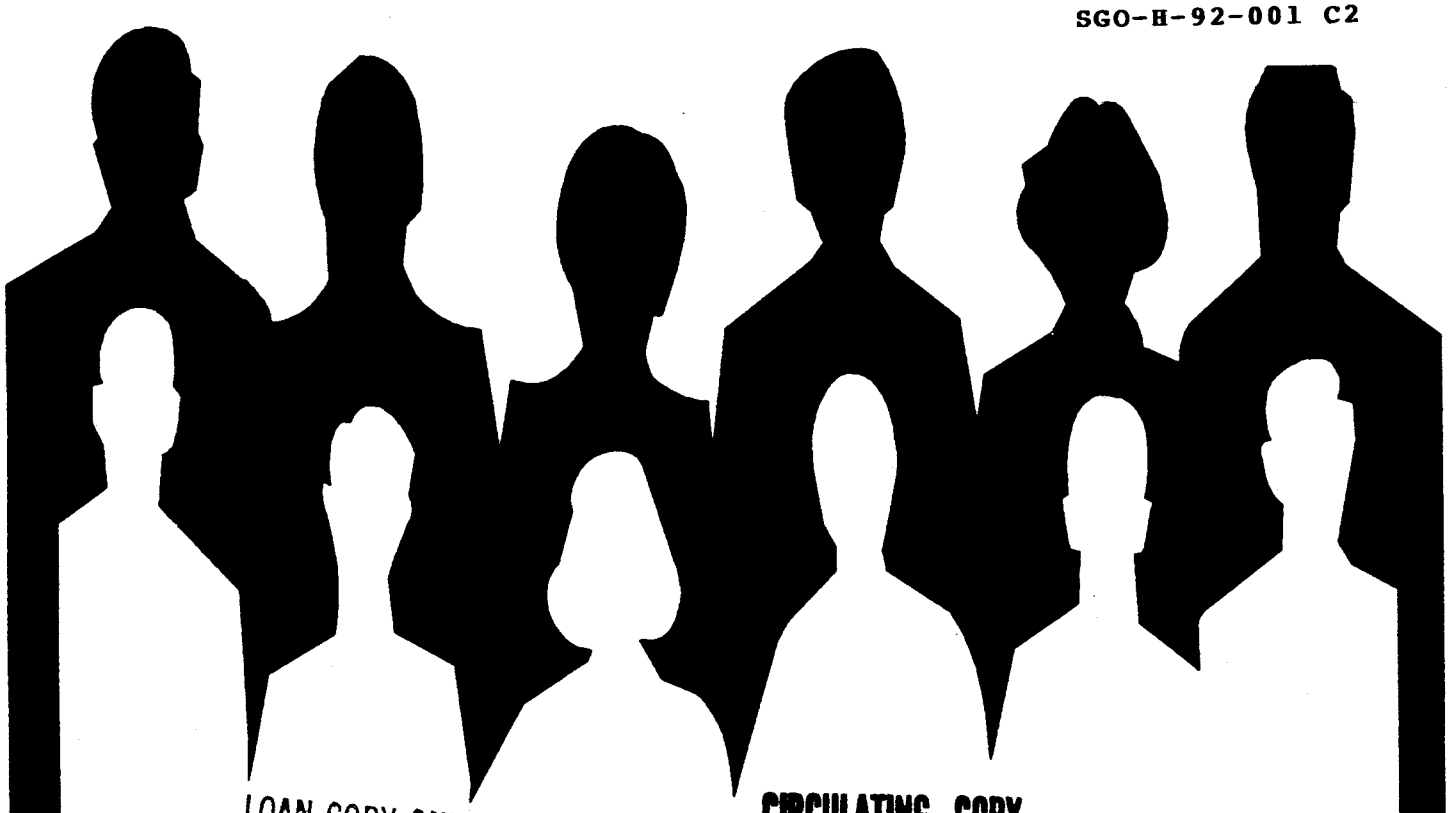


Office of Oceanic Research Programs

A Guide
to the National Sea Grant Office,
the National Sea Grant Review Panel,
the Office of Undersea Research,
and the National Coastal Resources
Research and Development Institute

September 1992

Contents

The Office of Oceanic Research Programs

Twenty-two years ago, the National Oceanic and Atmospheric Administration (NOAA) was created as an agency within the Department of Commerce to improve the nation's understanding, management and conservation of marine and atmospheric resources. Within NOAA is the Office of Oceanic and Atmospheric Research (OAR), home to the Office of Oceanic Research Programs (ORP).

The Office of Oceanic Research Programs is made up of the National Sea Grant College Program, the National Undersea Research Program, and the National Coastal Resources Research and Development Institute. These three programs are diverse yet complementary in their efforts to preserve, develop and wisely use our nation's marine and Great Lakes resources: Sea Grant through university-based research, education and training, and advisory/technology transfer services; Undersea Research through *in situ* investigations in the oceans and large lakes of the world; and the Coastal Resources Research and Development Institute through its work with communities along the coastlines of the United States.

This directory lists the national staff members of these three programs plus the Sea Grant Review Panel, the advisory board to NOAA Sea Grant.

The National Sea Grant College Program

The National Sea Grant College Program was conceived as a unique plan to develop and wisely use our nation's marine and Great Lakes resources through university-based research, education and training, and advisory/ extension services. At the birth of the program, in 1966, the name "Sea Grant" was chosen to show its relationship to the century-old "Land Grant" program--to point out how the present needs of the nation in the marine environment compare to the needs of the 1860s for developing the nation's agricultural lands.

The Office of Sea Grant, within the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), administers the National Sea Grant College Program. Through a matching fund program, the office provides financial grants-in-aid to colleges, universities and other institutions conducting research and educational projects on marine resources. The Office of Sea Grant receives research and educational proposals that undergo a thorough review, including a site visit by a team of experts. Funds for projects come from federal appropriations as well as from non-federal sources including colleges and universities, private industry, state agencies and legislatures, consumer interest groups, private foundations and individuals.

The core of the National Sea Grant College Program is comprised of 29 Sea Grant Colleges and institutions which encompass a wide network of over 300 participating universities and other marine organizations throughout the nation. Since most marine-resource problems are multifaceted, Sea Grant uses this network of multidisciplinary talent to address identified goals.

Today, Sea Grant's activities cover a wide spectrum of ocean programs that address national priorities. To mention a few, Sea Grant is the principal national source of research and technology transfer for marine aquaculture and marine biotechnology. It is a major source of research and expertise in the areas of fisheries recruitment; underutilized fish species; seafood product improvement, quality and safety; estuarine processes; critical habitat; coastal processes; ocean technology; marine policy; and the fates and effects of toxic pollutants (particularly in the Great Lakes). Sea Grant's Marine Advisory Service is the nation's only marine technology transfer mechanism linking scientists with the users of the nation's marine resources and with other groups concerned with marine issues. And Sea Grant's support of education and training ensures a cadre of professionals trained to solve ocean, Great Lakes and coastal water problems.

The information obtained through Sea Grant assistance has already proved of great benefit to the persons who must make use of the seas and oceans. In the future, the program will play an even more important role in helping those individuals who must make decisions about the future use of our marine resources.

National Sea Grant Office
Program and Administrative Assignments

John P. Ahrens
- Coastal Processes, Physical Oceanography
- Physical Impact, Observation and Predictions Program of NOAA's Coastal Ocean Program (for NOAA/Office of Oceanic & Atmospheric Research [OAR])
- National Science Foundation Coastal Ocean Processes Program (for NOAA/OAR)
- Member, American Society of Civil Engineers Rubble Mound Structures Committee

David H. Attaway
- Marine Biotechnology, Seafood Science and Technology
- ORP input to NOAA's Annual Operating Plan
- Member, Joint Committee on Modified Procedures (for review of Sea Grant proposals and programs)
- Coordinator, Special Focus Task Force Reports (looking at future Sea Grant activities)
- Representative, Biotechnology Research Subcommittee of the Federal Coordinating Council for Science, Engineering, and Technology (for NOAA)

David B. Duane
- Liaison with Council of Sea Grant Directors
- Sea Grant Review Panel
- Congressional Liaison
- Extramural Affairs Coordination (for NOAA/OAR)
- Liaison with University National Oceanographic Laboratories System
- Exclusive Economic Zone Coordination (for NOAA/OAR) with U.S. Geological Survey
- U.S. Chair, Marine Resource aand Engineering Committee (part of United States/Japan Cooperative Program in Natural Resources)

Leon M. Cammen
- Marine Ecology, Estuarine Studies, Biological Oceanography
- Member, Non-Indigenous Aquatic Species Working Group
- Member, Causes and Effects of Harmful Algal Blooms Management Committee, NOAA Coastal Ocean Program
- Member, Estuarine Habitat Program Management Committee, NOAA Coastal Ocean Program
- Member, Technical Advisory Committee, EPA Gulf of Mexico Program
- Member, NOAA Chesapeake Bay Environmental Effects Committee
- Liaison to Chesapeake Bay Toxics Program

Shirley J. Fiske

Marine and Coastal Policy, Social Sciences, Education and Training
Chair, NOAA Working Group on Human Dimensions of Global Change
Co-chair, Social and Economic Research Team of NOAA's Coastal Ocean Program
Member, Committee on Arctic Social Sciences, Interagency Research Policy Committee
Member, Human Dimensions of Global Change Task Force, Committee on Earth and Environmental Sciences
Monitor, Regional Marine Research Program - South Atlantic/Caribbean

