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SMITHSONIAN INSTITUTION

Budget Justification and Annual Report 1991



Submitted to the Committee on Appropriations
Congress of the United States

January 1991

SMITHSONIAN INSTITUTION

Budget Justifications for Fiscal Year 1992

Submitted to the Committees on Appropriations

Congress of the United States

SMITHSONIAN INSTITUTION

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- Office of Personnel Administration
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- International Environmental Science Program
- Joseph Henry Papers
- National Zoological Park •
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- Office of Fellowships and Grants
- Office of Interdisciplinary Studies
- Office of Quincentenary Programs
- Smithsonian Astrophysical Observatory
- Smithsonian Environmental Research Center
- Smithsonian Institution Archives
- Smithsonian Institution Libraries
- Smithsonian Tropical Research Institute

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- Archives of American Art ••
- Arthur M. Sackler Gallery and Freer Gallery of Art ••
- Conservation Analytical Laboratory ••
- Cooper-Hewitt, National Museum of Design ••
- Hirshhorn Museum and Sculpture Garden ••
- International Gallery
- National Air and Space Museum ••
- National Museum of African Art ••
- National Museum of American Art ••
- National Museum of American History ••
- National Museum of Natural History ••
- National Museum of Man ••
- Museum Support Center ••
- National Portrait Gallery ••
- Office of Exhibits Central
- Office of Horticulture
- Office of Institutional Studies
- Office of Museum Programs
- Office of the Registrar
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- Office of Conference Services
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- Smithsonian National Associate Program
- Office of Congressional Liaison •
- Office of International Relations
- Office of Special Events
- Office of Telecommunications
- Smithsonian Institution Press
- Smithsonian Magazine
- Air and Space Magazine
- Smithsonian Resident Associate Program

• Secretary's Management Committee
 •• The assistant secretaries for research and museums collaborate in the oversight of scholarly and presentational activities in these bureaus and offices

SMITHSONIAN INSTITUTION

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SMITHSONIAN INSTITUTION

FY 1992 BUDGET REQUEST

(\$000's)

<u>APPROPRIATION ACCOUNT</u>	<u>FY 1991 APPROPRIATION</u>	<u>FY 1992 REQUEST</u>
Salaries and Expenses	\$272,883*	\$292,450
Repair and Restoration	31,191	31,600
Construction	15,407	25,100
Zoo Construction	<u>6,636</u>	<u>8,000</u>
TOTAL	\$326,117*	\$357,150

*Includes \$14,921,000 for the trustees of the John F. Kennedy Center for the Performing Arts for repayment of an accumulated operating deficit.

INTRODUCTION

Visitors to the Smithsonian are consistently impressed by its numerous buildings, its well-maintained gardens, its exhibit halls, its theaters and lecture halls, and its public cafeterias, including the Wright Place in the National Air and Space Museum. The Institution's managers constantly maintain, renovate, improve, and replace these facilities to stem the ravages of time and heavy use. Moreover, the Institution recognizes its responsibility to reinvest not only in the infrastructure of bricks and mortar but also in the infrastructure of programs conducted within these buildings, halls, and theaters.

In FY 1992, the Smithsonian plans to continue a multi-year program of reinvestment in its foundations to obtain greater future yields in the increase and diffusion of knowledge among the American people and the peoples of the world.

FY 1992 BUDGET PRIORITIES

The Smithsonian Institution's request for all operating and capital budget accounts in FY 1992 totals \$357.1 million, \$46.0 million over the FY 1991 Smithsonian base. Of this amount, \$35.9 million represents resources that the Institution needs to reinforce its programmatic, operational, and facilities infrastructure--an investment in the foundation that will prepare the Institution to move into the 21st century; only \$10.1 million represents resources for new program initiatives and services.

SALARIES AND EXPENSES:

The Salaries and Expenses (S&E) request of \$292.4 million and 4,763 workyears represents a net increase of \$34.5 million over the FY 1991 Smithsonian level. As in the formulation of the FY 1991 budget, the Institution's various program and operating infrastructure requirements were the central theme in its deliberations for FY 1992 and represent \$10 million of the requested increase. In addition, the Institution has continued to support two principal themes for new program initiatives--Global Change Research and Cultural Pluralism, each responding to a clear national and public imperative. These initiatives represent \$7.7 million of the requested increase, including \$1.6 million for global change research and \$6.1 million related to the National Museum of the American Indian. Finally, an amount of \$17.4 million is required to cover the increased costs of "uncontrollable" items such as utilities, space rental, and the costs of legislated pay raises.

Of the total FY 1992 S&E budget, the Institution requests that \$29,237,000 remain available until expended. These funds support the instrumentation program; collections acquisition; Museum Support Center equipment and move; exhibition reinstallation; the National Museum of the American Indian and the repatriation program; and land acquisition at the Smithsonian Environmental Research Center.

STEWARDSHIP OF THE PUBLIC TRUST:

Review of the resource requirements necessary to carry out the public trust and to achieve the Institution's goals makes it evident to Smithsonian management that the majority of these requirements do not represent new or expanded service levels. Instead, most of these requirements constitute a growing backlog of resource deficiencies that have reached critical proportions. These deficiencies jeopardize the Institution's ability to manage the National Collections it holds in trust for the American people and its ability to increase knowledge and understanding among future generations. Last year, during the FY 1991 budget deliberations, the Institution grouped like deficiencies throughout various Smithsonian bureaus and offices into several broad categories in an effort to portray the magnitude of these deficiencies. This year the Institution continues its efforts to reduce this backlog. The table below provides a summary of the \$10 million and 53 workyears the Institution is requesting for various infrastructure requirements in FY 1992 and shows the remaining need the Institution intends to address in future budget years. Following the table is a category-by-category explanation of the importance of addressing these catch-up requirements.

RESOURCES REQUESTED FOR FY 1992 FOR INFRASTRUCTURE
 COMPARED TO THE UNFUNDED BACKLOG OF REQUIREMENTS

Infrastructure Bundle	FY 1992 Requested Increases FTE \$000		Unfunded Requirements Backlog FTE \$000	
Conservation of Library and Archival Collections	0	0	78	5,863
Reinstallation of Permanent Exhibit Halls	14	1,000	9	4,047
Library and Collections Acquisition	0	0	1	2,554
Collections Management	0	0	64	9,338
Human Resource Management	7	406	3	240
Clerical Support Staff	0	0	60	2,251
Specialized & Technical Staff and Support Costs	0	0	167	9,934
Major Scientific Instrumentation	11	3,940	Not Applicable	
Laboratory and Scientific Equipment (Non-computing)	0	0	0	2,415
Computers (Hardware)	0	0	8	3,297
Information Systems	4	3,500	51	8,506
Management Controls/Audit Deficiencies	17	982	16	1,432
Space Deficiencies	0	150	10	1,639
Facilities Maintenance Deficiencies	0	0	102	5,889
Health and Safety of Staff and Visitors	0	0	15	1,546
Security of Facilities and Collections	0	0	144	7,221
Total	53	\$9,978	728	\$66,172

Conservation of Library and Archival Collections - The Smithsonian's archives and libraries--books, documents, films, photographs, and recordings--are national resources. Their words and images are fuel to generate energy in the powerhouse of knowledge and understanding. Some are renewable; many unique ones are not. All are fragile; all deteriorate with use. Conservation and sustained investment are essential to maintain them. Replaceable items must be replaced; unique ones must be preserved. If the Smithsonian does not replace and preserve these items, it only hastens their deterioration, destruction, and depletion. Deferred investment simply intensifies a growing national debt of future replacement and renewal costs. Conservation is not a one-time need; it represents an essential sustained capital investment. Each year that the investment is not up to optimum levels accelerates cumulative deterioration, increases total cost and total loss, and makes it ever more difficult to recover these collections.

Reinstallation of Permanent Exhibit Halls - The Smithsonian receives visitors from all over the world who come to be enlightened, educated, and inspired. The Smithsonian is the "National" museum and, as such, has a public responsibility to reflect current concerns and perceptions of the Nation and the world.

After years of good service, "permanent" exhibitions become obsolete, both in their interpretive or presentation strategies and in their interest to the public. Many of the Institution's exhibitions have long outlived the timeliness and accuracy of their content. Few Smithsonian museums have had the funding to incorporate new exhibition techniques, such as laser discs and computers, that increase understanding among a museum-going constituency increasingly experienced in these methods and expecting their use. These new technologies also enable museums to explain exhibits in less space by reducing the area devoted to lengthy descriptive labels.

Additional funding in FY 1992 of 14 workyears and \$1.0 million will allow several Smithsonian museums to support replacement of the oldest exhibit halls in order to revitalize exhibits that are now decades old. These funds will guarantee that the information and presentation of Smithsonian exhibits reflect contemporary interests and achievements.

Library and Collections Acquisition - Modern researchers are dependent on the availability of published results from colleagues. The most utilized and timely source of such information is scholarly journals. The more than 40,000 journals in the sciences reflect the incredible degree of specialization in the scientific fields alone. Thus, an active scholar in a scientific discipline (e.g., molecular biology) can no longer simply read one or two of the scores of specialized journals available. To scientists and scholars, immediate access to the full range of scholarly literature is as important as research equipment.

The relative weakness of the dollar against foreign currencies has resulted in the escalation of subscription costs for many of the foreign journals upon which Smithsonian scientists and scholars rely. The Institution has in recent years attempted to maintain its current level of service by canceling some of the lesser-used journals, taking advantage of interlibrary loans, and utilizing private document delivery services. Although the Institution has vigorously pursued these options, journals dealing with such pivotal international issues as global change and molecular genetics are not a regular part of the Institution's journal base. Hence, the Institution needs additional resources to ensure that its scholars have regular access to information in those fields in which advances are occurring. The Smithsonian Institution Libraries manages the collection of periodicals for the entire Smithsonian community and for various related agencies represented within the Institution, including the United States Geological Survey, Fish and Wildlife Service, Department of Agriculture, and National Oceanic and Atmospheric Administration. Without access to scholarly journals, Smithsonian staff cannot conduct research in critical areas of national interest ranging from global warming to embryo transfer and space research. To offset the cumulative effects of the loss of purchasing power in the publishing industry, the Institution is requesting a \$250,000 uncontrollable increase for FY 1992.

Collections Management - The millions of artifacts and specimens entrusted to the Smithsonian as part of the National Collections truly constitute the "Nation's treasure chest." The care of collections is a sacred responsibility to the American public now and for future generations. With proper care, the National Collections can continue to offer future scholars valuable opportunities for study that cannot be envisioned today.

However, collections care is technical, tedious, and never complete, for the standards of care continuously increase as the museum profession learns more about the composition of objects and the effects of environment. The Institution has spent considerable sums to improve the registration, storage, restoration, and conservation care of objects and is proud of demonstration projects such as the Collections Information System (CIS) and the Museum Support Center. Despite advances such as these, responsibility for the care of collections escalates as they grow and age. Research on new preservation techniques and related advancements and automation make collections care an increasingly complex and expensive endeavor.

Human Resource Management - In its May 1989 report, Improving Personnel Operations and Policies, the National Academy of Public Administration (NAPA) urged that, for the

Smithsonian Institution's long-term organizational health, its personnel office be transformed from a "procedures and process" operation to an organization that provides leadership in managing the Institution's human resources. To that end, the Academy recommended that the Office of Human Resources (formerly the Office of Personnel Administration) be responsible for human resource planning and budgeting, personnel policy development and administration, management and supervisory training, and oversight of related information systems. The Academy went on to reaffirm that with these responsibilities come greater accountability.

To achieve prerequisite efficiency and effectiveness, the report made many recommendations pertaining to day-to-day operations. In addition, the Academy pointed out that the ratio of employees served to personnel staff was well above the ratio recommended by the President's Council on Management Improvement. This finding confirmed the general perception both within and outside the Office that it is understaffed.

The Institution began to address the recommendations in the NAPA and other reports on the Institution's human resource management infrastructure in the FY 1991 budget request. To continue these efforts in FY 1992, the Institution seeks 7 workyears and \$406,000 for the Office of Human Resources.

Clerical Support Staff - Over the past years, growth of public demands and programs at the Institution has resulted in a deficiency in clerical support. Productivity in many programs would increase measurably if additional clerical support were available to assist scientists, curators, and other museum specialists. The shortage of clerical support slows the Institution's progress in addressing critical programmatic imperatives such as global environmental change research and cultural diversity.

The shortage in clerical support is most evident at the Smithsonian Tropical Research Institute (STRI). As the Institute expands its biological research in forest dynamics and canopy biology, scientists will require additional clerical support so they can focus on research rather than spend time on clerical tasks. At the same time, shortages in clerical support exist throughout the Institution. Other bureaus reporting shortages include the Joseph Henry Papers, Smithsonian Environmental Research Center, National Science Resources Center, Office of International Relations, Office of Congressional Relations, and other administrative and support areas.

Specialized and Technical Staff and Support Costs - Among the Institution's major areas of concern over the past decade has been the closing of selective gaps in its research programs through the recruitment of new professional staff. A related objective has been to provide an adequate level of technical assistance to members of the professional staff so they can be more efficient and productive in the advancement of scholarship and public programming. For too long, many of the highly trained staff within the Institution have had to perform functions best suited to technicians, functions that divert them from their primary responsibilities. In addition to dealing with these deficiencies in existing programs, the Institution must also address the need to staff newly constructed or recently renovated facilities. The teaming of scholars with a proficient technical support staff is essential for the Institution to meet the many challenges facing the Nation in the next few years.

Major Scientific Instrumentation - A portion of the Institution's request for additional funding for research will enable the Smithsonian Astrophysical Observatory

(SAO) to continue two important projects involving the development of new and the reconfiguration of existing instrumentation. The Smithsonian request for FY 1992 includes an increase of \$3.9 million for these two projects. The construction of the submillimeter telescope array will allow SAO scientists to study more effectively the formation of stars and planetary systems and the puzzling processes taking place in the cores of galaxies and quasars. The conversion of the Multiple Mirror Telescope (MMT) to a telescope with a single 6.5-meter diameter mirror will enable SAO to gather data on objects much fainter than is currently possible and to study more than twice as much of the universe.

Laboratory and Scientific Equipment - The Smithsonian is not exempt from the difficulties faced by other research institutions in overhauling an obsolete research infrastructure. The availability of up-to-date research equipment is a basic necessity for scholars to remain competitive with their peers worldwide. In this regard, direct Federal funding is essential, since the Institution is not permitted to obtain National Science Foundation funding which is available to universities for this purpose. Failure to obtain necessary equipment will seriously impair the Institution's ability to meet crucial objectives in global environmental research. In the end, new facilities and talented scholars will be left without the opportunity to make full use of their skills.

In recent years, the Institution has placed major emphasis on improving its research facilities. It is not sufficient, however, to provide scholars with new or renovated space without also supplying them with the attendant tools of their trade: research equipment. All the Institution's research bureaus and research support offices have equipment acquisition and replacement plans detailing their requirements over the next decade. It is clear that, in an era in which research equipment has become increasingly sophisticated and is rapidly superseded by technological advances, much of the Institution's equipment inventory is obsolete. The Institution has systematically begun to rebuild the critical infrastructure requirements of laboratory and scientific equipment in selected areas.

The Institution must also acquire equipment for the new Barro Colorado Island laboratory, where existing equipment is more than 20 years old. The National Zoological Park requires equipment to take advantage of the rapid advances in the biomedical field for the study and care of endangered species. The Conservation Analytical Laboratory requires resources to replace equipment purchased or obtained more than a decade ago, some under excess property guidelines.

Computers - The computer is an indispensable tool for the production and dissemination of research. Scholars increasingly use computers to communicate through networks that provide bibliographic information, store research data, and prepare, or even publish, manuscripts. Due to limited resources, the Smithsonian has been unable to realize fully the potential of computer technology for increasing efficiency and productivity in the scholarly realm. The Institution now seeks to purchase, install, and create effective computer networks for its scholars. The Institution will seek to replace and upgrade computers, software, and networks for bureaus already using computer technology. The Institution must also implement a computer acquisition program for small bureaus that lack even rudimentary computing equipment.

Information Systems - In early 1989, the Office of Information Resource Management held an Institution-wide planning symposium to assess the state of Information Resource Management (IRM) in the Institution and to initiate an ongoing process for IRM planning and development. Through formal presentations, discussion groups, and critiques, users and providers of information services gained a comprehensive overview of information

handling and services. In the course of discussion, attendees identified an urgent need to focus IRM efforts on the solution of the most pressing systems development and service delivery requirements, including systems for the management of museum specimens and objects and bibliographic and archival materials. It also became clear that the resources available for information-related services are inadequate to provide the up-to-date technologies, systems, and communications necessary for the conduct of Institutional activities.

In the short term, the Institution must allocate resources to meet three objectives:

- to allow access to collections management, research, public service, and administrative information;
- to develop, design, implement, and maintain computer systems;
- to define how information technologies can be used to meet established goals.

The unique role of the Smithsonian in education and research is in jeopardy. Its accessibility as a resource to researchers worldwide and its public status are diminishing. Increasingly complex research, education, and business demands for information exceed the capabilities of the Institution's existing technologies. To reclaim its position as a leader in research, education, and collections and to remain accountable as a public trust, the Smithsonian must have the resources to utilize appropriate advanced information technologies. For FY 1992, the Institution seeks an additional \$3.5 million for this purpose.

Management Controls/Audit Deficiencies - The Smithsonian maintains a strong program of audit and review of its financial affairs and access to and control of the National Collections. Although not a department or agency of the executive branch, the Smithsonian recognizes and observes the intent of the Federal Managers' Financial Integrity Act (FMFIA). Towards that end, the Smithsonian's Office of Inspector General (OIG) performs financial and program audits on a regular cycle. To supplement the OIG's review of internal controls an outside certified public accounting firm performs an annual financial audit and the General Accounting Office and other agencies perform special audits from time to time. In addition, the Smithsonian's Management Analysis Office conducts internal management review studies on an as-needed basis.

These reviews and audits identify deficiencies in internal controls, policies, and procedures; in compliance with internal and external requirements; and in meeting the needs of the public. Additionally, they identify areas where efficiency improvements are possible. By implementing the recommendations from these audits and reviews, the Smithsonian improves internal controls; limits the potential for waste, fraud, and abuse; and becomes more effective in meeting public needs and more efficient in carrying out its programs. Implementing recommendations to eliminate such deficiencies represents an investment with an expected and important return. For FY 1992, the Institution is requesting 17 workyears and \$982,000 to address its most critical audit deficiencies.

Space Deficiencies - Historically, the Institution has housed administrative and other central support functions in museum buildings on the Mall. With the growth of collections, research, and public programs, however, space in museums has gradually become very limited. Increasingly, the Institution has relied on leased space (in buildings convenient to Mall activity) to house administrative functions. There are two primary

centers of off-Mall support: L'Enfant Plaza for administrative functions and the Service Center on North Capitol Street for light industrial, warehouse, and technical support.

The Institution presently leases 105,000 square feet of space at L'Enfant Plaza for accounting, personnel, publications, design and construction, and procurement and contracting functions. The Institution uses both Federal and Trust resources to pay for the rental space in direct proportion to the number of Civil Service and Trust employees in each office. The Institution anticipates additional need for leased space as buildings on the Mall must accommodate growth in public programs. For FY 1992, the Institution requests \$150,000 for additional space for the Office of Inspector General.

The current lease for the Institution's Service Center on North Capitol Street, containing about 165,000 square feet of space, will expire at the end of FY 1992. To replace this facility, the Institution will need a Service Center of approximately 350,000 square feet to house all related activities in one place and to free space on the Mall for public programs. The Institution is examining proposals for acquisition of a suitable facility. The Institution is requesting \$1.0 million in FY 1992 for shelving, furnishings, and security and communication systems for the replacement facility.

Facilities Maintenance Deficiencies - The Smithsonian owns, operates, repairs, and maintains more than five million square feet of space in more than 200 buildings. These buildings range in age from new to more than 140 years old, and many appear on the registers of historic landmarks. Many are, in fact, among the most precious "artifacts" the Smithsonian holds in trust for the Nation. The Smithsonian must operate and maintain these buildings to ensure the continued functioning of its many diverse programmatic activities and to preserve them for use by future generations.

The Institution has identified a backlog of essential maintenance and repair projects last estimated at \$216 million (January 1991). By increasing staff and equipment for facilities maintenance, the Institution will slow the rate of deterioration of its buildings and thus slow the rate at which new repairs add to the backlog. Additional staff for facilities maintenance will also ensure timely completion of the Repair and Restoration of Buildings projects. Custodial staff will improve the cleanliness of the interiors, and gardeners will maintain the grounds around the buildings in the manner appropriate for important and highly visible public buildings in the Nation's Capital. Support staff for the Education Center in the Quadrangle will ensure maximum utilization of this important resource for public programs.

Health and Safety of Staff and Visitors - The Institution is concerned about the health and safety of its staff and visitors. In recent years, Congress has allocated resources for a solid foundation for an environmental management and safety program. Staff members are now available to assess environmental and safety hazards of the physical plant and to identify necessary changes to buildings or work practices. The Institution needs resources, however, to carry out these changes, particularly at the bureau level. Staff of the Office of Environmental Management and Safety is developing programs required by law or regulation to inform and protect employees who work with dangerous chemicals or are exposed to hazardous conditions and to identify fire or safety risks in the workplace and public areas of Smithsonian buildings. Additional resources will allow coordination of these efforts at the bureau level and ensure that the laboratories and offices throughout the Institution carry out the safety programs.

An occupational health program is also in place, but the Institution needs additional resources to meet statutory obligations to staff. Presently the Smithsonian is unable to meet several mandatory requirements for health monitoring of all employees exposed to hazardous materials or working under extreme physical conditions. Additional funds will increase the number of physical examinations and streamline the medical records essential to such a program to make them more useful in a number of contexts. The Smithsonian has established programs in wellness and substance abuse, but these programs will also require increased support. Additional resources will make counseling services available to more employees whose personal problems are interfering with their well-being and job performance. Without these resources, the Institution will fail to meet the government standard for occupational health care for its more than 5,000 employees.

