

ANNUAL REPORT ON ACCOMPLISHMENTS AND ACTIVITIES
OF THE SEA GRANT EXTENSION PROGRAM IN NEW YORK

January - December 1978

INTRODUCTION

This report summarizes activities and accomplishments in coastal zone management, coastal protection, recreational access, tourism, consumer fish utilization, commercial fishing, seafood processing and youth education program areas. It is not a complete compendium. It is neither desirable nor possible to fully describe the more than 400 meetings and more than 102,000 direct audience contacts made during 1978 (90,100 by Sea Grant staff and 11,900 by County Cooperative Extension staff). Rather, selected activities and accomplishments are included to indicate the nature of program directions during 1978. Detailed background information and situational analysis for the major program areas are not included. These may be found in the 1978 Situation Statement and Program Plan. Each of the eight major program areas plus campus-based support and program leadership is described briefly and selected events listed.

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A. COASTAL RESOURCES MANAGEMENT

This area includes activities directly related to the State's Coastal Management Program and general coastal resources management considerations. As such, it includes information activities related to coastal issues and appreciation as well as assisting with public involvement in coastal management proper.

1. Activities Related to the N.Y.S. Coastal Management Program

The proposed formal structure for coastal management in New York relies on involvement of local governments. Extension and Sea Grant staff throughout the coastal regions are being turned to by local governments for objective information on coastal management. Sea Grant helped meet that need by developing a Coastal Zone Management Manual for staff. To date, 13 Sea Grant and Extension staff in 11 coastal counties are using the manual which includes information on the origins of CZM and the programs specific to New York.

The technical expertise of Sea Grant specialists has been recognized by the New York Coastal Management Program (CMP) and local CZM units. Current drafts of legislation for shoreline erosion control under the CMP reflect the technical reviews of Sea Grant Extension staff. Similarly, a Sea Grant specialist serves on the Power Plant Committee of the Erie-Niagara Regional Planning Board CMP.

Sea Grant also conveys information on the CMP to groups potentially influenced by the program. For example, a special Marine Trades Flyer highlighted portions of the CMP relative to marina operators and other marine trades interests. This supplemented a presentation to 35 members of the Western New York Marine Trades Association. Similarly, the New York City Department of City Planning was provided information on the interactions between the CMP and marine development. Assistance also was provided other public education groups such as when the St. Lawrence County League of Women Voters was helped in reinitiating their Coastal Management Program.

Because the potential influences on our clientele are significant, permission was granted the New York State CMP to purchase pages in three issues of our newsletter "Coastlines" to describe their program. While no endorsement of the CMP program was or should have been given, the information provided informed our 3,000 readers of current progress in coastal planning.

2. Coastal Issues and Resource Appreciation

In many cases, lack of familiarity with coastal resources limits the ability of local governments to manage them appropriately. The educational tour is a time-tested approach to situations of this type. Sea Grant assisted Suffolk County Extension in conducting a land use tour for 40 planners, local government officials and college students with emphasis on Westhampton Barrier Island erosion problems. Braddock's Bay, near Rochester, is under heavy recreational and development pressures and received special emphasis by the State CMP. As part of a day-long conference, a tour was arranged for 23 state and local government and community group leaders resulting in better understanding of the resources and interests involved among all attendees. A State CMP staff member who had written the special section on Braddock's Bay also attended and saw the area for the first time. As a result of this conference, management guidelines for Braddock's Bay now more accurately reflect the views of local user groups.

Educational programs on coastal issues ranged from sand and gravel mining in New York Harbor to winter navigation on the St. Lawrence. In the former, Sea Grant conducted a meeting between a representative of the N.Y.S. Office of General Services, which has jurisdiction over offshore resources, and Sea Grant and mining researchers to review the concept of combining sand mining and dredge spoil disposal activities. Early indications are that this combination of an industry need and a harbor maintenance problem might be feasible. In a related effort, Sea Grant met with the Sandy Hook Pilots Association to assess the possible integration of sand mining with harbor improvement projects.

Year-round navigation is a topic of interest and concern to many St. Lawrence Valley residents. Sea Grant provided assistance to the Great Lakes Tomorrow organization in arranging a series of public meetings on dual lock systems for the St. Lawrence, a requirement for extended navigation, which were attended by 100 people. In addition, Sea Grant conducted two programs on extended navigation on local radio stations.

Waterfront redevelopment is a major emphasis of our N.Y.C. program. This work involves both community groups interested in the waterfront and governments and agencies with waterfront jurisdiction. For example, the first Waterfront Committee of a Community Planning Board in N.Y.C. was established with Sea Grant helping its leadership identify potential roles. Other groups appraised of waterfront redevelopment options included the Hudson Harbor Preservation Committee, the N.Y.S. Maritime Museum, the Rouse Company and several Community Planning Boards. The new Sea Grant film, "New York City's Waterfront Legacy", which was sponsored by a local commercial enterprise, proved useful for initiating discussions with groups such as the Brooklyn Office of City Planning. The N.Y.C.

Department of Planning has drafted a proposal with assistance from Sea Grant to develop sites for fisheries related industrial development.

Over the long run, one of the most effective ways of addressing coastal issues is helping local interest groups become more viable. For example, the St. Lawrence County Environmental Management Council staff were trained in procedures for conducting effective public education programs.

3. New York Bight

The water and lands underlying the Atlantic Ocean between Long Island and New Jersey are of extreme importance. In recognition of this fact and the extreme developmental pressures on these waters, the Marine Ecosystems Analysis (MESA) New York Bight Project was initiated in 1974. This project has and continues to supply extensive research information on the Bight. In 1978 an advisory project was initiated to extend this information to those influenced by critical issues in the Bight area.

The MESA program, like any effective extension program, requires active feedback of clientele needs to the research base. Top priority environmental issues of over 40 local government, environmental, and fishing organizations were reported back to the New York Bight MESA staff for this purpose.

