The Coastalwealth of Massachusetts

Celebrating a Decade of Coastal Zone Management

1978–1988

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When the sixty original framers of the Massachusetts Coastal Zone Management Plan began their efforts during my first administration, I believed that these Massachusetts citizens would produce an effective coastal program that could serve as a model for the nation. Actions over the past ten years have proved that faith well founded. With our innovative efforts in land acquisition, agricultural and boatyard preservation, wetlands restrictions and barrier beach protections, we have accepted the challenge of a national leadership role in environmental protection. In 1983, I was especially pleased to sign into law legislation creating the MCZM office within EOEA. By officially sanctioning the program and establishing a specific office, we served notice to the nation of our serious concern and intention to preserve our coast for future generations. I look forward to the next decade of MCZM.

Governor Michael S. Dukakis
Commonwealth of Massachusetts

I am proud of the emphasis Massachusetts citizens and legislators have placed on environmental protection and, in particular, efforts to conserve our fragile coast. The creation of the MCZM Plan and its acceptance by the federal government in 1978 were milestones in the Commonwealth's environmental history. Continued support for the MCZM program from local municipalities, environmental groups and legislators and the positive reviews from the U.S. Department of Commerce have shown us that the agencies and offices of EOEA are on the right track. However, there is still much to do, from cleanup of our state's coastal waters to acquisition of coastal properties allowing greater public access to the shore. The next decade of MCZM should be even busier and more exciting than the first ten years.

Secretary James S. Hoyte
Executive Office of Environmental Affairs

Participants in the MCZM Program:

Executive Office of Environmental Affairs (EOEA)
Massachusetts Coastal Zone Management (MCZM) Office
Department of Environmental Management (DEM)
Department of Environmental Quality Engineering (DEQE)
Department of Fisheries, Wildlife, and Environmental Law Enforcement (DFWELE)
Department of Food and Agriculture (DFA)
Metropolitan District Commission (MDC)
Division of Conservation Services
Massachusetts Environmental Policy Act (MEPA) Office

The Coastalwealth of Massachusetts

A Ten Year Review of the Massachusetts Coastal Zone Management Program, 1978–1988.

Massachusetts' 1,500 miles of magnificent tidal shoreline is a national treasure – a resource that has played an important role in our Commonwealth's history and constant growth. Its future depends on how well we can manage the many demands that our state's citizens and visitors now place on this limited resource.

The Commonwealth of Massachusetts took a major step towards protecting its coastline with the creation of the Massachusetts Coastal Zone Management Program a decade ago. Upon its official designation on April 24, 1978, the Program set as its goal the "attempt to resolve conflicts where possible and to establish values and priorities for the use of coastal resources to help mitigate conflicts in the future."

Over the course of the past ten years, the MCZM Program has striven to both protect the land and waters of our coastal zone and guide development so as to best utilize our limited coastal resources. Through the dedication of local officials and citizen activists, the commitment of the MCZM staff, and the cooperation of MCZM's sister agencies, the MCZM Program has become one of the most highly regarded coastal programs in the country.

However, even with the successes that have been achieved, activities in the coastal zone have caused additional concerns. As we continue to address the traditional issues affecting the coastline and begin to solve some of the new pressing issues that confront our coastal communities, we now realize that there are no simple solutions. Every improvement to the coastal environment tends to make it even more attractive to the ever faster growing populations of coastal communities. While increased development pressures have led to added demands on the Commonwealth's already fragile ecosystem, the state is fortunate to have the MCZM Program as a mechanism for addressing these coastal concerns.

A major MCZM goal for the next decade is to increase public awareness and concern for this resource by creating a well-defined and balanced coastal agenda, statewide. The coastal zone is a priceless state resource and it is an integral part of our Commonwealth's maritime tradition and future.

Richard F. Delaney

Richard F. Delaney
Director, Coastal Zone Management Office

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Introduction

MCZM History

Developed under the authority of the federal Coastal Zone Management Act of 1972, as amended, the MCZM Program was the first state effort on the east coast and fourth in the nation to receive federal approval. However, approval did not come easily. It took three-and-a-half years of effort from scores of concerned citizens to create the MCZM Management Plan. This citizen participation has continued to play an integral role in the successful implementation of the MCZM Program, including valuable inputs from the Coastal Resources Advisory Board (CRAB) and various informal discussions between state officials and local interest groups.

In 1983, due to the success of the MCZM Program in setting a "coastal agenda," it was given an important vote of confidence by the state legislature with the passage of a bill that established a permanent Office of Coastal Zone Management within the Executive Office of Environmental Affairs.

Over the years the MCZMP has sought to encourage the wise allocation of public funds, which would maximize public investment while protecting important coastal resources.

Fort Sewall/Marblehead Harbor typifies the rocky type of shoreline found along Massachusetts' North Shore.

The Coastal Zone

As officially defined, the Massachusetts Coastal Zone extends landward to 100 feet beyond specified major roads, rail lines or other visible rights-of-way and seaward to the edge of the territorial sea and includes all of Cape Cod, Martha's Vineyard, Nantucket and Gosnold.

MCZM Policies

Twenty-seven official policies were established in the 1978 MCZM Management Plan. Since then, their significance has grown and evolved along with the Program itself. The MCZMP has expanded to keep pace with increased scientific knowledge, technological advances, and the demands of one of the state's fastest growing populations. At the present time, 40 percent of the Commonwealth's population lives within coastal communities and 70 percent resides within a one hour drive of the shore.

The original policies of 1978 are now being reviewed in the light of the experience of the last ten years. MCZM policy implementation is far from a static process. It is an active give-and-take balancing act between competing interests for the use of a finite area.

MCZM and the Nation

Massachusetts can be proud of its coastal heritage, its evolutionary work in the area of environmental protection, and its leadership role among coastal states today. The Massachusetts coastline has figured prominently in our nation's history and, with appropriate management, will continue to serve the nation through its fishing, commercial, tourism and recreational facilities.

Recognizing its responsibilities to its coastal residents, as well as all of the citizens of the nation who are attracted to the coast, the Commonwealth has actively supported the "federal consistency" review process. As required by the Coastal Zone Management Act of 1972, the MCZM reviews all federally conducted or supported activities that directly affect the coastal zone to assure that they are in compliance with approved state environmental management programs.

This system of checks and balances is unique in federal-state relations. It allows the Commonwealth to bring to public attention and review federal projects that potentially threaten the local environment, and thereby allows the opportunity for project modification or for alternative actions to be considered.

This relationship also allows the federal government to review state CZM programs, to verify that the states are implementing the provisions of the CZMA and that they are adhering to their approved plans. MCZM has consistently received high praise for its leadership on the national level and for its close work with the Commonwealth's coastal communities, in planning for and managing the use of the shoreline.

Coastal Hazards

The Blizzard of '78 wreaked havoc on the coastal communities of Plymouth, Marshfield, Scituate, Hull, Winthrop, Revere, Gloucester, Rockport and Boston by dumping 27 inches of snow on eastern Massachusetts. But it was the storm surge, combined with unusually high tides and huge waves, that inflicted the most damage along the coast during the storm. Effects on man-made structures in coastal areas were devastating and erosion was severe. Homes that were located on barrier beaches, cliffs and other coastal areas toppled from their foundations and roads broke apart, as subsurface sands were washed away by the encroaching sea.

Ushered in by this awesome demonstration of sea power was the Massachusetts Coastal Zone Management Program. Immediately, MCZM personnel were charged with the responsibility of organizing 15 local disaster assistance centers for victims of the storm; a storm with damage estimates in excess of $225 million. Because of the storm, Massachusetts received funding for the acquisition of storm damaged property as a pilot project from the Federal Emergency Management Agency (FEMA) through the Flood Insurance Act, Section 1362. As a result, properties in Scituate and Hull were purchased by the Commonwealth. Later, MCZM officials, working with the state's Department of Environmental Management, provided technical assistance to the legislature in support of a proposed $3 million bond issue that would be used to acquire flood-prone coastal areas.

Over the past ten years since that storm, Massachusetts has been actively working to protect its natural barrier beaches, barrier islands and the two wetland resources that characterize a barrier beach system, dunes and beaches.

Policies of the 1978 Massachusetts Coastal Zone Management Plan call for the protection of these resource areas, for their value as storm buffers and because barrier beaches protect other wetland areas that are valuable to marine productivity and as natural habitats. Over the years those policies have been applied to numerous state programs.

