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The Narragansett Bay Estuary Program

Using a State Water Quality Agency to Implement a CCMP

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Finally, we wish to note that the views, opinions, and conclusions described in this report and the supporting case studies do not necessarily reflect those of the authors' affiliations or those of any individual or organization that reviewed and commented on its contents.

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- Kauneckis, Derek, Leslie Koziol, and Mark T. Imperial, *Tahoe Regional Planning Agency: The Evolution of Collaboration*, A technical report prepared to support a final report to the National Academy of Public Administration as part of their Learning from Innovations in Environmental Protection Project (Washington, DC: National Academy of Public Administration, August 2000).

Copies of the report and the supporting case studies can be obtained from:

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List of Acronyms Used in the Report

AID	Agency for International Development, United States
ANEP	Association of National Estuary Programs
APDP	Action Plan Demonstration Project
APES	Albermarle-Pamlico Estuarine Study
BBP	Buzzards Bay Project
BMP	Best Management Practice
CAC	Citizen Advisory Committee
CBP	Chesapeake Bay Program
CCMP	Comprehensive Conservation and Management Plan
CES	Cooperative Extension System
COE	Corps of Engineers, United States Army
CNPCP	Coastal Nonpoint Pollution Control Program
CRC	Coastal Resources Center
CRMC	Coastal Resources Management Council
CSO	Combined Sewer Overflow
CWA	Clean Water Act
CWAP	Clean Water Action Plan
CWSRF	Clean Water State Revolving Fund
CZARA	Coastal Zone Act Reauthorization Amendments
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
EPA	Environmental Protection Agency
FTE	Full Time Equivalent
GBI	Greenwich Bay Initiative
GIS	Geographic Information System
GSO	Graduate School of Oceanography, University of Rhode Island
HMP	Harbor Management Plan
HWRP	Hazardous Waste Reduction Program
IAD	Institutional Analysis and Development
IGM	Intergovernmental Management
ISDS	Individual Sewage Disposal System
LISS	Long Island Sound Study
LMP	Land Management Project
MOU	Memorandum of Understanding
NBC	Narragansett Bay Commission
NBEP	Narragansett Bay Estuary Program
NBP	Narragansett Bay Project
NEIWPCC	New England Interstate Water Pollution Control Commission
NEP	National Estuary Program
NGO	Nongovernmental Organization
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NPS	Nonpoint Source
NRCS	Natural Resources Conservation Service, USDA
OWOW	Office of Wetlands, Oceans, and Watersheds, EPA
PEC	Public Education Committee
RIAR	Rhode Island Association of Realtors
RIBA	Rhode Island Builders Association
RICRMP	Rhode Island Coastal Resources Management Program
RIDEM	Rhode Island Department of Environmental Management
RIDOP	Rhode Island Department of Administration, Division of Planning
RIDOT	Rhode Island Department of Transportation
RIGA	Rhode Island General Assembly

RIGL	Rhode Island General Laws
RIGTP	Rhode Island Government Transformation Partnership
RIMTA	Rhode Island Marine Trades Association
RIPDES	Rhode Island Pollution Discharge Elimination System
RISA	Rhode Island Shellfishermen's Association
SAM	Special Area Management
SAMP	Salt Ponds Special Area Management Plan
SGP	Sea Grant Program
SPC	State Planning Council
SPP	Statewide Planning Program
STC	Science and Technical Committee
TMDL	Total Maximum Daily Loading
TQM	Total Quality Management
URI	University of Rhode Island
USDA	United States Department of Agriculture
WWW	World Wide Web

The Narragansett Bay Estuary Program: Using a State Water Quality Agency to Implement a CCMP

Abstract: This case study examines the development of the Narragansett Bay Project's Comprehensive Conservation and Management Plan (CCMP) pursuant to the U.S. Environmental Protection Agency's (EPA's) National Estuary Program (NEP). We then examine the Narragansett Bay Estuary Program's (NBEP's) efforts to implement the CCMP by placing the program in a state water quality agency. These efforts were then assessed using evaluative criteria provided by the National Academy of Public Administration. The case study concluded that the NBP suffered numerous problems in managing its collaborative, consensus-based planning process. As a result, the NBP failed to produce a CCMP that had broad agency support and the conflict surrounding the approval process almost destroyed the program. The EPA, Rhode Island Department of Environmental Management (RIDEM), and NBP staff then reinvented the watershed management effort and changed the name to the Narragansett Bay Estuary Program (NBEP). Despite the lack of significant state financial support, the NBEP managed to achieve some notable accomplishments, many of which were collaborative in nature. The NBEP also serves as a surrogate water quality planning staff and has improved the RIDEM's problem solving capacity. However, the implementation effort is largely project oriented rather than being focused on systematically solving specific problems. Moreover, we concluded that the CCMP is no longer a viable policy document and has little impact on the decision making of the original partners to the NBP. This finding raised several questions such as what the overall purpose of the NBEP is, when one of EPA's estuary programs should end, and under what conditions federal funding should be discontinued.

Introduction

This case study examines the Narragansett Bay Project's (NBP's) efforts to develop a Comprehensive Conservation and Management Plan (CCMP) for Narragansett Bay watershed and the subsequent efforts by the Narragansett Bay Estuary Program (NBEP) to implement this plan.¹ Narragansett Bay one of the original six estuaries that participated in the National Estuary Program (NEP)² administered by the United States Environmental Protection Agency's (EPA's) Office of Wetlands, Oceans, and Watersheds (OWOW).³ The NEP now contains 28 programs.⁴ The NEP is a voluntary program that provides federal funds (with a 25% nonfederal match) and technical assistance to develop a CCMP. The CCMP is required to address three management areas: water and sediment quality; living resources; and, land use and water resources. Each CCMP also addresses other problems, as appropriate.⁵ The goal of the CCMP is to improve the management of water quality and living resources in an estuary.⁶ While the NEP relies on a relatively well-funded and structured approach to developing a CCMP, individual estuary programs are given a great deal of flexibility in determining how their plans will be implemented and financed. The program is not intended to develop a new program but rather is designed to work within the existing framework of federal, state, regional, and local environmental protection and natural resource management programs.⁷

Each estuary program is required to create a Management Conference that will supervise the development of the CCMP and establish and support a program office or its equivalent.⁸ The

Management Conference is a collection of advisory and decision making committees, which contain appropriate federal, state, and local government officials, representatives of the scientific and academic community, industry representatives, and concerned members of the general public.⁹ While the management conference structure varies, most estuary programs use some combination of a policy,¹⁰ management,¹¹ science and technical, and citizens advisory committees.¹² The objective of the Management Conference is to :

- Stimulate the transfer of scientific, technical, and management experience and knowledge among management conference participants
- Enhance the awareness of the environmental problems among the general public and the decisionmakers
- Provide opportunities to discuss solutions to environmental problems
- Synthesize input to decision-making processes
- Provide a forum to build partnerships and obtain the commitments necessary to implement a CCMP¹³

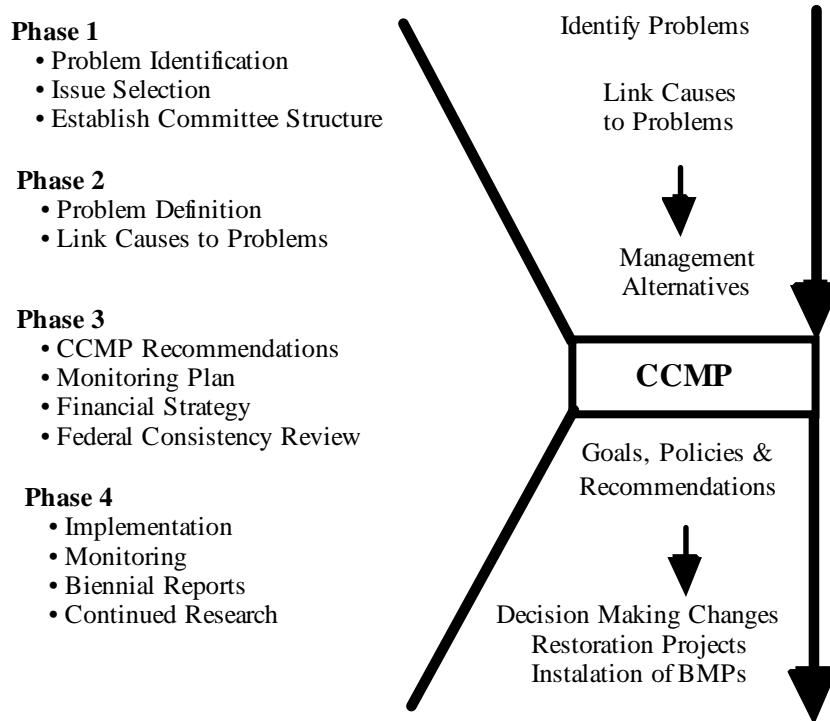
Management Conference participants use a structured planning process,¹⁴ which is designed to satisfy the seven statutory purposes that are contained in Section 320 of the Clean Water Act:

- Assess trends in the estuary's water quality, natural resources, and uses
- Identify causes of environmental problems by collecting and analyzing data
- Assess pollutant loadings in the estuary and relate them to observed changes in water quality and natural resources
- Recommend and schedule priority actions to restore and maintain the estuary and identify the means to carry out these actions
- Ensure coordination on priority actions among federal, state, and local participants in the management conference
- Monitor the effectiveness of actions taken under the CCMP
- Ensure that federal assistance and development programs are consistent with the goals of the plan¹⁵

The planning process consists of series of interrelated federally mandated steps that emphasize problem definition, provide flexibility in issue selection, and promote rational, watershed-based planning [Figure 1].¹⁶ The programs are also expected to employ the information gathering, public education, and public involvement activities necessary to develop consensus on management actions and ensure the CCMP's implementation.¹⁷ Each estuary program is also encouraged to take early action where problems and solutions have been identified and implement action plan demonstration projects (APDPs), which test, on a small scale, the effectiveness of strategies and technologies that may become part of the CCMP.¹⁸ The planning process is intended to be iterative in nature with problems continually redefined and the development of a CCMP often begins prior to the completion of the characterization phase.¹⁹

This planning process culminates in the development of a Comprehensive Conservation and Management Plan (CCMP) for the EPA's approval. The CCMP contains action plans that address the priority problems identified by the management conference. It also identifies lead agencies for implementation activities, the sources of implementation funding, and a schedule for

Figure 1: The NEP’s Planning Process



Modified from: Mark T. Imperial and Timothy M. Hennessey, “An Ecosystem-Based Approach to Managing Estuaries: An Assessment of the National Estuary Program,” *Coastal Management* 24 (no. 1, 1996): 121.

implementation activities. The CCMP must also include a federal consistency report and plans for its coordinated implementation. A monitoring plan that can be used to evaluate the effectiveness of implementation activities is also required.²⁰

The EPA provides limited implementation funding, approximately \$300,000 per year, which goes primarily to maintaining a small core staff and program office. Accordingly, the challenge for each estuary program is to develop an effective implementation structure that can monitor and coordinate implementation efforts and leverage or develop the resources necessary to support these activities.²¹ The EPA provides each estuary program with a great deal of flexibility in these efforts and monitors implementation progress through the approval of annual work plans and requires each estuary program to undergo a Biennial Review.²²

Objectives of this Case Study

This case study examines the activities related to the development and implementation of the CCMP for Narragansett Bay using evaluative criteria supplied by the National Academy of Public Administration. The case study begins with a brief discussion of the methods used to collect and analyze the data and the literature that framed our inquiry. We then examine the

planning environment for the Narragansett Bay watershed. This includes a discussion of the Narragansett Bay ecosystem, the nature and extent of the environmental problems affecting the watershed, and the institutional arrangement responsible for managing Narragansett Bay. The second section of the report examines the Narragansett Bay Project's (NBP's) efforts to develop the CCMP and the problems and conflicts that surrounded the plan's approval process. The report the implementation of the CCMP. During the implementation process, the name of the program changed to the Narragansett Bay Estuary Program (NBEP) when the EPA, Rhode Island Department of Environmental Management (RIDEM) (i.e., the state's water quality agency), and NBP staff tried to reinvent the program. The report discusses the NBEP's successes while also drawing attention to some future concerns that emerged from our analysis of the data. These activities are then be assessed using evaluative criteria provided by the National Academy of Public Administration. The criteria are described in more detail in our final report entitled *Environmental Governance in Watersheds: The Importance of Collaboration to Institutional Performance*.

Methods

This case study was developed using systematic and generally accepted methods of qualitative research. Qualitative approaches²³ are often recommended when trying to understand how a process occurs or to examine complex relationships between decision-making processes, physical settings, community characteristics, stakeholders' interests, existing institutional arrangements, availability of resources, and the capacities of state, regional, and local actors.²⁴ As a result, qualitative approaches tend to be descriptive and focus on explaining why a process is, or is not, effective and how different contextual factors influence the success of that process.

Three distinct streams of research provide the theoretical foundation for guiding our inquiry, identifying potential cause and effect relationships, and making recommendations to the Academy. The first line of research is environmental policy research on place-based or community-based management programs, which includes the growing research on ecosystem-based management and watershed management as well as the literature on integrated environmental management, integrated coastal zone management, and adaptive management. There is also great deal of environmental policy research in diverse areas such as collaborative decision making, stakeholder involvement and public participation, and the role of science in the policy process that informed our assessment. Unfortunately, this literature often ignores or downplays the administrative and institutional challenges associated with developing and implementing watershed management programs.²⁵ Accordingly, the second stream of research is the growing public administration literature on intergovernmental management (IGM) and networks, which is broadly defined here to include the literature on policy formation and implementation, interorganizational theory, policy networks, social networks, and federalism. The final line of research is the institutional analysis literature. In particular, the study draws upon the Institutional Analysis and Development (IAD) framework developed by Elinor Ostrom and her colleagues.²⁶ Of related interest is research on assessing implementation "success" and measuring institutional or network performance. A more detailed review of this literature can be found in Appendix A of our final report *Environmental Governance in Watersheds: The Importance of Collaboration to Institutional Performance*.

Data for the study was collected from several sources. Utilizing different data sources is important because it allows investigators to use a strategy of triangulation to improve the validity of our findings.²⁷ Documents and archival records were an important source of data. A bibliography of these materials can be found in Appendix C of our final report *Environmental Governance in Watersheds: The Importance of Collaboration to Institutional Performance*. Field interviews with 40 individuals representing various organizations were the second source of data. The interviews were confidential and recorded on tape to ensure the accuracy of the data collected. Given the controversial nature of evaluation findings, steps were also taken to protect the identity of our informants.²⁸ Follow-up telephone interviews were conducted with individuals who could not be reached in the field while email and telephone inquiries were used to clarify responses from the field interviews and to obtain additional information.

The final source of data was direct and participant observation. The authors previous involvement with various organizations and presence near the case study locations allowed them to attend meetings, observe the interactions among the actors, and obtain data that would otherwise have been unavailable. Mark Imperial and Timothy Hennessey also had some involvement with various organizations and programs described in the case study. Mark Imperial worked for the University of Rhode Island's (URI's) Coastal Resources Center (CRC) from 1989 to 1991 and the Coastal Resources Management Council (CRMC) from 1991 to 1994. Imperial also worked as a consultant to the CRC on two projects, including a project funded by the EPA and the U.S. Agency for International Development (AID). This project examined the NEP to identify estuary programs that could be used as the basis of a training program for international coastal managers that was designed by the CRC.²⁹ Tim Hennessey has periodically worked with CRC staff on various projects, worked as a consultant to the Environmental Quality Study Commission on a project that evaluated the RIDEM and issued its report in 1990, and has supervised graduate students who have worked for various state agencies including the RIDEM and CRMC. This involvement and the steps taken to ensure the validity of this data and its analysis are documented in Appendix B of our final report entitled *Environmental Governance in Watersheds: The Importance of Collaboration to Institutional Performance*.

Systematic qualitative techniques (e.g., coding) were used to analyze these data. Codes were derived both inductively and deductively from the data and generated based on a start list derived from previous research. As coding continued, patterns emerged and codes were used to dimensionalize concepts. When coding the data, quotes and short vignettes were identified to add context to the case studies. As the analysis continued, tables, figures, matrices, and network displays were used to identify trends and make observations.³⁰ The basic approach was one of synthesizing interpretations and looking for themes that cut across the cases.³¹ The comparisons of the Narragansett Bay experiences with those of the other five case studies (i.e., cross-case analysis) helped deepen our understanding of this case and allowed us to determine the extent to which the findings extended beyond individual cases.

To ensure the validity of the findings, the strategy of triangulation was used.³² Triangulation uses independent measures derived from different data sources to support, or at least not contradict, a research finding. The analysis also explored potential rival explanations for the findings and their consistency with the data.³³ Arguments and alternative explanations were compared with one another to identify logical inconsistencies.³⁴ The chain of events was

then examined to help determine causality. In some cases, this involved developing detailed timelines. Potential threats to the validity of the findings were then analyzed.³⁵ Additional steps were taken to address the particular threats to the validity of the findings created by our past involvement with the actors in this case [See Appendix B of the final report].

The Planning Environment

In order to understand the Narragansett Bay Projects (NBP's) development of the Comprehensive Conservation and Management Plan (CCMP) for the Narragansett Bay watershed and its implementation by the Narragansett Bay Estuary Program (NBEP), it is important to have some familiarity with the planning environment. The following sections discuss the Narragansett Bay ecosystem, the environmental problems affecting the watershed, and the institutional framework governing the watershed.

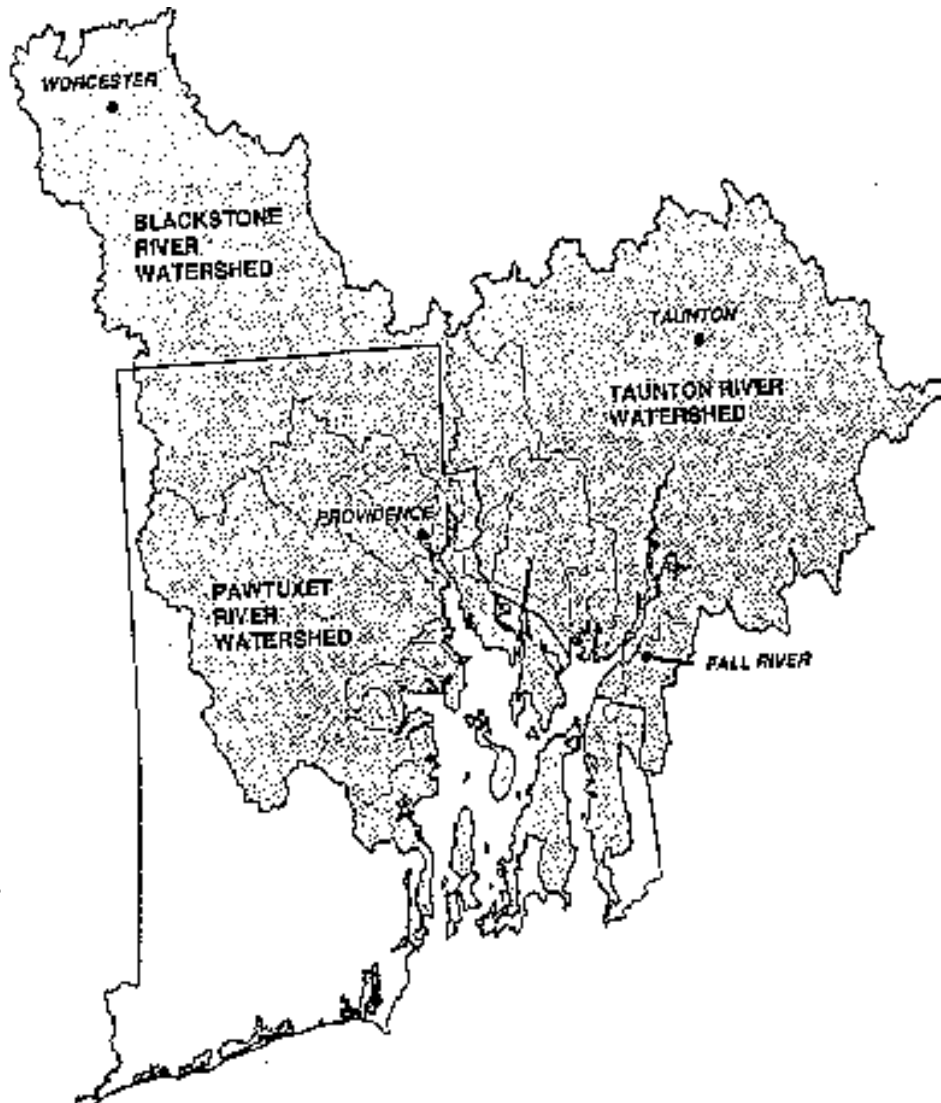
The Narragansett Bay Ecosystem

Narragansett Bay lies in the heart of Rhode Island and is the state's most prominent geographic feature, giving rise to the state's motto as the "Ocean State" [Figure 2]. The Bay has a surface area of approximately 165 square miles.³⁶ Five major rivers feed the bay and form a drainage basin covering more than 1,600 square miles that includes the urban centers of Providence, Rhode Island and Fall River and Worcester, Massachusetts.³⁷ The watershed contains a wide assortment of natural resources. There are more than 3,500 acres of marshes and wetlands on Narragansett Bay. More than 200 bird species depend on the Bay's habitats. The Bay also supports more than 60 species of fish and shellfish.

Rhode Island is one of the most densely populated states in country and the watershed is heavily urbanized. Nearly 2 million people live in the watershed's 100 cities and towns.³⁸ While sixty percent of Narragansett Bay watershed is located within Massachusetts, most of the activity reported in this study occurred primarily in Rhode Island's portion of the watershed.³⁹ The population is relatively stable. From 1991 to 1997, Rhode Island's population actually declined slightly from 1,003,464 to 987,429, down 1.3%. The recession of the early 1990's hit the region hard and more than 16,000 residents left the state in search of employment. As the state's economy improved in recent years, the population has begun to edge back towards 1 million.⁴⁰

Narragansett Bay has long provided the economic base for surrounding communities. Residential development, fisheries, tourism, and industrial activities all rely upon the bay. Historically, the Narragansett Bay watershed was home to a wide range of industrial activities, including many of the largest electroplaters in the country (e.g., costume jewelry makers) and there are over 400 permitted industrial dischargers. Culturally, the residents have a strong marine heritage. The Bay is relatively deep with well-protected harbors that support several recreational and commercial port facilities including the Ports of Providence and Quonset Point. The region still supports a vibrant commercial fishing industry. In 1997, 8 million pounds of quahogs with a value of \$6 million were caught in Narragansett Bay. The Bay's commercial fish and shellfish harvests are estimated to be worth \$31 million per year.⁴¹

Figure 2: Narragansett Bay Watershed



Source: NBP, *Comprehensive and Conservation and Management Plan for Narragansett Bay: Final Report*, State Guide Plan Element 715, Report Number 71 (Providence, RI: NBP and Division of Planning, December 1992), 2.2.

Over the last two decades, the local economy shifted from industrial and manufacturing to service and tourism. Much of the state's income is now derived from tourism and Narragansett Bay is the focal point for much of this activity. There is a large influx of summer tourists who are attracted to the state's beaches, water sports, and tourist destinations such as Newport. More than 32,000 boats are registered in the state and many more are trailered in from out of state. More than 100,000 people fish on the bay each year. It is estimated that tourism on

Narragansett Bay generates over \$400 million per year and supports more than 15,000 jobs. Statewide, tourism related services are believed to have generated \$1.5 billion in 1998.⁴²

Problems Affecting Narragansett Bay

Narragansett Bay experiences problems common to similar estuarine systems in the Northeast. The legacy of the industrial revolution had a noticeable impact with the filling of wetlands and the heavy development of shoreline areas. The electroplating industry and other industrial discharges caused water quality problems and left a legacy of contaminated sediments in many areas of the Bay. Sewage treatment plants, combined sewer overflows (CSOs), failing septic systems, and nonpoint source (NPS) pollution from stormwater runoff remain important water quality problems that cause many areas in the Bay to be closed to shellfishing. Many of these water quality problems were further exacerbated by decades of poorly planned development. Meanwhile, commercial fisheries such as the winter flounder have suffered problems due to overharvesting. Problems such as disease, storm events, loss of habitat, and damming of rivers make it more difficult to evaluate the impact of overfishing on the oyster, bay scallop, soft shell clam, Atlantic salmon, shad, and menhaden, which have also declined.⁴³

While the trend has been towards improved water quality and habitat protection, Narragansett Bay still experiences important water quality problems. Contaminated sediments and CSOs are persistent water quality problems that have received considerable attention. Many of the Bay's tributaries and embayments are plagued by growing water quality problems, mainly from NPS pollution and the development of rural areas in the watershed. The most severely impacted regions are in the upper bay (e.g., Providence and Blackstone Rivers and Mount Hope Bay) and Greenwich Bay, which is located on the western side of Narragansett Bay adjacent to the City of Warwick. While aggressive regulation of coastal and freshwater wetlands has curtailed the loss of this habitat, historically, the region has lost a significant area of its wetlands. Other potential problems stem from the need to dredge the channels serving the Port of Providence and the proposal to expand the Port Facility at Quonset Point by converting it to a major container facility.⁴⁴ This project could significantly impact the Bay.

Institutional Framework Managing Narragansett Bay

The institutional framework managing Narragansett Bay is quite complex. To simplify the discussion, only the key actors are discussed. These include: Save The Bay; industry trade groups; Local government; University of Rhode Island; Rhode Island Coastal Resources Management Council (CRMC); Rhode Island Department of Environmental Management (RIDEM); and the Division of Planning (RIDOP) in the Rhode Island Department of Administration. A number of other organizations also played important roles in the development and implementation of the CCMP including the United States Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Administration (NOAA), the Natural Resource Conservation Service (NRCS), and the Narragansett Bay Commission (NBC). The activities and roles of these and other actors are noted as appropriate.

Noticeably absent are actors from the Commonwealth of Massachusetts which only had limited participation from two of the state's environmental agencies. It is unclear exactly why

this was the case. A former NBP staff member commenting on the draft report asked: “What others are there?” An EPA Headquarters staff member commented that “the government actors [in MA] were never supposed to be, in reality, involved . . .” Clearly, a comparable set of actors in Massachusetts’ portion of the watershed could have been involved. Moreover, given the fact that 60 percent of the watershed is located in Massachusetts, it is questionable why the EPA assumed they could address the watershed’s environmental problems without taking actions in this state. Nevertheless, given the historic lack of involvement, our analysis focuses primarily on the actors in Rhode Island and their implementation activities.

Save The Bay

Save The Bay is a NGO with over 20,000 members. It was created in 1970 and its history is largely tied to the development of the RIDEM and CRMC as well as the changing environmental issues affecting Narragansett Bay. Its mission is “ensure that the environmental quality of Narragansett Bay and its watershed is restored and protected from the harmful effects of human activity. Save The Bay seeks carefully planned use of the Bay and its watershed to allow the natural system to function normally and healthfully, both now and for the future.”⁴⁵ It is a highly influential and well respected organization. Historically, its most important role has been to serve as a watchdog, monitoring agencies such as the CRMC and RIDEM. It is active in lobbying the Rhode Island General Assembly (RIGA)⁴⁶ and typically represents environmental interests in planning or decision-making processes such as the NBP. In recent years, Save The Bay has become increasingly focused on environmental education and in initiating direct actions (e.g., *BayKeeper* program) designed to improve and protect Narragansett Bay.

Industry NGOs

A number of nongovernmental organizations (NGOs) representing business interests were also important actors. The Rhode Island Marine Trades Association (RIMTA) represented the recreational boating and ship building industries. The Rhode Island Builder’s Association (RIBA) and the Rhode Island Association of Realtors (RIAR) represented the building industry. All three NGOs are influential and play active roles in lobbying the RIGA. Another influential group is the Rhode Island Shellfishermen’s Association (RISA). While the economic impact of the state’s shellfishing industry is relatively small when compared to other industries, the RISA has strong public and political support indicative of the state’s strong marine heritage. In addition to these groups, several electroplating companies were actively involved in the NBP’s planning process.

Local Government

More than 100 cities and towns are located in the watershed along with countless special districts. They range from small rural communities to major cities like Providence. There is no county-level government in Rhode Island.⁴⁷ There is a strong home rule tradition and several communities still hold well-attended financial town meetings. The capacity for these communities to address environmental problems varies considerably. Many communities have well developed planning staffs and local environmental ordinances designed to protect wetlands, control erosion and sediment, and manage stormwater runoff. Typically, local conservation

commissions review these activities. Many coastal communities have harbor management plans (HMPs) that address problems such as water quality, public access, and waterfront development. A local harbor management commission typically oversees these activities. Other smaller and rural communities have less capacity to manage environmental problems and often lack a professional planning staff. Despite the important role that local governments play in the managing Rhode Island's environmental problems, they had little involvement in the NBP other than City of Newport and a representative from the Rhode Island League of Cities and Towns. The City of Warwick became very active near the end of the planning process because the CCMP recommended actions to address Greenwich Bay's problems and subsequently has been involved in NBP implementation efforts.

University of Rhode Island

The University of Rhode Island (URI) played an active role in the NBP. Researchers at the URI's Graduate School of Oceanography (GSO), the Sea Grant Program (SGP), Cooperative Extension Service (CES), and other departments such as the Departments of Natural Resources Science (in particular the Environmental Data Center), Civil and Environmental Engineering, and Resource Economics conducted the wide range of studies in support of the CCMP's development. The URI's CES and SGP were actively involved in both developing and implementing the CCMP. Perhaps the most influential institution at URI was the Coastal Resources Center (CRC). The CRC historically played an important role in helping to develop new policies and programs for the CRMC. In recent years, the CRC has worked with the RIDEM, helping it develop its statewide watershed strategy.⁴⁸

Coastal Resources Management Council

The Rhode Island Coastal Resources Management Council (CRMC) implements Rhode Island's coastal zone management (CZM) program, which was approved by the NOAA in 1978. The CRMC was created in 1971 with the charge to:

“preserve, protect, develop and where possible restore coastal resources for this and succeeding generations . . . through comprehensive, long-range planning and management designed to produce the maximum benefit for society and that the *preservation and restoration of ecological systems* shall be the primary guiding principle by which alteration of coastal resources will be measured, judged, and regulated (R.I.G.L. §46-23-1, emphasis added).”

The CRMC's mandate focuses specifically on balancing resource conservation with the needs for development and human use of coastal resources. The CRMC approaches fulfilling this mandate by maintaining a balance between planning, management, and regulation. These policies are contained in the Rhode Island Coastal Resources Management Program (RICRMP).⁴⁹ The RICRMP contains rules that regulate all development along Rhode Island's 401 miles of shoreline. It also regulates certain activities (e.g., power generation facilities, chemical and petroleum processing facilities, and mineral extraction activities) on a statewide basis and other activities located in the watersheds of poorly-flushed estuaries (e.g., Salt Ponds and Narrow River). All federal, state, and local development projects in its jurisdiction are subject to the

CRMC's review and approval. The permit review process is open with opportunities for both written comment and public testimony at hearings that are required for all major development projects. The review process is similar to the one used by local governments in the watershed.

Unlike the Rhode Island Department of Environmental Management (RIDEM) which is an executive branch agency, the CRMC is a legislative agency delegated broad authority to develop whatever policies and programs the agency deemed necessary to fulfill its mandate. The initial focus was not to create a new bureaucracy. Instead, the Council relied on staff from the RIDEM and other state agencies to review and comment on development proposals. In 1986, the CRMC was given its own technical staff. However, the CRMC continues to rely on some RIDEM permits (e.g., individual sewage disposal system permits and Section 401 water quality certifications) to complete its technical review for some development projects. Minor permits are issued administratively while major permit decisions are decided by a 16 member council composed of politicians and citizens appointed by the governor, lieutenant governor, and the speaker of the house. The formula determining representation on the Council is quite complicated and ensures that all regions of the state and communities of different sizes are represented. The membership also includes both citizens and elected officials. While the structure of the Council has opened up the agency to charges of being political, we found no evidence to suggest that the CRMC was any more responsive to overt pressure brought by the governor or interest groups (e.g., Save the Bay, RIMTA, etc.) than the RIDEM. The CRMC also focused on building a constituency to support its programs and has been effective in maintaining strong relations with the General Assembly. This may help explain why the CRMC avoids the type of criticism that the RIDEM has received from the RIGA.

Rhode Island Department of Environmental Management

The Rhode Island Department of Environmental Management (RIDEM) is the state's water quality agency and is delegated the authority under the CWA to implement a number of the Environmental Protection Agency's (EPA) programs such as the Rhode Island Pollutant Discharge Elimination System (RIDDES) permit program and Section 401 water quality certifications. The RIDEM also implements statewide permit programs for freshwater wetlands and individual sewage disposal systems (ISDSs). Unlike the CRMC's programs that try to balance conservation and development in coastal areas, the mission of the RIDEM's programs, as contained in the State Constitution and various state enabling legislation, focuses on protecting human health and the environment on a statewide basis. This difference in mission appears to be one source of periodic conflict between the RIDEM and the CRMC, particularly in areas where there is overlapping authority and responsibility.

The RIDEM's programs are also more "hierarchical" than the CRMC's and have a centralized decision-making process.⁵⁰ Responsibility for the review of projects is divided among different divisions and it is not uncommon for a single development project to be reviewed by different programs located in different offices, which may disagree on the merits of a project. The RIDEM's enabling legislation at both the federal and state levels is also more restrictive than the CRMC's and places constraints on the agency's ability to develop new policies and programs. Opportunities for public participation in RIDEM permit decisions are more limited and closed than the decision-making processes of local governments and the

CRMC. The latter are required to hold public hearings on all major development projects in addition to having public notice and comment requirements. A council or board also makes permit decisions in full view of the public instead of being issued administratively.

