

THE SEA GRANT PROGRAM IN NEW YORK STATE

with emphasis on the
MARINE ADVISORY SERVICE

History, description

Compiler

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Based upon notes taken for Course No. 35, "The Sea Grant Program in New York State," during Cooperative Extension In-Depth Study Week at Cornell University, February 28 - March 2, 1972.

March, 1972

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Cooperative Extension
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State University of New York
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THE ORIGIN OF SEA GRANT

The National Sea Grant Colleges and Marine Sciences Development Act was signed into law by President Johnson on October 15, 1966. This Act is heralded as doing for the nation's ocean and Great Lakes coasts what the land grant program has done for rural America.

Congressional study of a national marine development program began in 1959. This followed a report prepared by the Committee on Oceanography of the National Academy of Sciences-National Research Council entitled, "Oceanography 1960-70." A proposed bill based on these studies received a pocket veto from the President.

During the same period the executive branch also became interested in marine development. In May of 1959 what was to become the Interagency Committee on Oceanography was established under the Federal Council for Science and Technology. This provided coordination for the programs of 15 Federal agencies engaged in some phase of oceanographic research.

In 1963 another oceanographic bill was passed by the House but was not acted upon by the Senate. Numerous bills on the development of marine resources were introduced into Congress during the following years as interest continued to increase.

Athelstan Spilhaus is often spoken of as the "father" of Sea Grant in its present form as a result of a 1963 proposal.

The Sea Grant Act was introduced in a bill passed by the Senate in 1965, and following conferences with the House, the Act as it now stands was passed by the Senate and House and sent to the President in 1966.

THE SEA GRANT ACT OF 1966

The Sea Grant Act is divided into two major parts: (1) marine resources and engineering development and (2) sea grant colleges (Appendix II).

Under the marine resources and engineering development section it is declared to be national policy to "develop, encourage, and maintain a coordinated, comprehensive, and long-range national program in marine science for the benefit of mankind to assist in protection of health and property, enhancement of commerce, transportation, and national security, rehabilitation of our commercial fisheries, and increased utilization of these and other resources."

Under the sea grant colleges section Congress declares (a) that marine resources are of immense potential significance; (b) that it is in the national interest to develop the skilled manpower, facilities and equipment necessary to exploit these resources; (c) that aquaculture can substantially benefit the United States; (d) that Federal support offers the best means of promoting programs towards these goals; and (e) that to achieve the earliest possible development of marine resources, the Act establishes a program of sea grant colleges and education, training, and research.

Among the purposes of the Sea Grant Act are:

encouraging and developing programs consisting of instruction, practical demonstrations, publications, and otherwise, by sea grant colleges and other suitable institutes, laboratories, and public or private agencies through marine advisory programs with the object of imparting useful information to persons currently employed or interested in the various fields related to the development of marine resources, the scientific community, and the general public.

Throughout the Act the term "marine science" is used in lieu of "oceanography" to highlight the greater breadth of scope contemplated for the Act.

The term "marine environment" as used in the Act is deemed to include the oceans, the Continental shelf of the United States, the Great Lakes, the seabed and subsoil of all submarine areas over which the United States asserts jurisdiction.

It is stipulated in the Act that the National Science Foundation shall administer the Sea Grant College section; however, administration was transferred in 1970 to the National Oceanic and Atmospheric Administration (NOAA) in the U. S. Department of Commerce.

Appropriations for implementation of the Sea Grant Act were not made until 1968, two years after its passage.

SEA GRANTS

Funding of Sea Grant began in 1968 with \$143,000; this rose steadily to \$12,545,250 in 1971. Federal funding for fiscal year 1972 is \$17.6 million. During this period 89 Sea Grants were awarded (Appendix III).

Sixty-one Sea Grants have been for research; 69% of all grants.

There are three types of Sea Grants: (a) Institutional; (b) Coherent; and (c) Project (Appendix V).

Institutional grants are the largest of the Sea Grant programs. An Institutional grant signifies a broad commitment by the recipient to a program which includes advisory services, technical training and research.

The first Institutional grants were awarded in 1968 to the University of Washington, Oregon State University, and the University of Rhode Island. These were followed shortly after by the University of Hawaii, Texas A & M and the University of Wisconsin.

There were 14 Institutional grants as of 1971 (Appendix IV). A consortium composed of the State University of New York and Cornell University received an Institutional grant in October 1971 (Appendix VIII).

Project grants are for specific research topics; these can be awarded to any applicant satisfying the requirements. They can be awarded to individuals, organizations (private or public) or institutions.

Coherent grants are made for collections of projects focusing on a particular subject area. Coherent grants are somewhere between a project grant and an institutional grant, being broader in scope than for a single project but not as broad as an institutional grant. A Coherent grant may be made to an institution working towards Institutional grant status in the future.

Sea Grants are matching grants in which the Federal contribution is not to exceed two-thirds of the total. The contribution by the recipient of a Sea Grant may include the value of buildings, facilities, equipment, supplies and services provided with respect to the program. Land values and other Federal contributions may not be included in this computation.

Federal payments under Sea Grant within any State shall not exceed 15% of the total Federal Sea Grant appropriation in any one year. This is significant for applicants for Sea Grants in New York State as the recent Institutional grant to the SUNY-Cornell University consortium constitutes a substantial portion of the total Sea Grant funds for which the state is eligible. Other applicants in New York State must compete for the remaining permissible Federal funding.

FEDERAL STAFFING

The National Sea Grant Program Office is not large as it is basically a granting agency and does not carry out programs on its own. All work is done through Sea Grant recipients.

Currently there are about 12 people in the national office:

Robert Abel is Director of the Federal Sea Grant Program.
Harold Goodwin is Associate Director.
Robert Wildman is Program Director for Project Support.
Arthur Alexiou is Program Director for Institutional Support.
Dan Panshin is Program Director for Marine Advisory Services
(A new position beginning February 28, 1972).

The National Sea Grant Program Office is located at Rockville, Maryland 20852. (National Oceanic and Atmospheric Administration)

MARINE ADVISORY SERVICES

The Marine Advisory Service is the extension component of Sea Grant. Except for separate identification the Marine Advisory Service is the parallel of Cooperative Extension through Land Grant institutions. In a number of instances the Marine Advisory Service is linked to or forms a component of a State's existing Cooperative Extension program.

Every Institutional grant recipient must provide advisory services. Although Institutional grants are the principal providers of advisory services, some Coherent and Project grant recipients also have advisory service components.

Current Federal Sea Grant funding allots 7.4% of total funds to The Marine Advisory Service. (New York State has alloted nearly 25% of its first year Institutional grant to advisory services.)

Greater emphasis on the Marine Advisory Service is expected at the Federal level with the recent appointment of Dan Panshin as Program Director.

Comments on the Marine Advisory Services by Dan Panshin,
Federal Program Director

The Marine Advisory Service sets Sea Grant apart from other Federal programs. Sea Grant will not be truly meaningful until the Marine Advisory Service is operating fully.

There are two principal facets to the Marine Advisory Service:

1. Information transfer; and
2. Feedback to guide research (problem identification).

Although the Marine Advisory Service and Cooperative Extension are similar concepts, there are these differences:

- a. the Marine Advisory Service is not a land program; rather it is focused upon offshore resources and related coastal development;
- b. the pressure of time is much greater than for Cooperative Extension when it began in 1914;
- c. Cooperative Extension has a long history to lean on in 1972; the Marine Advisory Service is new, focused upon a different audience and problems; and
- d. the Marine Advisory Service is regional or international in scope, rather than county or state oriented.

There is a name problem: how do you successfully meld Cooperative Extension and the Marine Advisory Service together when each must have separate identify under separate funding? No real reason can be cited as to why the Sea Grant function was called advisory services rather than extension.

The Marine Advisory Service is administered in a variety of ways in different states. It may have fragmented programs by subject content; it may not be associated with the state's land grant institution; it may be attached to separate state agencies; in one instance it is contracted to a private consulting firm; and often it is linked to or melded with Cooperative Extension in various ways.

Elements of an effective Marine Advisory Service program should include the following:

1. Support and understanding of Sea Grant administrators;
2. Advisory staff must not be in "second class" category;
3. Researchers must understand the Advisory Service function;
4. A plan for your advisory program with priorities;
5. Must have teamwork with a leader in charge (the team must see themselves as Marine Advisory people);
6. A nucleus of full-time personnel is needed;
7. Field work is needed if the Marine Advisory Service is to be truly meaningful (some states try to run their programs with staff on campus);
8. Field work must not be routinized--people are needed who "think young";
9. Regional cooperation with adjacent states is necessary; and
10. A strong information component with professional assistance.

Field staff should have subject matter competence and a liking for people.

Although county ties are unusual for marine advisory programs it is entirely possible for a county to seek assistance by contributing to the program.

Few lay advisory groups for marine advisory services have been formed but this may be a good idea. However, we should remember that Cooperative Extension began without local advisory groups also, i.e. the program came first with advisory groups formed later in Extension's history.

MARINE ADVISORY SERVICE PROGRAMS IN OTHER STATES

I New England Marine Resources Information Program (NEMRIP) and University of Rhode Island Marine Advisory Service--Walter Gray, Director

The New England Marine Resources Information Program is a regional effort funded by Sea Grant on a Project basis in 1968. It is based at the University of Rhode Island's Narragansett Bay Campus.

NEMRIP (1) acts as an information clearinghouse; (2) sponsors conferences and workshops; and (3) produces publications on marine resources. It has an advisory council of 18 people.

The University of Rhode Island Marine Advisory Service program began in 1970 under the University's Institutional grant. Under this program field specialists in the Extension tradition engage in marine resources educational activities.

Why should there be two informational Sea Grant programs based in Rhode Island (one regional and one statewide in Rhode Island)? This was partly a matter of timing, with the regional program getting its start first, followed by the Marine Advisory Service. An effective way of melding the Marine Advisory Service and Cooperative Extension in Rhode Island has not been worked out; therefore the Advisory Service is separate from Extension in Rhode Island.

The University of Rhode Island's Coastal Resources Center acts as a quick response medium for problems of interest to State legislators and agencies concerned with marine resources.

An example of activities carried out under Sea Grant in Rhode Island is a series of seminars on power plant siting at the University of Rhode Island. These seminars provided a forum for various groups to get together and discuss the issue.

A Marine Sciences Newsletter is also sent to University of Rhode Island faculty and to the public to let them know what is going on.