The implementation of these policies is primarily accomplished through the Coastal Wetlands Restriction Program (under Massachusetts General Laws, Chapter 130, Section 105) and the Wetlands Protection Program (Chapter 131, Section 40). Under the Restriction Program, a list of permitted and prohibited activities is actually attached to the deed of a parcel of land. The Wetlands Protection Program gives local conservation commissions the authority to condition the environmental impact of a project using state-generated guidelines. In addition, CZM's Community Assistance Grants program, which provided financial assistance to coastal communities to study coastal problems, stipulated a specific priority area for coastal hazards. And the federal consistency review process allows MCZM to ensure that federally funded, licensed or implemented projects do not encourage growth in hazard prone areas and that they do not damage the natural protective functions of a barrier beach.

The Blizzard of '78 lashed at the shoreline and tore away sea walls, homes and other structures. In Eastham on Cape Cod, houses on unprotected barrier beaches were swamped, including the "Outermost House" (upper left) made famous in a book by Henry Beston.

Substantive new regulations for the Wetlands Protection Act, Massachusetts General Laws, Chapter 131, Section 40, were promulgated on July 10, 1978 by the Department of Environmental Quality Engineering with the assistance of Coastal Zone Management specialists. The regulations provide specific performance standards that must be followed to protect the storm damage prevention and flood control characteristics of beach, dune and barrier beach areas. Regulations for inland wetlands were updated in January of 1983 and wildlife habitat regulations were added in 1987. To better enforce these regulations in coastal areas, DEQE has hired two coastal enforcement agents through a MCZM grant, starting in 1986.

Massachusetts was the first state in the nation to issue Executive Orders on "Barrier Beaches" and restrictions on Off-Road Vehicle (ORV) use. The Barrier Beach Executive Order #181 of August 8, 1980 prohibits the use of state funds to encourage growth and development on barrier beaches and establishes barrier beaches as a state priority for acquistion. Executive Order #190 of December 24, 1980 directs DEM and the Department of Fisheries, Wildlife and Recreational Vehicles (DFWRV), now DFWELE, to develop guidelines for the use of ORVs on Massachusetts public coastal lands and to exclude their use on environmentally sensitive areas, such as dunes, salt marshes and tidal flats.

Since 1978, MCZM funds have helped DEM and later DEQE to map and restrict coastal wetlands, using aerial photos and ground verification. After evaluation by a team of scientists, including a marine fisheries biologist, geologist and civil engineer, those wetlands that best meet the interests of the Coastal Wetlands Restriction Act are proposed for restrictions. Following information meetings, public hearings and on-site inspections, the restriction maps and orders are finalized, approved by the Massachusetts Board of Environmental Management and recorded in the registry of deeds. This on-going process continues.

In 1982, Massachusetts became the first state to participate in the Federal Emergency Management Agency's program to purchase storm-damaged properties from willing sellers. This program, part of Section 1362 of the National Flood Insurance Act of 1968, is intended to reduce the loss of developed property within flood hazard areas by acquiring and removing them as opposed to preventing new construction by regulation in those areas. The program pays pre-flood value for buildings and current market value for land which meets specified requirements. As part of the program, a state or municipality must enter into a legally binding agreement to take title to and manage the property in a manner that is consistent with sound land management use. Ten properties in Hull and eighteen in Scituate that were damaged during the Blizzard of '78 were sold by landowners to FEMA, who then gave title to the properties to DEM.

MCZM completed the historical shoreline change digital mapping project for the entire Massachusetts coast in May 1985. The maps were generated to give federal, state and local officials and the public a better understanding of past trends in shoreline accretion and erosion.

Sediment materials, such as sand, are moved by wave action and currents from one beach area to others in a natural process of shoreline change. Any interruption of that process, such as the construction of a groin, can result in severe erosion of the unprotected beaches.

Dunes, if stabilized by beach grasses and other vegetation, prevent direct wave attack against inland areas, while beaches, because of their gradual slope, act to lessen the impact of destructive waves. The beach grass plantings are part of a major erosion control effort at the Cape Cod National Seashore.

The federal Coastal Barriers Resources Act (CBRA), which prohibits most federal expenditures and financial assistance for development within units of the Coastal Barrier Resources System, became law on October 18, 1982. A total of 41 sites in Massachusetts have been designated as undeveloped coastal barriers by the Department of the Interior. Maps of the CBRS were produced in April 1983 and delineation of the units become final. In 1987, 18 additional units were proposed for addition to the Massachusetts inventory and many existing unit boundaries were modified.

In 1988, legislation was filed that would provide for the purchase of storm damaged property through a $10 million pilot project, administered by EOEA. Coastal lands that are repeatedly damaged by storms would be acquired through their voluntary sale by the landowners. They would be used for conservation and passive recreation purposes.

MCZM issued a report entitled "Massachusetts Coastal Submergence Program: Passive Retreat of Massachusetts Coastal Upland Due to Relative Sea-Level Rise." Using the historic (and conservative) rate of sea-level rise of 0.01 foot per year or 0.45 feet in 45 years (1980-2025), scientists calculated that 65 acres of upland area will be lost annually to sea level rise and land submergence, and that approximately 3,000 acres will disappear by the year 2025. Other less conservative but still moderate rates of sea level rise (1.14 feet/year and 1.57 feet/year) would produce 45-year losses of 7,459 and 10,273 acres, respectively. Extreme estimates of an 11.3-foot rise by the year 2100 would lead to significant geographical and economic consequences. The information contained in the report is intended for planning, design and conservation efforts in coastal communities.

Marine Environment

In 1967, the newly approved Article 97 of the Massachusetts Constitution guaranteed every citizen the right to clean air and water. It was inspired by an environmental consciousness that was sweeping the nation. Yet, throughout the two decades following that pronouncement, the Commonwealth's coastal waters have continued to serve as a repository for society's wastes. The passage of Article 97, unfortunately, did little to stem the flow.

This legacy of polluted harbors, increased closures of shellfish beds due to contamination, and recent observations of high levels of cancers in fish from state waters has now sparked a new environmental awareness and a determination from state agencies and citizen activists to end these disquieting trends.

Along with the passage of the federal Clean Water Act of 1972, came sources of funding that permitted states to define their water quality problems and initiate programs to address them. Over the past decade, water quality issues have remained one of the foremost concerns of the Massachusetts agencies that are charged with the mission of the Massachusetts Coastal Zone Management Program.

The work of the Boston Harbor Water Quality Committee (the "Sargent" Committee) in 1983 and 1984 led to the formation of the Massachusetts Water Resources Authority in 1985. This was a major step in the process for restoring Boston Harbor to a more pristine state. Laws, such as the Ocean Sanctuaries Act and the Wetlands Protection Act, have also been used to protect both offshore and nearshore waters from abuse and overuse.

Included among the 27 policies of the Coastal Zone Management Program are many that concern the marine environment, such as protection of ecologically significant resource areas, support for national water quality goals through coordination with existing water quality planning and management agencies, and the development of a state review process for projects in water bodies and contiguous land areas to minimize interference with water circulation, sediment transport and water quality.

Progress has been slow; it takes a long time to reverse centuries of pollution. But the fact that we have managed to make inroads, despite increased development and recreational use of the coast, is a positive sign in the effort to protect our shores.

Milestones in the Commonwealth's history of marine environmental protection over the past decade include:

A Coastal Wetlands Protection Act was passed in 1963. It was the first state program in the country to protect wetlands. Regulations for these coastal resource areas were promulgated in 1978 as part of the MCZM Program. The Coastal Wetlands Restriction Act was enacted in 1965, providing another innovative method for regulating the type of development allowed in sensitive environmental areas. Amendments were approved and regulations were developed in 1979.

A humpback whale breeches in the waters of Stellwagen Bank, an area that has been placed on the federal Marine Sanctuaries Site Evaluation List. Another visitor to the Bank, the endangered North Atlantic Right Whale, has been named the state marine mammal.

Waquoit Bay, with South Cape Beach (bottom right) and Washburn Island (center), has been designated as an Area of Critical Environmental Concern since 1979. A federal-state effort has resulted in the Bay's selection as the 17th National Estuarine Research Reserve.

The Massachusetts fishing industry landed a catch valued at $279 million in 1987. Commercially valuable species include cod, haddock, winter and yellowtail flounder, sea scallops and lobster.

Early Massachusetts settlers used them for fertilizer, but lobsters are now found in much diminished numbers. New limits in allowable size may help juveniles reach reproductive maturity, leading to an increase in the population.

In 1978, the North River was designated as the first "Scenic River" under the Massachusetts Scenic Rivers Program. This program is designed to control the alteration of selected rivers and the contiguous lands within 100 feet of their banks for scenic and recreation purposes and to prevent their pollution.

