

APPENDIX IV

NSF Agency Presentation

Ocean Sciences Division Budgets

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National Science Foundation
Directorate for Geosciences



GEO
Long-Range Plan

FY 1997-2001

NSF 96-95

National Science Foundation

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GEO LONG-RANGE PLAN, FY 1997-2001

I. THE CONTEXT AND PROCESS OF GEO LONG-RANGE PLANNING

Since its establishment in 1950, the National Science Foundation (NSF) has been dedicated to supporting and strengthening the United States' capacity to excel in science- Although the challenges facing the National Science Foundation have changed over the decades, NSF's core purpose remains substantially the same. As stated in its 1995 strategic plan, *NSF in a Changing World*:

The National Science Foundation is a catalyst for progress through investment in science, mathematics, and engineering. Guided by its long-standing commitment to the highest standards of excellence in the support of discovery and learning, NSF pledges to provide the stewardship necessary to sustain and strengthen the Nation's science, mathematics, and engineering capabilities and to promote the use of those capabilities in service to society.

The Directorate for Geosciences (GEO) shares the broader vision of NSF. Working in concert with other units of NSF, with other federal agencies, with international partners, and with numerous other organizations, including professional associations and private-sector firms, GEO seeks to make the strongest possible contribution to the advancement of the geosciences in the U.S. and the rest of the world. Accompanying the main text of this document are examples of activities supported by GEO that have resulted in major contributions to knowledge about Earth. These examples demonstrate the considerable benefits of support for fundamental research, for facilities, and for education in the geosciences, and they offer glimpses of the kinds of benefits that are expected to result from GEO investments in the future.

GEO's long-range planning process builds on its vision by seeking to identify the most effective ways that GEO can target its investments and activities in order to fulfill its mission, which is to advance scientific knowledge about solid earth, freshwater, oceanic, atmospheric, and geospace components of the integrated Earth system through support for high-quality research, through sustenance and strengthening of scientific capabilities, and through improved geoscience education.

Benefits of GEO Investments

Improved Weather Forecasting

GEO's support for basic research has contributed to fundamental understanding of severe weather events that has led to development of detection techniques of hazardous weather and improved predictions of a wide range of atmospheric phenomena. GEO was instrumental in supporting studies that determined the fundamental structure of severe wind events, known as microbursts, which have been responsible for several aircraft disasters. This research contributed directly to changes in emergency flight procedures

and to the creation of a national wind shear detection network. Knowledge gained during a study of east Coast snowstorms in the mid-1980's contributed to fundamental refinements in computer forecast models that led to highly accurate predictions of storms like the January 1996 blizzard. At universities and at the GEO-sponsored Center for Analysis and Prediction of Storms (CAPS), research is continuing on the dynamics and causes of tornadic storms. In the near future, it is anticipated that forecasts of the timing and location of potential tornadoes will become more specific and accurate.

In order to fulfill its mission, GEO strives to attain a set of strategic goals:

- **Advancement of fundamental knowledge about the Earth system.** This goal requires GEO to maintain strong bases of support across all geoscience fields in order to have the flexibility to respond to the highest-quality research opportunities identified by investigators while also identifying opportunities where more focused support can play an especially strong catalytic role in advancing scientific progress.
 - **Enhancement of the infrastructure for the conduct of geoscience research.** This goal requires GEO to identify and make investments in facilities and instruments that will be used by a large number of geoscientists. It also calls for GEO to facilitate interdisciplinary and international collaborations necessary to accomplish the highest-quality scientific projects, and it requires GEO to pursue productive partnerships with other parts of NSF, with other federal agencies, with organizations outside the federal government, and with international partners.
 - **Improvement in the quality of education and training.** This goal calls for GEO to advance education and training for current geoscientists, to facilitate the best education and training for future generations of geoscientists drawn from all segments of the population, and to improve knowledge about the integrated components of the Earth system by all people.
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Benefits of GEO Investments

