by incorporating the CCMP Action Plans into the Massachusetts Coastal Zone Management Plan (CZMP).

The most significant result from incorporation of the CCMP into the CZMP will be an intended expansion of the coastal zone boundary to encompass all or part of the Buzzards Bay drainage basin. The evaluation of projects, many of which involve critical land-use decisions in the upper reaches of the basin, would be most valuable to MCZM and the Buzzards Bay Project.

After the Administrator of EPA signs the final CCMP for Buzzards Bay, the process of incorporating the document within the state's coastal program will begin. New CZMP regulatory policies will be drafted that apply only to the Buzzards Bay drainage basin. In addition, non-regulatory policies that apply to non-enforceable CCMP actions will also be drafted. Because this will be the first attempt to merge a CCMP and a CZMP, it will receive close scrutiny and probably require a lengthy review period.

Financing

The issuance of the CCMP is set against a background of increasing costs for environmental protection and diminishing funds at the federal, state, and local level. Nationwide, government spending for environmental protection is projected to increase by 37% between 1987 and the year 2000 just to maintain current levels of environmental quality. An additional 38% increase will be needed to meet the requirements of new regulations and standards.

The burden of funding environmental programs is also shifting. In 1981, local governments were already paying 76% of the cost of environmental protection; by the year 2000, this share will increase to 87%.

In Massachusetts, the current economic climate suggests that raising funds to pay for local initiatives called for in the CCMP will be extremely difficult. Additional general taxes are unlikely to be viewed favorably and a deteriorating economy further

constrains the ability to raise revenues. As a result, each action in the CCMP will have to be justified in the eyes of those asked to pay for it. Public opinion polls have shown that most people favor higher taxes for improved environmental quality, hence a clear link must be established between each funding mechanism and the environmental goal it supports. Citizens must also be made aware that there are real costs and economic impacts associated with deteriorating water quality and inaction by environmental authorities.

The Financial Plan establishes the foundation for sound financial planning for implementation of the Buzzards Bay CCMP. It provides the tools for estimating the costs of selected actions, an inventory of possible existing and new sources, and guidance to local governments interested in developing new sources of revenues for locally implemented actions.

Public Involvement

Underlying all the recommendations presented in the CCMP is the need for citizen involvement. The management recommendations presented in the CCMP will not be accepted merely because they are good ideas. There is also a political element: one that involves individual hardships as well as implementation difficulties and cost. Citizens can be involved in protecting the resources of Buzzards Bay in many ways. Citizens must be prepared to support local initiatives for carrying out these recommendations, and to demand action if none is taken. Citizens can also volunteer for local boards, monitor actions of local boards, and participate in citizen water quality monitoring programs and other citizen organizations.

Conclusion

The CCMP has received wide-spread support from state and federal agencies as well as from the municipalities surrounding the Bay. This is exemplified by the Buzzards Bay Compact on the next page, but also by the letters of commitment received from the key state and federal agencies that will have a critical role in implementing actions contained in the plan. The Buzzards Bay Project is proud of the unanimous acceptance and endorsement that the CCMP has received from those who will be directly responsible for its implementation. For it is this level of support that distinguishes the CCMP from other planning documents. The BBP is confident that this will translate into the long-term protection of Buzzards Bay as a special national resource.

THE BUZZARDS BAY ACTION COMPACT

We, the undersigned municipalities, recognize the serious threat to Buzzards Bay as a significant resource through its deteriorating water quality and the associated threat to public and environmental health, to the viability of the economic base, and the quality of life.

We further recognize that the drainage basin of Buzzards Bay crosses municipal boundaries: that the future of the Bay depends on the ability of neighboring communities to control the quality of their environments through regional communication and cooperation among municipal, state, and federal agencies responsible for managing the Bay and its watershed.

We support the formation of a voluntary, regional organization of local governments to be known as the Buzzards Bay Action Compact. The Compact's members agree to exchange information and ideas that will expedite the region's ability to implement sound environmental regulations and by-laws to protect and enhance our mutual resource, Buzzards Bay.

We agree to review and update our individual town by-laws and regulation so as to voluntarily:

- manage nitrogen sensitive embayments
- protect and enhance shellfish resources
- control stormwater runoff
- manage wastes from boats
- manage individual septic systems
- prevent oil pollution
- protect wetlands and marine habitat
- plan for a shifting shoreline
- reduce/eliminate toxic pollution
- manage dredging and disposal of dredged materials

These actions are contained in the Buzzards Bay Comprehensive Conservation and Management Plan.

Acushnet Carle H. Blanchard
Bourne W. Thomas Boyer, Robert W. Parry, Marie O'Neil
Dartmouth Lennis Stueber, William M. ...
Fairhaven Joseph C. ...
Falmouth Virginia Valiela
Gosnold W. ...
Marion ...
Mattapoisett John De Costa
New Bedford ...
Rochester Henry A. Brown Jr.
Wareham Joseph R. ...
Westport ...

signed this 11th day of January, 1991