

New Jersey
Sea Grant
College Program

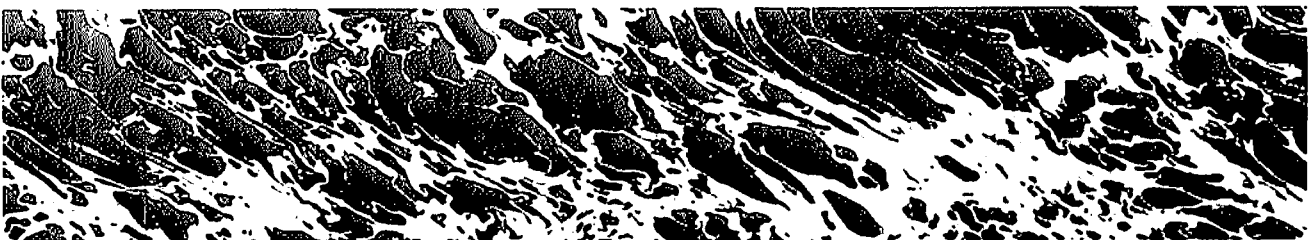
IMPLEMENTATION PLAN

A Vision
for the
Twenty-first Century

December 1999



NEW JERSEY
MARINE SCIENCES
CONSORTIUM



Introduction

The *New Jersey Sea Grant College Program (NJSGCP)* adopted a new Strategic Plan in the fall of 1998. This companion document, the Implementation Plan, identifies actions for addressing key elements of the Strategic Plan. As outlined below, both documents require maximum flexibility in the face of rapidly changing coastal zone priorities. The dynamic nature of New Jersey's coastal economy and management of its resource base mirrors that of the nation. *NJSGCP* research also reflects national as well as New Jersey priorities as identified by its stakeholder community, as follows:

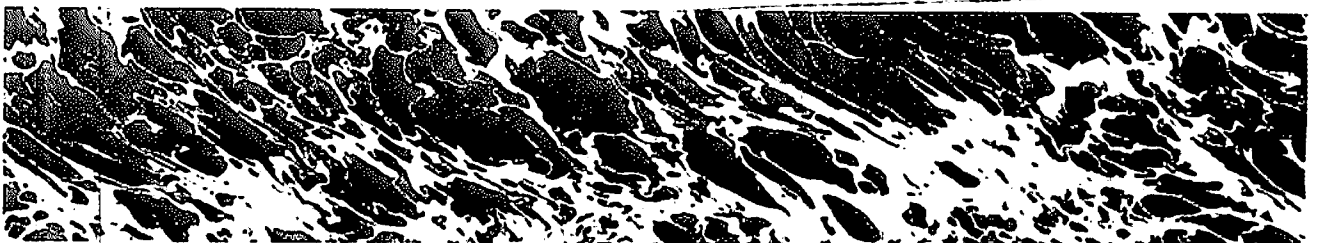
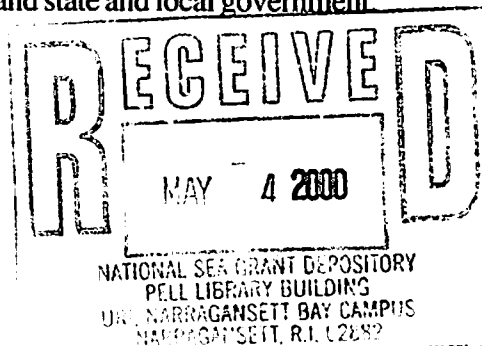
- ✓ Ecosystems Research
- ✓ Environmental Models
- ✓ Coastal Zone Management
- ✓ Marine Research Technology and Development
- ✓ Biotechnology
- ✓ Fisheries and Aquaculture
- ✓ Socioeconomic and Legal Studies

*"We must balance
the economic
growth that comes
from our seas with
the protection and
preservation of the
fragile and unique
ecosystems that
thrive in them"*

National Ocean Conference,
Monterey, CA
11-12 June 1998

These seven Thematic Areas are described in more detail in the *New Jersey Sea Grant College Program Strategic Plan*. Through research, education and outreach, the New Jersey Marine Sciences Consortium (NJMSC) and the *NJSGCP* it manages, contribute to a sustainable New Jersey through *balanced* economic growth and stewardship of coastal resources. The essence of this paradigm is captured in the Ecotwins® logo, an award-winning design submitted by a high school student during an NJMSC scholarship competition.

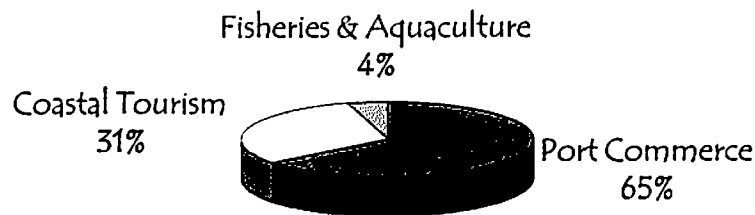
This document reflects the input of the Sea Grant Advisory Board (SGAB), a panel of multiple stakeholders from government and industry, as well as that of New Jersey legislators, the Governor's Office, and state and local government



Background

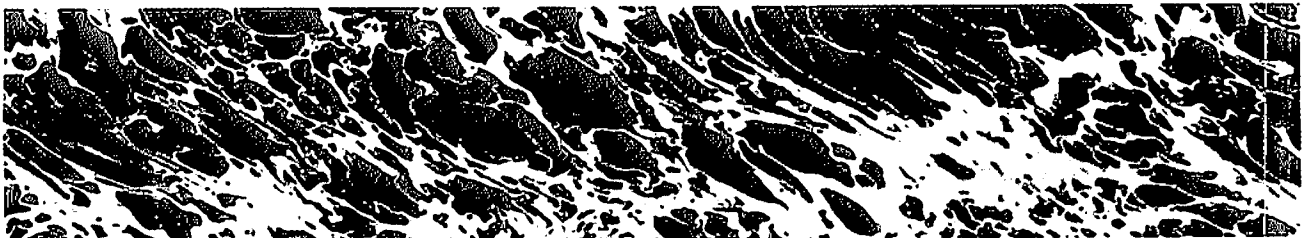
By the middle of the next century, approximately 75% of the nation's population will live within 80 km (50 miles) of the coast. New pressures on watersheds and coastal resources will result from increased competition for living space, and the conflict that often arises between humans and their environment. More than ever, sustainability will depend on striking an elusive balance between economic growth and stewardship of natural resources. Informed decision-makers and an informed public are essential ingredients to managing future growth, in consensus building and the development of science-based management policy.

