NOAA'S POLLUTION PROGRAM PLAN:

FISCAL YEARS 1982-1986

January 1982

U.S. DEPARTMENT OF COMMERCE
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National Oceanic and Atmospheric Administration
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I. Introduction: Today's Marine Pollution Problems

The marine environment provides a great many tangible assets, including petroleum and natural gas, hard minerals, and a variety of harvestable fishery products. It is also used as a medium for commercial transportation, a receiving and processing system for the wastes of civilization, a source of atmospheric moisture for continental precipitation, and a complex chemical factory for the cleansing and regulation of atmospheric gases. The marine environment provides recreational opportunities and scenic values which greatly contribute to the quality of life.

Conflicts often arise among different marine resource uses. This is particularly true in areas of high population and in areas where resources such as recreation and commercial fishing are dependent upon good enrivonmental quality, and other resources such as transportation, waste disposal, and marine mining, are not dependent on environmental quality. In addition, the open oceans that were once somewhat isolated by distance from such conflicts are now exposed to multiple activities. This trend will increase as new technologies are developed, such as commercial development of deep seabed mining, and existing technologies are utilized to a greater extent.

The United States and other countries will continue to face expanding resource needs which will require greater and more diverse intrusion into the marine environment. Increasing demands to use the oceans as a waste repository and as a source of marine energy and nonliving and living resources are facilitated by technological advances. This will challenge our nation's efforts to balance marine use and protection. Careful planning and management will therefore be necessary to maintain the integrity of these marine systems.

Because of the accelerating human influence on the marine environment, new management approaches must be devised which allow for equitable uses and activities, development of adequate safeguards to prevent environmental destruction, and, where possible, enhancement of marine environments. To be effective, these new approaches will have to be based on an improved understanding of the ecological processes which characterize these environments, and on an understanding of land-side alternatives (i.e., multimedia approach), if they exist. Further, important social and economic values must be recognized, and information must be exchanged rapidly between information users and the information generators and synthesizers.

II. NOAA's Role In Marine Pollution

The National Oceanic and Atmospheric Administration (NOAA) was established in 1970 to serve as a civilian governmental focus and to "ensure the full and wise use of the marine environment in the best

interests of the United States."[1] The NOAA concept was the result of two concurrent trends in national science policy thinking. The first was the conviction that the nation should pay increased attention to wise development of oceanic resources. The other was the growing recognition that the oceans, land, and atmosphere are interacting parts of the total environmental system and that a new organizational approach was needed to deal with such multi-media problems.

During the past 10 years NOAA's responsibilities have grown with the result that the agency now has responsibility for a wide array of ocean pollution research and service activities. In FY81, NOAA conducted 16 such marine pollution research, development, and monitoring studies with a budget over $25 million. In the past, limited effort has been exerted to integrate these various activities into a coordinated and comprehensive marine pollution research, development, and monitoring program. Marine pollution-related activities are conducted by different organizational elements within NOAA that have differing organizational responsibilities, capabilities, and direct legislative mandates. Recognizing this diversity of effort, Congress passed the National Ocean Pollution Planning Act of 1978 (P.L. 95-273) which requires NOAA to develop a coordinated and comprehensive program within the Agency.

To carry out this purpose of the Act, it is necessary for NOAA's program "...to develop the necessary base of information to support and to provide for the rational, efficient, and equitable utilization, conservation and development of ocean and coastal resources...". Thus, the program must provide information that addresses specific decisions that must be made to allow the equitable use of ocean resources. The program also needs to develop information that both increases the understanding of the marine ecosystem and addresses specific decision-makers' needs and timing requirements. The intent of this document is to define the mechanism whereby this information will be developed to describe NOAA's ongoing marine activities, and to detail how these activities will be implemented to form a comprehensive NOAA program.

III. Legislative Authority

An important part of NOAA's mission relates to marine pollution, and the National Ocean Pollution Planning Act of 1978 (33 U.S.C. 1701 et seq.) which requires that NOAA take a lead role in the Federal Marine Pollution effort. The purpose of this Act is:

1. to establish a comprehensive five-year plan for Federal ocean pollution research and development and monitoring programs in order to provide planning for, coordination of, and dissemination of information with respect to such programs within the Federal Government;

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[1] Our Nation and the Sea. p. 230.

2. to develop the necessary base of information to support, and to provide for, the rational, efficient, and equitable utilization, conservation, and development of ocean and coastal resources; and

3. to designate the National Oceanic and Atmospheric Administration as the lead Federal agency for preparing the plan and to require NOAA to carry out a comprehensive program of ocean pollution research and development and monitoring under the plan.

This Act directs the Administrator of NOAA, in consultation with appropriate Federal officials including the Director of the Office of Science and Technology Policy of the Executive Office of the President to prepare and biennially update a comprehensive five-year plan for the overall Federal effort in ocean pollution research and development and monitoring (Section 4). The Administrator also is required to provide financial assistance for research and development and monitoring projects or activities which are needed to meet priorities of the five-year plan if these are not being adequately addressed by any Federal agency (Section 6). In addition, the Act directs the Administrator of NOAA to ensure that results, findings, and information regarding Federal ocean pollution research and development and monitoring programs be disseminated in a timely manner and in a useful form to Federal and non-federal user groups having an interest in such information (Section 8).

The Act also directs the Administrator of NOAA to establish a comprehensive, coordinated, and effective marine pollution research and development and monitoring program within NOAA (Section 5). The NOAA program must be comprehensive in scope and address problems:

1. over a broad geographic area including land and water from the inner boundary of the coastal zone as that term is used in the Coastal Zone Management (CZM) Act[2] to and including the land underlying and the waters of the high seas;

2. involving short- and long-term changes in the marine environment; and

3. involving utilizing, developing, and conserving ocean and coastal resources.

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[2] Coastal zone is defined by the CZM Act as the coastal waters (including the lands therein and thereunder), and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other in proximity to the shorelines of the several coastal States, including islands, transitional and intertidal areas, salt marshes, wetlands, and beaches. Also included are the waters of the Great Lakes, to the international boundary between the United States and Canada.

The program also must be coordinated both within NOAA and with other Federal agency programs and be consistent with the Federal marine pollution research and development and monitoring plan.

NOAA has numerous other statutory mandates to conduct, support, or coordinate programs and activities for marine pollution research, development, and monitoring, ocean development, and living marine resource conservation and utilization. The programs mandated by these other laws complement NOAA's responsibilities under the National Ocean Pollution Planning Act.

IV. Agency Organization

NOAA is organized into six Major Line Components (MLCs). For the purpose of this plan, the Office of Policy and Planning and the Office of Ocean Minerals and Energy (both within the Office of the Administrator) are included in the definition of MLCs. Figure 1 describes the organization and identifies NOAA's marine pollution program activities within the organization. Due to organizational capability and responsibility, NOAA's marine pollution activities are conducted throughout the agency, by the Offices of Research and Development (RD), Fisheries (F), Oceanic and Atmospheric Services (OAS), Coastal Zone Management (CZM), Policy and Planning (PP) and Ocean Minerals and Energy (OME). The Office of Policy and Planning serves as a nucleus for Federal marine pollution program coordination and the Office of Research and Development has the lead role for the planning and coordination of marine pollution activities within NOAA. This decentralization requires NOAA to develop mechanisms and procedures that will ensure that these diverse activities are coordinated.