The RIDEM is also saddled with multiple and sometimes conflicting mandates⁵¹ and in recent years has been criticized by the RIGA, regulated community, and the EPA.⁵² For example, a 1990 report by the Environmental Quality Study Commission recommended the complete reorganization of the RIDEM and cited: 1) the inadequacy of staff levels within different divisions of the agency; 2) the inability to attract and retain qualified staff; 3) the inadequacy of certain core functions of the agency in areas of planning, program development, enforcement, and data management; 4) inadequate funding for environmental regulatory bodies; and 5) a flawed organization structure.⁵³ Many of these same problems continue to affect the agency and are the source of ongoing criticisms.⁵⁴ The lack of consistent leadership as evidenced by the high turnover in its commissioner has hindered the agency's ability to address these problems and the frequent reorganizations of the agency do not appear to have quelled these concerns.⁵⁵

There is also a history of periodic conflicts between the RIDEM and the CRMC that influenced the development of the NBP. The RIDEM and CRMC reflect different philosophies of environmental management as a result of their enabling legislation and relationships with different federal agencies (i.e., EPA and NOAA) and sometimes work to protect the interests of different constituency groups.⁵⁶ In the past, bills have been introduced into the RIGA to move the Council and its programs to the RIDEM. More recently, there have been proposals to move selected RIDEM programs to the CRMC. The problem this creates for the NBEP is that it becomes vulnerable to conflicts between the legislature and RIDEM. For example, in the past several years, bills have been introduced into the legislature to move the NBEP as well as the authority to implement federally delegated water quality programs to other agencies, most often the CRMC. Accordingly, it is not uncommon for the two agencies to be involved in periodic political conflicts. While these conflicts are real and are noted periodically throughout the case study, there are also many instances of effective collaboration between the agencies and staff often work well together. Thus, the relationship between the agencies is a complicated one filled with both conflict and collaboration.

Division of Planning

Rhode Island has aggressive comprehensive planning requirements that went into effect while the CCMP was developed. The Department of Administration's Division of Planning (RIDOP) and the Statewide Planning Council (SPC) administer the Statewide Planning Program (SPP). The SPP provides technical assistance to local governments and state agencies and maintains the *State Guide Plan*, the repository of state policies. State agencies and local governments are required to be consistent with these policies.⁵⁷ Moreover, local governments are required to develop Comprehensive Land Use Plans consistent with these policies and develop ordinances to implement the plans. The RIDOP reviews the plans to make sure that they are consistent with the policies contained in the *State Guide Plan*.

The Narragansett Bay Project

The Narragansett Bay Project (NBP) was not the first water quality planning effort for Narragansett Bay. Twenty-seven water quality planning efforts have been undertaken since 1900.⁵⁸ However, the NBP was the first attempt to develop a collaborative watershed management plan. Narragansett Bay did not ask to join the National Estuary Program (NEP).⁵⁹ The origins of the program predate the NEP. In 1985, Narragansett Bay and three other estuaries received approximately \$1 million per year in federal funding to “study” the Bay and its problems. The objective was to take an approach similar to the Chesapeake Bay Program. With the reauthorization of the Clean Water Act (CWA) in 1987, Congress turned this effort into a new national program (i.e., NEP) with the Narragansett Bay Project becoming one of the original six, or Tier I, estuary programs.⁶⁰

When reading this case, it is important to keep in mind that the NBP is a Tier I program. The NBP was operating in uncharted waters and faced challenges that subsequent estuary programs did not have to confront. There was also more diversity in the approaches taken to fulfill the NEP’s requirements by the early Tier I (e.g., Narragansett Bay) and Tier II (e.g., Delaware Inland Bays) programs than the Tier III – V estuary programs. Accordingly, the experiences, both positive and negative, of early programs like the NBP helped define the requirements that added structure to the NEP’s planning process overtime.⁶¹ The lessons also helped the EPA identify better candidates for inclusion in the NEP through the Governor’s Nomination Process. It resulted in the EPA providing estuary programs with other forms of flexibility and a shorter planning process that spends somewhat less money proportionately on scientific research. The technical assistance available to newer estuary programs in areas such as conflict resolution, managing collaborative decision-making, and incorporating performance measures into the programs was not available to early programs such as the NBP.⁶² Moreover, while there continues to be diversity in approaches to institutionalizing CCMP implementation, subsequent estuary programs such as Tampa Bay (Tier III) and Tillamook Bay (Tier IV) also had the opportunity to learn from the experiences of earlier programs such as Narragansett Bay (Tier I) and Delaware Inland Bays (Tier II). Accordingly, while the following sections describe some serious problems with respect to how the NBP’s planning process unfolded, we believe that these problems should be viewed in constructive terms as an opportunity to identify the lessons that can be learned from these experiences.

The Planning Process

Over \$10 million was spent between 1985 and 1992 by the EPA and the State of Rhode Island to support the activities and research that led to the creation of the CCMP for Narragansett Bay [Table 1].⁶³ Approximately 75 percent of the funding went to support the characterization efforts that occurred between 1985 and 1990 with the remainder supporting program administration, public outreach and education, data management, demonstration projects, and CCMP development. By 1990, the majority of the funding was being used to develop the CCMP and related work products.⁶⁴

Table 1: Timeline of Selected Activities Related to the Development of the CCMP

Date	Event
1985	Narragansett Bay established as one of four estuary projects
1985 - 1991	Scientific Assessment of the Bay
1986 - 1987	Public opinion survey was conducted
1987	NEP established; NBP commissions public opinion survey and goal setting workshop
1987	Series of goal setting workshops were held
1988	NBP officially becomes part of the NEP
1988	The Land Management Project and the Hazardous Waste Reduction Project started
1990	CRMC and RIDOP added to the Executive Committee
1990	Citizens Monitoring Project and Designs for a Better Bay awards program started
1991	Follow-up public opinion survey was conducted
Nov. 1991	Prioritization of the CCMP goals by the Management Committee
Jan. 1992	Draft CCMP released for public review and comment
Feb. – Apr. 1992	Six public information meetings were held
Jun. 1992	Public hearing on the Draft CCMP
Jul. 1992	NBP loses funding and most of the NBP staff leave the project. A small staff remains to finish the CCMP
Jul. 1992	Management Committee approves the final CCMP
Dec. 1992	State Planning Council approves the CCMP
Jan. 1993	The EPA approves the CCMP
1993	NBP created as program within RIDEM
July 1993	Funding is restored and the NBP regains a full complement of staff to begin implementation efforts
May 1995	Narragansett Bay Project (NBP) changed to Narragansett Bay Estuary Program (NBEP)
1997	NBEP Completes first EPA Biennial Review
1999	NBEP completes second EPA Biennial Review
Apr. 2000	Narragansett Bay Summit 2000 Conference

The early years of the program were oriented towards doing research on Narragansett Bay and its problems. The first director of the program was affiliated with the University of Rhode Island's (URI's) Graduate School of Oceanography (GSO) and several respondents noted that the director saw the program's mission as sponsoring "good science". Indeed, many Tier I programs⁶⁵ such as the Albermarle-Pamlico Estuary Study (APES)⁶⁶ and the Long Island Sound Study (LISS) modeled their efforts on the Chesapeake Bay Program (CBP),⁶⁷ placing heavy emphasis on scientific research. Research was conducted on water and sediment quality, water quality modeling, land-use impacts on environmental quality, health and abundance of living resources and critical habitats, governance issues, economics, and public finance issues. Some particularly notable efforts included the wet weather study, the habitat inventory program, and upper water quality model.⁶⁸

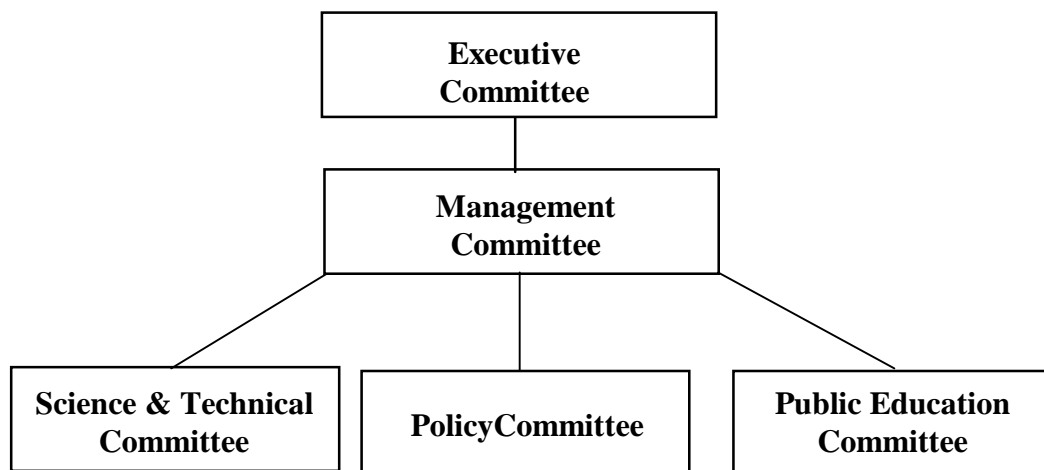
Overtime, the focus of the NBP appears to have shifted from basic to applied research. There are a lot of potential causes for this shift. A new project director⁶⁹ was hired in 1987 who had a different vision of the NBP's mission and this may have changed the research agenda. As

the NEP evolved, the EPA's expectations changed as did the RIDEM's information needs as it began to implement other policy changes required by the CWA revisions in 1987.⁷⁰ Early research and the development of the briefing papers and CCMP also began to raise new questions that were more applied in nature.

During the planning process, the EPA's funding was routed through the New England Interstate Water Pollution Control Commission (NEIWPC), which hired the NBP staff. The NBEP staff then worked in space provided by the Rhode Island Department of Environmental Management (RIDEM). This was done for several reasons.⁷¹ First, it removed the NBP from Rhode Island's state personnel system. This was important because the staffing of the NBP required specialized technical skills often requiring a Ph.D. while state personnel descriptions often did not adequately reflect these requirements (i.e., they may not even require a Masters degree) or had inappropriate titles or compensation to attract qualified staff. Union agreements specifying what work their employees should do created additional problems. Second, the project was funded with "soft" money in that it was allocated on a yearly basis and was discretionary with no guarantee that the funding would be continued. This made it difficult for an agency such as the RIDEM to commit to creating 8 to 10 new state positions. Third, the state personnel system makes it difficult to fill positions in a timely fashion with delays of six months to a year not being uncommon. This was not feasible given the nature of the project and its tight timelines. Fourth, it removed the NBP from the state's convoluted contracting and purchasing procedures. Finally, it was thought that this hiring arrangement would make the NBEP staff independent of the RIDEM and other state agencies. However, it was also thought that co-locating the staff in the RIDEM offices would foster an improved working relationship with many of the RIDEM divisions that served as the source of state match for the NBP.⁷² These personnel and contracting problems were serious and in a recent issue of *Governing*, the state received the worst rating in the country for its human resource management system.⁷³

Unfortunately, some problems appeared to be linked to this independence. Some actors were not aware of the hiring relationship and the perception, albeit largely incorrect one, was that the NBP staff were RIDEM employees.⁷⁴ These perceptions became a problem during the CCMP's development because some actors assumed that the EPA and RIDEM staff got to review the CCMP before anyone else did. Ironically, the improved relationship between NBP and RIDEM staff resulting from their co-location combined with less routine interaction between NBP staff and staff in other organizations may have served to reinforce these perceptions. Moreover, this staffing arrangement created an accountability problem. While the NBP's workplans and major activities were approved by the Executive and Management Committees and the EPA,⁷⁵ there appeared to be less direct control over staff activities than the other three estuary programs we examined.⁷⁶ The NEIWPC, the NBP staff's employer, provided little oversight and had no stake in the program or the CCMP. Thus, the planning staff did not work directly for one of the stakeholders, which was the case in the other three cases. The Executive and Management Committees were more reactive than proactive and had much less supervision and control over staff activities than in Tampa Bay and Tillamook Bay.⁷⁷ Moreover, the NBP staff did not view themselves as being neutral and working for the Executive and Management Committee as was the case in the Delaware Inland Bays, Tampa Bay, and Tillamook Bay. Instead, the NBP staff took their independence to heart and in effect ended up becoming another stakeholder at the table. As will be discussed in subsequent sections of the report, this became

Figure 3: The NBP's Original Management Conference Structure



problematic when the NBP staff's interests diverged from those of other stakeholders and they did not take a neutral position on controversial issues and was not an advocate for "consensus" but rather particular policy positions.⁷⁸

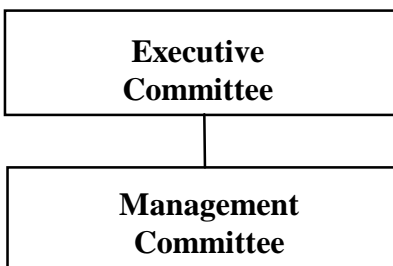
Establishing the Management Conference

One of the first steps in the NEP's planning process [Figure 1] was for the NBP to establish its Management Conference. Initially, a tiered committee structure consisting of an Executive Committee, Management Committee, Science and Technical Committee (STC), Policy Committee, and a Public Education Committee (PEC) was used [Figure 3].⁷⁹ Overtime, these committees were combined into just two-committees, an Executive Committee and a Management Committee with 45 members [Figure 4].

The Executive Committee provided the NBP's general policy direction and directed the activities of the Management Conference. The original members of the Executive Committee included the EPA, RIDEM, and the Natural Resource Conservation Service (NRCS). Later in the planning process when it became evident that the lack of inclusion of the CRMC and RIDOP might create problems during the CCMP's approval, the agencies were added as members of the Executive Committee in early 1990.⁸⁰

The Management Committee was intended to be the focal point for consensus building during the planning process. Originally, the NBP created a Science and Technical Committee (STC), Policy Committee, and a Public Education Committee (PEC) to assist in these efforts. However, the committees did not have clear roles and responsibilities and were viewed as being unproductive. Instead of revitalizing the committees, the NBP staff, in consultation with the Executive and Management Committees and the EPA, decided to disband the committees and folded them into the Management Committee, which in increased its size. By the end of the planning process, the Management Committee had 45 members with several actors sending support staff with their Management Committee representative to participate in discussions.⁸¹

Figure 4: The NBP's Final Management Conference Structure



The members of the Management Committee represented many of the important stakeholders with Save The Bay representing the environmental interests, groups like the RIMTA and RIBA representing economic development interests, and the URI representing scientific interests. Representatives of federal (7) agencies, the RIDEM (7) and other state agencies (10)⁸² filled out the remainder of the committee's membership.⁸³ Noticeably absent were representatives from local government (2) and only two agencies from Massachusetts participated in the Management Committee.⁸⁴

Attendance of some committee members was often spotty and it was not uncommon for other non-committee members to participate in discussions with the mix of participants often varying based on the issues discussed. According to one respondent, the management committee, "handled all the important business and decisions on which research projects had highest priority. It was the committee to which NBP staff presented technical findings and then presented policy recommendations. The Management Committee then would referee all the policy recommendations and recommend they be included or not." As a result, the Management Committee exercised significantly more control over the content of the CCMP than did the Executive Committee, which rarely debated the content of specific CCMP recommendations until the final stages of the CCMP's approval. This was different than the other three NEP case studies where the Executive Committee or its equivalent exercised greater control over the program and the CCMP's contents than the Management Committee. During most of the planning process in the NBP, the Executive Committee mostly deferred to the Management Committee, which became the defacto decision-making committee for the NBP.⁸⁵ However, during the CCMP's approval process, the Executive Committee became more intimately involved and was instrumental in resolving much of the conflict surrounding the CCMP.

Priority problems

Once the Management Conference structure was established, the participants had to develop a list of priority problems. To help do this, the NBP commissioned a public opinion survey in 1987 and sponsored a series of community round table events to elicit input from public and agency officials. These efforts produced the NBP Management Committee's original list of seven "issues of concern":

- Impacts of toxic pollutants
- Impacts of nutrients and eutrophication
- Land-based impacts on water and habitat quality
- Health and abundance of living resources
- Fisheries management
- Health risk to consumers of seafood
- Environmental impacts on commercial and recreational uses of Narragansett Bay

However, unlike the other three NEP case studies, no central issue emerged to focus the planning effort around. Several factors contributed to the lack of a focal problem. Research on Bay problems concluded that the Bay suffered from a “low-grade fever” resulting from several smaller interrelated problems rather than one dominant problem.⁸⁶ This led the NBP to focus on a wide range of problems that were more or less given equal attention. While some Executive and Management Committee members and EPA staff suggested taking a more strategic approach that focused on a more limited set of issues, these recommendations were rebuffed by the NBP staff and other committee members. The NBP staff reported that their hope was that the stakeholder process would naturally lead to the development of priorities and was reluctant to try and push their priorities because they were afraid this would be counter-productive.⁸⁷

While the NBP did not make an effort to prioritize the environmental problems, it did make an effort to prioritize the recommendations contained in the CCMP. This occurred late in the planning process when the NBP held a two-day retreat in November 1991. The product of these efforts was the identification of 41 high priority recommendations out of the CCMP’s approximately 500 recommendations. These activities clustered around seven areas of action:

- Reduce loadings of toxics, nutrients, and pathogens to Narragansett Bay
- Promote and use comprehensive watershed management techniques
- Abate sources of nonpoint source pollution
- Protect, manage, and restore critical environmental resources
- Provide technical assistance and outreach to project partners and the public
- Implement a long-term monitoring plan for Narragansett Bay
- Maintain a mechanism to oversee CCMP implementation

While the prioritization of implementation actions was common in all four estuary programs, the lack of a focal problem (i.e., one that was more important than the rest) was unique to Narragansett Bay. In the other NEP cases, the emergence of prioritized problems was the result of previous planning efforts combined with the nature of the problems facing the watershed. We believe that that the lack of a focal issue hindered the NBP’s efforts. It prevented the actors from focusing their research on a narrow set of issues.⁸⁸ It increased demands for stakeholder involvement in the Management Committee because the increase in the number of issues corresponded to an increase in policy proposals that affected different interest groups and NGOs. Since there were practical limitations on the size of the Management Committee, this meant that it was difficult to ensure that certain interest groups were adequately represented.⁸⁹ The lack of a focal problem(s) also made it difficult to develop consensus and prioritize CCMP recommendations since stakeholders viewed the importance of issues in

different ways.⁹⁰ It also produced a CCMP that included numerous recommendations addressing a wide range of issues affecting a wide range of government actors.⁹¹ This increased the likelihood that the NBP would experience conflict during the CCMP's approval process.⁹² The lack of central environmental problem also complicated efforts to develop specific goals or to link environmental indicators to implementation actions. The vast array of issues and recommendations also increases both performance and environmental monitoring costs.⁹³ These findings suggest that an important prerequisite for effective watershed management is the presence of one or more focal issues that can be used to structure planning and implementation activities around. In our other cases, these focal issues were also ones where there were important opportunities for collaboration present and the actors had a shared interest or incentive to address the problems.

Characterization Phase

One of the reasons that the NBP's planning process was so lengthy, in this case around 8 years, is that considerable financial resources were invested in scientific research. The vast majority of the \$10 million spent during the planning process funded over 110 scientific and policy-related research projects.⁹⁴ Much of this effort focused on developing a comprehensive understanding of the Bay and its resources. The STC advised NBP during the early years of the planning process while in the latter years the staff made recommendations to the Management Committee. However, there appears to have been relatively little direct involvement of either the Executive or Management Committee members in determining what research to fund. Rather, the committee members routinely accepted the NBP staff's recommendations.

Based on our comparative analysis of the NEP case studies, we concluded that one of the NBP's great missed opportunities was the failure to produce a status and trends (i.e., characterization) report that synthesized the research, identified probable causes of identified problems, and documented the relationships between pollution loads and potential uses in an estuary. The original draft CCMP even lacked a detailed discussion of the Bay's problems and their causes, although this summary was added to the final CCMP.⁹⁵ Instead, the NBP developed a series of briefing papers or detailed technical reports in each issue area. These reports presented the best scientific information on a specific problem and contained the NBP staff's recommendations for addressing these issues. The briefing papers then formed the basis of the first draft of future chapter of the CCMP. However, no attempt was made to tie together the issues, problems, and causes of the problems identified in the briefing papers other than the "State of the Bay" chapter added to the final CCMP.⁹⁶

Collectively, the briefing papers and "State of the Bay" CCMP chapter satisfied the NEP's characterization requirements.⁹⁷ However, we believe that this was a poor substitute for the detailed status and trends reports that were produced by other estuary programs, including some of the other Tier I and Tier II programs. The value of the reports is that they centralize existing research on a watershed's problems in one technical document, with the better documents being written such that they are accessible to both the general public and decisionmakers. This allows this information to be disseminated widely⁹⁸ and these reports can be an important way to educate the general public, often serve as important resource for government agencies and interest groups, and can educate new committee members. These

documents can also serve as an important resource for practitioners engaged in subsequent watershed management efforts. The EPA appears to agree with our findings because it now requires these reports and it would not waive the requirement for the Delaware Inland Bays (a Tier II program) when they proposed using existing technical reports to satisfy its characterization requirements.

There were also several problems with the briefing paper approach as it was employed here (others are discussed in a subsequent sections of the report).⁹⁹ The wide range of research and the excellent technical work completed during the characterization phase were never put in a single document that was accessible to a broad audience of decisionmakers and the general public.¹⁰⁰ The chapter added to the CCMP provides some excellent information but is largely a cursory explanation of the problems and their causes. Conversely, the briefing papers often erred on the side of being technical in nature and focused on very specific and detailed policy changes. As a result, the documents may not have removed the information asymmetries for those individuals unfamiliar with the problems, issues, institutions, and policy tools. These information asymmetries may have contributed to the problems experienced during the development of the CCMP.¹⁰¹ Moreover, the briefing papers and “State of the Bay” chapter were prepared at the end of the planning process while other estuary programs have tried to produce these reports (or at least drafts of the reports) earlier in the planning process. Accordingly, the lack of a detailed, integrated discussion of the Bay’s problems may have complicated efforts to prioritize problems while the series of briefing papers added credence to the view that all of the problems were of “equal” importance.

Other Notable NBP Activities

While the technical work was progressing, the NBP was busy in other areas. The NBP implemented a wide range of public participation activities, mostly in the area of outreach and education. Direct public involvement was limited, especially with the dissolution of the PEC. Instead, most public involvement was near the beginning of the process in various “round tables” convened to identify problems and at the end of the process during a series of public meetings held prior to the CCMP’s approval. The NBP was much more active in terms of public outreach and education having developed a wide range of materials such as pamphlets and fact sheets. At this point in time, there was no broad use of the internet for distributing this type of information.

Another area of activity concerned the NBP’s use of Action Plan Demonstration Projects (APDPs) that were designed to build support for the program and to address problems. Three notable projects were funded during the CCMP’s development. The *Land Management Project* (LMP) was created to look at alternative land use and growth management strategies in the context of sub-watersheds within the Narragansett Bay watershed.¹⁰² During the project, the NBEP staff worked with local governments to apply the results of NBP sponsored research on relationships between land use and water quality. The timing of these efforts was good because local comprehensive land use plans were being developed as a result of new state planning requirements. Accordingly, this information was well received by local officials.¹⁰³ The LMP lasted several years and provided valuable technical assistance to local governments and was widely recognized as a successful project.¹⁰⁴ It also led to other efforts such as the Wood-Pawcatuck Initiative and the municipal training programs for local officials implemented by

URI's Cooperative Extension and Sea Grant. The second project was the *Hazardous Waste Reduction Project (HWRP)*, a collaborative technical assistance project that conducted industrial process audits for specific businesses and found ways to reduce toxic substances and in some cases found ways to save money. The *Designs for a Better Bay Land Development Awards Program* was developed to recognize innovative projects undertaken in the private sector that results in environmental improvements.¹⁰⁵ These projects and other APDPs improved the visibility of the NBP and generated some support for the program. They also helped reveal some of the opportunities for collaboration that existed in the current governance framework.

Developing the CCMP

The development of the CCMP was linked to the development of the aforementioned "briefing papers". The process was intended to work in the following manner. The NBP staff or its contractors synthesized available scientific and technical research and then presented recommendations for addressing each problem, often in the form of different options. The Management Committee then discussed the briefing papers and their recommendations and directed the NBEP staff to make appropriate changes. In some cases, a briefing paper needed to be reviewed several times before it was approved. Once it was approved, the NBP staff then turned it into a draft chapter of the CCMP. Decisions were made by "consensus" with each Management Committee member providing input and raising objections. The hope was that this process would result in a CCMP with broad public and stakeholder support.

Unfortunately, a number of problems emerged that created conflict among the stakeholders and complicated the CCMP's approval. As noted by numerous respondents, the conflicting personalities of some NBP staff and committee members and the history of conflict between some actors (e.g., RIDEM and CRMC) exacerbated the conflicts that occurred. However, our analysis concluded that other structural problems offer a more powerful explanation of why the planning process experienced the level of conflict that occurred. These include:

- The broad ambitious scope of the CCMP and the wide range of issues addressed
- Length of the planning process combined with imposition of deadlines
- Murky definition of consensus
- Problems managing the participatory decision-making process
- CCMP's use of very detailed recommendations focusing on controversial issues
- NBP staff advocating specific policy positions rather than being a neutral broker for consensus
- Decision to include the CCMP in the *State Guide Plan*

In retrospect, we believe that these factors would have created conflict regardless of the personalities and institutional histories of the various NBP participants. As noted in subsequent sections of this report, many of the same participants continue to find ways to collaborate effectively despite the personalities and institutional histories.

The lack of a focal problem or issue meant that the scope of the CCMP was ambitious. This has several consequences. First, the large number of issues greatly expanded the range of

affected stakeholders and even with a large 45-member management committee it was hard to adequately represent the diverse range of interests. This may have been one reason for some of the local government opposition to the draft CCMP. Second, the large number of issues combined with the briefing paper process literally overwhelmed NBP staff and committee members during the critical period of CCMP development. Some respondents reported being overwhelmed by all of the documents requiring review while former NBP staff reported that it was often difficult to get the committee members to read and comment on the reports.¹⁰⁶ It also became a challenge for the NBP staff and committee members to keep track of the different versions of the documents and the changes that had been agreed upon.¹⁰⁷

The length of the planning process combined with the imposition of a deadline by the EPA for completing the CCMP created other problems. It created a sense of urgency. As a result, some briefing papers such as the one for living resources could not be developed even though there was broad political and public support for addressing these issues. Similarly, the NBP did not produce a CCMP chapter addressing Greenwich Bay's problems even though it was a high priority. The failure to develop a chapter on Bay Governance meant that the Management Committee spent little time debating alternative implementation structures. Other briefing papers such as the one for land use received little discussion before the Management Committee.

As the deadlines neared, NBP staff and some Management Committee members became reluctant to rehash old issues. However, new organizational representatives and NBP staff members replaced their counterparts over the years and few participants were party to all of the previous deliberations. The goals and priorities of some actors changed during the course of the planning process. For example, the 1990 Coastal Zone Act Reauthorization Amendments (CZARA) required the RIDEM and the CRMC to develop a Coastal Nonpoint Pollution Control Program (CNPCP) and elevated NPS issues on the policy agendas of both agencies. As a result, some respondents reported that they felt that the new representatives were not supporting the positions that their organizations had previously committed. Other respondents claimed that this support and approval had never been given or that some change in conditions warranted reopening issues for discussion. Both situations undoubtedly occurred. As one RIDEM participant recalled:

“We had meetings literally for years before we put pen to paper to write a plan. Over those years you had different characters. Characters. You had different individuals representing different agencies. So, at times you didn't have a good institutional memory of the agencies. What they originally said four years ago. Would they still support that. RIDEM had different directors. Different people were representing RIDEM. Some people didn't take the plan seriously until it got toward the end and then realized that they'd better read it and comment on it.”

While these problems could have been overcome by further deliberation, the lack of time and deadlines for completing the CCMP prevented it from occurring and these conflicts were unresolved when the draft CCMP was released.

The lack of clear decision-making rules and the use of a murky definition of consensus caused some of the problems the NBP experienced. Votes were sometimes used but most

decisions were made by “consensus”. However, it is unclear what that meant. It did not mean unanimity since respondents reported that the Management Committee would routinely pass things over the objections of a selected group of actors, particularly as the planning process came to a close and time ran out. Consensus also did not mean unanimous agreement among those most affected by a decision. Respondents reported that there were instances when the Management Committee would make a decision despite the objections of the only actors affected. As a result, the process never developed “true” consensus and the effort may have suffered from groupthink.¹⁰⁸

Groupthink occurs when the pressures for conformity are so extreme that the group acts as if it had only one mind, failing to critically evaluate alternatives by discounting dissenting views.¹⁰⁹ While all participants were allowed to voice their views during the Management Committee’s deliberations, some objections were simply not responded to or were ignored by the group.¹¹⁰ This is a key symptom of groupthink. The group begins to lose its ability to think critically about alternative views and dissenters are encouraged, explicitly or implicitly, to remain quiet so that the group can reach agreement. This can create a false sense of unanimity, another common symptom of groupthink. We believe that this may explain why several participants reported being surprised at the level of conflict. It may also explain why some participants decided to bide their time until the draft CCMP was released and used the public comment period to force the NBP to address their issues. It also helps explain why some of the actors choose to exit the “consensus” process and use other forms of political power to force the changes they wanted in the draft CCMP (these are discussed in the next section of this report). It also helps explain why this “consensus-based decision-making process resulted in hundreds of pages of comments on the draft CCMP by 38 individuals and organizations.¹¹¹

The NBP’s staff experienced other problems in managing the program’s collaborative decision-making process. The NBP’s staff reported that that EPA required that they use a collaborative, consensus-based decision-making process. As a result, all major NBP reports, work plans, and the draft and final CCMP were approved by the Executive and Management Committees. However, a former NBP staff member reported being dissatisfied with the *collaborative planning model* the EPA required:

“We had a huge group of stakeholders, 40-45 groups. They came with variable education. Very different organizational interests and backgrounds. So, one of the difficulties was trying to educate them so that there was ever a common language. Our experience was twofold. Committee members participated only when their ox was being gored. Our experience was that this project never really rose to consensus based decision-making about what was best for Narragansett Bay. Constituents entered the process determined that their interests be protected. Which is one of my criticisms of this problem. It also meant that decision making was bizarre, because you only had the most interested groups making decisions rather than having well informed people saying, this on objective grounds appears to be best for this bay or this watershed.”

In retrospect, the former NBP staff member would have preferred using a classic *advisory committee model*:

“They [Management Committees] should be strictly advisory. During the planning process they weren’t. They were the governing body. They could dictate what happened. Its a problem. Its pseudo democratic because you never have all interests at the table. Second, some groups are present for some issues and absent for other issues, so there is not true democracy or consensus, especially with a large stakeholder group. Third, all stakeholders are not equally educated or even, this is gross, but educable on certain issues. Some don’t care about a certain level of detail, and may prefer to make decisions based on something other than the best available technical information. For those reasons, I don’t think those people ought to be making public policy decisions for large populations. They should be advisors. They can provide information about political obstacles or incentives. Advisory groups are useful for public education to educate constituencies. As a governance body it’s totally inappropriate for this body of water or any other.”

We believe one of the central problems with the NBP’s planning process was that in effect it combined elements of the collaborative planning and advisory committee models ineffectively. In the *advisory committee model*, staff typically work for an organization and rely on an advisory committee for advice and guidance as they make decisions and prepare a plan that advances the interests of their organization. Therefore, staff may be active proponents of specific policy positions. In the *collaborative model*, staff typically maintain a neutral position and act on the direction of a collaborative organization and work to prepare a plan that advances the collective interests of the collaborative organization.¹¹² The NBP staff used a combination of the two models. The Management Committee was similar in structure to an advisory committee that was then empowered to make decisions that in effect could bind higher-level decisionmakers on the Executive Committee. The NBP staff did not maintain a neutral role and advocated specific policy positions but since they did not work for one of the stakeholders were advancing their vision of the Bay’s interests, not necessarily those of the Management Conference members. Thus, rather than being critical of the collaborative model like the former NBP staff member, we believe that the problems lie more in the execution of this approach. Moreover, the learning that occurred as a result of Tier I and II programs such as the NBP have helped subsequent estuary programs like Tampa Bay and Tillamook Bay to manage the collaborative model more effectively.

The detailed nature of the CCMP’s recommendations exacerbated the level of conflict and created other problems. The NBP’s draft CCMP recommended, often in exquisite detail, what the new regulations, policies, and plans should require. The 41 high priority recommendations contained in Appendix B provide a small glimpse of this complexity as each is a summary of a small piece of a larger set of complicated recommendations. Our review of the four estuary programs suggests that the consensus-based process is often best suited to developing general recommendations that provide the actors with a great deal of flexibility in how the recommendations are actually implemented. The NBP’s draft CCMP took the opposite approach and tried to specify exactly how the recommendations should be implemented. As noted by one former NBP staff member:

“We had a lot of information with which we could go after problems. It also meant that our recommendations could be quite detailed . . . What we found was that the Management Committee was unable to deal with or absorb that level of detail. Often they’d take the most general possible recommendation and approve that and ignore the detail. That’s a problem. My opinion is that that is a problem with this [collaborative] form of decision making.”

The detailed recommendations also enlarged the number of potential sources of disagreement among actors, lengthened the decision-making process, and caused the actors to debate issues that may be irrelevant given the reality of how CCMPs are implemented.¹¹³ Second, NBP staff may not have appreciated the complexity and consequences of the recommendations such as the administrative and budgetary realities associated with the proposals and the political realities of trying to get them adopted and funded.¹¹⁴ This caused additional debate. Therefore, the Management Committee spent a great deal of time and energy debating the wording of detailed recommendations even though the actors may have always agreed on the basic proposals.

The NBP staff’s decision to have the CCMP address controversial issues also increased the likelihood that the process would create conflict among the actors.¹¹⁵ The CCMP recommended changes to state legislation, dozens of new planning efforts, countless changes to the regulatory programs administered by the RIDEM and the CRMC, and the development of local ordinances. Many of the recommendations were also intended to resolve policy conflicts between agencies such as RIDEM and the CRMC. Thus, it is not surprising that some of the draft CCMP recommendations evoked considerable discussion and were the source of conflict because they sometimes involved win-lose issues.¹¹⁶

Complicating matters was the NBP staff’s decision to advocate particular positions on controversial issues rather than remaining neutral and brokering agreements acceptable to the parties. This made the NBP staff one of the stakeholders in the process and brought them into ongoing disputes between agencies such as the CRMC and RIDEM. At times, the NBP staff sided with the RIDEM or the CRMC while in other instances they took positions counter to both agencies. This put both agencies in the uncomfortable position of having to publicly disagree with one another as well as having to oppose the NBP when the draft CCMP included recommendations that were unacceptable. Accordingly, instead of the planning process bringing the agencies together and focusing on points of mutual agreement, it became a wedge that drove the agencies apart and exacerbated existing conflicts. Agencies such as the CRMC and RIDEM ten entrenched in an effort to “protect their turf” and adhered to traditional agency policy. This exacerbated conflict and made it more difficult to find common agreement.