Earthquake Hazard Reduction

GEO's support for Fundamental Earthquake Studies, a component of the National Earthquake Hazard Reduction Program (NEHRP), has led to an enhanced understanding of the processes operating prior to, during, and immediately after earthquakes. Studies of regional tectonic frameworks and the sequence and geometry of stress accumulation around pending focal zones provide the basis for identifying and interpreting earthquake probabilities. Knowledge of the rupture process, particularly the effects of local geology, provides the basis for estimating local ground motion. Such understanding is critical to progress in earthquake forecasting and in hazard mitigation. Although much of the GEO-sponsored earthquake research is conducted by individual investigators or small teams of researchers, GEO also funds the Southern California Earthquake Center, which encourages collaborative and complementary work of scholars in that tectonically active, densely populated area.

GEO's capabilities to advance fundamental knowledge in the geosciences expanded considerably over the last few decades. For the foreseeable future, however, GEO expects to function at budget levels roughly comparable to those of Fiscal Years 1995 and 1996. This situation contrasts sharply with trends over recent decades, when budgetary growth permitted ready consideration of new opportunities. Looking toward the next decade, the constraints of "flat-line" budgetary assumptions are compounded by possible reductions in support for the geosciences provided by other federal agencies. If these reductions are realized, requests for NSF to sponsor activities previously supported by federal partners may further intensify pressures on GEO.

This new situation makes it more important than ever for GEO to establish priorities regarding the use of limited funds. This plan highlights those activities that GEO judges to be of high priority from FY 1997 to FY 2001. Some of those activities are planned efforts that only need sufficient support for completion of stated objectives. Others are on-going activities that must maintain adequate levels of support but do

not require increased levels of funding. Still others are new and recently initiated activities for which additional funding may be needed during the planning period. In addition to identifying those higher-priority activities, this long-range plan also identifies activities for which funding may be reduced.

The changing conditions in which it now operates require that GEO develop even stronger partnerships with other units in NSF and with other organizations both within and outside the federal government, including international organizations. GEO commits itself to implement partnerships based on shared goals and the development of mechanisms for working together that enable more progress to be made than would have been possible had the partners operated independently

GEO undertakes its long-range planning in the same way it conducts its ongoing business -through partnerships with those engaged in geoscience research and education and with those who benefit from advanced knowledge in the geosciences. Among those with whom GEO interacts most frequently are the individuals and groups who conduct research and education projects and who operate facilities in the geosciences. GEO also seeks to meet the needs of those in the private and public sector who use new advanced knowledge in a variety of ways. GEO has relied on regular consultation with those it serves and its many partners in the development of this long-range plan. During 1993 and 1994, each of GEO's three divisions (Atmospheric Sciences, Earth Sciences, and Ocean Sciences) supported groups of leading scientists and educators who outlined special opportunities for their respective fields. The reports prepared by those groups played central roles in the development of this directorate-wide plan. Long-range planning also has been considered by the Advisory Committee for Geosciences, which consists of leading researchers and educators from the broad range of geoscience disciplines and a variety of institutional settings, including academia, government, and the private sector.

II. HIGH-PRIORITY RESEARCH ACTIVITIES

The set of research activities identified as being in the high-priority category for support include existing activities that should be completed as planned, on-going activities that should be sustained at relatively stable levels, and both new and on-going activities that require increasing levels of support.