Initially, major emphasis was placed on familiarizing specific audiences with MESA research efforts. Contact was made with local town and county governments, fishing councils such as the Long Island Fishermen's Association, the Mid-Atlantic Fisheries Council, environmental groups such as the League of Women Voters, Group for America's South Fork, and planning councils such as 208 boards and Marine Resources Council. These activities have helped to strengthen the local communication network.

A second emphasis was placed on promoting general audience awareness of, and participation in existing New York Bight water pollution problems. Presentations were made to fifty Hofstra University and Nassau Community College students, thirty U.S. Coast Guard Auxiliary members, twenty-five members of local shellfish and finfish advisory councils expressing New York Bight problems. Twenty-four students from New York City secondary schools were shown the film "The Seventh Service" and had oceanography careers discussed with them at the New York Aquarium.

A permanent display was set up in the Flushing Meadow Hall of Science depicting MESA research efforts and a variety of oceanographic techniques involved in water pollution control. This display is viewed by some 400 to 2,000 K-12th grade students daily.

A three-part series entitled "Troubled Waters--the New York Bight" was prepared and appeared in Coastlines. This article resulted in a large number of requests for further information on New York Bight problems.

Additional activities included: preparing an alert card designed to assist fishermen, divers and others in reporting illegal dumps of toxic substances; two articles on reporting illegal dumps and one on MESA/Department of Energy research on pollution appeared in the "Long Island Fisherman"; and water pollution problems were discussed at a Boy Scout Jamboree attended by 6,000 Boy Scouts.

4. Example Anecdotes

Orleans County (along Lake Ontario) officials had elected not to participate in the State CMP. After the officials received a number of inquiries from citizens concerned about how the program might influence them without county participation, Sea Grant was asked to provide information on CZM. Several meetings with local officials and interested citizens resulted in an invitation to State CMP employees to come to the county and discuss how the county might participate. Sea Grant neither advocated nor discouraged participation in the CMP yet helped the county reach their decision.

Community awareness of coastal resources can be a slow, cumulative process. Two years ago, Sea Grant assisted local groups in the Dunkirk/Fredonia area (Lake Erie) conduct a "Coho Day" workshop. In 1978, the success of "Coho Day" prompted the community to conduct a series of related events packaged as the "Lake Erie Festival". Sea Grant assisted the area Chamber of Commerce and ten other community groups involved in the planning conduct an evaluation of the event. The "Festival" is likely to become a permanent event. Many educational events are combined with entertainment and activities such as a coastal photography contest to give a high emphasis on the Lake, its resources and its importance to local communities. Spin off effects are starting to occur, such as a six week Coastal Photography Course sponsored by the Chautauqua County Arts Association and the Dunkirk Continuing Education program. Sea Grant cannot claim to have generated solely the Festival or its spinoff effects. It brought community groups together and taught them how to cooperate effectively. The end result is a public more informed and appreciative of coastal resources and community businesses and groups who have "discovered" each other and the benefits of working together.

B. COASTAL PROTECTION

Shoreline erosion causes severe physical and economic damages along both of New York's coasts. With thousands of shoreline property owners, both private and public, we must use contacts with governmental bodies and the industries associated with coastal protection to multiply our efforts in this area.

1. Contacts with Governmental Bodies

Representatives from twelve county, city and town planning or resource management groups received information on spring flooding and erosion along the Great Lakes, use of recession rate data for planning regulations, harbor protection options, vegetative and structural protection options. For example, consultations with the Urban Waterfront Advisory Committee in Buffalo and the Barcelona Harbor Commission resulted in the former deciding not to construct a floating tire breakwater (FTB) and the latter to construct one. Followup with the Urban Waterfront Advisory Committee resulted in initiation by the Specialist involved of a small research project to identify additional protection options and management alternatives. Current N.Y.S.G. research data on FTBs was very helpful in these decisions. In the case of the Wilson Town Board (Lake Ontario), insufficient data existed to determine whether the sediment blocking access to new recreational facilities was resulting from littoral transport or the stream itself. A small research project initiated by a Sea Grant specialist identified the source and allowed the town to continue planning a remedy.

Particularly along the Great Lakes, information on causes and effects of erosion is limited. All parties involved with research, education and regulation of erosion related factors need to exchange available information thoroughly. Such exchange was initiated by Sea Grant involving the International Joint Commission, Corps of Engineers and the New York Coastal Management Program.

2. Contacts with Shoreline Owners

No matter how informed the local governmental units become, most of the decisions on shoreline protection take place at the individual landowner level. In efforts to encourage wise decision making, many direct contacts are made with shoreline landowners.

When possible, these contacts are made through shoreline property owners association for efficiency. Groups such as the Shoreham Shore Property Owners Association, Lake Ontario South Shore Council, Niagara/Orleans Shore Protection Association, Sodus Bay Waterway Association, Far Rockaway Preservation and Restoration Council, Moriches Inlet Stabilization Committee, Sea Gate, Silver Beach, Oak Beach and Fiddler's Green Property Owners Associations with combined memberships of over 11,500 and shoreline ownership of over 70 miles provide effective forums for dispensing information on appropriate shoreline protection measures. Local media coverage of contacts with Associations often multiplies their effects even further. In some cases, more specific assistance is requested. The Niagara/Orleans Shoreline Protection Association asked Sea Grant to review a technical paper which explained Niagara River water level data published by the International Joint Commission (IJC). After the review, the Association was able to ask the IJC for clarification on specific points.

More than 560 contacts were made with individuals involving topics such as alternatives for shoreline protection, bulkhead design, casualty loss claim procedures, repair to existing structures, permit application procedures, floating tire breakwaters, use of gabions and sandbags, etc. Many individuals are reluctant to try a particular protection alternative unless it has been proven effective in their area. To that end, demonstration projects involving a tube sill constructed of sand-filled filter cloth on Long Island and vegetative bluff stabilization plots along the Great Lakes were established to provide "local proof".