Eugene S. Fritz

Fisheries Science, Marine Mammal Research
Sea Grant Annual Report
Recruitment Fisheries Oceanography (with NOAA)
Co-chair, Coastal Fisheries Ecosystem Theme, NOAA Coastal Ocean Program
Chair, Oversight Group for the Southeast Florida and Caribbean Recruitment (SEFCAR)
Liaison with Pacific International Council for Exploration of the Seas (PISCES)

William F. Graham

Environmental Quality, Marine Chemistry, Marine Pollution
NOAA/OAR's Representative, Regional Marine Research Program Executive Council
Member, NOAA Damage Assessment and Restoration Program Board of Directors
Member, NOAA Chesapeake Bay Environmental Effects Committee
NOAA/OAR's Representative to the Agency's Coastal Ocean Program Executive Council
Co-chairman, Estuarine Habitat Theme of NOAA/Coastal Ocean Program
Member, Mississippi/Atchafalya River Study Management Committee, NOAA/Coastal Ocean Program

Bernard L. Griswold
Marine Advisory Services
Dean John A. Knauss Sea Grant Fellows
Member, Joint Committee on Modified Procedures (for review of Sea Grant proposals and programs)
Liaison with Great Lakes Programs, both Interagency and NOAA
Persistent Marine Debris/Pollution (with NOAA)
Co-chair, NOAA Coastal Ocean Program Resource Information Delivery Theme Team
Global Change Education (Interagency)

Richard C. Kolf
Ocean Engineering, Marine Transportation, Artificial Intelligence
Liaison with Sea Grant Directors
Chair, Joint Committee on Modified Procedures (for review of Sea Grant proposals and programs)
Liaison, NOAA Grants Management Division
Sea Grant Procedures Manual ("Green Book"), Annual Program Guidance Document
Sea Grant College Designation and Recertification
Liaison to National Coastal Resources Research and Development Institute
Liaison with the Navy
Monitor, Regional Marine Research Program - Gulf of Maine

James P. McVey
Animal and Plant Aquaculture, Artificial Reefs, Coral Reef Ecology
Vice Chair, Joint Federal Subcommittee on Aquaculture
Chair, United States/Japan Cooperative Program in Natural Resources, Aquaculture Panel
Member, Joint Committee for Agricultural Resources Development
Technical Exchange with Japan and China on Aquaculture

Robert K. Norris
Ship Operations, Vessel Safety
Member, NOAA Coastal Ocean Program Resource Information Delivery Theme Team
Member, NOAA Corps Officer Assignment Board
Global Change Education (Interagency)

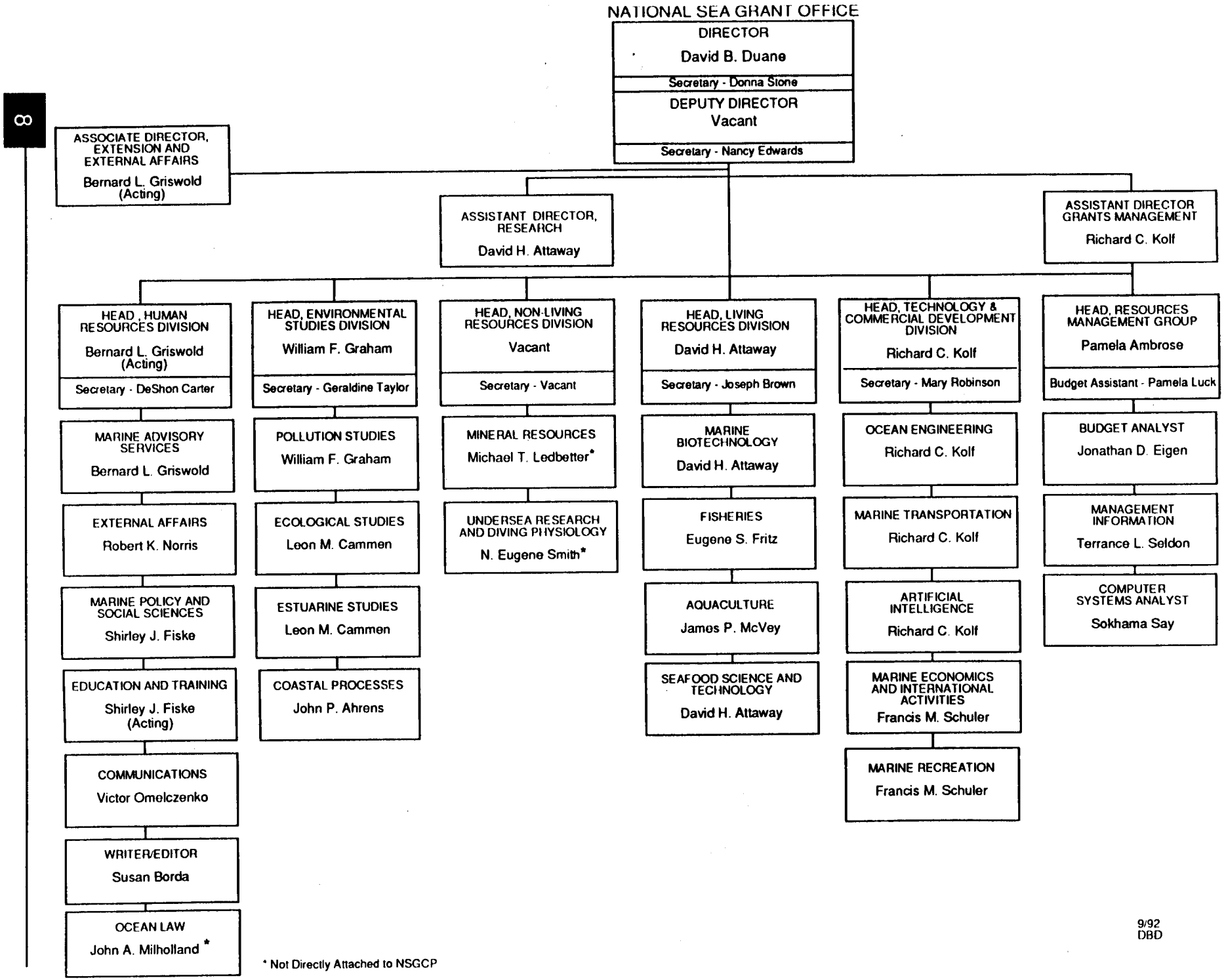
Victor Omelczenko
- Technical Communications, Print and Broadcast Media
- Sea Grant Depository
- *Sea Grant Abstracts* Quarterly
- Representation at Major Symposia and Conferences
- Liaison with NOAA External Affairs and Other Federal External Affairs Offices
- Research Strategy Documents (for NOAA/OAR)

Francis M. Schuler
- Marine Economics, Marine Recreation and Tourism
- Liaison for International Marine Activities
- Member, Sea Grant Business Initiative Working Group
- Representative, Department of Commerce Small Business Innovative Research Program (SBIR) Working Group, (for NOAA/ORP)

Staff Monitoring and Site Visit Assignments

PROGRAM	MONITOR	ASSOCIATE
Alaska	McVey	Graham
California	Cammen	Kolf
Connecticut	Schuler	Fritz
Delaware	Omelczenko	Fiske
Florida	McVey	Graham
Georgia	Fritz	Fiske
Hawaii	Griswold	Attaway
Illinois-Indiana	Kolf	Schuler
Louisiana	Cammen	Graham
Maine-New Hampshire	Fiske	Fritz
Maryland	Schuler	Omelczenko
Michigan	Attaway	Griswold
Minnesota	McVey	Fritz
Mississippi-Alabama	Schuler	Omelczenko
MIT	Ahrens	Attaway
New Jersey	Kolf	Schuler
New York	Kolf	Fiske
North Carolina	Graham	McVey
Ohio	Fiske	Fritz
Oregon	Ahrens	Kolf
Puerto Rico	Fritz	Fiske
Rhode Island	Fiske	Griswold
South Carolina	Attaway	McVey
Southern California	Cammen	Kolf
Texas	Attaway	Fritz
Virginia	Graham	McVey
Washington	Fritz	Fiske
Wisconsin	Griswold	Schuler
Woods Hole	Ahrens	Attaway

NATIONAL SEA GRANT OFFICE



* Not Directly Attached to NSGCP

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John P. Ahrens

Program Director for Coastal Processes

Mr. John Ahrens is a physical scientist who joined the National Sea Grant Office in August 1990. As program director for Coastal Processes, he is responsible for ensuring the relevance, quality and timeliness of Sea Grant research projects in coastal processes and coastal engineering. In addition, he participates in the physical oceanographic and physical impacts portions of NOAA's Coastal Ocean Program.

Mr. Ahrens started his professional career with the federal government in 1965 as an oceanographer for the Army Corps of Engineers' Coastal Engineering Research Center (CERC). During 25 years of service with CERC, he conducted extensive research on the design of coastal structures and the response of the shoreline to wave action. He is the author of numerous papers, reports, and articles relating to the design of coastal structures.

Mr. Ahrens received a B.S. in physics from Marietta College (Ohio) in 1962 and an M.S. in physical oceanography from Texas A&M in 1965. In 1968, he received a diploma in hydraulic engineering from the International School in Delft, the Netherlands. Mr. Ahrens is a member of the American Society of Civil Engineers, American Geophysical Union, American Shore and Beach Preservation Association, and American Association for the Advancement of Science.