We believe the final factor that increased conflict was the decision by the NBP’s staff near the end of the planning process to adopt the CCMP as an element of the *State Guide Plan*. While this decision was approved by the Executive and Management Committees, it created a level of uncertainty that contributed to the conflict surrounding the draft CCMP. The state had recently strengthened its comprehensive planning requirements and it was unclear to many state and local officials what affect the CCMP’s inclusion in the *State Guide Plan* might have. Local officials were concerned because they only had limited involvement in the CCMP’s development

but were affected by numerous recommendations and were the actors most affected by recent changes to the state's comprehensive planning requirements. As a result, some local officials wondered if the CCMP's inclusion in the *State Guide Plan* was a backdoor attempt at trying to force local governments to implement the plan's recommendations.¹¹⁷ The decision also affected how state officials viewed the CCMP's wording since these recommendations were now going to be state policy. This increased the attention on the specific details contained in the recommendations as well as specific wording (e.g., "should" vs. "shall"). Moreover, the CCMP's adoption as an element of the *State Guide Plan* meant that the State Planning Council (SPC) would now have to approve the CCMP. Since the SPC is a political body, it created a new opportunity for those with concerns to exert political leverage to force additional changes and prolonged the CCMP's approval.¹¹⁸

While in retrospect it may appear that these problems could have been easily avoided, it is important to view these problems in terms of their historical context. As a founding member of the NEP (i.e., Tier I estuary program), we do not find it surprising that the NBP experienced some problems in managing the collaborative decision-making process or developing the CCMP. While previous planning efforts addressed water quality problems in Narragansett Bay, this was the first attempt to comprehensively address the Bay's environmental problems using a collaborative planning process. Thus, there were no similar efforts to build upon or learn from in the state other than the CRMC's efforts in developing Special Area Management (SAM) plans, which were different in nature.¹¹⁹ This was unfortunate because the presence of earlier collaborative planning efforts proved to be an important factor facilitating the development of the CCMP in our other three NEP case studies (e.g., Delaware Inland Bays, Tampa Bay, and Tillamook Bay). The "Management Conference" was also a new approach for the EPA and subsequent estuary programs benefited from the positive and negative experiences of Tier I programs such as the NBP as the EPA and the estuary programs learned how to structure and manage these collaborative decision-making processes.¹²⁰ Moreover, the NBP's staff did not have access to the same EPA training and decision-making guidance that subsequent estuary programs had to help manage conflict.¹²¹ Accordingly, newer estuary programs such as Tampa Bay and Tillamook Bay place greater importance on neutral facilitators and staff training in negotiation and consensus techniques. Thus, while the NBP was by no means the perfect embodiment of a collaborative, consensus-based process, the EPA and many of its participants learned valuable lessons that improved subsequent watershed management efforts.

Resolving The Conflict Surrounding the CCMP

The aforementioned problems combined with the legacy of distrust between the RIDEM and CRMC, poor communication among the stakeholders, conflicting personalities, and the inclination for many of the agencies to adhere to traditional agency policy rather than embrace recommended policy changes made it difficult to reach "consensus". When the draft CCMP was finally released for public review and comment in early 1992,¹²² thirty-eight individuals and organizations including the EPA Headquarters and Region I, U.S. Army Corps of Engineers, Save the Bay, CRC, CRMC, Cities of Warwick, Newport, East Providence, Town of North Smithfield, Rhode Island Department of Economic Development, Narragansett Bay Commission, RISA, RIMTA, Rhode Island Society of Environmental Professionals, Rhode Island Association of Realtors, Kickemuit Rivers Council, RI SPC Technical Committee, and

various other NGOs, government organizations, and private citizens submitted comments on the draft CCMP and its recommendations.¹²³ While many of the comments were positive and constructive in nature, the scope and breadth of the criticism on the draft CCMP exceeded that of all three NEP case studies.¹²⁴ After the comment period ended, it was clear that much work needed to be done in order to complete the final CCMP and receive the requisite approvals from the Executive and Management Committees, CRMC (i.e., federal consistency determination), SPC (i.e., inclusion in *State Guide Plan*), and EPA.

Unfortunately, by the time the draft CCMP was released, “consensus” process had broken down. The CRMC and RIDEM were fighting with each other and with NBP staff to ensure that their concerns were addressed in the final CCMP. Some actors were using their existing legal authorities to exact the changes they wanted in the CCMP (e.g., EPA, CRMC, and RIDOP)¹²⁵ while others resorted to political strategies and working behind the scenes to ensure that their interests were protected in the final version of the CCMP.¹²⁶ For example, some industry trade groups and local officials were lobbying the legislature to introduce a bill to kill the NBP while others were lobbying members of the SPC to disapprove the CCMP’s inclusion in the *State Guide Plan*. At the same time, actors like Save the Bay, CRC, RIDEM, and the CRMC were working to keep the NBP alive. Moreover, instead of recognizing the comments as being legitimate and working with the commenting parties to address their concerns, the NBP staff initially resisted efforts to make many of the recommended changes in the CCMP, citing the EPA’s deadlines and the fact that the staffing had declined.¹²⁷

Ultimately, the controversy surrounding the CCMP was resolved to the point that the final CCMP was approved by the Executive and Management Committees and subsequently was approved by the SPC, became an element of the *State Guide Plan*, and was approved by the EPA. The final CCMP even included letters from the EPA, EPA Environmental Research Laboratory in Narragansett, NRCS, United States Geological Survey, RIDEM, RIDOP, CRMC, RI Department of Health, and the Town of North Smithfield, RI committing to certain actions designed to implement the CCMP.¹²⁸ No letters of commitment were received from agencies in Massachusetts. However, the development of the final CCMP was very much a “free for all” and for some time the fate of the program was truly in doubt. As one EPA official recalled: “There were so many problems at one point we thought the whole thing was going to go down in flames.” Moreover, while the Management Committee resolved some of the conflict surrounding the CCMP, most of the major disputes were resolved behind closed doors. Accordingly, few people, if any, have a complete picture of how all of the conflict surrounding the draft CCMP was ultimately resolved. The following summary of these efforts is our attempt to reconstruct this process.

To try and revive the process, the Assistant Administrator of RIDEM, Malcolm Grant, was brought in as the new chair of the Management Committee replacing the NBP’s director who had been serving as the committee’s chair. His job was to try and finish the process and bring the committee to resolution.¹²⁹ Several respondents suggested that without Grant’s eleventh hour assistance, the planning process may not have been completed and the parties would have walked away from the table. Up until this point, Grant had no involvement in the NBEP planning process. According to one respondent, he was asked to chair the management committee “because the group was spinning in circles. Oxes were getting gored. People were

polarizing. There was no progress toward resolution.” He was also well respected by many of the parties involved in the conflict surrounding the CCMP.

The Management Committee ended up resolving much of the conflict surrounding the CCMP under Grant’s leadership and approved the final CCMP in July 1992. The rest of the controversial issues were resolved by the Executive Committee, which took on a much stronger role than it had earlier in the NBP’s planning process. At a critical Executive Committee meeting following the comment period, the EPA Region I representative made it clear that the Administrator could not sign a CCMP that recommended significant changes to core EPA policies or programs and the NBP’s.¹³⁰ Next, the EPA Region I representative directed the NBP staff to work with each actor that submitted comments and negotiated acceptable wording changes. After this meeting, the NBP’s staff, often without their director, proceeded to negotiate wording changes with each of the parties who submitted comments. This process worked effectively and resolved many of the comments on the draft CCMP. What remained were several conflicts involving controversial issues involving recommendations focused on the inconsistencies between the RIDEM’s water quality classifications and the CRMC’s water use and shoreline zoning policies. These conflicts were resolved at a later point in time.

The EPA Region I representative then turned to another lingering conflict between the NBP staff and the CRMC involving the draft CCMP’s two federal consistency chapters. The federal consistency process under the federal Coastal Zone Management Act (CZMA) is the CRMC’s responsibility pursuant to federal and state statutes. The CRMC had been locked in a disagreement with the NBP for over two years maintaining that the briefing papers and CCMP chapters contained a faulty interpretation of the CZMA’s federal consistency provisions. The NBP staff rejected the CRMC’s interpretation and refused to make the requested changes. To resolve the conflict, the CRMC offered to rewrite the two chapters and the EPA agreed. This ended this controversy.

Another source of concern involved the CCMP’s cost and the implementation arrangement. Many of the actors expressed skepticism regarding the CCMP’s successful implementation because it was projected to cost over \$392 million including CSOs and other capital improvements that were required by the CWA (\$341 million).¹³¹ Even without the capital expenditures, the implementation of the new planning initiatives and regulatory changes was projected to cost Rhode Island over \$30 million over the CCMP’s five-year timeframe, although this did not include the costs to state and local officials or the regulated community. This occurred at a time when the state was mired in a prolonged recession and state agency budgets were declining. As one observer commented: “It’s sad the program has to unveil itself now . . . You would have to spill blood in the water to focus attention on the Bay.”¹³² Another observed: “In terms of implementation, both states suffer from a lack of funding.”¹³³

These actions resolved most of the conflict surrounding the CCMP and a new version of the CCMP was soon produced. However, there one last battle remained. When the NBP staff sat down with CRMC staff to negotiate wording changes, a couple of issues remained. The most controversial was a proposal to reconcile the RIDEM’s water quality classifications and the CRMC’s water use and shoreline zoning requirements. The NBP staff sided with the RIDEM in and refused to modify several of the associated CCMP recommendations in a manner that was

acceptable to the CRMC. However, the CRMC considered these wording changes to be “deal breakers” claiming it would refuse to accept a CCMP with the objectionable wording and would reject the EPA’s federal consistency determination pursuant to its authority under the CZMA. The EPA and the NBP decided to call the CRMC’s bluff and submitted a federal consistency determination for a version of the CCMP with the objectionable wording. The CRMC promptly faxed back a denial of the federal consistency determination on the same day that it was received. Later that same day the EPA’s federal consistency determination was withdrawn and consequently the CRMC withdrew its denial. The objectionable wording was then changed, paving the way for the Executive Committee’s approval of the final CCMP. The State Planning Council then approved the CCMP in December 1992 making it an element of the *State Guide Plan* and the EPA administrator signed the CCMP in January 1993.¹³⁴

The CCMP

Five goals form the foundation for the *Comprehensive Conservation and Management Plan for Narragansett Bay*:

- The State of Rhode Island and the Commonwealth of Massachusetts, in conjunction with the federal government and municipalities, should act to prevent further degradation and incrementally improve water quality in developing coastal areas with deteriorating water quality
- The State of Rhode Island and the Commonwealth of Massachusetts, in conjunction with the federal government and municipalities, should act to protect diminishing high quality critical resource areas throughout the Bay basin
- The State of Rhode Island and the Commonwealth of Massachusetts, in conjunction with the federal government and municipalities, should act to more effectively manage commercially, recreationally, and ecologically important estuarine-dependent living resources
- The State of Rhode Island and the Commonwealth of Massachusetts, in conjunction with the federal government and municipalities, should act to rehabilitate degraded waters throughout the Bay basin and restore water quality-dependent uses of Narragansett Bay
- The State of Rhode Island and the Commonwealth of Massachusetts, in conjunction with the federal government and municipalities, should establish necessary interstate and interagency agreements and mechanisms to coordinate and oversee the implementation of the Narragansett Bay Comprehensive Conservation and Management Plan¹³⁵

The CCMP’s ten high priority recommendations were to:

- Adopt legislation requiring municipalities to establish a wastewater management district and amend existing regulations governing ISDS systems.
- Implement a marina pump-out facility siting plan that includes a consistent written policy for: (1) regulating the construction of marinas, docks, and mooring fields; and (2) enforces prohibitions against boater discharges in Narragansett Bay.
- Develop guidance for municipal officials regarding: (1) best management practices to

- control NPS pollution; (2) innovative land and growth management practices; and, (3) development of local and regional stormwater management plans.
- Develop statewide critical resource protection policies that include: (1) objective criteria for designating critical resources and critical protection areas; (2) a GIS inventory of critical resources; and (3) regulatory and nonregulatory controls for protecting identified critical resources.
 - Prepare a SAM plan for Greenwich Bay.
 - Develop species specific management plans for managing (1) commercially, recreationally, and ecologically important fish and shellfish; (2) all threatened and endangered estuarine-dependent plants and animals; and (3) the reintroduction of anadromous and catadromous fisheries
 - Revise existing RIPDES permits to include enforceable, numeric, and chemical-specific limits for all toxic chemicals on the Narragansett Bay “List of Toxics of Concern”; (2) enforce compliance with revised discharge limits; and, (3) include other significant non-industrial sources of toxic chemicals in these regulatory programs to meet the state water quality goals.
 - Continue efforts to abate the CSOs in Mount Hope Bay and the Providence and Blackstone Rivers in accordance with the statewide CSO abatement priority ranking system.
 - Establish a Narragansett Bay Implementation Committee, a Narragansett Bay Policy Committee, and a Narragansett Bay Planning Section to oversee CCMP implementation
 - Implement a long-term monitoring program for Narragansett Bay.¹³⁶

The CCMP also contains 41 high priority recommendations [Appendix B of this report] along with various recommendations to coordinate existing policies and activities (12 recommendations), develop new policies and plans (31 recommendations), prepare legislation and new regulations (29 recommendations), enforce laws and regulations (27 recommendations), provide technical assistance and public education (16 recommendations), make investments in environmental infrastructure (14 recommendations), and to conduct monitoring and environmental assessments (18 recommendations) [Appendix A].¹³⁷

The end of the planning process resulted in the creation of a new program within the RIDEM to implement the CCMP that was initially called the NBP and in 1995 the name was changed to the Narragansett Bay Estuary Program (NBEP).¹³⁸ It also witnessed the demise of the NBP’s Executive and Management Committees. In their place, an Implementation Committee was created that consists of the:

- Executive Director, RI CRMC
- Dean, Graduate School of Oceanography, University of Rhode Island
- Director of RI State Program, US EPA Region I
- Director, RIDEM
- Chief, Stateside Planning Program, RI Department of Administration
- RI State Conservationist, Natural Rescue Conservation Service, USDA
- Executive Director, Save the Bay, Inc.
- RI League of Cities and Towns, Director of Planning, City of Warwick¹³⁹

The NBP also has an advisory committee with a somewhat broader range of stakeholders but it is much smaller than the Management Committee.

Unfortunately, the Implementation Committee does not function in the manner recommended in the CCMP. Both committees meet infrequently, perhaps once or twice a year on average. This is due, in part, to the uncertain nature of federal funding and the late arrival of funds which forces the staff to develop workplans in a short period of time to meet the deadlines for federal funding. This has made it difficult to draft workplans and convene both the Implementation and Advisory Committees for a review and comment session.¹⁴⁰ It was also reported that attendance by some members has been sporadic and many respondents had trouble identifying any significant value associated with these meetings. Our analysis also suggests that the Implementation Committee does not effectively serve the functions recommended in the CCMP. It has not done a good job of “overseeing the progress of CCMP implementation.” It is not “facilitating the adoption of relevant portions of the CCMP into agency policies, plans, and regulations”. It is not “coordinating agency requests for external funding . . . to implement the CCMP.” It is not “participating in the review of federal activities for consistency with the CCMP.”¹⁴¹

The CCMP recommended that the NBEP staff (referred to as a Narragansett Bay planning section in the CCMP) should support Implementation Committee activities and that staff may be reassigned to other implementation authorities to support planning and implementation committees. This also has not occurred. Instead, the Implementation Committee is designed to support NBEP staff activities and advises the staff. This is a different relationship between staff and the Implementation Committee than the one envisioned in the CCMP.¹⁴² Interestingly, the vision recommended in the CCMP is more similar to the relationship that exists between staff and the advisory committees in the three other estuary programs (Delaware Inland Bays, Tampa Bay, and Tillamook Bay) that rely on collaborative organizations to implement their CCMPs.

Observations About the CCMP

The planning process took its toll on all involved. As one RIDEM staff member in the process noted: “It was a very difficult process, and I think we all learned a lesson from it. If nothing else, how not to do it in the future.” Many respondents characterized the final months of deliberation as “arduous”, “hellish”, and “destructive”. The EPA staff referred to it as a “dysfunctional program” during our interviews and in their comments on the draft report.¹⁴³ It soured relations between the CRMC and RIDEM and exacerbated ongoing conflicts. Many Management conference participants developed a strong dislike for collaborative planning and some respondents reported that this continues to serve as a barrier to collaborative, interagency planning in Rhode Island.¹⁴⁴ For example, during RIDEM’s revision of the state’s Section 319 Nonpoint Source Management Plan and the development of the RIDEM and CRMC Section 6217 Coastal Nonpoint Pollution Control Program, state officials had to take steps to assure the new committee members that this was “not going to become another NBEP”.

The majority of informants shared three common reflections about the CCMP. The first was that the CCMP lacked focus and was too ambitious to be effectively implemented at this point in time. As one respondent noted, “the NBP CCMP looks like the bible. The new ones [other CCMPs] are more like *USA Today*.” The scope of the CCMP was so broad, one influential participant noted during the CCMP’s approval process that he was afraid that “we are not going to be able to focus public attention on the most important” issues. Another observed: “We have seen so many plans . . . If they got off the ground at all, they haven’t gotten very far before they crashed for lack of interest or lack of money. I hope that isn’t going to happen here.”¹⁴⁵ In retrospect, these concerns were justified. The lack of focus combined with the comprehensive scope of the CCMP made it hard to focus public attention and elevate issues on the public agenda. Moreover, the deep recession reduced public interest while at the same time it created staffing limitations in agencies such as the CRMC and RIDEM when additional staff resources would be needed to implement the CCMP but a hiring freeze was in place.

Second, the decision making process utilized during the planning phase did not encourage participants to continue their involvement during the implementation phase. Many Management Committee members were “turned off” by the adversarial nature of the planning process. As one respondent recalled: “There was so much burn out when the CCMP was completed . . . people walked away, never wanting anything to do with this program again because it was so contentious, long, tedious.” Another RIDEM official involved in the process recalled: “they [NBP] were just all over the place. From sea level rise to CSOs to septic system maintenance, all over the place. People’s energy went into developing a plan and fighting about what was important. When the plan was done, it was this big thud of relief. There was very little implementation. People virtually distanced themselves from that plan because it was so contentious at the end.” As a result, it has always been an uphill battle for the NBP/NBEP to get support for the CCMP’s implementation.

Finally, respondents reported that the CCMP did not lend itself to being useful document that guided their decision-making. There are several reasons why this might be the case. The respondents did not report finding the CCMP or the supporting technical reports (i.e., the briefing papers) to be a useful source of technical information, particularly given the changes that have occurred on the policy agendas of these decisionmakers.¹⁴⁶ This is different than our other cases where respondents reported finding the management plans and other technical reports as being a useful sources of technical information that guided their decision making.¹⁴⁷

The structure of the CCMP also limited its usefulness. The approach in the CCMP was one with vague goals and targets,¹⁴⁸ no detailed policies, and very detailed recommendations.¹⁴⁹ This was different than Tampa Bay and Tillamook Bay where they developed measurable and specific goals and targets and more generalized policies and recommendations.¹⁵⁰ The latter approach appears to be more effective than the former for stimulating collaborative activity and increasing the plan’s useful life span. The Narragansett Bay CCMP’s goals are so broad and long-term that progress towards these goals cannot be measured in any quantifiable way. This is different than Tampa Bay and Tillamook Bay where their detailed goals and targets are measurable and quantifiable. Moreover, the actors in both watersheds are monitoring (or plan to monitor) progress towards these goals. This creates important incentives for collaboration and continued implementation efforts since the actors can be held accountable by the public,

politicians, EPA, and other agencies for their progress towards the goals. The broad nature of the Narragansett Bay CCMP's goals makes it difficult to hold the actors accountable for their progress in achieving them. Almost any activity taken by any agency that improves environmental conditions in the Narragansett Bay watershed can be said to advance these goals.

Thus, the heart of the Narragansett Bay CCMP is the detailed recommendations not its goals. However, the detailed and specific nature of the recommendations and the decision to focus on regulatory and policy changes and new planning efforts meant that once an agency made the decision not to proceed with the changes in the manner prescribed in the CCMP, there was little reason to consult the plan. Given the detailed nature of these recommendations, these decisions occurred during the early stages of the implementation process. Thus, the CCMP had a very short shelf life and quickly ceased to be a viable policy document that guided the decision making of the original NBP partners.

A common finding that cut across all six cases is that the policy environment is very dynamic. Agency priorities changed frequently as a result of new federal requirements (e.g., Section 6217 of the CZARA, Total maximum daily loadings, etc.), changing public opinion, new research findings, maturation of existing programs, changing political leadership, and changing budgetary conditions. Thus, we do not find it surprising that the relevance and applicability of many of the CCMP's detailed recommendations diminished quickly. Conversely, the general action plans and recommendations of the other three NEP case studies appeared to have a substantially longer shelf-life than the NBP CCMP's detailed recommendations. Moreover, in all NEP case studies there were examples of where the actors chose to implement actions that were similar to or loosely based on CCMP recommendations rather than enacting the recommendations as they are explicitly described in the management plans.¹⁵¹ The principal difference between the NBP and the other three NEP case studies is the presence of a collaborative organization, specific goals, and monitoring helped ensure that these activities were more closely tied to a set of collective priorities. In the NBP, the actors largely pursue their own agendas, which may or may not be coordinated with one another and are rarely tied to the contents of the CCMP.¹⁵² Accordingly, we did not find it surprising that none of our respondents outside of the NBEP staff reported using the CCMP as either a resource or as the basis for making decisions or that implementation efforts were only loosely related to what is recommended in the plan.

Implementing the CCMP: Emergence of the NBEP

Implementation of the Narragansett Bay CCMP got off to a slow start. In part, this was because many of the Management Committee members were simply "burned-out" by the approval process. Even more damaging was the fact that the NBP essentially died for around a year.¹⁵³ In July 1992, during the CCMP's approval process, many of the NBP's staff began to leave the program as their contracts expired and the director left the program for another job as well. Only a small staff remained to finish work on the CCMP and at one point the program essentially consisted of the new director. This period of inactivity coincided with the CCMP's approval and the change in hiring agents from the NEIWPC to the RIDEM and the program's reorganization where it was initially run out of two different RIDEM divisions, the Office of Environmental Coordination and the Division of Water Resources.¹⁵⁴ Today, the program is

located entirely within the Office of Water Resources as a result of the latest RIDEM reorganization. This was a challenging time for the NBP. As one EPA official recalled: “The program barely remained alive for several years. There was no way to keep the staff on board, which is another reason it [the NBP] evaporated, there was not a presence . . . It’s been difficult for them to rebuild.” Accordingly, it was a major challenge for the NBP to survive, let alone implement the CCMP. During this time, implementation consisted primarily of the some of the actions contained in the letters of commitment included in the final CCMP.¹⁵⁵

Funding was restored in July 1993 and the NBP staff began to focus on implementing the CCMP and preparing its first implementation workplan for EPA. Implementation efforts have gradually improved since staffing was restored in 1993 and the EPA’s baseline funding has gradually increased up to about \$300,000 per year. It should be noted that the temporary shutdown created one unintended administrative challenge for the NBP/NBEP in that it often lagged a year behind in fiscal year spending during the early years of CCMP implementation. This complicated the development of the annual workplans for the EPA.¹⁵⁶

In May 1995, the program embarked on an effort to “reinvent” itself. This rebirth appears to coincide with the increase in financial support by the EPA for CCMP implementation. The name was changed to the Narragansett Bay Estuary Program (NBEP) and the staff began placing a renewed emphasis on partnerships and collaboration. This is reflected the NBEP’s new mission statement: “To protect and preserve Narragansett Bay through partnerships that conserve and restore natural resources, enhance water quality, and promote community involvement.”¹⁵⁷ The NBEP now follows these basic principals:

- Bringing a holistic resource protection and watershed-based viewpoint
- Coordinating implementation actions
- Building partnerships/collaborative projects
- Using Innovative techniques/technology
- Promoting stakeholder/citizen involvement
- Strong outreach role/communication mechanism
- Securing implementation funding from a variety of sources¹⁵⁸

Today, the NBEP is a program within the RIDEM with its staff placing great emphasis on supporting and encouraging collaborative projects in the watershed.

Progress in Implementing the CCMP

Implementation progress has been constrained by the availability of financial resources. The EPA provides approximately \$300,000 per year that the NBEP uses to support its staff and undertake its core program activities and projects. Since becoming a program in the RIDEM in 1993, no state funds have been directly allocated to the program.¹⁵⁹ The NBEP has been forced to rely on other discretionary federal (e.g., CWA Section 104(b), NOAA, COE) and state (e.g., Oil Spill Prevention Response, RI Aqua Fund, state university funds, local/municipal funding) grant funds to support its implementation efforts.¹⁶⁰ Accordingly, the implementation strategy is opportunistic in nature where the NBEP seeks out other sources of federal and state funding. From 1993 to 1999, the NBEP leveraged approximately \$2.2 million in competitive grants, non-

federal matching funds, and in-kind services beyond the annual funding provided by the EPA.¹⁶¹ This has consisted of more than 60 discrete projects that may or may not be related to one another and often are only loosely related to the CCMP's recommendations [See Appendix B for some examples]. Given this funding strategy, implementation efforts tend to reflect the priorities of the grant programs and their eligibility requirements as well as the changing priorities of the RIDEM and NBEP rather than being based primarily on the actions prescribed in the CCMP's 41 high-priority recommendations.

It is unclear how much of the CCMP has been implemented. The NBEP does not systematically monitor the progress towards the more than 500 recommendations contained in the plan. The NBEP maintains that funding and staffing limitations prohibit them from committing the level of effort needed to track and monitor CCMP implementation.¹⁶² However, for its *1999 Biennial Review*, the NBEP did gather information on the progress towards the 41 high priority actions recommended in the CCMP [Appendix B].¹⁶³ This review illustrates a wide range of progress. In some cases the recommendation was implemented (e.g., pumpout facility siting plan). In other cases, at least some action similar to what was recommended was undertaken (e.g., Greenwich Bay Initiative) or is planned in the future (e.g., Coordinate NPS outreach programs – Recommendation IV.A). What is unclear is how much of the reported activity is directly linked to CCMP implementation as compared to being activities that would have occurred anyway as agencies implemented their respective programs (e.g., efforts to address CSO problems). There is little information about efforts in Massachusetts even though many of the 41 priority recommendations apply to agencies in this state [Appendix B].

There was also little information linking changes in environmental conditions to CCMP implementation, a common finding across our cases. Therefore, our analysis examined the data available on direct (e.g., restoration project, capital investment, etc.) and indirect (e.g., public education, changes in decision making, etc.) actions that offered some promise of environmental improvements.¹⁶⁴ Many of these accomplishments appear to cluster in four main areas: 1) protecting critical areas; 2) source reduction; 3) source control; and 4) protection of living resources.¹⁶⁵

One of the strengths of the NBEP is its ability to collaborate with other agencies and organizations engaged in various aspects of habitat restoration and the protection of critical areas. Save the Bay, the RIDEM Mosquito Abatement Program, CRMC, US Fish and Wildlife Service, URI, and the NRCS have worked with the NBEP to protect and restore critical coastal habitat. Projects have included the NBEP initiated Critical Resource Mapping Project, a habitat restoration charrette, and the development of state legislation to fund habitat restoration projects.¹⁶⁶ More recently, the NBEP, CRMC, and Save The Bay were jointly awarded a \$270,000 grant from NOAA to develop a collaborative coastal habitat restoration program for the state and a restoration database that could be used by various stakeholders.

These projects illustrate some of the success that the NBEP has had in collaborating with other partners in the area of habitat restoration. However, the “[o]verlapping authority of legislative and executive branch agencies in the state’s coastal zone leads to interagency conflict, turf battles, and duplication of effort.”¹⁶⁷ This has periodically served as an obstacle to collaboration between agencies such as the CRMC and RIDEM. For example, in recent years

the RIGA has debated two competing versions of habitat restoration legislation during the past three sessions. One is supported by CRMC while the other is supported by the NBEP, RIDEM, and Save the Bay. The three groups are yet to agree on a means of sharing the administration of a statewide habitat restoration program.¹⁶⁸ In addition to the NBEP's habitat restoration efforts, other NBEP "partners" have implemented portions of the CCMP recommendation pertaining to habitat restoration. For example, the CRMC revised its buffer zone, wetlands, and barrier beach regulations to try and better protect these critical areas.

The actors also made progress in achieving the source reduction recommendations contained in the CCMP. For example, the NBC CSO stakeholder group recently approved a \$385 million CSO abatement system for its facilities.¹⁶⁹ The RIDEM also had success with the pollution prevention efforts undertaken pursuant to the *Hazardous Waste Reduction Project* (HWRP), achieving notable reductions in toxics at many facilities including Fields Point.¹⁷⁰ As for the NBEP, it has twice hosted a workshop on "Nutrients and Narragansett Bay". More recently, the "Workshop on Nitrogen Removal for Wastewater Treatment Facilities," was co-hosted by the New England Interstate Water Pollution Control Commission (NEIWPC), the CRC, and the RIDEM in June 1999. The program included a discussion of efforts in Connecticut and Long Island Sound to utilize denitrification procedures that are operational rather than physical plant improvements to achieve superior environmental outcomes. Following the example of efforts in Connecticut, the NBEP engaged Rhode Island wastewater treatment facilities in discussions regarding voluntary denitrification.¹⁷¹

Another important accomplishment was the designation of all state waters as a no-discharge zone, a first for any state. This prohibits the discharge of sewage waste from all vessels within state waters opening up some areas within the bay to shellfishing.¹⁷² The effort involved the collaboration of different programs within RIDEM. It also involved RIDEM's collaboration with the RIMTA and the CRMC. The NBEP assisted the RIDEM Shellfish Program in drafting the state's application to the EPA for no-discharge status that was based upon the NBEP's *Marine Pump Out Siting Plan*. The pumpout plan evaluated the locations where pumpout facilities were needed based upon recreational boating demands. The RIDEM worked with RIMTA to identify marina owners willing to install pumpout facilities. The RIDEM then used grant money available through the Clean Vessel Act to fund the construction of pump out facilities around the state. At the same time, the CRMC amended its regulations to include new requirements for the installation of pumpout facilities to create an incentive for marina's to participate in the RIDEM's program. It also ensured that future growth in marina facilities would not violate the requirements for becoming designated as a no-discharge zone. While the overall contribution of sewage from vessels is small when compared to other NPSs, it can be a significant problem in smaller, poorly-flushed embayments. Moreover, in addition to these environmental benefits, the designation served as an important symbolic victory for a state that values its marine heritage and relies heavily on tourism revenue.

The premier accomplishment may be the efforts to address water quality problems in Greenwich Bay. Prior to 1992, Greenwich Bay provided nearly 90% of Narragansett Bay's winter shellfish take. However, shellfish beds were then closed due to high fecal coliform counts resulting from stormwater runoff, failing septic systems, and agricultural activities. Instead of developing a SAM plan, a high priority CCMP recommendation, the City of Warwick opted for

a different approach. Through the leadership of newly elected Mayor Lincoln Chaffee, Warwick started what has come to be known as the Greenwich Bay Initiative (GBI).¹⁷³ The GBI is a coalition consisting of the City of Warwick, RIDEM, CRMC, NRCS, URI, Save the Bay, Oakland Beach Elementary School, Warwick Vets High School, and the Rhode Island Shellfishermen's Association among others. In the spring of 1994, Warwick produced the *Strategic Plan for the Reclamation of Greenwich Bay*, which provides a framework for guiding cooperation among these organizations.

The centerpiece of this effort is the \$130 million bond referendum approved by the voters in Warwick to expand sewer service to remove failing septic systems throughout the watershed.¹⁷⁴ In conjunction with these efforts, the RIDEM stepped up its efforts to identify failing ISDSs. When failing systems are identified, homeowners can apply to the Warwick Sewer Authority for grant of up to \$1,600 and a loan for up to \$2,400 for upgrading or replacing a failing cesspool or ISDS. To date, over 450 systems have been rehabilitated. The GBI has resulted in a number of other environmental improvements as well. Over \$7 million in grant funding from federal and state sources assisting in Warwick's efforts. The NRCS, RIDEM, and Warwick worked to get agricultural Best Management Practices (BMPs) installed in 1995. Warwick and the Rhode Island Department of Transportation (RIDOT) worked to get road drainage BMPs implemented in 1996. The RIDEM worked with marina owners to get 7 pumpout systems installed around Greenwich Bay. The City of Warwick revised its local ordinances by approving new stormwater regulations and a watershed overlay and revised its Harbor Management Plan. The NBEP and RIDEM developed an Interim Shellfish Management Plan. A number of public education and training programs have also been instituted. The recreational and commercial shellfish beds were reopened on a conditional basis in 1994 and indications are that these efforts contributed to improved water quality in Greenwich Bay.¹⁷⁵

The Importance of Collaboration and Capacity Building

A common theme of many of these activities is that they were collaborative in nature, often involving complex partnerships between governmental and nongovernmental organizations. For example, the efforts to develop the *Rhode Island Marina Best Management Practices Guidance Manual* involved a partnership between the CRMC, RIDEM's Section 319 program, and the CRC while the NBEP worked with the CRC and RIMTA to develop a pilot BMP project at a major marina located in Greenwich Bay (i.e., done in order to support the GBI). The funding was then augmented with a Section 319 grant to increase the level of BMP implementation by providing partial grants to five marinas.¹⁷⁶ More recently, the NBEP staff played an important role¹⁷⁷ in initiating a collaborative effort to develop the "Rhode Island Watershed Management Approach Framework."¹⁷⁸ Early efforts to develop a statewide watershed approach began in 1996 and expanded in 1998 when the NBEP received additional funding. The statewide watershed approach is a joint effort of the EPA, the CRC, RIDEM, NRCS, CRMC, Save the Bay, Friends of the Moshassuck, Johnson and Wales University, Southern Rhode Island Conservation District, Audubon Society of Rhode Island, RIDOP, and the Rhode Island Water Resources Board.¹⁷⁹ Although the watershed framework is still in development, pilot projects in South County and the northern watershed region are scheduled to begin in 1999.¹⁸⁰

The NBEP also improved the RIDEM's internal capacity for problem solving. The NBEP has provided funding to other RIDEM divisions to support their efforts to improve the implementation and administration of existing programs. For example, the NBEP funded a technical staff person to rewrite the ISDS regulations and make modifications to the fee schedules, and to participate on the ISDS denitrification taskforce established to examine denitrification requirements in coastal areas.¹⁸¹ The NBEP director has also been tasked to special projects and been called in to help decide where grant funds should be allocated. For example, the NBEP director worked with the RIDEM's Section 319 coordinator to help allocate the recent increases in EPA funding.