Outline of Sea Grant Information and Advisory Programs at the
University of Rhode Island

MARINE ADVISORY PROGRAMS

University of Rhode Island - 1972

New England Marine Resources Information Program

- 1 - Information clearinghouse
- 2 - Conferences and workshops
- 3 - Publications

URI Marine Advisory Service

- 1 - Field specialists in extension tradition
 - Commercial fisheries
 - Marine recreation
 - Coastal Management
 - Marine Science Education
- 2 - Information clearinghouse
- 3 - Conferences, seminars, workshops
- 4 - Publications
- 5 - Mass media
 - TV and radio
 - News and feature articles
 - Exhibits

PERSONNELNew England Marine Resources Information Program

W. Gray	Director	(50%)
W. Bivona	Information Center Manager	(50%)
N. Ross	Marine Extension Specialist	(50%)
T. Shafer	Marine Education Specialist	(100%)
E. Keiffer	Editorial Assistant	($\frac{1}{2}$ time)
R. McLeod	Special Assistant	(100%)
E. Gallagher	Secretary	(100%)
P. Sullivan	Secretary	($\frac{1}{2}$ time)
E. Robinson	Secretary	($\frac{1}{2}$ time)

URI Marine Advisory Service

W. Gray	Director	(50%)
W. Bivona	Information Center Manager	(50%)
N. Ross	Marine Extension Specialist	(50%)
R. Taber	Commercial Fisheries Agent	(100%)
J. Napoli	Marine Affairs Writer	(100%)
B. Mattox	Marine Resource Economist	(100%)
L. Anderson	Publications Editor	(100%)
L. McGivern	Secretary	(100%)

Full Time Equivalents

NEMRIP --- 6 (3 professional)
 MAS --- 6.5 (5.5 professional)

COOPERATING AGENCIES

Agricultural Extension Service
Army Corps of Engineers
National Marine Fisheries Service
State Department of Natural Resources
Narragansett Marine Gamefish Lab
Northeast Water Hygeine Lab
National Marine Water Quality Lab
Small Business Administration
National Assn. of Engine and Boat Manufacturers
Bureau of Outdoor Recreation
New England Regional Commission
New England Council
U.S. Coast Guard
New England Marine Trade Assn.
New England Aquarium
State Department of Community Affairs

URI MARINE ADVISORY SERVICE

Publications

Estimated Spending by Tuna Tournament Participants
Marine Economics Data Sheets
Marine Programs at URI
Marine Insurance Guide
New FCC Marine Radio Regulations
Aquaculture: A New England Perspective
Various Marine Science Education memoranda
NEMRIP Information (monthly)
MAS newsletter (monthly)
Commercial Fisheries newsletter (bi-monthly)
Issues in Nuclear Power Plant Siting
Rhode Island Marinas and Boatyards - 1970
Southern Rhode Island Coastal Zone Attitudes
Boating in New England
Cutting Web Tapers
Computing Horsepower Used in Trawling
Dynamics of European Wing Trawls
Remuneration Systems in the Fishing Industry
Center Console Boats
How to Build and Save Beaches and Dunes
Salt Marsh Flowers

UNIVERSITY OF RHODE ISLAND
Marine Advisory Service

Conferences, Workshops, Forums, Field Days

Annual Fishermen's Forum
Power plant siting
Boating in New England
Marina/Boatyard Management
Coastal Zone Management
Aquaculture
Marine Extension Workers
Scuba Safety
Beach Management
Science Teachers

UNIVERSITY OF RHODE ISLAND

Marine Advisory Service

1972 Projects

COMMERCIAL FISHERIES

- Economics (business management)
- Education
- Species utilization
- Harvesting technology
- Seafood/Processing technology

MARINE RECREATION

- Small business management
- Recreational planning and management
- Marine appreciation education

COASTAL MANAGEMENT

- Public affairs education teams
- Beach stabilization and management
- Coastal Resources Center
- Bibliographies

MARINE SCIENCE EDUCATION

- Curriculum development
- Field trips
- Consultant services
- Teacher workshops
- TV series with 4-H
- Adult groups

II Oregon State University Marine Advisory Program -- Frederic Smith, Marine Economist, Oregon State University

In Oregon the Marine Advisory Service is part of Cooperative Extension except that University-based Marine Advisory personnel are evaluated by the Department Chairman at the University. Marine Advisory field staff are evaluated and promoted through the Director of Extension.

The Director of the Marine Advisory Service is also an Assistant Director of Extension. Marine Advisory programs in Oregon are determined collectively by the field specialists. The Marine Advisory Director is a supporting office and is not directive in nature.

People in the Marine Advisory program must consider themselves as professionals on campus, yet must be able to circulate easily among locals without the tag of "expert" from the University. It is also easy to become too identified with local interests and become their spokesmen, so to speak.

Marine field workers should meet together often and as a group with professionals engaged in research on campus. This fosters the right frame of mind. The field office should be on a campus rather than in the local community.

The big problem at Oregon State University is that the field staff do not think of themselves as part of the University.

Field agents should have as much to say about research as the researchers on campus; they should develop this kind of confidence.

Marine audiences are not ready-made as with farmers today who have been conditioned by years of exposure to Extension programs. The marine people do not accept you like this; you must begin all over again.

Nearly all Oregon advisory activities are team projects; only rarely are projects run by one man.

Early emphasis in Oregon's advisory program was placed on seafood technology; now emphasis on coastal zone management and marine recreation is being added.

Field agents in Oregon get themselves acquainted with local councils, commissions, and other bodies as a person, not as a University expert.

Oregon's experience is that locals want development while outsiders not living on the coast want to preserve the coast to enjoy when they visit it. It has also been discovered that educating people who deal with the public may be as effective as direct public education.

What makes a good Marine Advisory agent? An agent must (1) know the subject matter; (2) be able to teach effectively anytime, anyplace, to anybody; and (3) remain coherent after beer, coffee, and lack of sleep.

Outline of Oregon Marine Advisory Service Program

OREGON STATE UNIVERSITY MARINE ADVISORY PROGRAM STAFF

ASTORIA Alan Otness, Marine Extension (Engineering)
Ken Hilderbrand, Seafood Technology



PORTLAND

Bill Wick, Head
Bob Jacobson, Marine Extension (Fisheries - 1st. Marine Ext. Agent in the Nation)
Don Giles Marine Science Education (Biologists at Marine Sciences Center)
Vicki Osis

NEWPORT

o CORVALLIS

Fred Smith Marine Economics
Ken Roberts

Gwil Evans Marine Science Information
Dick Richardson

Dan Panshin, Oceanography (Now heading up National Marine
Advisory Service Program)

COOS BAY

Paul Heikkila, Marine Extension (Fisheries)

NOTE:

A Marine Recreation Economist at Ph.D. level has been requested for next year.

CALIF.

OREGON STATE UNIVERSITY MARINE ADVISORY PROGRAM

PHILOSOPHY

- PROFESSIONALS
- TWO WAY COMMUNICATIONS
- RAPPORT
- TEAMWORK

PROGRAM AREAS

SEAFOOD

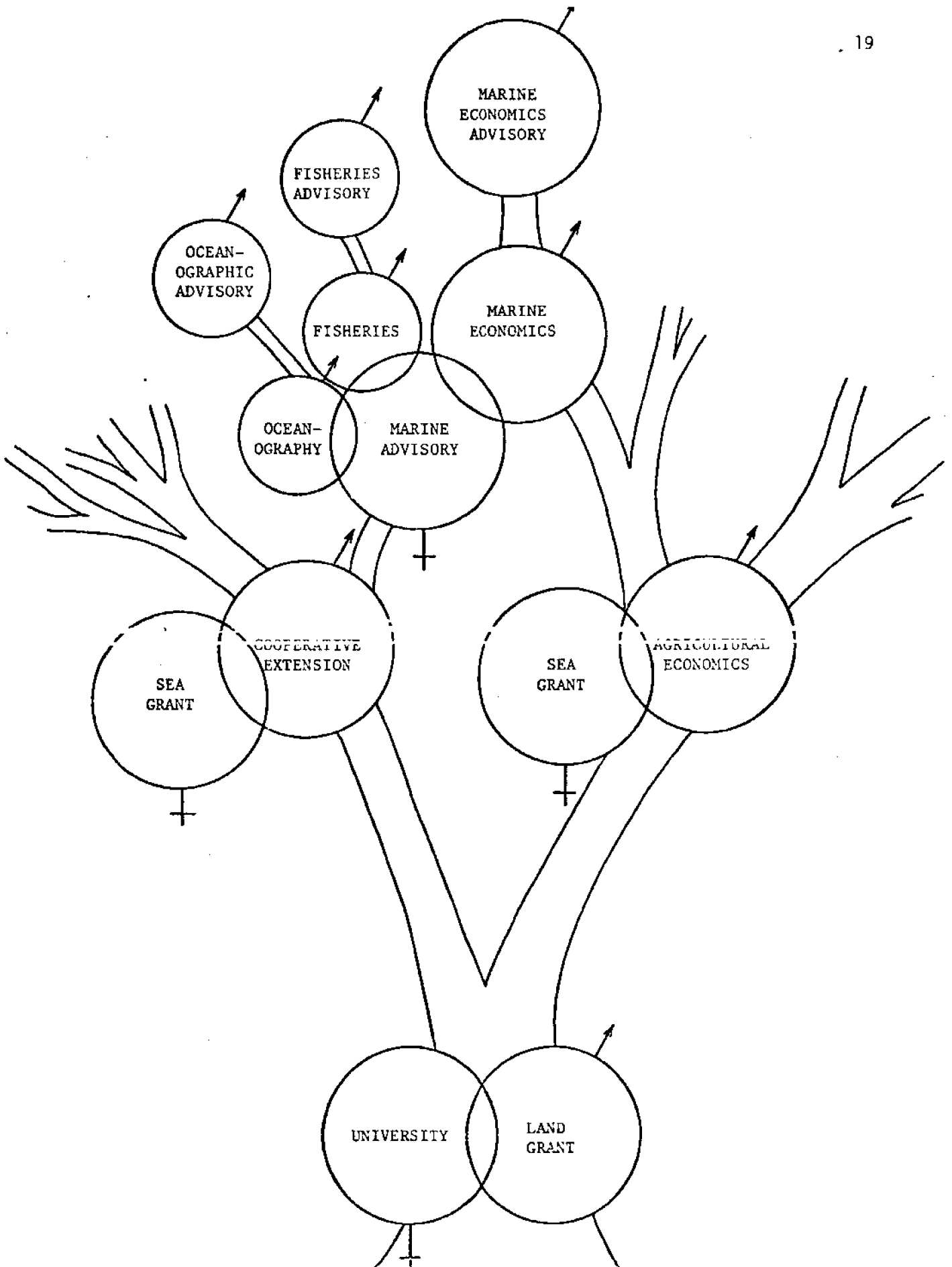
- FISHERY TECHNOLOGY
- FISHING BUSINESS MANAGEMENT
- FISHERMEN LEADERSHIP DEVELOPMENT
- SEAFOOD PRODUCT DEVELOPMENT
- SEAFOOD SANITATION
- PROCESSING EFFICIENCY

COASTAL PLANNING

- DECISION MAKING INFORMATION
- DECISION PROCESSES
- PUBLIC AWARENESS

MARINE RECREATION

- MARINE APPRECIATION
- MARINE RESOURCE UTILIZATION
- COASTAL BUSINESS MANAGEMENT



NEW YORK STATE'S INSTITUTIONAL SEA GRANT PROGRAM
Donald F. Squires, Program Director

Introduction

New York's Sea Grant Program is made possible by a grant from the National Sea Grant Program to the State University of New York in support of the campuses of State University of New York and Cornell University. The combined talents of the faculties of these institutions provide an intellectual resource which may be directed toward solution of developmental and management problems of the coastal resources of the State. Because New York has two coastlines, the program has two foci, but is not clearly divided into marine and Great Lakes components, for potential for interchange of personnel and methodologies between the two areas exists, i.e., expertise on inter-institutional relationships of coastal resource management might be utilized for either coast line. The program therefore seeks to mobilize the two universities in assisting State and local governments and industry in: 1) improving the quality of our waters; 2) development of management techniques to assure the best utilization of the coastal region; 3) understanding the inter-relationships and problems caused by multiple utilization; and 4) improving the economic return to the State from the resources of coastal waters.