In 1995, coastal industries contributed more than \$150 billion to the national economy. One of every six jobs in the United States is linked in some fashion to our estuaries and oceans — ports commerce and maritime trades, coastal tourism, marine technology, and fisheries and aquaculture. *With a \$45 billion coastal economy, New Jersey is no exception to the dependence of our state economy on the coastal zone.* Until recently, however, the coastal zone has been viewed as a “commons,” with infinite capacity to serve the nation's needs. That perception has changed, and most scientists and managers now agree that the commons is being taxed to its very limits!



The cost has been excessive. Although we have made great strides in addressing environmental issues in New Jersey¹ and the nation as a whole, a recent survey of coastal waters found that many areas do not meet federal and state water quality standards. In the last decade, for example, almost 19,000 of the nation's beaches have been closed due to health advisories. Health advisories issued for consuming contaminated fish and shellfish are of similar magnitude. We are witnessing a decline in the health of our oceans by pollution, collapsing fisheries, loss of critical and coastal and

¹Trends in New Jersey are generally positive: airborne pollutants have in many cases been reduced from frequent exceedences of health standards in the 1960s and early 1970s, to values generally below the standards in 1998; beach closures have been reduced from 803 in 1998 to less than 20 over the past four years. Shellfish waters open for harvesting statewide have increased from less than 74% before 1980, to over 85% in 1998, and preserved open space from about 500,000 acres in 1998 to nearly 1,000,000 acres in 1999.



marine habitats, harmful algal blooms, fish, bird, and marine mammal die-off, introduction of exotic marine species, and continued ocean dumping. Scientists and managers are also concerned about dwindling fish populations. About 30% of commercial fish stocks worldwide are no longer self-sustaining. Data on 191 commercial stocks in the US suggest that more than 80% are fully exploited or overfished. Overfishing has also been linked to damage to marine ecosystems and their production capacity (Ocean Studies Board 1999). Thus, sustainability² is the great challenge of the 21st century. Our future success will rest in managing coastal resources in a matrix of ever expanding human influence in the coastal zone, especially the land water interface where some of the highest levels of coastal productivity are measured.

A Question of Balance

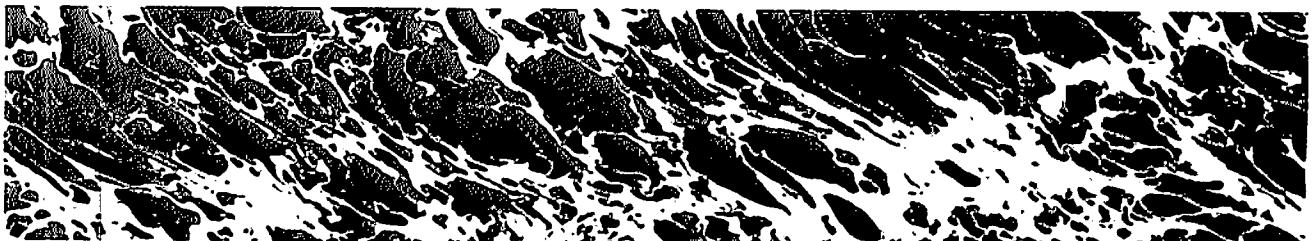
By the middle of the next century 5.5 billion people will live in the coastal zone. Moreover, much of this population will be clustered in “mega-cities” of eight million people or more, with nine of the ten largest cities in the world on sea coasts. Yet the coastal zone is only about 11% of the earth’s land surface.

United States coastal areas are the destinations for 180 million visitors *yearly*; and international trade is expected to nearly *triple* over the next two decades, with more than 90% of this trade waterborne and requiring larger ports and services.

With 30 million potential visitors within a two-hour drive of its beaches, and with the Ports of Newark, Elizabeth and Camden national leaders in maritime commerce, New Jersey is no exception to the national trend. We live in a coastal state with a population density of more than 1100 people per square mile. By 2010, New Jersey's population will exceed 8,500,000.

Clearly, mankind is one of the most coastally-dependent species in the biosphere. Humans use coastal embayments and the shore zone for activities that may be, and indeed frequently are, in conflict. The continental shelf margins are exploited for their extractable resources, both organic and inorganic; for shipping and transportation; for military activities; as a repository for human and industrial wastes; as a source of cooling water for power generation; and as habitats for recreation and living space. Thus, *managing for growth* will require proactive public involvement and greater awareness of the coastal issues.

² As defined by the World Commission on Development and the Environment, sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

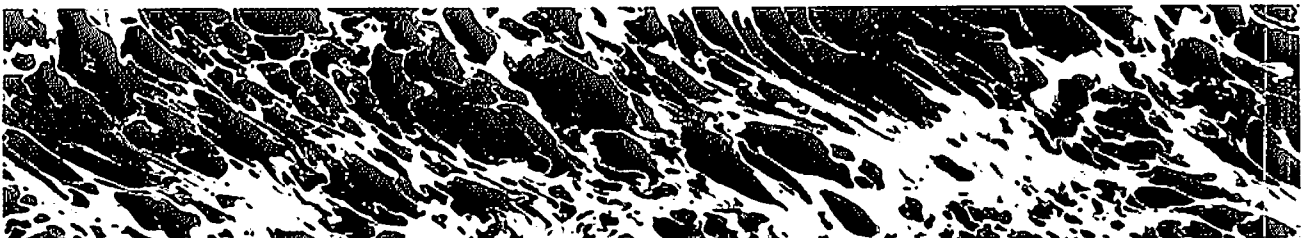


It begins with education. M.R.C. Greenwood, the President of the American Association for the Advancement of Science recognized the need: “...*we are forced to learn from each other—those whose main interest is conservation and those whose main interest is commerce and those of us who believe our job is to help the young in this country, to help young minds understand that it is, in the final analysis, a question of balance.*” [emphasis added]