The first of the Commonwealth's coastal Areas of Critical Environmental Concern (ACEC) was designated in December of 1978. Sandy Neck in Barnstable, on Cape Cod, was chosen for its beautiful and relatively undeveloped barrier beach and marsh system; its environmental, recreational and visual resources; and its use as a breeding habitat for Terrapin turtles. Since then, eight other areas have been designated as coastal ACECs: Parker River/Essex Bay, Ellisville Harbor, Pocasset River, Waquoit Bay, Weymouth/Hingham Back River, Inner Cape Cod Bay, Weir River and Pleasant Bay.

Regulations for the Ocean Sanctuaries Act of 1970 were issued by DEM in July 1978, again as a result of the MCZM Program. These regulations are directed toward protecting the five ocean sanctuaries from any exploitation, development or activity that would alter or endanger their ecology or appearance or that of the Cape Cod National Seashore. In 1987, an EOEA committee submitted a report to the legislature that proposed amendments to the Act, to more realistically address issues of ocean dumping of treated wastewater streams and water quality.

Massachusetts became the first state in the nation to formulate and institute a state-wide fisheries policy when the MCZM-funded Marine Fisheries Management Policy Report was approved in July, 1982. The report was written in response to Executive Order #165 which called for the formulation of a comprehensive fisheries policy to guide development, management and enhancement of the Commonwealth's living marine resources. Included are policies on regulations, licensing, environmental concerns, marine programs, marketing, research and mariculture.

Also in 1982, MCZM released "PCBs—A Status Report on PCB (Polychlorinated biphynel) Pollution in the New Bedford, MA Area." This report, a compilation of existing information, led to the designation of the Acushnet River estuary as a federal Superfund clean-up site.

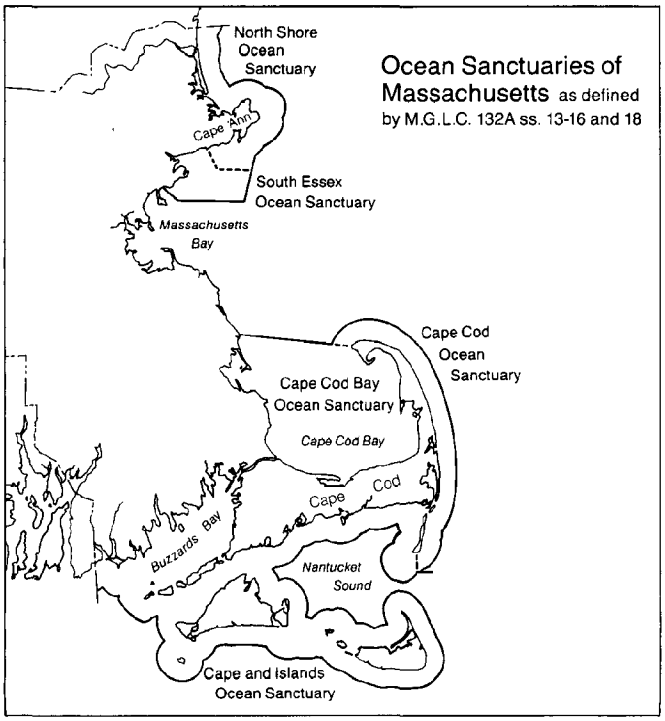
In 1983, two areas in or near Massachusetts waters were placed on the draft federal Marine Sanctuaries Site Evaluation List: Stellwagen Bank and Nantucket Sound/Shoals/ Oceanographer Canyon.

DEM resumed administration of the Massachusetts Rivers and Harbors Program after it was reauthorized and funded by the state legislature in 1984. The program is designed to assist communities upgrade their waterways. Projects include dredging, construction or rehabilitation of piers, wharves, bulkheads, sea walls, groins, jetties, boatways and public access facilities within strict environmental parameters.

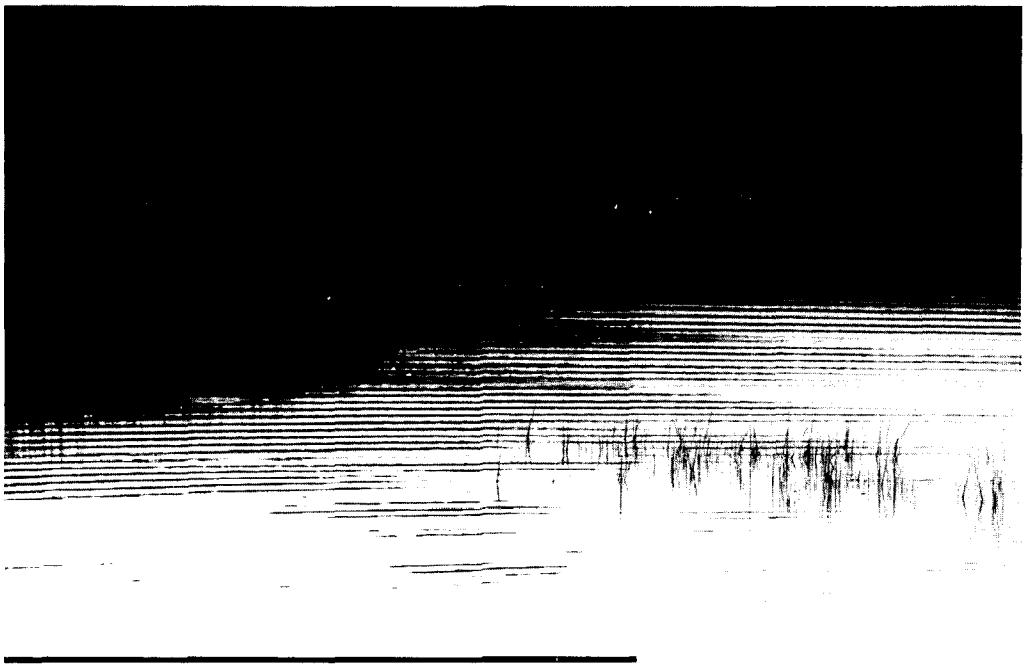
On October 30, 1985 the Massachusetts Division of Marine Fisheries with assistance from the Department of Environmental Quality Engineering and the Office of Coastal Zone Management issued a White Paper on "Massachusetts Marine Fisheries: Assessment at Mid-Decade." The report highlighted stresses on the marine environment and the Massachusetts fisheries industry. In response to the report, a Marine Resources Coordinating Committee was formed to develop and direct strategies to address the concerns outlined in the paper.

1985 also saw Governor Dukakis sign legislation creating the Massachusetts Water Resources Authority to specifically address the Boston Harbor cleanup project and speed development of secondary treatment facilities for Boston area sewerage.

Buzzards Bay was one of four estuaries selected by Congress to be studied under a special $4 million appropriation to the U.S. EPA budget in 1985. The Buzzards Bay Project, jointly managed by EPA and EOEA, has received approximately $400,000 per year for the first phase of the project with a primary goal of protecting water quality and the health of living resources in the Bay. The fiscal 1988 budget has grown to over $1 million. The Project is charged with developing an environmental master plan that will ensure an acceptable and sustainable level of environmental quality for Buzzards Bay. On January 25, 1988 EPA and the state designated Buzzards Bay as "an estuary of national significance," joining five other estuaries in the National Estuary Program. Massachusetts is also involved in a similar effort in Narragansett Bay, as the upper reaches of the Bay and many of the tributaries are within the Commonwealth. Work is underway to have Massachusetts Bay added to the list.



Massachusetts General Laws, Chapter 132A created the Ocean Sanctuaries Program. In 1987, an Ocean Sanctuaries Study Group report was sent to the legislature for their action in amending the Act.