Written materials on shoreline protection options often are used to replace, supplement or followup individual or group contacts with shoreline landowners. Over 125 landowners who had received materials from Sea Grant over the past several years were surveyed by mail questionnaire to determine the adequacy of these materials.

When possible, the media is used to supplement individual contacts. For example, a 30-minute television show in Rochester not only provided much useful information on Lake Ontario level regulation but also prompted the Corps of Engineers to request assistance from Sea Grant in upgrading their public education efforts. Along the Great Lakes, a local reporter developed a movie on erosion control drawing heavily from materials written by Sea Grant.

When new shoreline protection information becomes known, the formal conference can be an effective way of exchanging current experiences and data. At a June 1978 conference related primarily to design and effective use of floating tire breakwaters (FTBs) more than 40 participants, including shoreline owners, regulatory agency representatives and researchers exchanged the most recent information on design and application of FTBs. A tour to the Dunkirk Harbor FTB where local community leaders shared their views provided a clear tone of practicality to the conference. As a result at least three parties attending indicated alterations in their plans for FTBs. Also associated with the Conference was a half-day training session on FTB education for 9 Sea Grant personnel from five states. In addition, a slide program and bulletin on FTBs were produced for use by Sea Grant staff and others who help people assess if FTBs can be used effectively in their coastal regions.

3. Contacts with Marine Contractors

Structural shore protection devices are only as good as the skills of the designers/construction contractors that complete them. On Long Island, the Marine Contractors Association helps to maintain quality of construction. Sea Grant has worked with the Association to exchange current information on construction techniques and materials. For example, Sea Grant arranged for a gabion manufacturer to give a presentation at the Association's monthly meeting. Also, ten contractors toured different erosion control structures with Sea Grant staff. Several were impressed enough with the rock bulkheads they saw, not typically used by contractors, that they have recommended rock to homeowners.

There is no Marine Contractors Association along the Great Lakes. As a result, there is no simple mechanism for exchanging current information or for assuring quality construction. Sea Grant initiated discussions with upstate coastal contractors to see if an association is desirable for them.

4. Example Anecdotes

Many protective structures on Long Island are constructed of wood, particularly bulkheads. Contractors expressed concern that the quality of preservative impregnated wood building materials was variable at best. Sea Grant arranged for the Eastern Division Engineer of the American Wood Preserver's Institute (AWPI) to tour protection construction along Long Island's shore. Subsequently, the Institute requested the Sea Grant specialist involved to speak before their national governing board, to write an article on bulkhead construction for their monthly magazine and to assist them in developing a model bulkhead construction code for local government. Also, AWPI and Sea Grant are cosponsoring a seminar on treated wood for Long Island contractors and engineers.

Poor drainage of excess groundwater recently has been documented as a primary cause of bluff erosion along the Great Lakes. Shoreline owners who assumed wave action to be the primary cause of recession have often resorted to costly yet ineffective wave protection. Sea Grant has delivered this new information through a fact sheet, slide show, individual site visits and tours. In one site visit, a Lake Erie shoreline property owner was considering spending \$20,000 to move his house back from the bluff's edge. Instead, he has chosen to try vegetative and drainage procedures at an approximate cost of less than \$1,000. During one bluff stabilization tour for 13 property owners, 7 indicated they would alter vegetation on their bluffs while three others are exploring subsurface drain installation as a joint project.

The channel connecting Braddock's Bay to Lake Ontario became dangerously shallow two years ago. A dredging project was initiated to alleviate the problem. The agencies involved requested that Sea Grant monitor the effectiveness of the effort. Sea Grant identified researchers and helped design the monitoring project. The results will be used this year when dredging again occurs to decide the site most appropriate for spoil disposal.

C. COASTAL RECREATION

Three primary emphases of the coastal recreation program are community and government response to recreation access, recreation opportunity education and recreational facilities.

1. Community and Governmental Response

Town, county and regional government officials in four counties along Lake Ontario were informed of recreational access trends in the area and resulting implications through public meetings, news articles and consultation with local governments. Results included: a resolution by one county board of supervisors in support of development of two state launch facilities, and county property; the Department of Environmental Conservation is considering purchase of property along a popular fishing creek in the same county; a recommendation was made by another county's planning board that two access sites be studied, subsequently resulting in construction plans for 1979; and a small angler facility is being provided by a power utility. In Monroe County (Rochester area) the county government established a Recreational Fishery Advisory Board and specifically requested that Sea Grant provide clerical and advising assistance during its formative period. Other contacts relative to access potential included regional and state Fish and Wildlife Management Boards, the N.Y.S. Office of Parks and Recreation and the New York Conservation Council.

In some cases, the information required by local governments is very specific. For example, Sea Grant provided information on environmental impacts of motor boating, alternatives for water surface zoning, and the potential economic impacts of the expanded sportfishery in Lake Ontario as an advisor to the Irondequoit Bay Coordinating Committee. Recognizing that information on the latter point was limited, a Sea Grant specialist conducted a survey of 1978 Lake Ontario Salmon and Trout Derby participants. The information is being used by communities planning similar events and to help groups and decision makers identify and consider the socioeconomic impacts of the fishery.

On the marine coast, waterfront recreational access is severely limited within Metropolitan New York. Recreational potential of local waterfront property was explored with several Community Planning Boards, the N.Y.C. Parks Department, religious leaders in the Gramercy area of Manhattan, the Citizen's Union, the National Maritime Historical Society, and the N.Y.C. Department of Ports and Terminals. The latter is actively considering marina development on its lands. One Community Planning Board has requested the Sea Grant specialist to serve as an advisor while another is seeking funding for rehabilitation of the East River promenade through a proposal developed with assistance from Sea Grant.