V. NOAA's Marine Pollution Program Goals

In 1979, NOAA played the lead role in developing the first Federal Marine Pollution Program Plan for fiscal years 1979-83. This five-year Federal Plan was designed to provide a description of the existing marine pollution programs in the Federal agencies and to give overall policy guidance to efforts to plan and coordinate the Federal activities related to ocean pollution research, development, and monitoring.

In 1981, this Federal Plan was updated as required by P.L. 95-273. Broad policy goals were established to guide the Federal efforts relative to ocean resource use, waste disposal, and ocean conservation, and to form a basis for evaluating conflicts in marine use. The specific goals established for the Federal Marine Pollution Program as approved by the Interagency Committee on Ocean Pollution Research, Development, and Monitoring (COPRDM) are:

1. Encourage the use of the oceans, estuaries, and Great Lakes as sources of food, energy, and minerals, and as media for maritime commerce in such a way that no significant impact to human health, productivity, or aesthetic quality results.

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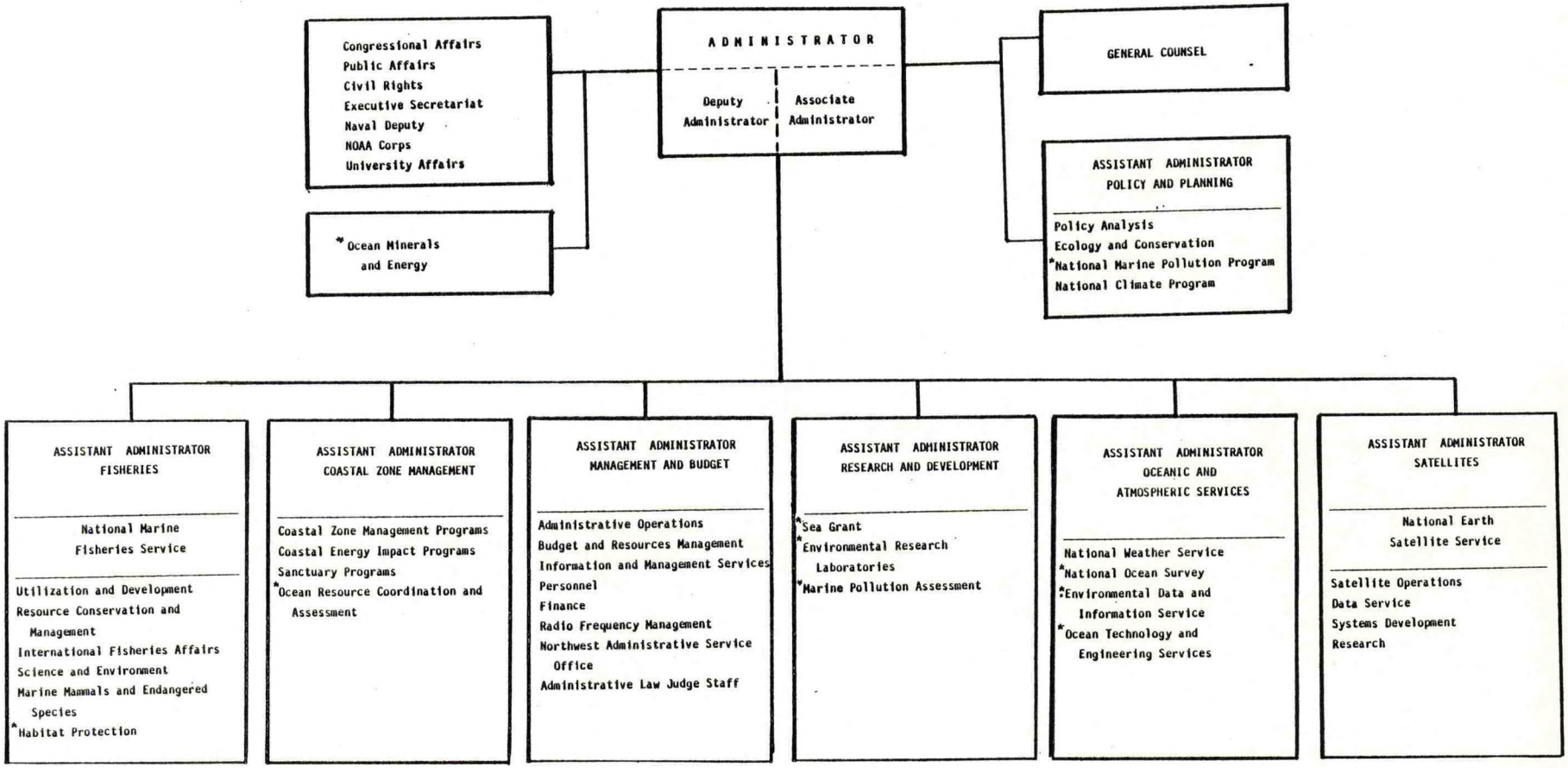

* NOAA's Marine Pollution-related programs and activities

Figure 1. NOAA Organization Chart.

2. Consider, along with other options, the use of the oceans, estuaries, and Great Lakes as repositories for the disposal of waste material and thermal energy when it is determined that no significant impact to human health, productivity, or aesthetic quality would result.

3. Preserve and enhance the productivity and aesthetic quality of the oceans, estuaries, and Great Lakes for the sustained yield of living marine resources and recreational opportunities.

The Department of Commerce (DOC) recognizes the urgency in achieving these national goals and has committed to full participation in their attainment through its departmental goal -- to manage effectively the oceanic and atmospheric resources of the United States. In direct response to the national and DOC goals, NOAA has identified six agency goals related to marine pollution. As other Federal agencies also have programs addressing marine pollution-related problems, NOAA will maintain cognizance of these efforts in order to identify and fill critical gaps as directed in Section 6 of the National Ocean Pollution Planning Act. It should be recognized that the NOAA marine pollution goals are not all-inclusive, but in some cases complement the goals of other Federal agencies, contributing expertise and information to the conduct of a comprehensive Federal marine pollution program. The NOAA Marine Pollution Program goals are:

1. To guide national policy decisions on marine pollution issues based upon scientific information.

2. To provide leadership in planning and coordinating Federal marine pollution research, development, and monitoring activities; in preparing and synthesizing results from such activities; and in disseminating information in a timely manner and in useful formats to all relevant users.

3. To develop sufficient understanding of marine ecosystems to provide a sound evaluation of the impacts of the use of the marine environment as a source of renewable and non-renewable resources.

4. To support efforts to prevent, or mitigate, the effects of accidental releases of oil and hazardous materials into the marine environment.

5. To protect the integrity, productivity, and aesthetic quality of the marine system from unacceptable ocean use practices and to enhance already degraded systems by recommending possible mitigatory and/or restorative actions.

6. To document and evaluate the status and trends of source loadings, ambient levels, and biological accumulations of critical pollutants and the probable effects of these pollutants on the ecosystem and on human welfare.

VI. NOAA's Responsibilities within its Marine Pollution Goals

The following section details each of the above goals and highlights NOAA's responsibilities within these goals. Specific NOAA objectives and corresponding FY82-86 milestones that will address each of these goals are identified in Table 1 (pages 22-37).

- Goal 1: To guide national policy decisions on marine pollution issues based upon scientific information

The NOAA Marine Pollution Program focuses on understanding the marine environment in order to improve the scientific basis for national policy decisions relating to all aspects of ocean use, development and protection. To be useful, the program will evaluate not only present-day marine pollution problems, but also will anticipate future environmental issues. It will incorporate understanding the options available for ocean-use and pollution control and consider sociological and economic implications in the development of ocean-use alternatives.