Pamela Ambrose

Chief of Resources Management,
Office of Oceanic Research Programs

Mrs. Pamela Ambrose is the chief of resources management for the Office of Oceanic Research Programs. As chief, her job is to provide Sea Grant and Undersea Research managers with accurate, timely information on the status of ORP's resources and analysis of that information for use in the decisionmaking process. Mrs. Ambrose's financial responsibilities focus on the Federal/NOAA budget processes as it affects ORP and the grants process.

A longtime employee of NOAA, Mrs. Ambrose came to Sea Grant from NOAA/OAR's Air Resources Laboratory where she was the senior administrative representative responsible for the operation of subsidiary units located in five states. Beginning her federal career with NOAA's National Environmental Satellite, Data, and Information Service, she has also worked for NOAA's National Weather Service and NOAA's Budget and Finance Division. Mrs. Ambrose received her B.S. in information systems management from the University of Maryland.

David H. Attaway

Assistant Director for Research
Head, Division of Living Resources and
Program Director for Biotechnology and for Seafood Science

Dr. David Attaway's goals are to: (1) be highly informed about problems and opportunities in research that will contribute to enhancing the seafood processing industry and to developing biotechnology based on marine resources; (2) communicate these problems and opportunities to the academic community so that projects of excellence in research that will advance both technology and marine science are proposed; (3) encourage inter-institutional and cross-disciplinary research and industrial collaboration in these projects where desirable; and (4) assess benefits and accomplishment in ongoing and completed research. In addition to addressing these goals, Dr. Attaway monitors state or regional Sea Grant programs and assists in management of the National Sea Grant College Program. He serves on the Biotechnology Research Subcommittee of the Federal Coordinating Council on Science, Engineering, and Technology and chaired its working group on marine biotechnology.

Dr. Attaway has been with the National Sea Grant Office since 1972. During that time, he spent a year as a Congressional fellow working with the U.S. House of Representatives Committee on Science and Technology. Prior to joining Sea Grant, Dr. Attaway participated in chemical oceanographic research on petroleum pollution with the U.S. Coast Guard in Washington, D.C., and he supervised the geochemistry section and organic geochemical research on oil shales with the State Geological Survey at the University of Kansas. While a postdoctoral fellow with the Marine Sciences Institute of the University of Texas, Dr. Attaway conducted organic geochemical research on marine sediments and studied steroids and hydrocarbons in marine plants and animals. With the U.S. Naval Oceanographic Office in Washington, D.C., Dr. Attaway studied physical oceanography of coastal areas and developed techniques for *in situ* measurement of oceanic radioisotopes.

Dr. Attaway received his B.S. in chemistry and his Ph.D. in chemistry (biochemistry major) from the University of Oklahoma. His postgraduate research was on natural organic toxins in tropical marine invertebrates.

Examples of Dr. Attaway's publications are: Attaway, D.H., 1991, Marine Organisms: Their Future in Providing Goods and Services in Bioactive Compounds from Marine Organisms, Oxford and IBH Pub. Co., New Delhi, pp. 399-403. Attaway, D.H., 1990, Strategic Marine Research: New Sea Grant Initiative, *Sea Technology* 30, 33-34; Flick, G.J. and Attaway, D.H., Guest Editors, 1991, Introduction: Academic Scientists Face Issues in Seafood Technology, *Marine Technology Society Journal* 25, 3.

Dr. Attaway is a member of several honorary and professional societies, including the American Chemical Society, American Association for the Advancement of Science, Marine Technology Society, Institute of Food Technologists, and American Geophysical Union.

Susan A. Borda

Writer/Editor

Mrs. Susan Borda is the writer/editor with the National Sea Grant Office. She works with the communications director on communication projects to inform the public, private sector, and other government agencies about Sea Grant research, education and training, and advisory and extension activities. Currently, she is involved in developing the desktop publishing capabilities in the National Office. Prior to joining Sea Grant in 1988, Mrs. Borda was a meeting consultant to the Association of General Merchandise Chains.

Mrs. Borda graduated from the University of Colorado in Boulder with a B.S. in secondary education. After graduation, she taught ninth-grade English at Meritt Hutton High School in Thornton, Colorado. Before that, she worked for the *Times-Democrat* newspaper in Davenport, Iowa.

Leon M. Cammen

Program Director for Environmental Studies

Dr. Leon M. Cammen is responsible for research in the areas of marine ecology and estuarine studies. He oversees the evaluation of Sea Grant proposals in these subject areas and the coordination of Sea Grant environmental research with the actions of other agencies and organizations. Dr. Cammen is also closely involved with NOAA's Chesapeake Bay Toxics Program and its Coastal Ocean Program.

Prior to joining Sea Grant in 1990, Dr. Cammen was a research scientist at Bigelow Laboratory for Ocean Sciences in Boothbay Harbor, Maine. His research interests while at Bigelow included benthic ecology, the "microbial loop," respiratory physiology, benthic-pelagic coupling, and ecosystem modeling. He also served on the board of the Association for Research in the Gulf of Maine, a regional consortium of research organizations.

Dr. Cammen received his Sc.B. from Brown University and M.S. and Ph.D. degrees in Zoology from North Carolina State University. His postdoctoral research was done at the Bedford Institute of Oceanography, the Institute of Ecology and Genetics of Aarhus University in Denmark, and at Skidaway Institute of Oceanography. In addition, he has been a visiting scientist at Odense University in Denmark and a visiting professor at Aarhus University.

A member of the Estuarine Research Federation, the American Society of Limnology and Oceanography, the American Association for the Advancement of Science, and the International Association of Meiobenthologists, Dr. Cammen has authored over 30 publications in the fields of marine ecology and biological oceanography.

David B. Duane

Director, Office of Oceanic Research Programs and the National Sea Grant College Program

Dr. David Duane was named director of the Office of Oceanic Research Programs (ORP) and the National Sea Grant College Program in March 1992. Formerly, he served as deputy director and acting director of those programs, and as director of NOAA's National Undersea Research Program (NURP).

Prior to his assignment with NURP, Dr. Duane was head of the Non-Living Resources Division in the National Sea Grant Office. There, he managed multi-project grants at several of the 29 programs and institutions in the Sea Grant network and helped determine and maintain the quality of the research as well as relevance of the projects to target user communities. In subject area specialties of marine geology and coastal processes, he had similar responsibilities, but throughout the network.

As a Department of Commerce Science and Technology Fellow from 1979-80, Dr. Duane had a 10-month assignment as legislative assistant for marine-related issues to U.S. Senator Lowell Weicker, Jr. (the 96th Congress). Following that assignment, he returned to Sea Grant to resume his previous responsibilities and activities.

Before joining NOAA/Sea Grant in 1974, Dr. Duane's work was focused on development of geologic resources, first with the Mobil Oil Company as an exploration geologist (oil and gas) and then with the U.S. Army Corps of Engineers (marine sand and gravel). As geology branch chief with the Corps, he conducted and managed research on geological processes affecting erosion and deposition along coastlines and on the floor of the Great Lakes and continental shelf. He also helped organize and operate SCUBA groups at the Corps' Lake Survey District (now NOAA/OAR's Great Lakes Environmental Research Laboratory) and later at its Coastal Engineering Research Center where he was certified at the advanced scuba level and was diving officer.

Dr. Duane has more than 30 research publications to his credit as well as several chapters in books. He was an organizer and co-editor of the book *Shelf Sediment Transport* (1972), and was organizer and editor of a two-volume theme issue of the journal *Marine Mining* (1988) concerning marine sand and gravel mining. A marine geologist who graduated with a B.A. degree from Dartmouth College and earned a Ph.D. in geology from the University of Kansas, Duane has current research interests in: metallogenesis at seafloor spreading centers; mineral resources of the continental shelf; use of the sea floor for disposal of waste materials; sediment movement under the influence of extreme events; and marine geo-political issues.

Jonathan D. Eigen

Budget Analyst, Office of Oceanic Research Programs

Mr. Jonathan Eigen is the budget analyst with the Office of Oceanic Research Programs' Resources Management Division. He is responsible for reviewing, monitoring and tracking the grants and supporting financial obligations of the National Sea Grant College Program and the National Undersea Research Program. Mr. Eigen received his B.S. in finance and marketing from the University of Maryland and his M.B.A. from George Washington University.

Prior to joining Sea Grant, Mr. Eigen worked for the Mizlou Sports News Network as a production assistant responsible for editing and producing video tapes for use during newscasts. For 10 years, he worked for Ramona Enterprises, a small wholesale gift importer where he gained experience in sales, accounts receivable, budgeting, purchasing, and computer programming.

Shirley J. Fiske

Program Director for Marine Policy and Social Science and for Education and Training

Dr. Shirley Fiske is a cultural anthropologist with the National Sea Grant Office. As program director for Marine Policy and Social Science, her goal is to focus the attention of the social and policy sciences on issues of marine resource use and development. This commitment stems from the conviction that environmental issues are human issues. Too often, the theories and methods from the social and policy sciences are overlooked in investigations of environmental issues.

Prior to joining Sea Grant in 1986, Dr. Fiske was senior policy analyst with the Office of Policy and Planning at NOAA. Earlier, she held faculty positions at the Los Angeles and Washington, D.C., campuses of the University of Southern California's School of Public Administration. She was chosen in 1981 to be faculty fellow for the National Association of Schools of Public Affairs and Administration. Dr. Fiske received her undergraduate degree from the University of California/Davis and her Ph.D. from Stanford University.