2. Recreation Opportunity Education

Participation in many recreational activities is limited because potential participants lack necessary awareness, knowledge and skills. Winter recreation is particularly limited along the Great Lakes. In cooperation with a Rochester TV station, Sea Grant developed five 15-minute TV segments about winter recreational activities on the lakeshore. These were aired by the station and viewed by 26,000 people. Radio shows and news articles on cold water survival supplemented the television shows. Also involving safety, the Rochester Red Cross received assistance in identifying recreation related groups and businesses for planning their water safety education program.

Sport fishing is of major importance along the Great Lakes. A salmon fishing seminar cosponsored by Sea Grant and a fishing association was attended by over 1,600 people. At this event, Sea Grant and Monroe County Extension staff at the seminar conducted educational programs on identifying fish and trimming them to reduce contaminants. In a related effort, 650 "Angler's Information Packets" of educational materials were distributed to sportsfishermen as a result of news releases and radio spots. Sea Grant also cosponsored a Lake Ontario fishing seminar with Niagara County Cooperative Extension, the Lake Ontario Trout and Salmon Anglers Association and the N.Y.S. Department of Environmental Conservation. Over 650 persons attended.

Statewide tourism promotion programs clearly have a large potential for promoting recreational use of New York's coastline. Until recently, little emphasis was placed specifically on water-related recreation. Sea Grant brought together representatives of the State Division of Tourism, private marine trades and fishing tackle interests to discuss opportunities for promoting water recreation.

Obviously, the pool of potential coastal recreationists is very large. We therefore work with other organizations such as those mentioned above to the largest extent possible to multiply our efforts. In some cases, Sea Grant has helped other organizations "get on their feet". Working again with Niagara County Cooperative Extension, a fledgling salmon anglers club was brought together with a well established Rochester Club to exchange organizational problems and solutions. Specific information on scuba diving and making egg baits was packaged in two fact sheets and distributed through appropriate organizations.

The dependence of waterbased recreation on environmental conditions results in a need for current weather, wave, water temperature and facilities condition information. For several summers Sea Grant has conducted a regular series of radio spots entitled the "Lake Erie Recreation Report". A breakthrough occurred in 1978 when the radio station involved assumed responsibility for assembling the report and a state agency agreed to provide current fishing information directly to the

station. Similarly, a Buffalo radio station now carries fishing reports for Lake Erie along with its previously existing Lake Ontario fishing report as a result of contacts by Sea Grant. This report is broadcast to twenty-two counties in Canada, New York and Pennsylvania.

3. Recreational Facilities

Assuming that recreational opportunity exists and the "public" is aware of that opportunity, lack of adequate facilities can be a limiting factor. Sea Grant assists both private and public providers of recreation by providing technical information on facilities design.

Much of the consultation described above with communities relative to access development logically includes emphasis on facilities design. A more unique example was when Sea Grant provided the New York City Department of Planning with information on vertical boat storage facilities for incorporation in a recreational complex being planned for Red Hook, Brooklyn. Also, information on proper design of boat launching facilities was obtained from Michigan's Department of Natural Resources and provided to the Monroe County Parks Department and a neighborhood association.

Over 200 contacts were made with marine trades enterprises relative to marina operations, lake levels, boating survey information, dock design and use of vegetation for visual and pedestrian barriers. Information on the last point, alternative plant species for barriers, was provided to a marina operator while he was preparing a permit for expansion of his facilities. Subsequently, a representative of the regulatory agency involved commented that this information had played a key role in determining that the permit should be issued.

Naturally generated damages such as erosion, corrosion and ice and wave damage plaque operators of marina facilities in New York. Sea Grant conducted a conference in which over 70 marina operators, dealers, resource management officials and marine facilities manufacturers became familiar with the latest methods and equipment for controlling such naturally generated damages.

4. Example Anecdote

Rochester Harbor has a long history as a center of commerce for Western New York. In recent years, however, land transport has made the harbor commercially unimportant. The city and surrounding communities are now considering alternative uses for the protected harbor, including recreation. Recognizing the many diverse and sometimes competitive interests in the harbor, Sea Grant sponsored the "Rochester Harbor Symposium: Prospects in Recreational Use and Development." Sixty individuals were able to discuss the pros and cons of recreational development. A representative of the Federal Office of Coastal Zone Management was present and indicated that the program was useful in conceiving, planning and evaluating an urban-oriented recreational emphasis in CZM. Also, as a result of the symposium, the Buffalo Office of the Corps of Engineers contacted Sea Grant and said that the interest and questions posed at the Symposium prompted them to 1) print an explanation of their harbor maintenance policies, 2) re-evaluate their harbor use/development priorities and maintenance program, 3) encourage Sea Grant to hold similar programs on Oswego, Ogdensburg and Buffalo Harbors and 4) ask for local support for the inclusion of public fishing facilities in rehabilitation of harbor breakwaters.

In the months following the Symposium, one new recreational access site was developed in the Harbor. At the official dedication, Governor Carey recognized the Sea Grant specialist involved for his efforts relative to awareness of need for recreational access development.

D. TOURISM

Tourism is a program area in which a substantial portion of efforts are in direct cooperation with other Extension staff. Since there is no formal recreation and tourism program within Extension, Sea Grant Specialists have worked together with Community Resource Development Specialists to provide support for county efforts.

1. Activities in Cooperation with Other Extension Staff

A Sea Grant specialist arranged and conducted two inservice training workshops on tourism and tourism education projects for 22 Cooperative Extension staff. Subsequently, Extension staff in seven counties were assisted in planning local tourism education programs. In one project, jointly funded by Sea Grant and St. Lawrence County, 55 persons completed a course entitled "You and Your Business" in which small business operators learned basic management principles. Material support for Sea Grant/Cooperative Education education programs was provided by two Sea Grant fact sheets on community information services.