The NBEP also represents the RIDEM in various stakeholder processes.¹⁸² For example, the NBEP was involved in the Quonset Point stakeholder process. Quonset Point is the site of a former US Navy base on the western side of Narragansett Bay. In 1997, a proposal to redevelop the property as a deep water port capable of servicing more than 300 container vessels per year was proposed by private interests and supported by Governor Lincoln Almond and the RI Economic Development Corporation.¹⁸³ Due to public concern regarding the economic and environmental impacts of this major development proposal, the governor established a stakeholder group to discuss these concerns.¹⁸⁴ The NBEP staff became involved in the process and helped represent the RIDEM by synthesizing the concerns of various divisions and passing them along to the stakeholder group. The NBEP staff "stuck their necks out at these meetings", walking a fine line between a governor who supported port development and an indifferent RIDEM director willing to disregard the agency's potential role in the stakeholder process and to avoid potential criticism from development interests. The NBEP also raised important issues such as the potential problems that might be created as a result of the introduction of invasive species from ballast water.

The data also suggests that the NBEP's efforts enhanced collaboration among various RIDEM programs. The aforementioned examples also illustrate some of the many ways that the NBEP staff has helped facilitate and encourage collaborative efforts among various governmental (e.g., RIDEM, CRMC, City of Warwick, etc.) and nongovernmental organizations (e.g., RIMTA, Save the Bay, etc.), often by providing a leadership role and improving the capacity to organize and undertake these efforts. The most recent manifestation of these efforts was the NBEP's efforts to organize the Narragansett Bay Summit 2000. More than 40 organizations helped plan the Bay Summit, which was attended by high-level federal, state, and local agency officials, various NGOs, private citizens and high-level decisionmakers such as Governor Almond, U.S. Senators Jack Reed and Lincoln Chaffee, and U.S. Rep. Robert Weygand. The focus of the Summit was on: the Narragansett Bay ecosystem, marine transportation, research, technology, and education; recreation and tourism, land use and transportation; industry; and fisheries and agriculture.¹⁸⁵ White papers were developed for each issue area and each panel included diverse ideas and interests related to the Bay such as legislators, fishermen, economists, environmentalists, scientists, lawyers, boat builders, and educators.¹⁸⁶ There was also an exhibit area with more than 20 organizations participating.

Examples such as this illustrate some of the many ways that the NBEP staff helped create a "culture of collaboration" in working to address environmental problems. They also illustrate how the NBEP often serves as a defacto planning staff for the RIDEM's water quality programs.

This fills an important capacity need for the agency and may be the most important accomplishment of the NBEP. Both of these are important sources of public value that has been added by this watershed management effort.

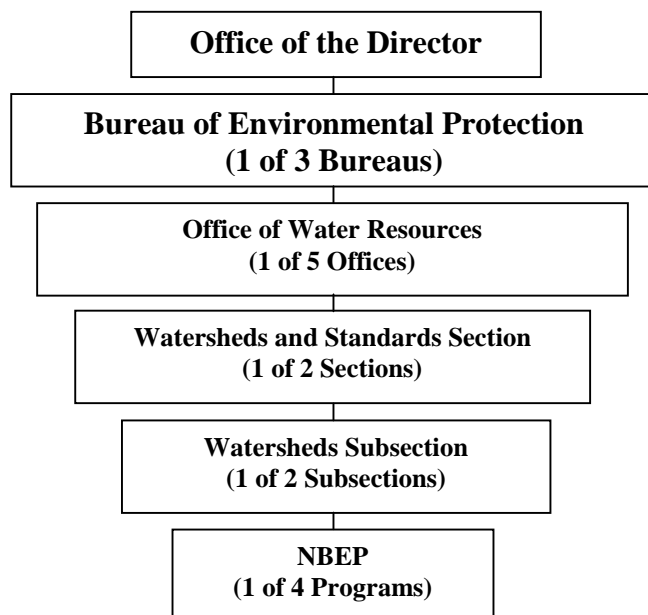
Future Challenges

While the NBEP achieved some notable accomplishments and made progress towards implementing many of its 41 high-priority recommendations [Appendix B], the program faces some significant challenges in the future. While the location of the NBEP within the RIDEM allows it to influence various RIDEM programs and helps it leverage resources, it also is the source of problems. State administrative processes cause difficulty in implementing agreements and contracts and delays of several months or more are not unusual, which creates difficulties in coordinating grant windows and opportunities for submitting grant applications. The NBEP has experienced a difficulty in accessing university expertise and working with potential partners because of these administrative impediments. There are also frequently differences in agency needs and university research priorities as well as university overhead requirements that present barriers.¹⁸⁷

Given the periodic conflicts between the RIDEM and CRMC, the location of the NBEP can serve as an impediment to collaboration.¹⁸⁸ The location of the NBEP office, buried deep within RIDEM's hierarchy [Figure 5], also limits the program's ability to take a leadership role within the agency and limits its ability to effectively represent the agency in interagency processes.¹⁸⁹ For example, a prominent RIDEM official whose program is the subject of many CCMP recommendations noted: "I'm not familiar with the activities of the NBEP." To address these problems, the NBEP recently created an internal Bay Committee consisting high-level of the RIDEM's Director, Associate Directors, and other high-level managers within the agency to better facilitate the communication and status of bay related activities and to find opportunities for joint project development and planning as well as opportunities for the NBEP staff to participate in policy development within the agency.¹⁹⁰ The location of the NBEP may also serve to reduce its visibility and stature with the general public and other federal, state, and local government agencies.

Another challenge is that the CCMP is no longer a viable policy document for guiding the activities of the program. The CCMP was originally meant to be a dynamic document¹⁹¹ with subsequent chapters on the management of living resources, Greenwich Bay, the management of marine and riverine sediments, bay governance, and public participation to be added to the *State Guide Plan* element. The plan was also designed around a five-year timeframe. The NBEP is now in the eighth year of implementation and the CCMP has not been amended or revised. It was also envisioned that the CCMP would be implemented by a wide range of actors with some agencies undertaking actions on their own while other actions involved partnerships between a different collection of actors [See Appendix B for some examples]. The NBEP staff were never supposed to be solely responsible for implementing the CCMP or initiating collaborative implementation activities, although that appears to what has occurred as the original NBP partners priorities have long since changed. Thus, we did not find it surprising that few respondents other than NBEP staff found the CCMP to be a useful document or stated that it affected their decision making in significant ways. We therefore

Figure 5: Location of the NBEP within RIDEM's Organizational Structure



concluded that the CCMP ceased to serve as a useful or viable policy document by the original NBP partners.¹⁹²

Our review of the available data¹⁹³ suggests that many of the actions taken during the past seven years are often related to CCMP recommendations but do not actually implement them [Appendix B].¹⁹⁴ While no comprehensive review of the CCMP's other 460 or more recommendations has been done, the general feeling among our respondents was that many of the recommendations had not been implemented or that similar substitute activities occurred that were not the direct result of the CCMP, albeit the NBP's planning process certainly helped elevate some of these issues on the policy agendas of agency decisionmakers.¹⁹⁵ The mere fact that the status of 41 high priority recommendations was not reported until the *1999 Biennial Review* and that no one knows the status of the remaining CCMP 460 recommendations, NBEP staff included, strongly suggests that the CCMP is not actively being used by the federal, state, and local agencies or NGOs as the basis for making decisions about projects or policy and planning initiatives.

Moreover, the fact that several speakers at the Narragansett Bay Summit 2000 said "it is time to prepare a major plan for future uses of the Bay"¹⁹⁶ is another strong indicator that the CCMP has ceased to be a useful policy document. In fact, the CCMP offers little guidance in how to address the issues that were the focus of the Bay Summit. Our data strongly suggests that other factors are largely guiding the activities of federal, state, and local programs including the NBEP. These include new federal policy initiatives such as: Section 6217 of the CZARA; increased Section 319 funding and the implementation of a revised management plan; CWA stormwater management requirements implemented pursuant to the RIPDES; ongoing

requirements for CSO abatement; increased attention to the CWA's total maximum daily loading (TMDL) requirements; and the President's Clean Water Action Plan (CWAP) which encouraged the development of statewide watershed strategies. Other activities are better explained by efforts to improve the implementation of baseline programs such as the CRMC's RICRMP or RIDEM's ISDS or freshwater wetlands program and the changing priorities of these programs.¹⁹⁷ These factors are a more compelling explanation for the scope and breadth of current activity than does CCMP implementation. What complicates matters is the fact that as a program in RIDEM, NBEP staff serve as a surrogate planning staff for RIDEM. Thus, the NBEP staff often participate and provide assistance to activities initiated as a result of these other programs. We question whether this activity is properly described as CCMP implementation activity since in many cases it would have occurred anyway.¹⁹⁸

In response to these findings, the NBEP staff correctly asserted that all of the program's current activities advance CCMP goals, address issues raised in the CCMP and advance the goals of their annual workplans prepared for the EPA.¹⁹⁹ Our criticism is not with the scope or substance of current activities. Many are quite notable and the staff deserve credit for these initiatives. Rather, we believe that this is a weak basis for a government program. The CCMP's goals are so broad that almost any agency activity could be viewed as advancing these goals as long as they are not degrading environmental conditions. Likewise, the CCMP addresses directly or indirectly almost every environmental issue currently up for consideration on the policy agendas of federal, state, and local decisionmakers. Thus, almost every action by the EPA, NRCS, RIDEM, CRMC, Save the Bay, URI, the City of Warwick, or the myriad of other original NBP partners could be viewed as an implementation activity if it improves environmental conditions in the watershed even though they were not intended to implement the CCMP. The NBEP also noted in their 1999 Biennial Review that various factors have served to limit the input of other stakeholders to the development of annual workplans.²⁰⁰ In addition, while the NBP was collaborative in nature, the Implementation Committee merely advises the NBEP on the contents of its workplans and there are no proposals to change this relationship.

Section 320 of the CWA is also vague with respect to CCMP implementation and there is no state enabling legislation for the NBEP. Thus, in the absence of specific goals, a policy document, or enabling legislation there is no public purpose to justify the NBEP's existence other than the implementation of the CCMP's recommendations. However, it is questionable whether the NBEP is still serving this purpose or is simply using the existence of the CCMP to justify its continued existence while it pursues various projects. Moreover, we find the EPA and NBEP's argument that it should continue to exist as long as it advances CCMP goals or addresses issues raised in the plan to be unconvincing. The EPA could give any agency \$300,000 a year to augment existing programs, apply for other grant funds, implement small projects, and support collaborative efforts in the watershed. The only compelling reason to have an NBEP office within RIDEM is if it was specifically designed to "coordinate" and "monitor" CCMP implementation, two tasks that do not appear to be occurring.²⁰¹ Instead, the NBEP staff's efforts appear to concentrate more on conducting a series of projects that are only loosely connected to the CCMP's recommendations.

Basing the NBEP and its decision-making on the CCMP's vague goals also creates accountability problems that are further compounded by the lack of regular monitoring, the

tendency to undertake actions other than those specified in CCMP recommendations, and the problems the program has had with its Implementation Committee. The central problem is that there really is no way to hold the NBEP (or its partners) accountable for any of its actions or decisions other than to examine whether they implemented the projects described in their annual workplans for the EPA. The NBEP can claim credit for any project it is involved in or for that matter any project conducted by any federal, state, and local entities if it leads to environmental improvements because it will advance the CCMP's goals. At the same time, the NBEP cannot be criticized for failing to do anything since it is not required to do anything beyond satisfying EPA workplan and grant requirements. This is different than most other government programs administered by agencies such as the CRMC and RIDEM that can be held accountable for both the actions they take as well as those they do not.

The governance structure used to implement the CCMP does not eliminate these accountability problems. The other three estuary programs in our study (e.g., Delaware Inland Bays, Tampa Bay, and Tillamook Bay) all developed collaborative organizations whose institutional structures, content of the CCMPs, reports, and related agreements (i.e., measurable goals and targets, shared policies and norms), and implementation procedures (i.e., joint work plans, performance monitoring, etc.) all served to increase accountability while at the same time created incentives for ongoing CCMP implementation. They also provide structure to implementation efforts even if the plan's recommendations are not being implemented. This has not occurred in Narragansett Bay. The Implementation and Advisory Committees are the main oversight mechanisms. But they meet infrequently and are primarily geared towards advising NBEP staff on annual workplans. Several respondents question their effectiveness while the two EPA Biennial Reviews noted other problems with these committees.²⁰²

Another concern is that the NBEP has not made the transition from being a loose collection of projects to a program that systematically provides a public service, implements a public policy, or systematically addresses a specific problem(s). This has not occurred to the degree it has in our other cases. For example, Tampa Bay and Tillamook Bay illustrate how a CCMP and the work products produced can be more than just a general set of goals and some ideas for actions (i.e., action plans or recommendations). Each program developed measurable goals, monitoring procedures to track the progress of their partners, and created new collaborative organizations where membership entailed committing to certain activities. Thus, even if their respective CCMP recommendations are not implemented, there is still some basis for the actors to collectively decide on a course of action and to be held accountable for their decisions and actions.

The most notable sustained effort for NBEP has been in the area of habitat restoration. For the last five years, the NBEP has worked to improve the capacity for undertaking habitat restoration projects by creating inventories and GIS databases, developing scientific information, bringing stakeholders to the table, and proposing legislation to create a stable source of state funding.²⁰³ While these activities are notable, this loose collection of activities has not resulted in the identification of a shared set of priority restoration or land acquisition sites and is not framed within the context of developing measurable targets or commitments to a specific level of implementation activity as occurred in Tampa Bay and Tillamook Bay. Without these shared policies and commitments it is difficult to make the transition from being a collection of projects

to being a program that works systematically to achieve a specific goal. Moreover, while the staff has worked to try and get a new habitat restoration approved by the RIGA, there is no guarantee that this program will not require a different set of preparatory activities.

The danger inherent in the project-based approach is that it creates the possibility that over the long-term the efforts may never amount to more than what our respondents in Tillamook Bay referred to as the tendency to implement a series of “random acts of environmental kindness”. In other words, the NBEP’s individual projects may have environmental benefits but they are too limited in scope, duration, or magnitude to make a significant difference in the underlying problem they were designed to address. In the NBEP’s defense, the lack of a significant and stable source of state funding that can be allocated to implementation efforts has necessitated its use of an opportunistic strategy based on leveraging federal and state grant projects. The NBEP has also had success with the strategy, leveraging over \$2.2 million.²⁰⁴ However, the priorities of federal and state funding programs will often influence the overall direction the NBEP is working in at any point in time.²⁰⁵ This limits the staff’s ability to plan and budget with confidence in the future since these funds are often allocated on an annual basis. This makes it difficult to systematically address a specific problem due to changing federal and state grant priorities and restrictions on how this funding can be utilized. Thus, there are strong institutional constraints present in the federal approach to funding NPS and habitat restoration projects that makes it difficult for the NBEP to make the transition from being a more than a collection of projects.²⁰⁶

Only time will tell if the NBEP is able to overcome these problems. While recent efforts to create an internal Bay Committee,²⁰⁷ the exploration of ways to reinvigorate the Implementation Committee, and using the Narragansett Bay Summit 2000 to explore interest in revising the CCMP are encouraging, they do not obviate the concerns that have been raised. Many of the participants in the Bay Summit worried that the conference would amount to a lot of talk and no action and it did not result in a commitment to revise the CCMP.²⁰⁸ Save The Bay’s Director also noted that: “We’re in the best economic times of all time, yet nobody has the money to do anything.”²⁰⁹ This is not a positive sign that the resources for revising the CCMP or increased implementation funding will forthcoming.

More importantly, these are not “new” problems and the NBEP and the EPA have had ample opportunity to address them and have had difficulty doing so. The problems with the Implementation Committee have been known for some time, reported in both the *1997 Biennial Review* and the *1999 Biennial Review*. The NBEP has consistently been located deep within the RIDEM hierarchy. While a recent reorganization helped improve matters (i.e., they only report to one department head now), we believe the elevation of this program within the agency’s hierarchy is essential if the NBEP is to play a leadership role in the agency. While the recent creation of the Bay Committee is a positive step, it is questionable whether this will solve these problems. The NBEP and RIDEM programs have been working on their statewide “watershed approach” for over three years and important issues remain unresolved.

Moreover, the CCMP ceased being a viable policy document some time ago. It is now more than three years beyond the expected CCMP lifetime and the NBEP and RIDEM have only recently begun to explore how to revise the plan. While the Narragansett Bay Summit may be a

positive first step, the meeting did not result in a commitment to revise the CCMP. Only time will tell if the Bay Summit was able to heighten the public and political interest necessary to generate the resources necessary to move forward. Like the other issues noted above, progress is slow and we have little reason to be optimistic that things will change in the foreseeable future.

During the last year and a half, the revision of the CCMP has been “discussed” but neither the EPA nor NBEP has developed a definitive strategy for revising the plan or made a decision to do so.²¹⁰ This suggests to us that there are important constraints in undertaking these revisions. The lack of state funding and the limited amount of federal funding limits the NBEP’s ability to undertake a sizable planning initiative. The proposals to rely on existing interorganizational committees as an advisory body for such a planning effort rather than reconstituting a collaborative Management Conference is also troubling because it suggests the lack of political support²¹¹ and the revised plan would not be the product of a collaborative organization as recommended and discussed in more detail in our final report. There has been no attempt to find a central focal issue(s) to center the new planning effort around²¹² or an effort to complete other necessary preparatory activities that could be completed with current funding.²¹³

It is likely to be some time before any effort to revise or replace the CCMP begins, let alone is completed. In the meantime, the NBEP has no guiding policy document other than the CCMP and implementation activities will remain project-oriented in nature. There also appears to be little interest in moving beyond a “project-based” approach as the NBEP defended this approach in its comments on the draft report. We were also left wondering whether collaboration has become an end in and of itself rather than a means to an end (i.e., adding some form of public value as result of working together rather than independently).²¹⁴ However, even if the NBEP staff is interested in making the transition, the absence of any dedicated federal or state funding source forces the NBEP to rely on a leveraging strategy to fund its implementation efforts. This will make the transition difficult to achieve.

Analysis

The analysis of this case study is divided into two sections. The first identifies those factors that appear to influence the success of a watershed management initiative, whether it be positively or negatively. In some cases, the Academy requested we explore the importance of certain factors (e.g., public and community involvement). In other cases, the factors emerged from our comparative analysis and review of the applicable literature. The second section examines the institutional performance of the NBP and the NBEP using criteria provided by the Academy as well as those drawn from the literature.

Components of Successful Watershed Management Programs

Our comparative analysis suggested that the following factors had some influence on the development and implementation of watershed management programs: 1) a program’s contextual situation; 2) public and community involvement; 3) use of science and other technical information; 4) well managed decision making process; 5) program administration; 6) collaboration; 7) EPA’s programs and action forcing mechanisms; and, 8) performance-based management. The following sections discuss the importance of each factor. For a more detailed

discussion of the definitions and concepts discussed in this analysis, please consult the main report entitled *Environmental Governance in Watersheds: The Importance of Collaboration to Institutional Performance*.

Context Matters

One observation was that contextual factors played a role in influencing the CCMP's development and implementation. Of particular importance was the configuration of the watershed, the lack of a clearly defined problem, and the institutional arrangement managing the watershed. While a detailed analysis of these contextual factors is beyond the scope of the analysis, a few examples are provided below with others noted in subsequent sections of the report.

The relatively large size of the watershed combined with a heterogeneous population make the watershed difficult to manage. While there may be a strong connection with Narragansett Bay, many respondents noted that the general public has little connection to the Bay's watershed, particularly those who live in Massachusetts. This probably explains why the CCMP focuses on the bay or statewide program changes. Even though the "Bay" is the region's most prominent geographic feature, it is also large and configured in a manner such that people tend to identify more with different regions (e.g., East Bay, West Bay, Greenwich Bay, Mount Hope Bay, etc.) rather than the Bay itself.²¹⁵

With two states and more than 100 cities and towns, the jurisdictional complexity confronting watershed managers is formidable. It would be difficult to involve all of these officials or collaborate with them directly given the small size of the NBEP's staff.²¹⁶ This may be another reason for Massachusetts' general lack of involvement. The heterogeneous population combined with the wide range of issues also increased the range of stakeholders that were affected by the process. While the Management Committee was large and "unwieldy", it still did not represent important stakeholders (e.g., local governments). Moreover, the interests of some groups were too diverse to be represented by a single representative (e.g., League of Cities and Towns representing cities such as providence as well as small rural communities). Conversely, the GBI's focus on a smaller region, limited number of issues, and a smaller group of stakeholders may explain why it was more effective than the NBEP in generating sustained collaboration among federal, state, and local governments to address specific problems.

Another important contextual factor concerned the structure and history of the institutional arrangement in Rhode Island. In particular, the legacy of conflict and distrust between the RIDEM and the CRMC and the subtle differences in their respective missions, regulatory programs, and approaches to resource management (e.g., differences between RIDEM's water quality classifications and the CRMC's Water Use zoning provisions). Instead of recognizing and respecting these differences and finding areas where the agencies could work together, the NBP's staff decided use the planning process to resolve these long-running conflicts ad took sides in these disputes. This resulted in conflict that could have been avoided. It is also important to understand that CRC and CRMC both had a long history of doing watershed planning and management when the NBP was created. Yet, the two organizations were relatively uninvolved with the NBP during the early years of the program.

We concluded that the problems caused by failing to recognize and work within the constraints created by these contextual factors was not due to the NEP's design. The NEP provided the NBP partners with the flexibility to avoid many of the problems the program experienced. The EPA even advised the NBP to limit the scope of the issues and to be strategic in focus by concentrating on in-Bay problems rather than all of the problems affecting the watershed. The NBP staff did not feel that such an approach was fulfilling the mandate contained in Section 320 of the CWA and resisted this advice with many of the management committee members supporting this decision. Unfortunately, this decision led to a very ambitious CCMP that focused on some controversial issues and may have exceeded the implementation capacity (political, financial, staff resources, etc.) of the NBP partners.

Public and Community Involvement

The NEP places great importance on public and community involvement. Estuary programs are expected to use a complex advisory committee structure, provide opportunities for public involvement, and to develop effective public education programs. The underlying assumption is that these activities improve a program's effectiveness. We concluded that public and community involvement did not play an important role in the development of the NBP's CCMP and that the failure to involve local officials caused problems.²¹⁷

The NBP started out with a committee structure comparable to other NEPs [Figure 3] but then merged its subcommittees (i.e., STC, PEC, and Policy Committee) into a large Management Committee [Figure 4]. The NBP also had a relatively unengaged Executive Committee until the end of the planing process choosing instead to vest decision-making authority in the Management Committee. Stakeholder involvement was limited primarily to the large and unwieldy Management Committee. While federal and state agencies and large statewide interest groups were well represented, other important stakeholders such as local officials were not. Their lack of involvement combined with the decision to incorporate the CCMP into the *State Guide Plan* caused a great deal of concern on the part of local officials. This led to attempts to lobby the SPC to reject the CCMP and had some officials lobbying the RIGA to abolish the NBP. Several respondents indicated that stronger local involvement may have helped to avoid these problems. The wide range opposition that the NBP received to its draft CCMP also suggested that stakeholder involvement did not result in a constituency to support the CCMP.

While the NBP developed a wide range of public education and outreach materials during the planning process, there was much less public involvement. As a RIDEM official noted:

“Public participation was almost nil during this phase [development of the draft CCMP]. They [NBP staff] talked about having it at the end. It was like, let's do public participation at the end when the plan is done. That's essentially what they did with the bay project [NBP]. Then with the final plan they sort of went to the public. Their eyes glazed over. All this stuff. Its thick, how do you boil that down for the public. I don't think they ever did a very good job of that.”

In part, this was because the Tier I programs like the NBP were more science-focused and did not have the media savvy that the later programs learned to acquire.²¹⁸ In terms of public input, the NBP relied mainly on symposiums, presenting the draft CCMP at a series of regional meetings, and distributing a summary document on the CCMP. Therefore, the main source of “public” input to the CCMP was interest groups such as Save The Bay, RIMTA, and RIBA to represent the interests of the general public. Clearly, these groups did not reflect the interests of the large, heterogeneous population in the watershed. The NBP also made relatively little effort to include the views of the minority and low-income populations living in the watershed. Thus, it was not surprising that none of the respondents indicated that public involvement contributed to the formation of the CCMP. However, it also was unclear how increased public involvement would have helped the NBP avoid the conflict surrounding the draft CCMP or whether it would have increased public, political, or financial support for its implementation.

In terms of CCMP implementation, the NBEP reported problems with local government and stakeholder involvement and few respondents, including RIDEM staff, reported being aware of the NBEP’s implementation efforts. The new Implementation Committee involves a narrow range of stakeholders and meets infrequently. Most of the NBEP’s interactions with stakeholder groups are project-based or occur through forums such as the Narragansett Bay Summit 2000. However, in recent years the NBEP has taken steps to increase local involvement. One example is a recent project with the Town of Bristol, the CRMC, and Roger Williams University where the NBEP staff worked with local officials to incorporate new Bay resource mapping into the local HMP. The NBEP is now considering ways to broaden stakeholder involvement possibly through a revised Implementation Committee based on a broader stakeholder based approach. The Bay Summit was one such attempt to broaden stakeholder involvement in Bay issues.

Public involvement is also sporadic and limited primarily to special events such as National Estuaries Day and the Bay Summit. The NBEP has sponsored conferences such as the Habitat Restoration Charrette. One of the factors that has limited these activities is the staffing problems related to the NBEP’s outreach position. Until recently, the NBEP had trouble maintaining a stable outreach presence, in part due to the problems with the state’s personnel system. It was also reported that the position has been filled numerous times by highly qualified individuals who subsequently were detailed to other RIDEM departments. Another problem is that the NBEP’s World Wide Web (WWW) site needs to be updated and integrated with other sites including the RIDEM’s site. Over the course of this project, the NBEP’s WWW site has remained unchanged and little information can be downloaded. For example, for information on the Bay Summit, you need to access Sea Grant’s WWW site and there is no link off of the NBEP’s site. Conversely, the project team noticed a marked improvement in the RIDEM’s WWW site and its use of the internet to distribute information to the public.²¹⁹

Use of Science and Other Technical Information

One of the major features of the NEP is that estuary programs are given substantial resources during the planning process to do the research necessary to develop, modify, and refine management strategies. This is one reason that the NBP has spent a disproportionate amount of its funding on planning when compared to implementation. Programs are also encouraged to

maintain an active research agenda during the implementation phase, although they are expected to leverage research funding from other sources.

We concluded that it is important to “nest” the science within the NBP’s decision-making process as well as that of other agencies such as the RIDEM and the CRMC if the research is to be useful to decisionmakers. The NBP certainly funded some innovative research that helped to improve the scientific understanding of the Bay and its problems. However, the much of the scientific research did not lead directly to changes in agency decision-making. As one NBP staff member noted:

“I think the science is largely unnecessary. The amount of money that was spent here, the science was not used wisely. In fact, policy decisions get made on not very much information. The people who make policy decisions often are not technically trained and cannot assimilate that information . . . Also, we didn’t need all the science. I hate to say it. The science comes in at a different level after the planning target has been thought out . . . Then at that point you need technical people.”

Part of the problem may have been that the Executive and Management Committee members did not have an active role in deciding which projects to fund, typically approving the NBP staff recommendations. The failure to develop an effective STC may also have contributed to these problems.²²⁰ The information was sometimes in a form or at a scale that was not useful to many decisionmakers, one clear exception being many of the GIS coverages the NBP developed.²²¹ The research did not lead to specific goals or targets for improvements in water quality or habitat as occurred in other cases (e.g., Lake Tahoe, Tampa Bay, and Tillamook Bay). No attempt was made to produce a detailed synthesis of this research (e.g., Status and Trends Report) and to this day there is no single report that a decisionmaker can read that summarizes the Bay’s problems, the changes in the problems, and their causes and effects.²²² Important data limitations remain with the NBEP and RIDEM only recently beginning the type of ambient water quality monitoring program envisioned in the CCMP and implemented by other programs in our study (e.g., Lake Tahoe and Tampa Bay). As a result, while 75 percent of the \$10 million²²³ spent during the planning process funded more than 110 scientific and policy-related research projects, respondents noted few examples of studies that directly influenced or changed policy directly.

This is not to say that the scientific research undertaken as part of the CCMP’s development was without value. It certainly improved the understanding of many Bay problems and their causes and effects. As such, the technical reports remain important sources of information for researchers and technical staff in various agencies such as the RIDEM. Thus, while many of the reports did not lead directly to policy changes, the research had an indirect affect on decision making. As technical staff learned more about the Bay and its problems they could provide better advise to agency decisionmakers, which can lead indirectly to improved management decisions.

Well Managed Decision-Making Process

We concluded that is important to develop a well-managed decision-making process. Overall, the NBP did a poor job of managing its decision-making process. The NBP had

problems with the committee structure. Executive Committee membership changed late in the planning process when it became evident that the CRMC and RIDOP's lack of representation might cause problems. The Executive Committee was relatively uninvolved during most of the planning process and delegated decision making to the Management Committee. It was not until the end of the planning process that the Executive Committee exerted its authority and got the planning process back on track.

The NBP had problems with the STC, PEC, and policy committee. The lack of any clearly defined roles and NBP staff support caused the committees to flounder and they were merged into the Management Committee. This had several consequences. It limited public involvement. It also limited consideration of the NBP's scientific and technical needs. The merger also centralized decision-making regarding the funding of scientific research and public participation activities in the hands of NBP staff and limited input from other stakeholders. It also created a Management Committee with more than 45 official members. The large size made the decision-making process very cumbersome. The lack of a focal problem and the NBP staff's belief that they had a duty to address a wide range of issues meant that even though the committee was large, important stakeholders were poorly represented. The best example of this was the lack of local government involvement when countless recommendations directly affected them. The lack of a focal issue also complicated the program's ability to generate consensus on what actions should be taken to implement the CCMP and the NBP has had trouble developing an identity.

The lack of involvement of certain stakeholders became a problem when the NBP staff, with the approval of the Executive and Management Committees, decided to implement the CCMP by incorporating it into the *State Guide Plan*. This changed the legal status of the plan. It moved from being strictly voluntary to being a state policy document with unclear legal requirements for state and local agencies. This decision combined with new local comprehensive planning requirements tied to the *State Guide Plan* caused concern among many local and state officials. Moreover, the change affected the bargaining process that the parties were engaged in. Some actors willing to commit to actions in a voluntary "plan" were unwilling to commit to having the recommendations become state policy. Thus, the decision to incorporate the CCMP into the *State Guide Plan* hardened the bargaining positions of some actors. This heightened the conflict surrounding the CCMP.

The fact that the Management Committee became the defacto decision-making body for the NBP created other problems. The committee was largely comprised of people with different status ranging from technical staff, to interest groups, to agency directors. As a result, some decisionmakers had no stake in the decision since they were unaffected by decisions. Other committee members lacked the authority to commit their membership to a decision (e.g., RIBA, RIMTA, League of Cities and Towns, etc.). The committee members had varying educational and technical backgrounds so there were large information asymmetries among the decisionmakers. The NBP's failure to develop consensus (i.e., social norms) on the definition of problems, the causes and effects, and the relative importance of different problems further complicated decision making.

Another problem concerned the lack of oversight of NBP staff. The NBP staff technically did not work for any member of the Executive or Management Committee and the former NBP staff we interviewed relished this independence. While this had some advantages and prevented the staff from being “captured” or “co-opted” by their hiring agent, it also meant that the Executive and Management Committee had limited control over the NBP staff, particularly when it came to daily operations. The actor with the most control and oversight over the NBP’s staff was ultimately the EPA since it controlled the grant funds.²²⁴ Unfortunately, when it became apparent to the Executive Committee members (including the EPA) that the NBP’s staff were the cause of some of the program’s problems and its director had become a polarizing figure, the EPA was unwilling to take action. Instead, the EPA decided to wait out the planning process, let the program die, and then try to rebuild the program. It is questionable whether this was an appropriate or constructive decision on EPA’s part.

The NBP staff’s independence created other problems. At some point, the NBP staff ceased being neutral, began advocating particular policy positions, and used the planning process as a forum to resolve long-standing disputes between the RIDEM and the CRMC. In fact, one of the reasons the former NBP staff relished their independence is because it allowed them to take positions that were counter to established policies of agencies such as RIDEM and the CRMC. As one respondent recalled: “The NBEP director felt that the CCMP might bypass the differences when it was incorporated in the *State Guide Plan*, thinking that would supercede arguments happening at the department level.” Instead, this had the opposite effect. It reinforced the determination of agencies such as the CRMC to protect their “turf”. It also moved the process from being a collaborative effort to a confrontational process. This made it more difficult to resolve these issues since it was unlikely that the RIDEM or the CRMC was going to make concessions in this confrontational atmosphere and each agency tried to protect its “turf”.

The NBP’s staff’s independence and operation outside of the state personnel, contracting, and budgetary processes may also have made them less sensitive to the political, budgetary, and practical realities confronting many Management Committee members. This was further compounded by the NBP staff’s view that their job was not to produce a plan that was “implementable” or “practical”. Rather, they believed their mission was to develop the most environmentally protective plan possible for Narragansett Bay. While the NBP staff and many of the Management Committee members were not concerned with political realities, state regulatory agencies do nothing but deal with these realities. This created conflicts when Management Committee members would question the practicality of CCMP recommendations.