Fundamental research supported by standing programs

Previous GEO long-range plans have highlighted a broad range of special activities for which enhanced use of GEO resources might be especially valuable. For the period from FY 1997 to FY 2001, one of the highest priorities is the maintenance of support for fundamental geoscience research through the standing programs of the three divisions. This renewed emphasis on the base program activities is being made because continued strength in investigator-initiated fundamental research across all geoscience disciplines is essential for the health and vitality of the geosciences in the nation. Broadly based fundamental research has been the foundation upon which special initiatives within disciplines, as well as wider-ranging interdisciplinary initiatives have been undertaken. In order to sustain the strength of research across all major disciplinary groups, base budget levels will be maintained,

Major field and modeling programs for global change research

GEO has been an active participant for more than a decade in interagency efforts to conduct integrated research on dynamic Earth systems. These efforts have been formally coordinated since 1989 through the U.S. Global Change Research Program (US/GCRP). GEO's focused global change programs are coordinated with other agencies and with international partners through the World Climate Research Programme (WCRP) and the International Geosphere-Biosphere Programme (IGBP). For the period from FY 1997 to FY 2001, GEO will continue to give high priority to the support of global change research programs that facilitate the most significant fundamental research and that complement the efforts of national and international partners, although the changing character of the overall set of activities supported will require slightly lower levels of support.

Support will be provided for the planned completion of major international global change field campaigns, such as the World Ocean Circulation Experiment (WOCE) and the Joint Global Ocean Flux Study (JGOFS). The levels of support for these activities will decrease somewhat over the planning period in accordance with the planned phase-down of these programs. Two focused global change

programs, Earth System history (ESH) and Global Ocean Ecosystem Dynamics (GLOBEC), are targeted for modest increases over the planning period. Following recent enhancements in support, funding for the Climate Modeling and Prediction (CMAP) Program and the Global Tropospheric Chemistry Program (GTCP) will be maintained at approximately their FY 1995 levels. Increased support will be given to the Climate Variability and Predictability (CLIVAR) Program of the WCRP, which will extend the domain and time scales of research on climate variability to the global oceans and to periods ranging up to centuries. This new program will build on the success of the decade-long Tropical Ocean-Global Atmosphere (TOGA) Program and generally will use funds released as TOGA's final analyses are completed.

Special emphasis areas in the geosciences

As geoscience research evolves, opportunities emerge within and across the base programs for the development of new topics and techniques for which focused attention will yield especially beneficial results. Working in concert with members of relevant scientific communities, special emphasis areas have been developed to foster increased interdisciplinary research or to promote important new lines of inquiry. Funding levels will be maintained as needed for the Ocean Drilling Program and the International Continental Drilling Program. Special emphasis areas at an early stage of maturity for which increased funding will be provided include Environmental Geochemistry and Biogeochemistry (EGB), Coastal Ocean Processes (CoOP), Cooperative Studies of the Earth's Deep Interior (CSEDI), and Active Tectonics research. Special emphasis areas that GEO expects to initiate between FY 1997 and FY 2001 are an expansion of the Ridge Interdisciplinary Global Experiments (RIDGE) to establish ocean-floor observatories and Continental Margins research (MARGINS). Increased levels of support for on-going and new initiatives will come from funds made available through planned phase-downs and reductions in some of the global change programs and other initiatives.

Multi-agency science research programs

Two newly established initiatives for the support of atmospheric science research coordinate GEO's efforts with complementary programs in other agencies. Because of the expected synergies resulting from multi-agency coordination, GEO intends to provide expanded support for the U.S. Weather Research Program (USWRP) and the National Space Weather Program (NSWP) during the planning period. The USWRP is a national research and technology-transfer program involving GEO, the National Oceanic and Atmospheric Administration (NOAA), and other agencies that develops the understanding, techniques, and systems necessary to translate basic scientific findings and new observational data into fundamentally improved short-term weather forecasts. The NSWP involves GEO, the Department of Defense, NOAA, the National Aeronautics and Space Administration (NASA), and the Department of the Interior. Its goal is to support research that will underpin a future predictive warning system for extreme space weather events associated with conditions on the sun and in the solar wind, magnetosphere, ionosphere, and thermosphere. As is true for the special emphasis areas, increased support for these multi-agency research programs will come from planned phase-downs and reductions in some of the global change programs and in other initiatives.