2. Direct Teaching by Sea Grant Staff

Chambers of Commerce are one of the obvious audiences for tourism education programs. In addition to individual consultation on tourism promotion, planning and evaluation, 35 chambers were provided information on topics such as tourism and community development, package tours and example programs from other areas of the State. Work with individual Chambers ranged from assisting in design and evaluation of a fishing derby to cosponsoring a "Keys to Selling Success" program. This latter also involved the Small Business Administration and the State University College at Potsdam. Of the 40 attendees, 22 were able to identify specific changes they would make in their business operations as a result of what they had learned. In another project a team of MBA students at Clarkson College who had been advised by Sea Grant presented a tourism master plan study for Barnhart Island recreation area to the Massena Chamber of Commerce.

Contacts with groups other than Chambers included a presentation to the St. Lawrence County Economic Development Council on stimulating tourism. This presentation was taped and rebroadcast on a local radio station. Presentations also were made to a Jefferson Community College tourism class, the Thousand Islands International Council and the Joint Assembly Standing Committee on Commerce, Industry and Economic Development. One specialist serves on the Northern New York Tourism Project and Jefferson Community College Advisory Boards, while two specialists serve on the Advisory Board of the Seaway Trail Tourism Association.

3. Example Anecdotes

Tourism information is limited in New York resulting in little basis for educational programs on tourism promotion and market segmentation. In recognition of this limitation, the Sea Grant specialist for the St. Lawrence Valley region initiated a Quick Response Research Project entitled "The St. Lawrence Seaway Tourism Survey". This grant of \$1,500 from Sea Grant was matched by \$11,700 of contributions from local communities and organizations! The information generated is providing guidance to the communities involved for designing their promotion programs. The Specialist involved is providing assistance in interpreting the results. Information from the survey also was used by the St. Lawrence County Office of Economic Development in their proposal for a \$7 million "Festival Park and American Festival Theater."

Economic growth opportunities are severely limited for the residents of the St. Regis Mohawk Indian Reservation. Tourism is a minor industry there at this time and holds potential for growth. Sea Grant assisted tribal leaders in designing and conducting a workshop to help the residents assess this option. The workshop, entitled "Moving Towards the Future: Tourism in the St. Regis Mohawk Indian Reservation" and attended by 40 individuals, did not produce a major commitment either to actively pursue or discourage tourism. However, it did help identify the concerns of residents and the barriers to development and thus provided a clearer basis for a decision on tourism. In that sense, the educational role of Sea Grant was fulfilled.

E. COMMERCIAL FISHING

Work with the commercial fishing industry includes emphasis on finfisheries, shellfisheries, business management, marketing, extended jurisdiction and, to a limited degree, aquaculture. The educational task requires involvement of federal, state and local bodies. Policy makers need adequate information to identify and respond to industry needs. Fishermen must be helped to recognize their own problems and seek appropriate solutions.

1. The Finfishery

Aside from the numerous contacts relative to business management and marketing mentioned below, activities included the creation of six fishermen information centers at major dock/packing facilities on Long Island. These are distribution points for current written materials relative to the industry.

Five "dockside" meetings involving over 100 fishermen were conducted to present "state of the art" information on pair trawling. A depth recorder was installed on a commercial fishing vessel for demonstration purposes. The experiences gained will be extended to other inshore fishermen increasing their knowledge of gear efficiency and proper location. Approximately 600 U.S. Coast Guard Navigation Rules Manuals were distributed to fishermen.

2. The Shellfishery

As in other subject areas, the target audience, shellfishermen, and the community and governmental groups with whom they interact are involved in shellfishery education programs. For example, a group of Shinnecock Indians was provided assistance in their development of an oyster/clam hatchery, while the East Hampton aquaculture committee received assistance with their 1978 pilot clam seed transplant program. The Southampton Baymen's Association was provided an overview of growth requirements of the hard clam in relation to availability for harvest while another 40 baymen were demonstrated hydraulic systems for outboards. The Long Island Shellfish Farmers Association in cooperation with Sea Grant and the Cornell College of Veterinary Medicine held its second annual shellfish health section meeting. This represents direct exchange between the originators and users of the current New York Sea Grant research on shellfish.

In another activity with governmental bodies, 12 of the 13 towns on Long Island were represented at a meeting including officials from two Massachusetts towns during which shellfish management programs were discussed.

Two meetings were arranged for representatives of town shellfish management programs in which coordination and cooperation among towns were discussed. This resulted in the decision to form an association that would foster improved coordination among programs and avoid duplication of research efforts, in addition to promoting increased knowledge and good will among the shellfish management programs on Long Island.

3. Business Management

New York fishermen confront many financial management dilemmas as they attempt to meet the challenges of extended fishery jurisdiction while maintaining their fleets. Specialists provided assistance to 11 boatmen establishing new vessel projects valued at over \$2,000,000. In addition, 20 others were assisted with Capital Construction Fund applications to protect revenues from sale of vessels from capital gains taxes and to help pay off new vessels.

The financial institutions themselves also were addressed. Sixty-five local and regional bankers, seafood industry and industrial development agency representatives participated in a conference jointly sponsored by Sea Grant and the Long Island Association of Commerce and Industry designed to make the financial community aware of special needs of fishing industries. Subsequently, one major investment firm indicated their intent to support commercial fishery development projects through direct financing of government backed fishing vessel loans and interim construction financing through local banks.

As a result of a meeting with the Inter-Governmental Coordinator for Suffolk County and the Long Island Fishermen's Association, a proposal was submitted to the Economic Development Administration to provide low interest loans to fishermen for financing capital expenditures. A news article describing the Small Business Administration's (SBA) interest in and procedures for financing fishing industry developments was coauthored by an SBA employee and Sea Grant Specialist. During nine months in 1978, the SBA backed approximately \$700,000 in dockside facilities and two used vessel projects totaling \$160,000. Also, one Specialist participated in the national review of the Tax Guide for Commercial Fishermen.

Other areas of financial management assistance for fishermen included unemployment insurance, tax management, sales tax law review and medical care programs and state marine insurance. Ninety fishermen attended five informational meetings on these topics.