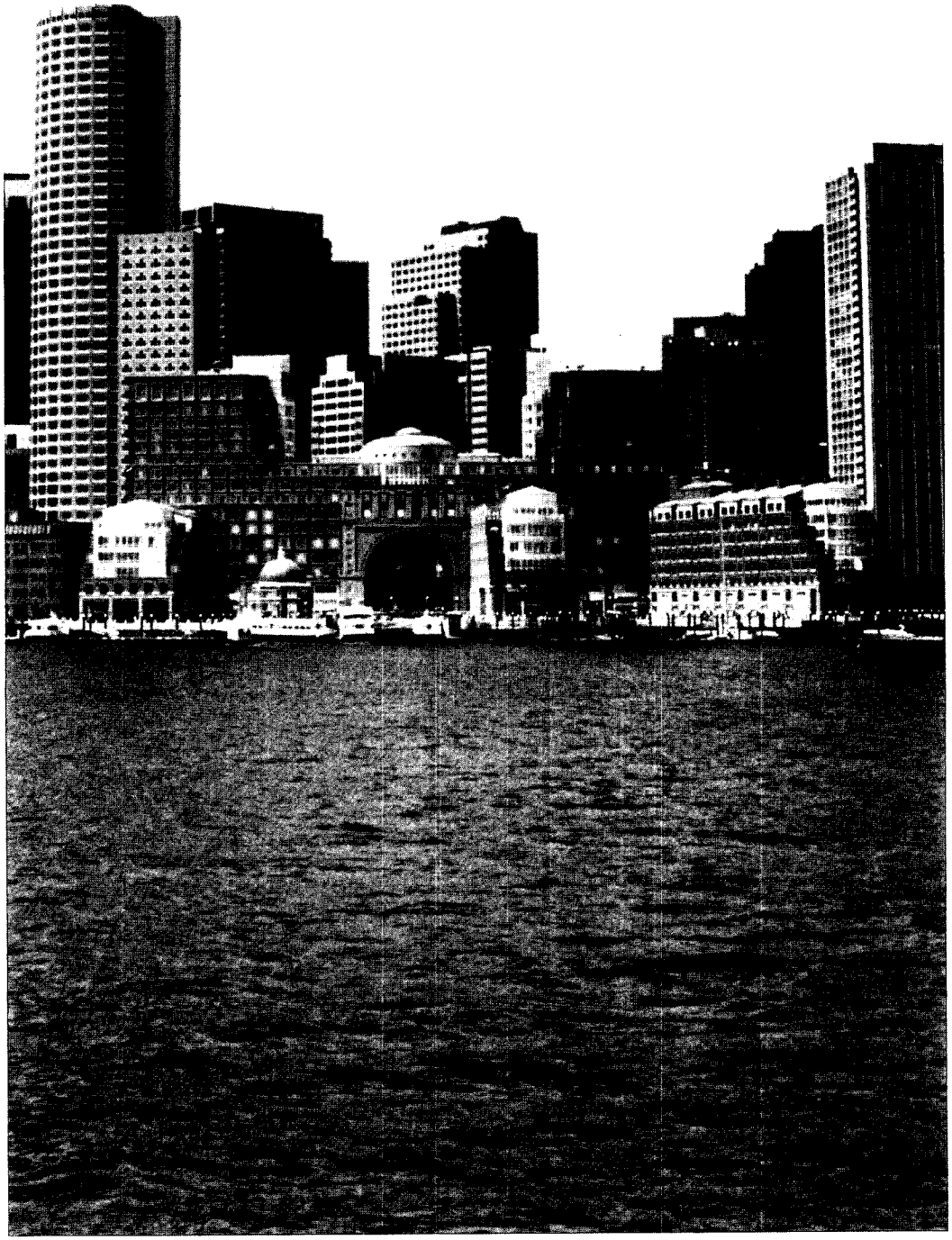
Ripples in a salt marsh hide the rich diversity of life in these valuable coastal waters.

Waquoit Bay, in Falmouth and Mashpee, already a state ACEC, was selected to become the 17th National Estuarine Research Reserve with official designation in 1988. The goals of the NERR program are to preserve representative estuarine systems for research and educational purposes, with resulting data used to make management decisions in similar areas across the nation.

In 1987, Massachusetts entered into the federal Nonpoint Source Control Program. The program is administered by EPA under authority of the Clean Water Act Amendments of 1987.

In 1988, Massachusetts added its name to the list of states proposing or enacting legislation to prohibit the use of antifouling paints with the chemical additive tributyltin (TBT). As of April 1, 1988, the Massachusetts Department of Food and Agriculture banned the use of TBT-paints on all non-aluminum vessels under 25 meters in length. Paints with limited TBT release rates of less than three micrograms per day can be used on larger vessels. Legislation has been proposed on both the federal and state level.

A landmark April 1988, federal-state agreement will allow $2 million in fines, previously assessed by EPA against the state, for past water pollution violations to be allocated to an Environmental Trust Fund, dedicated to the research, monitoring and clean-up of Boston Harbor and Massachusetts Bay.



General Development

MCZM policies on general development, public/private investment, and ports and harbors were developed in response to the rediscovery of the urban waterfront. Although the state has had a long and rich tradition of association with the sea, our urban waterfronts have recently become a magnet for housing and other forms of private, non-water-dependent use; unfortunately, such development pressure often displaces water-dependent activity and threatens to make the shore "off-limits" to the public at large.

The state's interest in coastal development, during the decade of the MCZMP, can be looked at as consisting of two phases. The first five years concentrated on rehabilitation of existing structures and construction of new marine facilities. While financial assistance continued to play an important role in the second phase, the major focus over the past few years has been on the development of Massachusetts laws to regulate work in tidelands.

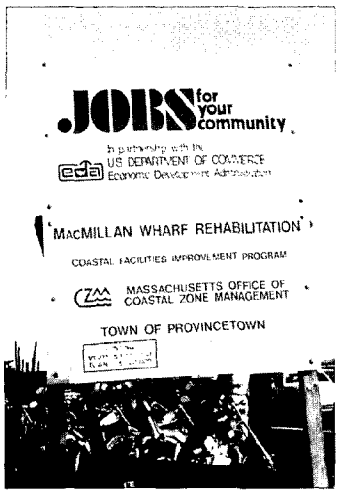
These intertidal flats and submerged lands have been regulated under the common law doctrine, known as the "public trust," which grants access to tidelands for "fishing, fowling and navigating" in intertidal areas and ownership by the Commonwealth below the low tide line. Recent sweeping changes in Massachusetts coastal law are based upon recognition that the Commonwealth's authority can extend to those areas which have been filled as well as those that are still subject to tidal action. Consequently, virtually all of the urban waterfronts in Massachusetts are now subject to a level of state control.

Foremost among the state's interests are the protection, in perpetuity, of the public's right to access the tidelands and support for water-dependent industries and activities that have played such an important role in the Commonwealth's history. During the past ten years, the state has recorded many milestones in its efforts to develop urban coastal resources.

The 1978 MCZM Program identified 12 "Designated Port Areas" (DPAs). Within a DPA, both filled and flowed tidelands are reserved exclusively for uses that are either maritime industrial or which occur in a manner that does not significantly diminish the capacity of the DPA to accommodate maritime industry in the future. DPAs are found in: Gloucester, Salem Harbor, Beverly Harbor, Lynn, Mystic River, Chelsea Creek, East Boston, South Boston, Weymouth Fore River, Plymouth Cordage Park, New Bedford-Fairhaven, and Mt. Hope Bay.

A Community Assistance Grants Program was initiated in 1977 as a state-federal effort, administered by MCZM. Through it, MCZM awarded over $1 million to help pay for some 82 local projects in the areas of: port and harbor development and waterfront renewal plans, preliminary engineering studies, applied science investigations, recreation plans, and coastal hazard mitigation studies. Instrumental in providing leverage for further fundraising, the first $240,000 of MCZM grants resulted in more than $10 million of investment in coastal improvements. In addition to the grants program, $84,000 in special funds was awarded in 1978 to Gloucester, Plymouth and Salem for urban waterfront demonstration projects.

New buildings along the Boston waterfront and elsewhere in the Commonwealth have incorporated visual and physical access amenities for the public in accordance with state licensing processes.



CFIP PROJECTS (ROUNDS I, II & III)

COMMUNITY	PROJECT
Barnstable	Hyannis Gateway Park
Beverly	Public Pier
Boston	Dry Dock Park
	Pier 10 Rehabilitation
Chatham	Barn Hill Road Landing
	Crow's Pond Town Landing
	Mill Pond Town Pier
	Ryder's Cove Landing
Chilmark	Menemsha Bulkhead Repair
Danvers	Popes Landing
Dennis	Sesuit Harbor Bulkhead
Edgartown	Memorial Wharf Bulkhead
	Memorial Wharf Superstructure
Falmouth	Eel Pond Dock
Gay Head	West Basin Boat Ramp
Gloucester	Harbor Cove Docking Facility
	State Fish Pier
Harwich	Saquatucket Marina
Hingham	Harbor Facilities
Hull	Pemberton Wharf
Lynn	Marine Park Pier
	LPA Docking Facility
Marshfield	Harbor Community Park
	Town Pier
Mashpee	Great River Boat Ramp
	Ockway Bay Boat Ramp
	Pirate's Cove Boat Ramp
New Bedford	South Terminal Fender System
	Steamship Pier
Newburyport	Waterfront Embayment
Oak Bluffs	Harbor Protection
Orleans	Paw Wah Pond Landing
	Rock Harbor
Provincetown	MacMillan Wharf
Quincy	Houghs Neck Park
	Nut Island Park
Salem	Collins Cove Bulkhead
	Winter Island Marina
Saugus	Lobsterman's Landing
Scituate	Town Wharf
Somerset	Pierce Beach Park
	Village Waterfront Park
Swampscott	Fish House and Pier
Swansea	Ocean Grove Parking Facility
Tisbury	Shellfish Hatchery
Wellfleet	Shirttail Point Facilities
Yarmouth	N.H. Ave. Access/Protection
	Wilbur Park Walkway

A Supreme Judicial Court decision in the Boston Waterfront Development Corp. v. Commonwealth case breathed new life into the public trust doctrine allowing access to Massachusetts trustlands along the shore. The Court ruled that private developers were subject to the implied condition that the property be used for the public purpose for which the land was originally granted. If they did not meet those requirements, the state could reclaim former tidelands, including those that had been filled for over 150 years. The Court emphasized the tenacity of the public trust doctrine over time and established that protection of the public interest in each parcel of tidelands is a perpetual responsibility of the government.