Security of Facilities and Collections - The Smithsonian has more than 137 million items in its collections, on display in exhibitions, or in storage. In addition to the very high intrinsic value of objects such as gems and coins, most of the objects are irreplaceable examples of human experience and achievement as well as global development and change. The collections are stored within the museum buildings on the Mall, at specially designed storage facilities in Suitland, Maryland, and in some leased warehouses in Washington, D.C., Virginia, and elsewhere around the United States. In addition, the Institution has research facilities in a number of remote locations in Panama and Arizona. Security in Smithsonian facilities consists of a complex combination of alarm systems throughout the buildings and physical surveillance by guards at entrances and in public galleries.

In the past several years, serious erosion of base resources to support the security program has undermined the Institution's ability to provide adequate protection for its collections and facilities. The political situation in Panama has also diverted Mall-based security resources to protect the Smithsonian Tropical Research Institute staff and properties. In recent years staffing shortages have caused the periodic closing of exhibit galleries when guards were not available for full coverage. While this solution interferes with the public's enjoyment of the exhibitions and activities presented at the various museums, the other alternative--a reduction in security coverage--places the collections and public property at an unacceptable level of risk of loss or irreparable damage.

INITIATIVES IN RESPONSE TO NATIONAL IMPERATIVES:

Global Change Research - During the past several years, countless studies and testimony have been presented before Congress and scientific groups concerning the effects of natural and human activities on the global environment. Rapidly evolving changes in the global environment have captured the attention of scientists, policy makers, and citizens around the world, including:

- the increase of atmospheric greenhouse gases such as carbon dioxide, methane, and the chlorofluorocarbons;
- the expected consequent changes in global climate and sea level;
- a global depletion of stratospheric ozone, and the observed Antarctic "ozone hole";
- widespread desertification and reduction in the diversity of plant and animal species;

- extensive damage to mid-latitude forests;
- acidification of lakes and soils in many regions.

At the least, these changes have far-reaching and potentially disruptive implications for the world's natural resources. In the worst case, the changes collectively threaten the life-support system of the earth. The problem of global environmental change is crucial and urgent.

The Smithsonian Institution is ideally positioned to undertake important research initiatives in the field of global change by building upon its current programs. With more than 150 scientists in a variety of biological and physical science disciplines (coupled with its stewardship over large, protected areas in both the tropical and temperate zone), the Institution can undertake comparative studies to assist in understanding the complexities of this global problem. Because of its expertise, the Smithsonian participates as an observer in the intergovernmental Committee on Earth Sciences, which is coordinating Federal research efforts in this area.

For more than 20 years, the Institution's International Environmental Science Program has been monitoring both biological and physical processes, and it currently possesses an incomparable set of data for both tropical and temperate sites. The proposed enhancements to this program will exploit and build upon the unique data already in the possession of the Institution. In addition to studies dealing with biological and physical processes, additional resources will expand ongoing research on biological diversity in tropical Latin America to additional rain forest sites.

The information that the Institution will generate as the result of proposed initiatives in global change research will be broadly available to policy makers and members of the scientific community. These scientific findings are also certain to form the basis for exhibitions in the National Museum of Natural History, the National Air and Space Museum, and other venues for public programming. The Institution's proven ability in sustaining long-term research at permanent sites is a crucial function that distinguishes the Smithsonian from Federal organizations and most universities involved in such research.

For FY 1992, the Institution is requesting 14 workyears and \$1,550,000 to undertake various research inquiries to assist in understanding the phenomenon of global environmental change.

Cultural Pluralism - The demographics of the United States are changing, and the pluralism of our country is more evident. What has been the dominant cultural group will no longer be the majority in our work force and our schools. This change and the exciting self-pride that minority groups are exerting calls for new responses on the part of the Smithsonian to be more sensitive in its public programs, hiring practices, training opportunities, exhibition presentations, and collections acquisition. As a national institution, the Smithsonian must assume a viewpoint that is deliberately inclusive in all respects.

The Institution must create exhibitions and programs that rethink the relationship between the indigenous peoples and the New World conquerors. The upcoming observance of the Columbus Quincentenary provides this opportunity to celebrate the accomplishments of minority people and make known to others the richness of their history. The Smithsonian

must assist in training minority people who wish to enter the Smithsonian's professional work force and increase the number of trained minority people in the museum profession at large. The Institution must be sensitive to the wishes of the Native-American communities for their human remains. It must continue to plan for the new National Museum of the American Indian and make it a reality, particularly through preparing Native-American staff to assume positions of professional leadership within the new museum. In addition to these efforts, the Smithsonian must make sure that its programs and exhibitions welcome all peoples.

For FY 1992, the Institution is requesting an increase of 64 workyears and \$6,121,000 to continue the development of the new National Museum of the American Indian.

Education - During the FY 1992 budget formulation process, the Institution selected a third program area, education, as a critical national imperative that the Smithsonian must respond to during the 1990s. Global change and other contemporary concerns present numerous opportunities for the Smithsonian to implement its mission to increase and diffuse knowledge. Doing so places many new public demands and challenges on the Smithsonian. The Institution is committed to enhancing its exhibitions, education, and other programs to provide the public with meaningful and comprehensive interpretations of these issues. Besides improving its educational programs the Institution is broadening the outreach of those programs through exhibitions and other educational activities that will increase participation by including culturally diverse communities, minorities, handicapped persons, and senior citizens. These efforts reflect new program initiatives that respond to these national imperatives and embody the recommendation of an internal staff committee, appointed by the Secretary in the fall of 1989, to place greater emphasis on education.

Nearly 30 million visitors of all ages, cultures, and countries, crowd the Mall and other buildings for the opportunity to see and gain knowledge from the Institution's varied exhibitions, lecture series, and film festivals. The Institution will enhance its educational programs to provide activities for underrepresented groups such as the African-American, Native-American, Hispanic, and Asian communities. The Smithsonian will develop educational materials to introduce the public and students to Asian art and culture using objects from the Sackler collections that explore crosscutting aspects of Asian art and culture. The Institution will complete the fabrication and installation of the opening exhibit of the National Museum of the American Indian at the Old Custom House which will serve local and national audiences much larger than ever before in the collection's history.

In order to address the concerns of national science literacy, the Institution must further develop programs to improve the teaching of science and mathematics in the nation's school systems. By working with the local educational systems to develop curriculum materials and programs for teachers and students, the Smithsonian will build stronger relationships with the community and encourage an early interest in the sciences.

Scientific research on the Institution's collections and the publication of scientific findings are fundamental to its educational mission. Scholars and other researchers benefit from Smithsonian scholarly publications. To serve the broadest possible audience, the Institution must continue to disseminate its findings through journals, national and international meetings and seminars, and public education activities.

While it is not possible for the Smithsonian to seek additional resources for this national imperative at this time, this area will remain an important priority for

Smithsonian bureaus and offices. Increases will be sought in future budgets to strengthen their education departments and programs in order to serve broad and diverse public audiences and to provide life-long and informal learning experiences in and beyond the classroom environment. As a unique educational institution, the Smithsonian must endeavor to adopt model educational strategies and techniques for informal, formal, and alternative education activities.

FACILITIES:

Construction - The Smithsonian's request for the Construction program for FY 1992 totals \$25.1 million. Projects proposed by the Smithsonian for the FY 1992 budget include planning and design for the facilities of the new National Museum of the American Indian (\$2.4 million), approved by Congress in 1989; design of the restoration of the General Post Office Building, located at 7th and E Streets, N.W., Washington, D.C., for Smithsonian use (\$1.7 million); and several projects involving minor construction and/or modifications to existing buildings (\$5 million). The Institution also requests \$1 million for FY 1992 to continue planning for future construction projects.

In addition, the National Museum of Natural History proposes to construct a building inside the Natural History Building's East Courtyard, which will interconnect directly with the existing building and become an integral part of the Natural History Building. The infill building will provide space to relocate employees during renovation of the museum's heating, cooling and ventilating systems and provide valuable permanent space for the museum's expanded programs (\$15 million).

Construction and Improvements, National Zoological Park - The request for the construction program at the National Zoological Park for FY 1992 is \$8.0 million. The request includes \$2,775,000 to fund the highest priority repair and renovation projects at the Rock Creek Park site and Front Royal, Virginia. The Institution also requests \$4.6 million for construction at Rock Creek, including \$1,650,000 for the final phase of the Smithsonian Tropical Science and Global Environmental Science Gallery. Once completed, the gallery will educate and inform visitors about tropical biology and global problems. Also included in the \$4.6 million request is \$2,975,000 for the Hall of Humankind which will exhibit great apes and monkeys, using living animals to extend and explore human knowledge of ourselves. The fiscal 1992 budget also includes \$600,000 to upgrade the antiquated water distribution system at the Conservation and Research Center at Front Royal.

Repair and Restoration of Buildings - The Institution is requesting \$31.6 million for the Repair and Restoration account. The Smithsonian's commitment to the maintenance and renovation of its facilities continues as a high priority in the FY 1992 budget. This request continues to bring the Institution closer to the projected optimal annual level of \$35 million for the R&R account. The Institution must continue to eliminate the substantial backlog of deferred maintenance and repairs in its various facilities and protect the integrity of its physical infrastructure. Within the requested amount is \$12,480,000 for the Major Capital Renewal program and \$19,120,000 for Repair, Restoration, and Code Compliance projects.

NONAPPROPRIATED SOURCES OF FUNDING

In addition to support provided by Federal appropriations, the Institution receives nonappropriated funds to expand and enrich its programs. The Institution presents nonappropriated fund activities (Trust funds) along with the Federal budget request to provide an overview of all uses of funds for each Smithsonian bureau. The estimates for Trust funds are subject to the uncertainty of donations, grants and contracts, fluctuations in visitor attendance, and the volatility of the economy, the last of which directly affects restaurant, mail order and shop revenues, Associates' memberships, and other auxiliary activities. The Institution's gross operating revenue, less the expenses of the auxiliary activities, represents the net operating revenue available for programmatic and other worthwhile purposes.

The FY 1991 Trust budget comprises approximately 28 percent of all net operating revenues. These revenues include grants and contracts received from government agencies. The Smithsonian expects grants and contracts will total nearly \$32 million in FY 1991. Due to the current economic downturn, the Institution now anticipates gross Trust fund revenues, excluding government grants and contracts, will be approximately \$247 million rather than the \$253 million included in the FY 1991 budget and net income will be in the \$63 million to \$64 million range (which includes \$23 million for restricted purposes).

The Trust funds include unrestricted funds, restricted funds, and government grants and contracts, and the Institution applies them in the following manner:

Unrestricted Funds

General - The sources of general unrestricted funds are investment income; unrestricted endowment income; net proceeds from the museum shops, mail order and food service concessions; sales of Smithsonian books, records, and other products based on designs and objects in the collections; the Resident Associate and National Associate Programs (including the Smithsonian and Air and Space magazines); and overhead recovery on grants and contracts the Smithsonian receives and from internal administrative fees charged to other Trust-funded activities. Overhead recovery is the principal source of Trust support for central management and administrative service units of the Institution, such as legal counsel, accounting, personnel, procurement, and budget. General funds also support various activities, such as the Visitor Information and Associates' Reception Center, the Cooper-Hewitt Museum, Smithsonian Tropical Research Institute, Office of Telecommunications, Office of Folklife Programs, Office of Membership and Development, and a variety of Institutional and bureau-based programs. The Board of Regents approves these allotments.

Special Purpose - These funds arise from revenue-producing activities operated by various bureaus and offices and transfers of General funds. The two largest of these activities are the Theater and Spacearium operations of the National Air and Space Museum. Special Purpose funds also include: miscellaneous revenues from the sale of posters, exhibit brochures, and publications; tuition reimbursement from universities; the museums' share of sales in the restaurant and museum shops; membership and admission fees; exhibit rental income; and investment income from current fund balances.

In FY 1979, the Board of Regents approved the annual transfer of General funds to Special Purpose funds for certain programs previously financed through Federal appropriations. These include the Institution's various fellowship programs (FY 1991 allotments of \$3 million). The Institution also uses Special Purpose funds to make awards

under its Collections Acquisition, Scholarly Studies, and Educational Outreach Program. The FY 1991 budget includes a total of \$3.37 million for these awards.

In FY 1991, \$1.16 million is available to purchase exceptional objects important to the collections. The Institution also has designated \$1.66 million for innovative scholarly research projects which by definition or because of their schedule do not fit within the Federal budget process. These include multi-disciplinary research projects initiated by the Institution's research staff, sometimes in collaboration with scholars from other institutions. Often the work is of an interdisciplinary nature and is conducted at more than one bureau. The Institution has allocated the remaining \$550,000 of the \$3.37 million available for this program to conduct a wide range of educational outreach programs of benefit to the public, with special focus on diverse cultural audiences.

In FY 1985, the Board of Regents approved an annual Trust fund allocation for the Special Exhibition Fund (SEF). The Institution supports exhibition programs with Federal funds, donations (from individuals, foundations and corporations) as well as the Special Exhibition Fund. Trust monies funded 44 percent of all exhibition costs for 1989, with Federal funds providing 56 percent. The Special Exhibition Fund, with \$2.18 million in FY 1991, will provide additional funds for temporary or permanent exhibitions proposed by Smithsonian bureaus that, regardless of scale, are outstanding in terms of their educational value to the public. The Fund gives special consideration to exhibitions that approach content in imaginative ways; that allow bureaus to explore new or expand current interpretive or exhibition techniques; that are worthy but, by their nature, unlikely to attract private funds; and that are likely to reach previously under-served audiences.

Restricted Funds

Restricted Trust funds include gifts, grants, and endowments from individuals, foundations, organizations, and corporations that specify the use of the donation or bequest. Generally, these funds provide support for a particular exhibit or research project. The Freer endowment is the largest restricted endowment in the Institution. Under the terms of the original gift and bequest, this fund is strictly limited to uses benefiting the Freer Gallery of Art.

Government Grants and Contracts

Various government agencies and departments provide grants and contracts for special projects that only the Smithsonian can conduct because of its expertise in a particular area of science, history, art, or education and because of its ability to respond quickly to certain needs.

SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

Summary of FY 1992 Change

FY 1991 Appropriation	\$272,883,000
FY 1992 Requested Change	
Less One-time Payment to John F. Kennedy Center	<14,921,000>
Uncontrollable Increases	17,439,000
Program Increases	<u>17,049,000</u>
FY 1992 Request	\$292,450,000

SMITHSONIAN INSTITUTION

"Salaries and Expenses"

Report of Appropriation by Objects of Expense

(Dollars in thousands)

	<u>1990 Actual</u>	<u>1991 Base</u>	<u>1992 Estimate</u>	<u>1992 Increase Over 1991</u>
11 Personnel Compensation	\$128,893	\$142,288	\$157,120	\$14,832
12 Personnel Benefits	24,470	30,699	34,534	3,835
13 Benefits to Former Employees	187	145	145	0
21 Travel and Transportation of Persons	2,137	2,788	3,073	285
22 Transportation of Things	568	1,354	1,379	25
23 Rent, Communications, and Utilities	22,456	25,379	27,880	2,501
24 Printing and Reproduction	1,594	2,142	2,252	110
25 Other Services	26,489	44,726	36,722	(8,004)
26 Supplies and Materials	10,060	13,764	16,077	2,313
31 Equipment	6,731	8,389	11,557	3,168
Acquisition for Collections	213	1,188	1,190	2
32 Land and Structures	0	0	500	500
41 Grants	847	10	10	0
42 Insurance Claims and Indemnities	0	11	11	0
T O T A L	<u><u>\$224,645</u></u>	<u><u>\$272,883</u></u>	<u><u>\$292,450</u></u>	<u><u>\$19,567</u></u>

FY 1992 UNCONTROLLABLE INCREASES

The Smithsonian Institution seeks funds to pay costs that are beyond its control. These costs result from established practices in regulating wages, higher rental costs, and the effects of inflation and other factors. The Institution requests \$17,439,000 for the following uncontrollable costs:

Salary and Related Costs	
Necessary Pay:	
--Annualization of FY 1991 Legislated Pay Raise	\$ 2,055,000
--Annualization of FY 1991 New Positions	1,249,000
--Lifting of Pay Scale Cap	644,000
--FY 1992 Legislated Pay Raise	5,720,000
--One Additional Workday in FY 1992 (262 days)	675,000
--Health Insurance (Increase in Premiums)	3,100,000
--Locality Pay/Base Deficiencies	394,000
Other:	
--Personnel Payroll System	120,000
--Workers' Compensation	<u><60,000></u>
 Total, Salary and Related Costs	 \$13,897,000
 Utilities, Communications, and Postage	 \$ 860,000
 Rental Space	 \$ 110,000
 Smithsonian Astrophysical Observatory Rent	 \$ 115,000
 Administrative Space	 \$ 1,000,000
 Disaster Preparedness	 \$ 200,000
 Inflation in Acquisition of Journals	 \$ 250,000
 Museum Support Center	 \$ <u>1,007,000</u>
 Grand Total, Uncontrollable Increases	 \$17,439,000 <u>=====</u>

SALARY AND RELATED COSTS - The Institution requests a net amount of \$13,897,000 for the projected higher salary and benefits costs in FY 1992 for FY 1991 staff. The Smithsonian has calculated costs required to provide annualized funding for the FY 1991 general pay raise (\$2,055,000), annualized funding for FY 1991 new positions (\$1,249,000), funding for the FY 1991 lifting of the pay scale cap (\$644,000), and annualized funding for the FY 1992 general pay raise (\$5,720,000). In FY 1992, the Institution also requires funds to cover salary and benefit costs attributable to one additional paid day (\$675,000), funding to cover rising health insurance premiums (\$3,100,000), locality pay/base deficiencies within several Smithsonian offices (\$394,000), and increased operating costs for the Personnel Payroll System (\$120,000). These increases are offset by a decrease in workers' compensation costs (\$60,000). In a table at the end of the Uncontrollable Increases section, the Institution has provided a line-item by line-item breakdown of the components of Necessary Pay.

Annualization of FY 1991 Legislated Pay Raise - The Smithsonian has included an amount of \$2,055,000 in its FY 1992 estimates to annualize the costs of the 4.1 percent January 1991 pay raise. In accordance with the pay plan established by the President (Executive Order 12736, December 12, 1990) under Section 5305 of Title 5, United States Code, annual salaries for Smithsonian General Schedule, Merit Pay, and Executive-Level employees increased on January 13, 1991.

Annualization of FY 1991 New Positions - The Smithsonian requests an amount of \$1,249,000 related to the annualization of new positions approved in FY 1991. This amount represents the restoration of the funding reduced by Congress in applying a 25 percent salary lapse rate to new FY 1991 positions.

Lifting of Pay Scale Cap - For FY 1992, the Institution requests \$644,000 to fund the cost of lifting the pay scale cap for senior Smithsonian employees authorized under Executive Order 12736. The Institution will absorb the partial-year costs in FY 1991. This request does not include the increased costs anticipated as a result of the gradeless pay system to replace grades 16 through 18.

FY 1992 Legislated Pay Raise - The Smithsonian has requested an amount of \$5,720,000 to fully fund the FY 1992 pay raise (4.2 percent) for three-quarters of the year. The Institution will include funds to annualize this pay raise in its FY 1993 budget request.

One Additional Workday in FY 1992 - The Institution has base funding for employee compensation for a 261-day workyear. FY 1992, however, contains 262 workdays, requiring additional funding of \$675,000 to cover employee salary and benefit costs for the additional workday.

Health Insurance - For FY 1992, the Institution requests an amount of \$3,100,000 to cover the rising cost of health insurance for employees. The Smithsonian's FY 1990 base is \$5,452,000, with no increase included in the FY 1991 budget. Actual insurance rates for FY 1990 rose 13.3 percent (\$725,000). FY 1991 costs will rise an estimated 20 percent (\$1,235,000) and the projected FY 1992 increase is 20 percent (\$1,140,000 for three-quarters of the year). The total of these three increases amounts to the \$3,100,000 request for health insurance premiums.

Locality Pay/Base Deficiencies - The Institution requests \$394,000 to address various geographic pay increases; legislated upgrades for guards residing in New York City, Zoo Police at the National Zoological Park, and nurses; and existing payroll-related base deficiencies. Geographic pay increases for employees in the cities of Los Angeles, New York, and San Francisco (authorized under Section 302 of Title III, Federal Employees Pay Comparability Act of 1990) will require \$169,000 in additional funding as follows: the Cooper-Hewitt Museum (\$80,000); the National Museum of the American Indian (\$79,000); and the Archives of American Art (\$10,000). Legislated pay upgrades for guards located in New York City (authorized under Section 5303 of Title 5, United States Code), Zoo Police in Washington, D.C. (authorized under Section 5375 of Title 5, United States Code), and nurses (authorized under Section 5303 of Title 5, United States Code) will require \$198,000 in additional funding as follows: (\$112,000) for Smithsonian guards located in New York City, (\$64,000) for the National Zoological Park Police, and (\$22,000) for Smithsonian nurses. The Institution requests \$27,000 to restore base operating funds to a current services level for the Office of Planning and Budget (\$21,000) and the Management Analysis Office (\$6,000). These funds will remedy base erosion resulting from staff promotions, pay increases, and the occasional need to fill vacancies at higher grades to attract the best

candidates. These units have small operating budgets with little flexibility to reprogram resources.

Personnel Payroll System - The Institution uses the computer services of the U.S. Department of Agriculture's National Finance Center to support personnel management and payroll production. With FY 1991 base Federal funds of \$590,000, the Smithsonian requires an increase of \$120,000 for the Federal share of processing the payroll and personnel data and related communication services for current staff and anticipated new positions in FY 1992.