- Goal 2: To provide leadership in planning and coordinating Federal marine pollution research, development, and monitoring activities; in preparing and synthesizing results; and in disseminating information in a timely manner and in useful formats to all relevant users.

The National Ocean Pollution Planning Act gives NOAA a unique role in the Federal Government for ocean pollution research, development, and monitoring. The Agency has the lead responsibility for producing a comprehensive plan that will provide a Federal overview and an integrated perspective that will stimulate research coordination and facilitate the synthesis and application of results to decision-making. Additionally, through Section 5 of this Act, NOAA has been given the task of coordinating its own diverse marine pollution activities into a comprehensive program consistent with the Federal Marine Pollution Program Plan. By developing and implementing a coordinated and comprehensive agency pollution program, NOAA can be an example for the rest of the Federal marine pollution effort. Consistent with and responsive to the Federal program, NOAA's pollution program will consider the full range of national and regional concerns. It will maintain familiarity with other agencies' efforts and will use and incorporate their findings into its own research program. NOAA will make information available to decision-makers for high-priority ocean pollution problems as required by Section 8 of P.L. 95-273. NOAA's program will develop mechanisms for the integration and dissemination of such information so that users will receive usable and timely input.

- Goal 3: To develop sufficient understanding of marine ecosystems to provide a sound evaluation of the impacts of the use of the marine environment as a source of renewable and non-renewable resources.

Society is faced with numerous decisions on the use of the marine environment's resources. Demand for the sea's renewable resources of fish and shellfish is growing, but these resources will remain valuable only while they maintain their productivity and do not become tainted. At the same time, society requires development of nonrenewable marine resources (e.g., oil, gas, and other minerals and metals) and use of the marine environment for transportation, recreation, and as a renewable source of energy.

Ocean-use decisions are further complicated by society's need to dispose of wastes. How we should dispose of wastes is a mixed political and scientific decision. In making this decision, consideration must be given to the disposal of wastes in the marine environment. The ability of the oceans to assimilate some wastes without unacceptable damage can be viewed as another of its resources, although the limits of this convenience are probably less understood than other, more conventional resources.

Before rational decisions are made on uses of the oceanic resources, the processes and dynamics of the marine environment must be understood. Discrimination between natural variability and human-induced perturbation and between healthy and stressed ecosystems is fundamental.

Basic ecosystem understanding must be used to evaluate various oceanic uses and predict their associated risks in terms of social, ecologic, and economic costs and benefits. However, it must also be recognized that complete ecosystem understanding may never be reached. NOAA's aim will be to provide the best available information on ecosystem understanding in order to address decision-makers' needs and timing constraints in a cost-effective manner.

- Goal 4: To support efforts to prevent, or mitigate, the effects of and assess damages resulting from accidental releases of oil and hazardous materials into the marine environments.

Over the past few years, there has been an upward trend in the frequency and seriousness of potentially damaging oil and hazardous chemical spills and the identification of uncontrolled hazardous waste sites. The increased size of tankers, the increase in marine transportation of hazardous chemicals, and enhanced public perception of the health hazards associated with uncontrolled hazardous waste disposal are

all factors which contribute to this pollution concern. In the past, scientific support was inadequate at the scene of an oil spill. NOAA's efforts caused Congress to realize the importance of on-scene scientists to assist the On-Scene Coordinator (a representative of EPA, USCG, or the state) of all operations. Consequently, the National Oil Pollution Contingency Plan (NCP) (prepared in response to the Federal Water Pollution Control Act) was amended to include the provision of such services. Later, when the Comprehensive Environmental Response, Compensation, and Liability Act was passed, the NCP was expanded to include scientific support for the cleanup of hazardous substances spills and dumpsites, as well as oil spills. NOAA is responsible for providing such support in the coastal waters (waters under tidal influence) and if requested by the On-Scene Coordinator, in the oceans.

Scientific support for such incidents can aid the response effort by identifying environmental resources which warrant extraordinary protective efforts, determining the potential of a pollutant to cause damage, forecasting the pollutant's distribution and composition with time, recommending alternative cleanup, mitigation, and containment strategies, and assessing the damages to natural resources resulting from such an incident. Damage assessments provide the basis for the recovery of compensation from the spiller or Hazardous Substances Fund to restore or replace damaged environments or resources. NOAA's responsibilities in this area can be expected to increase, since EPA recently announced the list of high priority hazardous dumpsites requiring cleanup. Fifteen of these are in areas considered to be coastal.

- Goal 5: To protect the integrity, productivity, and aesthetic quality of the marine, estuarine, and Great Lakes systems from unacceptable ocean use practices and to enhance already degraded systems by recommending possible mitigatory and/or restorative actions.

Society exploits certain aspects of the marine resources for food, transportation, energy, minerals, recreation, and aesthetic enjoyment. Yet some of these aspects are of value only in a pristine or moderately unperturbed state. Through various legislative mandates, NOAA has responsibility to ensure that the quality of these marine resources and the environment that produces them be given full consideration in ocean use decisions.

Prior to the environmental movement of the 1970's, land and water management policies throughout all levels of government were not notably concerned with degradation of the marine environment. However, with a growing populace and increased ocean-use, people began to recognize that past practices such as overfishing and inadequate treatment and control of wastes were impacting the usefulness of certain of our resources. In some cases, this impact was a very serious one, resulting in the closure of fisheries and recreational areas. These impacts have made us aware that such practices, if continued, might result in the destruction of a substantial segment of the resource or might so severely impact an ecosystem that recovery is greatly prolonged. Such wide-scale degradation

of the environment would not only damage the recreational and aesthetic qualities of the ocean and Great Lakes that millions of Americans value, but would also impair the recreational and commercial fisheries and the other living resources NOAA is mandated to protect.

There is a need to enhance the degraded environments that have resulted from past activities. Whether these impacts occurred through lack of understanding, neglect, or necessity, it is in the best interest of the nation to upgrade these ecosystems, if possible. Through its research efforts, NOAA will be able to recommend actions to alleviate some of the stress upon these ecosystems.

- o Goal 6: To document and evaluate the status and trends of source loadings, ambient levels, and biological accumulations of critical pollutants and the probable effects of these pollutants on the ecosystem and on human welfare.

Parallel with efforts to understand ecosystem processes, studies should be directed to evaluate regional pollutant loadings and to understand the environmental effects of specific and cumulative pollutant impacts. The relationship between specific pollution sources and their environmental effects will provide the key for control and management of polluting activities. One such need is data on pollutant inputs; these inputs can usually be addressed by water chemistry methods through compliance monitoring and long-term trend assessments. Effects of pollutant inputs are, in part, assessed by determining the existing levels, trends, and local variations of pollutants. Compliance monitoring answers the short-term management needs by measuring adherence to predetermined quality standards and criteria by various industries or municipalities. These programs are concerned with compliance to effluent and discharge criteria, ambient water quality standards, and seafood purity standards. The long-term trend assessment programs strive to monitor pollutant and pathogen trends in the environment, often on a national scale or in areas which could be affected by cumulative or synergistic pollutant inputs.

It is necessary to identify the pollutants of greatest concern and then determine the concentrations at which these pollutants and their transformation products cause unacceptable effects. Regulatory decisions on permissible exposure levels for the ecosystem can be made when the acute, chronic, bioaccumulative and synergistic effects are documented for various pollutants. The synthesis of all these research and monitoring efforts will result in assessments which will warn ocean-use managers of imminent harmful impacts and will provide a long-term data base for impact evaluation and forecast.