Recent publications include an article on social and cultural aspects of establishing marine sanctuaries and a chapter on social aspects of aquaculture development. Dr. Fiske also authored an article for *Renewable Resources Journal* (winter 1990) that illustrates how social sciences relate to resource management issues ("Resource Management as People Management: Anthropology and Renewable Resources"). She also edited a special issue of *Practicing Anthropology* that illustrates the close working and conceptual relationship between anthropology and marine extension, and co-edited with Francis Schuler a special issue of *Ocean and Shoreline Management* that brings a cross-disciplinary social science perspective to understanding our responses to change in marine resources (April 1990). Dr. Fiske also has published articles on fisheries social science literature and a book on the work of anthropologists solving public and private sector problems, and she has done field work in Mexico and the United States.

Dr. Fiske is president of the National Association for Practicing Anthropology, the fourth-largest unit of the American Anthropological Association, and the only unit oriented to developing an applied arm of anthropology. She has been president of the Washington Association of Professional Anthropology and has been on the executive boards of the Society for Applied Anthropology and The Coastal Society. In addition, she serves on the editorial board of *Ocean and Coastal Management*, an international journal of ocean policy and coastal management issues. She also represents NOAA and the social sciences on the editorial board of *Arctic Research of the United States*. In this capacity, she is organizing a fall 1992 special issue on social sciences in the Arctic.

Eugene S. Fritz

Program Director for Fisheries

Dr. Eugene Fritz is the National Sea Grant Office's fisheries specialist. As the manager of its fisheries program, he is responsible for research activities in fisheries biology, management and technology. He is also responsible for OAR and Sea Grant research activities associated with recruitment fisheries oceanography and is the co-chair for the Coastal Fishery Ecosystem theme area of the Coastal Ocean Program. Since coming to Sea Grant, he has emphasized research on improving man's ability to accurately predict the abundance of fishery resources. This emphasis is based on recognition that many existing forecasting methods are inadequate, particularly in regard to long time scales and radical population changes. Present inadequacies undermine commonly used fishery management schemes and exacerbate the dislocations so characteristic of fisheries.

Before coming to Sea Grant in 1981, Dr. Fritz was employed by the Department of Interior's U.S. Fish and Wildlife Service, first as a research fisheries biologist at the Great Lakes Fisheries Laboratory and later as an aquatic ecologist with the Office of Biological Services. He began his federal employment as a fisheries biologist with NOAA's National Marine Fisheries Service. Dr. Fritz earned a Bachelor's degree at Boston University; a Master's at California State College, Long Beach; and a Ph.D. at Dalhousie University, Halifax, Nova Scotia. He also was a postdoctoral fellow at the University of Delaware.

Dr. Fritz served as editor-in-chief of the international fisheries journal, *Fisheries Research*, during its start-up period. He has managed or conducted research programs on impact assessment of electric power plants, acid precipitation, and coastal wetland functions and modifications. He has also published articles on proper techniques for studying complex ecological issues. A member of the Canadian Society of Zoologists, Dr. Fritz also is a member of the American Fisheries Society.

William F. Graham

Head, Environmental Studies Division

Dr. William Graham is a chemical oceanographer with the National Sea Grant Office. As the head of the Environmental Studies Division, Dr. Graham oversees the division's activities in the areas of marine ecology, marine pollution, and estuarine studies. He also serves as the Office of Oceanic and Atmospheric Research's representative for NOAA's Coastal Ocean Program and the Regional Marine Research Program. Prior to his current assignment, Dr. Graham served as associate program director for Environmental Studies. In 1982–83, Dr. Graham was selected by the Commerce Department to serve as a fellow on the staff of the Science and Technology Committee of the U.S. House of Representatives. During his fellowship, Dr. Graham worked on issues relating to the National Science Foundation, science education, biotechnology, and Arctic research.

Before joining Sea Grant in 1977, Dr. Graham was associated for five years with the Graduate School of Oceanography at the University of Rhode Island (URI), where he received his Ph.D. in chemical oceanography. He conducted research into the phosphate chemistry of the marine atmosphere and developed the first complete atmospheric cycle for the element phosphorous. During 1958–1972, he was a process development project engineer and subsequently a group leader with the Procter and Gamble Company. He and his groups were responsible for the development of new detergent products and the start-up of new manufacturing operations worldwide.

Dr. Graham is a member of the American Association for the Advancement of Science, the American Chemical Society, the American Geophysical Union, and the Estuarine Research Federation. He has been elected into the Sigma Tau, Tau Beta Pi, and Phi Lambda Upsilon Honorary societies, is a URI fellow, and has received the Corliss Prize in Chemical Oceanography at URI.

Bernard L. Griswold

Acting Associate Director for Extension and External Affairs,
Acting Head, Human Resources Division and
Program Director for Marine Advisory Service

Dr. Bernard Griswold, as acting associate director for extension and external affairs, is responsible for external affairs with NOAA, DOC, Congress, other agencies, associations, and industry to ensure that the Sea Grant Program fulfills its mandated role. As acting head of the Human Resources Division, he is broadly responsible for Sea Grant's outreach functions including education and training, communications, marine policy and social sciences, and marine law. Trained as a fishery scientist, Dr. Griswold provides national support and guidance to Sea Grant Marine Advisory Service and administers the development of NOAA research activities in the Great Lakes. His research background, centered on questions related to practical fishery science, has been motivated by his interest in addressing real management needs which have resource management application. Dr. Griswold carries this philosophy forward in his work with the Sea Grant Marine Advisory Service where research applications are made available to users through education and technology transfer.

Dr. Griswold received a B.S. in fish and wildlife management from Iowa State University, an M.S. in zoology from the University of Maine, and a Ph.D. in fisheries science from the University of Minnesota. He began his career as a fishery research biologist for the National Marine Fisheries Service in Woods Hole, Massachusetts. From there, he moved to Ohio State University as leader of the Ohio Cooperative Fishery Research Unit, part of a unique partnership among the U.S. Fish and Wildlife Service (USFWS), universities around the country, and state fishery management agencies. While a federal employee at Ohio State, Dr. Griswold was also a member of the graduate faculty at the associate professor level. After seven years at Ohio State, he assumed the position of national leadership for the Fishery Research Unit Program in Washington, D.C. He then became director of the USFWS' Great Lakes Fishery Laboratory in Ann Arbor, Michigan, before returning to Washington, D.C., to join Sea Grant.

Dr. Griswold has received agency awards and recognition for his research management leadership. He has been involved in several committees and task forces related to research and management policy and was technical adviser to the 10th Michigan U.S. District Court on issues related to Indian treaty fishing rights in the Great Lakes. His research, which has been published regularly, has centered primarily on questions related to the health and well-being of fish populations, and on mechanisms, both natural and man induced, which control that well-being.

Richard C. Kolf

Head, Technology and Commercial Development Division,
Assistant Director for Grants Management and
Program Director for Ocean Engineering and for Artificial Intelligence

Dr. Richard Kolf received his B.S., M.S., and Ph.D. degrees in civil engineering from the University of Wisconsin. As a graduate student, he was a member of the hydraulics and sanitary engineering group at the university, where he developed his interest in safe and environmentally sound resource development.

Prior to his federal career, Dr. Kolf served on the faculties of the University of Wisconsin, Marquette University, and Loyola University of Los Angeles where he was Dean of the College of Engineering. He came to Washington, D.C., in 1968 as program director for undergraduate instructional programs at the National Science Foundation. Two years later, he transferred to the Office of Interdisciplinary Research at the National Science Foundation, and shortly thereafter to the Division of Environmental Systems. The objective of these moves was to pursue his growing interest in interdisciplinary solutions to complex societal problems.

Dr. Kolf joined the staff of the National Sea Grant Office in 1974. As assistant director for Grants Management, he is responsible for the office's relationships with the Grants Management Division including grants processing and management information system operation. His duties include implementation of uniform review procedures within the office, and oversight of ocean engineering and marine transportation studies. During the academic year 1983–84, he was on leave of absence as visiting professor of ocean engineering at the Massachusetts Institute of Technology.

James P. McVey

Program Director for Aquaculture

Dr. James P. McVey is a fisheries biologist with the National Sea Grant Office. As program director for aquaculture, he is responsible for managing the office's aquaculture research program and for maintaining coordination with other federal and state agencies regarding their aquaculture programs. Dr. McVey is also active in developing research and developmental programs for the Pacific Islands and in working with other countries to develop technical exchange in aquaculture.

Prior to joining the Sea Grant Program in 1984, Dr. McVey received his B.S. degree from the University of Miami and his Master's and Ph.D. from the University of Hawaii. He then served seven years as the fisheries biologist for the Trust Territory of the Pacific where he designed and managed a major marine science research center on the island of Palau. The center specialized in aquaculture of marine fish, giant clams, freshwater shrimp, and tropical oysters. He then spent five years at the Galveston laboratory of the National Marine Fisheries Service as aquaculture division chief for the Southeastern United States. This assignment provided further experience in marine fish culture and marine shrimp culture. He then was chosen by U.S. AID to participate in a development project for freshwater shrimp hatcheries on the island of Java in Indonesia. After two years in Indonesia, he accepted his present position with Sea Grant. Dr. McVey has also worked with the International Executive Service Corps as a volunteer in Panama and Egypt.

Dr. McVey has published over 40 scientific and popular articles and two best selling books on crustacean culture and marine fish culture for CRC Press. In 1992, he submitted a new version of the crustacean book for publishing. Dr. McVey was also final editor of the CRC volume on mollusk culture.