Workers' Compensation - The Smithsonian seeks to return a total of \$60,000 as specified in the provisions of Section 8147(b) of Title 5, United States Code, as amended on April 21, 1976, by Public Law 94-273. This law provides for payments to be made to employees for injuries and to their families in cases where work accidents result in employee death. These payments are determined and made by the U.S. Department of Labor's Employment Standards Administration, which subsequently bills agencies for costs incurred for their employees. The Institution's emphasis on the Accident Safety Program administered by the Office of Environmental Management and Safety (OEMS), providing employee training in safety awareness and promoting the identification and elimination of potential hazards in the workplace, has resulted in the decrease in related employee compensation costs. The FY 1992 bill for the Institution's Federal portion, \$1,067,000, covers the actual expenses incurred for the period July 1, 1989, through June 30, 1990. With an amount of \$1,127,000 in its base for workers' compensation, the Institution relinquishes the excess \$60,000.

UTILITIES, COMMUNICATIONS, AND POSTAGE - An FY 1991 Federal base of \$19,693,000 and anticipated reimbursements of \$900,000 (total of \$20,593,000) are available to fund the costs of electricity, steam, gas, fuel oil, water, sewer, communications, and postage for nearly all Institution facilities. The Smithsonian requires an increase of \$860,000 in FY 1992 to cover anticipated costs.

The Smithsonian's projections of future utilities costs consider a variety of factors. These include:

- comparative data on actual energy consumption in previous years for each facility;
- adjustments for normal weather conditions for this geographic region based on information provided by the National Weather Service;
- actual and projected rates charged by utility companies;
- actual and projected reimbursements for utility costs from concessions, museum shops, and the Friends of the National Zoo;
- modifications to work and public spaces within facilities;
- continued energy conservation efforts in all Smithsonian buildings;
- improvements installed to heating, ventilating, and air conditioning systems and components throughout the physical plant;

- the design of new facilities;
- projected increases in consumption caused by expanded use of computers and other equipment throughout the Institution.

The following table shows the costs and base funds available to cover the components of the Utilities account from FY 1990 to FY 1992.

ANALYSIS OF UTILITIES, COMMUNICATIONS, AND POSTAGE COSTS
FY 1990 - FY 1992
 (\$000's)

	<u>FY 1990</u> <u>ACTUAL</u>	<u>FY 1991</u> <u>ESTIMATE</u>	<u>FY 1992</u> <u>ESTIMATE</u>
<u>ELECTRICITY</u>			
<u>Use</u> - Millions of KWH	114.5	115.9	116.5
<u>Unit Cost</u> - Avg. per KWH	0.061	0.062	0.063
<u>Cost</u> - \$000's	\$6,963	\$7,190	\$7,340
			\$7,340
FY 1992 Estimated Cost			\$7,340
FY 1991 Base			<u>\$7,036*</u>
Base Shortage, Electricity			\$ 304
<u>STEAM</u>			
<u>Use</u> - Millions of Pounds	212.4	219.4	225.8
<u>Unit Cost</u> - Avg. per 1,000 lbs.	15.50	15.50	15.50
<u>Cost</u> - \$000's	\$3,292	\$3,400	\$3,500
			\$3,500
FY 1992 Estimated Cost			\$3,500
FY 1991 Base			<u>\$3,500</u>
Base Shortage, Steam			\$ 0
<u>GAS</u>			
<u>Use</u> - Millions of Cubic Ft.	1.225	1.354	1.354
<u>Unit Cost</u> - Avg. per Cubic Ft.	0.7036	0.7388	0.7388
<u>Cost</u> - \$000's	\$ 862	\$1,000	\$1,000
			\$1,000
FY 1992 Estimated Cost			\$1,000
FY 1991 Base			<u>\$ 900</u>
Base Shortage, Gas			\$ 100
<u>FUEL OIL/WATER</u>			
<u>Cost</u> - \$000's	\$ 275	\$ 300	\$ 300
			\$ 300
FY 1992 Estimated Cost			\$ 300
FY 1991 Base			<u>\$ 250</u>
Base Shortage, Fuel Oil/Water			\$ 50

D.C. GOV'T WATER/SEWER

<u>Cost - \$000's</u>	\$1,758	\$2,252	\$2,278
FY 1992 Estimated Cost			\$2,278
FY 1991 Base			<u>\$2,742</u>
Base Surplus, D.C. Water/Sewer			\$ 464

COMMUNICATIONS

<u>Cost - \$000's</u>	\$3,940	\$4,100	\$4,600
FY 1992 Estimated Cost			\$4,600
FY 1991 Base			<u>\$4,065</u>
Base Shortage, Communications			\$ 535

POSTAGE

<u>Cost - \$000's</u>	\$2,132	\$2,200	\$2,435
FY 1992 Estimated Cost			\$2,435
FY 1991 Base			<u>\$2,100</u>
Base Shortage, Postage			\$ 335

TOTALS

FY 1992 Estimated Cost	\$21,453
FY 1991 Base	<u>\$20,593*</u>
FY 1992 Requested Increase	\$ 860

*Reflects FY 1991 Federal base plus anticipated reimbursements in FY 1992 of \$900,000.

ELECTRICITY - The major component of the Utilities account is electricity. The FY 1992 estimate of electrical consumption reflects an increase in consumption associated with full operation of new facilities in Panama, full occupancy of all pods at the Museum Support Center (MSC), the operation of the National Museum of the American Indian facilities in New York, and general increases associated with major automation efforts under way in all Smithsonian facilities and upgrading of exhibit halls in the museums of Natural History and American History. The FY 1992 rate estimate includes an FY 1990 approved 1 percent rate increase for all Maryland facilities and an anticipated 2.3 percent average rate increase, which PEPCO filed with the Public Service Commission of the District of Columbia on September 1, 1989. This increase will most likely be approved sometime during FY 1991. As a result of these increases, the FY 1991 base, plus anticipated reimbursements in FY 1992, are insufficient to cover the anticipated electricity costs for FY 1992. An increase of \$304,000 is requested.

STEAM - The FY 1992 estimate reflects an expected increase in consumption over FY 1990 associated with a return to more normal winter weather patterns. Consumption for FY 1990, especially during the period of January - March 1990, was atypical for the Washington, D.C., area, with temperatures reaching in the 80°-90° F range. The Institution anticipates that FY 1992 costs will not exceed the current FY 1991 base.

GAS - The FY 1991 and FY 1992 estimates reflect a modest consumption increase associated with the planned full occupancy of the pods at the Museum Support Center. In addition, the estimates reflect a 5 percent rate increase that the Washington Gas Light Company has filed with the Public Service Commission of the District of Columbia that is

expected to be approved during FY 1991. As a result of these expected increases in consumption and rates, the current FY 1991 base is inadequate to cover the anticipated increased costs for gas in FY 1992. An increase of \$100,000 is requested.

FUEL OIL/WATER - The FY 1992 estimate reflects consumption increases in water usage at both the Museum Support Center, associated with the anticipated full occupancy of all pods, and at the National Zoological Park facilities at Front Royal, Virginia. As a result of the consumption increases, an additional \$50,000 is necessary to cover the anticipated costs for fuel oil and water in FY 1992.

D.C. GOVERNMENT WATER/SEWER - The FY 1991 and FY 1992 estimates are based entirely on cost estimates provided by the D.C. government. The D.C. government estimates are based upon usage data for FY 1988 and FY 1989. The FY 1990 cost figure represents three-quarter year costs, since the first-quarter cost was paid through the D.C. Federal appropriation. As a result of the cost estimates provided, a base surplus of \$464,000 is available in FY 1992 to offset expected shortages in other Utilities accounts.

COMMUNICATIONS - The FY 1992 estimate is based upon the usage costs associated with the FTS 2000 system and the annualization of costs associated with the data communications link between the Smithsonian Tropical Research Institute and Smithsonian computers in Washington. The Institution requires additional funds to annualize the costs associated with the new voice communication system at the Freer Gallery of Art and upgrades related to the extensive rehabilitation of the Arts and Industries Building. The increase is also necessary to provide data communications services for access to Institutional information systems such as the Accounting and Payroll/Personnel systems, the Institution's electronic mail system, and the Library system. As a result of these actions, an additional \$535,000 is necessary to cover anticipated costs for communications in FY 1992.

POSTAGE - The FY 1992 estimate is based upon a rate increase by the United States Postal Service for all classes of mail effective February 3, 1991, as well as expected increases in FY 1992. As a result of this expected action, an additional \$335,000 is necessary to cover anticipated postage costs in FY 1992.

ENERGY CONSERVATION - The Institution continues to monitor and limit all forms of energy consumption. An automated energy management system reduces peak energy demand by selectively shutting down equipment when necessary. This system, when fully installed, will monitor equipment in all buildings for fluctuations or malfunctions and alert staff to inspect for problems. Ongoing efforts also include:

- continuing the phased program of comprehensive building energy audits;
- renovating heating, ventilating, air conditioning, plumbing, and electrical systems;
- reducing lighting levels in work and nonpublic areas;
- installing more efficient lighting fixtures;
- operating heating and air conditioning systems at the minimum level necessary to prevent damage to the collections;
- curtailing electrical consumption during nonpublic hours;

-- increasing attention to energy conservation when determining space use, modifying space, and designing new facilities.

Through the use of the Facilities Management computer system, the Smithsonian will eventually gain closer control over building lighting systems. The system conserves electricity by turning lights on and off as use fluctuates. Automated lighting controls are now in place at the Air and Space Building, the American History Building, the Natural History Building, and the Quadrangle Complex. The Smithsonian plans to install such a system in the American Art and Portrait Gallery Building in FY 1991/FY 1992 and in later years in other major buildings.

RENTAL SPACE - For FY 1992, the central rental account, included in the line-item for the Office of Plant Services, requires \$110,000 for uncontrollable expenses. The FY 1991 base includes \$155,000 for new administrative space. The FY 1992 base includes redirection to the rental account of \$45,000 requested in FY 1991 for space renovations. This account provides for the Federal portion of the rental expenses for program and administrative activities located at L'Enfant Plaza, the Smithsonian Institution Service Center at 1111 North Capitol Street, the research bureaus of the Archives of American Art in New York City and Boston, Massachusetts, and storage at the Fullerton Industrial Park in Springfield, Virginia. The amounts below reflect projected costs for rental space at these sites:

FEDERAL RENTAL PROGRAM ADMINISTERED BY THE OFFICE OF PLANT SERVICES
FY 1990 - FY 1992
(\$000's)

	FY 1990		FY 1991		FY 1992	
	<u>Actual Cost</u>		<u>Estimated Cost</u>		<u>Estimated Cost</u>	
	<u>Federal</u>	<u>Trust</u>	<u>Federal</u>	<u>Trust</u>	<u>Federal</u>	<u>Trust</u>
L'Enfant Plaza	\$1,617	\$1,389	\$1,791	\$1,417	\$1,815	\$1,480
North Capitol Street	1,075	121	1,134	136	1,149	148
Archives of American Art:						
- New York	134	--	160	--	265	--
- Boston	11	--	15	--	15	--
Fullerton	<u>285</u>	<u>--</u>	<u>298</u>	<u>--</u>	<u>309</u>	<u>--</u>
Total Costs	\$3,122	\$1,510	\$3,398	\$1,553	\$3,553	\$1,628
Base	3,032		3,398		3,443	
Surplus/(Deficit)	(90)		--		(110)	

The FY 1992 estimate for Federal rental costs for L'Enfant Plaza reflects annual cost increases specified in the lease agreement and takes into account the offsetting Trust-fund contribution for shared administrative activities and office space occupied by the specific auxiliary activities on the Mall.

The projected rental expense for space at 1111 North Capitol Street includes the annual cost increase specified in the current lease, with the allocation policy on

administrative and programmatic space also governing the Federal/Trust apportionment of costs for this location.

The projected rental expense for the Archives of American Art represents funding requirements for the spaces occupied in New York and Boston. The increase for the New York office reflects an adjustment in the rental rate.

Finally, the projected rental expense for Fullerton reflects the continuing cost of storage space for the Smithsonian Institution Archives and the National Museum of American History.

For FY 1992, the projected Federal share of the central rental account is \$3,665,000. The Institution's Federal base is \$3,555,000 in FY 1991. Therefore, the Smithsonian requires an additional amount of \$110,000 to defray space rental costs at these locations in FY 1992.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY RENT - For FY 1992, the Smithsonian Astrophysical Observatory (SAO) seeks \$115,000 to cover uncontrollable rent increases for two of its facilities in Cambridge, Massachusetts: 60 Garden Street (\$100,000) and 160 Concord Avenue (\$15,000).

60 Garden Street Property - For FY 1992, SAO seeks \$100,000 to cover the impact of rent increases for the 60 Garden Street facility. SAO leases approximately 90,000 square feet of space from Harvard College Observatory (HCO). Rent is negotiated annually and is dependent on the actual costs of operating and maintaining the buildings during the previous year, plus or minus any carryover of costs from the prior year.

For FY 1991, HCO was directed by the assistant dean for facilities of the Faculty of Arts & Sciences to raise the level of maintenance on its buildings and to increase its contribution to the Maintenance Reserve Fund to a prescribed level adequate for proper maintenance of the buildings in future years. As a result of this directive, HCO plans to spend approximately \$175,000 in FY 1991 for unbudgeted repairs (not included in the negotiated lease costs per square foot) to its buildings to restore acceptable levels according to University standards. In addition, HCO provided \$200,000, also unbudgeted, to the Maintenance Reserve for the buildings. As these expenses were unknown at the time of submission for the FY 1991 budget request, SAO did not provide for them in its estimate of FY 1991 lease costs. Thus, this deficit of SAO rent payment to HCO in FY 1991 of \$375,000 will carry over to the FY 1992 lease. Further, FY 1992 upgrading and maintenance expenses are expected to increase by about \$100,000. SAO occupies approximately 70 percent of the HCO buildings, with the Federal share of SAO's rental costs being about 30 percent. Thus, the Federal share of SAO's FY 1992 rental obligation will increase by 21 percent (i.e., 30 percent of 70 percent) of \$475,000, an uncontrollable increase of \$100,000.

160 Concord Avenue Property - SAO's lease at 160 Concord Avenue expired in November 1990. SAO negotiated a renewal to the lease for the five-year period beginning December 1, 1990. The increase in the lease covering the period December 1990 to September 1991 is allocable to FY 1991 and was included in the FY 1991 budget submission. The cost to annualize the increase in the lease for October and November 1991 allocable to the Federal budget for FY 1992 amounts to \$15,000.

ADMINISTRATIVE SPACE - The Smithsonian seeks \$1,000,000 for FY 1992 to secure administrative facilities to replace the current warehouse located at 1111 North Capitol

Street. Two factors prompt the need to acquire a replacement for the North Capitol Street facility. The current lease expires in fall 1992, and the building size and condition are inadequate. Second, a thorough review of space requirements indicated that the Smithsonian now requires a service center of approximately 350,000 square feet to situate all related activities in one location. Such activities would include warehouse, shipping and receiving, craft and light manufacturing shops (now located in the Natural History Building), printing and binding shops, library and archival holdings, training classrooms, motor pool and vehicle maintenance, and a computer facility. Such a facility could include administrative functions now in other leased spaces.

To meet these requirements, the Institution issued a Solicitation for Offers for an Administrative Service Center in March 1990. The Institution received and evaluated offers during 1990 and early 1991 and expects to make a final selection of a site and new facility by early March. Land acquisition and construction will be financed with a mortgage loan to be repaid with Federal and Trust funds including present base amounts. The requested \$1,000,000 is for start-up costs associated with the acquisition of a suitable replacement facility. Such funds if appropriated and retained for future year operations will help to establish the full annual funding required.

DISASTER PREPAREDNESS - The Institution seeks an amount of \$200,000 for FY 1992 to implement a disaster preparedness program for all facilities within the Smithsonian. In addition, the Smithsonian must develop a pan-Institutional plan to reduce the risk of loss of life, facilities, collections, and interruption of operations.

The breakdown of the request is as follows:

Cost of emergency response trailer and initial supplies	\$ 75,000
Revision of computer system	100,000
Miscellaneous (training, exercises, educational materials, etc.)	<u>25,000</u>
Total	\$200,000

At present, the Institution has no comprehensive disaster preparedness program to safeguard the research, collections, staff, and facilities under its care. Preliminary development of the disaster preparedness program is currently under way. Implementation of the program among the Smithsonian organizations requires funding for training, computer applications, and initial supplies. Pursuit of this program has placed the Institution in a leadership position in the field of disaster preparedness within the museum community. The knowledge derived from this exercise will benefit both national and international organizations entrusted with the collection of cultural artifacts.

INFLATION IN ACQUISITION OF JOURNALS - For FY 1992, the Smithsonian requests an amount of \$250,000 to offset the inflation-related erosion of the Smithsonian Institution Library's (SIL) purchasing power for the acquisition of journals. For FY 1991, European journal subscriptions will rise by as much as 29 percent, while domestic subscriptions will rise an average of 9 to 12 percent. This increase in subscription rates reflects a trend that began in 1987 and continues at present as a result of increased postal rates passed on by the publishers, rising costs of paper, and the relative weakness of the dollar. As a result of increased subscription rates during the past several years, SIL has been forced to cancel existing subscriptions and limit new subscriptions to an exchange of existing journals of equal value. The procurement of serials and scholarly works has also been reduced as a result of price increases ranging from 8.2 percent to 33 percent. As most subscriptions and works purchased for the Institution are of a scientific and

academic nature, the costs are significantly higher than general circulation periodicals (e.g., Time and Newsweek). The table below provides a spectrum of price increases from 1989 to 1990.

Journal Subscriptions and Monographs

<u>Title</u>	<u>FY 1989 Cost</u>	<u>FY 1990 Cost</u>	<u>Percentage Increase</u>
<u>Greenhouse Grower</u>	\$ 12.30	\$ 25.70	109%
<u>Landscape Ecology</u>	105.07	210.74	101%
<u>Anthropologie: International Journal for the Science of Man</u>	25.45	50.78	99%
<u>Seed World</u>	10.25	18.50	80%
<u>American Chemical Society Journal</u>	369.00	645.75	75%
<u>Arnoldia</u>	12.30	20.56	67%
<u>Anais da Academia Brasileira</u>	56.26	89.99	60%
<u>Magazine Antiques</u>	38.95	59.63	53%
<u>Interni Guida</u>	99.31	143.96	45%
<u>Journal of Chemical Ecology</u>	353.63	508.86	44%
<u>Journal of Pacsal, Ada and Modular-2</u>	70.73	101.68	44%
<u>British Books in Print Microfiche</u>	664.99	953.26	43%
<u>History Workshop Journal</u>	44.00	60.42	37%
<u>American Forests</u>	18.45	24.68	33%
<u>Estuaries</u>	61.50	82.24	33%
<u>Queen City Heritage</u>	16.20	21.60	33%
<u>Swann Galleries: Auction Catalogs</u>	150.00	200.00	33%
<u>College & Research Libraries News</u>	15.53	20.56	32%

MUSEUM SUPPORT CENTER - For FY 1992, the Smithsonian requests an amount of \$1,007,000 pertaining to a vendor judgment relating to the purchase of equipment for the Museum Support Center facilities. This represents partial funding (the first installment) to repay the \$3,022,000 awarded to the contractor.

Smithsonian Institution
 FY 1992
 Necessary Pay Requirements
 (dollars in thousands)

	Annualize New FY 1991 Positions	Annualize FY 1991 Pay Raise	Lifting of Pay Cap	FY 1992 Pay Raise (3/4 FY)	Additional Workday	Locality Pay/Base Deficiency	Health Insurance	Total Necessary Pay
Assistant Secretary for Research	0	14	0	38	4	0	24	80
Astrophysical Observatory	15	94	262	260	31	0	79	741
Tropical Research Institute	0	54	57	151	18	0	94	374
Environmental Research Center	20	17	8	49	6	0	27	127
National Zoological Park	50	160	0	445	52	64	242	1,013
Smithsonian Institution Archives	0	7	0	19	2	0	11	39
Smithsonian Institution Libraries	0	47	7	131	19	0	71	275
Internat'l Environmental Science Program	28	6	0	16	2	0	9	61
Assistant Secretary for Museums	24	16	0	44	6	0	19	109
National Museum of Natural History	228	285	109	797	95	0	411	1,925
National Air and Space Museum	11	108	10	300	35	0	153	617
National Museum of American History	22	169	18	470	55	0	236	970
National Museum of the American Indian	341	53	0	147	17	79	62	699
National Museum of American Art	0	55	0	153	18	0	83	309
National Portrait Gallery	0	40	25	110	13	0	59	247
Hirshhorn Museum and Sculpture Garde	15	31	13	86	10	0	52	207
Sackler Gallery/Freer Gallery of Art	0	33	0	92	11	0	45	181
Archives of American Art	0	11	6	31	4	10	15	77
Cooper-Hewitt Museum	16	14	0	39	5	80	23	177
National Museum of African Art	0	25	29	71	8	0	39	172
Anacostia Museum	0	10	4	27	3	0	14	58
Conservation Analytical Laboratory	0	23	0	64	7	0	28	122
Office Exhibits Central	0	20	0	56	7	0	31	114
Traveling Exhibition Service	16	18	0	50	6	0	29	119
Museum Support Center	0	15	0	42	5	0	28	90
Assistant Secretary for Public Service	12	16	0	44	5	0	17	94
Smithsonian Institution Press	0	15	5	41	5	0	19	85
Office of Folklife Programs	0	6	0	18	2	0	7	33
Academic and Educational Programs	0	8	0	24	3	0	11	46
International Center	10	11	0	32	3	0	7	63
Administration	265	191	81	528	59	27	259	1,410
Office of Design & Construction	31	31	0	87	10	0	32	191
Office of Protection Services	145	255	10	710	84	134	535	1,873
Office of Plant Services	0	197	0	548	65	0	329	1,139
TOTAL	1,249	2,055	644	5,720	675	394	3,100	13,837

RESEARCH

OFFICE OF THE ASSISTANT SECRETARY FOR RESEARCH

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	23	1,527	6	429	-	2,424	-	214	-	272
FY 1991 Estimate	37	1,676	6	612	-	2,193	-	677	2	258
FY 1992 Estimate	37	1,756	6	612	-	2,207	-	625	2	249

* FTE = Full-time equivalent
 **FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	37	0	37
11 Personnel Compensation.....	1,018	67	1,085
12 Personnel Benefits.....	167	13	180
21 Travel.....	61	0	61
22 Transportation of Things.....	1	0	1
23 Rent, Communications & Utilities.....	19	0	19
24 Printing & Reproduction.....	13	0	13
25 Other Services.....	359	0	359
26 Supplies & Materials.....	18	0	18
31 Equipment.....	20	0	20
Total	<u>1,676</u>	<u>80</u>	<u>1,756</u>

Analysis of Increase

Necessary Pay.....	80
Program Funds.....	0

ABSTRACT - The Office of the Assistant Secretary for Research (OASR) seeks to facilitate, strengthen, and plan for the Smithsonian Institution's worldwide research efforts and research support activities. The Office develops policies and fosters an environment conducive to the creation and dissemination of high-quality, original scholarship; promotes research as an essential endeavor that contributes to knowledge and creates a heightened appreciation of the relevance of ideas in modern society; seeks to build an excellent research staff that reflects the Nation's diverse cultural heritage and

the Institution's scholarly strengths; and fosters effective linkages between scholarship and other Institutional efforts, especially public programs and global change initiatives. Also included in this line-item are the Joseph Henry Papers Project, the American Studies Program, the Office of Fellowships and Grants, and the SI Scientific Diving Program.