Only through improved science literacy and informed decision making, will the public have the tools to profoundly influence the direction of future management and policy approaches to sustaining coastal resources. A recurrent theme at the National Ocean Conference held in Monterey, CA in June 1998 was the public’s “need to know,” and a call for heightened public awareness and education. Speaker after speaker aligned himself or herself with this platform, as shown in the following remarks:

- ✓ “. . . most important of all to these efforts [managing our oceans] is engaging the public and honoring the public’s right to know . . .” — *Hon. Carol Browner, Administrator, USEPA*
- ✓ “. . . the Panel discussed education and the need to bring a much higher level of understanding [and]. . . more information to the public – absolutely critical . . .” — *Vice President Al Gore*
- ✓ “Ocean education provides an exciting means to draw children into science and technology and a commitment to the stewardship of our planet.” — *Panel comment*
- ✓ “One of the tasks that was laid out before this conference was . . . concerted efforts to introduce environmental studies to eliminate environmental illiteracy . . .” — *Dr. Tyrus Cobb, Yosemite National Institute*
- ✓ “The nation needs more ocean awareness and a more comprehensive, enlightened ocean policy. . .” — *Dr. Jane Lubchenco, Oregon State University*
- ✓ “. . . ignorance is our greatest enemy. . .” — *Elliott Norse, President, Marine Conservation Institute*

It is an unalterable truth that coastal environments are largely human landscapes. Restoring ecosystem health to our coastal waters, therefore, requires not only consideration of ecosystem components (including watersheds), but also the continued vitality of the nation’s coastal economy. We can and must have both, and the NJSGCP will do its part to support a sustainable New Jersey coastal economy.



Strategic Goals

As set forth in the Strategic Plan, the *NJSGCP* has identified eight Strategic Goals that form the basis of this Implementation Plan. These goals, along with management and administrative priorities described in the New Jersey Sea Grant Omnibus, form the basis for building a *NJSGCP* that is maximally responsive to New Jersey and the region's needs for addressing coastal sustainability in the 21st century:

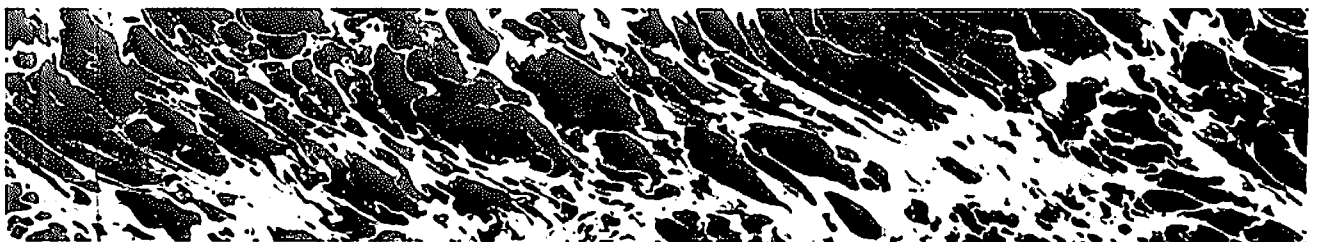
Strategic Goal 1

Maximize Contributions of Member Institutions in Support of a Sustainable New Jersey Coastal Environment by Focusing on Relevant, Problem-Oriented Studies, whose Outcomes and Products Reach the Broadest Number of Constituents

Why This Strategic Goal?

Collectively, the 29 Member Institutions of the NJMSC represent a vast pool of talent that can be mobilized to address virtually any coastal issue. Whether in the key economic areas of ports commerce, coastal tourism or fisheries/aquaculture, member resources include major research capabilities at the New Jersey Institute of Technology (NJIT), Princeton University, Rutgers University, Stevens Institute of Technology and the University of Medicine and Dentistry of New Jersey (UMDNJ). The strengths of these institutions complement one another, and together, they form a formidable pool of talent for addressing all Thematic Areas of the *NJSGCP*. Additional research capabilities reside at many other New Jersey institutions and NJMSC affiliates, such as the Academy of Natural Sciences of Philadelphia.

Education and outreach activities of the *NJSGCP* are also supported by member colleges, and will continue to be expanded to include aquaculture training (Cumberland College), Hazard Analysis Critical Control Point (HACCP) training (several community colleges), harbor management (several community colleges), and participation in Sea Grant sponsored events (e.g., *Coast Day*, hosted jointly with the Delaware Sea Grant College Program). Faculty at Member Institutions has also collaborated with NJMSC educators, especially in the area of minority outreach education, and in serving under-resourced communities.



Strategic Goal 2

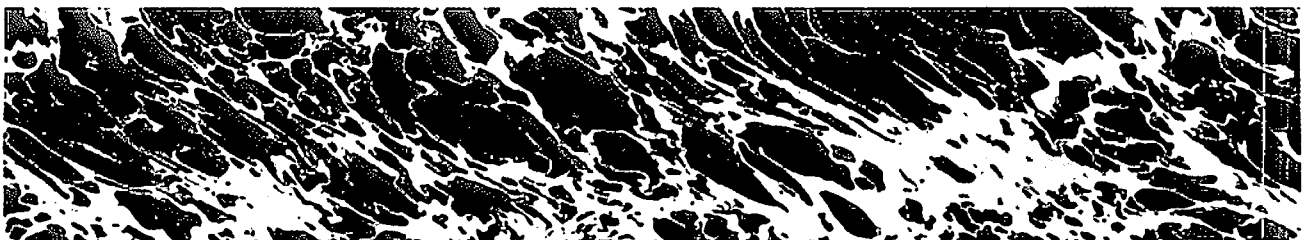
Identify Relevant New Jersey Coastal Issues and Seek a Balanced and Objective Response through Research, Education and Outreach

Why This Strategic Goal?