Since joining Sea Grant, Dr. McVey has served on the Joint Federal Subcommittee for Aquaculture, the Joint Committee for Agricultural Resources Development, United States/Japan Cooperative Program in Natural Resources (Aquaculture Panel Chairman), and Small Business Innovative Research review committees for USDA, NSF, and DOC. He has represented DOC on a fact-finding trip to Micronesia and represented NOAA at professional meetings around the country and internationally pertaining to aquaculture. Dr. McVey served on the Board of Directors of the World Aquaculture Society from 1990-1992. He presently serves as DOC liaison to the Aquaculture Panel for the Marine Board of the National Academy of Science and is involved in the planning and coordinating of a major effort to reestablish the East Coast oyster industry and is serving on a special committee to provide recommendations to Congress on the intentional introductions of aquatic species.

John A. Milholland

Senior Counsellor, NOAA Office of General Counsel

Mr. John Milholland is the legal advisor to the National Sea Grant Office. He is responsible for monitoring the direction and quality of individual legal programs at Sea Grant institutions as well as for advising the National Office on legal issues connected with its administration of the program as a whole. He also advises NOAA's National Weather Service and its National Environmental Satellite, Data, and Information Service.

Mr. Milholland has worked in the General Counsel's Office since 1975, primarily in the area of coastal zone management. He was responsible for reviewing and approving many of the state coastal zone programs submitted for federal approval and for defending the program from legal attack during the formative years of implementation. He was also responsible for developing the legal framework for the marine sanctuary program during this period.

Prior to coming to NOAA, he was engaged in private practice with Thacher, Proffitt, Prizer, Crawley & Wood, in New York City, particularly in the area of admiralty, and with FitzPatrick, Bennett, and Trombley in Elizabethtown, New York, where he specialized in land use law and was the town attorney.

Mr. Milholland received his B.A. from Williams College and his LL.B. from Columbia University. In 1975, he received an LL.M. in law and marine affairs at the University of Washington. This program stressed the importance of an interdisciplinary approach to marine issues, an approach Mr. Milholland has followed at NOAA and particularly at Sea Grant. A major interest at Sea Grant at this time is investigating the extent to which the legal structure in various states may be holding back the development of the aquaculture industry.

Robert K. Norris

Deputy Director for Marine Advisory Services

Commander Robert Norris has over 21 years of experience as a commissioned officer in the NOAA Corps. Prior to his Sea Grant assignment, he served as executive officer of NOAA's Office of Global Programs. Other shore assignments have included work with the National Ocean Service (NOS) Nautical Chart Division as chief of the Requirements Branch and as chief of the Chart Planning and Technology Group. While with NOS, Commander Norris also had a mobile assignment as officer-in-charge of a hydrographic field party.

In addition to these shoreside assignments, Commander Norris spent six years at sea in a wide range of management and operational positions that included tours as Commanding Officer of the NOAA ships RUDE & HECK, operations officer aboard the NOAA ship KELEZ, and navigation officer on the NOAA ship McARTHUR. During these sea deployments, Commander Norris was involved in hydrographic survey operations, oceanographic research, fisheries assessment surveys, side scan sonor surveys, and wire drag investigations. Because of his involvement administratively and operationally in a wide variety of NOAA programs (NOS, Office of Oceanic and Atmospheric Research and the National Marine Fisheries Service), Commander Norris considers himself to be a "generalist" within the organization.

Before joining the NOAA Corps, Commander Norris received a B.S. in geology from Arizona State University. Since joining the Corps, he has completed numerous government-sponsored training courses, including a six-week marine fisheries technology course at the University of Rhode Island. In addition, for the past three years, Commander Norris has been attending night classes at Hood College in Frederick, Maryland, for an M.B.A. and plans to receive his degree in the fall of 1992.

Commander Norris is the recipient of several awards from both the NOAA Corps and NOAA program offices including the NOAA Corps Director's Ribbon, a special achievement award, and six commendations for excellent performance. In addition to being a member of the Association of NOAA Commissioned Officers, he also belongs to the Society of American Military Engineers.

Victor Omelczenko

Program Director for Communications

Mr. Victor Omelczenko is the communications director for the National Sea Grant Office where he manages the technical communications program. This program supports projects at Sea Grant institutions to disseminate the results of research, education and training, and advisory/extension efforts. He is also monitor for both the National Sea Grant Depository, the network's archive and lending library, and for the quarterly *Sea Grant Abstracts*, a nationally-distributed document that provides abstracts of all Sea Grant-generated publications. In addition, he serves as liaison with public affairs offices at other federal agencies and coordinates Sea Grant participation at annual conferences such as Oceans '88, Coastal Zone '91, and Coastal Society '92. His efforts are aimed at providing both the public and private sectors with useful information resulting from Sea Grant projects fostering the wise use and development of the nation's ocean and Great Lakes resources.

Before joining Sea Grant in March 1984, Mr. Omelczenko held public affairs positions with the U.S. Department of Agriculture's Food and Nutrition Service in Chicago (1978-84) and with the National Endowment for the Humanities in Washington, D.C., (1975-78). A 1972 journalism graduate of the University of Michigan, Mr. Omelczenko has also worked as a general assignment writer at *Nation's Business and Popular Science* magazines.

Sokhama Say

Computer Systems Analyst

Miss Sokhama Say is the computer systems analyst in the Resources Management Division. She is responsible for facilitating the operation of the Sea Grant Network Information System by editing and updating the database and generating custom reports when requested. Her duties include developing a desktop publishing work station and responding to computer problems in the National Office.

Before coming to Sea Grant, Miss Say worked for the Vitro Corporation as a data processing assistant where she was involved with projects requiring data processing services utilizing both IBM mainframe and networked personal computers. Prior to her job at Vitro Corporation, she worked for Calculon Corporation as a technical assistant. Her duties there included maintaining a computerized data base of energy-related information photographic images of Department of Energy sponsored projects.

Miss Say received her A.A. degree from Anne Arundel Community College. She also has a certificate as a data processing computer specialist from Yorktowne Business Institute and is currently taking computer courses at the University of Maryland.

Francis M. Schuler

Program Director for Marine Economics,
Marine Recreation and Tourism, and International Activities

Dr. Francis Schuler is an economist in the National Sea Grant Office. He administers the marine economics program which supports research to advance the development of marine resource-based industries and to promote the efficient allocation of marine resources. He also directs the marine recreation and tourism program where research is focused on the goal of increasing the opportunities available for participation in coastal recreation. In addition, he is the National Office liaison for international marine activities, represents the Office of Oceanic Research Programs to the Department of Commerce Small Business Innovative Research Program, and serves as a member of the Sea Grant Business Initiative Working Group.

Before joining Sea Grant in 1978, Dr. Schuler served as staff economist for NOAA's Office of Policy and Planning and for NOAA's Office of Marine Resources. He conducted economic and policy analysis for the implementation of the Fisheries Conservation and Management Act and for the seabed mining and living marine resource provisions of the Law of the Sea treaty negotiations.

Dr. Schuler received a B.A. degree in economics from Catholic University in 1967 and a Ph.D. degree in resource economics from the University of Rhode Island in 1974. He is a member of several professional groups, including the American Economics Association and the Association of Environmental and Resource Economists. He chairs the annual meeting of marine economists held in conjunction with the American Agricultural Economics Association. Dr. Schuler has written on the use of economic incentives to allocate marine resources and on the economics of marine recreation. He co-edited with Shirley Fiske a special issue of *Ocean and Shoreline Management* that brings a cross-disciplinary social science perspective to understanding our responses to change in marine resources (April 1990).

Dr. Schuler, as part of a Department of Commerce Science and Technology Fellowship, served from July 1990-July 1991 on the staff of the House Committee on Science, Space, and Technology. While there, he worked as a special assistant on the International Scientific Cooperation Subcommittee and the Investigation and Oversight Subcommittee.

Terrance L. Seldon

Chief of Information Resource Management and Management Information Systems Coordinator

Mr. Terrance Seldon is a computer specialist with the National Sea Grant Office. As the chief of information resource management, he is responsible for database management systems and all aspects of computer service and support for the National Office. As management information systems coordinator, he represents Sea Grant on several committees for the exchange of publication information and is the technical reference for automatic data processing procurements of the Office of Atmospheric Research. Mr. Seldon has over 10 years experience in automatic data processing, five involving data and voice communications and database design and development.

Prior to joining Sea Grant in 1989, Mr. Seldon was involved in the development and management of four computer companies including his own. One of the companies he managed built the litigation database for the AT&T divesture and the factual database for listings on the Vietnam Memorial in Washington, D.C.

For seven years, Mr. Seldon worked for the Department of Treasury where he assisted in developing seven optical character reader treasury sites. While at Treasury, he also helped develop a data processing system to track disbursement of the federal government payroll.

Mr. Seldon has attended Montgomery College, the University of the District of Columbia and George Washington University. He is presently enrolled in computer science at the University of Maryland.

The National Sea Grant Review Panel

The National Sea Grant Review Panel is composed of distinguished citizens appointed by the Secretary of Commerce to advise the Secretary, the Administrator of the National Oceanic and Atmospheric Administration (NOAA), and the National Sea Grant Director on scientific and administrative policy. Panelists participate in onsite reviews of university Sea Grant proposals, evaluate progress and potential, and meet at least twice a year to address opportunities facing Sea Grant. Panelists are appointed to three-year terms, and, as a group, elect a Chair and a Chair-Elect to one-year appointments.