The Joseph Henry Papers Project researches and publishes the manuscripts of Joseph Henry (first Secretary of the Smithsonian and a leading 19th-century American physicist). The American Studies Program conducts a graduate program in American culture, incorporating course work at the Smithsonian. Beginning in FY 1991, both of these activities have come administratively under the direct supervision of the Assistant Secretary for Research. The Office of Fellowships and Grants manages and administers the Institution's programs of research grants, fellowships, and other scholarly appointments. The SI Scientific Diving Program oversees the diving activities of over 200 Smithsonian staff and related investigators ensuring their safety and training in compliance with OSHA regulations.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the offices included under the Office of the Assistant Secretary for Research. The Institution requires \$80,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM:

I. Office of Assistant Secretary for Research - With base funding of 20 workyears and \$845,000, the Office of the Assistant Secretary for Research, in concert with the Secretary and other appropriate management staff, supervises the research activities of the Institution. The Office is responsible for enhancing the Institution's scholarly environment and productivity by initiating cyclical outside evaluations of scholarly activities; fostering regular reviews of individual scholars; providing increased research opportunities through internal competitive funds; creating and coordinating central programs that support individual and group research efforts; broadening the base of funding for research through both Federal and private funds; assessing programmatic effectiveness and making recommendations for curtailing selected activities; deepening and selectively expanding the Institution's activities in areas of high Institutional priority; and establishing joint programs, appointments, and cooperative efforts with other scholarly institutions, including the Nation's universities. This Office is also responsible for tracking external research trends and ensuring that they are appropriately coordinated with current Smithsonian activities. OASR serves as the major Institutional liaison for research centers in the United States and abroad. The Office oversees and coordinates scientific diving activities that support collection and study of underwater subjects and environments by a variety of Smithsonian research bureaus. In addition, the Office strives to improve the dissemination of the Institution's research findings to the general public and to specialized audiences.

II. Joseph Henry Papers Project - With base funding of 6 workyears and \$297,000, the Joseph Henry Papers (JHP) conducts interpretive historical research on the life and times of Joseph Henry, a pioneer American physicist and the first Secretary of the Smithsonian Institution; supports internal and external scholarly research on 19th-century American science through the development of data bases and the management of collections; and maintains the Alexander Graham Bell-Joseph Henry Library. The Henry Papers is a source of unpublished and little-known letters and papers, collected from 30 foreign countries and 328 depositories in the United States. The documents and commentary provided by the editors give insight into the history of science, the institutional and social structure

of the scientific community in the 19th century, and the history of the Smithsonian Institution.

The Joseph Henry Papers Project completed the sixth volume of the Henry Papers, detailing Henry's work at the College of New Jersey (now Princeton University) and including his extensive experimentation in electricity and magnetism. A selection of 350 manuscripts from the 3,720 available for publication in volume 7, the first of the "Smithsonian Years," will focus on Henry's efforts to establish the Smithsonian Institution as a center for the support of original research. For the Joseph Henry Papers Project, publication objectives are a 15-volume letterpress series, an indexed 90,000-item microform edition, and special publications for a more general audience.

III. American Studies Program - With base funding of 2 workyears and \$115,000, the American Studies Program (ASP) sponsors a graduate program in American culture in cooperation with various universities located in the Washington, D.C., area and in other cities. The director of the program and cooperating scholars teach three or four seminars a year to graduate students in American studies or American history departments of affiliated universities for academic credit. Through the program, both scholars and students pursue American studies using the unique resources of experts, collections, manuscripts, and books available in various bureaus of the Smithsonian Institution. These scholars and students disseminate the knowledge acquired during course study and research performed. In addition, this Program fosters research on American studies within the Institution and elsewhere.

IV. Office of Fellowships and Grants - With base funding of 9 workyears and \$382,000, the Office of Fellowships and Grants (OFG) manages the Institution's centralized fellowship and internship programs, all other stipend appointments, and other programs that support research.

These research programs enable students and scholars from throughout the world to visit the Institution and use its varied resources. The number of awards has grown tremendously over the past six years. OFG receives more than 1,500 applications and administers approximately 900 appointments and 75 grants. In FY 1990, OFG awarded 99 predoctoral and postdoctoral fellowships through the Institution-wide program. Twenty-nine of these recipients were foreign students and scholars from 17 countries. In addition, Federal and Trust funds allocated to the bureaus supported 188 short- and long-term awards. Under the Short-Term Visitor Program, 141 persons representing 32 countries came to the Institution. The Office also administered internship stipend awards for 180 students in FY 1990.

The Office administers programs to increase minority participation in Smithsonian research activities and disciplines. Thirty-three students joined ongoing research and museum studies in the Minority Internship Program, and one student received an appointment under the Cooperative Education Program. The Native-American Awards Program appointed 23 Native-American students and scholars to work on Native-American resources and activities at the Institution. Under the Faculty Fellowship Program, two minority faculty members received awards to conduct research in residence.

Several programs provide scholarly support to Smithsonian professional staff. From the competitive Scholarly Studies Program, 45 research proposals received grants. Some of these awards involved collaborative studies with scholars from other institutions.

V. Smithsonian Institution Scientific Diving Program - With base funding of \$37,000, the SI-Scientific Diving Program (SI-SDP) supports underwater scientific research and provides approval and oversight to scuba diving activities conducted under the auspices of the Smithsonian Institution. Internal training in methods and techniques of underwater research and certification for SI scientific diving activities are provided at basic and advanced levels.

The SI-SDP enables research objectives to be met through scientific diving conducted in a manner that will protect individuals from accidental occupational injury and illness. Furthermore, SI diving certification standards allow a working reciprocity in cooperative underwater scientific efforts between Smithsonian scientists and other scholarly institutions, including universities both in the U.S. and abroad. In FY 1990, the SI-SDP certified 195 Smithsonian staff, monitored underwater projects at 6 bureaus and authorized an additional 45 investigators for diving on collaborative projects at Smithsonian field sites.

The SI-SDP periodically revises and publishes the SI Scientific Diving Safety Handbook (SSH No. 1400), which promulgates certification and operational policies, and ensures compliance with OSHA regulations and the nationally accepted standard of practice for scientific diving.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of Assistant Secretary for Research:

Unrestricted General and Special Purpose Funds - Annual allotments provide these funds that support the salary, benefits, and expenses of the Assistant Secretary for Research. An allotment also supports three important international foundations that operate field research stations used by Smithsonian staff members as well as others in the world scientific community. The Smithsonian also provides support for the exchange of scholars and scientific information between the Smithsonian and scientific organizations in other nations. A Special Purpose Fund supports cooperative agreements between the Smithsonian and the Nation's universities. The Research Opportunities Fund supports unanticipated general research for Smithsonian scholars. While the projected expenditures for FY 1991 and FY 1992 for the Research Opportunities Fund appear under this Office, the recipient organizations reflect the actual expenditures for FY 1990.

II. Joseph Henry Papers Project:

Unrestricted General and Special Purpose Funds - Funds are available from the Smithsonian's Research Opportunities Fund to support research projects.

Restricted Funds: The Smith College Tuition Fund defrays travel and auxiliary support costs for staff, interns, and volunteers, as well as stationery and supplies. Support from the National Academy of Sciences pays for incidental programmatic items not otherwise funded, including journal subscriptions and additions to the Henry Papers research collections. A grant from the Ida Hornstein Reingold Memorial Fund supports the scholarly activities of the Joseph Henry Papers.

III. American Studies Program:

Unrestricted General and Special Purpose Funds - The American Studies Program receives tuition reimbursement from cooperating universities, principally George Washington University and the University of Maryland, whose graduate students take courses offered by the American Studies Program. The tuition reimbursement refunds the Smithsonian Institution for the use of its facilities by the students participating in Smithsonian classes and, in addition, provides honoraria and reimbursement for the services of outside experts participating in the program.

IV. Office of Fellowships and Grants:

Unrestricted General and Special Purpose Funds - These funds are primarily for the Institution-wide fellowship programs. Shorter visits by scholars and students also receive support. A program allotment supports a part of the administrative expenses of the Office of Fellowships and Grants. The Regents Fellowship Program continues to bring distinguished visiting scholars to the Institution.

In addition, Special Purpose Funds provide for minority internships and faculty fellowships, minority students pursuing graduate degrees under the Education Fellowship Program, and the Native-American Awards Program. The Scholarly Studies Program encourages research by Smithsonian staff in the sciences, arts, and humanities. While the projected expenditures for FY 1991 and FY 1992 for the Scholarly Studies Program appear under this Office, the recipient organizations reflect the actual expenditures for FY 1990.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	105	10,911	48	4,422	35	2,390	-	130	106	24,709
FY 1991 Estimate	118	12,040	48	5,348	51	4,610	-	-	141	35,468
FY 1992 Estimate	130	13,649	56	5,620	51	4,423	-	-	155	39,181

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	118	12	130
11 Personnel Compensation.....	6,773	1,151	7,924
12 Personnel Benefits.....	1,257	290	1,547
21 Travel.....	51	2	53
22 Transportation of Things.....	60	0	60
23 Rent, Communications & Utilities.....	888	161	1,049
24 Printing & Reproduction.....	113	0	113
25 Other Services.....	2,582	1	2,583
26 Supplies & Materials.....	261	2	263
31 Equipment.....	55	2	57
Total	<u>12,040</u>	<u>1,609</u>	<u>13,649</u>

Analysis of Increase

Necessary Pay.....	741
Program Funds.....	868

ABSTRACT - The Smithsonian Astrophysical Observatory (SAO) conducts research in astronomy and astrophysics to increase knowledge and understanding of the universe, its origin, and its contents, and to communicate this information through publications, teaching, and public presentations. SAO conducts research in diverse fields that include the formation, current structure, and evolution of planets, the Sun, stars, galaxies,

clusters of galaxies, quasars, and the large-scale structure of the universe, as well as laboratory astrophysics, atmospheric physics, and geophysics. SAO research has a major impact in the worldwide scientific community and has helped the United States maintain world leadership in astrophysical research. SAO coordinates its varied scientific program with the Harvard College Observatory, and together the two observatories form the Center for Astrophysics in Cambridge, Massachusetts. In addition, SAO operates the Oak Ridge Observatory in Massachusetts and the Fred Lawrence Whipple Observatory in Arizona, the latter the site of the Multiple Mirror Telescope, a joint project with the University of Arizona.

For FY 1992, SAO requests an increase of 1 workyear and \$50,000 for global change. The Institution requires \$741,000 for Necessary Pay for existing staff funded in this line-item. Also, the justification for an increase in rent costs totaling \$115,000 appears in the Uncontrollable Increases section of this budget.

The Institution also requests no-year funding in the Major Scientific Instrumentation line-item for the nonpersonnel support to continue the construction of the submillimeter wavelength telescope array and the conversion of the Multiple Mirror Telescope to an instrument with a single mirror, 6.5 meters in diameter. In addition, the FY 1992 request for SAO includes an increase of 11 workyears and \$703,000 for personnel costs and rent associated with the submillimeter array. Since this increase is related to the Major Scientific Instrumentation request, the justification for these positions appears in the Major Scientific Instrumentation section of the budget.

PROGRAM - Together with the Harvard College Observatory, SAO forms the Center for Astrophysics (CfA), which is organized by divisions representing the diverse investigations of the joint scientific staff: atomic and molecular physics, high-energy astrophysics, optical and infrared astronomy, planetary sciences, radio and geoastronomy, solar and stellar physics, and theoretical astrophysics.

Data-gathering facilities include the Fred Lawrence Whipple Observatory in Arizona, site of the Multiple Mirror Telescope operated jointly with the University of Arizona, the Oak Ridge Observatory in Massachusetts, and a millimeter-wave radio astronomy facility at the CfA headquarters in Cambridge, Massachusetts. In addition, SAO scientists have access to ground-based facilities elsewhere and conduct satellite, rocket, and balloon experiments.

Research Highlights - The variety and depth of SAO research are typified by the following selected results from the past year:

- The largest, single coherent structure ever seen in nature--a "Great Wall" of galaxies stretching more than a half-billion lightyears over space--was identified by two SAO astronomers as part of their long-term project to construct a three-dimensional map of the universe.
- Two other SAO scientists, using a Caltech telescope, discovered hot water--at about 2,000^oC--in star-forming regions of our galaxy. SAO's submillimeter array of telescopes, when completed, will be an ideal instrument for high-resolution study of such hot water to understand how stars, like our Sun, are born. Such investigations are not possible with existing telescopes.

- Radar images, obtained by SAO scientists and their colleagues, of a small, Earth-approaching asteroid appear to be the result of a collision of two separate objects, each about one-half mile in diameter. The images, the first to show such a "dumbbell" shape, were obtained with the 1,000-foot-diameter radar telescope in Arecibo, Puerto Rico, when this asteroid passed within four million miles of Earth.
- A Delta rocket carrying the joint FRG-UK-US Roentgensatellit, better known as ROSAT, soared into space at 5:48 p.m. EDT, June 1, 1990, from Cape Canaveral, Florida. The largest X-ray telescope ever flown, ROSAT is equipped with a High Resolution Imager (HRI) built by SAO to provide the clearest pictures yet made of cosmic X-ray sources. ROSAT will first map the X-ray emission of the entire sky and then make a detailed study of selected objects, with a sensitivity several times greater than was achieved with the Einstein (HEAO-2) Observatory launched in 1978 and designed in part by SAO scientists. SAO will also operate one of two U.S. data analysis centers for ROSAT.

As SAO enters its second century, significant advances were made in its major initiatives for the future: the submillimeter wavelength telescope array and the conversion of the Multiple Mirror Telescope (MMT) to a single mirror telescope 6.5 meters in diameter.

SAO completed five design studies in cooperation with private industry to identify the best approach to the manufacture and construction of the antennas for the submillimeter wavelength telescope array. SAO also completed a study of the correlator design, as well as an extensive study of the techniques for calibration of the array. Furthermore, the SAO receiver laboratory completed the construction and testing of the first prototype receiver to operate at a frequency of 230 GHz.

At the Whipple Observatory, conversion of the MMT continued apace. SAO selected a consulting engineering firm and completed the conception for the building modifications, optical support structure, and primary mirror cell. The University of Arizona's Mirror Laboratory enlarged the casting furnace to allow the 6.5-meter mirror to be cast. The Mirror Laboratory is also polishing a 3.5-meter diameter mirror to develop the techniques it will use on the 6.5-meter diameter mirror, which is scheduled to be cast in FY 1991.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, SAO requests an increase of 1 workyear and \$50,000 for global change research (solar variability). The justification for an increase in rent costs totaling \$115,000 appears in the Uncontrollable Increases section of this budget.

The Institution also requests no-year funding in the Major Scientific Instrumentation line-item for the nonpersonnel support to continue the construction of the submillimeter wavelength telescope array and the conversion of the Multiple Mirror Telescope to an instrument with a single mirror, 6.5 meters in diameter. In addition, the FY 1992 request for SAO includes an increase of 11 workyears and \$703,000 for personnel costs and rent associated with the submillimeter array. Since this increase is related to the Major Scientific Instrumentation request, the justification for these positions appears in the Major Scientific Instrumentation section of the budget.

Global Change (Solar Variability) (1 workyear and \$50,000) - The solar output of radiation and particles is the principal external driver of the terrestrial atmosphere.

There is historical evidence that long-term variations in solar magnetic activity have been associated with global temperature changes (e.g., a low period of solar activity in the 17th century was associated with a time of a colder-than-average climate known as the Little Ice Age). Thus it is important to understand the connection between variations in solar magnetic activity and luminosity if we are to distinguish between natural and human causes of global change.

Observations from satellites in the past decade have shown that the luminosity of the sun varies with solar magnetic activity by at least 0.1 percent. Although a 0.1 percent change in solar luminosity over a period of a few years is believed to be too small to have significant effects on global temperatures, changes several times larger would be important.

Extensive satellite observations have shown that the solar far-ultraviolet and X-ray emissions and the solar output of low- and high-energy particles vary substantially. Although the magnitude of these outputs is small compared to the solar luminosity (which is dominated by radiation in the near-ultraviolet, visible, and near-infrared), they control conditions in the ozone layer, ionosphere, and higher layers of the upper atmosphere of the earth. Thus it is clear that solar magnetic variations are important to aspects of global change.

Solar magnetic activity and the resulting variability of the solar output of radiation and particles are caused by interactions between solar magnetic fields and plasmas. The Smithsonian Astrophysical Observatory has a very strong program in empirical studies of solar variability, particularly for the far-ultraviolet radiations and low-energy particle outputs that control conditions in the upper atmosphere of the Earth. The purpose of this request is to complement these empirical programs with a stronger theoretical program designed to improve our understanding of the basic physical mechanisms responsible for solar magnetic activity and the corresponding variations in solar radiative particle outputs. The goal is improving our understanding of the causes of solar variability and improving the state-of-the-art in solar predictions. If we are to understand global change, it is necessary to understand the physics of solar variability, which is a driver for some of these changes.

To achieve these goals, SAO requests a theorist to complement its strong observational program (1 workyear and \$40,000); \$3,000 for rent costs; \$2,000 for travel; and \$5,000 for other research support costs.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Unrestricted general funds come primarily from overhead charged on contracts and grants. These funds are used to support administrative positions and some other administrative costs of SAO. Special purpose funds come primarily from the Institution's Trust funds. Trust funds provide direct support for some research as well as for the Fellowship and Visiting Scientist programs, the largest uses of special purpose funds.

Restricted Funds - Restricted funds consist of specific endowments as well as gifts from individuals, foundations, or corporations earmarked for particular research purposes.

Government Grants and Contracts - SAO receives the majority of its funds through government agency contracts and grants for research in its particular areas of expertise and experience. This research is often carried out in cooperation with both governmental and academic institutions in the United States and abroad.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	122	5,871	3	413	1	899	-	129	-	1,187
FY 1991 Estimate	140	6,391	3	222	2	406	-	1,044	-	859
FY 1992 Estimate	143	7,053	3	222	2	401	-	2,045	-	365

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	140	3	143
11 Personnel Compensation.....	3,646	454	4,100
12 Personnel Benefits.....	785	122	907
21 Travel.....	259	0	259
22 Transportation of Things.....	78	0	78
23 Rent, Communications & Utilities.....	78	0	78
24 Printing & Reproduction.....	56	0	56
25 Other Services.....	705	0	705
26 Supplies & Materials.....	598	15	613
31 Equipment.....	186	71	257
Total	<u>6,391</u>	<u>662</u>	<u>7,053</u>

Analysis of Increase

Necessary Pay.....	374
Program Funds.....	288

ABSTRACT - The Smithsonian Tropical Research Institute (STRI) is the Nation's premier center for basic research on the ecology, behavior, and evolution of tropical organisms. Headquartered in Panama, STRI staff conduct scientific investigations throughout the New and Old World tropics. STRI resident and visiting scientists perform research relating to global change in the areas of ecological systems and dynamics, earth system history, biogeochemical dynamics, and human interactions. The Institute publishes the results of its basic research, and appropriate results are applied to selected conservation and

resource management problems. These applications seek alternatives to traditional agricultural and forestry practices that contribute to the massive deforestation of the world's tropical forests. The terms of the Panama Canal Treaties of 1977 designate STRI as the custodian of the Barro Colorado Nature Monument, a 12,000-acre tropical nature preserve located in the Panama Canal. The preserve consists of Barro Colorado Island (BCI) and five adjacent mainland peninsulas. Other STRI facilities include a cloud forest station, a research vessel, marine laboratories on the Atlantic and Pacific oceans, a research library, and a modern laboratory and conference center and administrative headquarters in Panama City.

For FY 1992, the Smithsonian Tropical Research Institute requests 3 workyears and \$288,000 for global change research (2 workyears and \$248,000); and central research support (1 workyear and \$40,000). The Institution requires \$374,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Smithsonian Tropical Research Institute performs four major functions in fulfilling its mission in tropical biology:

- conducts fundamental research on the ecology, evolution, and behavior of plants and animals, including humankind, with emphasis on the relationships of tropical forest organisms to global climatic change;
- provides major facilities and logistical support for the international scientific community to study both terrestrial and marine tropical biology;
- supports environmental education and conservation and management of tropical ecosystems;
- protects and manages the Barro Colorado Nature Monument under a treaty-assigned responsibility.

A compelling need exists for improved understanding and conservation of tropical terrestrial and marine ecosystems. Conversion of tropical forest to scrub and grassland can affect regional and even global climatic patterns. It may adversely affect the North American environment. Tropical deforestation and uncontrolled harvesting of marine resources causes extinction of species that are sources of medically and commercially important natural products. STRI's basic research provides the knowledge and understanding that are essential for the effective management and conservation of these resources.