Further complicating matters was the fact that the NBP director was reluctant to relinquish a leadership role to the other NBP partners and sometimes challenged actors that raised questions about staff recommendations. Many of the staff also appeared to lack the requisite training and skills necessary to manage this type of collaborative decision-making process. As one RIDEM official noted:

“I won’t get into particular names, but some of the personalities in the bay project [NBP] didn’t necessarily have very good consensus building skills or meeting facilitation skills. That was a problem. Certain individuals were really trying to ram their ideas using the

stakeholders to buy in . . . It doesn't work that way. They found out towards the end that it wasn't going to work, but it was too late.”

The confrontational atmosphere and the fact that the NBP staff advocated specific policy positions on controversial issues instead of working to build “consensus” also created great disaffection for the consensus process for many of our respondents.

The NBP staff and the Executive and Management Committee members also failed to clarify the rules governing the decision-making process. Specifically, no effort was made to define what “consensus” required. It is clear that “consensus” did not mean “unanimous”. It also did not imply that those most affected by a decision were in agreement. As one RIDEM official noted:

“I don't know that they ever achieved unanimous decisions on the bay project [NBP] though. I don't recall that on a lot of their recommendations. There were some strong opinions against some of the recommendations that were in that plan, including people here in the department [RIDEM] who didn't buy into everything that was in it either. I don't think its fair to say that they really reached consensus. CRMC didn't buy into a lot of what was in there. It was a very difficult process and I think we all learned a lesson from it. If nothing else, how not to do it in the future.”

The Management Committee routinely made decisions even though key actors with respect to the decision were in disagreement. The process also became so long and cumbersome that the NBP staff and the committee members became reluctant to revisit old issues. However, our analysis of the planning efforts in the other estuary programs suggests that periodically rehashing old issues is an important part of collaborative decision making and is crucial to developing a broad-based consensus.

The structure of the Management Committee, the information and power asymmetries, the use of a consensus process that discounted the concerns of the parties most affected, the change in the CCMP's legal status, and a staff that advocated particular positions created a “dysfunctional” decision-making process.²²⁵ These factors may have also caused a common group decision-making problem known as groupthink. The groupthink phenomena offers a compelling explanation for why some of the respondents reported being surprised with the level of conflict surrounding the draft CCMP. However, the long-term impact of the poorly managed decision-making process was perhaps more detrimental. Many of the respondents we interviewed noted that the NBP experience left them with negative view of collaborative decision making and are cautious about getting involved in this kind of effort in the future. This continues to serve as a barrier²²⁶ to collaborative efforts as are the periodic conflicts between the RIDEM and CRMC²²⁷ and the ongoing attacks on the RIDEM by the RIGA.²²⁸ Accordingly, most collaborative activities are primarily limited to the project level and other opportunities for collaboration have not been fully exploited.

As for the implementation phase, the NBEP did not create a new collaborative organization and relies on an advisory committee. The Implementation Committee meets infrequently and advises the NBEP staff and RIDEM officials who decide what grant funds to

purse and what activities to undertake. The Implementation Committee also comments on proposed work plans and the status of projects. The report has noted several problems with the NBEP's level of stakeholder involvement and its administration of the Implementation Committee. The NBEP also recently created an internal Bay Committee within RIDEM to improve its coordination with other RIDEM programs.

Program Administration

There is no substitute for well-managed program and building an effective organization. Factors such as an effective director, staffing (e.g., recruitment, hiring, retention, training), personnel management (e.g., personnel evaluations, grievance procedures), budgeting, grants management, and contracting all influenced the development and implementation of the Narragansett Bay CCMP. Rapid turnover in the RIDEM's Commissioner (i.e., three in the last four years and five in the last ten) combined with political attacks on the agency affected its programs, including the NBEP.²²⁹ As one RIDEM official noted: "Well, we've proven that a leaderless organization can exist." The choice of the NBP/NBEP director also influenced the program. During the planning process, the NBP's director exerted a great deal of control over the program's direction and became a controversial and polarizing figure. Conversely, the current NBEP director and staff were much more highly regarded by our respondents, who generally viewed them as playing a constructive role in trying to build collaboration and coordinate efforts to protect Narragansett Bay. These contrasting observations suggest to us that leadership and staffing are critical to a watershed management program's effectiveness.

These were not the only administrative problems confronting the NBP/NBEP. One of the advantages of using the NEIWPC as the hiring entity during the planning process was that it helped the NBP avoid Rhode Island's personnel system. The NBEP staff, with some exceptions, are RIDEM employees which now makes them subject to the problems embedded in the state's personnel system, which is among the worst in the country according to a recent study reported in *Governing*.²³⁰ In the past, these problems hindered the NBEP's ability to recruit staff for certain positions such as the Public Outreach Coordinator position. In addition, when they have been able to hire an effective outreach coordinator, the person has been detailed to other RIDEM programs. In the past, these problems limited the effectiveness of the NBEP's outreach and education efforts.

The use of the NEIWPC during the planning process also simplified the NBP's purchasing and contracting procedures. The NEIWPC had experience and the capacity to manage the wide range of contracts associated with this type of planning effort. The NBP certainly benefited from this experience. However, some minor problems were experienced. Lack of oversight, the use of university faculty, and the very nature of scientific research led to some missed contract deadlines. Other investigators failed to perform the requested analysis because the contracts did not require that it be done. The timing of some studies was also an issue with some studies completed after the briefing papers or planning process ended.

Now that the NBEP is subject to the Rhode Island's purchasing and contracting procedures, the staff are experiencing greater problems. Rhode Island's contracting and purchasing procedures are cumbersome and highly inefficient. As one RIDEM official noted:

“We have huge problems spending money. Just spending money. . . . We’ve had situations where we’ve gotten \$100,000 of federal money and a year later we’re still trying to get it through the system to work with the University [of Rhode Island] or someone and its just getting glitched up through the bureaucracy.” Part of the problem lies with the lack of clearly defined procedures within the Department of Administration.²³¹ These problems can have an adverse effect on the NBEP because it often needs to turn contracts around quickly. For example, if the staff are bidding on a contract to take aerial photos they only have a narrow window to work within. If a contract gets delayed it might delay the project for an entire year.

Another consequence of the personnel system and contracting procedures is that it forces the NBEP to route a portion of its funding from the EPA to the NEIWPC for hiring a staff member and paying for travel.²³² The NBEP has been constrained in hiring appropriate staff by several factors. First, for most of the 1990s, the RIDEM has had a Full Time Equivalent (FTE) cap and hiring freeze so the NBEP could not hire staff through the state system. Second, because of the lack of pertinent job descriptions the state system the NBEP have difficulty hiring staff with the necessary skills because they are not included in the state’s job descriptions. Third, delays in filling a state position can range, at times, from six months to a year. This is a critical problem for a small program like the NBEP with a limited staff. Another consequence of the state’s poor contracting procedures is that the NBEP often makes its implementation funding available directly to partners. This has the added benefit of reducing the NBEP’s administrative burden with respect to grant management, which allows the staff to spend additional time applying for grants and working on projects.²³³ However, the consequence is that the partners charge overhead rates to recover these added administrative costs. While the NBEP staff reported that the overhead rates were worth the benefits resulting from these arrangements, these actions raise some interesting issues. On the one hand, the NBEP could be applauded for its creativity in overcoming the problems created by the state’s personnel and contracting system. On the other hand, it reduces the program’s accountability to other state officials and possibly results in lost resources (e.g., overhead).²³⁴

The case also illustrates the important role that financial resources play in the CCMP’s development and implementation. The NBEP has not received any substantive financial support for implementation from the governor, RIGA, or the RIDEM and has difficulty finding matching funds. As one EPA official commented: “its outrageous that we’ve spent an inordinate amount of time on the phone to come up with a match on a \$15,000 grant.” As a result, the NBEP’s implementation efforts have been limited by the program’s ability to leverage funding from other funding sources.²³⁵ While the NBEP has had success in leveraging funding, these funds often constrain and influence the type of activities that are conducted. It also makes it difficult to maintain a sustained effort in any specific area since the priorities of the grant programs change frequently. Accordingly, the NBEP is more of a collection of loosely connected projects than it is a sustained effort to address a specific problem(s) or achieve a specific goal.²³⁶

We also concluded that the stability of resources is at least as important as the actual amount of funding. This is evidenced by the improvement in the NBEP’s implementation efforts once the EPA changed its policy and began providing limited implementation funding to maintain a core program staff. Stability allowed the NBEP to maintain staffing and build problem-solving capacity. It also provided the slack resources (i.e., staff time) for the NBEP,

and by extension the RIDEM, to organize and participate in other collaborative efforts. When a program such as the NBEP is working primarily off discretionary project-based grant money (i.e., soft money), there is less flexibility for the staff to become involved in other unrelated collaborative efforts as a result of the grant restrictions placed on the utilization of these funds.

Collaboration and Building Effective Partnerships

In the planning phase, the NBP placed less emphasis on collaboration and building effective partnerships than any of our case studies. As already noted, while a collaborative decision-making process was used during the planning process, it was poorly managed with few of the Executive and Management Committee members reporting that they viewed themselves as “partners”. Overtime the NBEP has become more focused on building partnerships and now spearheads and promotes many collaborative activities. These accomplishments illustrate some of the collaborative potential that the NBP chose to forgo when it moved from a collaborative to a confrontational approach. Had the NBP staff been willing to agree to disagree and focused on issues where agreement among the key actors could be reached, greater collaboration might have occurred and the CCMP might have been better received.

The NBEP has had a moderate level of success in improving collaboration among several RIDEM programs. The NBEP’s initiation of the Bay Committee offers some promise of increased communication, coordination, and collaboration among RIDEM programs. This is notable given the historic lack of coordination and collaboration between some of these programs. As one respondent noted: “[T]here is such an institutional bias against coordinating. You don’t get brownie points for helping someone else do a good job. That’s why people don’t want to do customer service or TQM. Those are invisible successes you don’t get credit for it.” To the NBEP staff’s credit, they are not concerned about who gets the credit.

The NBEP’s location in the state water quality agency appears to help in its efforts to facilitate collaboration among RIDEM programs and to leverage their resources, its location appears to create other obstacles to interagency collaboration. The NBEP’s location deep within RIDEM’s hierarchy makes it difficult for the program to play a strong leadership role in the agency and to represent other agency programs in collaborative forums. The NBEP is also saddled with the political baggage that comes from being located in the state water quality agency. While the NBEP tries to remain apolitical, the RIDEM is a regulatory agency that frequently takes controversial positions on projects and has been under attack by the state RIGA and some NGOs. These factors and others noted elsewhere in this report create potential obstacles to collaboration. For example, if the CRMC and RIDEM are engaged in a broader policy debate in the state legislature (e.g., creating a statewide habitat restoration program),²³⁷ this complicates the NBEP’s ability to collaborate on these issues. The CRMC may also be reluctant to collaborate too closely with the RIDEM because it wishes to avoid criticism by the legislature and is afraid of “guilt by association” if it works too closely with the agency.²³⁸ Thus, while there are many examples of collaboration between the NBEP and the CRMC, the relationship is a complicated one and the program’s location within RIDEM limits its ability to fully exploit the collaborative capacity present in this system.

The case also illustrates how organizations with a history of conflict can often find constructive ways to work together. Nowhere is this more evident than in the relationship between RIDEM and the CRMC. Despite the conflicts, the staff of each agency have learned how to work together. The agencies collaborated to get Rhode Island designated as a no discharge zone and provided Warwick much needed technical assistance during the GBI. The CRMC relies on RIDEM for the review of ISDSs while the RIDEM relies on the CRMC to enforce provisions of its Section 401 Water Quality Certifications. The two agencies were able to work together to coordinate the Section 319 and Section 6217 programs to receive conditional approval for their Coastal Nonpoint Pollution Control Program (CNPCP). The RIDEM and the CRMC also reached agreement on an memorandum of understanding (MOU) such that the CRMC will review projects with freshwater wetlands if they are located within its jurisdiction. More recently, NOAA awarded a \$270,000 habitat restoration grant to NBEP, CRMC, and Save The Bay, another organization with a history of conflict with the CRMC. Thus, while the periodic conflicts may limit some opportunities for collaboration, the scope of collaborative activity is much wider than one might believe. Moreover, the history of conflict has served a constructive role at times as well by ensuring that the interests of different constituency groups are protected and by creating a healthy competition of ideas that spurs policy change, both are important components of our federal system.

EPA's Role in Watershed Management

The role of EPA and RIDEM (i.e., its state counter part) water quality and NPS programs (NEP, Section 319) and action forcing mechanisms (e.g., TMDLs) varied within the case. The Section 319 program has had little involvement other than helping fund implementation efforts in the GBI. There is little relationship between action forcing mechanisms like TMDLs and the NBEP even though the RIDEM is working on TMDLs for the Providence River, Seekonk River, Runnins River, Palmer River, Buttonwoods Cove (bay), Greenwich Bay, Mount Hope Bay, Narrow River, and Kickemuit Reservoir are due in 2000. The NBEP has also had little reliance on EPA funding other than Section 104(b)(3) and Section 320 (i.e., NEP) of the CWA.

The only EPA program that appeared to have a large role in the NBEP or its implementation efforts was the NEP. However, during the planning process the EPA was reluctant to exercise any supervision over the NBP staff or to provide leadership until the end of the process. The RIDEM, which implements many of EPA's delegated programs, was also actively involved throughout the planning process. The RIDEM's Commissioner was an Executive Committee member and seven RIDEM staff represented the agency on the Management Committee. However, instead of using the NBP to address RIDEM's information needs or to improve its ability to implement existing programs, the NBP focused on changing regulatory programs and reconciling policy conflicts. This forced the RIDEM and EPA into a less constructive position of having to protect their interests during the planning process.

During the implementation process, however, the EPA has maintained its level of involvement and provides financial and technical assistance. The RIDEM's programs have also been involved in NBEP efforts. Some regulatory changes and actions recommended in the CCMP did occur. Although, many of these actions were already in process when the CCMP was developed or were required as a result of other federal statutory requirements. Much of the

RIDEM's involvement in NBEP implementation activities continues to be largely on a project-by-project basis. The NBEP's location within RIDEM has allowed it to assist the Section 319 program determine where to allocate its funding. Accordingly, the relationship between the NBEP and the RIDEM during the implementation process is much more symbiotic, which is to be expected given its location within the agency.

Performance-Based Management

The NBP/NBEP has not developed or employed performance-based management techniques. This appears unlikely to change in the foreseeable future given the RIDEM's lack of emphasis on these techniques. The NBEP has not developed specific, measurable goals and did not report any plans to do so during our interviews or in its comments on the draft report. The problem this creates is that the current goals are so broad that any environmental protection or resource management activity in the watershed advances these goals. The goals are not quantifiable or measurable either. Thus, there is nothing to measure progress towards other than the implementation of specific CCMP recommendations. However, the NBEP has not developed a system to track progress towards the CCMP's 500 recommendations and only reported on the progress towards the 41 high priority recommendations once during its 1999 Biennial Review for the EPA. While the NBEP staff reported it will take steps this year to improve its ability to monitor and track implementation activities,²³⁹ the lack of specific goals and our findings that other actors are not utilizing the CCMP as a policy document will limit the value of these activities. In terms of environmental monitoring, the NBEP has helped collect some needed data. However, Rhode Island has not invested in estuary ambient monitoring until recent actions by the NBEP facilitated the use of federal funds to set up a bay-wide system of electronic monitoring buoys. Thus, it is difficult to use environmental outcome data to evaluate CCMP implementation.

Institutional Performance

When examining the performance of an institutional arrangement, it is important to use several criteria to understand its strengths and limitations. It is also important to recognize that there may be a disconnect between the performance of an institutional arrangement and its ability to achieve environmental outcomes.²⁴⁰ For example, you could have a well functioning institutional arrangement but the underlying policy is flawed and unable to achieve the desired outcomes. The nature of watershed management also makes it difficult to determine causality. Numerous federal, state, regional, and local programs have an impact on the outcomes of interest (i.e., changes in water quality and habitat). It is difficult to disaggregate the effects of each program let alone determine which marginal changes in these programs were due exclusively to a watershed management program. Moreover, given the collaborative efforts employed, it is important to assess performance from the perspective of different actors since measures of success might change as you move from actor to actor.

Our analysis relies primarily on criteria provided by the Academy which were then supplemented with additional criteria derived from the literature. These criteria included: 1) risk reduction; 2) potential for short- and long-term gain; 3) cost-effectiveness; 4) predictability of the process; 5) certainty of effect; 6) accountability; 7) equity; 8) adaptability; and, 9) capacity

building. For a more detailed discussion of the definitions, concepts, criteria, and the application of these criteria, please consult the main report entitled *Environmental Governance in Watersheds: The Importance of Collaboration to Institutional Performance*.

Risk Reduction

This criterion is concerned with the question of whether the program demonstrated an ability to achieve the desired environmental outcomes. Despite the aforementioned causality problems and the lack of good water quality data, there is reason to believe that the NBEP has engaged in some efforts that have the capability of improving environmental conditions. Both the RIDEM and the CRMC made regulatory changes that addressed issues in the CCMP. Some progress was made towards addressing the CSO problems noted in the plan. The NBEP also improved the RIDEM's capacity for solving environmental problems. However, the NBEP's biggest accomplishments in terms of environmental improvements may be the HWRP, no-discharge zone designation, and the GBI.²⁴¹ Numerous respondents noted that the HWRP is largely responsible for the reductions in toxics and associated water quality improvements. While it is unclear how much water quality improvement will result from the no-discharge designation, it certainly had a great deal of symbolic value. Moreover, it allowed some areas closed to shellfishing to be reopened.²⁴² The GBI is another area where significant water quality and habitat improvements are likely to result. The City of Warwick provided the leadership for much of this effort and will provide more than \$130 million in environmental infrastructure that should lead to environmental improvements. We believe the NBEP deserves to share some of this credit since the CCMP focused attention on the problems in Greenwich Bay and it participated in the effort.

However, the majority of the NBEP's projects appear to be oriented towards capacity building and outreach activities, many of which have little chance of direct environmental improvements (e.g., Narragansett Bay Summit 2000). For example, while the NBEP had numerous projects focused on the issue of habitat restoration, most of these activities (e.g., research, mapping, GIS coverages) were designed to improve the capacity for habitat restoration rather than actually acquiring and restoring sites. These accomplishments are also small in comparison to the wide range of problems and the 500 recommendations contained in the CCMP.²⁴³ In addition, many of the accomplishments such as the regulatory changes, CSOs, and the GBI are only loosely connected to the CCMP. The lack of progress we found was not surprising given the conflict surrounding the CCMP, the near demise of the NBP, the lack of staffing during the first year of implementation, and the poor financial support for the program.

Potential for Short- and Long-Term Gains

There appears to be little prospect for significant short-term (3 to 5 years) gains beyond existing programs. Our analysis concluded that the CCMP is no longer used by the NBP partners and offers only limited guidance to the NBEP when it plans its implementation efforts. It also does not contain any clear goals or policies. It is also questionable how much of the \$2.2 million in funding that the NBEP leveraged over the last six years was "new" money.²⁴⁴ If the NBEP did not apply for this funding, other programs within the RIDEM may have received much of the funding, albeit for different projects that might be entirely unrelated to CCMP

implementation. Moreover, in its role as a surrogate planning staff for the RIDEM's water quality programs, a fundamental purpose of the NBEP is to seek out these sources of competitive and discretionary funding. This is not the case with many of the other RIDEM programs.²⁴⁵

The main barrier to more significant gains is that the NBEP is primarily focused on project-level activities and has had difficulty making the transition to a more systematic attempt to solve a specific problem(s). It does not provide a consistent set of services or maintain an ongoing technical assistance program. It does not provide financial assistance to other actors. It also does not serve as staff for a collaborative organization. Thus, the NBEP is the sum total of this collection of loosely related projects. While we applaud the "entrepreneurial" spirit of the NBEP and its ability to leverage funding, the approach has clear limitations. The principal danger is that over the long term these individual projects, or "random acts of environmental kindness", will be too limited in scale, scope, magnitude, or duration to significantly change the underlying environmental problem they were designed to address. This raises questions about whether or not these resources could be utilized more effectively. Moreover, the heavy reliance on other federal and state funding sources necessarily implies that the priorities and grant restrictions of these narrow categorical grant programs will largely shape the implementation activities the NBEP can undertake. Unfortunately, the absence of a dedicated and stable source of federal, state, or local implementation funding necessitates that the NBEP employs this opportunistic strategy. This makes it difficult to make the transition to a more systematic program designed to address specific problems. This limits the environmental gains that can be achieved over the short and long-term.

It was also clear that the majority of the activities by the NBEP and the original NBP partners were no longer designed to implementing specific CCMP recommendations.²⁴⁶ Instead, the RIDEM used the NBEP's implementation funding to create a surrogate policy and planning staff. While this fills an important capacity need for the RIDEM, it is not the public purpose that the NBEP was designed to achieve.²⁴⁷ It also raises questions about what public value is added by the NBEP that could not be added by current programs if the RIDEM allocated the resources necessary to improve its planning capacity. The RIDEM's consistent lack of support for the NBEP and the low importance the program has within the agency suggests to us that there is no reason to believe that this situation will change in the foreseeable future.²⁴⁸ While the NBEP staff has expressed interest in revising its CCMP, the former Executive and Management Committee members we interviewed did not share the same level of interest. There is also no funding available for this type of planning effort. Thus, we expect that the NBEP will continue to pursue individual projects. While isolated successes will occur, there appears to be little prospect for significant short- or long-term environmental improvements in any specific problem area. Moreover, if the EPA was ever to stop funding the NBEP, we have no reason to believe that the RIDEM or the state would allocate the resources necessary to continue the program.

Cost-Effectiveness

Efficiency is an important principle of public administration. Accordingly, it is important to examine the cost-effectiveness of a program. Our analysis is concerned with how a program uses its resources compared to the benefits it generates. What complicates the analysis is the

wide range of intangible costs and benefits associated with these efforts as well as the transaction costs involved with developing and implementing a watershed management plan.

One of the features of the EPA's funding of individual estuary programs is that it invests a disproportionate amount of its resources in planning when compared to implementation.²⁴⁹ It is also true that during the planning phase a substantial proportion of this total funding is used for scientific and technical work and public outreach and education efforts.²⁵⁰ In Narragansett Bay, approximately 75 percent of the planning budget was spent on characterization efforts.²⁵¹ Accordingly, judgements about the cost-effectiveness of the planning process largely depend on judgements about the cost-effectiveness of these expenditures. In both cases, it is unclear whether these resources were used effectively. Our findings related to the limited role that the scientific research had on changing agency decision making and the respondents reporting that they did not find the CCMP to be a useful policy document both suggest that at least some portion of the \$10 million could have been used more effectively. Moreover, the conflict surrounding the CCMP certainly exacerbated the transaction costs for all parties involved in the planning process.

The NBEP receives little funding specifically for CCMP implementation. Essentially, the EPA grant is enough to maintain a small core staff, undertake some projects each year (over 60 to date), and provide the slack resources necessary to leverage other funding sources and organize collaborative activities. In our view, the NBEP's cost-effectiveness during the implementation process should be judged in terms of whether it does more than spend the EPA's small appropriation of approximately \$300,000 per year. When viewed from this perspective, the CCMP's implementation is much more cost-effective. The NBEP has been able to leverage approximately \$2.2 million in funding from other sources over the past six years. Moreover, the NBEP's cost-effectiveness would further increase if it were given even partial credit for the investments that occurred as part of the GBI.

Predictability of the Process

Institutional performance can be judged in terms of the predictability of the process. We were concerned with two related questions: 1) the ability of the planning process to produce the intended result; and, 2) whether the program creates predictable conditions or requirements that allow its participants to plan and budget with confidence.²⁵² One of the strengths of the NEP is that it employs a predictable process that results in the development of a voluntary CCMP. However, the NBP did not have the benefit of the NEP's guidance during its formative years. The experiences of the NBP and other early estuary programs helped the EPA to develop the programmatic requirements. As a result, the NBP's planning process was less predictable than that of the other estuary programs we examined. However, the actors did satisfy the CWA requirements and developed the required CCMP.

From an implementation standpoint, one could conclude that the actors can plan and budget with confidence because none of the original NBP partners are required to allocate funding to implement the CCMP. If one assumes that the actors still had some obligation to implement the CCMP absent formal requirements, then it appears that the NBEP did not result in conditions that allowed the actors to plan and budget with confidence. The absence of specific

goals combined with the lack of clear expectations to implement the CCMP's recommendations as written meant that the partners were free to pursue any activities they wanted. There was also no effort to coordinate or monitor the implementation of the CCMP during its early years, with agencies largely left on their own with respect to deciding what activities they would undertake. Thus, there was no attempt to target efforts in any particular area. Accordingly, while the CCMP identified 41 high-priority recommendations this did not translate into agency priorities.²⁵³ The lack of implementation funding during the early years combined with the lack of a dedicated source of state funding and the heavy reliance on leveraging as a funding strategy have also limited the NBEP's ability to plan with confidence.

Certainty of Effect

One measure of success for any planning effort is whether the "plan" was actually implemented. This involved making two distinct judgements. First, we determined whether the CCMP recommendations were implemented or were likely to be implemented in the future. Second, if the recommended actions were not been implemented, we determined whether the participants were engaged in a substitute set of activities designed to achieve the goals of the CCMP. There appears to be little certainty that the vast majority of the CCMP's 500 recommendations will ever be implemented as they are specified in the plan. While a greater range of substitute activities have occurred [See Appendix B of this report for examples], it is questionable how much activity is the result of the NBEP versus being the result of other programs and initiatives, especially when many respondents reported that they were not implementing the CCMP. Moreover, given the broad nature of the CCMP's goals, it is difficult to determine whether many substitute activities are really best characterized as being "implementation activities". It was also clear from our analysis that the CCMP no longer serves as a policy document that guides the implementation decisions of the original NBP partners.²⁵⁴ Consequently, there is little certainty that many of the CCMP's will be implemented.

Accountability

It is also important that there are mechanisms to hold officials accountable for their actions and the allocation of scarce resources. During the planning process there were many accountability problems. There was no effective mechanism for holding the NBP's staff accountable for its actions. The Executive Committee did not have strong oversight over the decisions of the Management Committee. Professional accountability was limited by NBP's failure to defer to technical experts using a STC. Public accountability was limited by the failure to utilize a PEC. The only real accountability mechanisms were legal requirements such as open meeting laws, public notice and comment, and the CZMA's federal consistency requirements.

During the implementation process, accountability improved as a result of the EPA's Biennial Review process and the fact that the NBEP's staff were now accountable to RIDEM officials. However, the lack of action and interest in CCMP implementation has limited the effectiveness of other accountability mechanisms. The Implementation Committee has the potential to serve as an accountability mechanism but is relatively inactive and it has little ability to hold the NBEP staff accountable for its actions (i.e., it is advisory in nature and there are no clear goals or policies to measure progress against). Since the CCMP is an element of the *State*

Guide Plan, there is also the possibility that the RIDOP or the SPC could take on an oversight role, though this did not occur. The NBEP also lacks other important accountability mechanisms. The absence of a viable CCMP or clear program goals or policies makes it difficult to hold the NBEP accountable for its actions. Essentially, the NBEP can do anything it wants as long as it does not degrade environmental conditions in the Narragansett Bay watershed. This is a weak standard for accountability. The NBEP also lacks a viable mechanism for allowing the public to hold the program accountable for its actions.²⁵⁵

Equity

Another useful criterion for examining institutional performance is equity or fairness. There are a lot of different ways to view equity. Fiscal equivalence holds that those who benefit from a service should bear the burden of financing it. Thus, those who derive greater benefits are expected to pay more. Redistributive equity concerns structuring program activities around differential abilities to pay. Considerations about the equality of the process and the equality of the results are also important.

The NBP/NBEP does not appear to have created many significant equity issues. One issue that resulted was that the plan had the potential to have a large impact on a group of stakeholders (i.e., local governments) that had little involvement in the planning process. The second issue is whether the EPA and federal tax payers should continue funding implementation efforts that benefit Rhode Island when the state's tax payers have not provided their own financial contribution. The final issue concerns the institutional arrangement used to implement the CCMP. It gives the RIDEM sole control over the EPA's resources even though it is only one of many actors with implementation responsibility.

Adaptability

Unless institutional arrangements have the capacity to respond to their ever-changing environments, institutional performance is likely to suffer. Reflected here are concerns similar to those who argue for adaptive approaches to ecosystem or community-based management. In some respects, the NBEP could be considered to be highly adaptive. The NBP/NBEP has demonstrated a surprising ability to survive notable hardships and reinvent itself in the wake of a contentious planning process that left the program with a CCMP that most of the original NBP partners were not interested in implementing. The NBEP also employs an opportunistic strategy that tries to leverage resources from other programs. While this activity could be viewed as adaptation, it also could indicate that implementation efforts lack focus and that there is not a systematic approach to addressing specific problems.

This is also a different form of adaptation than we are concerned with. We are interested in whether the NBEP has the ability to adapt its efforts to achieve better policy outcomes. We concluded that the NBEP has little capacity for this type of adaptation. The NBEP has no definitive goals or policies and lacks the capacity to monitor changes in environmental conditions or to track progress in implementing the CCMP. Therefore, we concluded that the NBEP lacked the ability to conduct the type of adaptive management implied by the criteria. Moreover, the NBEP is housed in an agency, the RIDEM, which is anything but the "learning

organization” advocated by many organizational scholars. The RIDEM has consistently had leadership and organizational problems and demonstrated a surprising inability to learn from its successes and failures for more than a decade. As one respondent observed: “RIDEM is not a can do gang, they’re a can’t do gang.” These factors further constrain the NBEP’s capacity for becoming engaged in the type of adaptation implied by the criterion.

Capacity Building

A final criterion is whether the NBP/NBEP were effective at building the capacity for solving complex environmental problems. The NBP had limited success in improving the problem solving capacity of other Executive or Management Committee members. However, the NBEP has improved the RIDEM’s problem solving capacity. In effect, the NBEP filled a void that historically existed in RIDEM’s water quality programs, the lack of a policy and planning staff. As one respondent noted: “They [NBEP staff] get sucked into a variety of issues in DEM. The NBEP is the only source of coastal technical expertise in DEM.” The evidence suggests to us that the NBEP’s staff has undertaken many of the roles that a policy and planning staff would fill. They have helped improve communication, coordination, and collaboration among different RIDEM programs. The NBEP also develops grant proposals, designs projects, brokers collaboration between different divisions, and helps RIDEM leadership decide where to allocate grant funding (e.g., Section 319). They also represented the RIDEM in other collaborative forums (e.g., Quonset Point Stakeholder Group). The NBEP staff has also been engaged in a form of “shuttle diplomacy” with CRMC staff in the past, working to resolve conflicts between the agencies and improving relations at the staff level. The NBEP is also playing a role in the development of RIDEM’s new watershed approach.

We believe that the NBEP’s real value lies in these efforts to function as a planning staff for the RIDEM because it improved the agency’s problem-solving capacity. It has also provided the RIDEM with the slack resources necessary to become more involved in collaborative efforts. However, the NBEP’s location, buried within RIDEM’s bureaucracy, hinders its ability to more effectively accomplish this role. An elevated status within the agency might help the NBEP to more effectively function as a policy and planning staff.

Summary and Conclusions

The development of the NBP CCMP and its implementation by the NBEP is an interesting case study. Despite all of the problems experienced during the CCMP’s development and the NBP’s two near death experiences, the NBEP has managed to survive and achieve some notable successes. The current NBEP director and their staff clearly deserve a great deal of credit for these accomplishments. It was only through their hard work, dedication, and entrepreneurial spirit that the NBEP still exists. As a result, the NBEP improves the RIDEM’s problem solving capacity by serving as a surrogate planning staff for its water quality programs and has stimulated project-level collaboration between various governmental and nongovernmental organizations. We believe that this is the real value of the NBEP today since the CCMP no longer guides the decision making of the original NBP partners.

We also concluded that the NBP's collaborative planning process was mismanaged and that this caused much of the conflict surrounding the CCMP. The EPA and NBP/NBEP staff who commented on this report were inclined to blame these problems on the institutional environment (e.g., conflicts between agencies such as the CRMC and RIDEM) and the personalities of the actors involved.²⁵⁶ While these factors certainly contributed to the NBP's problems, we believe that other factors noted in this report provide a more powerful explanation for the problems that resulted and would have created problems regardless of the institutional environment or the personalities of the actors involved. Accordingly, we believe this case reveals several constructive lessons about the complex challenges associated with managing a collaborative decision-making process. These include:

- The importance of structuring the collaborative effort around a core set of focal problems and be strategic in focus rather than synoptic
- The need to establish clear rules that structure the decision making process
- Decide early in the planning process what the legal status of the CCMP will be and create rules for changing this status
- The need to clearly establish the roles and relationships between the program's advisory committee structure
- The importance of having high level decisionmakers activity involved in the decision-making process and to be careful in limiting the delegation of decision-making authority to a broader committee of stakeholders that may not be affected by their decisions
- Focus on areas of mutual agreement such as win-win and win-no-lose situations rather than controversial win-lose issues where the participants have options other than collaboration for advancing their interests
- Our federal system is comprised of federal, state, and local government programs that overlap in their authority and often protect and advance different interests. Therefore, participants in a collaborative process must be willing to agree to disagree on some issues and respect these policy differences
- Staff should remain neutral and focus on being a proponent for consensus and brokering agreements rather than becoming a stakeholder that actively pursues specific policy options
- Science should be nested in the decision-making process

The case also reveals several constructive lessons about the challenge of implementing a CCMP and the choice of governance arrangements and implementation strategies. These include:

- Structure the plan around specific and goals and general and flexible recommendations to increase the plan's shelf-life
- Develop a performance monitoring system that encourages accountability and the ongoing implementation of the plan by partners
- It is important to find a way to continue the collaborative focus of the program when selecting a governance arrangement (i.e., creating a new collaborative organization)
- The participants should work to move beyond the project-level to create a program the systematically provides a service, implements a policy, or addresses a specific problem

- The importance of a stable and flexible source of long-term implementation funding that allows the priorities of a watershed management program to drive funding decisions rather than those of other federal, state, or local agencies.