The National Sea Grant Program

The National Sea Grant Program provides funding in support of an institution of higher education in each coastal state to develop and improve the capability of that institution to provide service to the state in the activities cited above. Sea Grant funding is not expected to be a sole source of support for marine research. (The word "marine" is used in the following text to apply to the waters of both Lakes Erie and Ontario and the salt waters of the estuaries, Long Island Sound, and the Atlantic Ocean.) Sea Grants are intended, rather, to provide core support for the development of a long-range program of activities of benefit to the state. The Sea Grant program also funds the development of educational programs where there is a clear need for a particular type of trained personnel; for advisory service activities to provide for two-way communication between the public, government and industry and the academic community; and, for program development support. Sea Grant research may be basic or applied, but must be directed towards the needs of the community. Sea Grant research is clearly oriented towards the "customer". The rationale for undertaking a project must always include answers to the questions "why is the research being undertaken?", "who will use the results of the research?", and "what use will be made of the results?".

New York's Sea Grant Program

The New York State Sea Grant Program is structured to provide for wide participation (it is the first program to have begun with a multiple campus structure) and to be maximally responsive to the needs of the State. Elements of the program are:

The Governing Board - composed of ten campus presidents and vice-presidents, and the Commissioner of the Department of Environmental Conservation, this group makes policy and oversees the activities of the program.

The Sea Grant Cabinet - is the operational body of the program, composed of the Program Director, the Program Leader for Advisory Services, the coordinators of Great Lakes and marine research and the Director of Cornell's Water Resources and Marine Science Center.

The Advisory Councils - approximately fifteen members each from the industrial, civic and governmental communities of the Great Lakes region and the marine province are appointed, on rotating terms, to serve on the Marine and Great Lakes Advisory Councils. The Councils assist the program director in goals formulation and in the establishment of priorities for its activities. The councils provide an important liaison between the program and the people and industry of the State.

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Leonard Dworsky, Director
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607/256-2385

History of the New York Program -

National Sea Grant legislation was passed in the fall of 1966, authorizing the establishment of a Sea Grant Institution in each of the twenty-eight coastal states. Extensive documentation is required of each university proposing to become the institutional representative which includes demonstration of a history of research activities in the sea; ability to mount a program of value to the state; and, adequate faculty, research laboratories and facilities to carry out the program. In March of 1970, following extensive discussions between State University of New York, Cornell and the National Sea Grant Program, a planning grant was awarded State University for the development of an institutional proposal. The amount of the award, for the subsequent twelve months, was \$18,700.

Ad hoc governing board, cabinet and advisory councils were appointed, meeting through the spring and fall of 1970. Project proposals were sought from the faculties of the participating campuses and a program formulated. In February of 1971 a full proposal consisting of three volumes totalling 643 pages was submitted to the national office. In support of research, education, advisory services and program development, a total program of \$1,058,308 was presented, for which \$679,745 in federal funds were requested. (The Sea Grant Program requires that one-third of the total funds be derived from non-federal sources.) Matching funds for the federal appropriation were developed from university contributions, from local government and from industry. Through the spring and summer of 1971 negotiations were continued with the national program. In mid-September the National Sea Grant panel visited New York to meet with each investigator, members of the university administration and members of the advisory councils. A formal presentation ceremony was held on October 27, 1971 in the Governor's press conference room in New York City at which Mr. David Wallace, Associate Administrator of the National Oceanic and Atmospheric Administration (and former chairman of the Marine Advisory Council for our program) and Mr. Robert Abel, Director, National Sea Grant Program presented the Sea Grant institutional award for New York State to Chancellor Boyer of State University of New York. Attending the ceremony were Dr. Keith Kennedy, Vice-Provost, Cornell University, representing President Corson, and Mr. Henry Diamond, Commissioner of the Department of Environmental Conservation, representing the Governor, and invited guests.

Our first year program, as awarded, was in the amount of \$967,935, of which \$600,000 was in federal funds. The division of funds is as follows:

Research	\$524,032
Great Lakes	268,304
Marine	255,728
Education	75,456
Advisory Services	240,146
Program Development	124,947

Following the guidance of the ad hoc advisory councils, emphasis during the first year was placed on environmental quality. Appendix A. is a summary of the meetings of these councils and indicates the directions in which the program was focussed.

Program development is, however, a complex mix of factors such as funds available, faculty research interests, technical review as well as priorities. From the guidance received from the advisory councils and the factors cited above, the research program outlined in Appendix B. emerged.

Program Development for Year II

With the award of institutional (continuing) support for Sea Grant activities, State University of New York and Cornell look forward to the next challenge--attaining Sea Grant College status. To obtain this designation, and assured long-range federal support for coastal activities, we must demonstrate our capability to develop and maintain a program which yields demonstrable returns to the State and the nation. Among the criteria utilized in determining when an institution has achieved the stature of a "Sea Grant College" are: ability to develop and maintain a complex program responsive to the needs of the state; ability to develop multidisciplinary teams to attack problems and provide timely, usable results; a demonstrated record of involvement with industry and with local and state government in joint activities; and, measurable results to the state in improved utilization of coastal resources, particularly in the enhancement of marine industries. At present only four states have achieved Sea Grant College status--Rhode Island, Oregon, Washington and Texas. In general the process requires about three to four years. It is quite clear that the advisory councils will be a major factor in assisting the State University and Cornell in attaining Sea Grant College status.

Now that we are engaged in an activity having an annual cycle commencing November of each year, a calendar of activities has been initiated to develop the program. Monthly cabinet meetings assess progress and work towards program development through visitations to campuses and development of faculty interests. During February and March Advisory Councils meet to develop goals and priorities as guidance for the Program Director. Through May, the Cabinet works towards implementation of the program and the development of a budget with the National Office. In May, a program is assembled and put before the Advisory Councils for their review. Other internal technical reviews occur and a proposal is formulated. In July the Governing Board assesses the total package and makes critical cuts to make the proposal meet the realities of the funds available. The program is submitted to Washington in mid-August. In mid-September, the National Sea Grant Panel visits New York and makes final determinations.

Through the past months we have been engaged in a review of program direction with the assistance of the national office. Several points have emerged which will have direct bearing upon the deliberations of the advisory councils. While during the first year of Sea Grant we emphasized environmental quality and included within the scope of the program many projects studying the effects of pollution, the

national program now wishes our activities to move in a different direction. This shift takes cognizance of the number of other federal agencies supporting work on water quality and seeks to place stress on those activities which are uniquely Sea Grant. We are therefore encouraged to emphasize studies relating to the economic development of the resources of the coastal region, the management of the coastal region and its resources, and the development of techniques, policies, understandings and technologies which will enhance the utilization of the coastal region. In the totality of our program, such activities should be closely coordinated with other national programs such as the International Field Year on the Great Lakes, the New England River Basins Study of Long Island Sound, and the National Marine Fisheries Program on New York Bight, etc.

Charge to the Advisory Councils

Within the broad scope of national program objectives, the advisory councils of the New York State Sea Grant Program should seek to develop the longer range objectives for the program and to place priorities upon the alternative pathways for attaining those goals. Where should our program be in the next five years? At the end of the decade? To answer these questions the councils may have to determine the character of the coastal regions both at present and in the future. What priorities are to be placed on coastal resource utilization? What balances must be achieved between industrial, commercial and recreational activities? By examining these questions the councils will be able to indicate priority areas of research activity. Within the general context of the program, what balances should be made between developmental research related to marine industries? To what degree should the New York State Sea Grant Program strive to develop new industrial potentials and encourage, through direct participation with industry the realization of these potentials? May such developmental activities be reconciled with conservation and recreation interests? What inter-relationships should the program develop between local, regional and state planning organizations? In what ways can the program best foster development of broad programs for enhancing the utilization of coastal resources?

It is my sincere hope that the advisory councils will look to the future, developing a rationale for the program which will place upon the Program Director the burden of developing a first class program--one leading towards a better, more healthy marine region for New York. To accomplish this, the NYS Sea Grant Program must work with industry and governmental agencies in developing new techniques and technologies, probing the old for their weaknesses and fallacies. In so doing we must never lose sight of our requirement to be of service to the people of the State.

February 17, 1972

Appendix B. Year I Research Program.

<u>Title</u>	<u>Investigator</u>	<u>College</u>	<u>Total Funds</u>
I. Marine Environmental Quality			
A. <u>Impact of Waste Heat Disposal.</u>			
Impact of power plant heated effluents on the lake temperature environment	Chernack	Oswego	\$ 17,056
Physiological ecology of aquatic arthropods in a stressed environment	Costa	Brockport	19,517
Atmospheric effect of thermal effluents into L. Ontario	Czapski	Albany	26,938
Mixing of water surface layers by steady Langmuir circulations	Leibovich	Cornell	15,245
Dissipation of thermal effluents by currents in L. Ontario	Scott	Albany	17,829
Isotherms under the ice of L. Erie	Stewart, K.	U. Buffalo	21,259
B. <u>Chemical, Pesticide, Petrochemical and Radioactive Pollutants.</u>			
Natural processes that clean the sea	Baylor	Stony Brook	50,767
Development of oil-water separating system for ships	Femenia	Maritime	22,597
Interaction of dissolved macromolecules with trace metals	Schrier	Binghamton	12,910

Elemental pollutant distribution in L. Erie and L. Ontario	Thomas	U. Buffalo	\$ 15,000
Determination of traces of heavy metals in environment and their removal from lake waters	Van Geet	Oswego	23,957
<u>C. Domestic, Industrial and Agricultural Waste Waters as Nutrients.</u>			
Environmental effects of <u>Cladophora</u> in the Great Lakes	Judd	Oswego	11,702
Exchange of nutrients and salinity between East R. and Long Island Sound	Longobardi	Maritime	30,369
<u>D. Waste Solids and Dredging.</u>			
<u>II. Coastal Utilization and Management.</u>			
<u>A. Coastal Utilization and Renewal.</u>			
Substrate and water study, Long Island Sound and Peconic Bays	Brennan	Cortland	20,902
Environmental geomorphic study of the coastal regimes along the south shore of Long Island	Coates	Binghamton	25,000
<u>B. Wetlands Utilization and Management.</u>			
<u>C. Recreation.</u>			
<u>D. Environmental Restoration.</u>			
Analysis of water pollution enforcement in western NY region	Ford	U. Buffalo	25,842
Changes in a portion of L. Ont. due to pollution abatement	Judd	Oswego	6,775

Appendix B. Page 3.