Fernando E. Agrait
Guaynabo, Puerto Rico

Mr. Fernando Agrait, attorney and law professor, has served for 20 years as a faculty member of the University of Puerto Rico where he was also its president from 1985-1990. A recent member of the National Science Foundation's Scientific, Technical and International Affairs Advisory Committee, he is currently executive director for the Commission for Reform of the Civil Code of Puerto Rico and chairman of the Council for Puerto Rico/ U.S. Affairs Mr. Agrait received his B.S. and J.D. from the University of Puerto Rico and his LL.M. from Harvard. He has also received honorary degrees from City University of New York and the University of South Carolina as well as the Palm Academique from the government of France.

Ronald C. Baird (Chairman, 1991-1992)
Worcester, Massachusetts

Dr. Ronald Baird, Chairman of the Sea Grant Review Panel, is director of corporate relations at Worcester Polytechnic Institute where he is also an adjunct associate professor in the Department of Biology and Biotechnology. He currently serves as a director of the Schuster Corporation, an investment holding company, of which he was formerly vice president and executive vice president. Dr. Baird spent eight years as a faculty member of the University of South Florida's Marine Science Institute where he is now an adjunct professor of marine science. He received a B.S. from Yale University, an M.A. from The University of Texas at Austin, and a Ph.D. from Harvard University.

Maumus F. Claverie, Jr.
New Orleans, Louisiana

Mr. Maumus Claverie is an attorney and a lifelong recreational fisherman. He has served in various fishery organizations, most prominently the Marine Fisheries Advisory Committee to the Secretary of Commerce and the Gulf of Mexico Fisheries Management Council. He also serves or has served on the Louisiana Governor's Task Force on Saltwater Finfish, the Louisiana Department of Wildlife and Fisheries Marine Finfish Panel, the Louisiana State University's Coastal Fisheries Institute Advisory Panel and College of Agriculture's Fishery and Aquaculture Advisory Panel, the United Sports Fishermen's International Convention for the Conservation of Atlantic Tunas Subcommittee (ICCAT), and the Advisory Committee to the U.S. Delegation to ICCAT. A recipient of the Louisiana Outdoor Writers Association award for lifetime dedication to conservation, Mr. Claverie is currently on the boards of the Nature Conservancy of Louisiana, the International Game Fish Association, the Coastal Conservation Association, the Louisiana Gulf Coast Conservation Association (GCCA), the National Coalition for Marine Conservation, the Louisiana Universities Marine Consortium Foundation, and the Billfish Foundation. He is chairman of the Louisiana GCCA cooperative marine fish tagging program. He has practiced law in the private sector since receiving his law degree from Tulane University in 1961 and served as judge of the traffic court of New Orleans in the 1960s.

William F. Cochrane
Beaufort, South Carolina

Mr. William Cochrane is a corporate executive and real estate expert who is currently president of ALCOA South Carolina, Inc. Mr. Cochrane has served as executive vice president of Dataw Management Company, Inc., vice president for special projects with the National Homes Construction Corporation, Northeast regional representative for the Housing Corporation of America, and vice president for planning and marketing of Jonathan's Landing, Inc. He helped to establish the Coastal Zone Management Program in Florida and later served on the program's board. He received his B.A. from the University of Denver and has continued his education through management and real estate courses and through workshops and seminars on environmental concerns.

Marne A. Dubs (Chair-Elect)
New Canaan, Connecticut

Mr. Marne Dubs is a private consultant to clients in oil, chemical, mineral and industrial products industries and is Chair-Elect of the Sea Grant Review Panel. His particular expertise is in evaluating and managing technology and new ventures. Mr. Dubs has served as a member of the National Advisory Council on Oceans and Atmosphere and as an expert with the United States delegation to the Law of the Sea Conference. Currently, he is a member of the Advisory Council on Marine Affairs to the president of the University of Rhode Island. Mr. Dubs received his B.E. from Johns Hopkins University.

Peter M. Dunbar
Tallahassee, Florida

Mr. Peter Dunbar, an attorney who has specialized in governmental, administrative, and real estate law, is a partner in the law firm of Haben, Culpepper, Dunbar & French, P.A. He served as chairman of the Sea Grant Review Panel from 1987-88. A member of the Florida House of Representatives from 1978-1989, Mr. Dunbar was the primary sponsor of legislation creating the state's Marine Fisheries Commission in 1983. Committees on which he served in the Florida House included: natural resources; finances and taxation; and criminal justice. He received both his B.A. and his J.D. from Florida State University.

Otto Klima
Jamesville, Virginia

Mr. Otto Klima, a former Sea Grant Review Panel member from 1967–1975, is a retired vice president and division general manager of the General Electric Company. He has had 35 years of diversified executive experience in high-level technology, large-scale production and new-venture business operations in the United States and overseas. Mr. Klima previously served for 20 years on NASA's Research and Advisory Committee and as a presidential appointee to the National Advisory Committee on Oceans and Atmosphere from 1978–1980. He received his B.S from Rensselaer Polytechnic Institute.

Frank Kudrna, Jr.
Clarendon Hills, Illinois

Before becoming president of Kudrna & Associates, Ltd., a Chicago civil engineering consulting firm, Dr. Frank Kudrna was president of Epstein Civil Engineering Company. Prior to that, he was director of the Illinois Division of Water Resources and supervising engineer of flood control and planning with the Metropolitan Water Reclamation District of Greater Chicago. Dr. Kudrna has served for almost 15 years on the Great Lakes Commission and is presently chairman of the Illinois delegation. He is former vice-chairman of the Upper Mississippi River Basin Commission and the Ohio River Basin Commission. Dr. Kudrna received a B.S. from Chicago Technical College, an M.S. and a Ph.D. from the Illinois Institute of Technology, and an MBA from the University of Chicago.

Arthur Eugene Maxwell
Austin, Texas

Dr. Arthur Maxwell is director of the Institute for Geophysics and professor in the Department of Geological Sciences at The University of Texas at Austin. Previously, Dr. Maxwell held positions at Woods Hole Oceanographic Institution as provost, director of research, and associate director, and with the Office of Naval Research in Washington, D.C. as head of the geophysics branch and head oceanographer. A former American Geophysical Union president, he is also a charter member of the Marine Technology Society and served as its president from 1981–1982. A previous Sea Grant Review Panel member from 1982–1985, Dr. Maxwell received his B.S. from New Mexico State University and his M.S. and Ph.D. from the University of California's Scripps Institution of Oceanography.

Saul B. Saila
Narragansett, Rhode Island

Dr. Saul Saila is a fisheries biologist and biometrician who retired in June 1988 after 32 years with the University of Rhode Island as professor of oceanography and chief scientist for the university's marine programs office. He has also been a biologist with the New York State Conservation Department, a research associate with the Indiana Lake and Stream Survey, and a fishery biologist with the Rhode Island Department of Environmental Management. He is a member of the International Council for the Exploration of the Sea Committee on Demersal Fisheries and a member of the Rhode Island Marine Fisheries Council. Dr. Saila received his B.S. from the University of Rhode Island and his M.S. and Ph.D. from Cornell University.

Mr. Carl H. Savit
Houston, Texas

Mr. Carl Savit is a consultant and an adjunct professor of geology and geophysics at Rice University. After 38 years with the Western Geophysical Company of America, Mr Savit retired as senior vice president in 1986. From 1970–1971, Mr. Savit served on the White House staff as assistant for earth, sea and air sciences to the President's science advisor. Since 1988, he has served as a panel member on the proposed NOAA survey of the United States' Exclusive Economic Zone. Mr. Savit received his B.S. and M.S. from the California Institute of Technology. He has been issued 42 U.S. patents with 124 corresponding patents in other countries and is the author of the fourth edition of *Introduction to Geophysical Prospecting* and numerous other publications.

Mr. Eugene Francis Shiels
Houston, Texas

Mr. Eugene Shiels is an engineer and a former consultant to the Zapata Corporation, the Urban Investment and Development Corporation, and the Reading and Bates Drilling Company. He worked for the General Electric Company before serving as a U.S. Army major in the Pacific Theatre during World War II. From 1946–1966, Mr. Shiels worked for Dresser Industries in capacities such as design engineer, technical services manager, and vice president. Joining the Zapata Corporation in 1966, he served as marketing vice president, senior vice president, and as executive vice president and director, and as chairman and director of several of Zapata's subsidiary companies before retiring in 1981. Mr. Shiels received his B.S. in electrical engineering from Texas A&M University.

Gregory Switlik, Sr.
Trenton, New Jersey

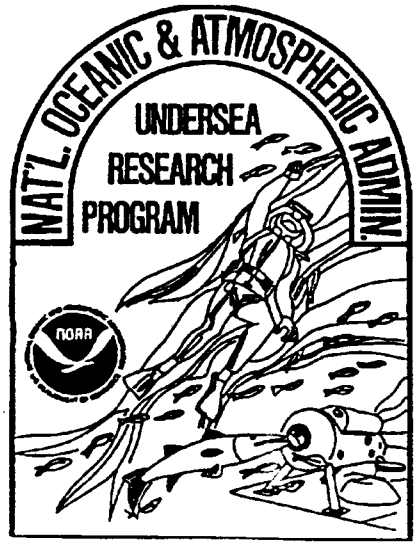
Mr. Gregory Switlik is vice president of a family owned and operated business, Switlik Parachute Company Inc., which also produces marine safety equipment. A recreational fisherman and a conservationist with strong involvement in the marine community, he is chairman of the New Jersey Marine Advisory Board, serves as president of the United States Marine Safety Association, is director of the New Jersey Marine Trades Association, and is a former trustee of the New Jersey Sea Grant Consortium. Mr. Switlik received his B.A. from Alliance College in Pennsylvania.