4. Seafood Marketing

Efforts related to marketing include both attempting to improve existing market mechanisms and helping to identify potential new markets. Supermarkets are an obvious outlet for seafood products yet they often are ill equipped to deal with them. A meeting with a Deputy Commissioner of the New York Agriculture and Markets Department and her staff resulted in a commitment to assist in educating supermarket operators in seafood merchandising and promotion. A direct mail campaign aimed at supermarket retailers was begun to increase their effectiveness in seafood marketing. This aroused interest in seafood's potential and a one day workshop for an entire chain of stores will soon occur. With Sea Grant encouragement, four shellfish industry members contributed products for serving at the New York State Food Merchant Convention sponsored by the New York Department of Agriculture and Markets in an effort to raise awareness of shellfish marketing possibilities. A "Caught in New York" promotional theme and logo was developed for merchandising efforts.

Sale of fresh fish was prohibited at a major "farmer's market" on Long Island. A meeting arranged by Sea Grant between the Commissioner of Agriculture and Markets and the Jamaica Farmers Market Director resulted in the sale of fresh seafood at the market.

The school lunch program represents a large potential market for seafood. Eighteen school lunch directors were demonstrated the use of minced fish in school lunch programs. Seven directors indicated they would be willing to test seafood cakes in their programs. In a related effort, the Department of Agriculture and Markets and Sea Grant conducted a demonstration on uses of minced seafood products in food service programs.

With the implementation of Extended Jurisdiction, the potential for foreign markets has increased. Thirty-two fishing industry members attended an afternoon seminar on seafood exporting. Three packers/dealers subsequently requested assistance in following up foreign sales leads. In addition, two new fisheries development projects were initiated by workshop participants.

Two seafood marketing service letters were mailed to packers/processors and wholesalers outlining seafood exporting advantages and opportunities.

Two separate overseas shipments of New York squid resulted from several meetings on the potential for squid exporting.

5. Extended Jurisdiction

The extension of New York fishing waters to the 200 mile limit was in full swing during 1978. In a program specifically funded for the purpose, Sea Grant provided information to New York fishermen and management agencies and other Mid-Atlantic State Sea Grant programs on the implications of extended jurisdiction.

Activities included distribution of a monthly fact sheet on extended jurisdiction to 700 commercial and recreational fishermen plus other interested parties. During a public hearing on the Groundfish Plan one Mid-Atlantic Fishery Management Council member cited the fact sheet as the most comprehensive source of information on the Plan. Fishermen were made aware of the need for groundfish licenses and over 100 application forms were distributed in New York alone. Over 80 fishermen attended six workshops and "dockside" meetings dealing with the new management plans. A less traditional medium was used when opportunity to comment on three fishery management plans was advertised using CB radios. At their request, the information and education committee of the Mid-Atlantic Council was provided with suggestions for improving their public hearing process.

Personal contact and the newsletter resulted in four commercial fishermen voicing their support for alternative fishery management plans for squid, mackerel and butterfish. One commentator submitted the Update with his comments. A fishermen's association was assisted in planning a position paper on the closure of the yellowtail flounder fishery. This paper was submitted to the Chairman of the Merchant Marine and Fisheries Committee and NMFS officials.

A feature article authored by a specialist on management and development potential of Mid-Atlantic and Northeast fisheries was published in Northeastern Industrial World, a magazine with a circulation of 15,000.

6. Aquaculture

With the exception of shellfish culture, aquaculture is a relatively minor activity in New York's coastal zone. As a result, educational programming in this area is limited. Two individuals interested in American eel culture were accompanied to the University of Bridgeport Institute of Anguilliforme Research to help them assess their interest in culturing elvers. The People's Development Corporation in the South Bronx was provided information and consultation in their attempts to link aquaculture with a community revitalization project. Sea Grant assisted more than 50 individuals inquiring about culturing bloodworms, sand eels, Macrobrachium, squid eels, minnows and trout.

7. Example Anecdotes

Representatives from the Brookhaven Shellfish Advisory Committee, the Chairman of the New York State Department of Environmental Conservation Shellfish Advisory Committee, representatives of two Baymen's Associations and two town biologists were briefed on ocean dumping practices and their potential influence on the shellfisheries. When public hearings on ocean dumping were held subsequently, several baymen participated and contributed informed observations.

Many fishermen and local health organizations are unaware of the Public Health Service's free medical care plan for fishermen. Several informational meetings were conducted for fishermen with many skippers subsequently requesting "Masters Certificates", the first step of reinstatement into the Health Care Policy. Shortly after one such meeting, one skipper became seriously ill. Fortunately, he had become eligible for the Health Care Policy and financial disaster was averted. Actual implementation of a health care program depends upon understanding within local hospitals. In one case this required a visit to the hospital's billing department by a Sea Grant Specialist.

Through a series of meetings among local packers, fishermen, Long Island Duck Cooperative and two New England seafood export brokers, an arrangement was made to process Long Island butterfish for export to Japan. One immediate result was the stabilization of the butterfish price at the Fulton Market.

Forty New York fishermen and representatives of the Polish Government were brought together to discuss potential cooperative fisheries ventures. In some cases, identification of specific barriers to marketing is half the battle in establishing new markets. A subsequent meeting was held between six Polish fishing industry and government representatives and six New York fishing industry and government representatives. The result was identification of changes needed to establish a joint fish harvesting venture.

F. SEAFOOD PROCESSING

This program area is closely aligned with the marketing emphasis within our commercial fishing program. Clearly, the need for improved processing practices is directly linked with expansion of markets for new fishery products. Educational programs relative to processing itself are conducted by one field staff with support by a Sea Grant specialist located in the Food Science Department at Cornell.

1. Field Staff Programs

A relatively new processing option, deboning and mincing, was demonstrated to fifteen fishermen and processors along with a discussion of the potential for minced fish on Long Island. Information on seafood refrigeration, freezers and insulation was provided to several processing firms.