E. Resource Allocation and Multiple Utilization.

Physical model study of L. Ont. Rumer U. Buffalo \$ 35,381

III. Resource Development

A. Minerals.

B. Food Production and Processing.

Growth and culture of Irish Moss Terry 29,772
and other benthic red algae in
Long Island waters Stony Brook

Ecology of the Peconics: Williams 23,936
Planktonic fish eggs and larvae
Stony Brook

C. Water Resources.

Thermal discharge--how to use it Stewart, R. 19,024
Albany

Development of a management model Weyl 36,245
for the west end of L.I.S.
Stony Brook

D. Recreation.

Atlantic
Marine Advisory Council

2/17/72

Name and Address

Term of Membership/Phone Number

Mr. John Binner
Apartment 2L
49-02 21st Street
L.I. City, New York 11101
(Sportsmen's Council)

3 years
212/EX-2-5802

Mr. Thomas Bishop
Manager, Port Newark
Moran Towing and Transportation
17 Battery Place
New York, N.Y. 10004

1 year
212/943-2525 or 201/589-2323

Mr. Leo Geyer
Grumman Aerospace Corporation
S. Oyster Bay Road
Bethpage, New York 11714

2 years
516/575-9866

Mr. Roger H. Gilman
Director of Planning
and Development
The Port of New York Authority
111 Eighth Avenue
New York, N.Y. 10011

1 year
212/620-7233

Mr. George Humphreys
Assistant Commissioner
Department of Environmental
Conservation
4175 Veterans Memorial Hwy.
Ronkonkoma, N.Y. 11779

3 years
516/585-5400

Mr. Harry Kilthau
101 Elder Road
Islip, N.Y. 11751

3 years
516/575-6363

Mr. Lee Koppelman
Executive Director
Nassau-Suffolk Regional
Planning Board
Hauppauge, N.Y. 11787

3 years
516/724-1919

Mr. Irving Like
Reilley, Like and Schneider
200 W. Main Street
Babylon, N.Y. 11700

2 years
516/669-3000

Mr. Jack Low
M. Low and Sons, Inc.
110 Hudson Street
New York, N.Y. 10013

1 year
212/966-7305

Mr. Richard Miller Executive Secretary L.I. Fisherman's Association East Quogue, L.I., N.Y. 11942	3 years 516/653-5606
Mr. J. Richards Nelson Long Island Oyster Farms 610 Quinnipiac Ave. New Haven, Connecticut 06513	2 years 203/467-6384
Mr. Harry Pearson 176 Prospect Avenue Sea Cliff, N.Y. 11579	1 year 516/741-1234
Mr. G. Stanley Platt Oceanographic Fund, Inc. 15 Exchange Place Jersey City, New Jersey 07302	1 year 201/434-8281
Mrs. Claire Stern Executive Director L.I. Environmental Council 45 Windsor Road Great Neck, New York 11021	2 years 516/466-9493
Mr. John Suydam National Boatsman's Alliance 910 S. 7th St. Lindenhurst, N.Y. 11757	2 years 516/226-5395

Great Lakes Advisory Council

2/17/72

Name and AddressTerm of Membership/Phone Number

Mr. James Bruce, Director
 Canadian Centre for Inland Waters
 Department of The Environment
 P.O. Box 5050
 Burlington, Ontario, Canada

3 years
 416/637-4272 or 4265

Mr. David Caverly
 Executive Director
 Ontario Water Resources
 Commission
 135 St. Clair Avenue West
 Toronto, 7, Ontario, Canada

1 year
 416/363-1211

Mr. Leonard T. Crook
 Executive Director
 and Director of Planning
 Great Lakes Basin Commission
 City Center Building
 220 E. Huron Street
 Ann Arbor, Michigan 48108

3 years
 313/763-3590

Mr. Thomas Dyer
 Metropolitan Water Board
 and Eastern Oswego Basin
 c/o Onondaga County Water
 District
 28 E. Main Street
 Marcellus, N.Y. 13108

2 years
 315/652-8656

Mr. Royal LaLonde
 Hutchinson's Boat Works, Inc.
 Holland Street
 Alexandria Bay, N.Y. 13607

1 year
 315/482-9931

Mr. Mason Lawrence
 Deputy Commissioner
 N.Y.S. Department of
 Environmental Conservation
 Wolf Road
 Albany, New York 12204

3 years
 518/457-5587

Dr. Robert E. Lee
 Rochester Committee for
 Scientific Information
 Box 5236
 River Campus Station
 Rochester, N.Y. 14627

2 years
 716/385-2297

Mr. Jeff MacClennon Buffalo Evening News Buffalo, N.Y.	1 year 716/856-3333
Mr. James Mullarkey President New York Conservation Council, Inc. Room 505 5 Broadway Troy, New York 12180	2 years 518/273-2800
Mr. Leo Nowak, Director Erie-Niagara Counties Regional Planning Board 2085 Baseline Road Grand Island, N.Y. 14072	1 year 716/773-7611
Mr. Leonard Starr Vice President Fredonia Products, Inc. Fredonia, New York 14063	2 years 716/672-2600
Mr. William Steinfeldt Eastman-Kodak Company Kodak Park Division Engineering Rochester, N.Y. 14650	2 years 716/458-1000 x74181
Mr. Joseph C. Swidler, Chairman Public Service Commission 44 Holland Avenue Albany, New York 12208	2 years 518/474-2530
Mr. Winfield D. Tyler Executive Secretary Associated N.Y.S. Food Processors, Inc. 430 First Federal Savings Building Rochester, New York 14604	1 year 716/442-2780
Mr. William E. Tyson Executive Director St. Lawrence-Eastern Ontario Commission Box 188 Alexandria Bay, N.Y. 13607	3 years 315/482-2585
Mrs. Richard Vesley New York Committee Chairman Lake Erie Basin Committee, LWV 306 N. Youngs Road Williamsville, N.Y. 14221	1 year 716/634-1017
Mr. Sam Williams O'Brien & Gere 1050 W. Genesee Street Syracuse, N.Y. 13204	3 years 315/472-6251

Comments on New York State's Institutional Sea Grant Program - Donald Squires, Program Director

New York is the only state in the Sea Grant program with two coastlines, on the Great Lakes and the Atlantic Ocean.

Reluctance was initially expressed by the National Sea Grant Office for Cornell University participation in the Sea Grant program because Cornell is not located on either coast. Joint Cornell University - State University of New York participation was therefore proposed and finally approved in October 1971.

Sea Grant awards are made to individuals on a yearly basis, not to campuses. It is therefore expected that there will be a constantly changing cast of people with the Sea Grant program.

The purpose of the Advisory Councils is to develop long range objectives for Sea Grant programs for next 10 to 15 years.

It is to be noted that the Sea Grant Program is in the U. S. Department of Commerce. Emphasis is upon development; New York State must show some economic return for the Federal investment.

In New York State our former marine industries are nearly gone and interest must be rekindled in this area. There is strong emphasis in the State on environmental quality, a major interest of the Sea Grant Advisory Councils. New York State will therefore have a more balanced program between development and environmental quality than most other states.

Sea Grant research projects under the Institutional grant usually coincide with the academic year. Research proposals must be submitted in early March for funding the following year. The New York State Sea Grant Office will put these research proposals together each year for a unified proposal to Washington due on September 1st.

Participants in Sea Grant research will meet twice a year at various campuses around the state, in March and September.

Sea Grant Institutional funds are currently split about 50-50 between Great Lakes and Atlantic research.

After three years, if all goes well, Cornell-SUNY will be named a "Sea College" under the Sea Grant Act. This is the final step of assurance that an unequivocal commitment has been made for indefinite funding.

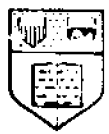
The one-third local funding required to match Federal funds under Sea Grant currently comes from:

- a. Universities (the largest source)
- b. State appropriations
- c. Industry
- d. Local government

Funds are expected to grow at a rate of 20-50% per year under Sea Grant.

The geographic boundaries to which Sea Grant is applicable are more precise in the Great Lakes-St. Lawrence region than in southern New York. All of Long Island is included. As to the Hudson River, the Environmental Conservation Department definition of the Tappan Zee Bridge has been accepted as the limit of the estuary, but definitions are flexible. Currently the Rockefeller Foundation is funding a major research effort the length of the Hudson River, so Sea Grant refers research requests in that area to the Foundation.

It is to be emphasized that there are many other marine research activities being carried out in New York State besides Sea Grant. However, emphasis is usually not upon development as with Sea Grant.



Cornell, SUNY Begin Sea Grant Program

The State University of New York and Cornell will undertake a comprehensive, long-term program to develop New York's Atlantic Ocean and Great Lakes environments to benefit the people of this state. Federal and state officials announced here yesterday that 11 State University components and Cornell will participate as a consortium in the New York Sea Grant Program designed to determine how the state can best utilize its 2,400 miles of coastline along the ocean, Lake Erie and Lake Ontario.

It represents a major, cooperative effort to make intelligent use of largely untapped marine resources for economic development, more job opportunities, recreation and ecological advances. The consortium of the State University and Cornell received a grant from the National Oceanic and Atmospheric Administration (NOAA) in the U.S. Department of Commerce at a presentation conducted in the office of Governor Nelson A. Rockefeller.

Chancellor Ernest L. Boyer of the State University accepted the grant — the first in New York — on behalf of the consortium from federal officials. A total of \$967,935 in funding is available for the first year of the New York Sea Grant Program.

Chancellor Boyer said the new program, bringing together public and private institutions of higher education, reflects the commitment of the State University and Cornell to help create a proper relation between people and their physical environment.

"Scientific and scholarly research, when done in the service of people, is still the best means we have at our disposal for advancing health, economic growth and human enrichment of society," he said. "Research is an important function of our university. We welcome the opportunity to turn our intellectual and scientific resources to the critical task of developing marine resources along New York's lake and ocean coasts."

Cornell President Dale R. Corson said "Cornell's participation in the Sea Grant Program pays tribute to the tradition of the land-grant institution of New York State. As the land-grant college, Cornell has a continuing responsibility for teaching, research and extension. Through legislation and technology this responsibility is being expanded and Cornell welcomes the opportunity to address itself to the problems and concerns of the sea as well as the land."

Corson was represented at yesterday's presentation by W. Keith Kennedy, vice provost at Cornell.

Headquarters for the New York Sea Grant Program will be at the Marine Sciences Research Center at the State University of New York at Stony Brook. Dr. Donald F. Squires, director of the research center, will be in charge of the new program.

Offices for the program's advisory services and Great Lakes segments will be at Cornell and the State University College at Oswego, respectively.

According to Squires, New York State,

under the National Sea Grant College Act of 1966, is beginning to do for marine resources what once was done for the land as a result of the historic Morrill Land Grant Act of 1862.

The Sea Grant program involves taking an inventory of New York's coastal waters, wetlands and two major lakes; training technical and professional personnel for new and expanded marine-related industries; carrying out a wide variety of research projects, including environmental studies, and disseminating study findings through an advisory services program patterned after the farm extension program that resulted from the Morrill Act.

In the first year, 26 projects will be undertaken on campuses across the state in three areas — marine environmental quality, coastal utilization and management, and resource development.

Within these areas, research will deal with such matters as:

- The development of new aquaculture industries, such as seaweed and shellfish farming in the Atlantic Ocean and two Great Lakes.
- The impact of waste-heat disposal on these waters.
- The utilization of marine mineral deposits.
- The management of wetlands.

The first year's projects will be carried out at Stony Brook, the State University centers at Binghamton and Buffalo, Cornell; the State University colleges at Brockport, Cortland and Oswego; the State University Maritime College at Fort Schuyler (The Bronx); the Western New York Nuclear Research Center at Buffalo; the Atmospheric Sciences Research Center at Albany; and Suffolk County Community College at Selden.

"The combined resources of the State University campuses and Cornell University offer incredibly rich opportunities for the New York Sea Grant Program to provide public service for New York State."

Continued on Page 6

Cornell, SUNY Begin Sea Grant Program

Continued from Page 1

Squires said: "With almost three-fourths of the state's population clustered in counties bordered by the Atlantic Ocean and the Great Lakes, we must approach our waters with all the knowledge and wisdom we can muster."

Squires also said priority would be given to the rapid improvement and conservation of remaining marine resources. From there, he added, "we can proceed to environmental management programs designed to stabilize and then improve the marine environment and to develop new, ecologically sound means of utilizing marine resources."

The National Sea Grant College Act of 1966 describes marine resources, including animal and vegetable life and mineral wealth, as a largely untapped asset of immense potential significance to the United States.