John Toll
Bethesda, Maryland

Dr. John Toll is president of the Universities Research Association. He also serves as chancellor emeritus of the University of Maryland where he is a physics professor and was formerly its president and founding chancellor. Previously, Dr. Toll was president of the State University of New York at Stony Brook. He is a fellow of the American Physical Society and a member and former national chairman of the Federation of American Scientists. Dr. Toll has also served as chairman of three advisory panels for the U.S. Congress Office of Technology Assessment, and as chairman of advisory panels in physics for the National Science Foundation and the National Aeronautics and Space Administration. He received his B.S. from Yale University and Ph.D. from Princeton. Dr. Toll has received honorary degrees from Adelphi University, University of Maryland, State University of New York, Wroclaw (Poland), and Fudan University (China).

Grace Wever
Bergen, New York

Dr. Grace Wever has worked for Eastman Kodak Company since 1981. Currently, she is director and liaison for Kodak to the Council of Great Lakes Industries for which she also serves as president and chief executive officer. Dr. Wever was a founding member of the Council which focuses on environmental and economic issues as well as policy. She previously managed environmental programs at Kodak Park site, a facility employing more than 20,000 people. Prior to working for Kodak, Dr. Wever was a research faculty member at the University of Rochester Medical Center and Institute of Optics. She received her B.A. and a Ph.D. in cell and molecular biology from Temple University.



The National Undersea Research Program

NOAA's Undersea Research Program (NURP) supports *in situ* investigations in the oceans and large lakes of the world. The program seeks to place investigators safely undersea to conduct manipulative experiments not possible within the limitations of traditional laboratory and ship-based research.

Research activities are aimed at increasing our knowledge of the structure and processes of the global ocean. With an understanding of how physical, chemical, biological, and geological processes control marine environments important to the nation, informed decisions can be made to improve the wise use of our marine resources.

Proposals are solicited from qualified investigators and peer reviewed through a competitive, national process. Support is awarded to investigators with scientifically meritorious projects. Specific program areas of undersea investigations are: 1) biological productivity and living resources, 2) coastal oceanic and estuarine processes, 3) pathways and fate of material in the ocean, 4) global and oceanic processes, 5) ocean lithosphere and mineral resources, 6) ocean technology, and 7) diving safety and physiology.

As part of the diving safety program, NURP supports research on diving physiology and hyperbaric medicine in cooperation with the U.S. Navy, U.S. Coast Guard, and recognized academic centers of excellence in these fields. Science activities in the ocean technology category include development of the tools required to facilitate undersea research.

Major, integrated undersea programs now underway in the other seven categories listed above include the processes governing seafloor venting, geochemical cycling of pollutants in the Great Lakes, ecology of seamounts, and the factors controlling primary productivity and nutrient cycling in diverse ecosystems ranging from the subarctic to tropical environments.

Program activities are supported with a wide array of advanced undersea sampling and sensing platforms including manned submersibles, remotely operated vehicles, and saturation habitats. Examples of this technology are the "ALVIN" and "PISCES V," two of the deepest diving submersible platforms available to the scientific community today, and the "AQUARIUS," a mobile deep-diving saturation habitat. NURP also has an agreement with the U.S. Navy to utilize its deep submergence assets such as the "SEACLIFF," a research submersible capable of diving 6,000 meters, for conducting undersea research.

NURP is managed by the Office of Undersea Research in NOAA's Office of Oceanic Research Programs. The research community gains access to the program through six Undersea Research Centers. These are located at the Universities of Alaska, Connecticut, Hawaii, and North Carolina (Wilmington), Rutgers University, and the Caribbean Marine Research Center (Riviera Beach, FL).

NURP provides the focal point for meeting the undersea research requirements of government, academia, and industry. Support provided by the program is generally accompanied by co-funding from traditional granting agencies such as the National Science Foundation, Office of Naval Research, National Sea Grant College Program, and the business community.

Marcia Collie

Editor

Mrs. Marcia Collie is editor with the National Undersea Research Program. In this capacity, she edits various publications including science reports, technical reports, symposium proceedings of NURP-supported research, and papers from NURP-sponsored workshops. She recently completed revising the *NOAA Diving Manual*, which is the Government Printing Office's best seller. Currently, Mrs. Collie is editing the Proceedings of the 20th United States/Japan Natural Resources Symposium (on aquaculture nutrition).

Mrs. Collie has been with NURP since 1983. Prior to this assignment, she was an editorial assistant with NOAA's Environmental Science Information Center where she worked on publications such as the *Monthly Weather Review*, a meteorological journal now published by the American Meteorological Society.

A graduate of Strayer College in Washington, D.C., Mrs. Collie has been extensively involved in editing and preparing government publications since joining the Coast and Geodetic Survey in 1966.

A.N. Kalvaitis

Senior Engineer and Operations Director

Mr. A. Kalvaitis is senior engineer and operations director for the National Undersea Research Program (NURP). As such, he is responsible for providing technical support and guidance on undersea platforms to the NURP professional staff and the National Undersea Research Centers. Mr. Kalvaitis' primary goal is to ensure that NOAA's undersea research mission objectives and operations are technically feasible, safe, cost-effective, and efficient.

Prior to joining NURP, Mr. Kalvaitis was a program engineer with NOAA's Special Projects Office. He was responsible for managing several projects associated with the Ocean Thermal Energy Conversion (OTEC) program that explored the ocean as a renewable power resource. One of his OTEC projects was nominated by the American Society of Civil Engineers as an outstanding civil engineering achievement in 1984. Earlier, Mr. Kalvaitis was an engineer with NOAA's Engineering Support Office where he designed, tested and evaluated instrumentation systems and platforms for oceanographic and meteorological measurements. He received his BSME from the University of Maine, Orono.

Mr. Kalvaitis has published articles on undersea science platforms, OTEC developments, data quality assurance, and marine instrumentation. He is a member of the Marine Technology Society's Undersea Vehicles/ROV Committee and the Current Measurement Technology Committee of the Institute of Electrical and Electronics Engineers. In addition, Mr. Kalvaitis is a member of the Engineering Committee on Oceanic Resources Working Group on Marine Robotics.

Michael T. Ledbetter

Program Director for Geological Sciences

Dr. Michael Ledbetter, a geological oceanographer, is program director for Geological Sciences with the National Undersea Research Program and an advisor to the Non-Living Resources Division of the National Sea Grant College Program. He received a B.A.A.S. in engineering geology, an M.S. in geology from Memphis State University, and a Ph.D. in oceanography from the University of Rhode Island.

After receiving his Ph.D. in 1978, Dr. Ledbetter was a Department of Geology faculty member at the University of Georgia. From 1983-1992, he was on the faculty of the Moss Landing Marine Laboratories of San Jose State University. Dr. Ledbetter also spent two years as an associate program director in the Marine Geology and Geophysics Program of the National Science Foundation.

As a researcher, Dr. Ledbetter studied deep-sea sedimentary processes and paleoceanography of Antarctic-derived bottom currents and deep-sea fan deposits, and has also contributed to the scientific programs of the Deep-Sea Drilling Project and Ocean Drilling Program. After the 1989 Loma Prieta earthquake in California, he was a co-leader of a series of projects to determine the offshore effects of liquefied soils and slumping of canyon sediments in Monterey Bay. That research demonstrated that both onshore and offshore sediments are subject to earthquake-induced liquefaction, slumping, and mass movement, and that those processes may play an important role in submarine canyon evolution.

A former member of the California Sea Grant Committee, Dr. Ledbetter has published over 60 papers in the reviewed scientific literature and has contributed to several books. Currently, his research interests are the role of slumping on submarine canyon formation and paleoclimate-induced changes in ocean bottom-current circulation.

Odysseus Mikalis

Computer Systems Analyst

Mr. Odysseus Mikalis joined NOAA's National Undersea Research Program (NURP) as a computer specialist. He brings with him administrative, accounting, computer, and marketing skills from work in the private and public sectors. Before joining NURP, Mr. Mikalis directed constituent services for Senator Paul Sarbanes of Maryland. In that capacity, he served as liaison with government and private organizations.

Mr. Mikalis graduated from Montgomery College in 1976 with a degree in mathematics and science. In 1979, he graduated from George Washington University with a major in political science. During his junior year, he interned in the Senate doing research regarding legislation on Alaska lands, the Clinch River Breeder Reactor, the Comprehensive Employment and Training Act, and foreign policy issues. Mr. Mikalis also attended the University of Baltimore Law School from 1982–1983, and in 1990–1991, he completed accounting courses required for the certified public accountant examination.

N. Eugene Smith

Operations Director and
Program Director for Diving Safety and Physiology

Mr. Eugene Smith received his B.S. in mechanical engineering and M.S. in environmental engineering from Kansas State University and is a registered professional engineer. His involvement with manned and unmanned undersea activities has spanned 25 years, and he has written several technical papers and book chapters, primarily on diver thermal protection, and has served on technical committees related to diving in the United States and overseas. Currently, Mr. Smith is on the American Society of Mechanical Engineers Main Committee on Pressure Vessels for Human Occupancy.