Among STRI's primary assets are the trust placed in the Institute by the host country and a long history of collaboration with Panamanian scientists and students. The continuing cooperation of the Republic of Panama facilitated the work at STRI of resident scientific staff and more than 330 visiting researchers representing 24 nations during 1990. The present government of Panama has demonstrated its commitment to a democratic process and has taken concrete steps to ensure the preservation of its rich tropical environment.

The study of tropical environments is vital to understanding biological diversity and global change. This understanding requires a basic knowledge of the history of tropical communities, the organisms that live in the tropics, and the interactions among them.

Biodiversity - The study of the behavior of specific species forms an essential link in understanding the origins of biological diversity. For example, field studies at STRI have led to new insights about social competition and the evolutionary effects of sexual selection, which include the exaggerated displays of animals like the peacock and fearsome weapons like the antlers of male deer. Social competition can also cause different members of a species to perform different, specialized tasks that ease the competition and suit their individual talents, analogous to the "careers" of humans. Work by one STRI scientist has shown that these various social traits can evolve into key differences among species. This research, which began as a detailed study of wasp behavior, has helped explain the origins of biological diversity, especially the spectacular variety of species in the tropics.

Molecular Evolution - The molecular evolution laboratories permit STRI scientists to increase understanding of how new species are formed, how genetic variation is maintained in a species, and how different populations of the same species vary genetically. One study of fossil bryozoans has shown that their evolution is not always gradual but can proceed in fits and starts. This finding will influence understanding of how species have responded to past global change. Another study applying molecular techniques has shown that a species of marine isopod found in both the Atlantic and Pacific oceans has so many genetic differences that scientists can tell the beach from which an individual has come by assaying its proteins. Such studies help explain how new species form and how present levels of species diversity came to be.

Tropical Marine Ecology - Tropical marine communities are changing as a consequence of deforestation, increases in human exploitation, discharge of agricultural and industrial wastes, and global climatic change. For example, STRI researchers are documenting coral bleaching associated with El Nino events, altered coral reef structure as a result of the die-off of the Caribbean black sea urchin, and gradual loss of coral colony cover in coastal fringing reefs for reasons as yet unknown. In addition, a major study of the paleoecology of the Isthmus of Panama is producing for the first time a history of past changes in the marine environment against which current changes can be measured. The construction of a new research vessel with funds appropriated in FY 1990 and FY 1991 will allow expansion of these studies to the entire Caribbean and tropical eastern Pacific Ocean.

Plant Physiology - Studies in plant physiology are showing how tropical plants respond to changing climatic conditions. For example, scientists grew tropical forest and crop species under atmospheric conditions similar to those projected for 50 to 75 years from now. The changes in physiological processes under these conditions varied greatly from one species to another. Knowledge of this variability is crucial to long-term planning for tropical agriculture and tropical forest management and conservation.

International Forest Dynamics Project - The influence of climate and other physical factors on the diversity, structure, and dynamics of tropical forests is poorly understood. The Forest Dynamics Project, begun in 1980, follows the growth, survival, and reproduction of more than 200,000 trees and shrubs, constituting more than 300 species, in a 120-acre plot on Barro Colorado Island. Comparable plots are being studied in Malaysia and India, and other countries have expressed an interest in joining the project. Among the expected results is the identification of fast-growing native species that are suitable for plantation forests. STRI recently established a Center for Forest Science in collaboration with Harvard and Princeton Universities. The Center will serve as a depository and

clearinghouse for research results from throughout the tropics and as a site for training, international symposia, and workshops.

Canopy Access System - The tropical forest canopy is an extraordinarily rich habitat that is poorly understood because access has been difficult. STRI is solving the access problem by erecting modified tower construction cranes in the forest. Scientists will use instrumented gondolas to study parts of the canopy that until now were out of reach. With funding obtained in FY 1990 and FY 1991, STRI has erected a small crane to serve as a prototype access system. In addition to providing valuable design and engineering data for the planned permanent system, the prototype is permitting STRI scientists to begin in situ studies of plant physiology and biological diversity in this important but poorly known part of the forest.

Agroforestry Systems as an Alternative to Deforestation - To check tropical deforestation, scientists must develop sustainable farming methods that do not destroy the forest. STRI has set up a pilot project in the Panama Canal watershed that combines planting of fast-growing leguminous trees, shade-tolerant food crops, and fodder plants used to raise goats in confined pens. The goats provide milk, meat, and cheese for food or cash sale as well as manure for fertilizer. This system represents a vast improvement over traditional slash-and-burn farming in terms of sustainability and environmental impact, diet quality, and cash income. STRI is planning to expand this pilot project to explore economies of scale and to test new trees and crop species.

Fellowships, Conservation, and Environmental Education - One of STRI's major efforts centers on the development and support of young scientists. In 1990, 74 young men and women from 17 nations participated in academic programs at STRI. With the opening of the new Earl S. Tupper Research and Conference Center in late 1989, the staff also prepared a bilingual photographic exhibit entitled "Parting the Green Curtain," which highlights the history of tropical biology. STRI prepared a special program centered on the exhibit for school groups to focus attention on tropical biodiversity and conservation. A public education program at STRI's marine labs will educate visitor groups about Panama's marine life from both the Atlantic and Pacific oceans.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the Smithsonian Tropical Research Institute requests 3 workyears and \$288,000 for global change research (2 workyears and \$248,000); and central research support (1 workyear and \$40,000).

Global Change Research (2 workyears and \$248,000) - The study of tropical habitats is vital to understanding global change. These habitats contain most of the world's species of animals and plants, many of which have important, though mostly untapped, potential as sources of medicine and food. Tropical forests play a major role in regional and probably global climate systems, and coral reefs protect large areas of coastline from erosion. The destruction of tropical forests proceeds at an unprecedented rate. This destruction will have global consequences through effects on atmospheric water cycles, production of greenhouse gases, and siltation of coastal marine habitats.

Tests of models of global change rely on retrospective analysis of past environmental and biological conditions as much as on monitoring current processes. STRI's most pressing need for FY 1992 in this initiative is for an additional paleoecologist (1 workyear and \$81,000), who will use such records as ocean and lake sediments, terrestrial deposits, and pollen records to establish past rates and patterns of change in marine and terrestrial environments and communities. Requested funds will also provide a research

technician to support this program (1 workyear and \$27,000), as well as basic equipment, travel, and research support for the global change program (\$140,000).

Given the urgency of the issues and the crucial role of the tropics and the Isthmus of Panama, STRI intends to implement its plan to expand its research program in the area of global change. The expansion is augmenting key areas where more expertise is needed. STRI's permanent base in the tropics, location in Panama, stewardship over protected research areas, and multi-faceted approach to tropical research for more than 60 years make it uniquely suited for such a venture.

Inventory Management Program (1 workyear and \$40,000) - STRI seeks to strengthen its research efforts with technical support by establishing a staffed program in property management. The cost of scientific equipment replacement has risen dramatically in recent years. As a result, STRI has increased efforts to improve the use and management of existing equipment. Because STRI facilities are physically dispersed, inventorying and coordinating the use of equipment are very cumbersome and time consuming.

A recent internal audit review concluded that STRI should employ a person to oversee this function. STRI requests a property manager (1 workyear and \$40,000) to oversee the inventorying and management of equipment at its various facilities. Such a program will permit more efficient use of equipment.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds derive from a variety of sources, including receipts and collections from users of Barro Colorado Nature Monument facilities (20 U.S.C. 79b (d)) and annual allotments. Such funds support, in part, the salaries and related costs of the fellowship program, the senior sabbatical program, insurance, supplies, and a long-term collaborative research program with the Forest Research Institute in Malaysia. Funds also support a short-term fellowship program in tropical biology; visiting scientists and students; field research; seminars and lectures; and environmental, conservation, and educational activities in Panama. Funds are also available from the Institution's Scholarly Studies and Research Opportunities funds to support research at STRI.

Restricted Funds - These funds are in the form of restricted endowments that specify the use of the donation or bequest and gifts and grants from individuals, foundations, organizations, or corporations for specific purposes. These funds advance scientific research related to the biological, ecological, and behavioral processes that serve as a basis of tropical ecosystems; research related to geophysical events; publication and distribution of research results; and studies related to endangered tropical environments.

Continuing support from the Exxon Corporation provides short-term tropical biology fellowships and assistance to 30 students from developing Latin American countries. In FY 1990, STRI received funds from the Andrew W. Mellon Foundation to finance botanical research. That same year STRI received gifts from Glenn Tupper to fund construction of a new library wing and for the purchase of scientific equipment for the plant physiology program.

Government Grants and Contracts - Beginning in FY 1987, the Minerals Management Service of the Department of the Interior awarded STRI a contract of more than \$4.0 million

to fund a five-year study of the catastrophic oil spill at the Galeta field station. This study is scheduled to terminate in March 1992.

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	32	1,912	2	96	-	288	-	56	-	471
FY 1991 Estimate	41	2,143	2	100	-	90	-	20	-	545
FY 1992 Estimate	45	2,979	2	100	-	90	-	20	-	290

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	41	4	45
11 Personnel Compensation.....	1,265	234	1,499
12 Personnel Benefits.....	188	57	245
21 Travel.....	32	4	36
22 Transportation of Things.....	2	0	2
23 Rent, Communications & Utilities.....	16	0	16
24 Printing & Reproduction.....	5	0	5
25 Other Services.....	245	1	246
26 Supplies & Materials.....	242	20	262
31 Equipment.....	148	20	168
Collections Acquisition.....	0	500	500
Total	<u>2,143</u>	<u>836</u>	<u>2,979</u>

Analysis of Increase

Necessary Pay.....	127
Program Funds.....	709

ABSTRACT - The Smithsonian Environmental Research Center (SERC), occupying 2,600 acres of the Rhode River tidal river system in Edgewater, Maryland, performs basic scientific research on coastal land/water systems. The interdisciplinary staff, visiting scientists, and students study the effect of land use, air quality, and weather variations on the movement of nutrients, eroded soil, and other materials through the system; the

dynamics of plant and animal populations; and the overall health of the system. SERC also conducts public education and outreach activities for audiences of varied ages and diverse cultures. The research staff uses long-term observations, controlled experiments, and models to address a wide variety of ecological questions, particularly those relevant to the Chesapeake Bay region. SERC is part of a network of United States and international sites, conducting ecological research relevant to their geographic regions.

For FY 1992, SERC requests 4 workyears and \$709,000 to conduct global change research. The Institution requires \$127,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - SERC research aims to understand how coastal land/water environmental systems function. The research staff addresses a wide variety of ecological questions while conducting a long-term interdisciplinary study of a tidal subestuary of the Chesapeake Bay (Rhode River) and its watershed. This watershed contains a mosaic of upland and floodplain forests, marshlands, cropland, pastures, abandoned fields, and residential areas typical of the mid-Atlantic Coastal Plain. The Center has studied the effects of herbicides on plants in the Chesapeake Bay, the effects of acid rain on deciduous forest and bay fish reproduction, the role of riparian forests in alleviating agricultural pollution, and the effects of increasing concentrations of atmospheric carbon dioxide on natural communities.

Research - As a part of the Smithsonian's global change research effort, in FY 1990 SERC initiated new studies of the dynamics of atmospheric and forest canopy interactions in a deciduous hardwood forest. An instrumented research tower at a carefully characterized research site measures vertical profiles of gases such as carbon dioxide, water vapor, and sulfur dioxide, as well as the rate of mixing between the air contained within the forest and the atmosphere above the forest. The staff mapped and measured all trees more than one inch in diameter within one acre of the tower and measured the length of fetch and roughness of the forest canopy in each direction to document conditions for valid atmospheric exchange measurements. Studies determined that the leaves of the understory were more numerous but had less surface area than those of the canopy and that leaf area, mass, and number of the tulip poplar, the dominant species, were bimodally distributed with height.

SERC also studied the effect of salinity in the brackish tidal marshes in the headwaters of the Rhode River that are dominated by the narrow-leaved cattail. Seasonal and interannual differences in salinity, produced by variations in the volume and timing of precipitation, have large effects on the productivity of these plants. Long-term measurements of salinity and cattail productivity made at three sites along the tidal axis of the upper Rhode River showed that mean salinity during the critical spring and summer period had tenfold interannual differences. Shoot density, height, and biomass were all reduced when salinity was higher, and the above-ground standing crop varied fourfold between years.

Studies of blue crab behavior progressed through the application of ultrasonic biotelemetry to measure jaw muscle activity in free-ranging crabs. The staff designed and successfully tested small battery-powered transmitters in the Rhode River. These transmitters track crabs and record when they are ingesting food. Individual crabs tracked continuously for 96 hours moved up to two miles and fed an average of 15 times, each feeding session comprising 15 to 2,750 bites. Studies have also shown that both movement

and feeding were unrelated to time of day or night or tide stage and that molting crabs selected shallow, marsh-lined tidal creek banks for molting.

Through support from the Department of Energy, studies continue on how the Chesapeake Bay tidal marshes respond to increased atmospheric concentrations of carbon dioxide. Results of testings may indicate whether plants will respond and reduce the rate of increase of carbon dioxide, by storing carbon, when atmospheric levels of carbon dioxide reach about 700 parts per million sometime in the 21st century. Previous SERC studies of marsh plant communities exposed continuously for two years to increased carbon dioxide concentrations showed that plants become much more productive. New results demonstrate that most of this increased production will be stored below ground. For the sedge, Scirpus olneyi, the increase in below-ground storage was 83 percent. No change was found, however, for the grass, Spartina patens. Thus it seems likely that some, but not all, plant communities experiencing increased concentrations of carbon dioxide will be more productive and will store enough carbon in soils and below-ground structures to slow the rate of increase in atmospheric carbon dioxide.

Educational Activities - SERC provides a broad range of educational activities, including teacher-led field trips, self-guided nature trails, and guided tours. Groups of students and the general public observe firsthand a variety of natural habitats. A work/learn intern program enables students from all over the world to work with scientists and educational staff, both in the field and in the laboratory. Predoctoral, postdoctoral, and sabbatical programs for professionals enable visitors to carry out collaborative or independent research. SERC disseminates the results of its research through scientific journals, national and international meetings and seminars, the training of scientists, and public education activities.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, SERC requests an increase of 4 workyears and \$709,000 to conduct global change research.

Global Change Research (4 workyears and \$709,000) - Research at SERC includes comparative studies throughout the Chesapeake Bay area and the placing of results within a regional context. Studies focus on the ecosystem dynamics of the Rhode River, its watershed and airshed. The Long-Term Ecosystem Research Network has selected SERC as one of 25 sites suitable for intensive ecologically oriented global change research in the United States and its territories. To assure the future protection of the SERC facility, the Institution proposes to acquire about 500 more acres of the lower watershed and approximately 3,000 acres of the upper watershed. Acquisition of this land will protect SERC's value as a national ecological research site and preserve its heritage. SERC already receives substantial extramural global change grant support and expects this support to increase steadily. Research efforts will build on a history within SERC of ultraviolet radiation monitoring and research on nutrient cycling, landscape-level transport of nutrients, and the geochemical effects of acid rain.

Since the 1960s, the Smithsonian has purchased and protected about 2,600 acres of the Rhode River tidal river system, including the waterfront areas. Rapidly intensified development now threatens the rural character of the upper parts of the drainage basin, currently forested or farmed. SERC plans to use a combination of outright purchases, easements, and protective covenants to protect a series of key land parcels on the upper watershed from urbanization.

The initial request of \$500,000 of no-year base funds for FY 1992 will provide the necessary funding to protect and purchase watershed land on a cost-matching basis with private funds. The estimated development cost of these properties is approximately \$35 million. However, through the proposed collective process of purchase, easements, donations, and protective covenants, SERC estimates the cost of protecting the land at \$8 - \$12 million. The Institution requests that these be no-year funds to allow the flexibility necessary for a series of separate and complex arrangements with current property owners.

In addition to the property purchase, the global change research program requires four additional staff scientists in the areas of photobiology and environmental chemistry to conduct research on the effects of elevated ultraviolet radiation and climatic change. The FY 1992 request of \$209,000 will fund a photobiology staff scientist, an environmental chemistry staff scientist, a physical science technician, and a data management technician (4 workyears and \$164,000). The request will also provide related support (\$45,000) for the new staff and the existing physical/chemical staff specialist assigned to this program.

SERC is the only long-term ecological research site in the Chesapeake Bay region with the potential to meet U.S. Global Change Research Program needs. If undeveloped lands on the upper watershed become urbanized, the site's use for global change research will be seriously impaired. These proposed actions for FY 1992 will begin to effectively protect the future research and educational potentials of a unique and valuable research territory. Proposed funding will also provide sufficient permanent scientific staff to conduct a well-balanced, interdisciplinary global change research program representative of the Chesapeake Bay region.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds, provided by allotments, support special events, work/learn and fellowship programs, and the salary costs of a docent coordinator and a public program director.

Government Grants and Contracts - Various Federal and State agencies supply funds for special projects conducted at SERC that use the expertise of the staff and the unique physical site characteristics. Four grants from the Chesapeake Research Consortium support research on ecosystem dynamics and community ecology; a grant from the U.S. Department of Energy advances the study of greenhouse gases on tidal marshes; and a grant from the Maryland Department of the Environment supports studies of the role of riparian vegetation in nutrient dynamics.

NATIONAL ZOOLOGICAL PARK

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	335	14,373	1	140	3	752	1	470	-	572
FY 1991 Estimate	361	15,812	1	134	4	802	-	583	-	484
FY 1992 Estimate	361	16,825	1	144	4	829	-	681	-	330

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	361	0	361
11 Personnel Compensation.....	11,409	831	12,240
12 Personnel Benefits.....	2,013	182	2,195
21 Travel.....	90	0	90
22 Transportation of Things.....	10	0	10
23 Rent, Communications & Utilities.....	70	0	70
24 Printing & Reproduction.....	20	0	20
25 Other Services.....	470	0	470
26 Supplies & Materials.....	1,405	0	1,405
31 Equipment.....	305	0	305
Collections Acquisition.....	15	0	15
42 Insurance Claims & Indemnities.....	5	0	5
Total	<u>15,812</u>	<u>1,013</u>	<u>16,825</u>

Analysis of Increase

Necessary Pay.....	1,013
Program Funds.....	0

ABSTRACT - Since 1889, the primary mission of the National Zoological Park (NZP) has been "the advancement of science and the instruction and recreation of the people." The Zoo's living collection, open to the public, occupies 163 acres at Rock Creek Park in Washington, D.C. The Zoo also maintains the Conservation and Research Center, a major conservation, animal breeding, and research facility on 3,150 acres in Front Royal,

Virginia. Through programs in education, research, conservation, and animal health, NZP serves the public and specialized audiences and promotes understanding of animal adaptations and evolution and the interaction of wildlife with the environment. Because of world environmental crises and the need to keep people informed, the National Zoo endeavors to represent the whole of life on earth, both plant and animal. To this end, the Zoo is transforming the animals-only zoological park into a biological park. This holistic approach will combine living exhibits of plants and animals with museum-type exhibits of skeletons and fossils. The BioPark will educate visitors and will stimulate a concern for the future of life in all its forms.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the National Zoological Park. The Institution requires \$1,013,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The major programs of the National Zoological Park are public education through living exhibits, conservation, propagation, and research. The current program emphasis will transform the animal-only zoological park into a biological park that will highlight the relationships of animals and plants in a holistic approach.

Living Exhibits - The new BioPark emphasis means breaking down traditional divisions in biological exhibition between plants and animals, aquatic and terrestrial life, vertebrates and invertebrates, and even between science and art. Exhibit remodeling, renovation, and construction at NZP result in a new emphasis on education about the living world. NZP goes beyond habitat exhibits that recreate natural environments to make the wonders of biology, such as intricate and beautiful adaptations for survival, accessible to all visitors. In FY 1990, the Zoo opened the renovated Elephant House and planted more than 5,000 new trees and shrubs around the Zoo. Sunlight, plants, and redesigned animal barriers provide a brighter view of rhinos, hippos, elephants, and giraffes. A coral reef tank will open in 1991 as the first exhibit in the new Australian Pavilion.

At its Rock Creek site, the Zoo cares for more than 6,200 animals, comprising about 500 species, and approximately 1,400 plant species. At the Conservation and Research Center, the Zoo maintains more than 800 animals representing 52 species whose status in the wild is precarious. In FY 1990, the Zoo experienced more than 100 births and hatchings. Among these were the black-footed ferret, small-clawed otter, serval, bongo, boat-billed heron, king vulture, Bali mynah, Micronesian kingfisher, green tree python, green and black arrow poison frog, pygmy hippopotamus, and cusimanse. Significant additions to the Zoo's exhibit collection during FY 1990 included the Sumatran orangutan, chambered nautilus, rainbow boas, Darwin's rhea, white-fronted marmosets, and red wolves.

Animal Management - Medical care and research programs are vital to the mission of the Zoo. In March 1990, the Zoo's 20-year-old Hospital and Research Building reopened as a state-of-the-art Research Facility. This facility, coupled with the two veterinary hospitals, serves to keep the National Zoo as a leader in the zoological community.

New biotechniques establish the breeding cycle of the endangered Eld's deer, Pere David's deer, and Przewalski's horse. Refined methods for diagnosing pregnancy and gestation in these species will enhance species recovery plans. By understanding the breeding cycle of female black-footed ferrets, zoo physiologists can decide exactly when to introduce males to females for mating. This information has resulted in a considerable increase in the colony at Front Royal and the captive population as a whole.

New laboratory techniques for in vitro (test-tube) fertilization are useful in reproduction of rare and endangered species. Researchers at NZP have joined forces with scientists from two other U.S. zoos to achieve a major milestone in the fight to save endangered species. The birth in the spring of 1990 of the world's first tiger cubs from in vitro fertilization dramatically highlights the prospect of reproductive physiologists playing an ever more crucial role in saving animals from extinction.