New Jersey is a coastal state, with 127 miles of shoreline and 17 of 21 counties bordering salt water. The highest population density in the United States is also found here. As a consequence, competition for living space and natural resources is intense, and will intensify further in the 21st century. New York/New Jersey Harbor and portions of Delaware Bay are highly industrialized and urbanized, and the less populated waterbodies, such as Barnegat Bay, are under increasing pressure from rapid development. “Common denominators” in the Comprehensive Conservation and Management Plans (CCMP) for New Jersey bays and estuaries are land-use practices, degraded water quality and quantity, aquatic habitat loss and alteration, eutrophication, harmful algal blooms, exotic species effects and multiple sources of contamination. Although progress is being made, beach closures, health advisories for seafood, and water quality contraventions continue to plague the viability of New Jersey’s coastal economy. What good are the finest beaches in the world if the water is neither swimmable nor fishable?

Although its coastal issues are as complex as any in the nation, the NJSGCP is the third smallest, in dollars, among the 29 Sea Grant Colleges. To have the most impact in addressing extremely complex coastal issues, New Jersey must make optimum use of its scarce federal dollars. Therefore, the *NJSGCP* must weight its efforts towards the very core of New Jersey’s coastal economy by addressing coastal ecosystem health through a focused and aggressive research, education and outreach campaign.

The *NJSGCP* addresses this challenge through its SGAB, and through various interactions with its state, private sector, and municipal partners. Wherever possible, *NJSGCP* interfaces its research, education and outreach agenda with that of its principal partners, including the New Jersey Department of Environmental Protection (NJDEP), to co-fund cooperative programs.



Strategic Goal 3

Increase Science Literacy in New Jersey, and Educate New Jersey Citizens to the Need for Balancing Sustained Economic Growth with Environmental Stewardship

Why This Strategic Goal?

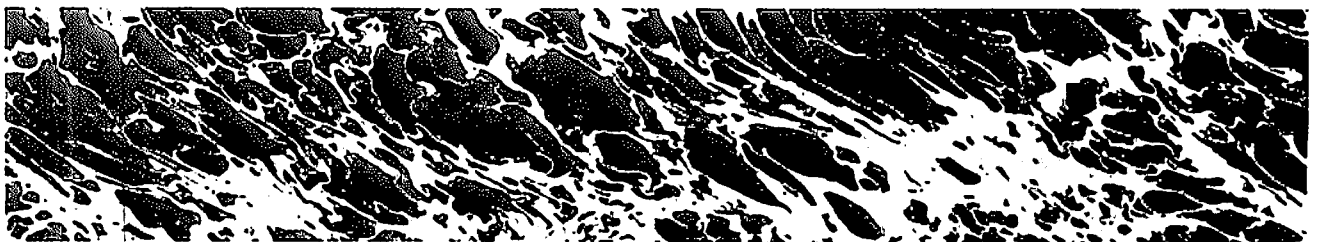
By mid-century, more than 75% of the nation's population will live within 50 miles (80 km) of a coast, while international commerce is expected to *triple* within the same period, with more than 90% of this commerce waterborne. Larger, deeper ports, more intensive use of coastal resources and living space, and ever-increasing pressure on natural resources will result. Managing growth, reducing conflict, creating sustainable uses, and promoting stewardship are the great challenges for coastal New Jersey in the 21st century. A sustainable New Jersey has a growing economy that provides equitable opportunities for satisfying livelihoods and a safe, healthy, high quality of life for current and future generations. New Jersey must protect its environment, its natural resource base, and the functions and viability of natural systems on which all life depends. Providing the public with objective third-party information and the tools to make informed decisions on coastal issues is a critical feature of New Jersey Sea Grant activities. The process begins with K-12 education and meeting New Jersey's Core Curriculum Content Standards in education through marine and environmental science. Family participation in NJMSC educational activities is critical.

Strategic Goal 4

Develop Sea Grant Extension Program (SGEP) Services to Support Research, Education and Technology Transfer

Why This Strategic Goal?

Throughout its history, New Jersey SGEP has lacked balance in addressing critical coastal issues in New Jersey. Despite laudable efforts in fisheries and aquaculture (its primary focus area), funding constraints have prevented SGEP from realizing its full potential, restricting its ability to fully participate in ports-maritime, coastal processes, and coastal ecosystem health issues. The *NJSGCP* has identified this Strategic Goal as key to the future construct of a fully-effective SGEP. Through a competitive grants process, NJMSC will seek out and recruit additional talent from its membership in the areas of Coastal Ecosystem Health and Coastal Processes. Once this grant is awarded, NJMSC will revisit its Memorandum of Understanding with its current extension partners, to build a larger pool of talent and framework for conducting Extension activities.



Strategic Goal 5

Forge Strong Ties with Civic Leaders, Legislators, the Media and the Public to Ensure Continued Public Support for Marine Science and Education

Why This Strategic Goal?

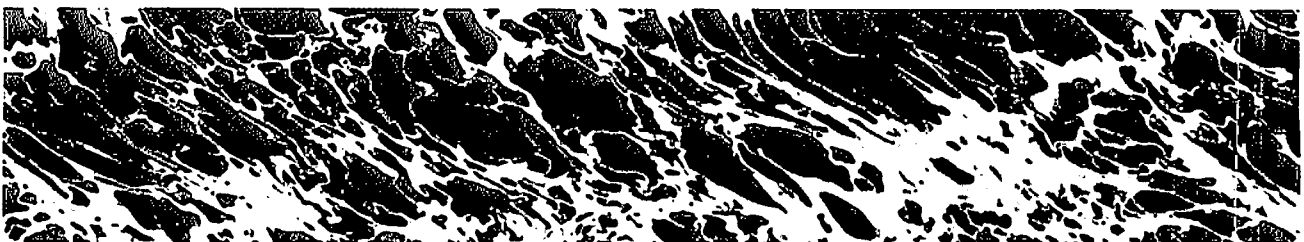
The future of Sea Grant rests in accountability and performance standards that meet taxpayer expectations. The *NJSGCP* must be a proactive partner with its public constituency to demonstrate its value-added skills in dealing with coastal issues. Public “buy-in” to New Jersey Sea Grant research, education and outreach is essential to the future impact of the program.