Mr. Smith was with Sub Sea International (SSI) for over 15 years as engineering manager, operations manager, and the manager of an overseas (New Zealand) subsidiary. While with SSI, his major responsibilities were: design and fabrication of saturation diving systems; development and implementation of underwater inspection tools and techniques; management of diving operations including dynamically positioned support vessels, lock-out submersible operations and remotely operated vehicle operations; and formulation of a research and development program that included complete revision of both decompression and therapeutic recompression tables and operation and safety manuals.

Prior to his employment at SSI, Mr. Smith spent seven years at the Westinghouse Ocean Research and Engineering Center in the life support engineering group as a design engineer, project engineer, and project manager on manned submersibles and hyperbaric facilities, and diver-worn saturation diving equipment. He also directed a hyperbaric respiratory heat loss study.

David L. Stein

Senior Scientist

Dr. David Stein is an ichthyologist with the National Undersea Research Program (NURP). He received his B.A. degree from California State University at Humboldt, and M.S. and Ph.D degrees in fisheries from Oregon State University.

Before joining NURP, Dr. Stein was an oceanographic technician, research associate, and assistant professor (senior research) at Oregon State University's College of Oceanography. In those positions he spent over three years total time at sea on about 60 research cruises, most as field party chief or chief scientist. He is a National Association of Underwater Instructors certified scuba diver.

As a technician, Dr. Stein worked on the distribution of continental shelf benthic fishes, biology and behavior of deep scattering layer organisms, and taxonomy of fishes of the continental slope and abyssal plain. After receiving his Ph.D in 1982, he conducted research on deep sea fishes down to 6,000 meters, development of deep sea, large net trawling methods, taxonomy of snailfishes, and fisheries biology of Pacific grenadier. He has also used submersibles for multi-year studies of upper subduction zone methane vents and of deep bank fishes off Oregon.

Dr. Stein has published over 30 research papers and has been an author or co-author of several book chapters. His current research interests are the taxonomy and natural history of snailfishes and deep-sea fishes, and the fisheries biology of continental slope fishes.

Gregory Stone

Assistant Program Director for Biological Sciences

Mr. Gregory Stone was the 1989 Sea Grant Fellow assigned to the National Undersea Research Program and is now its assistant program director for biological science. From 1990–Spring 1992, he was NOAA's representative to the Japan Marine Science and Technology Center (JAMSTEC) in Yokosuko, Japan, where he created new opportunities for U.S.–Japanese collaboration in undersea research.

Prior to joining NURP, Mr. Stone was a research associate at the College of the Atlantic where he conducted research on whales and taught research diving and marine mammal courses. He has conducted field research on depleted whale species in the Antarctic, Caribbean, and the Gulf of Maine. Mr. Stone has also worked for the New England Aquarium as chief scientist of the right whale project and worked at the University of Rhode Island Graduate School of Oceanography as a marine research specialist conducting aerial surveys for whales and turtles. During 1986, he was principal investigator for cetaceans in the NOAA National Marine Fisheries Service's Antarctic Marine Living Resources Program.

Mr. Stone is a recipient of the 1986 National Science Foundation and U.S. Navy Antarctic Service Medal. He is an instructor with the National Association of Underwater Instructors and has logged over 1,400 hours SCUBA diving. A member of the American Academy of Underwater scientists and the International Society for Marine Mammalogy, Mr. Stone has written over 10 scientific publications on whales and numerous other articles on marine topics.

Marsh J. Youngbluth

Director, National Undersea Research Program

Dr. Marsh J. Youngbluth, a biological oceanographer, is director of the National Undersea Research Program (NURP). Before joining NURP, he was a senior scientist with the Harbor Branch Oceanographic Institution where he formerly acted as director of the Marine Sciences Division and as chief administrative officer of the postdoctoral fellowship program. Dr. Youngbluth's most recent research at Harbor Branch concerned the ecology and behavior of zooplankton in the Atlantic and Pacific Oceans and in the Mediterranean Sea.

Dr. Youngbluth has extensive experience with manned submersibles in midwater environments, and he pioneered the development of undersea tools needed to collect as well as conduct *in situ* experiments on midwater pelagic fauna. His current research interests include the biology of gelatinous plankton, the flux of particulate material, and the coupling of pelagic/benthic processes.

After receiving a B.S. from Portland State University, Dr. Youngbluth earned an M.S. from the University of Hawaii, and a Ph.D. from Stanford University. He has authored over 40 publications in scientific and technical journals, lectured at universities, institutions and national/international meetings, participated in program-development workshops, and served on science review committees.

The National Coastal Resources Research and Development Institute*

Congress established the National Coastal Resources Research and Development Institute (NCRI) in 1984 in response to concerns about economic stress in the nation's nonmetropolitan coastal areas. The slow recovery of these areas from the 1979–82 recession was exacerbated by changes in the rural economy due to the national shift from goods-producing and resource-based industries to service industries. Today, most urban coastal communities have recovered, but many rural communities remain economically stressed due to the continuing decline of natural resource sectors, in-migration causing unprecedented growth, and economic isolation.

In establishing NCRI, Congress perceived a need to develop strategies that encourage a stable and sustainable coastal economy. NCRI is committed to using its resources in support of efforts that have the greatest positive impact on the future economic and public well-being of coastal communities along U.S. seaboards and the Great Lakes, acting as:

- a development-oriented program that translates scientific and technological advances into environmentally responsible economic gain in the coastal U.S. and provides demonstration programs to enable coastal communities to solve problems.

***NCRI staff are employees of the Chancellor's Office of the Oregon State System of Higher Education. NOAA/OAR's Office of Oceanic Research Programs provides federal oversight of NCRI.**

- a center for scientific entrepreneurship and technology transfer that continually spurs innovation in coastal industries, particularly small companies less able to support research and development.

NCRI occupies a unique position, providing the bridge between applied research and private sector or community application of innovative ideas. This niche is fully complementary to other federal and federally-supported institutions, such as the National Science Foundation and the National Sea Grant College Program, that sponsor basic and applied research.

NCRI solicits and awards grants on a competitive basis. Specific program areas of coastal economic development and diversification are: 1) aquaculture development; 2) coastal business and community economic development; 3) coastal tourism and recreation; 4) commercial fisheries; 5) marine technology and product development; 6) ports, harbors, and waterfront development; and 7) seafood technology.

A Board of Governors sets NCRI policy and an Advisory Council provides technical oversight for proposed projects. Several factors are considered in evaluating each proposal submitted to NCRI. Of these, the most important are: 1) the degree to which the proposed work is innovative and applied to an immediate, coastal, economic problem or opportunity; 2) the potential for the work to produce a direct measurable economic effect at the commercial and/or community level; 3) the likelihood for the project results to be immediately adopted and implemented by the public or commercial sector; and 4) the degree to which the results can be applied at a regional and preferably national level. Proposed projects are not funded if they consist of basic research, long-term programs, or projects not having a clearly defined and direct relationship to coastal economic development and diversification.

Earle N. Buckley

Director, National Coastal Resources Research and Development Institute

Dr. Earle N. Buckley, as director of the National Coastal Resources Research and Development Institute, provides administrative and scientific leadership for NCRI's ongoing program development, project monitoring, and technology transfer activities. He oversees the implementation of Institute policies established by the NCRI Board of Governors, evaluates NCRI proposals with the Institute's national Advisory Council, and analyzes and reviews project implementation and results through program evaluation and periodic monitoring. He is responsible for coordinating NCRI activities with other federal and state agencies, university-based marine and coastal programs and their faculties, and local coastal community and business leaders to ensure the continuing relevance of the Institute's efforts to priority coastal economic needs and to encourage multidisciplinary, public institution-private sector partnerships for projects to address these needs.

Prior to joining NCRI as deputy director in 1986, Dr. Buckley was the director of the Office of Resource and Environmental Management for the South-East Consortium for International Development, a not-for-profit, international development assistance institution composed of 33 universities and colleges in the southeastern United States In this position, he supervised administration and technical coordination of U.S. Agency for International Development technical assistance projects in East and West Africa and Asia. Dr. Buckley personally directed an AID collaborative technical assistance project which established environmental training and integrated resource management programs with institutions in and participants from 26 African countries.

From 1973-1980, Dr. Buckley conducted graduate and postdoctoral research at the Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill. His Ph.D. research included *in situ* and laboratory experiments to directly measure the effects of petroleum hydrocarbons on community composition of suspended heterotrophic salt marsh bacteria and the microbial metabolism of marsh cord grass-derived organic carbon. He was a member of the scientific party on the NOAA ship Researcher to the IXTOC-I oil well blowout in the Bay of Campeche, Mexico, and conducted impact studies in Brittany, France, following the Amoco Cadiz oil spill. Dr. Buckley received a B.S. degree in biological sciences from Florida State University, where he participated in studies to survey species diversity of estuarine fish populations.

Becky Voelkel

Grant and Contract Officer

Ms. Becky Voelkel is grant and contract officer of the National Coastal Resources Research and Development Institute (NCRI) where she is responsible for grant planning, coordinating and monitoring. She represents NCRI to negotiate and clarify contract issues and to ensure contract project performance. Ms. Voekel also provides technical assistance to NCRI staff regarding grant and contracts issues and methods to meet legal requirements and agency objectives.

Prior to joining NCRI, Ms. Voelkel worked for Oregon State University Extension/Sea Grant in Newport as the assistant to the director of public education for the Hatfield Marine Science Center. She was previously in the budget and planning department at Washington State University, Pullman, Washington.