New outlets for underutilized species were addressed in several meetings. Five packers, processors, and potential processors of squid were provided information on the feasibility of processing squid. Five other processing companies have expressed interest in processing whiting. One major processor was consulted concerning use of spider crab and minced fish combinations with crabs and scallop mantles. Also, a bayman was assisted with a proposal to the Small Business Administration to establish a filleting operation for flatfish, ling and dogfish on Long Island.

2. College Based Programs

A complete listing of seafood processors in New York was established. This has allowed direct mail contact with this industry which is scattered across the state--issues of a seafood newsletter entitled "Fillet" is distributed to over 400 seafood processors and retailers throughout the State.

Requests for information by over 40 individual processors and potential processors involved topics such as shark handling, reduction of white perch to recover fish oils and fertilizer materials, processing alternatives, fish preservatives, fish protein concentrate, construction of a fish meal plant, establishing retail/wholesale stores, wastewater treatment, inspection law, canning, and fish smoking. A list of major U.S. seafood processors was provided to a task force working to attract new seafood processing companies to the New York City area.

Two fish deboners acquired by the Food Science Department at Cornell were set up for demonstration purposes on Long Island and Lake Erie. A third machine which had been used for parts, was given to a professor who expressed a desire to refurbish and use it.

G. CONSUMER FISH USE

New dietary recommendations emphasize use of fish as a protein source. However, many consumers are simply unaware of how to use fish and new fish products. Also, some fish are known to be contaminated with toxic substances resulting in a need for informed fish consumers.

The primary mechanism for direct teaching of consumer fish use is through the existing network of County Extension Home Economists throughout the State. Sea Grant staff serve the role of traditional extension specialists by providing county staff with subject matter materials and training.

1. Summary of Training Sessions

Seven training sessions on seafood use, nutrition and purchasing were conducted by Sea Grant Specialists. These sessions reached over 150 Extension staff from 18 counties plus New York City with program responsibilities in Home Economics, Expanded Federal Nutrition Education Program (EFNEP), Consumer Education and 4-H. Approximately 200 home economists, nutritionists and EFNEP aides viewed a "Fish as Food" display at a Food Issues Seminar.

2. Other Support Activities

Subject matter support was provided through completion of two slide programs, "Why Eat Fish" and "Preparing Those Forgotten Fish" (the latter with an accompanying fact sheet by the same title), mailing of fish contaminant and fish preparation information to Extension staff in all counties and through participation in regional and local radio programs.

3. Summary of Direct Consumer Teaching Generated by Sea Grant Staff

Over 500 Captree State Park visitors viewed a three-day presentation on dogfish handling and preparation. The intent of this program was to interest partyboat fishermen in keeping the often discarded dogfish for food purposes. Nine fish preparation demonstrations reaching over 900 people were conducted during the two-day Salmon Festival and Derby held in Oswego County. Over 600 potential consumers of Lake Ontario salmonids were instructed on proper ways to prepare fish and minimize chemical contaminants through demonstrations held in cooperation with Monroe, Wayne and Orleans County Cooperative Extension staff during a major fishing derby. At the same time, radio spots on the same topic reached an estimated 26,000 listeners. Another similar event conducted with Monroe County Extension staff reached 300 additional potential fish consumers.

Sea Grant informational materials on fish use were distributed by the J. C. Penney Company in their Rochester area stores during their annual tackle sale and angler tips program.

4. Example Anecdote

Through a cooperative funding (50/50) and program planning arrangement with Sea Grant, Nassau County Cooperative Extension initiated a summer consumer fish use program. This project included hiring a half-time paraprofessional specifically to conduct the program whose results included: newspaper articles in four Long Island newspapers, including "Newsday" with combined circulations of 520,000; Saturday and Sunday programs on a cable television network with 80,000 subscribers; two radio spots on a local station with an estimated listening audience of 25,000; three workshops and demonstrations reaching a total of over 400 people including 16 Home Care Aides and 100 senior citizens. Initial training of County Extension staff in fish preparation technique was conducted by Sea Grant.

H. YOUTH EDUCATION

The three primary contact channels for our youth programs are school systems, youth groups and 4-H. The current program emphasizes the urban centers of New York City and the Buffalo area although some activities take place throughout the State.

1. School Systems

As far as is possible, we "teach the teachers" to multiply our efforts. Six teacher training workshops in subjects such as aquatic sciences, marine careers and classroom projects reached over 250 New York City area teachers. Other contacts with teachers included marine education training sessions at the New York Marine Education Association and at a training program in association with the New York State Outdoor Education Association Conference. Participation in the Marine Mobile program, which brings marine education experiences to New York City classrooms, was continued through provision of teacher training and educational materials. Over 3,200 children were reached by the effort funded by New York State. A computerized grading and evaluation process designed for the program showed knowledge gain. An independent evaluation of the program's effectiveness was very positive.

Several schools were assisted in designing marine education programs of their own. For example, a Rochester school has established a summer freshwater ecology course with help from Sea Grant. School District No. 4 in Harlem is planning alternative education programs for junior high students that will center around marine education. Sea Grant assisted in planning the program. Also, four New York City schools requested and received assistance in setting up urban fishing programs. In addition, marine education training sessions were conducted for the Elementary School Science Association and the Science Council of New York City.

Direct teaching of students also occurs especially in the more recently established upstate program for which teacher interest and support is still being generated. Marine career opportunities were discussed with 410 students at the Brockport, Fairport and East Aurora High Schools. Similar presentations were made to 200 students in the Brooklyn Archdiocese.

2. Youth Groups and Facilities

The New York State Department of Environmental Conservation (DEC) is establishing urban fishing programs in the major metropolitan centers of the State. Sea Grant provided leadership to the educational components of the program. For example, four leader training sessions on aquatic sciences and fishing technique were provided for New York City Parks Department employees who supervise children participating in the program. More than 2,100 children participated. Upstate, Sea Grant assisted DEC in locating volunteer leaders and training sites.