Thus, we do not find it surprising that the NBP partners and the NBEP staff learned a great deal from these experiences. For example, the NBEP director often serves as a “coach” for newer estuary programs by helping them address some of their complicated problems. Another example is that when the state began revising its Section 319 NPS Management Plan, steps were taken to ensure the management committee process would be different. The EPA also learned a great deal and newer estuary programs such as Tillamook Bay were the beneficiaries of the training and technical assistance developed in response to the experiences of the Tier I and II programs.

Clearly, the most troubling finding was that the CCMP no longer serves as a policy document that guides the activities of the original NBP partners. We did not find this surprising since the NBEP is in its eighth year of implementation and the CCMP has not been amended or revised. While the NBEP staff activities may advance CCMP goals and address issues raised in the CCMP,²⁵⁷ we believe this is a poor basis for a program. Our criticism is not with the scope or substance of the NBEP’s current activities. Many are quite notable and the staff deserve credit for these initiatives and accomplishments. The problem is that the CCMP’s goals are exceptionally broad and almost every environmental issue currently up for consideration on the policy agendas of federal, state, and local decisionmakers is addressed directly or indirectly in the CCMP. Therefore, any agency activity can be viewed as “implementing” the CCMP provided it does not degrade environmental conditions. This makes it difficult to hold the NBEP or the EPA accountable and it is difficult to judge whether the efforts are effective. The NBEP and the EPA can claim credit for almost any agency activity as an “accomplishment” while at the same time they cannot be blamed for failing to do or achieve anything. While this certainly makes the NBEP a good public relations program, the danger is that over the long-term it will never amount to more than the sum total of this loose collection of projects. Individually, the projects may provide benefits but collectively they may be insufficient in scale, scope, magnitude, or duration to fundamentally change the underlying problems. This raises important questions about whether this funding could be used more effectively.

We also concluded that the current status quo condition is insufficient. The report notes many concerns about the NBEP. Federal and state decisionmakers have many options to address these issues. An obvious alternative would be for the EPA to cease funding implementation. The agency would be well justified in doing so since the state has never contributed a dedicated funding source for implementation²⁵⁸ and the data strongly suggests that the CCMP is not being implemented. Thus, it is unclear what the basis is for continued EPA funding. A review of the Delaware Inland Bays, Tampa Bay, and Tillamook Bay cases reveals that a number of planning efforts that came and went before the estuary programs. Rather than being a sign of failure, we believe these cycles of planning actually served to strengthen subsequent watershed management efforts. Thus, an alternative would be to terminate the NBEP and reconstitute it as part of some new state funded watershed planning effort, perhaps focusing at the subbasin level.²⁵⁹ A related option would be for the EPA to reconvene the Management Conference for Narragansett Bay (or a subbasin) and to develop a new CCMP. Federal and state decisionmakers could also decide to

let the NBEP end and move forward with a new statewide watershed approach, such as the one that has been proposed.²⁶⁰

The current course of action appears to be to develop a statewide watershed approach that focuses on smaller subbasins, many of which are in the Narragansett Bay watershed, while maintaining the NBEP. However, progress has been slow. It was also unclear to many of our respondents and the research team exactly how the NBEP fits into this new framework which left us wondering whether it really does.²⁶¹ Regardless, if the NBEP is to continue, it needs to make the transition from being a loose collection of projects to a program designed to systematically address specific problems, provide an ongoing service, or advance specific and measurable goals or targets. However, doing so is likely to require a stable and flexible source of federal or state implementation funding beyond the current EPA grant allocation. We are not optimistic that this transition can occur while utilizing a funding strategy that relies on leveraging existing federal and state grants to fund implementation activities.²⁶²

Moreover, while the NBEP has had some notable successes in fostering project-level collaboration, these efforts need to be expanded to the policy-making and institutional levels. The Narragansett Bay watershed is “managed” by a wide range of governmental and nongovernmental organizations whose actions and decisions influence the health and integrity of ecological systems. Therefore, the fundamental purpose of a program like the NBEP is not to “manage” the watershed but should be on getting this portfolio of actors and programs to work together more effectively. Therefore, any watershed management program for Narragansett Bay (or its subbasins) should focus on building, managing, and maintaining collaborative relationships necessary to facilitate the direct (e.g., restoration projects, or infrastructure investment) and indirect (e.g., public education, changes in decision making, or new research) actions needed to improve environmental conditions and enhance the governance of a watershed.

While the controversial nature of the NBP’s planning process, NBEP’s location within RIDEM’s hierarchy,²⁶³ the problems with the Implementation Committee and stakeholder involvement,²⁶⁴ and the lack of performance monitoring have limited collaborative activities at the policy-making and institutional level, we feel that the main obstacle is the overall structure of the governance arrangement and the CCMP’s lack of specific and measurable goals. Our review of the six watershed management programs suggests that the development of a collaborative organization, based on shared policies and priorities as being more effective at stimulating a wider range of individual and collaborative implementation activities. This is a very different governance structure than the one employed by the NBEP, which is located in the state water quality agency (i.e., RIDEM). Thus, the current governance arrangement may inhibit making the transition from a loose collection of projects to a more sophisticated program based on interagency goals and priorities.

Collectively, the findings raise two important policy questions for the EPA. First, there is reason to question why the EPA continues to provide funding to the NBEP when the state has not provided a match in real dollars during the implementation process. We believe seven continuous years without state financial support is a strong indicator that the NBEP is a low priority with the Governor, the RIGA, and the RIDEM.²⁶⁵ Consequently, we believe there is strong reason to question whether the EPA and U.S. tax payers should continue funding CCMP

implementation when Rhode Island refuses to do so. This is not a temporary problem of budget shortfalls but a chronic problem that deserves attention by the EPA. Second, if the CCMP is no longer serving as a viable policy document, then there is reason to question the basis for the NBEP's continued existence and the rationale for the EPA's ongoing funding of the effort. Therefore, these findings naturally raise questions about when an estuary program should end and what role EPA funding should play in maintaining these efforts.

The questions are important because if the EPA will not terminate funding in the circumstances presented in this case, it is questionable whether the EPA will ever end financial support for an estuary program other than if it demonstrates a total disregard for how the funds are spent.²⁶⁶ This is unfortunate because the NEP was never intended to result in a new program that would live on forever.²⁶⁷ Based on our interviews and EPA comments on the draft reports, it appears that given the current budget climate and the relatively small federal financial commitment, the EPA would rather maintain the status quo and avoid formulating new policy and taking actions that will alienate core constituency groups that support the NEP.²⁶⁸ Several respondents suggested that the EPA is satisfied as long as an estuary program is visible, contributes to the "picture of the NEP as a whole", and the program does not show a total disregard for the NEP requirements or the misuse of EPA resources.²⁶⁹ We believe this is a poor basis for funding implementation efforts and argue that the status quo is counterproductive. It creates no incentives for an estuary program (e.g., NBEP) to revise its CCMP if it becomes outdated, develop specific goals if they are lacking, create a collaborative organization to improve or expand the scope of collaborative activity, or find a dedicated source of implementation funding. All of these changes may be necessary to improve the long-term effectiveness of an estuary program.²⁷⁰ The failure to let an estuary program end when it has surpassed its useful life span also inhibits the cycles of planning that proved to be useful in the other watersheds we examined.²⁷¹

We also have little reason to be optimistic that the concerns raised in this report will be addressed in a timely fashion. In its comments on our draft report, the EPA stated it has begun "talking" about the issue of when an estuary program ends or should be required to revise its CCMP and recently raised the issues at the annual meeting of the Association of National Estuary Programs (ANEP). However, the EPA has been "discussing" and "talking about" these issues for some time.²⁷² There was also no indication during our interviews or the comments on this report that a policy change was imminent or that a timeline for these changes has been established. Meanwhile, the issues increase in importance with every passing day as other Tier I and II programs begin facing similar problems (e.g., Delaware Inland Bays) and some CCMP's (e.g., NBP's)²⁷³ become increasingly irrelevant. Similarly, the NBEP staff acknowledged that there is a need to develop a new CCMP or some other smaller, strategic document to replace the CCMP and reported that they may use the Narragansett Bay Summit 2000 as the starting point for beginning these discussions.²⁷⁴ However, progress in addressing this issue has also been slow and the NBEP has been aware of these problems for some time. Moreover, we are not optimistic that progress in addressing the issues will come quickly. The Summit did not result in a commitment to develop a new plan for Narragansett Bay, although the option was raised.²⁷⁵ The state has not provided any funding dedicated to implement the CCMP and therefore it appears unlikely it will provide the funding needed to write another plan.²⁷⁶ It is also

questionable whether a new CCMP could be developed given the EPA's current baseline funding for the NBEP.

In the absence of a policy change at EPA or at the state-level, we are left to conclude that the status quo situation will prevail for the foreseeable future. While the NBP's problems served as important lessons to subsequent estuary programs, it is unfortunate that the EPA has not utilized the Tier I and II programs as the basis for experimenting with how to revise a CCMP and address the other concerns raised in this report. Not only does this prevent the Tier IV and V programs from learning from these experiences, it prevents the NBEP from correcting past mistakes. Moreover, if the EPA's status quo policy prevails, the implementation problems experienced by the NBEP could become problems for other estuary programs. Our worry is that these implementation problems will gradually worsen and begin to erode political support for the NEP.

End Notes

¹ Originally the program was called the Narragansett Bay Project (NBP). As a result of the conflict experienced during the planning process, the EPA and the Rhode Island Department of Environmental Management (RIDEM) subsequently renamed it the Narragansett Bay Estuary Program (NBEP) as part of their attempt to reinvent the program.

² For more information on the history of the NEP and its development see: Mark T. Imperial, *Developing Integrated Coastal Resource Management Programs: Applying the NEP's Experience to Developing Nations* (Kingston, RI: University of Rhode Island, Coastal Resources Center, July 1995); Mark T. Imperial, *Public Participation in the National Estuary Program: A Descriptive and Empirical Analysis*, Masters Thesis (Kingston, RI: Department of Marine Affairs, University of Rhode Island, May 1993); Mark Imperial, Timothy Hennessey, and Donald Robadue, Jr., "The Evolution of Adaptive Management for Estuarine Ecosystems: The National Estuary Program and its Precursors," *Ocean and Coastal Management* 20 (no. 2, 1993): 147-180; Mark T. Imperial, Donald Robadue, Jr., and Timothy Hennessey, "An Evolutionary Perspective on the Development and Assessment of the National Estuary Program," *Coastal Management* 20 (no. 4, 1992): 311-341; EPA, *The National Estuary Program After Four Years: A Report to Congress*, EPA 503/9-92/007 (Washington, DC: EPA, Office of Water, April 1992); EPA, *Progress in the National Estuary Program: Report to Congress*, EPA 503/9-90-005 (Washington, DC: EPA, Office of Water, February 1990); and, EPA, *Saving the Bays and Estuaries: A Primer for Establishing and Managing Estuary Projects*, EPA/503/8-89-001 (Washington, DC: EPA, Office of Water, August 1989).

For more information on the development and implementation of individual estuary programs see: Renu Khator, "Networking to Achieve Alternative Regulation: Case Studies from Florida's National Estuary Programs," *Policy Studies Review* 16 (no. 1, Spring 1999), 66 – 85; Katrina Smith Korfmacher, "Invisible Successes, Visible Failures: Paradoxes of Ecosystem Management in the Abermarle-Pamlico Estuarine Study," *Coastal Management* 26 (no. 3, 1998): 191 – 211; Ames Borden Colt, "The First Step in Comprehensively Evaluating Implementation of an Integrated Estuarine Management Plan: Developing Evaluation Criteria," *Ocean and Coastal Management* 24 (1994): 85-108; Michael Healey and Timothy M. Hennessey, "The Utilization of Scientific Information in the Management of Estuarine Ecosystems," *Ocean & Coastal Management* 23 (1994): 167 – 191; W. S. Touhy, "Neglect of Market Incentives in Local Environmental Planning: A Case Study in the National Estuary Program," *Coastal Management* 22 (1994): 81 – 95; W. S. Touhy, "Characterizing the San Francisco Estuary: A Case Study in Science Management in the National Estuary Program," *Coastal Management* 21 (1993): 113 – 129; Katherine Fletcher, "Protecting Puget Sound: An Experiment in Regional Governance," *Washington Law Review* 65 (1990): 359 – 375; and, Thomas M. Leschine, "Setting the Agenda for Estuarine Water Quality Management: Lessons from Puget Sound," *Ocean and Shoreline Management* 13 (1990): 295 – 313.

³ Since the program's inception, the EPA Headquarters office has devolved a great deal of the day to day responsibility for supervising the individual programs to the EPA's Regional offices.

⁴ The EPA identifies nationally significant estuaries threatened by pollution, development, or overuse and assists estuary projects with the preparation of a Comprehensive Conservation and Management Plan (CCMP). The NEP currently has 28 estuary projects in 18 states and the commonwealth of Puerto Rico. The estuaries comprise a diverse set of ecosystems including both heavily urbanized and rural watersheds. The latest group of programs (Tier Five) entered the program in 1995 through a streamlined governor's nomination process. For more information on the governor's nomination process see: EPA, *The Streamlined National Estuary Program: Instructions on the Preparation of a Governor's Nomination* (Washington, DC: Environmental Protection Agency, Office of Water, December 1994); and, EPA, *The National Estuary Program: Final Guidance on the Contents of a Governor's Nomination* (Washington, DC: EPA, Office of Water, January 1990).

⁵ EPA, *The National Estuary Program After Four Years*; and, EPA, *Progress in the National Estuary Program*.

⁶ 33 U.S.C.S. § 1330 et. seq.

⁷ Mark T. Imperial and Timothy M. Hennessey, "An Ecosystem-Based Approach to Managing Estuaries: An Assessment of the National Estuary Program," *Coastal Management* 24 (no. 1, 1996): 115 – 139.

⁸ We should note that several EPA staff and former NBP staff questioned our reliance on our own previous research (e.g., Imperial and Hennessey, "An Ecosystem-Based Approach") as the basis for our discussion suggesting that our discussion should be based strictly on what is stated in EPA guidance documents. However, the EPA provided no explanations or clarifications for where our discussion of the NEP or its requirements is incorrect. We chose to rely on our previous research because we believe it accurately reflects the NEP's structure and planning process and the application of the guidance documents. Just because something is stated in an MOU or a guidance document does not mean it actually occurs. For example, the EPA and NOAA have an MOU where the EPA agreed to encourage CCMPs to be incorporated into a state's federal CZM program but this largely has never occurred. Moreover, the article was based largely on a report prepared for and approved by the EPA by the authors (Imperial, *Developing Integrated Coastal Resource Management Programs*) where this discussion of the planning process was vetted by EPA staff.

⁹ 33 U.S.C.S. § 1330 (c).

¹⁰ The members of this committee are the ultimate signatories of the CCMP and direct the activities of the management conference. See: Imperial and Hennessey, "An Ecosystem-Based Approach."

¹¹ While the policy committee oversees management conference activities, it is the management committee, which is the focal point of consensus building. The members of the management committee represent state water quality and natural resource management agencies, members of the regulatory community, as well as representatives of the general public and interest groups. Some of the typical responsibilities of the management committee include: the identification and definition of environmental problems in the estuary; advising the policy committee on major decisions such as funding priorities and the development of annual work plans; and, guiding the development and approval of the CCMP. The management committee also supports and monitors activities of the other standing committees or work groups which reflect the local jurisdictional conditions, attitudes, and requirements of individual estuary programs. See: Imperial and Hennessey, "An Ecosystem-Based Approach."

¹² Imperial and Hennessey, "An Ecosystem-Based Approach."

¹³ Ibid.

¹⁴ For more discussion of the EPA's requirements see: EPA, *National Estuary Program Guidance: Base Program Analysis*, EPA 842-B-93-001 (Washington, DC: EPA, Office of Water, March 1993); EPA,

Comprehensive Conservation and Management Plans: Content and Approval Requirements, EPA 842-B-92-002 (Washington, DC: EPA, Office of Water, October 1992); EPA, *The Economics of Improved Estuarine Water Quality: An NEP Manual for Measuring Benefits*, EPA 503/5-90-001 (Washington, DC: EPA, Office of Water, September 1990); EPA, *Saving the Bays and Estuaries: A Primer for Establishing and Managing Estuary Programs Appendices G, H, and I*, EPA 503/8-90-005 (Washington, DC: EPA, Office of Water, September 1990); EPA, *Saving the Bays and Estuaries: A Primer*; and, EPA, *Guide for Preparation of Quality Assurance Project Plans for the National Estuarine Program*, Interim Final, EPA 556/2-88-001 (Washington, DC: EPA, Office of Marine and Estuarine Protection, June 1988).

¹⁵ 33 U.S.C.S. § 1330 (b).

¹⁶ The EPA defines seven key activities and products of a management conference: 1) Identification of priority problems based on public or other input; 2) An inventory of applicable federal programs that identifies potential conflicts with the CCMP; 3) An analysis of the scope and effectiveness of existing federal, state, and local resource management programs to evaluate gaps, target opportunities, and have the potential to be leveraged as part of the effort to develop and implement the CCMP; 4) A financing plan based on state and public input that considers the costs and benefits of pollution control options and identifies how the options will be financed; 5) Final reports on the estuary's status and trends, probable causes of environmental problems, and pollutant loadings; 6) A Draft CCMP that includes a federal consistency report and plans for its coordinated implementation and monitoring; and, 7) A final CCMP that identifies action plans for implementing the CCMP including a discussion of their likelihood for success, lead implementation agencies; funding required and the sources of this funding, and a schedule for implementation (TBEP, *Tampa Bay National Estuary Program Management Conference Agreement* (St. Petersburg, FL: TBEP, March 25, 1991), 4).

¹⁷ For more discussion of the NEP's public participation requirements and the effectiveness of these efforts see: Imperial, *Public Participation in the National Estuary Program*.

¹⁸ Imperial and Hennessey, "An Ecosystem-Based Approach." For more information on the use of these demonstration projects see: EPA, *A Summary of Implementation and Demonstration Projects in Bays and Estuaries* (Washington, DC: EPA, Office of Water, November 1992).

¹⁹ Imperial and Hennessey, "An Ecosystem-Based Approach"; and, EPA, *Saving the Bays and Estuaries*.

²⁰ For the EPA's guidance on monitoring implementation activities see: EPA, *Measuring Progress of Estuary Programs: A Manual*, EPA 842-B-94-008 (Washington, DC: EPA, Office of Water, November 1994); EPA, *Volunteer Estuary Monitoring: A Methods Manual*, EPA 842-B-93-004 (Washington, DC: EPA, Office of Water, December 1993); and, EPA, *Monitoring Guidance for the National Estuary Program*, EPA 842-B-92-004 (Washington, DC: EPA, Office of Water, September 1992).

²¹ The choice of strategies is left up to the estuary programs. Many states are attempting to leverage existing Clean Water Act (CWA) grants (e.g., §104(b)(3), 604(b), and §319(h)) or use state revolving funds to implement CCMP recommendations. Others have used new taxes to help finance water pollution control efforts. For example, a cigarette tax finances the implementation of the Puget Sound Water Quality Management Plan (Puget Sound's CCMP). Finally, estuary projects could design their CCMP such that it is implemented through existing programs. For more information see: Imperial and Hennessey, "An Ecosystem-Based Approach."

²² For EPA's guidance on financing and organizing implementation activities see: EPA, *Beyond SRF: A Workbook for Financing CCMP Implementation*, EPA 842-B-96-002 (Washington, DC: EPA, Office of Water, August 1996); EPA, *Case Studies: Organizational Structures Relevant to Implementation of Comprehensive Conservation and Management Plans*, EPA 842-B-95-003 (Washington, DC: EPA, Office of Water, July 1995); EPA, *Using Nonprofit Organizations to Advance Estuary Program Goals*, EPA 842-B-093-008 (Washington, DC: EPA, Office of Water, November 1993); and, EPA, *Financing Marine and Estuarine Programs: A Guide to*

Resources, EPA 503/8-88/001 (Washington, DC: EPA, Office of Marine and Estuarine Protection, September 1988).

²³ Qualitative research employs an intense investigative process that contrasts, compares, replicates, catalogues, and classifies objects and events to provide decisionmakers with the information necessary to improve program performance. For more information on approaches to qualitative analysis see: Norman K. Denzin, and Yvonna S. Lincoln (eds.), *Strategies for Qualitative Inquiry* (Thousand Oaks, CA: Sage Publications, 1998); Norman K. Denzin, and Yvonna S. Lincoln (eds.), *Collecting and Interpreting Qualitative Materials* (Thousand Oaks, CA: Sage Publications, 1998); Joseph A. Maxwell, *Qualitative Research Design: An Interactive Approach* (Thousand Oaks, CA: SAGE Publications, 1996); Sharon L. Caudle, "Using Qualitative Approaches," in Joseph S. Wholey, Harry P. Hatry, and Kathryn E. Newcomer (eds.) *Handbook of Practical Program Evaluation* (San Francisco, CA: Jossey-Bass Publishers, 1994); Matthew B. Miles and Michael A. Huberman, *Qualitative Data Analysis: An Expanded Sourcebook*. Second Edition (Thousand Oaks, CA: SAGE Publications, 1994); Mary Ann Scheirer, "Designing and Using Process Evaluation," in Joseph S. Wholey, Harry P. Hatry, and Kathryn E. Newcomer (eds.) *Handbook of Practical Program Evaluation* (San Francisco, CA: Jossey-Bass Publishers, 1994); Anselm Strauss and Juliet Corbin, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques* (Newbury Park, CA: SAGE Publications, 1990); and, Michael Quinn Patton, *Qualitative Evaluation and Research Methods*, Second Edition (Newbury Park, CA: SAGE Publications, 1990).

²⁴ Maxwell, *Qualitative Research Design*; Miles and Huberman, *Qualitative Data Analysis*; Scheirer, "Designing and Using Process Evaluation"; and, Patton, *Qualitative Evaluation and Research Methods*.

²⁵ Mark T. Imperial, "Analyzing Institutional Arrangements for Ecosystem-Based Management: The Institutional Analysis and Development Framework," *Environmental Management* 24 (1999): 449 – 465.

²⁶ For some discussion of the IAD framework and its application in environmental settings see: Elinor Ostrom, Roy Gardner, and James Walker, *Rules, Games, & Common-Pool Resources* (Ann Arbor, MI: The University of Michigan Press, 1994); Elinor Ostrom, Larry Schroeder, and Susan Wynne, *Institutional Incentives and Sustainable Development: Infrastructure Policies in Perspective* (Boulder, CO: Westview Press, 1993); Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (New York, NY: Cambridge University Press, 1990); Elinor Ostrom, "An Agenda for the Study of Institutions," *Public Choice* 48 (no. 1, 1986): 3 – 25; Imperial, "Analyzing Institutional Arrangements"; Mark T. Imperial, "Analyzing Institutional Arrangements for Ecosystem-Based Management: Lessons From the Rhode Island Salt Ponds SAM Plan," *Coastal Management* 27(no. 1, 1999): 31 – 56; Sue E. S. Crawford, and Elinor Ostrom, "A Grammar of Institutions," *American Political Science Review* 89 (no. 3, September 1995): 582 – 600; Timothy M. Hennessey, "Governance and Adaptive Management for Estuarine Ecosystems: The Case of Chesapeake Bay," *Coastal Management* 22 (1994): 119 – 145; Mark H. Sproule-Jones, *Governments At Work: Canadian Parliamentary Federalism and Its Public Policy Effects* (Toronto, Canada: University of Toronto Press, 1993); William Blomquist, *Dividing the Waters: Governing Groundwater in Southern California* (San Francisco, CA: ICS Press. 1992); and, Larry L. Kiser and Elinor Ostrom, "The Three Worlds of Action: A Metatheoretical Synthesis of Institutional Approaches," in Elinor Ostrom (ed.) *Strategies for Political Inquiry* (Beverly Hills, CA: Sage, 1982), 179 – 222.

²⁷ Triangulation involves using independent measures derived from different sources to support, or at least not contradict, a research finding. For more information see: Miles and Huberman, *Qualitative Data Analysis*; and, Robert K. Yin, *Case Study Research: Design and Methods*, Second Edition (Thousand Oaks, CA: SAGE Publications, 1994).

²⁸ Several RIDEM, former NBP, and EPA staff who commented on our report were critical of our efforts to protect the identity of our sources. However, this is a common practice when conducting qualitative research and was particularly important in this controversial case where staff were often critical of staff in their own agency. We have also protected the identity of those that commented on the draft report.

²⁹ See: Imperial, *Developing Integrated Coastal Resource Management Programs: Applying the NEP's Experience to Developing Nations*. The discussion of the NEP contained in this report and some of the data gathered on this project was the basis for a subsequent article on the NEP that has been well received by many EPA and estuary program staff. See: Imperial and Hennessey, "An Ecosystem-Based Approach."

³⁰ Miles and Huberman, *Qualitative Data Analysis*.

³¹ Ibid.

³² Triangulation is one of the recommended strategies when using quantitative research methods (Yin 1994; Rossi and Freeman 1993; Singleton, et al. 1993). Triangulation involves using independent measures derived from different sources to support, or at least not contradict, a research finding (Miles and Huberman 1994; Yin 1994; and, Singleton, et al. 1993).

³³ A detailed discussion of the procedures used to ensure the validity of our findings is beyond the scope of this report but it included: All data was collected using the procedures recommend in the literature (e.g., Maxwell 1996; Miles and Huberman 1994; Yin 1994; Patton 1990); All sampling decisions and interview procedures were documented as will techniques used in the data analysis; The investigators worked with the principal contacts at each site to identify appropriate interview respondents; A snowball sampling technique was used to ensure a diverse range of actors were interviewed; Follow-up phone interviews were conducted as necessary until a complete picture of the integrated watershed management program emerged; Detailed field notes will be prepared for each interview; All interviews will be recorded on audiotape to ensure that there is an accurate record; Strict confidentiality will be maintained both during and after the study; Detailed timelines were developed to examine potential cause and effect relationships; To ensure that the record of events was accurate, the principal contacts will be sent a draft of the findings for "factual" verification; and, The interview data and archival records were analyzed using systematic procedures recommended in the literature (e.g., Maxwell 1996; Miles and Huberman 1994; Yin 1994; Patton 1990).

³⁴ Yin, *Case Study Research*.

³⁵ Thomas D. Cook and Donald T. Campbell, *Quasi-Experimentation: Design and Analysis Issues for Field Settings*. (Boston, MA: Houghton Mifflin Company, 1979).

³⁶ Department of Environmental Management, Rhode Island (RIDEM), *Working Across the Watershed: 1998 Report. Narragansett Bay Estuary Program* (Providence, RI: RIDEM, Narragansett Bay Estuary Program, 1998).

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Narragansett Bay Estuary Program (NBEP), *1999 Biennial Review: Narragansett Bay Estuary Program* (Providence, RI: RIDEM, NBEP, May 1999).

⁴¹ RIDEM, *Working Across the Watershed*; and, NBEP, *1999 Biennial Review*.

⁴² Department of Environmental Management, Rhode Island (RIDEM), *Annual Report 1998: Creating New Solutions for a Greener Rhode Island* (Providence, RI: RIDEM, 1998).

⁴³ Ibid.

⁴⁴ Located 20 miles south of Providence on the western side of the Bay this deep-water port would require significant changes to the landscape and to the topography of the bay to accommodate deep draft vessels. Although

this development proposal has yet to be approved by the stakeholder group assembled by second term governor Lincoln Almond, dialog surrounding the development of the port continues, as does the interest of the NBEP in the potential impact of the port on the bay.

⁴⁵ <http://www.savebay.org/Mission.htm> (October 7, 1999).

⁴⁶ Save The Bay is also actively involved in working with similar organizations to lobby Congress.

⁴⁷ Rhode Island does not even have a county-level of government, other than for the purposes of its judicial system.

⁴⁸ Coastal Resources Center (CRC), *Rhode Island Watershed Approach Framework. Draft* (Narragansett, RI: Coastal Resources Center, Watershed Approach Writing Group, 1999).

⁴⁹ With assistance from the CRC, the CRMC developed the Rhode Island Coastal Resources Management Program (RICRMP) which received federal approval in 1978. The program has been substantially revised several times since its inception and the CRMC routinely makes minor revisions to its program.

⁵⁰ The CRMC is a very flat or “horizontally” structured agency whereas the RIDEM’s organizational structure is vertical in orientation. This observation was supported by interviews with RIDEM staff that complained about the agency’s organization and its cumbersome and centralized decision-making process.

⁵¹ An independent study of the DEM says changes are needed to strengthen the agency’s leadership structure, improve customer service and bolster environmental law enforcement. The \$800,000 study, commissioned by a panel of legislative and executive leaders, notes “the sense among some state officials” that the agency’s two main functions -- regulating polluters and protecting natural resources -- are “incompatible.” See: Rhode Island Government Transformation Partnership (RIGTP), *DEM Recommendations Report* (RIGTP, Undated).

⁵² At least two formal reports have been issued: Environmental Quality Study Commission, *Environmental Quality Study Commission Final Report* (Providence, RI: Environmental Quality Study Commission, 1990); RIGTP, *DEM Recommendations Report*.

⁵³ *Environmental Quality Study Commission*, 49 – 55.

⁵⁴ This is supported by the report’s findings pertaining to the NBEP’s problem’s related to its location within RIDEM’s hierarchy. Other evidence can be found in the recent \$800,000 report that proposed changes in RIDEM programs and its organizational structures. See: RIGTP, *DEM Recommendations Report*. The RIDEM has undergone frequent reorganizations and continues to suffer many of the same staffing and funding problems noted in the *Environmental Quality Study Commission*.

The EPA has also been critical of the RIDEM as exemplified in comments EPA Administrator Carol Browner made while campaigning for the Democratic candidate for Governor during the last election. The EPA warned the RIDEM to improve hazardous waste enforcement, which “narrowly escaped an EPA takeover” after Gov. Lincoln Almond (R) promised to add new staff and “beef up” enforcement. The proposal was unveiled at Governor Almond’s state of the state address where “Dozens of House and Senate members skipped the applause” for Almond’s initiative, because the RIDEM has undergone “years” of controversial directors, charges of mismanagement and “attempted raids on its power.” “History may also outweigh hope.” In the past, DEM reform efforts have “eroded under a steady rain of acrimony”. Other recent bills have been introduced that would make the RIDEM more accountable to the public and subject deputy directors to Senate confirmation as well as reorganize the agency. For the recent set of bills see: R.I.G.A. 99–H 5603; R.I.G.A. 99–H 6336; R.I.G.A. 99–H 6168; and, R.I.G.A. 99–H 5647. The most critical voice of the RIDEM in recent years was the Kennedy commission, which among other things investigated the agency’s freshwater wetlands program. These controversies have all been well documented in the *Providence Journal Bulletin* and other news sources and were frequently identified by our respondents.

⁵⁵ The RIDEM has had at least five commissioners over the last ten years. They are Robert Bendick, Louise Durfee, Timothy Keeney, Andrew Mcleod, and most recently Jan Reitsma. Michael Annarumo also served for some time as the Acting RIDEM director as well. This includes three commissioners in the last four years as the RIDEM has been under attack by the EPA and the RIGA

⁵⁶ We should note that the EPA region I staff who commented on this report did not agree with our observation stating that the RIDEM was not created to protect a consistency group but is there to implement federally delegated laws and is often opposed by organized interest groups. Clearly, the federal statutes are designed to protect and advance the interests of organized and established groups at the federal (e.g., Sierra Club) and state level (e.g., Save the Bay) who often are opposed by other organized groups. A clear example relevant to this case would be the controversial proposals concerning the reconciling of RIDEM's water quality classifications and the CRMC's water uses. The CRMC's water uses are designed to protect water dependent uses and organizations such as RIMTA often support the CRMC in these issues. At the same time, the impacts of recreational boating and the RIDEM's water quality classifications often cause the agency to oppose the expansion of these efforts and they are frequently joined by Save the Bay and the RISA. Thus, we disagree with EPA Region I's comments (see page 6 of EPA Region I's comments on our reports).

⁵⁷ One exception is that the CRMC's policies take precedence over those of the *State Guide Plan*. However, the CRMC is required to be consistent whenever practicable.

⁵⁸ Robadue, Donald D., Jr., *History of Water Quality Monitoring for Narragansett Bay* (Narragansett, RI: Coastal Resources Center, Undated).

⁵⁹ The NBP did have to prepare an application package with the information consistent with the requirements of a Governor's nomination.

⁶⁰ For more information on the history and development of the NEP see: Imperial and Hennessey, "An Ecosystem-Based Approach"; Imperial, et al. "The Evolution of Adaptive Management for Estuarine Ecosystems"; and, Imperial, et al. "An Evolutionary Perspective on the Development and Assessment".

⁶¹ EPA, *Monitoring Guidance for the National Estuary Program*; EPA, *National Estuary Program Guidance: Base Program Analysis*; EPA, *Comprehensive Conservation and Management Plans: Content and Approval Requirements*.

⁶² For example, the directors of the individual estuary programs did not meet as a group for the first time until 1990. At this meeting, the directors complained that more time was needed to complete their plans, the EPA needed to provide greater technical assistance in developing management strategies, and that greater training in facilitation and other meeting skills was needed for staff and committee chairs. See: "Estuary Directors Meet in Texas, Propose NEP Changes to Davies," *Coastlines* 1 (no 2, Oct. – Nov. 1990), 1, 9.

⁶³ Narragansett Bay Project (NBP), *Comprehensive Conservation and Management Plan for Narragansett Bay. Final Report*, State Guide Plan Element 715, Report Number 71 (Providence, RI: NBP and RIDOP, December 1992), 1.1.

⁶⁴ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 1.4.

⁶⁵ For information on the Puget Sound Estuary Program see: Healey and Hennessey, "The Utilization of Scientific Information". For information on the Buzzards Bay Project see: Colt, "The First Step". For information on the San Francisco Estuary Program see: Touhy, "Characterizing the San Francisco Estuary";

⁶⁶ For more information on APES see: Katrina Smith Korfmacher, "Invisible Successes, Visible Failures".

⁶⁷ For the role of science in the CBP see: Hennessey, “Governance and Adaptive Management for Estuarine Ecosystems”.

⁶⁸ These examples were the ones identified in the NBEP’s comments on the draft report (page 4).

⁶⁹ The title was actually project manager but for sake of consistency with the other cases we use the term director.