The Coastal Facilities Improvement Program (CFIP) was created in Chapter 589 of the Acts of 1983 as one part of comprehensive legislation addressing coastal matters. State bond funds in the amount of $18 million were allocated for use by eligible coastal communities for the construction, reconstruction, repair or maintenance of coastal facilities. 49 projects in 32 communities were assisted in three rounds of grants. CFIP was reauthorized in 1987 for another three years with a $10 million allocation.

Chapter 91 of the Massachusetts General Law was amended in 1983 to provide greatly in creased substantive and procedural protection to public rights in tideland, both flowed and filled. The following year, the legislature and Governor Dukakis declared a moratorium on the enactment of irrevocable license bills and other special tidelands statutes, further strengthening the public trust doctrine. In 1986, DEQE published draft revisions to the Waterways Regulations which overhauled the entire licensing framework and included policy initiatives expressed in the 1983 amendments.

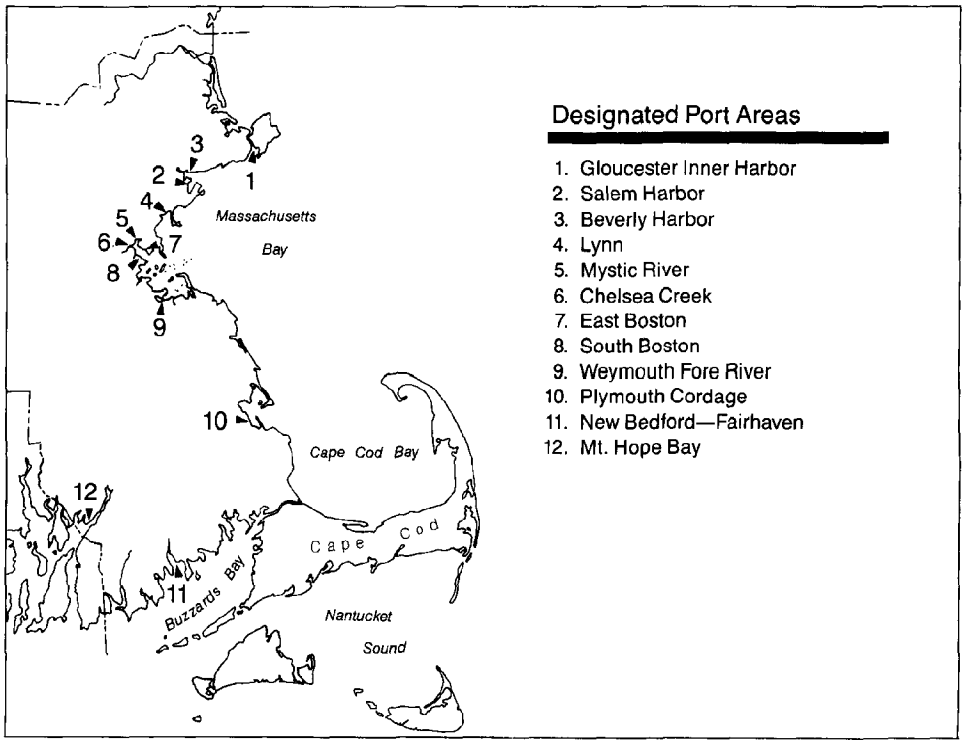
Planning boards coping with development in local harbors received a boost in 1987 as MCZM released "Guidelines for Harbor Planning" and the reauthorized Coastal Facilities Improvement Program allocated $1 million towards the production of comprehensive plans. MCZM will award these harbor planning grants in the 1988-1991 time period.

Massachusetts agencies completed licensing actions on the first ten major applications for non-water dependent use of filled tidelands along the waterfront in 1987. Public access provisions consistent with the public trust doctrine and Chapter 91 were incorporated in the developers' plans.

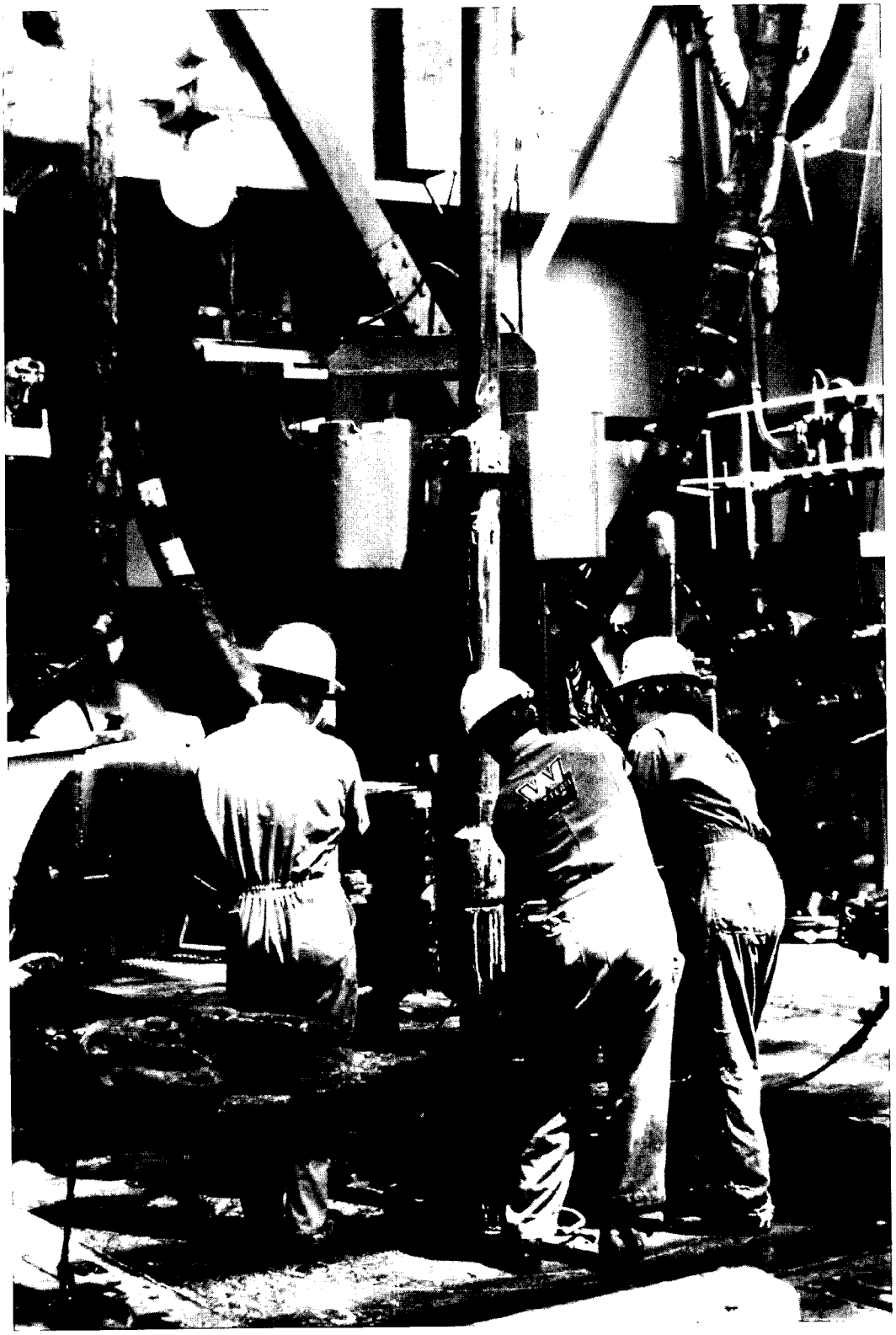
Dredging projects also received attention in 1987 with the publication of MCZM's Dredging Handbook and the reauthorization of DEM's Rivers and Harbors Program under the Open Space Bond. This program funds a significant portion of locally-sponsored dredging projects.

A new program, intended to allow the state to purchase development restrictions to threatened boatyards, was established in the 1987 Open Space Bond with MCZM chairing the organizational committee. The Boatyard Preservation Program is modelled after the Commonwealth's successful Agricultural Preservation Program.