Strategic Goal 6

Develop and Implement Education Programs that Reach Broad Audiences and that Contribute to Science Literacy and Informed Decision-Making Among All New Jersey Citizens

Why This Strategic Goal?

Marine environmental issues are often technically complex and poorly understood by the general public. For example, the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET) cited recent declines in student performance in science relative to their international peers. The FCCSET also identified a generally low scientific literacy among the American public. Too few citizens understand the scientific principles and developing technologies that are essential to making responsible decisions affecting the environment and influencing governmental policies that have global implications. This concern is echoed in the *Plan of Action for Environmental Education in New Jersey*, which acknowledges the need to help adults and children understand their role in the environment and attain the knowledge, attitudes, values, skills and behaviors needed to maintain, protect and improve it. To meet New Jersey’s 21st-century goal of sustained economic development with balanced environmental stewardship will require a better-informed public. The *NJSGCP* will do its part to address these deficiencies in technology and information transfer to New Jersey citizens. This will include partnering with organizations with similar goals, such as the New Jersey Division of Fish, Game and Wildlife’s Office of Information and Education.



Strategic Goal 7

*To Engage New Jersey Sea Grant Education as a Resource
Partner in Support of Education Reform Initiatives in New
Jersey and the Region*

Why This Strategic Goal?

Our national habit of producing average students is inadequate to meet the extraordinary economic and social challenges we face today and in the future. The workplace demands a workforce that can solve problems, be flexible, and work in teams. Society demands a public that is knowledgeable and capable of informed decision making. The realization of this type of citizenry has become increasingly connected to high-quality public school education. New Jersey, along with the rest of the nation, has responded by drafting and adopting competitive standards and by initiating education reform initiatives. New Jersey and the surrounding region are poised for education reform and new approaches to education.

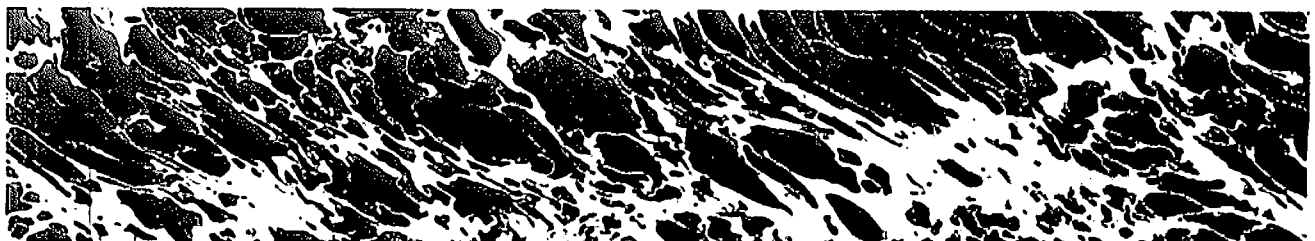
The marine environment offers an unparalleled educational resource for the reform of public school education. The harbors, bays, estuaries and ocean coastlines of New Jersey are important areas of scientific investigation and this investigation can (and should) become highly effective, multi-disciplinary areas of instruction for teachers and students statewide. Marine science education at all age and grade levels can support the realization of the core goals of education reform: science literacy, social responsibility, mathematical and technological power, and workplace readiness.

Strategic Goal 8

*Expand NJSJGCP Capabilities through Local and Regional
Private Sector, Municipal, and Government Partnerships*

Why This Strategic Goal?

The *NJSJGCP* is among the smallest in the nation. To have a meaningful impact in the marine affairs of New Jersey requires a proactive approach to increasing NJMSC's funding through competitive grants, and state, municipal and private sector partnership. By identifying common needs, NJSJG has successfully pursued resource partners to jointly address coastal issues related to watershed management, atmospheric deposition, wetland restoration, dredged material management and chlorination impacts from ocean outfalls. Such efforts are critical to the future impact of the program unless new federal funds are forthcoming. An important example has been the co-funding of nearly \$300,000 in cooperative atmospheric deposition research among NJSJG and the NJDEP's Division of Science and Research.



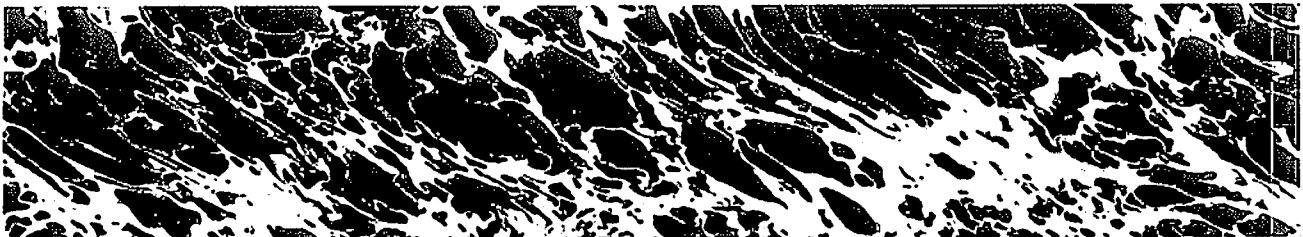
Actions for the Next Omnibus Cycle (2000-2002)

To address these Strategic Goals, the *NJSGCP* identified numerous actions for the 2000-2002 Omnibus Cycle, which are listed separately under Research, Education, Outreach and Communication. *The availability of federal Sea Grant funds will dictate the extent to which these actions can be implemented.*

Actions for Research

Long-Term (Ongoing):

- ✓ Broaden the base of competition and encourage multi-investigator, multidisciplinary research among Member Institution Principal Investigators to assure that the best research is funded
- ✓ Develop a *Sea Grant – State Agency – Private Sector Partnership* to address substantive issues identified by SGAB, NJDEP, and other resource agencies in the areas of dredged materials management, coastal processes and coastal hazard mitigation, non-point source pollution, fisheries and habitat restoration
- ✓ Facilitate participation in state-of-the-art scientific conferences, symposia, congresses, regional workshops, roundtable discussions and seminars to present research findings and interpretations to other scientists, managers and resource agency personnel
- ✓ “Track” the early careers of graduate students supported by Sea Grant funds through development of a relevant data-base
- ✓ Encourage Sea Grant Researchers to include Sea Grant Specialists and Extension Agents in their research programs to facilitate technology and information transfer
- ✓ Encourage Sea Grant Researchers to be public advocates providing unbiased third party information for decision makers, and proactively participating in public meetings, citizen advisory panels and management conferences
- ✓ Recruit Sea Grant Researchers *directly* into the process of technology transfer to the user community by their participation on advisory panels and industry sponsored seminars/workshops
- ✓ Work proactively with Sea Grant Researchers to incorporate their expertise and participation in outreach activities such as demonstrations of advanced technology at Sea Grant sponsored events