Aspects of these efforts (compliance monitoring, trend assessments, effects studies, etc.) currently are conducted in NOAA and other

agencies. These programs and studies generate a vast wealth of information geared toward impact assessment. It is necessary at this time to evaluate these data to determine what our status is in ecosystem understanding, what we have learned, and where the knowledge gaps are. NOAA will focus on an analysis and synthesis of data from existing Federal, state, and local programs and development of improved techniques for such synthesis and information dissemination. This analysis will identify monitoring needs in critical areas and data gaps in our knowledge of pollutant effects as well as assist Federal and state agencies in the regulation of ocean polluting activities.

VII. NOAA's Management Plan to Ensure a Coordinated and Comprehensive Marine Pollution Program

The coordination and integration of NOAA's marine pollution activities is the central objective of this Plan. The following outlines a management plan designed to focus and clarify management responsibilities that exist within the NOAA Marine Pollution Program. Management, through coordination, will provide an agency-wide program framework to ensure an effective and comprehensive marine pollution program. Figure 2 outlines the overall coordination requirements of this plan. The following discussion highlights key areas of this plan in detail: organizational responsibilities within NOAA, the Marine Pollution Program planning process, guidelines for determining priorities, and information and data products.

Organizational Responsibilities

Currently, five formalized areas of authority and responsibility exist in the NOAA's Marine Pollution Program. First, NOAA has established a Board of Directors to guide the Marine Pollution Program. This Board, with membership consisting of the NOAA Assistant Administrators and the Directors of PP and OME, and chaired by the Assistant Administrator for RD, represents upper NOAA management and recommends actions to the Administrator. The responsibility of the Board is to provide oversight and general guidance to NOAA's Marine Pollution Program. Duties also include reviewing the elements of the program and recommending new initiatives, enhancements, reductions, and resource allocations.

Second, NOAA has established the National Marine Pollution Program Office (NMPPO) to address its responsibilities under Section 4 of P.L. 95-273. In this section, NOAA is mandated to: 1) prepare and revise biennially a five-year plan for the overall Federal effort in marine pollution research, development, and monitoring; and 2) coordinate the budget review process to ensure interagency coordination and cooperation in carrying out Federal marine pollution programs. NMPPO focuses primarily on interagency planning coordination, and responds to direction from the Interagency Committee on Ocean Pollution Research, Development and Monitoring (COPRDM). NMPPO plays an important role in the definition of marine pollution problems and the establishment of priorities at the national level.

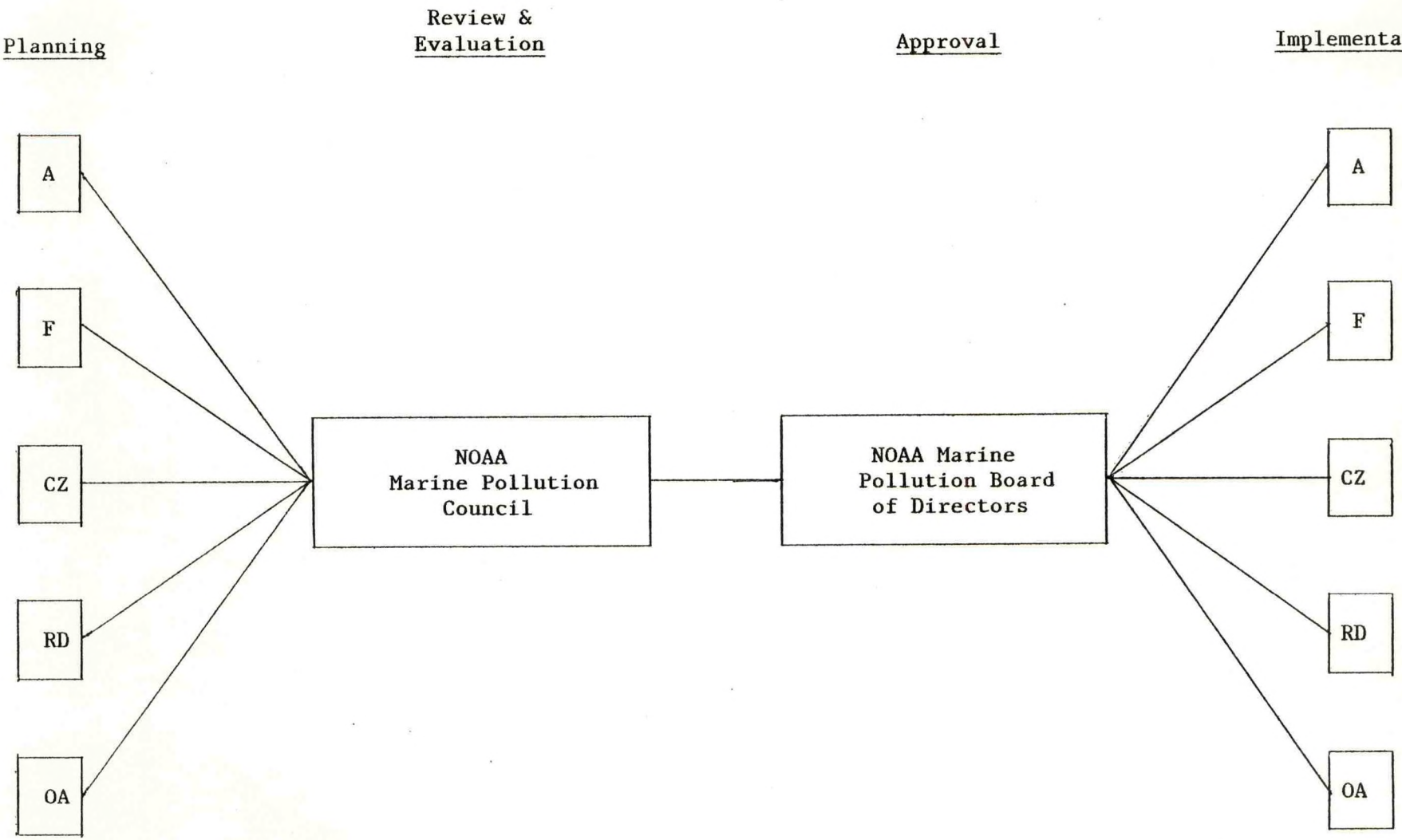

Figure 2. Management-Coordination Schematic for NOAA's Marine Pollution Program

Third, NOAA has assigned the Office of RD the task of implementing the responsibilities defined by Section 5 of P.L. 95-273. This requires the establishment of a comprehensive, coordinated, and effective marine pollution program within the agency. To assist in carrying out its assignment, RD established the Office of Marine Pollution Assessment (OMPA). OMPA's responsibilities are to: 1) focus and coordinate NOAA's programs and activities in marine pollution research, development, and monitoring; 2) provide the interface between NOAA programs and the National Marine Pollution Program Office which produces the Federal Plan; 3) develop and implement programs to assess the short- and long-term impacts of pollutants and other people-induced changes in marine ecosystems; and update the NOAA program plan and coordinate its implementation.

Fourth, NOAA assigned the Office of OA lead responsibility for dissemination of information defined by Section 8 of P.L. 95-273. In this section, NOAA is mandated to ensure that the results, findings and information regarding Federally-sponsored marine pollution programs are disseminated in a timely manner and in useful forms to all Federal organizations and other interested parties. OA designated the National Oceanographic Data Center (NODC) of the Environmental Data and Information Service the responsibility for addressing the mandate of Section 8. NODC's tasks include the development and implementation of an Ocean Pollution Data and Information Network (OPDIN). This network is intended to facilitate dissemination of data results. The OPDIN will coordinate and integrate this information and serve as a focal point for access to the results from Federal marine pollution programs.