Program grants similar to the one awarded today began in 1968. Although other states have received federal aid under the act, New York is the first to include lake coasts as part of its effort and the first to develop an integrated consortium approach.

Governor Rockefeller was represented at today's presentation by Henry L. Diamond, New York's environmental conservation commissioner. The federal agency was represented by David H. Wallace, associate administrator of NOAA for marine resources, and Robert Abel, director of the Office of Sea Grant.

Future Program for New York State Institutional Sea Grant Activities - Donald Squires, Program Director

I Coastal Zone Management

- A. Wetlands (a principal activity--all aspects will be studied to come up with hard data as a basis for proposed legislation; studies will include legal, physical, biological, economic, social factors, also possibility of artificially creating needed wetlands)
- B. Institutional Management Studies (How do you get local, State, Federal, and International interests together to work within one management framework?)

II Resource Evaluation and Management

- A. Energy Policies (problems with power plant cooling water needs; initial effort will be focused on Lake Ontario, involving about 12 professionals; this problem downstate has stabilized recently with focus upon offshore artificial islands for power plants which may benefit fisheries)
- B. Coastal Stabilization (over a billion dollars has been spent on shore stabilization on the Atlantic coast of New York, yet the job is only partially attacked despite this)
- C. Recreational Uses
- D. Port Development and Transportation (a ruling this year included the St. Lawrence Seaway in Sea Grant development areas; initial thrust will be directed to the Great Lakes in this category, especially the Port of Buffalo; Port of New York already has large research resources)

III Resource Development

- A. Fisheries Management (world's largest market in New York State--a cooperative effort being set up on Atlantic coast from New England to Virginia--clearing up pollution in Great Lakes and off Atlantic coast must be emphasized--will be a large committment in New York State to aquaculture, with attempts to utilize heated water from power plants--hope to attract one or two of these industries to the State in next year or two, despite local taxes and land costs, which are high in New York compared to other states)
- B. Mineral Resources (sand and gravel resources are badly needed near major urban areas, especially on Long Island; is offshore mining of these deposits the answer? Can this be done without upsetting the fishing industry? Offshore oil deposits not being emphasized.)
- C. Food Processing and Marketing (educational programs are needed with housewives and restuarants, neither of which know how to properly prepare seafood anymore; there is also a need to develop new forms of seafood)

IV Ocean Technology (a category for speculative projects, such as developing underwater industries and artificial islands)

Comments on New York State's Marine Advisory Service Program - Bruce Wilkins, Program Leader

New York State's Institutional Grant includes a high committment to the Marine Advisory Service, about a quarter of the total budget.

There is a need to avoid overlap and duplication between Cooperative Extension and the Advisory Service while developing understanding of each other. The funds for the Marine Advisory Service Sea Grant project were awarded

through Clifford Harrington, who is the principal investigator of the project as well as Associate Director of Cooperative Extension. With the appointment of a Program Leader for the Marine Advisory Service project most project functions have been undertaken by this office. The Program Leader has commitments to Clifford Harrington in Cooperative Extension; Donald Squires, Program Director of the New York State Institutional Sea Grant Program; and to Fred Winch, Acting Chairman of the Department of Natural Resources at Cornell University where the office is located.

The first immediate objective for the Marine Advisory Service is to identify and set priorities on needs in the field. Personnel to undertake this field work must be recruited or drawn from such important resources as Cooperative Extension.

One of the first priorities for the field staff will be to get together with Cooperative Extension staffs, local planning boards, river basin boards, and other similar agencies or groups.

The Marine Advisory Service needs to develop and use techniques which will make them highly visible at first, such as workshops, symposiums, resource development projects, and tours; something to show they are doing things.

It is hoped to be able to set up traineeships whereby qualified persons with a marine science background can gain Master's Degrees by work education in or vice versa.

Informational sources must be identified and tapped, such as the LUNR data on the State's land uses and the Cornell University Water Resources Center's new connection enabling it to acquire water resources research information from a national computer data bank in Oklahoma.

Proposals from Cooperative Extension agents for Sea Grant consideration are welcomed. Proposals are needed which say "here is our objective, here are our needs, here is our proposal, this is how much we need, this is how much we can put into the project as a county, here is our audience."

The main contact which the Institutional Sea Grant Program will have with communities will be through the Advisory Service. In the long run this facet may be the most important portion of the whole Institutional Program.

Initial Announcement To Cooperative Extension Staff

New York State's Sea Grant Program

Now that formal announcement has been made regarding the Sea Grant Program for New York State, more information can be provided. Funding of the total program began on November 1, 1971.

The sea grant program embraces research, resident instruction, and advisory (extension) services pertaining to marine resources, identified as including the ocean salt waters and the Great Lakes. The total program will be managed by a consortium representing several campuses of the State University of New York and of Cornell University. The director is Dr. Donald Squires, Marine Science Research Center, Stony Brook.

A significant part of the program will be the advisory service, to be managed by Cornell University through Cooperative Extension. A full-time program leader will be employed, and four regional specialists are contemplated, two on Long Island and two near Lake Ontario. While the advisory service needs to maintain its own identity, efforts will be made to relate it to Cooperative Extension programs where appropriate. Other extension work related to water resources will also be involved.

The task of the advisory service is to help people utilize knowledge about marine resources to achieve the wisest use of resources for the benefit of individuals, communities and society. Expectations are that emphasis will be placed on environmental quality and on the recreational aspects of marine resource use. Helping individuals improve private practices will be a part of the program, but the most significant decisions will be made and implemented by groups. Thus, a major component of the effort will be public affairs education.

Two challenges confront the management of the advisory service effort: (1) to implement a meaningful program as rapidly as possible, and (2) to build the bridges of understanding with the several university campuses involved, with the Cooperative Extension staff, and with the other related interests and activities. At the moment, the first priority is on the selection of a program leader who can guide the development of the total advisory service endeavor.

C. R. Harrington

Notes from Discussion Session on New York State's Marine Advisory Service Program -
Bruce Wilkins, Discussion Leader

1. How much information do we have to base an advisory program on?
Perhaps the funds could be well spent informing the public of what facts researchers do have available and bringing professionals abreast of recent information. For Cooperative Extension agents, perhaps an in-service training program? This could be coupled with or follow information sent to Extension agents. The publication "Coastlines" is intended to inform marine researchers of each others' activities.
2. Who should be the primary audience for a Cooperative Extension agent working on a Sea Grant Project? Where does one begin? Who will provide backup information?
 - a. A productive audience should be identified.
 - b. People who live and work in the area can help in identifying the problems which exist.
 - c. Extension agents might sponsor tours of specific areas such as wetlands, marshes or estuaries which can help identify needs and audiences.
 - d. All researchers with Sea Grant funds have an obligation to make their knowledge available to the Advisory Service.
3. Coordinated statewide programs might be undertaken jointly by the Advisory Service and Cooperative Extension's Community Resource Development program in a way to stimulate and support legislation based on Sea Grant research inputs.
4. Close liason with planning boards should provide insights into future problem areas which could be researched through Sea Grant funds.

5. Will directories of experts and publications lists be available for Cooperative Extension agents?

This is the function of the Program Leaders Office for the Advisory Service; as any directories or lists would rapidly be out of date and would provide much more information than an individual could possibly use anyway, the Program Leader can locate precise informational sources for you much more easily. The Program Leader will also develop priorities for the Marine Advisory Service.

6. It is suggested that the Program Leader should develop:
 - a. a list of suggestions as to what Cooperative Extension agents can do to utilize Sea Grant services, including possible interest areas for Sea Grant activities; and
 - b. more general information on the Sea Grant program and the Marine Advisory Service for Cooperative Extension agents.
7. The regional Marine Advisory agents in the field should develop close contacts with Cooperative Extension agents, yet they must maintain separate programs. Regional Advisory agents should be able to put county Extension agents' problems in a different light.

Four regional Marine Advisory Service agents will be employed and, it is hoped, will be on the job by September 1972. These positions will be in the following subject matter fields:

- 1 marine biologist
- 1 regional marine planner
- 1 marine food technologist or engineer
- 1 economist with marine interests



New York State College of Agriculture and Life Sciences
 a Statutory College of the State University
Cornell University

Department of Natural Resources
 Fernow Hall, Ithaca, N. Y. 14850

Fishery Science
 Forest Science
 Wildlife Science
 Natural Resources
 Outdoor Recreation
 Environmental Conservation

POSITION ANNOUNCEMENT No. 300

2-7-72

Title of Position - Regional Sea Grant Specialist - 4 POSITIONS:

- 1) Marine biologist
- 2) Regional marine planner
- 3) Marine food technologist
or engineer
- 4) Economist with marine interest

Persons with related skills will be considered.

Location - Long Island or Great Lakes Area

The Program

To most effectively use marine resources, the National Sea Grant College Act of 1966 established programs similar to those set up for agriculture under the Morrill Land Grant Act. The Sea Grant program is intended to stimulate involvement of scholars in practical marine problems through research, education and advisory services, the latter bringing to users information of immediate value.

New York's Sea Grant program was initiated in 1971. It is the only multi-campus program, and the only program to include marine and Great Lakes work within a state's borders. The advisory service component will focus on off-campus education aimed at helping the people of New York State apply knowledge related to marine resources for the benefit of individuals, firms, communities, the state, and the nation.

The breadth of needs in dealing with the resources of the sea permits many fields to make important contributions and a variety of professional competencies will be sought among the regional specialists initially appointed.

Responsibilities

Persons in these positions will act as a member of a two-man team to plan, develop, implement, and evaluate a marine advisory service on Lake Ontario and Erie, or in New York's marine environment.

Major Duties of Job

- Work with local State University of New York units, lay persons and other educational units to develop a Sea Grant Advisory Service effort (20% of time).
- Provide individual and group consultation to identified audiences including community leaders, commercial fishermen, processors and county extension staffs (30%).
- Plan, develop, and teach in group learning experiences for identified audiences (30%).
- Prepare material for use in radio, television and newspapers (20%).

(NOTE: All program efforts will be executed in subject matter area of competency).

Initial objectives of the Advisory Services on the Great Lakes may include:

- 1) Achieving implementation of important portions of the regional water resources plan
- 2) Increasing incomes of commercial fishermen on Lakes Erie and Ontario
- 3) Expanding as appropriate recreational developments occurring on the shores of Lake Erie and Ontario
- 4) Aiding in appropriate siting of power plants

On Long Island, initial objectives may include:

- 1) Increasing the protection afforded estuaries areas by governmental groups and community action
- 2) Improving incomes of full-time commercial fishermen through better use of equipment
- 3) Development of the Irish moss industry if deemed feasible by research
- 4) Achievement of plant efficiencies in processing of shellfish
- 5) Development of better cost control for charter fishing boats

Qualifications

- A masters degree in aquatic or marine sciences is preferred. A person with a bachelors degree would be considered if applicant has extensive experience in aquatic or marine sciences field. Coursework with practical marine or aquatic application orientation is particularly useful.
- At least one to two years of professional work experience in informal adult education such as Extension, nature centers, continuing education centers, etc.
- Applicants with other combinations of the above skills and knowledge will be considered.
- Ability to communicate effectively.

Salary Range - \$10,000 - \$14,300 Commensurate with qualifications.