⁷⁰ The NBEP’s comments on the draft case study provide additional confirmation for these observations (page 5).

⁷¹ The following observations resulted from our analysis of the interview data as well as additional observations that were contained in the NBEP’s comments on the draft case study (page 7).

⁷² A consistent finding of research on social and interorganizational networks is that geographic proximity often increases the likelihood for interactions. It appears that in this case the co-location had the desired affect. However, it may also explain an additional source of some of the conflict with the CRMC because the agency was located in the southern region of the state and there was less of a day to day interaction with NBP staff.

⁷³ *Governing* 12 (no. 5, February 1999): Special Issue: Grading the States.

⁷⁴ There were also examples of where the EPA exerted control over the staff based on its control over the program’s funding.

⁷⁵ The EPA’s guidance and subsequent grant regulations required workplans to be reviewed and approved by the Management Conference as a whole. This was to ensure that no one entity including the EPA could dominate project funding and priority setting.

⁷⁶ In the Delaware Inland Bays, the staff worked directly for the state water quality agency which allowed it greater control over the direction of the program and the day to day activities of staff. In Tampa Bay and Tillamook Bay the staff worked for the Executive Committee and one of the major stakeholders served as a hiring agent. Staff accountability problems also developed in Tillamook Bay.

⁷⁷ See the respective technical reports. It should also be noted that Tillamook Bay also experienced some problems because of the lack of day-to-day supervision of the staff as the hiring agent (i.e., Oregon State University) was located some distance from the watershed. As a result, many personnel management issues ended up causing important problems that prolonged the CCMP’s development.

⁷⁸ The chair of the Management Committee at the time was the NBP director.

⁷⁹ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 1.3.

⁸⁰ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 1.3; and, Imperial and Hennessey, “An Ecosystem-Based Approach”, 125.

⁸¹ More than 100 individuals attended Management Committee meetings at different points in time. See: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 1.3.

⁸² These included the CRMC, RIDOP, Department of Health, Department of Transportation, Department of Economic Development, and Narragansett Bay Commission as well representatives from the governor’s office.

⁸³ This is the breakdown of the committee’s membership described in the final CCMP. See: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, xxxvii – xxxviii.

⁸⁴ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*.

⁸⁵ The EPA region I comments on the draft report clarified that the Management Committee was always intended to serve as the driving force for the CCMP's development. That may be true. However, in the other three estuary programs we examined, the management committee made recommendations to the Executive Committee that made the actual decisions. In Narragansett Bay, the Management Committee made decisions that were then viewed as binding on Executive Committee members. Our analysis led us to conclude that the better managed collaborative decision-making processes were the ones where control rested with an Executive Committee that was actively involved in the process and where there was a clear delineation of the roles of the different committees. This did not occur in this case as is discussed in the analysis section.

⁸⁶ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 2.1 – 2.39.

⁸⁷ RIDEM's comments on the draft case study (page 3).

⁸⁸ See the list of NBP research projects contained in the CCMP for an example of the wide range of research. NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay, Appendices*, State Guide Plan Element 715, Report Number 71 (Providence, RI: NBP and RIDOP, December 1992), Appendix C.

⁸⁹ The general lack of stakeholder involvement from Massachusetts and local governments are two examples where this occurred.

⁹⁰ Issues like CSOs were added as high-priority actions at the insistence of EPA and Save the Bay. See Appendix A and D for examples of the disparate set of issues.

⁹¹ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*.

⁹² This conclusion is simply based on the laws of probability. The greater the number of proposals the higher the probability that at least one of these proposals might generate conflict.

⁹³ Since a wide range of agencies were subject to the CCMP's recommendations, performance monitoring (i.e., monitoring implementation activities) costs increased.

⁹⁴ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 1.4.

⁹⁵ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 2.1 – 2.39.

⁹⁶ The former NBP staff and EPA officials commenting on this report defended their actions by stating that other Tier I programs did not produce a Status and Trends Report and their "State of the Bay" CCMP chapter was more detailed than other Tier I programs. It is true that some Tier I programs did not produce a Status and Trends report but other did. For example, the APES released its status and trends report in Jan 1991 and had review drafts available earlier. See: "Albermarle/Pamlico Study Presents Status and Trends report to Public," *Coastlines* 1 (no. 4, Feb. – Mar. 1991), 4 – 6, 11. By the Tier II programs, the value of these reports had been well established and programs such as Delaware Inland Bays were unable to use strategies such as the one employed by the NBP to satisfy their characterization requirements. Thus, we find the EPA and NBP staff's defense of this weakness to be unjustified. The NBP staff and EPA also neglected to acknowledge in their comments that the draft CCMP did not contain the aforementioned CCMP chapter and this was a source of concern for several stakeholders.

⁹⁷ Our criticisms have nothing to do with whether or not these reports satisfied the EPA's characterization requirements. We are merely pointing out that no such report was produced and the data we collected from this and other programs suggests that these reports can be useful. The fact that the EPA now requires these reports appears to support our finding.

⁹⁸ There are a number of reasons why this is likely to be the case. One is lower printing and distribution costs in the pre-internet days. With the internet, it would be possible to distribute a large number of technical reports more effectively. However, we are unaware of any current or planned efforts by the NBEP to put the information in a form that is accessible over the internet. The NBEP's web site is also poorly developed when compared to the other estuary programs we analyzed. The centralization of this information also helps to clarify the tradeoffs and interrelationships among environmental problems.

⁹⁹ We want to clarify that that none of the findings in this report should be interpreted as concluding that the briefing paper approach will always be ineffective. Rather, the briefing paper approach might be a useful way to develop a watershed management plan. However, in this case the approach did not work effectively.

¹⁰⁰ For example, the CRMC and Save The Bay both expressed this concern and insisted on the "State of the Bay" chapter being added to the CCMP since time and resource constraints made it impossible to develop such a report at this late stage in the planning process.

¹⁰¹ It should be noted that former NBP staff who commented on the report denied that the information was presented in a form that was difficult to understand for those with differing technical background. We do not find this denial surprising because the same individuals were the authors of many of these briefing paper. Other respondents, however, noted that the briefing papers were often highly technical and focused on the specific details of various regulatory programs that few Management Committee members were aware of.

¹⁰² Myers, Jennie. C., "Working With Local Governments to Enhance the Effectiveness of a Baywide Critical Area Program," *Seminar Publication: Nonpoint Source Workshop*. EPA/625/4-91/027 (Washington, DC: EPA. September 1991), 175 – 185.

¹⁰³ Ibid.

¹⁰⁴ Ibid.

¹⁰⁵ Information provided by the NBEP in its comments on the draft case study (Page 1).

¹⁰⁶ NBEP comments on the draft report (Page 2).

¹⁰⁷ While the NBEP kept minutes of the meetings, at times they were not detailed enough to be useful in this regard.

¹⁰⁸ For a discussion of the groupthink phenomena see: Janis, Irving L., *Victims of Groupthink: A Psychological Study of Foreign-Policy Decisions and Fiascoes* (Boston, MA: Houghton Mifflin, 1972).

¹⁰⁹ One way the pressure for conformity is increased is when deadlines and a sense of urgency like that found during the CCMP's development occurs. The suppression of dissenting views is often referred to in the literature as "censoring". Censoring can occur by criticizing those that offer dissenting views and by ignoring these views. It does not necessarily mean that these views are prevented from being heard. Rather, the social dynamic encourages those with dissenting views to remain quiet so that the group can reach conformity.

¹¹⁰ Our interview data and NBEP's comments on the draft report indicate that this did occur.

¹¹¹ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay, Appendices*, Appendix E. Note: the final version of the plan incorporated as a State Guide Plan element does not contain the actual text of the comments on the CCMP. You need to consult the September 1992 version for the text of the comments.

¹¹² Tampa Bay and Tillamook Bay are examples of this model while Delaware Inland Bays used a combination of the two models.

¹¹³ Our interview data and the comments on the CCMP that focus on the detailed nature of the draft CCMP's recommendations support this conclusion. See: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay, Appendices*, Appendix E. See note 111.

¹¹⁴ Our interview data and review of the comments on the draft CCMP supports this observation. See: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay, Appendices*, Appendix E. See note 111.

¹¹⁵ A former NBP staff member commenting on the report noted that planning efforts often focus on "hot" topics or controversial issues and that when a wide range of stakeholders are involved there is bound to be conflict. This is certainly true of many planning efforts that use a traditional advisory committee structure where the staff focuses on developing a plan for their agency. The problem is that this is a collaborative planning model where the group is not stakeholders but are more correctly described as decisionmakers, which was the case in the NBP. Our analysis of the other watershed management efforts suggests that these efforts tend to focus on areas of agreement rather than disagreement and the staff remain neutral. This comment further supports our finding that the NBP's mixing of a traditional advisory committee model with a collaborative model caused problems in how the decision-making process was managed. See NBEP comments on the draft report (page 2).

¹¹⁶ A review of the comments submitted on the draft CCMP supports this conclusion. See: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay, Appendices*, Appendix E. See note 111.

¹¹⁷ See the city of Warwick's comments on the draft CCMP as an example. NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay, Appendices*, Appendix E. See note 111.

¹¹⁸ A related problem with the decision to include the CCMP as an element of the *State Guide Plan* at this late stage in the process was that it was not designed to be an element of the plan. Its format differed and the CCMP lacked the clearly defined policies found in the other elements. Thus, it was never clear what elements of the CCMP would actually constitute state "policy". Unfortunately, because the planning effort was behind schedule and there was so much conflict surrounding the CCMP, no attempt was made to develop the policies or to change the CCMP's format. As a result, even though the CCMP ultimately became an element of the *State Guide Plan*, its usefulness has been limited because it was not designed to be an element.

¹¹⁹ While the NBP could perhaps have learned from the efforts to develop SAM plans for the Salt Ponds, Narrow River, and Providence Harbor, the EPA was encouraging a different approach with a different end product. Moreover, no attempt was made to learn from these efforts which was a source of criticism for some respondents.

¹²⁰ The NBEP staff reported that they have frequently "provided coaching on these experiences to many of the newer NEPs". See NBEP comments on the draft report (page 8)

¹²¹ In fact, many of these technical assistance efforts were developed in direct response to the problems experienced by the NBP and other Tier I programs (e.g., APES).

¹²² The final draft underwent a public comment period from January through March of 1992 during which time the NBEP staff held several public meetings throughout the watershed on the CCMP.

¹²³ For the comments on the draft CCMP see: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay, Appendices*, Appendix E. See note 111.

¹²⁴ The level of conflict exhibited by the comments on the draft CCMP exceeds that of any of our cases including the Delaware Inland Bays where critical comments primarily involved the Sierra Club, EPA, and the Poultry industry with many others being supportive in nature. What is striking about the comments on the NBP's

CCMP is that a wide range of groups commented on a broad range of issues and in some cases groups that you might think would be opposed to one another like Save The Bay and the CRMC were both critical of the same thing (e.g., lack of a State of the Bay chapter). We believe that the breadth and scope of these comments confirms the information provided by our respondents that many organizations were dissatisfied with the draft CCMP and the planning process did not result in a consensus document, although there was more agreement on the content of the final CCMP as noted later in this report. Conversely, the comments on the draft Tampa Bay and Tillamook Bay CCMPs was different in tone. While there were certainly criticisms and changes requested by a wide range of agencies, there was virtually no substantive disagreement on core issues with the vast majority of issues addressed by clarifications and wording changes such as changing “shall” to “should”. The only case involving greater conflict was the watershed management efforts in Lake Tahoe that resulted in lawsuits and a court injunction that prohibited the Tahoe Regional Planning Agency from implementing its plan.

¹²⁵ For example, the EPA used its approval of the final CCMP, the RIDOP used its SPC approval process, and the CRMC used its federal consistency authority to force the changes they wanted in the draft CCMP.

¹²⁶ This group would include the City of Warwick, Save the Bay, RIMTA, and RIBA which used their access to the political process and decisionmakers to force the changes they wanted in the final CCMP.

¹²⁷ For example, the original draft had no substantive discussion of the Bay’s problems at the beginning of the plan and only a brief discussion of each problem at the beginning of each chapter. These changes were only made after several Management Committee members (e.g., Save the Bay and the CRMC) insisted on the changes.

¹²⁸ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 5-95.

¹²⁹ Ibid.

¹³⁰ The rationale appears to be that the EPA Administrator cannot sign a policy document that in effect is critical of agency policies or programs. We heard respondents in the other programs recount similar stories although often the EPA informed them of this earlier in the planning process.

¹³¹ The state was already required to spend \$392 million on CSO abatement whether or not there was a CCMP. The CCMP’s recommendations had to do with how to prioritize the CSOs for attention, not whether or not the projects should take place. The state is currently in the design phase of a CSO program that is now estimated to cost \$380 million.

It is interesting to note that the NBP staff reported to us that they were opposed to making CSOs a high priority issue because they felt the science did not justify this conclusion and there was too much uncertainty with respect to the benefits of these investments. However, the EPA forced the NBP to make it a priority issue in the CCMP and Save the Bay refused to support a CCMP that did not have CSO abatement as a priority issue.

¹³² “Narragansett Bay Project Prepares for Sprint to CCMP Finish Line,” *Coastlines* 2 (no. 1, Oct. – Nov. 1991), 9.

¹³³ Ibid.

¹³⁴ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*.

¹³⁵ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 3.1

¹³⁶ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, xliii – xlv.

¹³⁷ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*.

¹³⁸ The CCMP refers to this program as the Narragansett Bay Planning Section. NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 5.6 – 5.7.

¹³⁹ RIDEM, *Working Across the Watershed*.

¹⁴⁰ Narragansett Bay Estuary Program (NBEP), *Narragansett Bay Estuary Program 1997 Biennial Review* (Providence, RI: NBEP, 1997), 3.

¹⁴¹ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 5.6.

¹⁴² NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 5.6 – 5.7.

¹⁴³ See EPA, Coastal Management Branch comments on the draft final report (page 1).

¹⁴⁴ While the NBEP staff who commented on this report denied this occurred, our interview data actually suggested that this was a common observation among our respondents.

¹⁴⁵ “Narragansett Bay Project Prepares for Sprint to CCMP Finish Line,” *Coastlines* 2 (no. 1, Oct. – Nov. 1991), 9.

¹⁴⁶ The best example of this are the white papers developed for the Narragansett Bay Summit 2000. The CCMP and briefing papers do not address these issues in great detail. The increased prominence of NPS and habitat protection issues, while addressed in the CCMP, is also dated in the NBP’s reports and CCMP.

¹⁴⁷ For example, in the Salt Ponds and Lake Tahoe, local and state officials reported that the technical information contained in the plan and supporting reports were useful in guiding agency decision-making. The same was true in Tampa Bay and Tillamook where many officials reported that the CCMP’s detailed goals and recommendations guided their decision-making. Moreover, in Tampa Bay and Tillamook Bay state and local officials reported that other documents such as the status and trends report or technical reports (e.g., habitat restoration plan in Tampa Bay and Tillamook Performance Partnership document) guided their decision-making. The only case where respondents reported that the management plan was not a useful document was the Delaware Inland Bays with more of a mixed response. In Delaware Inland Bays, there was also more evidence that the officials were still relatively faithful to the CCMP’s priority recommendations and were still acting to achieve them.

¹⁴⁸ One of the former NBP staff who commented on the report noted that they could also be termed “broad and long-term” goals. Regardless, our analysis of the six watershed management programs suggests that specific and measurable goals are more useful than broad and long-term goals because almost any action any agency takes advances the NBP’s broad goals. Thus, the adoption of the goals does not require any actor to change their decision-making processes in any appreciable ways.

¹⁴⁹ See Note 118 for a discussion of other problems created by the structure of the CCMP.

¹⁵⁰ Delaware Inland Bay’s CCMP also has problems which is one of the reasons the EPA almost did not approve the plan. It lacks true goals but has several specific high priority tasks that are recommended and then several supporting action plans. However, the CCMP avoids the type of very specific and detailed recommendations found in the Narragansett Bay CCMP and we believe this increased the useful life of the CCMP.

¹⁵¹ Often this occurred before the CCMP was even completed or soon after it was completed indicating that the recommendations tend to have a much shorter shelf life than detailed goals.

¹⁵² The best example of this may be in the area of habitat protection and restoration where actors have largely pursued separate agendas until recently. In fact, at one point the CRMC and NBEP were supporting competing versions of a habitat restoration bill before the RIGA.

¹⁵³ There were several reasons this occurred: 1) at this point in time, it was EPA policy that Section 320 funds should not be used to implement the CCMP and this changed with a change in administrations; 2) it allowed the conflict to subside so that implementation could get off on a new start; 3) there was some inevitable period of transition as the hiring agents changed.

¹⁵⁴ "Update on the National Estuary Program," *Coastlines* 3 (no. 1, Feb. – Mar. 1993), 7.

¹⁵⁵ NBEP, *1999 Biennial Review*, 3-1.

¹⁵⁶ *Ibid.*

¹⁵⁷ NBEP, *1999 Biennial Review*, i.

¹⁵⁸ NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*, 7

¹⁵⁹ NBEP, *1999 Biennial Review*, 3-1.

¹⁶⁰ NBEP, *1999 Biennial Review*, 3-1 – 3-5.

¹⁶¹ RIDEM, *1999 Biennial Review*.

¹⁶² NBEP, *1999 Biennial Review*, 1-1.

¹⁶³ NBEP, *1999 Biennial Review*, 1-7 – 1-14.

¹⁶⁴ For a discussion of the changes in environmental conditions see: Rhode Island Department of Environmental Management (RIDEM), *Narragansett Bay Water Quality: Status and Trends* (Providence, RI: RIDEM, July 1998).

¹⁶⁵ In addition to these examples, additional information on CCMP implementation efforts can be found in: NBEP, *1999 Biennial Review*; NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*; RIDEM, *Working Across the Watershed*; Narragansett Bay Estuary Program (NBEP), *1995 Biennial Report* (Providence, RI: NBEP, 1995).

¹⁶⁶ NBEP, *1999 Biennial Review*.

¹⁶⁷ NBEP, *1999 Biennial Review*, 6-3.

¹⁶⁸ The CRMC submitted a workplan to its parent federal agency, NOAA, which includes a habitat restoration program, including mapping and statewide restoration planning efforts, a mirror image of NBEP habitat restoration efforts over the past three years. In response to the CRMC workplan, NBEP staff communicated with CRMC regarding potential for collaboration and the benefit of avoiding duplication of effort. Although this matter is still unresolved, with the active support of the new director of RIDEM, Jan Reitsma, efforts by the NBEP to move its host agency toward a collaborative relationship with CRMC may finally succeed through their shared interest in coastal habitat restoration. The new director, has indicated that he is hopeful that habitat restoration may in fact provide the collaborative venue that will provide a step toward overcoming the long-standing antagonism between CRMC and DEM.

¹⁶⁹ However, as noted earlier this activity was required whether or not there was a CCMP and was only included in the CCMP at the insistence of the EPA and Save The Bay. See note 131.

¹⁷⁰ Fields Point is one of the first sewage treatment plants in the country. It is one of the regional treatment facilities managed by the NBC. It serves Providence and other urbanized areas in the upper bay. It is also a significant source of the CSO problems in the upper bay.

¹⁷¹ RIDEM, *1999 Biennial Review*.

¹⁷² It is important to note that many of the areas opened to shellfishing were due to how the FDA regulations were applied instead of having to do with actual improvements in water quality.

¹⁷³ While the NBEP staff did assist and participate in the effort, it was largely led by the City of Warwick and its Mayor Lincoln Chaffee who filled the Senate seat held by his late father, Senator John Chaffee, and is now running for this seat. Senator John Chaffee was instrumental in creating the NEP and is largely responsible for the creation of the NBP and its designation as an Estuary of National Significance. Because of these connections, the EPA made the effort a priority issue, which helped the City obtain additional grant funds.

¹⁷⁴ It should be noted that the NBEP staff, along with Mayor Chaffee, were pushing high tech ISDS as the answer despite the obvious limitations of the soils and lot sizes. It was a City Council member and state representative that largely led the fight that secured the bond issue \$130 million bond issue while others such as Mayor Chaffee supported a smaller \$3 million bond issue.

¹⁷⁵ For information on these activities see: City of Warwick Planning Department, *Greenwich Bay Progress Report* (Warwick, RI: City of Warwick Planning Department, July 1996), 1 – 4; and, http://seagrant.gso.uri.edu/G_Bay/index.html (October 11, 1999).

¹⁷⁶ NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*, 13.

¹⁷⁷ The NBEP director was responsible for developing the grant proposal that secured \$100,000 to develop this framework.

¹⁷⁸ CRC, *Rhode Island Watershed Approach Framework. Draft*.

¹⁷⁹ The RIDEM hired the CRC as a contractor to facilitate the work of the Watershed Approach Writing Group, a small multi-entity task force charged with creating a draft framework for a statewide watershed approach and ended up playing a leadership role in this process. Since the draft framework document was completed, the CRC has been less involved in the evolution of this approach.

¹⁸⁰ This is an excellent example of a NBEP “implementation” activity that is only loosely related at best to CCMP recommendations.

¹⁸¹ NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*, 18.

¹⁸² RIDEM, *Working Across the Watershed*.

¹⁸³ Conservation Law Foundation, *Analysis of the Submission by Quonset Point Partners, LCC to the Rhode Island Economic Development Corporation* (Conservation Law Foundation, 1999).

¹⁸⁴ *Ibid.*

¹⁸⁵ A comparison of these issues to those contained in the CCMP is strong evidence of how outdated the CCMP is and how the priorities of federal, state, and local decisionmakers have changed since the CCMP was adopted.

¹⁸⁶ The white papers and other information about the Narragansett Bay Summit 2000 can be downloaded from the internet. See: ([see: http://seagrant.gso.uri.edu/riseagrant/news/news.html#Summit](http://seagrant.gso.uri.edu/riseagrant/news/news.html#Summit) (May 31, 2000)).

¹⁸⁷ NBEP, *1999 Biennial Review*, 6-2 – 6-3.

¹⁸⁸ Several respondents noted that the CRMC has tried to maintain a low profile when the RIDEM is being attacked by the RIGA in order to avoid coming under similar attack. Thus, the agency often tries to maintain a certain distance and degree of independence that is both the product of distrust as well as an effort to help insulate the agency from political attacks by opponents of RIDEM. See also: NBEP, *1999 Biennial Review*, 6-3.

¹⁸⁹ This conclusion is based both on our interviews with respondents in different agencies including the RIDEM and our examination of the RIDEM's organizational structure on the comments of RIDEM on the organization's decision-making process. For a description of the RIDEM's organizational structure see: <http://www.state.ri.us/dem/org/orgchart.htm> (May 31, 2000).

¹⁹⁰ NBEP, *1999 Biennial Review*, 1-1 – 1-2.

¹⁹¹ See NBEP comments on the draft report (page 10).

¹⁹² The EPA and NBEP staff disputed this finding. They claimed that the NBEP staff use the CCMP. However, this was never intended to be the main client for the plan. It was intended to be the staff in the other agencies we interviewed that did not report using the plan. The NBEP staff also claimed that it was an important source of technical information. Respondents in other agencies did not make similar claims. Moreover, evidence of the fact that the information is now dated and the major issues in the Bay have changed can be seen in the briefing papers that were prepared for the Narragansett Bay Summit 2000 (see: <http://seagrant.gso.uri.edu/riseagrant/news/news.html#Summit>, May 31, 2000).

¹⁹³ NBEP, *1999 Biennial Review*; NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*; RIDEM, *Working Across the Watershed*; NBEP, *1995 Biennial Report*.

¹⁹⁴ As an example, see the letters of commitment in the final CCMP. The majority of activities that the organizations committed to were only loosely related to the CCMP's recommendations and often they were activities that were also designed to satisfy other agency priorities and satisfy other federal and state requirements. See: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*.

¹⁹⁵ For many recommendations there likely has been some activity that is related to the recommendations but it is questionable whether these activities are properly attributed to implementing the CCMP or were really done to satisfy other priorities. New federal and state initiatives, changes in agency priorities, lack of regular implementation monitoring, and the failure to develop a collaborative organization to oversee CCMP implementation (i.e., the NBEP relies on an advisory committee) make it difficult to disaggregate these activities. It also makes it difficult to determine with any degree of certainty whether the CCMP is actually being "implemented" by agencies or programs other than the NBEP.

¹⁹⁶ Peter B. Lord, "Experts: Develop Plan for RI Waterway" *Providence Journal Bulletin*, April 25, 2000.

¹⁹⁷ The NBEP's comments on the draft report support the conclusion that RIDEM's priorities and the priorities of other federal and state grant programs largely drive implementation efforts rather than the specific recommendations in the CCMP. See: NBEP's comments on the draft report (page 10) as an example.

¹⁹⁸ The development of the statewide watershed framework is an excellent example as it is not a CCMP recommendation. Every state we examined was involved in a similar effort pursuant to the President's CWAP. Thus, if NBEP staff did not get the grant to perform the work some other group in RIDEM could have applied for the grant. The NBEP also pick and choose what they call implementation activity. When commenting on our discussion of CCMP costs in the draft report, the NBEP staff were quick to point out that these activities were required anyway in an effort to portray CCMP implementation as costing only \$30 million instead of \$392 million.

In Appendix B they claim credit for these same activities as an implementation activity. This is part of the rationale for our concerns about the program's accountability that are discussed in subsequent sections of the report.

¹⁹⁹ See NBEP's comments on the draft report (page 10).

²⁰⁰ This was confirmed by both numerous respondents and the NBEP's own reports. See: NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*, 3; and, NBEP, *1999 Biennial Review*, 4-3.

²⁰¹ The NBEP's 1997 and 1999 Biennial reports to EPA both note that there are problems with the Implementation Committee and that there was greater need for stakeholder involvement. Thus, the coordination function appears limited primarily to projects and activities within the RIDEM. Both reviews also acknowledge that there is little information on the status of the CCMP's implementation. This also indicates that the NBEP staff have only a limited coordination function and perform limited performance monitoring. See: NBEP, *1999 Biennial Review*; and, NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*.

²⁰² This was reported by many respondents, the NBEP's comments, and documents that report on activities to improve stakeholder involvement support this observation as well. For example, the NBEP, *1999 Biennial Review*, 4-3 notes that they want to change the management structure with a more active "stakeholders" approach. See also: NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*, 3.

²⁰³ This bill was opposed by the CRMC which introduced competing legislation.

²⁰⁴ Leveraging funding is a strategy frequently used to implement CCMPs and is one the EPA advocates. See: "The Money Game: Leveraging Funds an Asset of NEPs," *Coastlines* 4 (no. 1, Feb. – Mar. 1994), 6. See also: EPA, *Financing Marine and Estuarine Programs*.

²⁰⁵ See NBEP comments on the draft report (page 10).

²⁰⁶ The NBEP staff commenting on this finding pointed out that the collection of projects was more than a series of random actions in that they were linked together to accomplish the goals of the annual workplan or the CCMP. See NBEP comments on the draft report (page 12). We find this to be a poor basis for a government program.

²⁰⁷ The Bay Committee consists of the RIDEM's Director, Associate Directors, and other high-level managers within the agency. Its purpose is to better facilitate the communication and status of bay related activities and to find opportunities for joint project development and planning as well as opportunities for the NBEP staff to participate in policy development within the agency. The effort was too new to make any judgements about its effectiveness. See: NBEP, *1999 Biennial Review*, 1-1 – 1-2.

²⁰⁸ Peter B. Lord, "A Blueprint to Polish State's Economic, Recreational Jewel." *Providence Journal Bulletin*, April 26, 2000.

²⁰⁹ Peter B. Lord, "A Blueprint to Polish State's Economic, Recreational Jewel." *Providence Journal Bulletin*, April 26, 2000.

²¹⁰ Verified based on the comparison of interviews at the beginning of the process and the comments on the draft report.

²¹¹ If the stakeholders truly viewed the development of a revised CCMP as a priority they would be willing to create and participate in a stand alone collaborative committee. The existing collaborative processes that have been proposed have also expressed some reluctance to serve this purpose and there is reason to question whether their membership would be adequate to serve these purposes.

²¹² The Narragansett Bay Summit enlarges the scope of potential interests further by focusing explicitly on economic as well as environmental interests (See: <http://seagrant.gso.uri.edu/riseagrant/news/news.html#Summit>, May 31, 2000). However, this may also create new opportunities for collaboration that may be able to garner broad-based political support.

²¹³ This would include identifying issues, establishing a committee structure, and developing the rules that would guide the decision-making process and determine the legal status of the plan. These activities could easily be accomplished given current funding levels and would also help increase the likelihood that Congress, EPA, or the RIGA might then fund the planning effort. These activities can be time-consuming and are best undertaken before the committees start meeting formally. For example, Tampa Bay and Tillamook Bay spent nearly a year conducting the background work that was necessary to begin the Management Conference process in earnest.

²¹⁴ For example, the NBEP's mission statement and basic principals heavily emphasize collaboration, partnerships, and stakeholder involvement rather than emphasizing addressing a specific set of problems. See: NBEP, *Narragansett Bay Estuary Program 1997 Biennial Review*, 7.

²¹⁵ The *Providence Journal*, the state's major newspaper, even uses regional sections oriented around different regions of the Bay.

²¹⁶ The NBEP staff reported in their comments on the draft report that they are actively seeking increased involvement of MA officials by trying to solicit their involvement in the upcoming Narragansett Bay Summit 2000 and becoming more involved in other interstate initiatives such as those in the Blackstone and Ten Mile River watersheds. See: NBEP comments (page 10).

²¹⁷ See the NBEP's comments (page 10) that acknowledge that the lack of local involvement was an issue in both the NBP and NBEP.

²¹⁸ See: NBEP's comments (page 10).

²¹⁹ For the NBEP site see: <http://home.earthlink.net/~narrabay/nbep.html> (May 31, 2000). For the RIDEM site see: <http://www.state.ri.us/dem/> (May 31, 2000). More evidence of the lack of visibility of the NBEP due to its location within the RIDEM hierarchy has can be found in the RIDEM's WWW site that has no direct links to the program from its main page and no links from the organizational chart/programs pages.

²²⁰ Evidence of the STC's lack of effectiveness is the fact that the committee was disbanded. Conversely, other estuary programs like the one in the Delaware Inland Bays and Tampa Bay developed very effective STCs.

²²¹ However, there were some problems with the GIS coverages that illustrate the different needs of researchers, technical staff, and decisionmakers. For example, when new GIS habitat coverages were developed, the NBP decided to produce the coverages at a scale of 1:24,000, which was cheaper than developing the coverages at a smaller scale and it served the NBP's needs. However, information at this scale is of less use to regulatory agencies that need information at a smaller scale (i.e., 1:200 or 1:1,000). In this instance, the NBP staff were bewildered when the CRMC was not interested in having access to its GIS coverages even when the NBP was willing to pay for the computer software and hardware.²²¹ The CRMC was not interested in this statewide information because their jurisdiction is limited to a narrow strip of land adjacent to the shoreline where they need highly detailed information to support regulatory decisions. The 1:24,000 maps were much less useful than aerial photos and other sources of information.

²²² While the NBEP staff consistently noted in their comments that CCMP has a "State of the Bay" chapter, this is too limited in scope and detail to serve the purposes ascribed above. The fact that there was a need to develop white papers for the Bay Summit illustrates both the CCMP's inability to serve this purpose as well as the importance this detailed technical information can have when it is in a form that is accessible to decisionmakers.

²²³ Based on the estimates contained in the CCMP and the recollections of former NBP staff.

²²⁴ The former NBP staff we interviewed noted several instances where the EPA compelled them to take certain actions.

²²⁵ The EPA staff we interviewed frequently used the term “dysfunctional” to describe the NBP and referred to it as such in their comments on the draft report (EPA, Coastal Management Branch Comments, page 1).

²²⁶ This is not to say that collaborative activities do not occur as many are noted throughout the report. Rather, we suggest that a greater range of these activities might occur if these problems did not exist.

²²⁷ While the NBEP comments on the draft report often dispute that conflicts between the CRMC and RIDEM serve as a barrier to greater collaboration, this is contradicted by the statements of numerous other respondents including RIDEM and CRMC officials. It is also contradicted by the NBEP’s own statements in its *1999 Biennial Review*: “The very structure of Rhode Island’s coastal decision-making mechanism creates difficulties, as well. Overlapping authority of legislative and executive branch agencies in the State’s coastal zone leads to interagency conflict, turf battles, and duplication of effort.” (NBEP, *1999 Biennial Review*, 6 – 3).

²²⁸ Several respondents noted that the CRMC has been wary of getting tied too closely to RIDEM and its programs such as the NBEP to avoid being the subject of attacks by the RIGA.

²²⁹ See EPA Region I comments on the draft report (page 11), which also support this conclusion.

²³⁰ *Governing. Grading the States: A 50-state Report Card on Government Performance* (February 1999).

²³¹ This problem is so bad that some agencies like RIDOT have hired a staff member to work directly for them in the Rhode Island Department of Administration to process their contracts.

²³² However, the consequence of this is also that the staff are no longer controlled by the RIGA and other state administrators and are not subject to other requirements negotiated by the state’s labor unions.

²³³ If the RIDEM had the capacity for grants management it would not have to suffer the loss in funding due to university overhead rates.

²³⁴ Rosemary O’Leary has termed this situation the “bureaucratic politics” paradox. For more discussion see: Rosemary O’Leary, “The Bureaucratic Politics Paradox: The Case Of Wetlands Legislation in Nevada,” *Journal of Public Administration Research and Theory* 4 (no. 4, 1994): 443 – 467.

²³⁵ RIDEM, *1999 Biennial Review*.

²³⁶ The NBEP staff continually noted in their comments on the draft report that the “collection of projects” was more than a series of random actions in that they were designed to achieve the CCMP’s goals as well as those in the workplan. However, as noted elsewhere in the report, these goals are vague and nearly any activity can be said to achieve the CCMP’s goals. Moreover, implementation actions should not be designed to achieve the workplan’s goals. Rather, the workplan should be designed to implement the CCMP. See NBEP staffs comments on the draft report (page 12 – 13).

²³⁷ In past years the CRMC and RIDEM supported competing versions of the legislation that would create a habitat restoration program.

²³⁸ This was reported by respondents in the CRMC as well as by other actors familiar with the CRMC’s operations.