Fifth, the marine-oriented organizational elements of NOAA: Fisheries, Research and Development, Coastal Zone Management, Oceanic and Atmospheric Services and Office of Ocean Minerals and Energy conduct a number of marine-pollution related activities.

The Office of RD, through its Office of Marine Pollution Assessment (OMPA), executes the lead role in the coordination and integration of the NOAA marine pollution research, development and monitoring activities. In order to ensure full MLC participation, a Marine Pollution Coordination Council (MPCC) will be established.

Guidelines for composition of the MPCC are:

- Each MLC nominates at least one but no more than three members to the Council;
- Based on this list of nominees, the Board of Directors approves of final composition of the Council;
- Each Council member is responsible for policy and technical coordination within his/her MLC;
- The Council is chaired by the Director of OMPA;
- An Executive Secretary for the Council is provided by the AA/RD; and

- The Office of the General Counsel provides legal assistance at appropriate times.

This council will serve as the mechanism responsible for coordination among the NOAA marine pollution-related activities and as staff to the Board of Directors. Members of this group will be familiar with both pollution-related and mission-related research, development, and monitoring needs of their particular MLC and will provide coordination to ensure that appropriate data and information from all MLCs are used to support the Marine Pollution Program. The Marine Pollution Coordination Council (MPCC) responsibilities will include the following:

- With the general policy guidance from the Board of Directors, prepares documents on marine pollution-related matters; drafts marine pollution-related policy statements; provide MLC marine pollution activity implementation plans; and at the request of the Board of Directors, coordinates program evaluations of multi-MPE or MLC activities in marine pollution for presentation to the Board of Directors.

- Facilitates the exchange of information between the MLCs conducting marine pollution activities;

- Establishes communication among MLCs to facilitate joint planning and coordination of the NOAA Marine Pollution Program and to facilitate the resolution of inter-MLC issues;

- Coordinates the NOAA submission to the Federal Plan;

- Updates and coordinates the implementaion of the NOAA Marine Pollution Program Plan;

- Synthesizes and summarizes results annually of NOAA programs and evaluates how they address NOAA marine pollution goals and objectives.

The Planning and Approval Process

NOAA's marine pollution planning process will be implemented as indicated in Figure 3. The principal responsibility for planning and implementing NOAA programs rests with the MLCs. This plan recognizes that individual MLCs need flexibility and autonomy to respond to their own specific missions. The goal of this planning process is to improve coordination and prevent duplication, and not to involve yet another group in the detailed management of existing programs. The NOAA Marine Pollution Program will be developed in the following sequence:

Step 1. Each MLC will develop its own plan for marine pollution research, development and monitoring studies based on needs developed from all sources, including the current Federal Plan, NOAA policies, and specific concerns appropriate to the MLC's legislated responsibilities and historical role. The success of this coordinated Marine Pollution Program relies on each MLC developing an approach that incorporates NOAA's marine pollution goals, objectives, and identified priorities

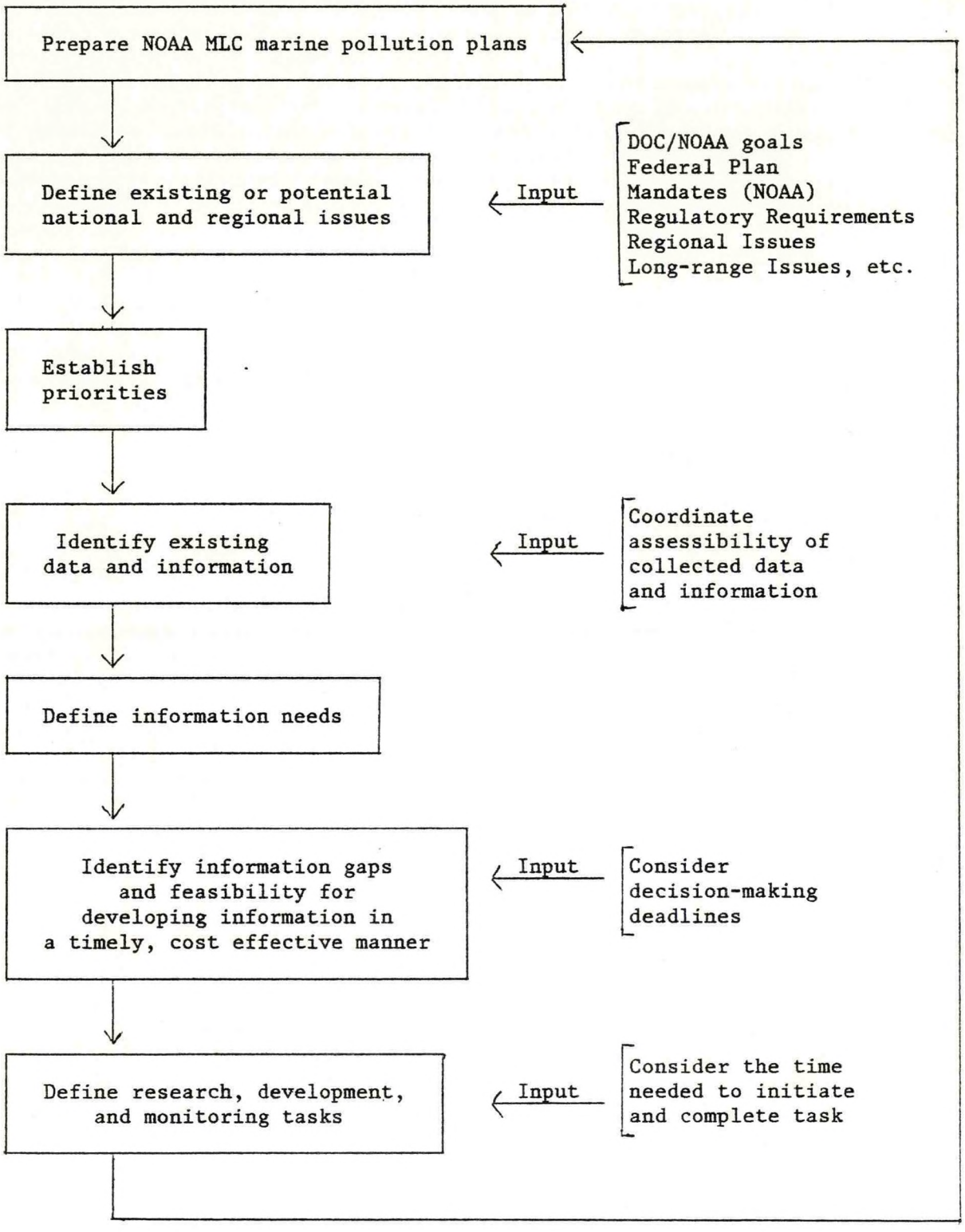

Figure 3. Schematic illustration of the NOAA Marine Pollution Planning Process

within its assigned purview or area of special expertise. Each MLC will adhere to the process illustrated in Figure 3 and transmit an MLC Marine Pollution Plan to the Marine Pollution Coordination Council to ensure internal coordination of its proposed program. It is expected that MLC Marine Pollution Plans will cover a five-year period and not be detailed technical plans, but will contain, as a minimum, a clear statement of objectives, rationale, research needs, technical approach, planned coordination and quality control procedures, resource requirements, users, and products.