New interdisciplinary methodological efforts linking the geosciences and other disciplines

Because the atmospheric, solid-earth, ocean, and geospace components of the Earth system are linked with biological, human, and other components, GEO works closely with other units in NSF and with other federal agencies to advance methodologies that promote interdisciplinary research. In recognition of the increasingly important role of technologies like the Global Positioning System (GPS) and geographic information systems (GISs), GEO is working with other NSF units to develop a new initiative dealing with Integrated Spatial Information Systems (ISIS). This initiative is expected to bring together individuals and organizations involved in the technical development of GPS, GISs, and other new technologies with geoscientists as well as biological and social scientists whose interests lie primarily in the adaptation of these geospatial technologies to accelerate progress in fundamental research. GEO also expects to initiate support for selected components of the Global Observing System (GOS), especially the Global Ocean Observing System (GOOS) and the Global Climate Observing System (GCOS). These closely related collections of observing systems will make available data that are critical for research on long-term processes related to interactions among ocean and atmospheric systems. GOOS and GCOS are being developed in coordination with other US/GCRP agencies, especially NASA and NOAA, and international partners. Funding for increased support of these special initiatives largely will come from

funds redirected out of High-Performance Computing and Communications activities, which are being phased down over the planning period.

III. HIGH-PRIORITY INFRASTRUCTURAL INVESTMENTS

The nature of geoscience research requires large investments to be made in facilities and instruments. Many of the projects supported by GEO consist of field work for which major capital investments are required in order to study complex, interdependent processes extending over large areas. Decisions regarding GEO's support for science and technology centers, facilities, equipment, instrumentation, and other forms of infrastructure are made in concert with the development of scientific research priorities. They also are made in coordination with other federal agencies, industrial organizations, and international partners.

Solid-earth science facilities

Starting in FY 1997, GEO will assume a larger share of the responsibility for the operation and maintenance of the Global Seismographic Network (GSN). The GSN is the U.S. contribution to an international network of permanent, state-of-the-art digital seismic stations in support of basic research in earthquake studies, imaging of the Earth's internal structure and dynamics, and nuclear test-ban monitoring. GEO also will maintain support for other activities that facilitate geoscience research. These include the national and international continental scientific drilling programs, the Argonne Advanced Photon Source as a major synchrotron X-ray facility, major national accelerator mass spectrometry (AMS) and ion microprobe facilities, and UNAVCO facilities to support the use of the Global Positioning System in geoscience research.

Atmospheric facilities

Shared-user resources in the atmospheric sciences will be maintained at or near current levels of support during the planning period. The facilities, equipment, and computers at the National Center for Atmospheric Research and the incoherent scatter radar facilities have assumed critical roles in the conduct of a wide range of atmospheric science inquiries, and as a result, support for these facilities will be kept in balance with the support for activities undertaken through research projects. Other atmospheric facilities also will be maintained, with upgrades undertaken as feasible in conjunction with normal maintenance.

Academic research fleet

The U.S. academic research fleet is an integral facet of ocean science research supported by GEO and other federal agencies, often in conjunction with international partners. Support for maintenance and operation of the academic research fleet of more than two dozen vessels will be maintained from FY 1997 to FY 2001 at levels that will enable scientific needs to be met. Through prudent management of the fleet, upgrades and replacement of vessels may be undertaken in conjunction with the possible lay-up of vessels that are not needed during parts of the planning period.

Benefits of GEO Investments

Ocean Drilling Program

GEO's support for the Ocean Drilling Program (ODP) includes funding and management of the internationally financed drilling and logging program using the JOIDES Resolution as well as support for participation of U S scientists on drilling cruises and in post-cruise analyses of samples and data. A primary objective of the ODP has been to examine the global history of climate change. Toward this end the program has recovered a vast array of continuous sediment cores from all the world's oceans from which changes in ocean and atmospheric properties can be examined on geologic time scales. Equally important has been the development of new technologies for examining active processes in the ocean crust. At convergent margins, ocean crust is consumed in deep-sea trenches accompanied by large, destructive earthquakes. ODP has focused on examining the role of fluids in this process and has developed and deployed new instrumentation for long-term monitoring of fluid flow and composition.