Animal Conservation - Current research projects at the Conservation and Research Center at Front Royal include studies of Przewalski's horses and black-footed ferrets. The breeding of these endangered ferrets has been especially encouraging. The Zoo hopes to participate in the reintroduction of captive-bred ferrets to the wild in 1991 and is now developing reintroduction strategies following techniques developed using the Siberian polecat as a research surrogate. FY 1989 saw a major step forward in the rescue program for the Guam rail, a species that since 1985 has been maintained only in captivity. In cooperation with the Government of Guam, the Commonwealth of the Northern Marianas, the U.S. Fish and Wildlife Service, the University of Tennessee, and 12 mainland zoos, the Zoo is now reintroducing captive-bred rails to the island of Rota.

Zoo staff continue to play a leading role in international conservation through wildlife and zoo animal management training programs for developing countries. Recent renovations to living quarters at the Conservation and Research Center helped accommodate 22 participants from the West Indies (Bahamas, St. Lucia), South America (Argentina, Bolivia, Brazil, Venezuela), Africa (Cameroon, Egypt, Madagascar, Nigeria, Tanzania, Zambia), and Asia (India, Malaysia, Nepal, The People's Republic of China, Philippines). The staff also presented eight additional training courses in the Far East and Latin America and gave a workshop in microcomputer data management and analysis in India.

Research - The Zoo's research initiatives include the ecological, demographic, and genetic assessment of wild and captive animal populations. The research also includes comparative studies of mating systems in birds and mammals, influences on individual reproductive success, and the behavioral and physiological bases of growth and reproduction in vertebrate species. The reintroduction of the golden lion tamarin to the forests of Brazil would not have been possible without sophisticated and painstaking research on the social and family life of tamarins. This success also depended on advances in nutrition, metabolism, and genetics.

One research effort has provided definitive evidence that local habitat degradation can have geographically far-reaching, and possibly global, effects on animal populations. Tropical deforestation in Mexico is measurably depressing populations of forest-dwelling migratory bird species in their tropical winter ranges, and thus in summer ranges in North America. Observations demonstrate a marked decline in the North American populations of such once-common species as the woodthrush, redstart, and red-eyed vireo.

Public Education and Information - As the Zoo begins its second hundred years, it continues to inform and educate the large and diverse audience it serves through a wide range of creative programs, exhibits, and materials. In spring 1990, dinosaurs came alive on stage at the Zoo in a one-person 40-minute show for families entitled "Dinosaurs, Dinosaurs...A Mesozoic Musical." The show sent the audience on a 140 million-year journey through the age of dinosaurs with innovative musical styles, props, characters, sound effects, and techniques of interactive theater. Also in the spring, the Zoo hosted the Northeastern Regional Meeting of the American Association of Zoological Parks and Aquariums. Curators, educators, keepers, and directors discussed topics of interest to

the zoological community, including the future of zoos and aquariums, public perceptions of zoos, the animal rights movement, the biology and care of tree kangaroos, fundraising, development of animal exhibits, and education at zoos and aquariums reaching wider audiences.

Reflecting the emphasis of a BioPark, the Zoo developed a new "wayfinding" system, including a revised map brochure for all visitors and an additional brochure for disabled visitors. Through the FONZ (Friends of the National Zoo) the Zoo offers classes in conservation, animal behavior, and exotic animal medicine as well as public symposia on timely scientific topics. Numerous programs for school children from prekindergarten through high school are among the educational activities, as well as learning experiences for families. Through these programs and through news and feature stories, publications, and other activities, the Zoo continues to focus public attention on issues important to biology, wildlife, and conservation.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds come from a variety of sources, including allotments and fees for services and general use of the facilities by Trust-fund units or outside organizations. The Zoo uses these funds to support and maintain its facilities, purchase plants and animals for the collection, support multi-year fellowship programs, purchase scientific and research equipment, and support the salary and travel costs of the director.

Restricted Funds - Gifts and foundation grants continue to support training programs, research projects, and the acquisition of animals for exhibit purposes. In FY 1989 and again in FY 1990, the Zoo received outside funding to support the training of zoo professionals from developing nations in wildlife management, conservation, and zoo management. Since its creation in 1986, the New Opportunities in Animal Health Science Center has continued to receive financial support for its programs in biomedical research.

Government Grants and Contracts - The National Zoo receives direct and indirect support from various government agencies and departments to support specific research projects. Zoo researchers in collaboration with investigators from the National Cancer Institute have studied the effects of genetic monomorphism on reproductive performance, endocrine status, and animal health. The research staff received financial support from the National Institutes of Health to study in vitro fertilization in domestic and nondomestic cat species. In association with the U.S. Department of Agriculture, the Zoo is expanding research efforts in the area of sperm and embryo preservation, genetic engineering, and artificial breeding of domestic animals. The Zoo's medical staff is investigating the characteristics of a new primate hepatitis virus with a grant it received from the U.S. Department of Health and Human Services.

SMITHSONIAN INSTITUTION ARCHIVES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	13	611	6	215	-	10	-	-	-	-
FY 1991 Estimate	16	682	6	215	-	-	-	-	-	-
FY 1992 Estimate	16	721	6	215	-	-	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	16	0	16
11 Personnel Compensation.....	510	34	544
12 Personnel Benefits.....	70	5	75
21 Travel.....	4	0	4
22 Transportation of Things.....	0	0	0
23 Rent, Communications & Utilities.....	5	0	5
24 Printing & Reproduction.....	1	0	1
25 Other Services.....	40	0	40
26 Supplies & Materials.....	26	0	26
31 Equipment.....	26	0	26
Collections Acquisition.....	0	0	0
41 Grants.....	0	0	0
Total	<u>682</u>	<u>39</u>	<u>721</u>

Analysis of Increase

Necessary Pay.....	39
Program Funds.....	0

ABSTRACT - The Smithsonian Institution Archives (SIA) is the official repository of Smithsonian Institution records and related historical documentation. SIA is the Institution's means of assuring systematic, comprehensive historical accountability of its national public trust. SIA supports Smithsonian research, management, and planning; serves other scholarly research and public inquiry; and provides advice to archival

research programs in and outside the Institution. As the Smithsonian grows, ages, and diversifies, SIA accommodates, preserves, and manages a constantly increasing volume and an ever-changing technological variety of Institutional records and other pertinent historical documentation.

Located in the Arts and Industries Building, the facility is convenient to principal users. A records center on North Capitol Street holds inactive records awaiting disposition. Remote storage for records that exceed central storage limits is located in leased space in Springfield, Virginia. Modification of an existing building at the Conservation and Research Center, Front Royal, Virginia, is under way for security storage of documents.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Smithsonian Institution Archives. The Institution requires \$39,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Smithsonian Institution Archives surveys and schedules official records and scholarly research files for retention and disposal; conducts oral history interviews; accessions, preserves, processes, and catalogues records for future research; provides research and reference service to users of the records; and gives professional advice to other archives. Specific accomplishments in FY 1989 included:

Surveys and Scheduling - SIA established a records disposition schedule for records of the Archives of American Art.

Accessions, Processing, and Preservation - SIA accessioned records from 55 Smithsonian offices, ten professional societies, 22 research scholars, and four oral history interviews. The staff reopened the records center after a three-year moratorium due to lack of storage space and took custody of 230 cubic feet of inactive records pending scheduled disposal. Staff also replaced 2,500 nitrate negatives with safety film copies and used Trust funds to conserve, rehouse, and photograph 1,500 early architectural drawings of historic Smithsonian buildings. SIA produced a guide to records of directors of the National Zoological Park (NZIP) for the NZIP centennial. It published (through Smithsonian Institution Press) the first volume (National Museum of American History) of a projected multi-volume series of finders guides to Smithsonian photographic collections.

Research and Reference Service - Scholars and other users did biographical research on former Smithsonian secretaries; architectural and engineering records for current engineering, repair, and construction projects; use of imagery in the newly redesigned Visitor's Center in the Castle; and American Indian tribal catalogues.

Professional Advice and Outreach - Two dozen archivists, museum professionals, and librarians, including representatives of the Shanghai Municipal Archives, the National Museum of Kenya, and the National Archives of Zimbabwe, visited SIA for briefings and instruction in the management of museum archives. SIA staff members served on many workshops as faculty for training and developing skills and techniques in archives management and oral history. For the past three years SIA participated with other Smithsonian bureaus in a Sloan Foundation-funded project that probed the potentials and limitations of video history inquiry and recording.

Statistical Summary of SIA Activity

	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>
Total Holdings at Year-end (cubic feet)	14,393	15,288	16,066
Accessions Added (cubic feet)	1,070	895	1,045
Reference Inquiries	1,610	1,424	1,246
Items Provided to Researchers	6,148	5,625	6,009
Pages of Copy Provided to Researchers	28,431	16,134	26,554

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Provided by annual allotments, these funds cover the salaries, benefits, and support costs of an archivist and an archives technician. They also support a temporary archives specialist, three program assistants, and support costs for a survey and publication of guides to photographic collections of the Smithsonian Institution. In FY 1989 and FY 1990, the Smithsonian awarded SIA competitive grants to conserve 19th- and early 20th-century architectural drawings of historic Smithsonian buildings.

SMITHSONIAN INSTITUTION LIBRARIES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	97	5,547	11	536	-	173	-	13	-	-
FY 1991 Estimate	106	5,574	11	417	-	2	-	-	-	-
FY 1992 Estimate	106	6,099	12	575	-	1	-	-	-	-

* FTE = Full-time equivalent
 **FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	106	0	106
11 Personnel Compensation.....	3,280	214	3,494
12 Personnel Benefits.....	720	61	781
21 Travel.....	24	0	24
22 Transportation of Things.....	21	0	21
23 Rent, Communications & Utilities.....	8	0	8
24 Printing & Reproduction.....	116	0	116
25 Other Services.....	732	250	982
26 Supplies & Materials.....	623	0	623
31 Equipment.....	50	0	50
Total	<u>5,574</u>	<u>525</u>	<u>6,099</u>

Analysis of Increase

Necessary Pay.....	275
Inflation.....	250
Program Funds.....	0

ABSTRACT - The Smithsonian Institution Libraries (SIL) supports the mission of the Institution "for the increase and diffusion of knowledge" by providing information in all forms to Smithsonian scholars, staff, and others with research needs. The Libraries serves its users by building, organizing, managing, housing, and preserving collections; by providing reference services and consultation; by employing appropriate technologies for finding and disseminating information; and by contributing to and drawing from national

data bases. The Libraries participates in local, national, and international networks and cooperative activities that promote the sharing of information, access to recorded knowledge, and the advancement of scholarly communication.

For FY 1992, the Smithsonian Institution Libraries requests \$250,000 for inflation in the acquisition cost of journals. The justification for this request is found in the Uncontrollable Increases section. The Institution requires \$275,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Smithsonian Institution Libraries provides research services, collections acquisitions and management, and outreach programs to support multidisciplinary research at the Smithsonian Institution. SIL's collections number more than 1,101,000 volumes, including 14,000 serial titles and 35,000 rare books. The collections provide a context for and describe the artifacts, specimens, and other objects in the Smithsonian museum complex, and support basic scientific research. By centralizing acquisitions and cataloguing, preservation and conservation, administrative services, and interdisciplinary reference/information services, SIL gains operational and cost efficiencies. SIL's staff uses electronic technology for internal communication, for most internal library operations, for resource sharing, and for communication with other libraries. The Smithsonian Institution Bibliographic Information System (SIBIS) provides bibliographic access to collections through an on-line catalogue. SIL also uses SIBIS for acquisitions, cataloguing, and increasingly for circulation and inventory control. As SIL fully implements new functions of the current system, deficiencies become apparent. Beginning in FY 1992, SIL and the Office of Information Resource Management will implement a multiyear replacement of SIBIS. The new system will reside on an existing IBM mainframe computer, using new software to accommodate the expanded growth and demands placed on the current system.

During FY 1990, the Institution, represented by the Libraries, joined the Coalition for Networked Information. Formed in March and organized by the Association of Research Libraries, CAUSE and EDUCOM, the Coalition strives to advance scholarship and intellectual productivity by promoting access to information resources through existing networks and the proposed National Research and Education Network. Library constituencies are an important early priority of the Coalition and networks will be used to link libraries.

In FY 1990, the Libraries automated its circulation records in the Air and Space Museum Branch Library, the Anthropology Section of the Natural History Museum Branch Library, the Museum Reference Center, the Office of Horticulture Branch Library, and the National Zoological Park Library. Eight SIL locations are now using the automated circulation system.

Research Services - SIL provides daily, direct support to researchers in 14 branch libraries, including Central Reference and Loan Services. All branches offer subject and information-science expertise to provide users with the information they need. The staff searches on-line data bases and participates in national bibliographic networks to locate and retrieve items and information. SIL prepares and distributes bibliographies to Institution staff, the public, and other libraries in the United States and abroad. In FY 1990, eight branches produced new titles lists and/or bibliographies. SIL added the EPIC service, a product of the On-line Computer Library Center (OCLC). EPIC gives access to the OCLC data base by subject and key word searches to expand researchers' ability to conduct research and create comprehensive bibliographies. SIL contracts with commercial document delivery services to provide hard-to-find and highly specialized materials. The

Libraries answered 51,000 reference questions, borrowed 9,277 books or articles from, and loaned 5,000 items to outside libraries. The number of items circulated both inside and outside the system was 49,000.

Collections Acquisition - SIL acquires materials through purchase and through an active gift-and-exchange program with more than 3,900 partners worldwide. In FY 1990, the Libraries purchased the Robert Mussey Collection on varnishes and furniture finishes, which will be used by conservators and historians of decorative arts.

In the past three years, the spiraling costs of serial subscriptions and the declining value of the American dollar against foreign currencies, forced SIL to redirect resources to maintain the most crucial current journal and periodical subscriptions. Because of sudden increases predicted for FY 1991, SIL cancelled 443 subscriptions. SIL lacks the resources to place subscriptions for new titles to support new and emerging research emphases and will reduce its purchases of other dramatically.

Collections Management - SIL houses its collections in Smithsonian buildings in Washington, D.C., and other locations, including Edgewater, Maryland; Cambridge, Massachusetts; New York City; and the Republic of Panama. The Libraries controls collections and makes them available to researchers at the Institution and worldwide by systematically describing materials and entering them into the SIBIS on-line catalogue and into OCLC. SIL continued its contracts for commercial cataloguing and for converting manual records to machine-readable data. In FY 1990, SIL catalogued 24,673 items. When SIL completes cataloguing records for older materials on to SIBIS, researchers, for the first time, can search every collection in all SIL locations on-line. In FY 1990, SIL completed cataloguing collections in the branch libraries in the main collection, Cooper-Hewitt Museum, National Air and Space Museum, National Museum of Natural History's Anthropology, Botany, and Mollusks locations, and the National Zoo's Branch Library.

Unless they are preserved, 19th- and 20th-century materials, heavily used by researchers, face certain destruction by crumbling caused by high-acid-content paper. As the result of a 1986 study, SIL identified one-third of its holdings as already severely deteriorated. With the new position and funding provided by Congress for FY 1991, SIL will continue expansion of its Preservation Services Department, which is responsible for treating the general collections and binding library materials. SIL bound 18,653 volumes in FY 1990.

Outreach - SIL serves the wider scholarly community and the public through outreach programs including publications, lectures, and exhibitions. An exhibition on "Science and the French Revolutionaries" was part of the Institution's tenth International Symposium, "Les Droits de l'Homme and Scientific Progress," which also included a public lecture. From November 1989 to July 1990, SIL exhibited artifacts and explanations related to "Library Preservation: Problems and Solutions," featuring aspects of the Libraries' preservation and conservation programs. In April 1990, SIL participated in the American Library Association's National Library Week Celebration, "Night of a Thousand Stars," by presenting a lecture on "Black Beauty: From Humane Tract to Children's Classic." SIL's lecture for the Washington Collegium for the Humanities Lecture Series, "The World of the Child," was an illustrated talk "Playful Readings: A History of Children's Movable Books." Concurrently, SIL mounted an exhibition of its collection of pop-up books from the Cooper-Hewitt Branch Library.

In October 1990, SIL mounted the first exhibition, "Turning Over Old Leaves: A Sampler of Manuscript Materials in the Smithsonian Institution Libraries," in its new public gallery in the National Museum of American History. SIL hosted an opening reception for the Association of Research Libraries to view the exhibition during the organization's fall meeting in Washington. SIL plans to develop two exhibitions a year, depending on resources.

The Libraries published Alchemical Death and Resurrection: The Significance of Alchemy in the Age of Newton by B.J.T. Dobbs of Northwestern University, an illustrated lecture based on an Isaac Newton manuscript in the SIL collections and delivered for the 1988 Washington Collegium for the Humanities Lecture Series, "Death and the Afterlife in Art and Literature." With funding from the Special Foreign Currency Program, SIL administers the Science Information Program of translations. Blood-Sucking Mosquitoes of the Sub-Tribe Culisetina was published in February 1990, and 30 additional titles are in various stages of production.

The Smithsonian Information Exchange Service (SIES) helps nonprofit institutions in the United States by sending their preaddressed educational materials to interested foreign institutions, many in Third World countries. In FY 1990, the service mailed 82,286 pieces.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - An administrative allotment funds administrative salaries and related support costs including travel, training, and supplies. A program allotment supports such special events as public lectures and seminars.

Restricted Funds - Gifts and grants from individuals, foundations, endowments, organizations, and corporations provide these funds for specific purposes. In FY 1991, these funds will support the preparation costs for two exhibitions in the SIL exhibition gallery and provide for the purchase of rare volumes in the decorative arts.

INTERNATIONAL ENVIRONMENTAL SCIENCE PROGRAM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	11	765	-	-	-	-	-	-	-	-
FY 1991 Estimate	14	828	-	-	-	-	-	-	-	-
FY 1992 Estimate	18	1,097	-	-	-	-	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	14	4	18
11 Personnel Compensation.....	336	129	465
12 Personnel Benefits.....	82	40	122
21 Travel.....	126	7	133
22 Transportation of Things.....	2	0	2
23 Rent, Communications & Utilities.....	2	0	2
24 Printing & Reproduction.....	8	0	8
25 Other Services.....	214	28	242
26 Supplies & Materials.....	50	20	70
31 Equipment.....	8	45	53
Total	<u>828</u>	<u>269</u>	<u>1,097</u>

Analysis of Increase

Necessary Pay.....	61
Program Funds.....	208

ABSTRACT - The International Environmental Science Program (IESP) is a multi-bureau interdisciplinary effort to coordinate the Smithsonian Institution's long-term monitoring and study of unique and significant ecosystems. The goal of the Program is to evaluate and eventually predict the impact of human activities and natural change on selected ecosystems. Research sponsored by IESP occurs at two permanent Smithsonian sites--the Smithsonian Tropical Research Institute (STRI) in Panama and the Smithsonian Environmental

Research Center (SERC) in Edgewater, Maryland--and several nonpermanent sites throughout the world.

For FY 1992, IESP requests 4 workyears and \$208,000 for global change research at the Smithsonian Environmental Research Center (3 workyears and \$158,000) and to establish East African savannah ecosystem studies (1 workyear and \$50,000). The Institution requires \$61,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The International Environmental Science Program sponsors research to meet the urgent need for long-term studies of the world's ecosystems, especially in tropical and subtropical regions where the rapid rate of tropical deforestation, loss of suitable soil, and resulting threat to wildlife are of critical importance to biological diversity and global change. The Program provides funds for teams of scientists to monitor natural variations in specific environments unchanged by humans.

Scientists maintain permanent IESP research sites at the Rhode River Estuary at Edgewater, Maryland, and in the tropical lowland forest of Barro Colorado Island in Panama and the Galeta Reef on the Atlantic side of the Isthmus of Panama. For more than 15 years, scientists have gathered information for a data base on the biological, physical, and chemical components of various ecosystems. Analyses of these data have produced speculations and verifiable hypotheses about long-term patterns in climate and disturbances resulting from human activity.

Research sponsored by IESP also takes place at nonpermanent sites on Aldabra in the Seychelles and in Venezuela, Brazil, Mexico, and the Amazonian regions of Peru and Bolivia. Smithsonian scientists, with support from the host governments, are continuing their efforts at these sites to gather descriptive data.

The following highlights IESP's most significant accomplishments for FY 1990 at the Program's permanent and nonpermanent sites:

Edgewater, Maryland - Sunlight penetration is often the factor that limits the density of algal growth in the Chesapeake Bay. Using field data from 1988, researchers developed a mathematical model of spectral attenuation calibrated with depth. Model predictions compared with field measurements taken in 1989 were accurate within about 25 percent, the first time such a model has been successfully tested for the very turbid, highly productive waters of the Chesapeake Bay.

Panama - IESP-funded research on Barro Colorado Island (BCI) continues to expand understanding of global change and to develop techniques for agroforestry and reforestation. One major study is examining seasonal and longer-term fluctuations of forest insects. STRI scientists have monitored insect density and species diversity daily for more than 17 years, yielding a record unparalleled in the tropics. These data clearly contradict the long-held idea that tropical insect populations are more stable over time than are comparable temperate forest populations. This finding has significant economic implications for pest management in tropical forestry and agriculture.

At Galeta, long-term monitoring of reef and mangrove communities continues to provide invaluable background for analyses of the impact of the April 1986 oil spill on these areas. Evidence gathered to date indicates that the effects of oil spills on tropical marine habitats are more severe and long lasting than previously suspected. In addition,

regular monitoring of sea level at Galeta provides data on a critical aspect of global climatic change.

Aldabra - Scientists continued marine and terrestrial surveys of the flora and fauna of this relatively undisturbed atoll in the Indian Ocean. Such studies will provide important baseline data for comparative ecological analysis, especially with disturbed areas. Within this framework, the five-year study of the giant tortoise population and growth progressed. Scientists began a study of the breeding of hawksbill turtles in earnest after an initial program of tagging. Studies on Polynoid worms yielded three scientific papers and several new taxa.

Venezuela - A continuing 15-year demographic study of several social groups of the red howler monkey helped detect male invasions of social groups and document the details of infanticidal behavior in red howlers. To resolve some of the problems related to the captive maintenance of folivorous monkeys, scientists studied the monkeys' diet. Two other studies had important implications for species conservation and dealt with aspects of biology of the green-rumped parrotlet and the caiman. Additionally, the Venezuelan Project included two 14-year demographic studies of the white-bearded flycatcher and the Cebus monkey and an investigation of the local moth fauna. The latter study included research on the taxonomy, distribution, and life history of species, especially those of economic importance.