Transportation - Provided

Date Jobs are Available - March 1, 1972

If you are interested in this position, please submit an application or resume prior to April 1 to:

Sandra S. Clarkson

Sandra S. Clarkson
 Personnel Specialist
 212 Roberts Hall
 Cornell University
 Ithaca, New York 14850
 607-256-2292

APPENDIX



Cornell University Water Resources
 and Marine Sciences Center
 468 Hollister Hall
 Ithaca, New York 14850

Tel. 607-256-4209

COOPERATIVE EXTENSION IN-DEPTH STUDY WEEK

Cornell University

Course No. 35: The Sea Grant Program in New York State

Lyle S. Raymond, Jr.
 Extension Associate,
 Water Resources, Co-ordinator

DATES : February 28 - March 2, 1972
 TIME : 1 - 3 P.M.
 PLACE : 468 Hollister Hall

CLASS SCHEDULE (Revised)

Monday, February 28

INTRODUCTION TO THE NATIONAL SEA GRANT PROGRAM

Dan Panshin, Program Director for The Marine Advisory Service, National Sea Grant Program, National Oceanic and Atmospheric Administration, Washington, D. C.

Tuesday, February 29

EXTENSION AND INFORMATION PROGRAMS UNDER ESTABLISHED SEA GRANT PROGRAMS IN OTHER STATES

Walter Gray, Director, New England Marine Resources Information Program, and University of Rhode Island Marine Advisory Service, University of Rhode Island, Narragansett, Rhode Island

Frederic Smith, Marine Economist, Oregon State University, Corvallis Oregon (on leave at the University of Rhode Island)

Wednesday, March 1

THE SEA GRANT PROGRAM IN NEW YORK STATE

Donald Squires, Program Director, New York State Sea Grant Program, State University of New York, 99 Washington Avenue, Albany, N.Y. 12200

Bruce Wilkins, Program Leader for The Marine Advisory Service, Department of Natural Resources, Cornell University, Ithaca, N.Y. 14850

Thursday, March 2

CHALLENGES FOR EXTENSION IN THE SEA GRANT ADVISORY PROGRAM

Discussion Leader: Bruce Wilkins, Program Leader for The Marine Advisory Service

**CHAPTER 22.—SEA GRANT COLLEGES AND MARINE
SCIENCE DEVELOPMENT**

**SUBCHAPTER I—MARINE RESOURCES AND
ENGINEERING DEVELOPMENT**

- Sec.**
1101. Congressional declaration of policy and objectives.
1102. National Council on Marine Resources and Engineering Development.
- (a) Establishment; composition; Chairman.
 - (b) Executive appointments.
 - (c) Alternate presiding officer over Council meetings.
 - (d) Alternates for service on the Council.
 - (e) Personnel; civilian executive secretary.
 - (f) Termination date.
1103. Executive responsibilities; utilization of staff, interagency, and non-Government advisory arrangements; consultation with agencies, solicitation of views of non-Federal agencies.
1104. Commission on Marine Science, Engineering, and Resources.
- (a) Establishment; composition; representation of interests; advisory members; Chairman and Vice Chairman.
 - (b) National oceanographic program based upon investigation and study of marine science; adequacy of marine science activities for meeting stated objectives.
 - (c) Compensation and travel expenses of members.
 - (d) Appointment and compensation of personnel including temporary services of experts or consultants.
 - (e) Powers and duties of Chairman.
 - (f) Financial and administrative services of General Services Administration; payment for services; application of Administration regulations for collection of indebtedness of personnel resulting from erroneous payments and for administrative control of funds.
 - (g) Information from Government agencies.
 - (h) Report to President and Congress; termination date.
1105. International cooperation.
1106. Reports to Congress.
1107. Definitions.
1108. Authorization of appropriations.

SUBCHAPTER II—SEA GRANT COLLEGES

1121. Congressional declaration of purpose.
1122. Administration by National Science Foundation; authorization of appropriations.

Ch. 22 MARINE SCIENCE DEVELOPMENT 33 § 1101

Sec.

1123. Marine resource development programs.
- (a) Cooperation of agencies with National Science Foundation.
 - (b) Development programs; research; publication of useful information.
 - (c) Grants and contracts to carry out programs.
 - (d) Limitation on federal contribution ratio to total program cost; prohibition against use of program funds to purchase or rent land or repair buildings, docks or vessels.
 - (e) Allocation of funds to achieve maximum participation by sea grant colleges and agencies throughout the country.
 - (f) Duplication and overlapping of federal programs.
 - (g) Powers and authority of National Science Foundation.
 - (h) Use of personnel, services, and facilities of other federal agencies or instrumentalities.
 - (i) Definitions.
1124. Advisory functions of National Council on Marine Resources and Development.

SUBCHAPTER I—MARINE RESOURCES AND ENGINEERING DEVELOPMENT

§ 1101. Congressional declaration of policy and objectives

(a) It is hereby declared to be the policy of the United States to develop, encourage, and maintain a coordinated, comprehensive, and long-range national program in marine science for the benefit of mankind to assist in protection of health and property, enhancement of commerce, transportation, and national security, rehabilitation of our commercial fisheries, and increased utilization of these and other resources.

(b) The marine science activities of the United States should be conducted so as to contribute to the following objectives:

- (1) The accelerated development of the resources of the marine environment.
- (2) The expansion of human knowledge of the marine environment.
- (3) The encouragement of private investment enterprise in exploration, technological development, marine commerce, and economic utilization of the resources of the marine environment.
- (4) The preservation of the role of the United States as a leader in marine science and resource development.

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(5) The advancement of education and training in marine science.

(6) The development and improvement of the capabilities, performance, use, and efficiency of vehicles, equipment, and instruments for use in exploration, research, surveys, the recovery of resources, and the transmission of energy in the marine environment.

(7) The effective utilization of the scientific and engineering resources of the Nation, with close cooperation among all interested agencies, public and private, in order to avoid unnecessary duplication of effort, facilities, and equipment, or waste.

(8) The cooperation by the United States with other nations and groups of nations and international organizations in marine science activities when such cooperation is in the national interest.

Pub.L. 89-454, Title I, § 2, June 17, 1966, 80 Stat. 203.

Historical Note

Short Title. Pub.L. 89-454, Title I, § 1. June 17, 1966, 80 Stat. 203, as renumbered and amended by section 2(a) of Pub.L. 89-688, Oct. 15, 1966, 80 Stat. 1661, provided that: "This title [enacting this subchapter] may be cited as the 'Marine Resources and Engineering Development Act of 1966'." Legislative History. For legislative history and purpose of Pub.L. 89-454, see 1966 U.S. Code Cong. and Adm. News, p. 2262.

Library References

Navigable Waters \S 2 et seq.

C.J.S. Navigable Waters \S 10 et seq.

§ 1102. National Council on Marine Resources and Engineering Development—Establishment; composition; Chairman

(a) There is hereby established, in the Executive Office of the President, the National Council on Marine Resources and Engineering Development (hereinafter called the "Council") which shall be composed of—

(1) The Vice President, who shall be Chairman of the Council.

(2) The Secretary of State.

(3) The Secretary of the Navy.

(4) The Secretary of the Interior.

(5) The Secretary of Commerce.

(6) The Chairman of the Atomic Energy Commission.

(7) The Director of the National Science Foundation.

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- (8) The Secretary of Health, Education, and Welfare.
 (9) The Secretary of Transportation.

Executive appointments

(b) The President may name to the Council such other officers and officials as he deems advisable.

Alternate presiding officer over Council meetings

(c) The President shall from time to time designate one of the members of the Council to preside over meetings of the Council during the absence, disability, or unavailability of the Chairman.

Alternates for service on the Council

(d) Each member of the Council, except those designated pursuant to subsection (b) of this section, may designate any officer of his department or agency appointed with the advice and consent of the Senate to serve on the Council as his alternate in his unavoidable absence.

Personnel; civilian executive secretary

(e) The Council may employ a staff to be headed by a civilian executive secretary who shall be appointed by the President and shall receive compensation at a rate established by the President at not to exceed that of level II of the Federal Executive Salary Schedule. The executive secretary, subject to the direction of the Council, is authorized to appoint and fix the compensation of such personnel, including not more than seven persons who may be appointed without regard to civil service laws or chapter 51 and subchapter III of chapter 53 of Title 5 and compensated at not to exceed the highest rate of grade 18 of the General Schedule as may be necessary to perform such duties as may be prescribed by the President.

Termination date

(f) The provisions of this chapter with respect to the Council shall expire on June 30, 1970.

Pub.L. 89-454, Title I, § 3, June 17, 1966, 80 Stat. 204; Pub.L. 89-670, § 8(j), Oct. 15, 1966, 80 Stat. 943; Pub.L. 90-242, § 2, Jan. 2, 1968, 81 Stat. 780; Pub.L. 91-15, § 1, May 23, 1969, 83 Stat. 10.

Historical Note

References in Text. The civil service laws referred to in subsec. (e), are classified generally to Title 5, Government Organization and Employees.

Level II of the Federal Executive Salary Schedule and the General Schedule, referred to in subsec. (e), is classified to sections 5313 and 5332 of Title 5, respectively.

1969 Amendment. Subsec. (f). Pub.L. 91-15 substituted "June 30, 1970" for "June 30, 1969".

1968 Amendment. Subsec. (f). Pub.L. 90-242 substituted "on June 30, 1969" for "one hundred and twenty days after the submission of the final report of the Commission pursuant to section 1104(h) of this title".

1966 Amendment. Subsec. (a) (9). Pub.L. 89-670 substituted "Secretary of Transportation" for "Secretary of the Treasury".

Effective Date of 1966 Amendment. Amendment by Pub.L. 89-670 effective 90

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days after the Secretary of Transportation first takes office, or on any earlier date after Oct. 15, 1966, as the President prescribes and publishes in the Federal Register, see section 15(a) of Pub.L. 89-670, set out in a note under section 1051 of Title 49, Transportation. 1966 U.S.Code Cong. and Adm.News, p. 2362. See, also, Pub.L. 89-670, 1966 U.S.Code Cong. and Adm.News, p. 3202; Pub.L. 90-242, 1967 U.S.Code Cong. and Adm.News, p. 2705; Pub.L. 91-15, 1969 U.S.Code Cong. and Adm.News, p. 1004.

Legislative History. For legislative history and purpose of Pub.L. 89-454, see

Library References

United States Code et seq.

C.J.S. United States § 34, 82.

§ 1103. Executive responsibilities; utilization of staff, inter-agency, and non-Government advisory arrangements; consultation with agencies; solicitation of views of non-Federal agencies

(a) In conformity with the provisions of section 1101 of this title, it shall be the duty of the President with the advice and assistance of the Council to—

(1) survey all significant marine science activities, including the policies, plans, programs, and accomplishments of all departments and agencies of the United States engaged in such activities;

(2) develop a comprehensive program of marine science activities, including, but not limited to, exploration, description and prediction of the marine environment, exploitation and conservation of the resources of the marine environment, marine engineering, studies of air-sea interaction, transmission of energy, and communications, to be conducted by departments and agencies of the United States, independently or in cooperation with such non-Federal organizations as States, institutions and industry;

(3) designate and fix responsibility for the conduct of the foregoing marine science activities by departments and agencies of the United States;

(4) insure cooperation and resolve differences arising among departments and agencies of the United States with respect to marine science activities under this chapter, including differences as to whether a particular project is a marine science activity;

(5) undertake a comprehensive study, by contract or otherwise, of the legal problems arising out of the management, use, development, recovery, and control of the resources of the marine environment;

(6) establish long-range studies of the potential benefits to the United States economy, security, health, and welfare to be

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gained from marine resources, engineering, and science, and the costs involved in obtaining such benefits; and

(7) review annually all marine science activities conducted by departments and agencies of the United States in light of the policies, plans, programs, and priorities developed pursuant to this chapter.