Future emphasis in borehole instrumentation will be to expand the global seismic to the ocean basins by deploying broadband seismometers in ODP holes. Perhaps the most significant legacy of the Ocean Drilling Program will be as a model for the planning and operation of a shared international program. More than 1,500 scientists from 25 nations have participated on drilling cruises which are planned by JOIDES, an international scientific organization representing the 18 countries that support the ODP.

IV. HIGH-PRIORITY RESEARCH-BASED EDUCATIONAL ACTIVITIES

Many of GEO's research awards include support for educational activities through the support of both undergraduate and graduate students as well as postdoctoral fellows. Some GEO awards also result in the broader dissemination of research results beyond standard scholarly outlets. In order to facilitate the more effective integration of research and education, GEO intends to intensify its efforts from now through FY 2001 for these types of activities. Increased attention also will be given to a selected set of special activities that will either help improve general education in the geosciences or facilitate the best education and training for future generations of geoscientists drawn from all segments of the population.

Innovative activities linking geoscience researchers and educators to advance general and undergraduate geoscience education

The geosciences occupy a distinctive place in natural science education. Although studies of the Earth system generally are not taught as independent courses in elementary or secondary school curricula, the atmospheric, ocean, and solid-earth components of the Earth system often are the settings where principles developed in physics, chemistry, and biology are demonstrated. The attention given to geoscience topics in popular media like television shows and museums also attests to the special interest that many people have in the Earth. GEO therefore intends to build on this special role, working closely with geoscientists interested in educational improvement and with professional organizations. Special emphasis will be given to providing students and the general public with opportunities to witness and participate in active research efforts. Based on recent experiences, GEO expects that science and technology centers and research consortiums will play especially critical roles in this process. GEO's enhancement of support in these areas will be undertaken through close coordination with relevant parts of the NSF Directorate for Education and Human Resources (EHR).

Benefits of GEO Investments

SOARS and REU Sites

In coordination with the University Corporation for Atmospheric Research (UCAR) and the National Center for Atmospheric Research (NCAR), GEO is sponsoring an educational program that brings ethnically diverse students into careers in the atmospheric and related sciences. Scientific Opportunities in Atmospheric and Related Sciences (SOARS) students are recruited at the end of their sophomore years from universities and colleges with large enrollments of ethnic minorities. SOARS provides ten-week summer programs at UCAR/NCAR, or other institutions, where students work with scientific mentors on real-world scientific project. During their participation in SOARS, students maintain a close connection with a UCAR mentor and research program as they complete undergraduate degrees, earn an M.S. while on full scholarship, and then enter either a Ph.D. program or the professional work force. SOARS is only one program sponsored by GEO that advances geoscience education and diversifies the geoscience research and teaching community. Other successful efforts include Research Experiences for Undergraduates (REU) activities in the ocean sciences at Oregon State University geared to Native Americans and a joint REU effort at Harbor Branch Oceanographic Institution and Savannah State College that focuses on African American students.

Focused programs to increase diversity in the geoscience communities

In addition to seeking to improve the quality of education and training for all individuals who are seeking to pursue careers in the geosciences, GEO is committed to helping to broaden the diversity of the

geoscience communities, by attracting and assisting individuals from groups that have been underrepresented. In order to accomplish this, GEO will maintain support for special Research Experiences for Undergraduate Site activities that have assisted underrepresented groups. GEO will expand its support for diversity-enhancing activities at science and technology centers, and it will increase its support for focused activities designed to provide students from underrepresented groups with opportunities to learn about and participate in geoscience research. GEO also will build on its involvement in the Model Institutions for Excellence (MIE) Program, which includes an initial award to the Universidad Metropolitana of Puerto Rico.