Brazil: Golden Lion Tamarin Project - By summer 1990, 27 (36 percent) of 75 reintroduced tamarins remained from those released between 1984 and 1989, and 22 (65 percent) young survived from 34 born. Altogether, there are 49 more tamarins in the wild as a result of the Institution's reintroduction program.

The Poco das Antas Reserve was seriously damaged in early 1990 by a major fire that broke out during an unusually dry wet season. Nearly 25 percent of the Reserve was burned, and scientists estimate that forest regeneration was set back up to ten years as a result. The fire will also delay efforts to increase the small population of golden lion tamarins within the Reserve. Scientists initiated several projects to chart the effects of the fire. Findings will help us understand how to rehabilitate damaged ecosystems in the tropics.

Latin America: Neotropical Lowland Research Program - In FY 1990, scientists conducted field and laboratory work in archeology, botany, entomology, herpetology, and ichthyology on the Amazonian and Atlantic forest biota. Results of these investigations provided new information on the composition and distribution of the neotropical biota that is important for the completion of several major publications and conservation planning. Data from the herpetology project documented frog species extinctions that were the focus of a National Academy of Sciences study and considerable press attention. An article on the project, co-authored by Smithsonian and Brazilian scientists, was published in the scientific journal Biotropica.

Mexico - Research on the Yucatan Peninsula continues to focus on biological responses to severe damage done by Hurricane Gilbert and by fires that occurred during the subsequent dry season. In unburned areas, the forest canopy and tree growth rates recovered significantly after 27 months. In contrast, areas that burned suffered very high rates of mortality; recovery will most likely be very slow because the highly organic soils

burned almost completely and few seeds and seedlings of tree species survived. The bird community has recovered rapidly in the damaged forest.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, IESP requests 4 workyears and \$208,000 for global change research at the Smithsonian Environmental Research Center (3 workyears and \$158,000) and to establish east-African savannah ecosystem studies (1 workyear and \$50,000).

Global Change Research at SERC (3 workyears and \$158,000) - The collection of long-term data on the effects of global change on biota of the Chesapeake Bay region is important for improved management of natural resources. Increased support of long-term monitoring programs will enhance the collection and use of these data and complement previously funded programs at the Smithsonian Tropical Research Institute.

Monitoring of biological populations and their controls is performed on the tidal Rhode River, a tributary to the Chesapeake Bay and its watershed. The Smithsonian controls or owns much of the site. Less-intensive, short-term comparative studies throughout the region place these data in a broader context. To expand the estuarine program, IESP requests 2 workyears and \$101,000 to hire two biological technicians and provide support funding.

Land alterations and intensified use have extensively fragmented the natural forest habitats of the Chesapeake region. SERC proposes a long-term study of the impacts of forest fragmentation on biota, especially migratory birds. This program will build on past, privately funded short-term research. IESP requests 1 workyear and \$57,000 to hire one biological technician and provide other support for this program.

The SERC Rhode River site has been selected, through national peer competition, as one of 25 members of the Long-Term Ecosystem Research Network. These sites are research centers in the United States and its territories with characteristics, facilities, staff, and long-term research results that make them ideal for ecological global change research.

East African Savannah Ecosystem Studies (1 workyear and \$50,000) - The processes of overgrazing and desertification that characterize much of Africa may be as critical to global climatic change and loss of biodiversity as are the processes of tropical deforestation that characterize Asia and Latin America. An understanding of these African ecosystems is of great practical as well as theoretical interest.

In 1990, the Smithsonian Institution collaborated with a private donor, Princeton University, and with the Government of Kenya to establish the Mpala Research Station, a major research center in north central Kenya. Mpala Ranch is a 40,000-acre tract of grassland and dry woodland in north central Kenya, just north of the equator at an elevation of 5,000 to 6,000 feet. The site is ideal for interdisciplinary research and training in systematics, ecology, evolution, geology, and resource management. It is home to largely intact fauna characteristic of east-African savannahs: lion, leopard, cheetah, two species of zebra, cape buffalo, hippopotamus, giraffe, and many other large and small mammals. A herd of more than 900 African elephants, one of the last large elephant herds in East Africa, routinely traverses, grazes, and otherwise uses the Ranch. Mpala Ranch lies in the middle of the Laikipia Ecosystem, with more than 400,000 acres of contiguous properties, most of which actively conserve wildlife. The Ranch also has a small cattle operation, thereby providing important opportunities for research on the interactions of

cattle with wildlife in east-African ecosystems, an issue vitally important throughout Africa because of the importance of cattle to local economies.

The Mpala Research Station is critically needed. The monitoring of global environmental change in East Africa will provide fundamental contrasts to the more intensively studied regions of Latin America and Southeast Asia. Africa as a whole is typified more by grassland and semidesert shrubland than by the moist tropical forests characteristic of Latin America and Southeast Asia. These dry African ecosystems are subject to rapid erosion and desertification that have as great an impact on global climatic change as does tropical deforestation, yet African ecosystems are far less studied. An understanding of the functioning of these ecosystems and the regional climates associated with them is of great practical as well as theoretical interest, because environmental mismanagement in the region has social and economic impacts on a global scale.

For FY 1992, IESP requests funds to hire a director of research (1 workyear and \$25,000), support travel expenses (\$5,000), and provide support for Kenyan collaborators and students (\$20,000). The director will begin detailed planning of research programs, initiate preliminary monitoring of critical climatic and biological factors, and publicize the research opportunities at the Station.

Conflicts between the needs of wildlife and the activities of humans are at the center of critical economic, social, and environmental issues in East Africa. With the expansion of human activities such as firewood gathering and cattle grazing, wildlife disappears rapidly, and with it a primary source of revenue in the form of tourism. The Mpala Research Station provides opportunities for rigorous long-term studies of the interaction of cattle with wild game--studies that would be impossible in national parks. The Station will also provide critically important data on environmental change in East Africa. The results of these studies will be of direct economic and social importance to East Africa and will also be of great scientific interest.

MAJOR SCIENTIFIC INSTRUMENTATION

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	-	1,402	-	-	-	-	-	-	-	-
FY 1991 Estimate	-	4,882	-	-	-	-	-	-	-	-
FY 1992 Estimate	-	8,119	-	-	-	-	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	0	0	0
21 Travel.....	20	20	40
25 Other Services.....	2,862	1,757	4,619
26 Supplies & Materials.....	2,000	1,460	3,460
Total	<u>4,882</u>	<u>3,237</u>	<u>8,119</u>

Analysis of Increase

Necessary Pay.....	0
Program Funds.....	3,237

ABSTRACT - The development of major scientific instrumentation is vital for Smithsonian scientists to remain at the forefront of their fields. Because of the magnitude of the costs and the time required to fabricate new instruments and reconfigure existing ones, the Institution requests funding for such projects under this line-item rather than under individual bureau line-items. Since these projects will, of necessity, require long-term development and multi-year funding, the Institution also requests that funds in this line-item remain available until expended.

For FY 1992, the Smithsonian requests an increase of \$3,237,000 in this no-year funding line-item to continue the construction of the submillimeter telescope array

(\$2,677,000), to continue the conversion of the Multiple Mirror Telescope (MMT) (\$441,000), and to begin development of new instrumentation for the converted MMT (\$119,000). In addition, in the Smithsonian Astrophysical Observatory (SAO) line-item, the Institution asks for an increase in the funding for personnel costs and rent (11 workyears and \$703,000) associated with the submillimeter telescope array. The justification for these positions is included here because of their relationship to the Major Scientific Instrumentation request.

PROGRAM - The development of major scientific instrumentation, such as telescopes, requires research and development (R&D) over an extended period of time. Teams of Smithsonian scientists, engineers, technicians, and contractors, focused on critical telescope elements such as optics, detectors, receivers, and support structures, are engaged in these R&D efforts. To facilitate the unique, extended R&D efforts that are integral to the acquisition of major scientific instrumentation, the Institution established this no-year line-item in the FY 1989 budget.

In the FY 1989 budget, the Smithsonian requested funding under this line-item for two projects for the Smithsonian Astrophysical Observatory:

- the development of an array of submillimeter telescopes;
- the conversion of the Multiple Mirror Telescope (MMT).

Both these forefront scientific projects involve the fabrication of major new instrumentation that will take a number of years to complete. SAO expects the submillimeter telescope array to be completed by FY 1996. In 1987, SAO estimated that the array would require total funding of \$30 million (1987) for construction on a continental site and about 25 percent more for construction on a site in Hawaii. Annual operating costs are expected to be about 8 percent of the construction costs. Almost all operating personnel will be hired during the design and construction phases of the project. They will participate in the final construction of the instrument and thus will already be included in the SAO base when operations commence.

SAO expects "first light" for the converted MMT by the end of 1994. In 1987, SAO estimated the total cost to the Smithsonian for the conversion would be no more than \$10 million (1987).

Except for inflation, which affects the two projects differently, SAO's current estimates for the costs of these projects are unchanged. In 1990 dollars, these estimates are \$35.1 million for the submillimeter array and \$10.8 million for the converted MMT.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the Smithsonian requests an increase of \$3,237,000 in this no-year funding line-item to continue the construction of the submillimeter telescope array (\$2,677,000), to continue the conversion of the Multiple Mirror Telescope (MMT) (\$441,000), and to begin development of new instrumentation for the converted MMT (\$119,000).

Construction of Submillimeter Wavelength Telescope Array (\$2,677,000):

Scientific Justification - The last frontier for ground-based astronomy consists of observing the skies with telescopes sensitive to submillimeter waves, light with wavelengths between those of infrared and radio waves. Only in the past few years has technology advanced sufficiently to allow the construction of telescopes that can observe

the universe at submillimeter wavelengths. SAO's efforts to build a submillimeter wavelength telescope array will lead to fundamental contributions to astronomy and astrophysics in several areas:

(1) For studies of star formation, the array will be used to map the structure and motions of the disks that eventually contract into stars. The array offers the prospect of detecting and studying gas falling into very young stars and thereby gaining detailed knowledge of how stars are formed. With unprecedented resolution and sensitivity, the array will also provide images of high-velocity gas flows from recently formed stars. These images will elucidate the mechanisms that limit the growth of a star and will help answer a fundamental question: Why is the Sun the size it is?

(2) Use of the array will generate new information about galaxies. Detailed maps of the emission from carbon monoxide molecules will provide the first clear view of the spiral structure of galaxies outlined by giant molecular clouds. The array will also allow astrophysicists to study the emission from the dust surrounding young stars in galaxies. Study of these emissions will reveal centers of star formation not visible with optical telescopes. These two new views of galactic structure will expand understanding of the now-mysterious ways that spiral patterns in galaxies originate and sustain themselves.

(3) Because of its high sensitivity, the array will provide accurate measurements of the submillimeter wavelength emission from quasars and active nuclei of galaxies. These measurements will clarify the relationship between these enormously energetic objects and may reveal the source of their energy. These measurements also could be crucial to distinguishing between the mechanisms leading to quasars that emit radio waves and those that do not. An explanation for these mechanisms is one of the most important unsolved enigmas in the quest for understanding the source of energy in quasars.

(4) The array will give new information about the surfaces and atmospheres of planets and other objects in the solar system. Maps of Mercury, Mars, Saturn's rings, and some dozen additional bodies, including asteroids and satellites, will reveal the temperature and structure immediately beneath the surface. This information is needed to understand the nature of the subsurface composition. New data gathered on emission from molecules in the atmospheres of Venus and Saturn's satellite Titan should also provide insight into planetary weather.

(5) Finally, the array is likely to make unexpected discoveries. Only a few telescopes can work at submillimeter wavelengths. The array's ability to discriminate spatially will be at least ten times greater than that of other, single, submillimeter telescopes. If the past is any guide, this unique capability should lead to important serendipitous discoveries.

In 1982, the ten-year plan of the Astronomy Survey Committee of the National Research Council (NRC) recognized the desirability of submillimeter wavelength observations. Several single-antenna telescopes capable of such observations are now under construction or in operation. These telescopes will dramatically advance the field. None of them, however, will be able to discern details finer than about ten seconds of arc. This limitation means that their resolving power will be less than one-tenth of the leading astronomical instruments in other wavelength regions, such as the Very Large Array (VLA) of radio telescopes.

The NRC study also recommended development of advanced spatial interferometers at all wavelengths to improve resolving power. SAO's submillimeter wavelength telescope array will be a premier response to the NRC's recommendation. It will have a resolving power of better than one second of arc, far finer than for any single-antenna submillimeter wavelength telescope and comparable to that of the VLA.

Status and FY 1992 Plans - SAO began its submillimeter program in FY 1987. In that year, SAO hired a submillimeter receiver scientist and started to equip a receiver laboratory. With funding provided in FY 1988 and FY 1989, SAO continued to develop the laboratory and hired a leader to direct the laboratory. In 1988, SAO hired a technical leader to coordinate the design and development of the array subsystems. In 1989, SAO added a project scientist to oversee the design specifications for the array in light of its scientific goals and a project director to manage the entire array program. In FY 1990, the project added the services of a mechanical engineer to oversee the antenna development and an electronic technician to help with site testing.

Progress since assembling the core team has been substantial. Existing data on atmospheric conditions above Mauna Kea, Hawaii, and Mt. Graham, Arizona, the two sites under prime consideration for placement of the array, have been analyzed thoroughly, and an extensive report has been completed. Special equipment for the most sophisticated part of the site testing has been designed and constructed. Analysis of the basic terrain at each site is well under way. Five design studies have been completed in cooperation with private industry to identify the best approach to the manufacture and construction of the antennas. A study of the correlator design was also completed, as was an extensive study of the techniques for calibration of the array. Furthermore, the receiver laboratory completed the construction and testing of the first prototype receiver to operate at a frequency of 230 GHz. Its performance is nearly equal to the best yet achieved in the world at this frequency.

SAO's scientific and technical advisory group for the array, consisting of 14 experts from other institutions in the United States, Europe, and Japan, met for two days at the Observatory in September 1989 to review progress and plans. Their comments at the meeting and their 12-page written report were constructive. Overall, their assessment was positive: "The entire committee is very enthusiastic about the project and impressed with the progress to date." The committee met for three days at the Observatory in January 1991 to review the completed design study for the entire array; their written report is expected shortly.

In FY 1991, SAO will publish the results of the design study, including the specifications for the antenna systems that are the most critical, long-lead-time elements of the array. Successful recruitment for the positions provided in the FY 1991 request will allow some key members of the construction team to be assembled, including the site manager who will be responsible for the site preparation. The FY 1991 funding will also allow the Observatory to contract for two of the antenna reflector assemblies. SAO will also continue the development of higher frequency receivers in the receiver laboratory. The staff will complete site testing early in FY 1991 and recommend a site for selection shortly thereafter.

For FY 1992, the Institution requests a total of \$5,586,000 for the submillimeter array program in the Major Scientific Instrumentation line-item. Such funding represents an increase of \$2,677,000 over the FY 1991 base of \$2,909,000. These funds will be used to continue the construction started in FY 1991 and will be expended as follows:

	(\$ millions)
-- Acquire site and complete environmental impact statement.....	\$0.20
-- Contract for site and pad design.....	0.25
-- Contract for correlator (Phase I).....	0.50
-- Purchase computers for telescope operation.....	0.30
-- Make prototype intermediate frequency and local oscillator links.....	0.30
-- Build 490 GHz prototype receiver.....	0.35
-- Build three 230 GHz receivers.....	0.60
-- <u>Purchase next three antennas.....</u>	<u>3.10</u>
Total funds to be expended in FY 1992	\$5.60

The SAO line-item requests funding for the staff required for the submillimeter telescope array. With the funding increases in its base for FY 1992, SAO will fill 11 new positions for the project (11 workyears and \$613,000) and provide rent costs of \$90,000 for both its Cambridge, Massachusetts, headquarters and the site selected for the submillimeter telescope array. SAO expects to lease 2,500 square feet of office space at the site for office, laboratory, and storage functions (\$45,000). In addition, SAO must provide office space for 9 persons (\$27,000) as well as 1,000 square feet of laboratory space in Cambridge (\$18,000). The personnel to be hired and their duty stations are:

- Receiver engineer, Cambridge
- Programmer, Cambridge
- Research assistant, Cambridge
- Purchasing assistant, Cambridge
- Secretary, Cambridge
- Electronics/receiver engineer for site, temporarily based in Cambridge
- Mechanical engineer for site, temporarily based in Cambridge
- Programmer for site, temporarily based in Cambridge
- Electronic technician for site, temporarily based in Cambridge
- Expeditor for site
- Secretary for site

Project Schedule - SAO will complete the design study early in 1991 and then initiate construction.

The following chart shows the total level of funding (actual for past years and 1990 dollars for present and future years) required for the project from FY 1989 through FY 1996, including allocations already made.

PAST AND PROJECTED FUNDING FOR SUBMILLIMETER TELESCOPE ARRAY
FY 1989 through FY 1996¹

	<u>FTE</u>	(\$ millions) ^{2,3}			
FY 1989	3	0.8			
FY 1990	6	1.6			
FY 1991	12	3.9			
FY 1992	23	7.0			
FY 1993	28	7.5			
FY 1994	28	6.2			
FY 1995	34	5.8			
FY 1996	34	2.3 ⁴			
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; text-align: center;">TOTAL</td> <td style="width: 20%; text-align: center;">174⁵</td> <td style="width: 40%; text-align: center;">35.1</td> </tr> </table>			TOTAL	174 ⁵	35.1
TOTAL	174 ⁵	35.1			

¹Assumes construction on continental site

²Rounded to the nearest \$100,000

³Includes all personnel costs for the project

⁴In addition, \$1.6 million required for approximately six months operating expenses

⁵Represents the cumulative workyear requirement over the seven-year period

Conclusion - When operational, the SAO submillimeter telescope array will be a major scientific instrument of international stature. The array will be unique in the world in its combination of wavelength coverage and resolving power. It will, therefore, measurably enhance the scientific competitiveness of the United States. With the recent unfortunate delay in acquiring high-resolution space-based observations, the recovery of momentum represented by the construction of technologically advanced, pioneering ground-based instruments such as the submillimeter array is especially timely.

Conversion of the Multiple Mirror Telescope (\$441,000):

In FY 1988, SAO began the process of converting the Multiple Mirror Telescope (MMT) to a telescope with a single 6.5-meter diameter mirror. This conversion will more than double the light-gathering power of the telescope and increase its field of view more than one hundredfold. The converted telescope will allow scientists to observe many objects simultaneously. For certain types of problems, the converted telescope will permit more than a hundredfold increase in efficiency of data collection over the MMT.

Scientific Justification - The increased collecting area of the converted telescope will allow astronomers to gather, on objects 2.5 times fainter, data of the same quality as now obtained. This improvement will allow the use of the converted telescope in many new areas of research, especially where the extreme faintness of the objects involved precludes the use of the present telescope. Further, the added light-gathering power means that more than twice as much of the universe will be accessible for study than is now possible. SAO has already established itself as a world leader through the discovery and study of the "bubble" structure of the universe. Expanding such studies beyond the MMT's present horizon will be very important in determining if even larger structures exist; if they do, scientists might again have to rethink their understanding of the evolution of the universe.

The expanded capability of the converted telescope also will be especially beneficial for the study of clusters of stars and galaxies. SAO astronomers will be able to complete in a few hours projects that now require many nights on the MMT. For example, SAO scientists will conduct studies of the dynamics of clusters of stars, an area in which SAO scientists have been among the world's leaders. Similarly, the study of clusters of galaxies, hitherto prohibitively demanding of telescope time, will become feasible. Research on these clusters may hold the key to an understanding of the distribution of matter in the universe. This distribution has a fundamental bearing on the evolution of the universe, in particular on how galaxies formed--a question that has baffled scientists for decades.

In addition, the converted telescope will allow measurements of the velocities of gas in very distant galaxies. Astronomers can then compare these velocities, which are often related to the intrinsic brightnesses of the galaxies, to the apparent brightnesses of the galaxies to determine their distances. This technique will allow scientists to determine the rate of expansion of the universe when it was younger. A measurement of this rate is critical for understanding the evolution and ultimate fate of the universe: Will it continue to expand forever, or will it eventually collapse?

The increased collecting area will allow pioneering studies of certain astrophysical phenomena that change too rapidly for astrophysicists to study with today's telescopes. Some of these rapidly changing processes take place in double stars, so close to each other that their surfaces almost touch. Scientists similarly can study phenomena in systems with one star whose core is so dense that not even light can escape from it--a black hole. Such systems give rise to very unusual conditions; their study will be possible with the converted telescope and will allow scientists to gain insights into new physical processes.

These are just a few examples of the scientific justifications for the conversion of the MMT. A conference held at SAO in April 1986 resulted in a 50-page paper, which outlines in more detail the various reasons for the conversion.

Status and FY 1992 Plans - With funding provided for the conversion project in FY 1987 through FY 1991, SAO has achieved the following:

- SAO ordered, received, and tested the glass required for casting the 6.5-meter mirror in the University of Arizona's Mirror Laboratory;
- SAO selected a consulting engineering firm and completed the conceptual design for the building modifications, optical support structure, and primary mirror cell.

As part of its contribution to this joint project, the University of Arizona's Mirror Laboratory enlarged the casting furnace to allow the 6.5-meter mirror to be cast. The Mirror Laboratory is also polishing a 3.5-meter diameter mirror to develop the techniques to be used on the 6.5-meter diameter mirror.

In FY 1991, the 6.5-meter diameter mirror is scheduled to be cast. SAO will complete the preliminary design of the building, optical support structure, and primary mirror support. SAO will also order the blanks for two secondary mirrors.

For FY 1992, the Institution requests a total of \$2,414,000 to continue the conversion

process. This represents an increase of \$441,000 over the FY 1991 base of \$1,973,000. The main efforts in FY 1992 will be to:

- complete detailed design and begin fabrication of the optics support structure;
- complete detailed design and begin fabrication of the primary mirror cell.