The Public Access Board of the Department of Fisheries, Wildlife and Environmental Law Enforcement was formed in 1962. Over the past decade the Board has been involved in the repair and construction of boat launching facilities in: Plymouth Harbor, New Bedford, Apponagansett Bay, Pease Park and Sconticut Neck, Hither Creek, Back River, Cashman Park, Cole River, Pamet River, Blish Point, Clark Cove and Scituate Harbor. In 1987, the Board published "Public Access to the Waters of Massachusetts," listing 121 boat and canoe launching sites which have been designated state access facilities.



The original CZM Plan described 12 Designated Port Areas where tidelands are reserved for water-dependent industry or other uses not harmful to the DPA's capacity to accommodate future maritime commerce.



Energy

When the MCZMP came into force, two major accidents had just illustrated the problems of spilling oil on coastal waters. The December 16, 1976 ARGO MERCHANT incident off Nantucket showed Massachusetts that its waters were not immune to shipping accidents. Favorable ocean currents, fortunately, dispersed the 7.7 million gallons of fuel oil out to sea. The coast of Brittany, France, was not as lucky less than two years later. The AMOCO CADIZ breakup on March 17, 1978 demonstrated just how devastating an oil spill could be to beaches and wildlife.

When the MCZMP was officially approved, energy projects and energy facilities siting found their way into those initial 27 policies, with particular emphasis on the issues of commercial, industrial and energy development in urban ports, harbors and in the offshore Georges Bank region. The energy policies demonstrate a commitment by the Commonwealth to minimizing any adverse impacts on fisheries, water quality, wildlife and the marine environment. This commitment has led to confrontations with the federal government with regard to offshore oil and gas development in the Georges Bank area, one of the most productive fishing grounds in the world.

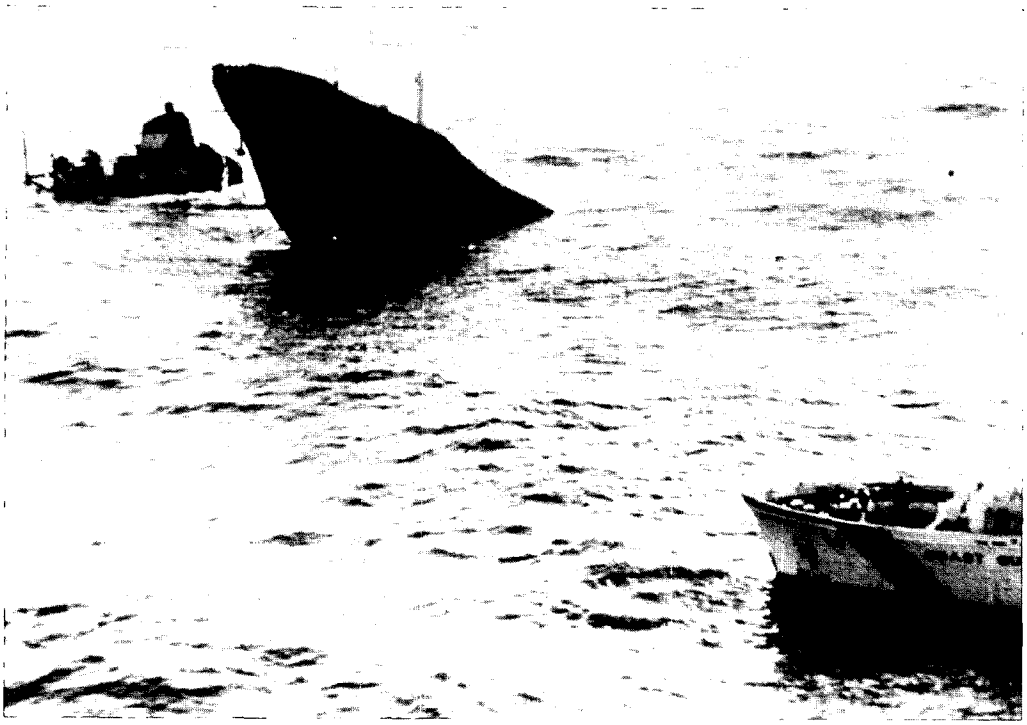
The Coastal Zone Management Program has worked diligently over the past decade to reduce conflicts between the various groups interested in the Georges Bank region and to insure that adequate safeguards are in place before oil and gas wells are drilled and other energy development projects are initiated.

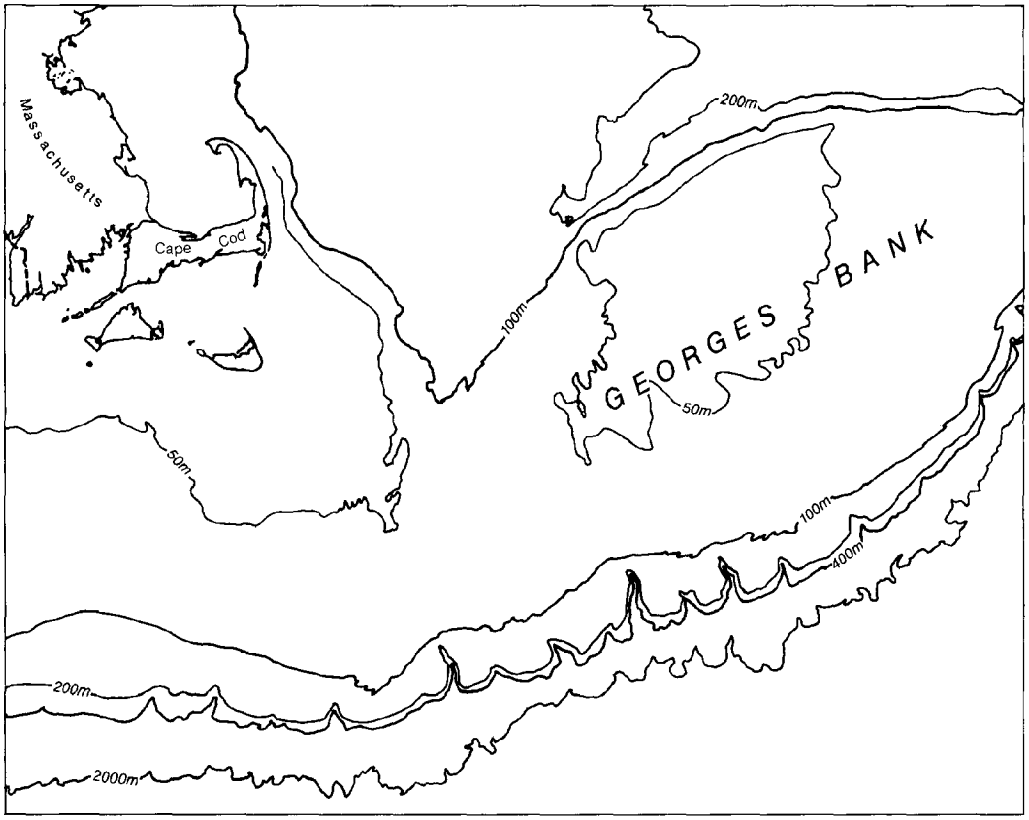
Massachusetts worked with several states and national environmental groups to amend the federal Outer Continental Shelf Lands Act in 1978. The amendments increased the states' roles in the development of federal leasing policy and created an offshore oil spill compensation fund.

The Coastal Energy Impact Program (CEIP) was established by Congress in 1976 and administered under the CZMA to help states and local communities deal with the social, economic and environmental impacts of coastal energy activity. The federally funded program, administered in Massachusetts by EOEA, provided assistance in the form of grants and loans. Significant projects included development of oil spill contingency plans. Work to restore this funding program is now underway.

The U.S. Department of the Interior offered for sale 116 blocks on Georges Bank in Sale #42 during December 1979. Bids of $816.5 million were accepted on 63 blocks. Massachusetts succeeded in persuading the Department of the Interior to develop a training program for oil rig personnel to recognize and minimize conflicts with the fishing industry. For the first time, DOI required drilling operations to employ personnel trained in the use of oil spill containment equipment and to subscribe to some of the strictest drilling standards nationwide.

The drill floor on the ALASKAN STAR hummed with activity during the sinking of two test wells. Actions by CZM led to the requirement that all drilling operations be staffed with personnel trained in oil spill containment and clean-up.




Massachusetts
Cape
Cod
200m
100m
GEORGES
BANK
50m
50m
100m
400m
200m
2000m

The Massachusetts Oil Spill Contingency Planning Program was inaugurated in January 1980. The project is designed to give coastal communities the organization, training and equipment necessary to respond immediately to an oil spill. Cape Cod, Martha's Vineyard, and the North and South Shores have completed plans, funded through the CZM-administered Coastal Energy Impact Program. The Cape and Martha's Vineyard began the training phase in 1981.