V. ACTIVITIES TO BE SUPPORTED IF ADDITIONAL FUNDS ARE AVAILABLE

The previous three sections of this long-range plan have described those activities that GEO plans to give the high priority for support during the period from FY 1997 to FY 2001, presuming that budgets are kept at or near the levels of FYs 1995 and 1996. The selective character of the activities underscored in these sections should not be interpreted as an indication that these are the only geoscience activities worthy of augmented support during the planning period. Through the GEO long-range planning process, the following activities and infrastructural investments have been identified as meritorious if additional resources become available.

Construction of a polar-cap observatory and upgrades of atmospheric science infrastructure

Advances in atmospheric science research on a number of topics have highlighted the need for expansion of facilities and equipment on which future research activities will rely. A polar-cap observatory has been proposed for a site in far north central Canada to obtain ground-level measurements of the "solar wind," which consists of charged particles that are energized in space and that enter the atmosphere and deposit energy, producing aurora and modifying the composition of the ionosphere and neutral atmosphere. Upgrades and replacements of aircraft that take critical measurements of atmospheric phenomena operating at scales ranging from the local to global are warranted. These kinds of investments have been especially effective in recent years, as GEO funding for these airborne platforms has focused on the marginal costs of upgrading excess military aircraft made available by the Department of Defense. Additional support also would be warranted for further expansion of computational capabilities at NCAR.

Construction or upgrade of vessels in the academic research fleet

Although GEO anticipates that fleet requirements for ocean-based research can be met over the period from FY 1997 to FY 2001 through maintenance of the current budget for the academic fleet, the need for additional support for new vessels and major upgrades will increase throughout the planning period. The dedication of a research vessel providing all-season access to the Arctic region has been identified through some studies as an important research platform. GEO and other units in NSF will continue to work with researchers and with the U.S. Coast Guard and other agencies to determine whether a new vessel is needed or whether research needs in the region can be met by using vessels currently in operation or under construction. Upgrading of the current ocean drill ship or construction of a new vessel for this purpose has been a central point of discussion among the U.S. and the 17 other nations that cooperatively manage the Ocean Drilling Program, and construction of a coastal research vessel has been proposed to provide adequate facilities for the measurements, experiments, and over-the-side operations that currently are not available on ships used for coastal research.

Enhancement of international cooperative research programs

U.S. leadership in major international cooperative research programs, including a number of core projects of the International Geosphere-Biosphere Programme and the World Climate Research Programme, focuses special attention on the need for maintenance or expansion of GEO support for collaborative efforts linking U.S. and foreign scientists. Similarly, the next generation of the Ocean Drilling Program will require expanded and improved capabilities that most likely could be developed only if overall budget levels increase.

This plan was reviewed and approved by the Advisory Committee for Geosciences on March 18, 1996

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The World Wide Web (WWW) system makes it possible to view text material as well as graphics, video, and sound. You will need special software (a "web browser") to access the NSF Home Page. The URL (Uniform Resource Locator) is ***http://www.nsf.gov/***.

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To get an electronic copy of the "STIS USERS GUIDE," NSF 94-10, send an e-mail request to: **stisserve@nsf.gov**. Your message should read: **get NSF9410.txt**. For a printed copy of the "STIS USERS GUIDE," see instructions "How To Request Printed NSF Publications."

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NSF 95-64 (Replaces NSF 94-4)

NSF OCEAN SCIENCES DIVISION

Ocean Sciences

- Budget estimate is \$193.7 Million
- Increase of \$0.9 Million or .5%

	FY 1994	FY 1995	FY 1996
Ocean Sciences Research	\$100.0 M	\$102.6M	\$104.9M
Oceanographic Centers & Facilities	50.3M	50.4M	48.9M
Ocean Drilling Program	38.7M	39.8M	39.9M
	\$189.0M	\$192.8M	\$193.7M