Short-Term (Annual):

- ✓ Convene an SGAB whose membership mirrors the broad constituency of New Jersey's coastal economy, and who will actively pursue a balanced spectrum of relevancy criteria for evaluating NJSR research (2000)
- ✓ Host a *Roundtable* with Member Institutions, the SGAB and State Resource Managers to identify issues and focus research funds in the area of greatest need (2000)
- ✓ Publish a *Research Directory* of Member Institution faculty to facilitate collaborations (2001)
- ✓ Develop at least one opportunity for the *NJSRCP* and local municipalities/counties to co-fund a project in a relevant area of Sea Grant research or outreach (2001)
- ✓ Develop electronic formats for Sea Grant Request for Proposals (RFP) and submission of proposals by the end of the next Omnibus (2001)

Actions for Education

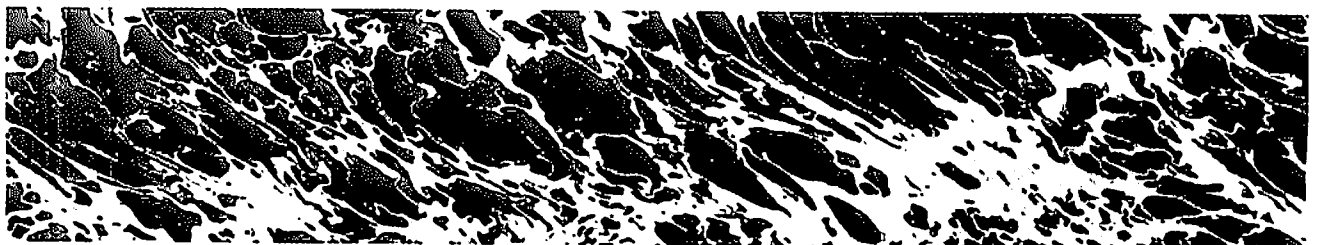
Long-Term (Ongoing):

Public Education:

- ✓ Assemble a *Speakers Bureau* and develop a Directory of *NJSRCP* researchers and SGEF personnel available to speak to formal and informal education audiences
- ✓ Add NJMSC web pages dedicated to profiling the members of the *Speakers Bureau*. These pages can support and extend on-site visits and serve as a distance-learning alternative to on-site visits
- ✓ Solicit municipal and legislative support for *A Partnership for Learning* which currently provides marine science education to under-resourced students solely through corporate financial support
- ✓ Involve more secondary schools in regional and municipal *NJSRCP* programs
- ✓ Work with Sea Grant Communications to strengthen outreach to media for education initiatives
- ✓ Offer and advertise Sea Grant Extension Program seminars and workshops to high school and college students, and K through 12 educators
- ✓ Prepare *Coast Day* exhibits to incorporate educational and research contributions from Member Institutions

Teacher/Leadership Training:

- ✓ Through Member Representatives and Principal Investigators, seek ways to integrate *NJSRCP* into pre-service education departments at each member campus
- ✓ Explore possibility of distance-learning as a support or alternative to on-site field programs



Educational Reform:

- ✓ Develop a marine and environmental sciences *Tool Kit* (of resource materials) that will support education reform initiatives in New Jersey
- ✓ Compile and distribute a *correlation matrix* between NJMSC education programs and New Jersey's Core Curriculum Content Standards in *all* subject areas with emphasis on statewide proficiency tests.

Student Education/Recruiting:

- ✓ Recruit students from Member Institutions into co-op programs for field instructors and interns

Community Involvement:

- ✓ Promote and expand education programs for families and informal groups
- ✓ Expand partnerships in education reform efforts such as the New Jersey Statewide Systemic Initiative (NJSSI) and Operation Pathfinder

Short Term (Annual)

Public Education:

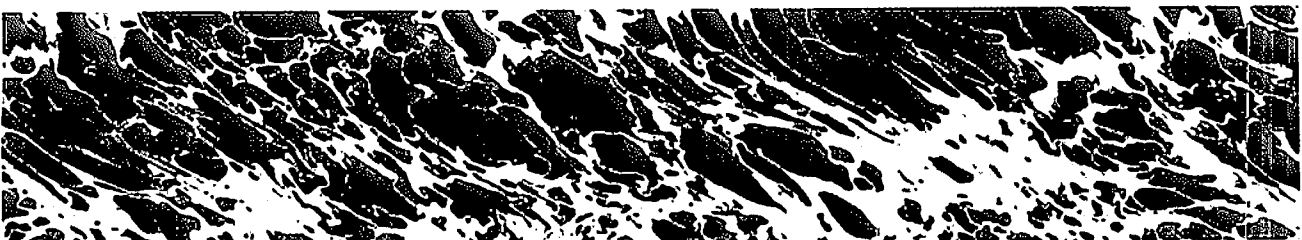
- ✓ Expand NJMSC's *A Partnership for Learning* to include more under-resourced communities, schools, teachers, parents, and children (2001)

Teacher/Leadership Training:

- ✓ Seek intellectual and financial support to assemble *Tool Kits* geared towards teaching coastal sustainability in K-12 settings as well as informal education venues (2000)
- ✓ Develop annotated *Web-Liographies* to assist teachers in using the Internet to introduce web-based information on coastal issues into their classrooms (2001)
- ✓ Develop and offer two standards-based workshops for professional educators that are topically based in marine and related environmental science (2000)
- ✓ Conduct two professional development seminars in *Coastal Sustainability* for NJMSC field instructors, who in turn will work with school, scout, family and other groups (2001)