During the 1970s and 80s scientific studies added to our understanding of the unique characteristics of Georges Bank and its fisheries productivity; however, DOI continued to plan further lease sales even as its estimates of petroleum resources were further reduced. Massachusetts believed the best protection for the fisheries resource was to prevent drilling on the Bank. Therefore, when DOI proposed Lease Sale #52, Massachusetts filed suit. A preliminary injunction was granted on March 28, 1983 and the sale was cancelled on November 21.

The Commonwealth again sued DOI in 1984 in an attempt to stop Lease Sale #82, scheduled for September 26, 1984. The Conservation Law Foundation, representing several environmental and fishing groups, was party to the suit. Citing violations of the Outer Continental Shelf Lands Act and the National Environmental Policy Act, the District Court decided in the Commonwealth's favor on September 25, 1984 and granted a preliminary injunction against the sale. Just a few hours after that announcement, DOI cancelled the sale, scheduled for the next day. DOI had not received a single bid from any of the oil companies, an unprecedented occurrence in offshore leasing.

Massachusetts is now challenging DOI's five year plan for 1987-1992. Along with four other states and various environmental groups, the Commonwealth questions whether the plan subscribes to the tenets of the OCS amendments and considers the impacts of leasing programs on the condition of the coastal zone. Massachusetts recommends placing all areas of 400 meters depth or less, effectively all of Georges Bank, off limits to oil and gas drilling.

The ARGO MERCHANT broke in two on shoals off of Nantucket, spilling millions of gallons of fuel oil; luckily for Massachusetts, prevailing winds and seas took the oil away from shore.

Georges Bank, a relatively shallow area some 60 miles east of Cape Cod, is the feeding and breeding ground for many commercially-important species. The state's fishing fleet lands about 90% of the U.S. catch from the Bank.

The ALASKAN STAR oil rig was moved to a site on the Georges Bank in 1981. Wells drilled at that time came up dry.

Recreation

Getting on to our shores—will it be a right for all citizens or a luxury for a few? Over the years the Massachusetts coast has attracted lovers of the sea, but as the population of our coastal communities continues to soar, the beaches, parks and historic sites will be increasingly pressured. Coastal areas, not now owned by state and local governments, are threatened by conflicting multiple uses, many of which are non-water-dependent.

From the very beginnings of the MCZM Program, the state recognized its role in maintaining coastal public access opportunities for all its citizens and developed policies that focused on recreation as well as visual, cultural and historic environments. This commitment was demonstrated through the development of programs for: 1) state-level acquisition of coastal lands; 2) financial assistance to municipalities; 3) project reviews for the protection and enhancement of amenities; and 4) technical assistance and other support services to communities with threatened coastal resources.

On several occasions, MCZM and other government officials have worked closely to ensure that proposed activities in or near historic districts or sites respect their preservation intent. Representative cases include the Coast Guard facility on Cape Cod Canal (1983) and three historic lighthouses at the Cape Cod National Seashore (1986).

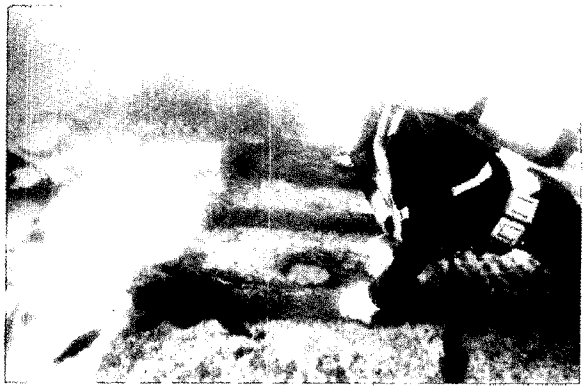
With respect to visual access, Chapter 91 waterways regulations explicitly require consideration of "the extent to which the project blocks the public view of the coast or the ocean or is incompatible with the existing characteristics of its neighborhood." During the past few years, visual access considerations have been an important part of MCZM and DEQE review of all proposed waterfront buildings, and have occasionally produced significant layout and design changes.

In addition to these accomplishments, funds from the Community Assistance Grants Program and the Coastal Facilities Improvement Program have upgraded waterfront parks, recreational facilities and visual access opportunities. Other highlights over the past ten years have included:

- *The Coastal Acquisition Program, initiated in 1978 and administered by DEM, obtained several major properties over the past decade, including South Beach in Edgartown, Halibut Point in Rockport, Washburn Island in Falmouth and the 402-acre South Cape Beach in Mashpee. Some 1,230 total acres were acquired at a cost of approximately $20.3 million; this nearly doubled the number of DEM-owned coastal properties from 8 in 1978 to 15 today. The 1987 Open Space Bond contains $30 million to continue this vigorous coastal acquisition effort.*

- *The Urban Heritage State Parks Program, also initiated in 1978 and run by DEM, helps revitalize older urban centers while providing open space for people in densely populated areas. Heritage State Parks have been created in the coastal communities of Fall River and Lynn.*

Will our children's children be able to enjoy the Massachusetts shore? Aggressive state coastal acquisition programs are preserving public beaches and other recreational open spaces for use by future generations.



The Board of Underwater Archaeological Resources, established in 1973 by EOEA, was transferred to CZM in 1988. Regulations promulgated by the Board in 1985 established a permitting process for exploration and recovery of shipwrecks and artifacts in state waters. Here, a diver inspects one of the numerous wrecks off the Cape Cod coast.

Development of the Hyannis Gateway Park Marina was funded in part by a CFIP grant.

The Public Trust doctrine protects public rights to "fishing, fowling and navigation" in the intertidal zone. In Massachusetts, species commonly caught from shore include bluefish, yellowtail flounder and striped bass.

The first phase of DEM's Boston Harbor Islands State Park Development Program (originally planned in 1972) included clean-up, seawall repair, new piers, trail improvements, water-taxi service, and staffing by trained, live-in managers. Annual visitors in 1987 increased 77% over 1986, and total visitor-trips per year are presently estimated at 220,000. The 1986 master plan for the next phase of improvements foresees an increased capacity to 600,000 visitor-trips per year by the year 2000.

Another DEM program, which began in 1977, focuses on Scenic Rivers. Under this program, a total of nine river segments within the coastal zone have attained "classified" status which gives them top priority for protection and entails close monitoring. Two coastal rivers have attained "designated" status, the ultimate goal for all rivers on the classified list. The North River has been designated a State Scenic River and is subject to a state protective order and a DEM-adopted management plan; the Merrimack River has been designated a Local Scenic River and is subject to a locally-developed, DEM-approved protection strategy.

The 1978 Statewide Comprehensive Outdoor Recreation Plan (SCORP) set forth in a coordinated manner a five-year agenda for outdoor recreation and natural and cultural resource conservation, including a call for innovative statewide programs of coastal acquisition and urban state parks. Subsequent SCORPs in 1983 and 1988 reinforced the earlier programs. The SCORP process was established in 1965 as a requirement imposed by the federal Land and Water Conservation Fund Act on all states receiving grants from the fund.

With financial assistance from the Coastal Energy Impact Program in 1980, the MCZM office planted the seeds for what eventually has become a major waterfront reclamation project for the Dorchester waterfront. In 1981, MDC opened Tenean Beach as the first link in a nine-mile-long, 84-acre esplanade on the banks of the Neponset River. The planned pedestrian/bicycle connections with holdings in South Boston and the Blue Hills Reservation will make this one of the largest open space and conservation projects in the entire Boston metropolitan area, rivaling the success of the Charles River Esplanade.

A Massachusetts Landscape Inventory, completed in 1982, was the first major survey of the Commonwealth's scenic areas in fifty years. The inventory allows state and local acquisition and conservation efforts to concentrate on prime landscapes. Among these "scenic landscape units" are 11 in the coastal zone; each unit is defined as at least one square mile where visual quality is consistently high.

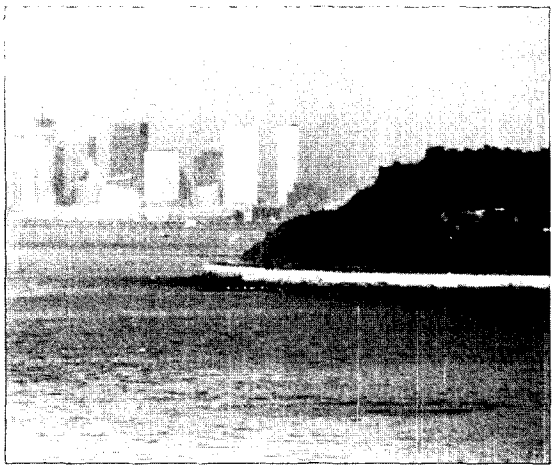
COASTWEEK was created in 1982 as a follow-up to the Year of the Coast (1980) with Massachusetts Coastal Resources Advisory Board members instrumental in its development. Since its inception, Coastweek (now Coastweeks) has become an annual event in some 27 states and several foreign countries.