(b) In the planning and conduct of a coordinated Federal program the President and the Council shall utilize such staff, inter-agency, and non-Government advisory arrangements as they may find necessary and appropriate and shall consult with departments and agencies concerned with marine science activities and solicit the views of non-Federal organizations and individuals with capabilities in marine sciences.

Pub.L. 89-454, Title I, § 4, June 17, 1966, 80 Stat. 205; Pub.L. 89-638, § 2(b), Oct. 15, 1966, 80 Stat. 1001.

Historical Note

1966 Amendment. Subsec. (a). Pub.L. 89-454, § 2(b), in the introductory material preceding par. (1), substituted "section 2 of this title", for "section 2 of this Act", which for purposes of codification, was translated as "section 1101 of this title". Legislative History. For legislative history and purpose of Pub.L. 89-454, see 1966 U.S. Code Cong. and Adm. News, p. 2262. See, also, Pub.L. 89-638, 1966 U.S. Code Cong. and Adm. News, p. 3509.

§ 1104. Commission on Marine Science, Engineering, and Resources—Establishment; composition; representation of interests; advisory members; Chairman and Vice Chairman

(a) The President shall establish a Commission on Marine Science, Engineering, and Resources (in this subchapter referred to as the "Commission"). The Commission shall be composed of fifteen members appointed by the President, including individuals drawn from Federal and State governments, industry, universities, laboratories and other institutions engaged in marine scientific or technological pursuits, but not more than five members shall be from the Federal Government. In addition the Commission shall have four advisory members appointed by the President from among the Members of the Senate and the House of Representatives. Such advisory members shall not participate, except in an advisory capacity, in the formulation of the findings and recommendations of the Commission. The President shall select a Chairman and Vice Chairman from among such fifteen members. The Vice Chairman shall act as Chairman in the latter's absence.

National oceanographic program based upon investigation and study of marine sciences; adequacy of marine science activities for meeting stated objectives

(b) The Commission shall make a comprehensive investigation and study of all aspects of marine science in order to recommend an

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overall plan for an adequate national oceanographic program that will meet the present and future national needs. The Commission shall undertake a review of existing and planned marine science activities of the United States in order to assess their adequacy in meeting the objectives set forth under section 1101(b) of this title, including but not limited to the following:

(1) Review the known and contemplated needs for natural resources from the marine environment to maintain our expanding national economy.

(2) Review the surveys, applied research programs, and ocean engineering projects required to obtain the needed resources from the marine environment.

(3) Review the existing national research programs to insure realistic and adequate support for basic oceanographic research that will enhance human welfare and scientific knowledge.

(4) Review the existing oceanographic and ocean engineering programs, including education and technical training, to determine which programs are required to advance our national oceanographic competence and stature and which are not adequately supported.

(5) Analyze the findings of the above reviews, including the economic factors involved, and recommend an adequate national marine science program that will meet the present and future national needs without unnecessary duplication of effort.

(6) Recommend a Governmental organizational plan with estimated cost.

Compensation and travel expenses of members

(c) Members of the Commission appointed from outside the Government shall each receive \$100 per diem when engaged in the actual performance of duties of the Commission and reimbursement of travel expenses, including per diem in lieu of subsistence, as authorized in section 73b-2 of Title 5, for persons employed intermittently. Members of the Commission appointed from within the Government shall serve without additional compensation to that received for their services to the Government but shall be reimbursed for travel expenses, including per diem in lieu of subsistence, as authorized in sections 825 to 842 of Title 5.

Appointment and compensation of personnel including temporary services of experts or consultants

(d) The Commission shall appoint and fix the compensation of such personnel as it deems advisable in accordance with the civil service laws and chapter 51 and subchapter III of chapter 53 of Title 5. In addition, the Commission may secure temporary and intermittent services to the same extent as is authorized for the departments by section 55a of Title 5 but at rates not to exceed \$100 per diem for individuals.

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Powers and duties of Chairman

(e) The Chairman of the Commission shall be responsible for (1) the assignment of duties and responsibilities among such personnel and their continuing supervision, and (2) the use and expenditures of funds available to the Commission. In carrying out the provisions of this subsection, the Chairman shall be governed by the general policies of the Commission with respect to the work to be accomplished by it and the timing thereof.

Financial and administrative services of General Services Administration: payment for services; application of Administration regulations for collection of indebtedness of personnel resulting from erroneous payments and for administrative control of funds

(f) Financial and administrative services (including those related to budgeting, accounting, financial reporting, personnel, and procurement) may be provided the Commission by the General Services Administration, for which payment shall be made in advance, or by reimbursement from funds of the Commission in such amounts as may be agreed upon by the Chairman of the Commission and the Administrator of General Services: *Provided*, That the regulations of the General Services Administration for the collection of indebtedness of personnel resulting from erroneous payments (section 46d of Title 5) shall apply to the collection of erroneous payments made to or on behalf of a Commission employee, and regulations of said Administrator for the administrative control of funds (section 665(g) of Title 31) shall apply to appropriations of the Commission: *And provided further*, That the Commission shall not be required to prescribe such regulations.

Information from Government agencies

(g) The Commission is authorized to secure directly from any executive department, agency, or independent instrumentality of the Government any information it deems necessary to carry out its functions under this chapter; and each such department, agency, and instrumentality is authorized to cooperate with the Commission and, to the extent permitted by law, to furnish such information to the Commission, upon request made by the Chairman.

Report to President and Congress; termination date

(h) The Commission shall submit to the President, via the Council, and to the Congress not later than twenty-four months after the establishment of the Commission as provided in subsection (a) of this section, a final report of its findings and recommendations. The Commission shall cease to exist thirty days after it has submitted its final report.

Pub.L. 89-454, Title I, § 5, June 17, 1966, 80 Stat. 205; Pub.L. 89-588, § 2(b), Oct. 15, 1966, 80 Stat. 1001; Pub.L. 90-242, § 1, Jan. 2, 1968, 81 Stat. 780.

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Historical Note

References in Text. Section 53b 2 of Title 5, referred to in subsec. (c), was repealed in the general revision of Title 5, and the provisions are now covered by sections 5703(b)-(d) and 5707 of Title 5, Government Organization and Employees.

Sections 535 to 542 of Title 5, referred to in subsec. (c), was repealed in the general revision of Title 5, and the provisions are now covered by section 5701 of sec. of Title 5.

The civil service laws, referred to in subsec. (d), are classified generally to Title 5.

Section 55a of Title 5, referred to in subsec. (d), was repealed in the general revision of Title 5, and the provisions are now covered by section 5109(b) of Title 5.

Section 46J of Title 5, referred to in subsec. (f), was repealed in the general revision of Title 5, and the provisions are now covered by section 5514 of Title 5.

1968 Amendment. Subsec. (b). Pub.L. 90-242 substituted "twenty-four months" for "eighteen months".

1960 Amendment. Subsec. (a). Pub.L. 86-688, § 2(b), substituted "this title" for "this Act", which, for purposes of codification, was translated as "this subchapter".

Legislative History. For legislative history and purpose of Pub.L. 89-454, see 1966 U.S.Code Cong. and Adm.News, p. 2262. See, also, Pub.L. 89-688, 1966 U.S.Code Cong. and Adm.News, p. 5709; Pub.L. 90-242, 1967 U.S.Code Cong. and Adm.News, p. 2763.

Library References

United States Code 29 et seq.

C.J.S. United States §§ 34, 62.

§ 1105. International cooperation

The Council, under the foreign policy guidance of the President and as he may request, shall coordinate a program of international cooperation in work done pursuant to this chapter, pursuant to agreements made by the President with the advice and consent of the Senate.

Pub.L. 89-454, Title I, § 6, June 17, 1966, 80 Stat. 207.

Historical Note

Legislative History. For legislative history and purpose of Pub.L. 89-454, see 1966 U.S.Code Cong. and Adm.News, p. 2262. See, also, Pub.L. 89-688, 1966 U.S.Code Cong. and Adm.News, p. 5709; Pub.L. 90-242, 1967 U.S.Code Cong. and Adm.News, p. 2763.

Library References

International Law Code 10.

C.J.S. International Law § 16.

§ 1106. Reports to Congress

(a) The President shall transmit to the Congress in January of each year a report, which shall include (1) a comprehensive description of the activities and the accomplishments of all agencies and departments of the United States in the field of marine science during the preceding fiscal year, and (2) an evaluation of such activities and accomplishments in terms of the objectives set forth pursuant to this chapter.

(b) Reports made under this section shall contain such recommendations for legislation as the President may consider necessary.

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is desirable for the attainment of the objectives of this chapter, and shall contain an estimate of funding requirements of each agency and department of the United States for marine science activities during the succeeding fiscal year.

Pub.L. 89-454, Title I, § 7, June 17, 1966, 80 Stat. 207.

Historical Note

Legislative History. For legislative history and purpose of Pub.L. 89-454, see 2202.

§ 1107. Definitions

For the purposes of this subchapter the term "marine science" shall be deemed to apply to oceanographic and scientific endeavors and disciplines, and engineering and technology in and with relation to the marine environment; and the term "marine environment" shall be deemed to include (a) the oceans, (b) the Continental Shelf of the United States, (c) the Great Lakes, (d) seabed and subsoil of the submarine areas adjacent to the coasts of the United States to the depth of two hundred meters, or beyond that limit, to where the depths of the superjacent waters admit of the exploitation of the natural resources of such areas, (e) the seabed and subsoil of similar submarine areas adjacent to the coasts of islands which comprise United States territory, and (f) the resources thereof.

Pub.L. 89-454, Title I, § 8, June 17, 1966, 80 Stat. 208; Pub.L. 89-688, § 2(b), Oct. 15, 1966, 80 Stat. 1001.

Historical Note

1966 Amendment. Pub.L. 89-688, § 2(b), substituted "this title" for "this Act" which for purposes of codification, was translated as "this subchapter".

Legislative History. For legislative history and purpose of Pub.L. 89-454, see 1966 U.S.Code Cong. and Adm.News, p. 2202. See, also, Pub.L. 89-688, 1966 U.S. Code Cong. and Adm.News, p. 3509.

§ 1108. Authorization of appropriations

There are hereby authorized to be appropriated such sums as may be necessary to carry out this subchapter, but sums appropriated for any one fiscal year shall not exceed \$1,200,000.

Pub.L. 89-454, Title I, § 9, June 17, 1966, 80 Stat. 208; Pub.L. 89-688, § 2(b), Oct. 15, 1966, 80 Stat. 1001; Pub.L. 91-15, § 2, May 23, 1969, 83 Stat. 10.

Historical Note

1969 Amendment. Pub.L. 91-15 substituted "\$1,200,000" for "\$1,500,000".

1966 Amendment. Pub.L. 89-688, § 2(b), substituted "this title" for "this Act" which, for purposes of codification, was translated as "this subchapter".

Legislative History. For legislative history and purpose of Pub.L. 89-454, see 1966 U.S.Code Cong. and Adm.News, p. 2202. See, also, Pub.L. 89-688, 1966 U.S. Code Cong. and Adm.News, p. 3509; Pub.L. 91-15, 1969 U.S.Code Cong. and Adm. News, p. 1004.