Step 2. The Marine Pollution Coordination Council will evaluate each MLC plan to ensure that it is responsive to one or more of NOAA's marine pollution objectives. The Council will identify duplication, if any, between MLC activities and opportunities for cooperation among the MLCs. It will also consider how the proposed MLC program could be better balanced and improved to meet the NOAA objectives as well as those of the Federal Plan. The Council will report its findings to the Board.

Step 3. The Board of Directors will review the Council's recommendations and resolve any conflicts that may have arisen. When the Board is satisfied with the implementation plans, it will approve them whereupon they become binding on the MLC(s) concerned.

Step 4. Each MLC will proceed to implement its marine pollution research, development, and monitoring plan and each MLC will provide an annual summary documenting the results of these research, development, and monitoring activities as input to the Council's annual report.

Although the above process is described as a series of discrete steps, the planning process will, in practice, be more continuous. It is expected that each MLC representative to the Council will be actively involved in NOAA's planning process, and thus be able to effect inter-MLC coordination from inception. The AA or MLC representative to the Board of Directors, as well, is expected to be involved in issue-solution prior to formal submission of the Council's recommendations to the Board of Directors.

The activities of the Marine Pollution Coordination Council are not limited to review of NOAA's marine pollution activities on an annual basis. Because this inter-MLC group will possess a strong grasp of NOAA's total program, it will provide a periodic evaluation of selected marine pollution issues and how NOAA's activities address these problems.

The Council will also be a mechanism for the inter-MLC development and coordination of the NOAA position on major pollution issues such as sewage sludge dumping, dredge spoil disposal, and OCS development. A major role of the MPCC will be the review of proposed research development and monitoring activities, ensuring strong inter-MLC coordination from inception to execution.

Criteria for Setting Priorities

The most crucial step in formulating NOAA's Marine Pollution Program is the determination of priorities among the many competing program alternatives. The NOAA Marine Pollution Program activities must meet the following criteria as established in Section 5 of the National Ocean Pollution Planning Act:

- NOAA's projects or activities must be consistent with, but not identical to, Federal Plan priorities.

- NOAA has statutory authority in the area of the proposed projects or activities.

It is obvious that a great many pollution-related activities will meet these criteria; thus, by themselves, these criteria are not adequate for establishing priorities for the expenditure of the available Marine Pollution Program resources. It is therefore necessary for an in-depth analysis of the issues to ensure that the highest priority problems are addressed in a cost-effective manner. The primary factors that must be given consideration in the development of a program focus and in the establishment of priorities include:

- Seriousness of pollution threat.

- Value of the polluting activity.

- Intensity and extent of the polluting activity, including future anticipated problems caused by the activity.

- Value of the resources at risk.

- Amount of useful information already available.

- Time-frame in which information is required for decision-making.

- Utility of information in preventing or minimizing future pollution problems.

- Capability of being accomplished by the agency.

- Cost-effectiveness (Ratio of costs to anticipated benefits).

- NOAA's responsibility vis-a-vis other agencies (e.g., regulation, supporting research.

- International commitments.

Information Dissemination and Synthesis

The activities which form the NOAA Marine Pollution Program will result in environmental data and information, descriptive and predictive models, and strategies for assessing the effects of alterations on the

marine and estuarine environments. As part of the requirements of Section 8 of P.L. 95-273, these results or products must be provided to industry, the scientific community, the resource managers, and to local, state, and Federal Government organizations for consideration in establishing their environmental policies. The development and implementation by NODC of an Ocean Pollution Data and Information Network (OPDIN) will support this part of the Section 8 requirements.

Along with information and data dissemination, Section 8 requires that marine pollution results be disseminated "in useful forms." To address this requirement, all elements of the NOAA Program, using OPDIN to identify existing information sources, will emphasize in-depth synthesis efforts. These efforts will be designed to assist decision-makers from the Congressional to local government levels, as well as to aid in research planning and to improve understanding of ecological processes. NOAA will promote the synthesis of information by sponsoring review papers on various aspects of marine pollution.

Management position papers utilizing the results of scientific studies will also be used to support marine pollution policies. These papers will include emphasis on scientific and socioeconomic assessments of the marine environmental consequences of polluting activities. Marine pollution issues will also be explained to the public, through clear, non-technical presentations of marine pollution results.

VIII. NOAA's Marine Pollution Priorities: FY82-86

The NOAA planning process illustrated on page 19 and the priority criteria established in this document are used directly in identifying the NOAA Marine Pollution Program priorities. First, the national and regional issues that NOAA's program will address should be identified. In defining these issues, NOAA's Marine Pollution Program must consider the guidance and responsibilities given to the agency from a number of sources: DOC/NOAA goals, the Federal Plan, legislative mandates, etc.

The Federal Plan states that a balance between use of marine resources to the benefit of the national economy and protection and conservation of the ocean must be determined to allow continued multiple use. In addition, the Federal Plan identifies six major marine pollution concerns that must be addressed: marine waste disposal, marine mining, marine energy, marine transportation, accidental discharge of oil and hazardous substances, and coastal land use. Based on these general problem areas, the Federal Plan identifies the priorities for actions to be: "waste disposal, OCS environmental studies, cumulative impacts to human health and marine resources, increased coal use, and organizing to better support the entire Federal Program".

Figure 4 highlights legislation passed since 1970 giving NOAA authority to conduct specific marine pollution activities. Using this figure, NOAA has authorization to address all of the problem areas or recommended priorities for action listed in the Federal Plan. Of all the legislative mandates in this figure, however, the National Ocean Pollution Planning Act, P.L. 95-273, gives explicit guidance to NOAA's Marine Pollution Program.

1972	- Marine Mammal Protection Act P.L. 92-522	Provide scientific data concerning the marine ecosystem and related environmental considerations which affect the extent to which marine mammals may be taken or imported.
	- Marine Protection, Research, and Sanctuaries Act P.L. 92-532	Conduct a comprehensive and continuing program of monitoring and research on the effects of the dumping of materials into ocean or tidal coastal waters or the Great Lakes (Section 201) and research on the possible long-range effects of pollution on other man-induced impacts on the ocean ecosystem (Section 202).
1973	- Endangered Species Act P.L. 93-205	Conduct research to determine endangered or threatened species.
1974	- Deepwater Port Act P.L. 93-627	Assess the potential polluting possibilities of proposed new ports.
1976	- Coastal Zone Management Act P.L. 92-583 (as amended in 1976)	Conduct research to support a Federal-State Coastal Zone Management Plan.
	- Sea Grant Improvement Act P.L. 94-461	Research problems of National interest with respect to ocean and coastal resources.
	- Fishery Conservation and Management Act P.L. 94-265	Initiate a fishery research program to study the interdependence of fisheries of stocks of fish, the impact of pollution on fish, and the impact of wetland and estuarine degradation upon the abundance and availability of fish (Section 304[e]).
1977	- Federal Water Pollution Control Act (P.L. 92-500) as amended by the Clean Water Act P.L. 95-217	Cooperate with other Federal and State agencies in establishing National Programs for the prevention, reduction, and elimination of pollution.
1978	- National Ocean Pollution Planning Act P.L. 95-273	Prepare a 5-year Plan for the Federal ocean pollution research development and monitoring efforts; establish a comprehensive ocean pollution R,D,&M program within NOAA.
	- Antarctic Conservation Act P.L. 95-541	Provide consultation services to NSF for the conservation of Antarctic Flora & Fauna including provisions to control discharge of pollutants within Antarctica.
1980	- Ocean Thermal Energy Conversion Act P.L. 96-320	Perform baseline studies, and assess the nature and magnitude of short- and long-term effects of any oceanographic, atmospheric, weather, climatic, or biological changes in the environment which may result from the establishment of ocean thermal energy conversion facilities.
	- Deep Seabed Hard Mineral Resources Act P.L. 96-283	Conduct an assessment of the effects of exploration and recovery activities of ocean mining including disposal of processing wastes.
	- Marine Protection Research and Sanctuaries Act of 1972 amended P.L. 96-381	These responsibilities shall include the scientific assessment of damages to the natural resources from spills of petroleum or petroleum products.
	- Coastal Zone Improvement Act P.L. 96-464	To provide planning for the citing of pollution control and aquaculture facilities within the coastal zone.