The Nantucket Land Bank was authorized in 1983 at a Town Meeting and by the Massachusetts Legislature. This unique local initiative attempts to preserve coastal beaches and open space through assessment of transfer taxes on real estate.

The Department of Public Works instituted an open space program in 1985. $10 million was authorized for the purchase of land or easements within or adjacent to public ways for the purpose of "restoring, preserving, or enhancing areas of scenic beauty or special environmental value." Three coastal properties have been funded under this program at Brewster, Chilmark and Truro. The 22-acre Truro acquisition abutting Route 6 now affords Cape Cod vacationers and residents a spectacular view of the hook of Cape Cod and, on a clear day, completely across Cape Cod Bay to Plymouth's Manomet Cliffs – a vista that otherwise would have been blocked by a proposed residential subdivision.

Barnstable used a 1985 CFIP grant of $1 million for development of the Hyannis Harbor Gateway Park, including removal of three existing buildings to establish a direct visual link to the harbor. A 1987 grant for the rehabilitation of Pier 10 in the Boston Marine Industrial Park will afford the public a means of access to the working waterfront of South Boston.

The 1987 Open Space Bond reauthorized the Self Help Program which assists municipalities in acquiring land for conservation and passive recreation purposes. Established in 1961, the Self Help Program has provided financial assistance to numerous coastal projects, including acquisitions on the Mashpee River, the Forest River in Salem, the North River Driftway and marshes in Scituate, and property in Truro. Many of these projects have also used funding from the federal Land and Water Conservation Fund which is administered nationally by the National Park Service. While the intent of the Self Help Program is to preserve lands and waters in their natural state, the Land and Water Conservation Fund also supports development of outdoor recreation support facilities. Major projects over the past decade are: Charlestown Waterfront Park, Revere Beach, St. Peter's Park in Gloucester, Chelsea Waterfront Park, Long Wharf in Boston, and the Bourne Marina.



NEW STATE PARKS

1980	Plum Island (52.5 acres)
1981	Halibut Point (50.0 acres)
1982	South Cape Beach (401.9 acres)
1983	Washburn Island (335.0 acres)
1983	South Beach (24.2 acres)
1984-7	Brewster Beach (91.3 acres)
1987	Waquoit Bay National Estuarine Research Reserve Headquarters (22.0 acres)

The Boston Harbor Islands State Park now hosts over 220,000 visitors per year with a three-fold increase expected by the turn of the century. This view is from Gallops Island.

Coastal areas protected by the state's Wetlands Protection and Wetlands Restrictions Acts provide habitat for a wide variety of birds and other animals.

MCZM Policies

The purpose of the Massachusetts CZM Program is to protect and carefully manage the development and use of the Commonwealth's coastal zone and its valuable resources. This is largely accomplished through existing EOEA agencies and guided by 27 Coastal Zone Management Program Policies. These policies are individually summarized below. The regulatory policies and non-regulatory policies are used in conjunction with state regulatory programs and decision-making and reflect state management priorities.

Regulatory Policies

Policy 1 Protect ecologically significant resource areas (salt marshes, shellfish beds, dunes, beaches, barrier beaches, and salt ponds) for their contributions to marine productivity and value as natural habitats and storm buffers.

Policy 2 Protect complexes of marine resource areas of unique productivity (Areas of Preservation or Restoration (APRs)/ Areas of Critical Environmental Concern (ACECs)); ensure that activities in or impacting such complexes are designed and carried out to minimize adverse effects on marine productivity, habitat values, water quality, and storm buffering of the entire complex.

Policy 3 Support attainment of the national water quality goals for all waters of the coastal zone through coordination with existing water quality planning and management agencies. Ensure that all activities endorsed by CZM in its policies are consistent with federal and state effluent limitations and water quality standards.

Policy 4 Condition construction in water bodies and contiguous land areas to minimize interference with water circulation and sediment transport and to preserve water quality and marine productivity. Approve permits for flood or erosion control projects only when it has been determined that there will be no significant adverse effects on the project site or adjacent or downcoast areas.

Policy 5 Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity and public health.

Policy 6 Accommodate offshore sand and gravel mining needs in areas and in ways that will not adversely affect marine resources and navigation.

Policy 7 Encourage the location of maritime commerce and development in segments of urban waterfronts designated as port areas. Within these areas, prevent the exclusion of maritime-dependent industrial uses that require the use of lands subject to tidelands licenses.

Policy 8 For coastally-dependent energy facilities, consider siting in alternative coastal locations. For non-coastally-dependent energy facilities, consider siting in areas outside of the coastal zones. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

Policy 9(a) Accommodate exploration, development and production of offshore oil and gas resources while minimizing impacts on the marine environment, especially on fisheries, water quality and wildlife, and on the recreational values of the coast, and minimize conflicts with other maritime-dependent uses of coastal waters and lands. Encourage maritime-dependent facilities serving supply, support or transfer functions to locate in existing developed ports.

Policy 9(b) Evaluate indigenous or alternative sources of energy (coal, wind, solar and tidal power) and offshore mining to minimize adverse impacts on the marine environment, especially with respect to fisheries, water quality, and wildlife, and on the recreational values of the coast.

Policy 10 All development must conform to existing applicable state and federal requirements governing subsurface waste discharges, sources of air and water pollution and protection of inland wetlands.

Policy 11 Protect designated scenic rivers in the coastal zone. Support designation of areas for preservation or restoration as "sign free areas."

Policy 12 Review proposed developments in or near designated or registered historic districts or sites to ensure that federal, state, and private actions requiring a state permit respect their preservation intent and minimize potential adverse impacts.

Policy 13 Review developments proposed near existing public recreation sites in order to minimize their adverse impacts.

Non-Regulatory Policies

Policy 14 Encourage and assist commercial fisheries research and development, restoration and management of fishery resources, development of extensive and intensive aquaculture, and enhancement of anadromous fisheries, initiated at local, state and federal levels.

Policy 15 Ensure that state and federally funded public works projects proposed for location within the 100 year coastal flood plain will:
(a) not exacerbate existing hazards or damage natural buffers;
(b) be reasonably safe from flood and erosion related damage; and
(c) not promote growth and development in damage prone or buffer areas, especially in undeveloped areas of APRs.

Policy 16 Encourage acquisition of undeveloped hazard prone areas for conservation or recreation use, and provide technical assistance for hazard area zoning and mitigation of erosion problems.

Policy 17 Provide funding for protection from tidal flooding and erosion, emphasizing the use of non-structural measures where feasible.

Policy 18 Encourage, through technical assistance and review of publicly funded development, compatibility of proposed development with local community character and scenic resources.

Policy 19 Promote the widest possible public benefit from channel dredging, ensuring that designated ports and developed harbors are given highest priority in the allocation of federal and state dredging funds. Ensure that this dredging is consistent with marine environmental policies.

Policy 20 Encourage, through technical and financial assistance, expansion of water-dependent uses in designated ports and developed harbors, redevelopment of urban waterfronts, and expansion of visual access.

Policy 21 Improve public access to coastal recreation facilities, and alleviate auto traffic and parking problems through improvements in public transportation. Link existing coastal recreation sites to each other or to nearby coastal inland facilities via trails for bicyclists, hikers and equestrians and via rivers for boaters.

Policy 22 Increase capacity of existing recreation areas by facilitating multiple use and by improving management, maintenance and public support facilities. Resolve conflicting uses whenever possible through improved management rather than through exclusion of uses.

Policy 23 Provide technical assistance to developers of private recreational facilities and sites that increase public access to the shoreline.

Policy 24 Expand existing recreation facilities and acquire and develop new public areas for coastal recreational activities. Give highest priority to expansion or new acquisitions in regions of high need or where site availability is now limited. Assure that both transportation access and the recreational facilities are compatible with social and environmental characteristics of surrounding communities.

Policy 25 Encourage energy conservation and the use of alternative sources such as solar and wind power in order to assist in meeting the energy needs of the Commonwealth.

Policy 26 Ensure that state and federally funded transportation and wastewater projects primarily serve existing developed areas, assigning highest priority to projects which meet the needs of urban and community development centers.

Policy 27 Encourage the revitalization and enhancement of existing development centers in the coastal zone through technical assistance and federal and state financial support for residential, commercial and industrial development.

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Coastal Zone Management operates several regional offices in the coastal zone. Please contact the Boston office for more information.

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