Education Reform:

- ✓ Offer two professional development seminars for staff instructors in co-operative learning, mixed-ability grouping, cross-disciplinary lessons, thematic learning units and integration of real-world problems into science instruction (2000)



Actions for Outreach

Long-Term (Ongoing):

Public Outreach:

- ✓ Develop www.njmssc.org and its hyperlinks as vehicles to disseminate results of member institution research to diverse audiences
- ✓ Develop three *Traveling Exhibits* that address Coastal Ecosystem Health and Coastal Processes issues
- ✓ Expand *Coast Day* as a primary vehicle for showcasing the commercial/recreational fishing and aquaculture industry in New Jersey
- ✓ Work with the research community to develop two fact sheets and two bulletins on three coastal issues and/or problems that can be used by teachers in the classroom and the general public
- ✓ Prepare two *posters*, one with a sustainability theme, and one with a fisheries theme targeted at various user groups

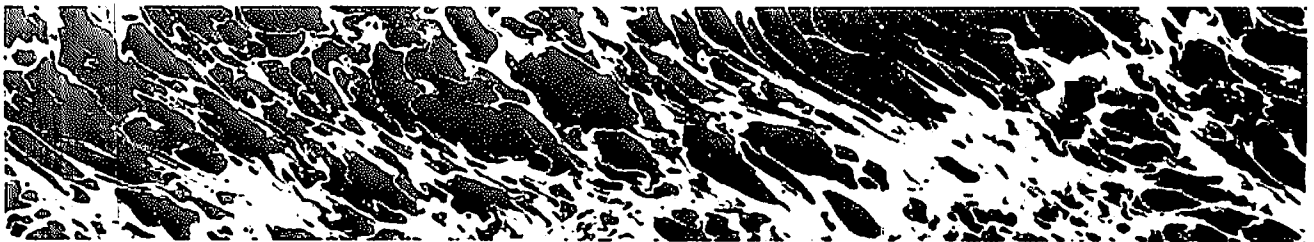
Regional Partnerships:

- ✓ Increase SGEP efforts in regional Sea Grant programs by building strong ties with the mid-Atlantic Sea Grant Extension Network and other Sea Grant Networks
- ✓ Strengthen traditional Extension activities in commercial/recreational fishing and aquaculture through in state partnerships with the Department of Agriculture, counties, NJDEP, and the Office of Science and Technology
- ✓ Participate in regional Sea Grant outreach/education programs to build a regional constituency (e.g., non-indigenous species)
- ✓ Strengthen the partnership with the Delaware Sea Grant College Program to make *Coast Day* a major science education event in the region

Short-Term

Public Outreach (Annual):

- ✓ Host an *Open House* with Sea Grant Principal Investigators, Sea Grant Extension, Sea Grant Education and local civic and municipal leaders to present findings and applications of Sea Grant research to the user community (2000)
- ✓ Develop a *CD-ROM* to promote the concept of Sustainable New Jersey (2001)
- ✓ Prepare a *Coastal Hazard Mitigation Manual* that will provide the coastal community with up-to-date technical information regarding natural and man-made impacts to the shoreline and alternative solutions to erosion and flooding problems (2000)
- ✓ Develop a trifold brochure for distribution to the research community that describes SGEP's mission, priorities and goals for technology transfer of Sea Grant research to the user community and general public (2000)



- ✔ Form a *Sea Grant Advisory Council* to develop and prioritize a list of coastal issues and challenges to be addressed (2000)
- ✔ Develop a glossy brochure on *New Jersey — The Coastal State* for the general public (2001)

Research Coordination:

- ✔ Prepare an *SGEP Planning Document* with assistance from Sea Grant Specialists — Agents, SGAB, and various Member Institutions — that incorporates coastal issues into an overall comprehensive and balanced outreach program (2000)
- ✔ Host an informal half-day meeting to introduce New Jersey SGEP personnel to the member institution research community and SGAB, and summarize the content of New Jersey *SGEP Planning Document* (2000)

Actions for Communications

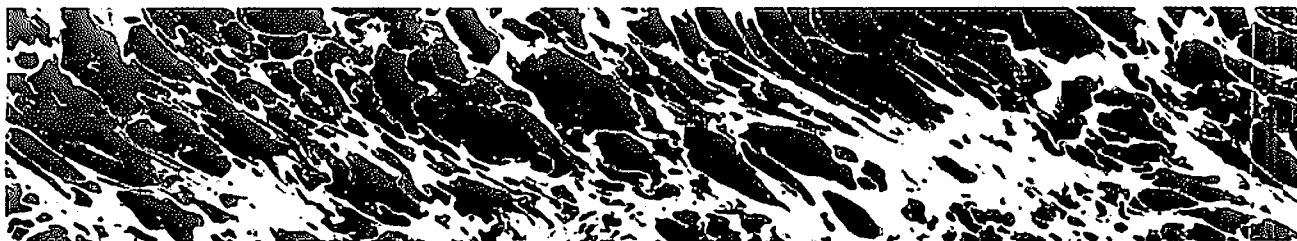
Long-Term (Ongoing):

Public Surveys

- ✔ Conduct an annual survey through various Sea Grant media (*ShoreLine* quarterly newsletter, at special events, and on www.njmssc.org) to identify marine and coastal issues that are public priorities
- ✔ Develop a *database* from newsletters, journals, annual reports, etc., produced by coastal organizations and state agencies about current marine and coastal issues, activities and legislation

Media

- ✔ Document the quality of *NJSGCP* research through a periodically published database of peer-reviewed articles, books and monographs
- ✔ Maximize the use of computer technology by improving and maintaining information access and making more program resource materials available on www.njmssc.org
- ✔ Develop a quarterly *JerSea Journal* to update local, state and federal legislators and managers about program activities, events and relevant marine and coastal issues affecting the state and the region
- ✔ Meet quarterly with New Jersey SGEP personnel to review project status and update needs for Communication services
- ✔ Increase the diversity and breadth of research and topical articles from Member Institution representatives and researchers, and the stakeholder community to improve the quality of NJSG's *ShoreLine* quarterly newsletter and other special publications
- ✔ Develop at least one high-profile event each program year (e.g., an *OP-SAIL 2000* — *R/V* cruise or facilities tour or meet-the-press reception) for civic leaders, legislators and the media