²³⁹ See NBEP staff comments on the draft report (page 13).

²⁴⁰ Imperial, “Analyzing Institutional Arrangements for Ecosystem-Based Management”; and, Imperial, “Analyzing Institutional Arrangements”.

²⁴¹ The NBEP staff suggested that the programs biggest accomplishments were creating a culture of collaboration and cooperation in addressing environmental problems, bringing the positive lessons of the NEP to the statewide watershed approach, and the other joint planning and other activities that built trust and capacity for resource protection at the local level. While these may be accomplishments, this evaluative criteria is concerned with changes in environmental outcomes. These activities have only an indirect connection to improved environmental conditions while activities such as the HWRP, no-discharge zone, and GBI had direct environmental improvements. See NBEP comments on the draft report (page 13).

²⁴² Although this had more to do with the application of FDA requirements than it did actual improvements in water quality.

²⁴³ The NEP staff reported that they had implemented over 60 projects yet the CCMP contains more than 500 recommendations.

²⁴⁴ The NBEP staff confirmed in its comments that for the most part this was not “new” money. See the NBEP comments on the draft report (Page 14).

²⁴⁵ See NBEP comments on the draft report (Page 14).

²⁴⁶ This is not to say that there were not a few isolated examples. However, most of these activities are loosely related to the CCMP’s specific recommendations and the NBEP staff also acknowledged in their comments that many of their activities are merely designed to general goals contained in the CCMP and the issues addressed. It would be unfair and misleading to characterize the NBEP’s implementation activities as being designed primarily to implement specific CCMP recommendations.

²⁴⁷ In its comments on the draft report, the NBEP noted that all of the activities undertaken in their role as a planning staff result directly or indirectly in implementation actions. Since the NBEP defines implementation actions as any action that advances the general goals, addresses issues raised in the plan, or is loosely related to one of the CCMP’s more than 500 recommendations, almost any activity it chooses to undertake would be classified as an implementation action. We believe that the NBEP’s broad definition of “CCMP implementation” is misleading and does not represent an accurate characterization of the nature of these activities. See NBEP staff’s comments on the draft report (Page 14).

²⁴⁸ The report has documented evidence of the RIDEM’s lack of support including being located deep within RIDEM’s hierarchy, the lack of a link to the program on the agency’s main WWW page, the lack of dedicating funding to the effort, the lack of coordination with other RIDEM programs that created the need for the Bay Committee, transferring the NBEP’s outreach staff to serve other agency programs, and utilizing NBEP resources to achieve other agency goals (i.e., increase in RIDEM’s planning capacity).

²⁴⁹ Evidenced by the fact that over \$10 million was spent developing the CCMP and \$300,000 a year to implement the plan. In every estuary program we examined, the ratio of annual planning funds greatly exceeds annual implementation funds.

²⁵⁰ This has varied among the estuary programs by the different Tiers and their different timeframes for CCMP development. Tier I programs such as the NBP had the heaviest emphasis on science while the Tier V programs were largely based on existing characterization work. However, in every case the estuary programs still allocated a substantial portion of their overall planning budgets, particularly during the early years of a program, to characterization work.

²⁵¹ NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 1.4.

²⁵² The NBEP staff questioned the use of the Academy's criteria noting that flexible programs can produce effective results without being forced to fit into these "bureaucratic criteria" and that the emphasis should be on real benefits to "ecosystems and citizens". See: NBEP comments on the draft report (Page 14). While that may be true, the purpose of using a variety of evaluative criteria is not to suggest that every program should score well on every criteria. Rather, the criteria are designed to explore various strengths and weaknesses in the overall structure and design of a program. This criteria explores whether the program accomplished what it was designed to accomplish and is related to the accountability criteria.

²⁵³ This is readily illustrated by comparing the actions identified in the letters of commitment submitted with the CCMP to the actions specified in the 41 high priority actions. The actions specified in the letters of commitment also illustrate that even before the CCMP had been approved the main NBP partners had deviated from the recommendations as they were specified in the plan. See: NBP, *Comprehensive Conservation and Management Plan for Narragansett Bay*, 5-95.

²⁵⁴ Even the NBEP staff reported that they largely rely on its general goals rather than the substance of specific recommendations. See NBEP's comments on the draft report (page 15).

²⁵⁵ In their comments on the draft report, the NBEP noted that the Biennial Reviews for the EPA contained letters of support from various stakeholders and citizens. See NBEP comments on the draft report (page 15). We find this to be a weak accountability mechanism.

²⁵⁶ This is suggested periodically throughout the EPA and NBP/NBEP comments on the draft case study and final report.

²⁵⁷ See NBEP comments on the draft report (page 10).

²⁵⁸ The RIDEM uses existing expenditures as its match on the EPA Section 320 implementation grant.

²⁵⁹ We believe that the watershed is probably too large to be addressed effectively under one framework and that focusing on specific subbasins and small embayments or tributaries might be more effective. This was the lesson the Delaware Inland Bays learned and their watershed was much smaller.

²⁶⁰ CRC, *Rhode Island Watershed Approach Framework*.

²⁶¹ The NBEP's 1997 Biennial Review (page3) noted that it had been working with other programs in RIDEM to develop a "watershed approach". While the activities and funding pursuant to the President's CWAP may have reenergized these efforts, they have now been working on this effort for well over three years and it was clear from our interviews with RIDEM staff and other staff in other organizations (e.g., CRMC and CRC) that there is a long way to go and major questions and issues are unresolved.

²⁶² This conclusion applies to all four cases, not just the NBEP. Tampa Bay made the transition and has these funding sources, Tillamook Bay has partially made the transition but is having trouble in the portions of the watershed where this funding is not available, and the Delaware Inland Bays is in a similar position to Tillamook while having many of the same problems as the NBEP.

²⁶³ At one point in the past, the NBEP actually reported to two different offices within RIDEM. It recently created a Bay Committee to better facilitate the communication and to find opportunities for joint project development and planning (See: NBEP, *1999 Biennial Review*, 1-1 – 1-2).

²⁶⁴ The NBEP staff is exploring the possibility of revising its Implementation Committee structure by moving more towards an active “stakeholders” approach by possibly merging with an existing group, the Rhode Island Partners for Resource Protection (See: NBEP, *1999 Biennial Review*, 4-3). Some respondents questioned whether this was appropriate. We would also question the efficacy of the approach. If the issues pertaining to Narragansett Bay and the CCMP’s implementation are not important enough to warrant the creation of a stand alone entity, then perhaps one should not exist. The fact that the NBEP needs to leverage existing entities because people are not interested in a new entity is an indicator of the overall lack of interest in the CCMP.

²⁶⁵ The placement of the NBEP within the RIDEM hierarchy is also indicative of the priority the program has within the agency.

²⁶⁶ The only example of this was the APES where funding was suspended for a short period of time following a biennial review. This is the only example of sanctions that we are aware of. See: Korfmacher, “Invisible Successes, Visible Failures.”

²⁶⁷ During the early years of the NEP while the NBP CCMP was being developed, both Congress and EPA were quite clear in their intention that it was the state’s role to fund CCMP implementation and that the intention was not to develop an ongoing program. This attitude appears to have changed during President Clinton’s Administration. See: “Funding Implementation of NEP Plans Not EPA’s Role, House Hearing Told,” *Coastlines 1* (No. 6, June – July 1991), 14. For more discussion of the legislative history see: Imperial and Hennessey, “An Ecosystem-Based Approach,” 125; Imperial, Hennessey, and Robadue, “The Evolution of Adaptive Management”; and, Imperial, Robadue, and Hennessey, “An Evolutionary Perspective on the Development and Assessment”.

²⁶⁸ For example, environmental groups and the ANEP may oppose a decision to terminate estuary program funding as they often have lobbied for an increase and continuation of funding.

²⁶⁹ Only one estuary program, the Albermarle-Pamlico Estuarine Study (APES), received a failing grade during the EPA’s Biennial Review process. They only lost one year of implementation funding after they undertook some actions and agreed to changes in their program.

²⁷⁰ While the EPA’s Biennial Review process helps in this regard, the EPA has not used the process to require these fundamental changes in the estuary programs as a condition of future funding. Instead, the EPA comments on the reports tend to highlight a few issues and minor changes that the estuary program should complete by its next Biennial Review.

²⁷¹ Delaware Inland Bays, Tampa Bay, and Tillamook Bay all are good examples in this regard.

²⁷² Interviews conducted as part of two previous research projects and our periodic contacts with EPA region and headquarters staff and various estuary program managers over the past five years indicate that the EPA has been aware of the issue for some time and has chosen not to take action. See: Imperial, *Developing Integrated Coastal Resource Management Programs: Applying the NEP’s Experience to Developing Nations*; and, Imperial and Hennessey, “An Ecosystem-Based Approach.”

²⁷³ The fact that issues addressed at the Narragansett Bay Summit 2000 were very different than the 41 high-priority actions and the CCMP’s other recommendations and the fact that some Summit participants were calling for a new planning effort supports this conclusion as does the interview data.

²⁷⁴ This was reported in our interviews with EPA and NBEP staff as well as other respondents. The NBEP comments also acknowledged this fact. See NBEP comments on the draft report (Page 13).

²⁷⁵ Peter B. Lord, “A Blueprint to Polish State’s Economic, Recreational Jewel.” *Providence Journal Bulletin*, April 26, 2000.

²⁷⁶ The lack of funding was also an issue raised at the Narragansett Bay Summit 2000. See: Peter B. Lord, “A Blueprint to Polish State’s Economic, Recreational Jewel.” *Providence Journal Bulletin*, April 26, 2000.

Appendix A

Summary of the NBEP's CCMP

High Priority Recommendations

1. Adopt legislation requiring municipalities to establish a wastewater management district and amend existing regulations governing ISDS systems.
2. Implement a marina pump-out facility siting plan that includes a consistent written policy for: (1) regulating the construction of marinas, docks, and mooring fields; and (2) enforces prohibitions against boater discharges in Narragansett Bay.
3. Develop guidance for municipal officials regarding: (1) best management practices to control NPS pollution; (2) innovative land and growth management practices; and, (3) development of local and regional stormwater management plans.
4. Develop statewide critical resource protection policies that include: (1) objective criteria for designating critical resources and critical protection areas; (2) a GIS inventory of critical resources; and (3) regulatory and nonregulatory controls for protecting identified critical resources.
5. Prepare a SAM plan for Greenwich Bay.
6. Develop species specific management plans for managing (1) commercially, recreationally, and ecologically important fish and shellfish; (2) all threatened and endangered estuarine-dependent plants and animals; and (3) the reintroduction of anadromous and catadromous fisheries
7. Revise existing RIPDES permits to include enforceable, numeric, and chemical-specific limits for all toxic chemicals on the Narragansett Bay "List of Toxics of Concern"; (2) enforce compliance with revised discharge limits; and (3) include other significant non-industrial sources of toxic chemicals in these regulatory programs to meet the state water quality goals.
8. Continue efforts to abate the CSOs in Mount Hope Bay and the Providence and Blackstone Rivers in accordance with the statewide CSO abatement priority ranking system.
9. Establish a Narragansett Bay Implementation Committee, a Narragansett Bay Policy Committee, and a Narragansett Bay Planning Section to oversee CCMP implementation
10. Implement a long-term monitoring program for Narragansett Bay

Types of recommendations in the NBP CCMP

1. Coordinate policies and activities (12 recommendations)
2. Develop policies and plans (31 recommendations)
3. Prepare legislation and regulations (29 recommendations)
4. Enforce laws and regulations (27 recommendations)
5. Provide technical assistance and public education (16 recommendations)
6. Capital investment (14 recommendations)
7. Conduct monitoring and assessment (18 recommendations)

NBP CCMP Action Plans

1. Source Reduction: Toxics
2. Source Reduction: Nutrients
3. Source Control: Water Treatment and Wastewater Treatment
4. Source Control: CSOs
5. Source Control: ISDSs
6. Source Control: Boater Discharges
7. Source Reduction: Nonpoint Sources
8. Resource Protection: Land Use
9. Protection of Critical Areas
10. Living Resources (To be prepared during CCMP implementation)
11. Public Health
12. Mount Hope Bay
13. Blackstone River
14. Greenwich Bay (To be prepared during CCMP implementation)
15. Management of Marine and Riverine Sediments (To be prepared during CCMP implementation)
16. Bay Governance (To be prepared during CCMP implementation)
17. Consistency Review
18. Public Participation (To be prepared during CCMP implementation)
19. Long Term Monitoring
20. Unfinished Agenda

Appendix B

Implementation of the CCMP's 41 Priority Recommendations

CCMP Recommendation	Partners	Status
Source Reduction: Toxics		
I.A.4: Require all regulated dischargers to minimize their use, generation, and disposal of toxic substances and report their waste minimization efforts. Require all existing industrial users in significant noncompliance with industrial pretreatment discharge standards to undergo a formal on-site waste reduction assessment and to submit a waste minimization report.	EPA, RIDEM, MADEP	Addressing through highly successful voluntary pollution prevention programs such as RIDEM Hazardous Waste Reduction Program (HWRP) and Narragansett Bay Commission (NBC – the regional metropolitan sewer authority) pretreatment; the HWRP has provided service to over 300 private industry sites to date.
I.B.1.a: Establish a basin-wide Narragansett Bay List of Toxics of Concern which would include cadmium, chromium, copper, lead, mercury, nickel, zinc, cyanide, total petroleum hydrocarbons (PHC), polyaromatic hydrocarbons (PAH), and polychlorinated biphenyls (PCB).	EPA, RIDEM, MADEP, RIDOH, MADPH	Addressing through added permit limits for metals and through priority pollutant scans done twice each year as required by RIPDES (R.I. Pollution Discharge Elimination System) permits.
I.B.1.b: Issue pollution discharge permits to wastewater treatment facilities (WWTF) with expired permits and revise existing permits to include discharge limits for all relevant toxic metals and organic pollutants.	EPA, RIDEM, MADEP	Ongoing, as of 9/98, six facilities are operating with expired permits; however, with the implementation of existing consent agreements, the final result will be compliance with water quality criteria.
I.B.3: Enforce limitations on pollutant discharges to Narragansett Bay and its tributaries through increased monitoring and penalties for noncompliance.	EPA, RIDEM, MADEP	Monitoring has been increased through establishment of an effective NBC pretreatment program and penalties have been assessed; 1996 new regulations for use of Enforcement Response Plans (ERPs).
I.C.2: Require training and/or certification for municipal industrial pretreatment program staff and enforce regulation compliance through fines, public notices of violation, and criminal enforcement actions where significant noncompliance is found.	EPA, RIDEM, MADEP, local control authorities	Each WWTF required to have ERP which includes list of enforcement actions and timetables; must be approved by RIDEM; includes fines/penalties for reporting and discharge violations; WWTFs required to publish annual public report of permittees in significant noncompliance; noncompliance determined by WWTF monitoring and submitted permittees self-monitoring reports.
I.C.3: Encourage source reduction practices such as the implementation of economically feasible technologies that reduce the discharge of toxins. Require the creation of certified design drawings of source reduction, reclaim and recycle plans. Require the use of proven affordable technologies or processes that reduce the use or generation of toxic pollutants. RIDEM should assure that companies that purchase restricted chemicals are licensed by RIDEM.	EPA, RIDEM, MADEP, local control authorities	Ongoing source reduction technical assistance through RIDEM HWRP.

Narragansett Bay Estuary Program

CCMP Recommendation	Partners	Status
II.E.3: Emphasize raw material substitution techniques and best management practices to reduce the discharge of cadmium, chromium, copper, nickel, lead, mercury, silver, zinc, and cyanide.	EPA, RIDEM, HWRP, MA Agencies	Ongoing through HWRP, although limited by funding and volunteers.
Source Reduction: Nutrients		
I.F.2: Develop a Special Area Management (SAM) Plan for the Greenwich Bay region which would address both point and nonpoint sources of pollution to Greenwich Bay through effective sewerage, septic system management and management of shellfish resources.	CRMC, RIDEM	Addressing through the Greenwich Bay Initiative, City sewerage program (with help of NBEP, \$130 million sewer bond passed), NBEP Greenwich Bay Shellfish Management Plan, alternative ISDS sites, and through a RIDEM Total Maximum Daily Load (TMDL) Plan for pollutants currently in planning for FY2000.
Source Control: CSOs		
III.A: Develop statewide priority rankings to help determine how state funds should be spent on CSO abatement projects.	RIDEM, Narr. Bay Planning Section, NBC, MADEP	Ongoing with NBC as lead agency and a stakeholder process for plan approval. Implementation of Phase I has been approved by the state. There will be a total of approximately \$400 million spent over 25 years to implement all three phases of the abatement plan, consisting of a system of deep rock tunnels and subsurface holding reservoirs which release stormwater/sewage as plant capacity allows.
Source Control: OSDs		
I.A: Review the adequacy of existing minimum standards for septic systems with respect to setbacks and separation distances from drinking water supplies, groundwater and critical resources, septic system and well design, and performance standards.	RIDEM, CRMC, MADEP, MACZM	Revisions to ISDS regulations have taken place pursuant to new state legislation requiring licensing of designers/installers as well as moving to soils-based rather than water table-based siting (based on NBEP staff research/work); RI Coastal Resources Management Council requires installation of denitrifying ISDS in critical coastal areas; revisions to CRMC Special Area Management Plans include increased lot sizes in these areas.
I.H: Develop educational programs for municipal officials and the general public that describe the environmental and financial risks of failing to address septic system density and maintenance.	RIDEM, RIDOP, CRMC, MA Agencies	Ongoing with Univ. of RI Cooperative Extension training for municipal officials, NBEP/RI Chapt. of the Amer. Planning Assoc'n. technical NPS conference series for RI planners (\$65,000) and the Cooperative Ext. Home*A*Syst program (\$200,000).

Narragansett Bay Estuary Program

CCMP Recommendation	Partners	Status
II.A: Develop and submit legislation that will require each Rhode Island municipality to establish or associate with a waste water management district (WWMD), which would inspect and maintain all septic systems within the WWMD and treat all septic system water generated within the WWMD.	RIDEM, RIDOP, CRMC, WWMDs, MA Agencies	Addressing in nonregulatory manner through RIDEM technical assistance and grants to communities for WWMD studies and programs; also RIDEM ISDS Policy Forum/ISDS Inspection Handbook; NBEP funded research into alternative ISDS and created an ISDS Technology Technical Review Team to expedite State approval of such systems for use in critical areas; to date, 3 R.I. communities have established WWMDs and is under consideration in several other municipalities.
Source Control: Boater Discharges		
I.A.2: Prepare and update maps of critical marine resource areas on a biennial basis.	RIDEM NBEP, CRMC,	Ongoing through NBEP Critical Resource Mapping initiatives, utilizing aerial photographs and photo-interpretation for 1996 and 1999.
I.B.1: Develop and implement a Bay-wide pump-out facility plan in order to assure convenient boater access to pump-out facilities.	RIDEM/N BEP, CRMC, MA Agencies	Completed; based on NBEP Marina Pumpout Siting Plan, a No Discharge Area is in place for Narragansett Bay and RI waters with outreach and education for marinas, boaters, and Harbor Masters using grant funds totaling \$500,000 at this time and another \$300,000 expected to be awarded FY2000; Massachusetts about to make a plan submission for a statewide No Discharge Area.
I.D.1: Institute a boater education program regarding proper boater waste disposal, such as the operation and maintenance of marine sanitation devices (MSD) and the identification of no discharge areas and local pump-out stations.	RIDEM, MA Agencies	Addressing through Clean Vessel Act funds and outreach programs; NBEP/URI Coastal Resources Center Marina BMP pilot project in Greenwich Bay (BMPs for boat maintenance, fuel spills, hazardous materials use and storage); cooperative proposal for a new Boater's Guide including "green" practices and critical resource maps.
I.F.1: Encourage marinas to require boaters to obey all rules and regulations relating to boater discharge.	RIDEM, CRMC, MA Agencies	Addressing through Clean Vessel Act funds and outreach programs.
I.F.2: Increase Coast Guard enforcement of MSD equipment requirements and delegate authority to state and local governments for enforcement of MSD requirements and boater disposal.	EPA, USCG, RIDEM, CRMC, MA Agencies, harbor masters	Addressing through Harbor Masters and DEM Boating Safety groups conducting boat inspections, however, there has been minimal support from the Coast Guard.
II.B: Identify certain regions of Narragansett Bay and Rhode Island waters as appropriate for "no discharge" status.	RIDEM, CRMC, local govt., EPA	Completed - Narragansett Bay is the first large estuary in the U.S. to have No Discharge Area status approved.

Narragansett Bay Estuary Program

CCMP Recommendation	Partners	Status
Source Reduction: Nonpoint Sources		
II.B: Maintain or reinstate a state Nonpoint Source Management Committee, to guide the nonpoint source control planning process and to assist in developing new initiatives and the technical guidance needed for implementation in statewide Watershed approach.	RIDEM, CRMC, MADEP, MACZM, RIDOT, MA EOTC	To be addressed through development of Statewide Watershed Approach (SWA); SWA will have issue-specific subcommittees; RIDEM investigating how Section 319 grant process can have greater stakeholder input.
II.A.2: Maintain a statewide natural resource database center with adequate staff and equipment that will be available to all federal, state and municipal authorities responsible for nonpoint pollution management.	RI DEM, MA, EPA, and other federal agencies	Ongoing efforts by RIDEM to improve input and public access of data including RIDEM GIS data sets and maps available on the Internet through the URI Dept. of Natural Resources Science/Environmental Data Center web page.
IV.A: Coordinate nonpoint source pollution control and outreach programs and ensure their continuation.	All RI and MA NPS education programs	To be addressed through development of Statewide Watershed Approach.
IV.B: Increase education about nonpoint source pollutants, their effects on natural resources and implementation of Best Management Practices.	All RI and MA NPS education programs	Addressing through URI/CE outreach, RIDEM and NBEP outreach, Save The Bay, Inc., (STB) and other NGO outreach.
IV.B.1: Develop a comprehensive training program for municipal boards and officials on nonpoint source issues.	State NPS programs, RIDOP, MA Agencies	Addressing through URI/CE training for municipal officials and NBEP/RI Chapt. of Amer. Planning Assoc'n. training conferences for planners.
IV.C.1: Increase information among the public about nonpoint source problems in surface waters, including wetlands.	All RI and MA NPS education programs	Addressing through URI/CE outreach, RIDEM and NBEP outreach, STB and other NGO outreach.
IV.C.2: The Rhode Island Sustainable Agriculture Committee (RISA) should be used as an information tool by its sponsors. A similar Committee should be established in the Massachusetts' portion of the watershed.	USDA, RIDEM, MA Agencies	Addressing through a new NRCS program, EQIP, to assist farmers in controlling nonpoint source pollution.
IV.C.3: Develop an information strategy targeted at homeowners' use of water, pesticides and fertilizers.	RI & MA CES	Addressing through STB Toxic Diet pilot program in Massachusetts section of the Narragansett Bay Watershed: URI/CE Home*A*Syst programs; NBEP support of STB Backyards to the Bay homeowners landscaping manual.

Narragansett Bay Estuary Program

CCMP Recommendation	Partners	Status
Recommended Policies & Actions: Land Use		
II.A.3.b: Encourage communities to apply effective land use and growth management techniques and provide municipal officials with appropriate technical guidance and assistance to aid in implementation.	RIDOP, RIDEM, CRMC, MA Agencies	Addressing through Grow Smart efforts (Program Director serves on the Technical Committee of Grown Smart RI, a nonprofit supported by \$230,000 in EPA Sustainable Development Challenge grant dollars for education to citizens and officials), RIDEM Sustainable Development Grant (\$100,000) in South County to upgrade zoning and Compliance Plans, as well as outreach to citizens, businesses, and the creation of official training programs.
III.A.1: Establish minimum development standards to protect water quality and critical areas from cumulative land use impacts.	RIDEM, CRMC, RIDOP, MA Agencies, Local Govt.	Not being addressed in a regulatory manner at this time; nonregulatory outreach and education programs are ongoing.
III.C.1: Encourage innovative land use management techniques that protect sensitive environmental resources while accommodating balanced growth.	RIDOP, RIAPA, Grow Smart RI	Ongoing through education regarding Municipal planning abilities under 1991 Zoning Enabling Act, NBEP/RI Chapt. Of Amer. Planning Assoc'n. conferences and workbook; establishment of Grow Smart RI programs (NBEP Program Director co-drafted outreach strategy plan for this organization).
III.C.2: Coordinate the land use management efforts of state agencies, local governments and organizations.	RIDOP, public and private technical assistance programs	Ongoing through Grow Smart RI programs and re-establishment of State Division of Planning/Community Affairs Program; coordination with the Partners for Resource Protection grants to RI land trusts.
Recommended Policies & Actions: Protection of Critical Areas		
IA: Create a Critical Resource Policy Committee to develop and implement a Critical Resource Protection Policy.	RIDEM, RIDOP, CRMC, municipal planners, private entities, MA Agencies, federal agencies	Working toward establishing issue-based workgroup within SWA.

Narragansett Bay Estuary Program

CCMP Recommendation	Partners	Status
I.B: Develop a unified Critical Resource Protection Policy focusing on interagency consistency, improving existing protection standards and enforcement.	RIDEM, RIDOP, CRMC, municipal planners, private entities, MA Agencies	Ongoing, incrementally, beginning with a Submerged Aquatic Vegetation Policy developed with RI CRMC; NBEP pilot program for protection of critical resources in local harbor management plans with Town of Bristol, RI.
Recommended Policies & Actions: Mt. Hope Bay		
I.A: Ensure the timely completion of the Fall River CSO abatement project through financial support, technical assistance and enforcement measures.	EPA, MA, City of Fall River	Massachusetts has dedicated funding toward planning component of City of Fall River CSO abatement.
I.B.2: Develop a Shellfish Management Plan for the harvestable shellfish resources of Mount Hope Bay.	RIDEM, MADFW, MADMF	Being developed through NBEP-funded project with RIDEM Division of Fish & Wildlife; technical statistical documents completed.
Recommended Policies & Actions: Blackstone River		
I.A.1: Incorporate water quality based effluent limits for nutrients and toxins in discharge permits issued to wastewater treatment facilities (WWTFs) in the Blackstone River watershed.	MADEP, RIDEM, EPA	Addressing through Woonsocket permit to limit all toxins and the creation of a Total Maximum Daily Load (TMDL) program to address pollutant limits for all dischargers based on dry & wet weather surveys conducted by Univ. of R.I.
I.A.7: Ensure the timely completion of WWTFs' planning design and construction of CSO abatement measures for the NBC CSO discharges to the Blackstone River.	EPA, RIDEM, NBC	Addressing through NBC as lead agency and final approval of Phase I of the CSO abatement project has and the creation of a Total Maximum Daily Load (TMDL) program to address pollutant limits for all dischargers.
III.E: Establish community-based programs for the protection of valuable resource areas.	BRVNHC C, local govt.	Addressing through the Statewide Watershed Approach and coordination with the Massachusetts Watershed Approach and Blackstone Valley National Heritage Corridor Commission.
Recommended Policies & Actions: Institutional Oversight		
I.A: Establish a Narragansett Bay CCMP Implementation Committee that would include representatives from the major federal, state and local governments.	NBEP Executive Committee	Completed.
II.A: Create a Narragansett Bay Policy Committee to broaden public participation in CCMP implementation and oversight. The NBP Management Committee should recommend appointments to the Policy Committee to be ratified by the Governors of Rhode Island and Massachusetts.	NBEP Mgt. Committee	Completed through existing CCMP Implementation Committee. Further addressing by working to integrate with the Statewide Watershed Approach process; plans for using existing Partners for Resource Protection as combination Management Committee and CAC.

Narragansett Bay Estuary Program

CCMP Recommendation	Partners	Status
III.A: Create a centralized Narragansett Bay planning section to support Narragansett Bay CCMP Implementation and Policy Committee activities.	EPA, RIDEM, CRMC, other federal and state agencies	Completed through creation of NBEP within RIDEM Office of Water Resources.
Recommended Policies & Actions: Long Term Monitoring		
IV.A: Maintain a permanent natural resource database center in Rhode Island and Massachusetts, with adequate staff and equipment provided by each state and other users.	RI & MA	Addressing through linking existing and new databases via Internet and GIS; RIDEM undergoing conversion to centralized data collection and storage, designed to be accessible by other states, agencies, NGOs and the public; EPA Resource Protection GIS data across New England states.
Post-CCMP NBEP Priority Initiatives: <i>(the following actions, though not part of the 41 high priority actions specifically marked by the Management Committee in 1991, have been identified as priority actions by the NBEP, the Implementation Committee and project partners and are based on the overall goals of the CCMP)</i>		
Develop Habitat Restoration Plan for Narragansett Bay and Coastal Waters through consensus-based stakeholder process.	All appropriate stakeholders	Ongoing through the NBEP critical resource mapping and analysis program; NBEP Habitat Restoration Charrette and follow up stakeholder meetings; Co-development of state Coastal Habitat Restoration legislation with Save The Bay, Inc., currently before the RI Legislature.
Develop needed technical planning tools to establish scientific basis for collaborative habitat restoration actions.	All appropriate stakeholders	Ongoing through the NBEP critical resource mapping and analysis program.
Develop mechanism to broaden input into NBEP planning and projects and into CCMP implementation decision-making from the wide range of stakeholders with which the program interacts	All appropriate stakeholders	Currently exploring options to accomplish this task.
Develop Bay-wide real-time monitoring system	NBEP, NOAA/ NMFS, URI, EPA, Roger Williams University	Ongoing development of first Bay-wide monitoring system, including real-time YSI sampling of salinity, temperature, DO and other parameters. Much of the system based on the NBEP CCMP Long-term Monitoring Plan recommendations.

About the Contributors to the Report

Mark T. Imperial graduated with a Master of Arts in Marine Affairs from the University of Rhode Island in 1993. From 1991 to 1994, Imperial worked as a policy analyst with the Rhode Island Coastal Resources Management Council. Mark is currently a Ph.D. candidate in the Public Affairs program at the School of Public and Environmental Affairs, Indiana University. His concentrations are Public Management and Policy Analysis with a minor in Environmental Science. His dissertation research focuses on collaboration in the development and implementation of watershed management programs. In addition to these activities, Mark has had articles published in the journals *Coastal Management*, *Ocean and Coastal Management*, *Environmental Management*, and *Public Works Management and Policy*.

Timothy M. Hennessey is a Professor of Political Science and Marine Affairs and the Associate Director of the Rhode Island Public Administration Program at the University of Rhode Island. He has over twenty years of experience studying the management and governance of coastal and estuarine ecosystems. In 1985, he and his colleagues at the Coastal Resources Center at the University of Rhode Island conducted a five-year Sea Grant funded comparative analysis of the governance structure and process in five estuaries; Narragansett Bay, Galveston Bay, San Francisco Bay, Albermarle-Pamlico Sound, and Puget Sound. More recently, Hennessey conducted a major study of the Chesapeake Bay Program and worked with Mark Imperial on a research project examining the National Estuary Program. He has also studied the role of science in the management of estuaries through a comparative analysis of Puget Sound and the Fraser River Estuary in Canada. Professor Hennessey has published numerous articles in journals such as *Marine Policy*, *Coastal Management*, and *Ocean and Coastal Management* as well as chapters in edited books.

Derek Kauneckis received a Masters of Science degree in International Development with an emphasis on Natural Resource Management and Policy in 1997 from the University of California, Davis. Currently he is a Ph.D. student in Public Policy at the Department of Political Science and the School for Public and Environmental Affairs at Indiana University, Bloomington. Derek's professional experience includes working with the US Forest Service in Alaska on Cultural Resource Management and Community Development programs, the Division of Natural Resources at Winrock International Institute for Agricultural Development and various environmental consulting firms in the Western United States. Derek's dissertation research uses a comparative approach to examine the effect of political decentralization on local public policy decision-making regarding natural resource management.

Leslie Koziol graduated Magna Cum Laude from Northland College, Ashland, Wisconsin, with a Bachelors of Science degree. Leslie has received numerous awards and achievements including the Aldo Leopold Award in Environmental Ethics, The Northern States Power Environmental Achievement Award, and Distinction in the Social Sciences. Leslie is currently pursuing a Masters degree in Environmental Science at Indiana University. Her

research interests include Wetland Ecology and Environmental Policy and she has worked as an assistant instructor and a lab assistant at Indiana University for the Indiana Clean Lakes Program. Prior to her graduate work, Leslie conducted research on acid mine drainage sites in Southwest Colorado. In particular, the research focused on the philosophical underpinnings of science and its role in policy formulation. Leslie has also worked as an Assistant Environmental Specialist at the Bad River Department of Natural Resources, Odanah, Wisconsin.

Katheryn Summers received a Bachelor of Science degree, with a concentration in Zoology and a minor in Wildlife Ecology, from the University of Florida in 1994. From 1994 to 1995, she conducted research University of Florida's Neurobiology Lab and provided staff support at the National Biological Survey's Sirenia Project. Katheryn then worked for The Nature Conservancy's in Gainesville, Florida where she produced the 1995 Eglin Air Force Base Annual Research Report, a compilation of inventory, monitoring and research conducted in support of ecosystem management. She also participated in the development of an agreement to conduct joint ecosystem management on 750,000 acres near Eglin Air Force Base. In 1996, she began her graduate studies at Indiana University and graduated in May 1999 with a Master of Environmental Science and a Master of Public Affairs, concentrating in Environmental Policy and Natural Resource Management. Katheryn is also working as a research assistant at the Center for the Study of Institutions, Population, and Environmental Change (CIPEC) on a project examining the private ownership of forested lands in Indiana.

Sally McGee is a graduate of Smith College where she received her B.A. in economics in 1989. She lived in Washington, DC for several years, working with environmental groups including Greenpeace and Conservation International. This work inspired her to experience the marine environment first hand, so she left Washington to study and then work for Sea Education Association in Woods Hole, MA. Sally has worked aboard a number of traditionally rigged sailing vessels and has sailed the eastern seaboard of the US and Canada, the Caribbean, and in the North and South Pacific. She returned to the US in 1997 and worked for Mystic Seaport (Mystic, CT) before entering the Marine Affairs Program at the University of Rhode Island in the Fall of 1998. The focus of her studies at URI is environmental conflict resolution.