"Open Doors", an organization attempting to bring youngsters from low-income neighborhoods in New York City into contact with a range of career options was provided information on marine careers. Also, the Asphalt Green Community of Manhattan was provided assistance in planning their renovation of a former fireboathouse and pier on the East River for marine education uses and in designing educational programs. The Niagara Falls Aquarium was assisted in starting an educational resource center for marine educational materials.

Other efforts with youth groups included a series of fishing workshops for mentally handicapped young adults in New York City and an estuarine ecology workshop for 60 Youth Conservation Corp workers in Rockland County and at the Mt. Loretta Home for Children on Staten Island.

3. Cooperative Extension 4-H

The Sea Grant youth education program is a component of 4-H youth development activities in New York City and the upstate program is in direct cooperation with the County Extension Associations. Example support and "spin off" activities included the following. Displays on coastal youth education were provided at the Extension booths of the Erie and Niagara County fairs. Written materials for both students and teachers suggesting games and activities for park rangers were provided to the Operation Explore Program which brought New York City children to their coastlines. Three teachers workshops were conducted for Operation Explore teachers. Three fish printing workshops were presented at the Annual 4-H Congress involving 60 youngsters. Stimulated by Sea Grant's fish printing exhibit at the Extension Conference, an Extension agent established a similar display at Nassau County's 4-H Conference attended by 6,000 persons. Sixty 4-H leaders were trained in fish utilization at a western New York workshop.

4. Example Anecdote

Reaching large numbers of youth clearly is one criteria for measuring success. However, the true "payoff" is the experience provided to individuals. Minority youth have been a focus of the New York City marine education effort. When several NOAA units received requests to support students at a Black Science Fair in Cleveland, a prompt and

positive response came from New York Sea Grant. A student was selected, briefed on Sea Grant and presented his project at the fair. His project was one of several by New York City students that received awards. The positive reinforcement provided through participation in the fair and receipt of the award likely will influence the individual for years to come.

I. CAMPUS BASED SUPPORT OF FIELD EDUCATION PROGRAMS

Subject matter and technique support are provided in the areas of recreation and tourism, seafood processing, aquatic plants, fish contaminants, and communications. Overall program direction is provided by the Program Leader and his Assistant.

1. Subject Matter Support

Recreation and tourism is a major subject area for New York Sea Grant particularly along the Great Lakes. Support for field staff programs is provided by a research associate in the Department of Natural Resources at Cornell with a partial (30%) extension commitment. Selected activities included developing an updated publication on liability and recreational access and a bibliography on tourism, recreation and associated land uses. Field staff were provided a half-day training session on New York State recreation agencies and their organizational structures. A program "road show" on liability and recreational access was developed and implemented in two counties and scheduled in three other counties and two regions. Data from previous Sea Grant angling and boater studies were provided Oswego County legislators to assist them in planning tourism promotion activities.

Support for seafood processing programs was generated through production of the newsletter "Fillet" (see Seafood Processing section), establishing two fish deboner demonstration projects on Long Island and along Lake Erie, handling numerous (over 75) requests for information on processing procedures and by directly participating in programs conducted by Long Island field staff. Assistance also was provided to the ongoing seafood processing research at Cornell (see Seafood Processing section).

Support for field staff in the areas of fish contaminants and aquatic plants was provided by the Assistant Program Leader. Specifically, three Cooperative Extension Fact Sheets on fish contaminants, three informal contaminant "profiles" and three issues of the aquatic plant management newsletter "Cattales" were produced.

2. Communications Support

Production and editing of our bimonthly newsletter "Coastlines" provided an outlet for current topical articles by specialists and other information of interest to our more than 3,000 readers. In addition, staff were assisted in production of more than 15 bulletins, fact sheets and pamphlets and three slide shows. Training sessions for staff included: roles of the media specialist, writing for publication, radio technique, "hard" vs. "soft" news and the publication process. In addition, the Media Specialist participated in a cooperative fisheries management communications project sponsored by the New England Marine Advisory Service (NEMAS).

3. Program Leadership

Staff maintenance activities included hiring three limited term specialists (interns), a media specialist and five field specialists; two of the latter were new positions. The new positions are in East Aurora with emphasis on youth education and at Stony Brook with emphasis on critical issues of the New York Bight. Also, the first position jointly funded by a County Cooperative Extension Association and Sea Grant was established, a Suffolk County 4-H position which was filled by a former Sea Grant intern.

Training sessions for staff included an "In Depth" course on evaluative techniques plus time management, and two workshops for limited term specialists and their supervisors.

Active involvement in Sea Grant regional and national activities assures that program leaders are able to provide current and informed assistance to staff in the home state. The Program Leader assumed the Presidency of the Sea Grant Association and was elected Chairman of the NEMAS Board of Directors. Presentations on day-to-day management practices and a potential national advisory program awards system were made at the National Program Leaders Conference by the Assistant Program Leader and Program Leader respectively. The Program Leader presented a paper on "advocacy" at the National Advisory Service Recreation Meeting in Norfolk. The Assistant Program Leader participated in the Wisconsin site visit. The Program Leader also spent two days consulting with the VPI Sea Grant Program. The Federal Cooperative Extension Service felt that "Views on Sea Grant Advisory Service Work," authored by the Program Leader, had high applicability to Extension programs around the country and distributed copies to each of the states. The first funding for participation in the Great Lakes Sea Grant Network was received. The Program Leader hosted a session following the Marine Recreational Fisheries Symposium which brought NMFS, regional and state agency representatives, Mid-Atlantic Fishery Management Council and Sea Grant people in the Middle Atlantic region together to discuss research needs related to marine recreational fisheries management.

The Sea Grant/County Projects effort, a 50/50 funding arrangement for educational programs related to the coasts, continued in 1978 with eight County Cooperative Extension Associations participating in programs such as youth education, fish preparation, tourism, vegetative shoreline protection and resources management.