Figure 4. Major Legislation Leading to NOAA's Role in Marine Pollution Assessment

Based on the above guidelines, NOAA's Marine Pollution Program has the following priorities to be addressed by each MLC in its marine pollution planning:

1. Develop within NOAA a capability to balance resource-use against conservation of these resources.

2. Establish within NOAA a program which is comprehensive in scope in terms of geographic reach, short- and long-term problems, and information to support utilization, conservation, and development of ocean and coastal resources, coordinated within NOAA and with other Federal agency programs and consistent with the Federal ocean pollution research, development, and monitoring plan.

3. Develop marine pollution research, development, and monitoring programs that address the following major marine pollution concerns: marine waste disposal, marine mining, marine energy, marine transportation, accidental discharge of oil and hazardous substances, and coastal land use (See the National Marine Pollution Program Plan for descriptions and definitions of these concerns).

IX. NOAA Objectives and Milestones: FY82-86

Based on the marine pollution goals and priorities, NOAA has developed the following objectives and milestones for FY82-86 (see Table 1). The NOAA marine pollution goals, listed in section V of this document, are reiterated below along with an abbreviated goal descriptor for quick reference:

GOALS FOR THE NOAA MARINE POLLUTION PROGRAM

Policy Decisions:	To guide national policy decisions on marine pollution issues based upon scientific information.
Leadership:	To provide leadership in planning and coordinating Federal marine pollution research, development, and monitoring activities; in preparing and synthesizing results from such activities; and in disseminating information in a timely manner and in useful formats to all relevant users.
Ecosystem Understanding:	To develop sufficient understanding of marine ecosystems to provide a sound evaluation of the impacts of the use of the marine environment as a source of renewable and non-renewable resources.
Spill Response:	To support efforts to prevent, or mitigate the effects of accidental releases of oil and hazardous materials into the marine, estuarine, and Great Lakes environments.
Environmental Protection:	To protect the integrity, productivity, and aesthetic quality of the marine, estuarine, and Great Lakes systems from unacceptable ocean use practices and to enhance already degraded systems by recommending possible mitigatory and/or restorative actions.
Current Status:	To document and evaluate the status and trends of source loadings, ambient levels, and biological accumulations of critical pollutants and the probable effects of these pollutants on the ecosystem and on human welfare.

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86

GOAL: Policy Decisions

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
1. Prepare draft NOAA policy document for major ocean-use issues:					
- sewage sludge disposal	Draft	Final		Update	
- industrial waste disposal		Draft	Final		Update
- contaminated dredge material disposal		Draft	Final		Update
- siting of large coastal facilities)					
- deep seabed hard mineral mining)	to be prepared in advance of identified decision points				
- siting and operation of OTEC plants)					
- coal ash disposal)					
- radioactive waste disposal	Draft	Final		Update	
2. Conduct analyses of the existing marine pollution regulatory framework and its application to specific ocean waste disposal activities		Initiate	Draft		
3. Prepare assessment report describing impacts resulting from past, on-going and proposed ocean dumping activities:					
a. Mid-Atlantic Bight - 106-mile site	Initiate	Draft/Final			
b. New York Bight - 12-mile site	Initiate	Draft/Final			
c. Philadelphia sewage sludge dumpsite	Initiate	Draft	Final		
d. Puerto Rico industrial dumpsite	Draft	Final			
e. Southern California Bight sewage sludge site				Initiate	Draft

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Policy Decisions (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
4. Recommend alternative source control or disposal strategies based on knowledge of cumulative pollutant impacts and comparative assessment of risks:					
a. New York Bight	Initiate	Draft	Final		
b. Great Lakes		Initiate	Draft	Final	
c. Puget Sound	Initiate	Draft	Final		Update
d. Southern California Bight				Initiate	Draft
e. Northern Gulf of Mexico		Initiate	Draft	Final	
5. Develop site selection guidelines for disposal of:					
a. Sewage sludge		Draft			
b. Contaminated dredge material		Draft			
c. Fish processing wastes			Draft		
d. Manganese nodule processing wastes		Draft	Final		
e. Coal ash			Draft		

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Policy Decisions (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
6. Prepare comprehensive synthesis and evaluation report on the documentable environmental impacts from OCS oil and gas development using appropriate areas (Alaska, North Sea, Gulf of Mexico, Southern California) as case histories.	Initiate	Draft	Final		Update
7. Prepare assessment report on the documentable effects of the Alaska Pipeline Terminal operation on the environment and resources of Valdez Arm.	Initiate	Draft	Final		Update
8. Prepare assessment report on the impacts resulting from disposal of contaminated dredged material with evaluation of alternative disposal practices:					
a. New York Bight	Initiate	Draft/Final			
b. Mobile Bay/Mississippi Sound		Initiate	Draft	Final	
c. Galveston Bay/Houston Ship Channel			Initiate	Draft	Final
d. Tampa Bay				Initiate	Draft
9. Prepare assessment report describing known and potential consequences of production and transportation of halogenated organic chemicals in the Gulf of Mexico.		Initiate	Draft	Final	

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Policy Decisions (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
10. From a systems perspective, define the efforts and concerns associated with ocean disposal of nuclear wastes and prepare issue paper defining possible NOAA role in any future national program on subseabed disposal of nuclear waste.		Final			
11. Evaluate scientific information to determine major pollution-related threats to living marine resources and develop a national fisheries policy on marine pollution issues of national importance.		Final			

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Leadership

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
1. Revise and update National Marine Pollution Program Plan.			Final		
2. Coordinate implementation of recommendations of the most current National Marine Pollution Plan:					
a. Long-term effects program for OCS oil and gas		Final			
b. Strategies for multimedium waste disposal		Final			
c. Integrated regional studies and monitoring			Final		
3. Coordinate preparation of NOAA Marine Pollution Program Plan.	Final		Revise		Revise
4. Prepare marine pollution sections of Atmosphere and Marine Quality Assessment Plan.	Progress Report	Draft			
5. Prepare OMPA Plan for comprehensive, coordinated program on high priority marine pollution issues.	Final	Update	Revise	Update	Revise
6. Obtain regional input and prepare regional marine pollution issue analysis report.	Continuous with Annual Summary				

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Leadership (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
7. Institute system for interpreting and disseminating pollution-related scientific findings into formats understandable and useable by resource managers, government officials, and the general public.	Initiate	Design			Operational
8. Develop a Regional Action Plan (RAP) for the northeast region to meet the marine pollution objectives of the NMFS Strategic Plan		Final	Evaluate for use in other regions		
9. Develop operational Ocean Pollution Data and Information Network (OPDIN).					
a. Requirements, evaluation, and existing systems analysis	Final				
b. Detailed system design		Final			
c. Implement OPDIN				Operational	