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SUBCHAPTER II—SEA GRANT COLLEGES**§ 1121. Congressional declaration of purpose**

The Congress hereby finds and declares—

(a) that marine resources, including animal and vegetable life and mineral wealth, constitute a far-reaching and largely untapped asset of immense potential significance to the United States; and

(b) that it is in the national interest of the United States to develop the skilled manpower, including scientists, engineers, and technicians, and the facilities and equipment necessary for the exploitation of these resources; and

(c) that aquaculture, as with agriculture on land, and the gainful use of marine resources can substantially benefit the United States, and ultimately the people of the world, by providing greater economic opportunities, including expanded employment and commerce; the enjoyment and use of our marine resources; new sources of food; and new means for the development of marine resources; and

(d) that Federal support toward the establishment, development, and operation of programs by sea grant colleges and Federal support of other sea grant programs designed to achieve the gainful use of marine resources, offer the best means of promoting programs toward the goals set forth in clauses (a), (b), and (c), and should be undertaken by the Federal Government; and

(e) that in view of the importance of achieving the earliest possible institution of significant national activities related to the development of marine resources, it is the purpose of this subchapter to provide for the establishment of a program of sea grant colleges and education, training, and research in the fields of marine science, engineering, and related disciplines.

Pub.L. 89-154, Title II, § 202, as added Pub.L. 89-688, § 1, Oct. 15, 1966, 80 Stat. 998.

Historical Note

Short Title. Section 201 of Pub.L. 89-688, as added by section 1 of Pub.L. 89-688, provided that: "This title [enacting this subchapter] may be cited as the 'National Sea Grant College and Program Act of 1966.'" **Legislative History.** For legislative history and purpose of Pub.L. 89-688, see 1966 U.S. Code Cong. and Adm. News, p. 3509.

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§ 1122. Administration by National Science Foundation; authorization of appropriations

(a) The provisions of this subchapter shall be administered by the National Science Foundation (hereafter in this subchapter referred to as the "Foundation").

(b) (1) For the purpose of carrying out this subchapter, there is authorized to be appropriated to the Foundation for the fiscal year ending June 30, 1967, not to exceed the sum of \$5,000,000, for the fiscal year ending June 30, 1968, not to exceed the sum of \$15,000,000, for the fiscal year ending June 30, 1969, not to exceed the sum of \$6,000,000, for the fiscal year ending June 30, 1970, not to exceed the sum of \$15,000,000, for the fiscal year ending June 30, 1971, not to exceed the sum of \$20,000,000, for the fiscal year ending June 30, 1972, not to exceed the sum of \$25,000,000, and for the fiscal year ending June 30, 1973, not to exceed the sum of \$30,000,000, and for each subsequent fiscal year only such sums as the Congress may hereafter specifically authorize by law.

(2) Amounts appropriated under this subchapter are authorized to remain available until expended.

Pub.L. 89-454, Title II, § 203, as added Pub.L. 89-588, § 1, Oct. 15, 1966, 80 Stat. 999, and amended Pub.L. 90-477, § 1(1), Aug. 11, 1968, 82 Stat. 704; Pub.L. 91-349, July 23, 1970, 84 Stat. 448.

Historical Note

1970 Amendment. Subsec. (b) (1). Pub. L. 91-349 authorized appropriations for the fiscal year ending June 30, 1971, not to exceed the sum of \$20,000,000, for the fiscal year ending June 30, 1972, not to exceed the sum of \$25,000,000, and for the fiscal year ending June 30, 1973, not to exceed the sum of \$30,000,000.

for the fiscal year ending June 30, 1969, not to exceed the sum of \$6,000,000, and for the fiscal year ending June 30, 1970, not to exceed the sum of \$15,000,000.

Legislative History. For legislative history and purpose of Pub.L. 89-588, see 1966 U.S. Code Cong. and Adm. News, p. 3309. See, also, Pub.L. 90-477, 1968 U.S. Code Cong. and Adm. News, p. 3203.

1968 Amendment. Subsec. (b) (1). Pub.L. 90-477 authorized appropriations

§ 1123. Marine resource development programs—Cooperation of agencies with National Science Foundation

(a) In carrying out the provisions of this subchapter the Foundation shall (1) consult with those experts engaged in pursuits in the various fields related to the development of marine resources and with all departments and agencies of the Federal Government (including the United States Office of Education in all matters relating to education) interested in, or affected by, activities in any such fields, and (2) seek advice and counsel from the National Council on Marine Resources and Engineering Development as provided by section 1124 of this title.

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Development programs; research; publication of useful information

(b) The Foundation shall exercise its authority under this chapter by—

(1) initiating and supporting programs at sea grant colleges and other suitable institutes, laboratories, and public or private agencies for the education of participants in the various fields relating to the development of marine resources;

(2) initiating and supporting necessary research programs in the various fields relating to the development of marine resources, with preference given to research aimed at practices, techniques, and design of equipment applicable to the development of marine resources; and

(3) encouraging and developing programs consisting of instruction, practical demonstrations, publications, and otherwise, by sea grant colleges and other suitable institutes, laboratories, and public or private agencies through marine advisory programs with the object of imparting useful information to persons currently employed or interested in the various fields related to the development of marine resources, the scientific community, and the general public.

Grants and contracts to carry out programs

(c) Programs to carry out the purposes of this subchapter shall be accomplished through contracts with, or grants to, suitable public or private institutions of higher education, institutes, laboratories, and public or private agencies which are engaged in, or concerned with, activities in the various fields related to the development of marine resources, for the establishment and operation by them of such programs.

Limitation on federal contribution ratio to total program costs; prohibition against use of program funds to purchase or rent land or repair buildings, docks or vessels

(d) (1) The total amount of payments under any grant or contract with any participant in any program to be carried out by such participant under this subchapter shall not exceed 60% per centum of the total cost of such program. For purposes of computing the amount of the total cost of any such program furnished by any participant, the Foundation shall include in such computation an amount equal to the reasonable value of any buildings, facilities, equipment, supplies, or services provided by such participant with respect to such program, but not the cost or value of land or of Federal contributions.

(2) No portion of any payment by the Foundation to any participant in any program to be carried out under this subchapter shall be applied to the purchase or rental of any land or the rental, purchase, construction, preservation, or repair of any building, dock, or vessel.

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(3) The total amount of payments in any fiscal year by the Foundation to participants within any State shall not exceed 15 per centum of the total amount appropriated to the Foundation for the purposes of this subchapter for such fiscal year.

Allocation of funds to achieve maximum participation by sea grant colleges and agencies throughout the country

(e) In allocating funds appropriated in any fiscal year for the purposes of this subchapter the Foundation shall endeavor to achieve maximum participation by sea grant colleges and other suitable institutes, laboratories, and public or private agencies throughout the United States, consistent with the purposes of this subchapter.

Duplication and overlapping of Federal programs

(f) In carrying out its functions under this subchapter, the Foundation shall attempt to support programs in such a manner as to supplement and not duplicate or overlap any existing and related Government activities.

Powers and authority of National Science Foundation

(g) Except as otherwise provided in this subchapter, the Foundation shall, in carrying out its functions under this subchapter, have the same powers and authority it has under the National Science Foundation Act of 1950 to carry out its functions under that Act.

Use of personnel, services, and facilities of other Federal agencies or instrumentalities

(h) The head of each department, agency, or instrumentality of the Federal Government is authorized, upon request of the Foundation, to make available to the Foundation, from time to time, on a reimbursable basis, such personnel, services, and facilities as may be necessary to assist the Foundation in carrying out its functions under this subchapter.

Definitions

(i) For the purposes of this subchapter—

(1) the term "development of marine resources" means scientific endeavors relating to the marine environment, including, but not limited to, the fields oriented toward the development, conservation, or economic utilization of the physical, chemical, geological, and biological resources of the marine environment; the fields of marine commerce and marine engineering; the fields relating to exploration or research in, the recovery of natural resources from, and the transmission of energy in, the marine environment; the fields of oceanography and oceanology; and the fields with respect to the study of the economic, legal, medical, or sociological problems arising out of the management, use, development, recovery, and control of the natural resources of the marine environment;

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(2) the term "marine environment" means the oceans; the Continental Shelf of the United States; the Great Lakes; the seabed and subsoil of the submarine areas adjacent to the coasts of the United States to the depth of two hundred meters, or beyond that limit, to where the depths of the superjacent waters admit of the exploitation of the natural resources of the area; the seabed and subsoil of similar submarine areas adjacent to the coasts of islands which comprise United States territory; and the natural resources thereof;

(3) the term "sea grant college" means any suitable public or private institution of higher education supported pursuant to the purposes of this subchapter which has major programs devoted to increasing our Nation's utilization of the world's marine resources; and

(4) the term "sea grant program" means (A) any activities of education or research related to the development of marine resources supported by the Foundation by contracts with or grants to institutions of higher education either initiating, or developing existing, programs in fields related to the purposes of this subchapter, (B) any activities of education or research related to the development of marine resources supported by the Foundation by contracts with or grants to suitable institutes, laboratories, and public or private agencies, and (C) any programs of advisory services oriented toward imparting information in fields related to the development of marine resources supported by the Foundation by contracts with or grants to suitable institutes, laboratories, and public or private agencies.

Pub.L. 89-454, Title II, § 204, as added Pub.L. 89-688, § 1, Oct. 15, 1966, 80 Stat. 999, and amended Pub.L. 90-477, § 1(2), Aug. 11, 1968, 82 Stat. 704.

Historical Note

References in Text. The National Oceanic and Atmospheric Administration Act of 1966, referred to in this section, is classified to chapter 3501 of Title 12, The Public Health and Welfare.

Legislative History. For legislative history and purpose of Pub.L. 89-688, see 1966 U.S. Code Cong. and Adm. News, p. 2327. See also Pub.L. 90-477, 1968 U.S. Code Cong. and Adm. News, p. 2303.

1968 Amendment. Section 1(1) of Pub.L. 90-477 struck out "in any fiscal year" following "The total amount of payments" and "by any participant".

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§ 1124. Advisory functions of National Council on Marine Resources and Development

The National Council on Marine Resources and Engineering Development established by section 1102 of this title shall, as the President may request—

- (1) advise the Foundation with respect to the policies, procedures, and operations of the Foundation in carrying out its functions under this subchapter;
- (2) provide policy guidance to the Foundation with respect to contracts or grants in support of programs conducted pursuant to this subchapter, and make such recommendations thereon to the Foundation as may be appropriate; and
- (3) submit an annual report on its activities and its recommendations under this section to the Speaker of the House of Representatives, the Committee on Merchant Marine and Fisheries of the House of Representatives, the President of the Senate, and the Committee on Labor and Public Welfare of the Senate.

Pub.L. 89-454, Title II, § 205, as added Pub.L. 89-688, § 1, Oct. 15, 1966, 80 Stat. 1001.

Historical Note

Legislative History. For legislative history and purpose of Pub.L. 89-688, see 3509, 1968 U.S. Code Cong. and Adm. News, p. 3509.

APPENDIX III

ADDITIONAL MATERIALS AVAILABLE

Additional materials provided by the lecturers in In-Depth Course No. 35 include the following:

1. Sea Grant Awards by States by Fiscal Year
2. Listing of Sea Grants Current as of December 31, 1971
3. Sea Grant Control Report as of June 30, 1971
4. National Marine Advisory Program Conceptual Plan
5. Recent reports on Marine Advisory Services activities:
 - a. Identifying User Needs
 - b. Report of Committee on Marine Advisory Services, Sea Grant Colleges Association
 - c. It's Time To Get Serious About Marine Extension Education
 - d. The Role of the Fisheries Extension Agent
 - e. Business Management Needs of Fisherman