- Major Research Initiatives

	FY 1994	FY 1995	FY 1996
Global Change Programs	\$53.7M	\$57.7M	\$57.6M
Biotechnology	4.0M	3.6M	3.0M
High Performance Computing	0.4M	0.8M	0.8M
Environmental Research	7.3M	7.7M	7.3M
SMETE (EHR)	2.1M	2.9M	3.1M
	\$67.5M	\$72.7M	\$71.8M

• Other Research Activities	\$121.5M	\$120.6M	\$121.9M
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(June 1996)

NSF OCEAN SCIENCES DIVISION

	FY 1994	FY 1995	FY 1996
Ocean Sciences Research	\$100.0 M	\$102.6M	\$104.9M
Oceanographic Centers & Facilities	50.3M	50.4M	48.9M
Ocean Drilling Program	38.7M	39.8M	39.9M
	\$189.0M	\$192.8M	\$193.7M
Oceanographic Facilities Detail			
Operations			
Ship Operations*	\$32.2M	\$35.1M	\$31.1M
ALVIN, Aircraft, etc.	2.2M	2.1M	2.4M
Marine Techs	4.2M	4.4M	3.8M
	\$38.6M	\$41.6M	\$37.3M
Infrastructure			
Science Instruments	2.5M	1.9M	1.9M
Shipboard Equipment	2.1M	1.1M	1.6M
Ships, Upgrades	2.1M	0.2M	1.5M
UNOLS, Misc.	0.5M	0.5M	0.3M
	\$7.2M	\$3.7M	\$5.3M
Centers and Reserves			
AMS	1.2M	1.0M	1.4M
IAI	1.3M	2.0M	1.9M
Cross Directorate/Reserves	2.0M	2.1M	3.0M
	\$4.5M	\$5.1M	\$6.3M

*Plus \$1.6M from ODP (1994), \$1.8M (1995), \$2.1M (1996)

(June 1996)

HOUSE APPROPRIATIONS SUBCOMMITTEE

NSF FY1997 – DRAFT LANGUAGE

ACADEMIC RESEARCH FLEET

- Concern with possibility of adding new Navy-owned, university-operated, Class I Oceanographic Research vessel to academic fleet.
- No existing academic plan for new vessel at this time.
- Health of oceanography threatened by new ships without corresponding increases in ship operations and research funds.
- Support NSF efforts to work with other agencies to broaden usage of academic fleet.
- NSF to report on impact of possible Class I ship addition – fiscal and otherwise, balance between research and ship operations funding.

⇒ Report to Committee by August 30, 1996

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OCEANOGRAPHIC CENTERS & FACILITIES

- Staff Change
 - * Lisa Rom, Instrumentation and Technical Services (ITS)
 - one year leave. August 1996-August 1997
 - * Sandy Shor, ITS Program Director
 - IPA, University of Hawaii, August 1996-August 1997

- Program Addition
 - * Interamerican Institute (IAI)
 - * Line budget in OCFS (\$1.6M)
 - * OCE "center" management
 - * Global Change Program

- UNOLS Liaisons
 - Unols Council - Don Heinrichs
 - RVOC —————
 - Ship scheduling ————— Dolly Dieter
 - DESSC —————
 - RVTEC - Lisa Rom/Sandy Shor
 - FIC - Richard West

ACADEMIC RESEARCH FLEET

The Committee is concerned with the possibility of new Navy-owned, university-operated, Class I Oceanographic Research vessel being added to the academic fleet. There is no existing academic fleet planning to incorporate a new vessel at this time. The addition of new ships without corresponding increases in ship operations funding and in the funding for research programs that require ship time threatens the health of oceanography. NSF is directed to report to the Committee by August 30, 1996, the ramifications, fiscal and otherwise, of such an addition, with particular attention to the overall balance between research funding and ship operations funding. The Committee is concerned about a funding shortfall for the operations of the academic fleet and supports NSF's efforts to work with other agencies to broaden usage of the fleet.