Cooperative Partnerships

- ✓ Enhance media relations and contacts by issuing more frequent press releases and media advisories, and developing an electronic means of notifying and inviting targeted constituent groups to appropriate meetings, events, etc.
- ✓ Develop a bi-annual *Coastal Explorer* newsletter geared toward educators that focuses on NJMSC programs

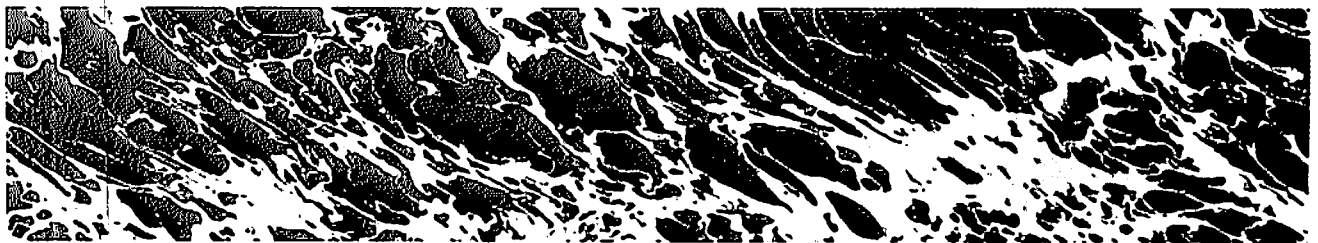
Short-Term (Annual):

Media

- ✓ Develop a questionnaire for distribution to Principal Investigators during the implementation phase of their research to more effectively prepare for dissemination of research results (2000)
- ✓ Complete the Central and Northern New Jersey *Ecotourism Guides* to promote conservation and sustainable uses of natural, cultural and heritage resources throughout the state (2000)
- ✓ Prepare a *Media Contact Kit* for Sea Grant Research, Education and Outreach activities (2001)
- ✓ Develop a *Marketing Brochure* that features NJMSC personnel and resource capabilities, and profiles successful joint ventures (2000)

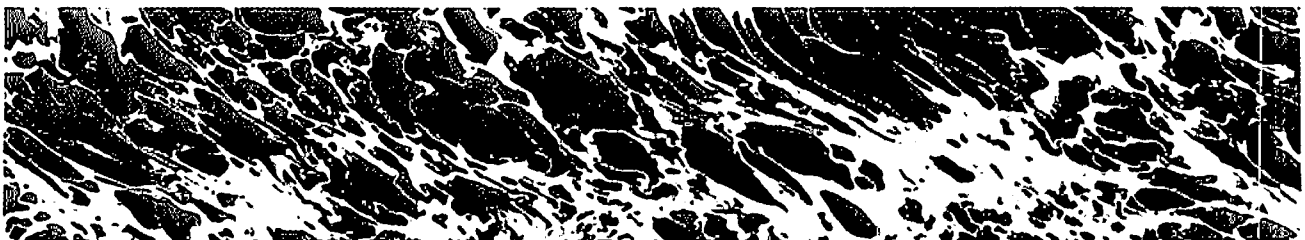
Expected Impacts from Strategic Plan Implementation

- ✓ *NJSGCP*-funded research is increasingly applied in practical ways by coastal stakeholders and decision makers
- ✓ Communities, resource agencies and the general public are increasingly aware of the capabilities of the NJMSC and its *NJSGCP*. NJMSC's pool of expertise is rapidly becoming a statewide resource for addressing coastal problems
- ✓ NJMSC is increasingly visible as a partner and participant in coastal issues, and coastal dredged materials management, coastal processes, coastal hazard mitigation, watershed management, habitat restoration, contaminant reduction, fisheries ecology, and shellfish aquaculture
- ✓ NJMSC faculty and staff become state-wide leaders in minority education outreach, promoting sustainability through K-12 and adult education, and contribute substantively to improved science literacy and informed decision-making in New Jersey
- ✓ State legislators, municipal government, and multiple-stakeholders increasingly call upon NJMSC and its resource base for information and technical assistance in addressing regional coastal issues



- ✓ NJMSC and its *NJSGCP* contribute substantively to science based management policy and coastal sustainability in the region
- ✓ By reconstituting its outreach program, the *NJSGCP* can incorporate new talent into the program from the Stevens Institute of Technology and the Institute of Marine and Coastal Sciences at Rutgers University. Both institutions are leaders in the conduct of long-term field investigations of nearshore and coastal impacts
- ✓ NJMSC faculty and staff are increasingly visible as active partners in local, state, and national education reform efforts

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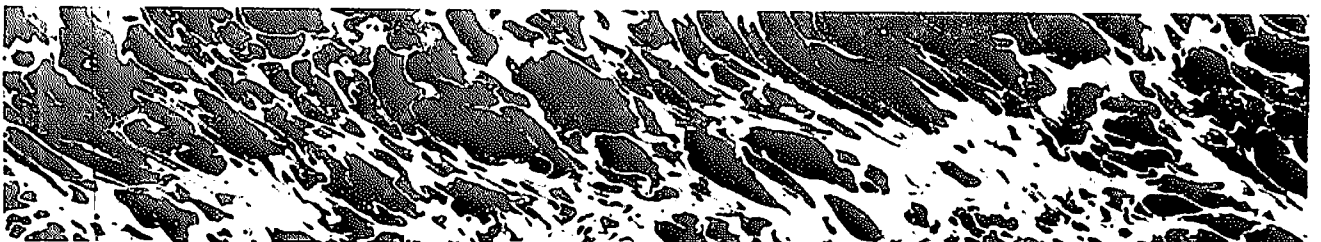


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*New Jersey Sea Grant
College Program*

**New Jersey Marine Sciences Consortium
Sandy Hook Field Station, Building #22**

Fort Hancock, NJ 07732

Phone: (732) 872-1300

FAX: (732) 872-9573

<http://www.njmsc.org>