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Ecosystem Understanding

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
1. Conduct research on those fundamental ecosystem processes which will enable NOAA to:					
a. Prepare interim indices of unacceptable ecological impacts resulting from introduction of contaminants.		Interim		Interim	
b. Define recovery rates following reduction of contaminant input or removal of existing contaminant reservoirs:					
- Philadelphia sewage sludge dumpsite	Initiate	Draft	Final		
- Commencement Bay		Initiate	Draft	Final	
- NY Bight 12-mile site (if dumping ceased)		Initiate			
c. Prepare synthesis of physical processes and their interaction with contaminants:					
- Eastern Bering Sea	Interim	Final			
- Puget Sound	Interim	Interim	Interim	Interim	Final
- Lake Michigan	Interim	Interim	Interim	Interim	Final
d. Prepare reports on specific, key environmental processes controlling contaminant distribution and impact:					
- interactions between contaminants and riverine, suspended, and resuspended particulates.		Draft	Final		Update

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Ecosystem Understanding (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
- Role of the ocean in assimilating atmospheric pollutants				Draft	Final
- Chelation of trace metals by natural dissolved organic materials.		Draft		Final	
e. Construct family of models to predict chemical fate, biological pathways, and persistence of toxic substances (e.g., PCBs) in the Great Lakes water, biota and sediments.	Interim	Interim	Interim	Interim	Final
f. Quantify the chemical composition and decomposition pathways of the phosphorous pool in Lake Michigan.	Initiate		Final		
2. Prepare and test prototype assessment strategies for predicting biological effects with consequences at the population level from selected ocean waste disposal strategies.	Initiate	Interim	Interim	Interim	Interim
3. Develop an accurate method for determining sources and levels of pathogenic organisms in coastal environments with emphasis on safety for human consumption of seafood.		Initiate			Final

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Ecosystem Understanding (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
4. Describe and quantify critical, functional components of normal and perturbed ecosystems which support nationally important living marine resources.	Initiate		Draft		
5. Determine interactions between contaminants and living marine organisms at the individual, food web, and ecosystem levels.		Initiate			
6. Develop procedures for defining the induced flows and displacement of waters due to intake and discharge by an OTEC plant	Initiate		Final		
7. Determine relationship of 6 above to survivability of ichthyoplankton and associated impacts on commercial fisheries.					Final
8. Improve predictions of surface and benthic plumes from deep sea-bed mining through analysis of knowledge on benthic boundary layer processes, pycnocline accumulation and fine particulate settling processes.				Final	
9. Improve predictions of severity of benthic impact and recolonization rates following likely deep sea mining activities.					Final

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTVES & MILESTONES, FY82-86 (cont.)

GOAL: Ecosystem Understanding (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
10. Develop computer-based life history data system for living marine resources of:					
- east coast and Gulf of Mexico.	Complete				
- Bering/Chukchi/Beaufort Seas		Complete			
- West Coast		Initiate	Complete		
11. Develop system concepts:					
- contaminant flux measurements				Complete	
- underway pollution sampling					Complete
12. Develop portable, self-contained system for chemical and biological measurements in shallow water from platforms of opportunity			Initiate		Complete
13. Identify limiting functional elements of NOAA's ocean pollution observational and information delivery systems and provide recommendations for improvements. Also examine the relative merits of major observational platforms such as buoys, ships, aircraft, and satellites.		Complete			
14. Develop and demonstrate new and improved experimental in situ chemical measurement sensors and techniques: enzyme-pollution detector; profiling dissolved oxygen sensor; and automated in situ sampler for trace organics.		Complete			

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Ecosystem Understanding (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
15. Improve and maintain efficiency and effectiveness of pollution research and/or monitoring systems through periodic utilization of calibration, standards, and chemical monitoring services.	Initiate		Draft		

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Spill Response

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
1. Achieve spill-response readiness by completing:					
a. Detailed response plans for most likely spill scenarios		Partial	Partial	Complete	
b. Development of "stand alone" computerized pollutant trajectory capability		Partial	Partial	Complete	
c. Certification of two scientific teams to provide on-scene assistance		Complete			
d. Improve vertically integrated transport model		Complete			
2. Establish Scientific Support Coordinators corresponding with U.S. Coast Guard District	Partial	Partial	Complete		
3. Complete Environmental Sensitivity Index maps for high risk regions of U.S. coast	Partial	Partial	Partial	Partial	Complete
4. Provide on-scene assistance at spills of oil, other hazardous substances, and designated uncontrolled waste sites	As needed				

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Spill Response (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
5. Prepare summary report on coastal transport of spilled oil and evaluation of tidal-based trajectory model for the southeastern Bering Sea.	Complete				
6. Provide DOC/NOAA representation on Regional Response Teams	Continuous, as needed				
7. Carry out applicable provisions of CERCLA	Initiate	Full Implementation			

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Environmental Protection

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
1. Predict and test in appropriate selected areas the effects on valuable living resources that will result from remedial action in demonstrably contaminated areas.		Initiate		Interim	
2. Develop effective regional monitoring approaches which will detect unacceptable impacts and indicate causative contaminants and sources and which will lead to development of management strategies:					
a. New York Bight		Draft			
b. Mid-Atlantic Bight		Draft			
c. Puget Sound			Draft		
d. Southern California Bight					Draft
3. Develop strategies for eliminating or minimizing adverse impacts that may result from commercial OTEC development.		Initiate			Complete
4. Assess the consequences of individual water resource development projects which have marine environmental implications.	Initiate				

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Current Status

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
1. Conduct literature and field research as necessary to prepare synthesis reports on historical trends and current status of coastal pollution for:					
a. Great Lakes and northeast		Initiate	Draft	Draft	Final
b. Southeast and Gulf of Mexico		Initiate	Draft	Draft	Final
c. Pacific		Initiate	Draft	Draft	Final
d. Alaska			Initiate	Draft	Final
2. Conduct strategic assessment project and publish Data Atlases for the following regions:					
- Gulf of Mexico		Complete			
- Bering/Beaufort/Chukchi Seas	Initiate	Complete			
- West Coast		Initiate	Complete		
4. Define environmental and human risks posed by discharge of biocides or other trace contaminants from commercial OTEC plants	Initiate				Complete
5. Obtain time-series data sets to detect significant changes in the marine environment in coastal waters of the northeast.	In progress				

Table 1. NOAA MARINE POLLUTION PROGRAM OBJECTIVES & MILESTONES, FY82-86 (cont.)

GOAL: Current Status (cont.)

OBJECTIVES	FY82	FY83	FY84	FY85	FY86
6. Prepare inventory of coastal pollutant discharge for East Coast, Gulf of Mexico, Alaska, and West Coast		Complete			
7. Develop pollutant transport models for East Coast and Gulf of Mexico.	Complete				

X. NOAA Program Descriptions

In FY81, NOAA had sixteen ongoing and two proposed marine pollution research, development, and monitoring activities. Each of these activities was initiated for a specific purpose and, therefore, reflects the original program design intent. However, using the marine pollution problem areas as defined in the Federal Plan and this Plan, it is now possible to categorize which marine pollution problems these activities address. This categorization will be used to identify agency overlap or gaps in addressing today's marine pollution priorities. Building on this review, NOAA will continue to use today's marine pollution priorities to focus its activities into a comprehensive NOAA Marine Pollution Program. Detailed descriptions of the FY81 NOAA Marine Pollution Programs have been presented in Appendix 1 to the Federal Plan for Ocean Pollution Research, Development, and Monitoring, Agency Program Summaries, Fiscal Years 1981-85.