The University of Arizona will begin polishing the 6.5-meter primary mirror.

Project Schedule - SAO expects "first light" for the converted MMT by the end of 1994 at a total cost to the Smithsonian of no more than \$10.8 million (1990). The exact cost of the conversion and the precise contribution of the University of Arizona are still not known, but \$10.8 million is believed to be a reliable upper figure for the Smithsonian Institution's contribution. This total includes amounts allocated in FY 1987 for glass and refractories. The funding provided in FY 1988 was part of the one-year appropriation for SAO. Beginning in FY 1989, the Smithsonian requested and received funding for the MMT conversion as no-year funding in this line-item. The breakdown of funds by year (actual for past years and 1990 dollars for present and future years) is shown in the following chart.

PAST AND PROJECTED FUNDING FOR CONVERSION OF THE
MULTIPLE MIRROR TELESCOPE
FY 1987 through FY 1994

(\$ millions)¹

FY 1987	0.5
FY 1988	0.5
FY 1989	0.6
FY 1990	0.9
FY 1991	2.0
FY 1992	2.4
FY 1993	2.3
<u>FY 1994</u>	<u>1.6</u>
TOTAL	10.8

¹Rounded to the nearest \$100,000

Conclusion - The conversion is the most cost-effective way to ensure that Smithsonian astronomers will remain in the forefront of ground-based optical and infrared astronomy through the remainder of the 20th century and beyond.

Instrumentation for the Converted MMT (\$119,000):

The converted MMT will more than double the light-gathering power of the existing telescope and increase its field of view more than one hundredfold. The converted telescope will, therefore, allow scientists to observe many objects simultaneously. To achieve the benefits of this greatly enhanced capability, development must begin at once for a dual, multi-object spectrograph matched to the capabilities of the converted telescope.

Scientific Justification - SAO scientists are now leading the world in uncovering the three-dimensional structure of the universe. Recently, they discovered the largest

single structure, the "Great Wall" of galaxies, extending hundreds of millions of light years in two dimensions, consistent with the "bubble" structure previously discovered by SAO scientists. This discovery has captured the interest of scientists and laypeople alike, as witnessed, by coverage in Science magazine, Time, Life, the New York Times, the Washington Post, and all the major television networks.

To take the next step out--to discover what larger-scale structures exist--requires not only a large telescope with a very wide field of view but a very sophisticated instrument to gather and analyze the light from many distant galaxies at once. The converted MMT will collect two and one-half times as much light as the present MMT and, more important, will be able to view more than 100 times as much of the sky at one time.

The advantages of this increased capability can only be achieved by using a very sophisticated spectrograph in conjunction with the converted telescope. By using "high-tech" optical fibers, this spectrograph will make possible the simultaneous analysis of the light from more than 100 galaxies. This greatly enhanced data rate is necessary if SAO scientists are to make substantial progress in seeking the largest-scale structures in the universe. Such discoveries can only be made once. The large-scale structure of the universe is so fundamental that it will undoubtedly be described in the textbooks of schoolchildren of the future.

The converted MMT should be available for initial operation by the end of 1994. At that time, it should be the world's second largest telescope. To use the converted MMT upon completion to determine the largest-scale structures, SAO must start now to build the needed sophisticated spectrograph and its associated control instruments and software. In the past months, SAO scientists have developed the preliminary design of this instrument, but construction needs to start soon in order to have a reliable instrument available for use by mid-FY 1995.

MUSEUMS

OFFICE OF THE ASSISTANT SECRETARY FOR MUSEUMS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	23	1,305	6	439	-	312	1	113	-	14
FY 1991 Estimate	29	1,731	6	519	-	8	-	107	-	-
FY 1992 Estimate	31	1,940	8	582	-	1	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	29	2	31
11 Personnel Compensation.....	1,008	151	1,159
12 Personnel Benefits.....	217	44	261
21 Travel.....	118	5	123
22 Transportation of Things.....	1	0	1
23 Rent, Communications & Utilities.....	26	0	26
24 Printing & Reproduction.....	56	0	56
25 Other Services.....	180	0	180
26 Supplies & Materials.....	43	4	47
31 Equipment.....	82	5	87
Total	<u>1,731</u>	<u>209</u>	<u>1,940</u>

Analysis of Increase

Necessary Pay.....	109
Program Funds.....	100

ABSTRACT - The Office of the Assistant Secretary for Museums (OASM) offers oversight to 12 museums and six major bureaus. It manages essential museum functions, including collections management, exhibitions, education, public orientation, and operations. OASM acts as a liaison with other museums and public institutions worldwide to fulfill the Smithsonian's obligation as the Nation's museum. This role affords OASM the unique opportunities to coordinate training, exhibitions, and collections. This line-item includes the Office of Museum Programs, which provides training and research services to

the museum profession worldwide, and the Office of the Registrar, which develops, oversees, and coordinates Smithsonian collections management policies.

For FY 1992, the Office of the Assistant Secretary for Museums requests an increase of 2 workyears and \$100,000 to provide to SI buildings and programs accessibility for staff and visitors with disabilities. The Institution requires \$109,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - I. Office of the Assistant Secretary for Museums - OASM works closely with museum staff, educators, and specialized committees to improve programs related to reaching broader audiences; participates in planning new museum initiatives; and encourages the development of new techniques in museum administration and practices for embedding multi-cultural programming within the Smithsonian Institution.

African-American Institutional Study Program - During FY 1990, the Office of the Assistant Secretary for Museums organized and staffed a broadly based committee to advise the Institution on the feasibility of establishing a separate African-American exhibition, collection, and research center. OASM works with a variety of African-American organizations, and the Program is exploring ways to highlight the collection-building and curatorial needs of African-American studies, including consideration of a dedicated presence within the Smithsonian museums.

Smithsonian Special Exhibition Fund Program - In 1984, the Board of Regents established a Special Exhibition Fund to support exhibitions resulting from scholarly research in various scientific, humanistic, aesthetic, technical, or interdisciplinary fields represented throughout the Institution. The Fund supplements Federal appropriations that have become increasingly insufficient for permanent and temporary exhibitions. The Program encourages Smithsonian museums and bureaus to experiment with communication to the broadest range of visitors, including the handicapped and people of all ages as well as audiences with diverse educational, economic, ethnic, and social backgrounds.

Collections Acquisition Program - This program provides Institution-wide Trust funding for bureaus to acquire objects, art collections, and significant archival papers. These acquisitions symbolize diverse cultural perspectives that strengthen the Institution's efforts to exemplify underserved or underrepresented audiences in research and public programs throughout the Smithsonian.

II. Office of Museum Programs (OMP) - The Office of Museum Programs serves museums and communities nationally and internationally, providing training courses and reference services in contemporary museum practice. In FY 1990, a new curriculum, faculty, and teaching methods (tested in experimental programs) emphasized cultural patrimony and increased access to more diverse audiences. The national curriculum for FY 1991, with additional courses for Smithsonian staff, will communicate methods of collecting, research, interpretation, design, and management. Regional training programs and internships in museum studies will focus on native-American issues in museums, archives, libraries, and cultural centers.

OMP redirected staff to provide career outreach and internship placement programs for all Smithsonian museums. The Awards for Museum Leadership Program, for minority museum professionals, encourages multi-cultural leadership within the museum field. Besides workshops and seminars, the Office of Museum Programs coordinates professional resident study at the Smithsonian and international exchanges in museum theory and practice. The

Museum Reference Center is a unique library for research and reference in museum studies. The Center responds to thousands of inquiries, serving as a resource for the revised OMP curriculum.

III. Office of the Registrar (OR) - The Office of the Registrar permits diverse audiences access to the National Collections while designing systems to keep the collections safe. The National Collections, comprised of items such as a 396.3 carat Kunzite and South Sea pearl necklace, a daguerreotype of Henry Clay, a pair of red wolves, a SS-20 intermediate range ballistic missile, and theatrical costumes from "Chorus Line," reflect the diversity of American interests and include more than 137 million artifacts and specimens.

Researchers and the general public gain access to the National Collections through the Collections Information System (CIS). Automation of CIS is a multi-year, interbureau effort organized by OR. This effort identifies appropriate technology, training needs, and resources crucial for effective collections management.

OR designs inventory and internal control procedures to provide accountability for Smithsonian collections. The collections management policy, updated in 1990, places renewed focus on internal controls, collecting plans, managing collections information, balancing the goals of accessibility and accountability, and representation of cultural and biological diversity. The National Air and Space Museum (NASM) and the National Museum of American History (NMAH) are presently redrafting their individual policies with particular attention to collecting plans. The Registrar's Council, which includes staff from registration departments in all Smithsonian museums, offers essential training and opportunities for the exchange of information. Working through Smithsonian and external professional organizations, OR teaches museum colleagues the principles and techniques of collections management. As a leading participant in the International Council of Museums Documentation Committee, OR assists in mapping the development of collections automation systems worldwide.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, OASM requests an increase of 2 workyears and \$100,000 to provide accessibility to SI buildings and programs for staff and visitors with disabilities.

Accessibility for the Disabled (2 workyears and \$100,000) - The Smithsonian's Office of Inspector General has recommended that the coordination and administration of the Smithsonian's Accessibility Program transfer from the Office of Equal Opportunity to the Office of the Assistant Secretary for Museums. The Office of Inspector General also recommended adding a full-time accessibility program manager to the OASM staff. In addition to this position, OASM requests a position for an assistant to the program manager.

The manager and assistant will establish and coordinate programs that address current deficiencies in the Smithsonian's museums and the Zoo. They will also develop and implement Institution-wide policies that ensure comprehensive consideration of accessibility in all future building, exhibition, and program planning. In addition to necessary salaries and benefits (2 workyears and \$86,000), the requested funds will furnish an accessible office and provide necessary support.

The U.S. Government, in the 1973 Rehabilitation Act as amended in 1978, requires all Federal agencies to make their programs accessible to people with disabilities. With

transfer and expansion of the Smithsonian's Accessibility Program, OASM will assume oversight of museum accessibility requirements in programming, from design and construction of buildings and exhibition spaces to publications. Although an accessibility coordinator now serves each Smithsonian building, many of these individuals are not trained for their responsibilities. Renewed commitment through this central Accessibility Program will enable the Smithsonian to provide better services to visitors and staff alike.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of the Assistant Secretary for Museums: Unrestricted General and Special Purpose Funds - These funds support the salary, benefits, and expenses of the Assistant Secretary and five staff members of the Office of Institutional Studies, the only Institution-wide resource available for the scientific study of the Smithsonian's clientele (e.g., visitors, members, and donors). In addition, Special Purpose funds support the Collections Acquisition Program, which facilitates the Smithsonian's purchase of major acquisitions, and the Special Exhibition Fund, which provides partial funding through a competitive process for important and innovative exhibitions throughout the Institution. While the projected expenditures for these programs for FY 1991 and FY 1992 appear under this Office, the recipient organizations reflect the actual expenditures for FY 1990.

Restricted Funds - In FY 1989, the Office of the Assistant Secretary for Museums received grants from the Rockefeller Foundation and the Morris and Gwendolyn Cafritz Foundation. These grants were dedicated to the development of an Experimental Gallery, where new techniques can be tested for presenting information and objects to diverse audiences. In FY 1990, the Pew Foundation awarded funds to the Office of the Assistant Secretary for Museums to continue development of the Gallery.

II. Office of Museum Programs: Unrestricted General and Special Purpose Funds - The Office of Museum Programs receives an annual allotment that is awarded to minority professionals attending the OMP seminars for travel and subsistence expenses. In addition, OMP has two revolving Trust funds for training and for an audio-visual loan and sales program to accommodate fees and services.

III. Office of the Registrar: Unrestricted General and Special Purpose Funds - The Office of the Registrar receives an annual allotment to fund salary and support costs for the administrator of the Collections Information System.

NATIONAL MUSEUM OF NATURAL HISTORY/MUSEUM OF MAN

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	553	27,479	3	408	3	2,987	1	2,716	6	891
FY 1991 Estimate	614	30,784	4	378	-	775	-	10,191	18	853
FY 1992 Estimate	624	33,844	4	390	-	1,234	-	6,758	18	848

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	Base FY 1991	Proposed Adjustments	Est. FY 1992
FTE Allocation.....	614	10	624
11 Personnel Compensation.....	20,853	1,849	22,702
12 Personnel Benefits.....	3,774	426	4,200
21 Travel.....	510	50	560
22 Transportation of Things.....	40	5	45
23 Rent, Communications & Utilities.....	186	0	186
24 Printing & Reproduction.....	334	0	334
25 Other Services.....	3,526	688	4,214
26 Supplies & Materials.....	977	8	985
31 Equipment.....	582	32	614
Collections Acquisition.....	2	2	4
Total	<u>30,784</u>	<u>3,060</u>	<u>33,844</u>

Analysis of Increase

Necessary Pay.....	1,925
Program Funds.....	1,135

ABSTRACT - The National Museum of Natural History/Museum of Man (NMNH/MOM) is the largest research organization in the Smithsonian complex. Studies carried out by the Museum's staff, and by scientists worldwide using its collections, increase understanding of the diversity, abundance, and evolutionary relationships of plants and animals living

today and in earlier periods and shed light on the great physical changes that take place on this planet through time. Studies of different cultures enhance knowledge of cultural history and human adaptation to the environment, while research on human biological variation and evolution helps to uncover the history of humankind from paleolithic times to the present. Through its many exhibits, educational programs, and scholarly and popular publications, NMNH/MOM disseminates knowledge about the natural and cultural diversity of the world. The Museum recognizes that, with more than six million visitors each year, it has a unique opportunity and responsibility for improving scientific literacy, and it is committed to presenting the best of current scientific thinking in a stimulating learning environment. The Museum houses the world's largest and most valuable assemblage of natural history specimens and cultural artifacts. It acquires, preserves, cares for, studies, and interprets these vast collections and makes them accessible as an indispensable resource to the scientific community and the public.

For FY 1992, NMNH/MOM requests an increase of 10 workyears and \$1,135,000 for Human Ecological History research (3 workyears and \$335,000); the Collections Information System (7 workyears and \$400,000); and permanent exhibit hall renovations (\$400,000). The Institution requires \$1,925,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM:

Research - The National Museum of Natural History is by far the largest scientific research institute of the Smithsonian, with more than 200 active research projects throughout the world. Many of the projects emphasize research that will contribute to our understanding of global environmental change. However, because of continuing base erosion, the Museum has been unable to fill all authorized positions and has had to reduce non-salary support for research and other Museum operations to remain within appropriated funding levels. Since almost 70 percent of the total NMNH staff is assigned to perform research-related functions, the impact is greatest in this area. Current research initiatives include:

-- Scientists working on the Biological Dynamics of Forest Fragments Project study the changes that occur in Amazonian rain forest ecosystems of Brazil as human development encroaches. With Federal support received in FY 1991 and continued foundation support, they are now focusing on innovative forest conservation and regeneration research.

-- Museum anthropologists and paleobiologists involved in the Evolution of Terrestrial Ecosystems Program are conducting ground-breaking studies on the history of global ecological change. Among the goals are discovering the kinds of disruptions ecosystems have experienced throughout the Earth's history and whether the present impacts on ecosystems are extraordinary compared with events prior to the origin of humans.

-- Museum anthropologists are excavating a site at Olorgesailie, Kenya, that sheds light on one of the most interesting and least understood periods of human evolution, the mid-Pleistocene. The Museum team is in a vanguard of ecologically focused paleoanthropologists who excavate not just for bones but also to reconstruct the climate and biota of the ancient world in which early hominids lived.

Conferences and Workshops - Museum scientists played a major role in organizing and hosting the Sixth International Conference of the International Council for Archaeozoology, May 21-25, 1990, attended by more than 250 scientists from all over the world. Between

June 30 and July 7, 1990, 1,500 scientists, again from all over the world, attended the Fourth International Congress of Systematic and Evolutionary Biology (ICSEB), co-sponsored by NMNH, the Smithsonian Institution, and the University of Maryland. Fourteen Museum scientists presented a public symposium on the history of global change, March 29, 1990. Ongoing work is yielding critically important information on how previous episodes of global warming and cooling, extinction, and deforestation affected life on Earth long before human intervention.

Research Publications - The Museum staff produced more than 648 publications in FY 1989. One example from 1989-90 is the two-volume Manual of the Flowering Plants of Hawaii, a crucial work because fully one-third of the Hawaiian plants are rare and endangered. The senior author is a Museum botanist. In another example, a Museum geologist, who has studied iron meteorites collected in Antarctica, published a research paper in collaboration with a Danish metallurgist that clarified for the first time the electrochemical mechanism causing iron corrosion. The cold and aridity of the Antarctic climate slow down the process of corrosion and preserve metal meteorites for hundreds of thousands of years, making them ideal for this type of research.

Collections - The Museum contains more than 119 million specimens of plants, animals, fossils, rocks, minerals, and human cultural artifacts, and more than half a million more are added yearly. The collections provide fundamental documentation for the study of humankind and of the flora, fauna, and geology of our planet and outer space.

The Museum initiated a program to modernize its Collections Information System, a multi-year effort to upgrade information management capabilities for collections management and collections-based research. The focus in FY 1991 will be on defining an appropriate system architecture and building a prototype to evaluate the architecture choices. Within a new common architecture, the Museum can begin implementation of a loan and accession management module and planning for the integration of image data bases and geographical information systems.

The Museum has developed a detailed repatriation plan in response to the National Museum of the American Indian Act passed by Congress in November 1989, providing for the inventory, identification, and return of Indian human remains and Indian funerary objects.

Exhibitions - More than six million persons visited the Museum in 1990, making it the most heavily visited natural history museum in the world. Highlights of 1990 exhibit activities include:

-- "Life in the Ancient Seas," the first permanent exhibition focusing on prehistoric marine life ever constructed by a major U.S. museum, opened to critical acclaim in May. Showcasing more than 2,000 specimens and a spectacular mural (16 x 120 ft.) by the noted artist Ely Kish, this exhibition makes it possible for the public to learn about the great diversity of life forms that evolved in the ancient seas.

-- "Dinosaurs Alive and in Color," Dinamation's animated exhibition that has captivated the younger generation in museums around the world, opened at the Museum in April 1990. Attendance exceeded 600,000 for the nine-month period. At the same time, the Museum opened Jim Gary's whimsical "20th-Century Dinosaurs." Gary, an African-American sculptor, uses a welder's torch to transform parts of old automobiles into metallic, brightly colored creatures that resemble prehistoric beasts.

-- The Museum announced a \$6 million fund-raising campaign in January 1990 to support the construction of a new Geology, Gems, and Minerals Hall and expects to unveil the new hall in 1995. The Museum's current geology hall is so outdated that, for example, it fails to portray plate tectonics and continental drift, concepts that have revolutionized earth science. An innovative new design will integrate specimens and processes into a single dynamic educational experience.

Education - Relying heavily on nearly 300 volunteer docents, the Museum's Office of Education (OE) develops programs and instructional materials for schools, Museum visitors, and the general public. Nearly 38,000 students participated in special in-Museum school programs, while 7,900 children heard in-school presentations by Museum staff. Among the special activities in 1990 was a forum on "Shaping a New Environmental Agenda," co-sponsored by the Museum to mark the 20th anniversary of Earth Day. Distinguished speakers included Paul Ehrlich of Stanford University, John Holdren of the Resources Institute, and Thomas Lovejoy of the Smithsonian. Another special activity was the Natural Science Institute for Teachers of Minority Students, organized by the Museum and funded by the D.C. School System. Running for three weeks in July 1990, this science program for teachers of grades 4 through 12 featured activities aimed at learning how to "read" natural history objects.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, NMNH requests 10 workyears and \$1,135,000 for Human Ecological History research (3 workyears and \$335,000); the Collections Information System (7 workyears and \$400,000); and permanent exhibit hall renovations (\$400,000).

Human Ecological History (3 workyears and \$335,000) - Human modification of world ecosystems intensifies daily. These changes need to be analyzed in historical perspective, for human alteration of ecosystems is not new. In fact, human groups have been manipulating and changing plant and animal communities for thousands of years. Research on these long histories of expanding human alteration of ecosystems provides the essential developmental context for understanding present-day research on modern ecosystems.

The Human Ecological History research program focuses on the long history of human modification of ecosystems and human responses to changing environments. The objective is to document and understand major turning points in humankind's ability to change the Earth's environment, from human origins up through the agricultural revolution and the development of states. Collaborative field and laboratory projects worldwide are designed to establish the long-term pace of change in environments inhabited by humans. Research focuses on the resulting adaptation of early populations and the origins and intensification of agriculture, during which humans emerge as powerful agents of environmental change.

The requested funding will support three positions (3 workyears and \$131,000). A professional archeozoologist and a laboratory specialist will establish a permanent laboratory for analyzing archeological plant and animal remains. An educational specialist will coordinate the development of museum exhibits and data bases on human alteration of past environments. Funding will allow for collaborative field research in Africa, China, India, and South America and related shipping (\$55,000), fellowships and internships (\$75,000), field equipment (\$32,000), supplies and services (\$40,000), and collections acquisition (\$2,000).

The Human Ecological History Program directly addresses the U.S. Global Change Research Program objective of improving our understanding of the physical, biological, and social

processes that influence Earth system processes and trends on global and regional scales. It is designed to answer the fundamental questions of how and why humans and human systems influence physical and biological systems and to characterize the relevant processes of change in human systems over the greatest possible periods of time and spatial dimensions.

Collections Information System (7 workyears and \$400,000) - The Museum administers the National Collections and associated data for the benefit of the public and researchers worldwide, averaging more than 300,000 artifact and specimen loans annually. Present NMNH collections provide the largest specimen data base extant for global change studies. The Collections Information System modernization effort will result in a comprehensive data base of information vital to the understanding of biodiversity and global environmental change. The System will also provide an improved specimen transaction management program capable of meeting the increasing number of requests for loans of items from the National Collections.

This request for increase has two parts: data management and automated system development. Both are essential to making the data base accessible to a broad constituency. Funding will enable NMNH to continue the multi-year effort to upgrade the Museum's collections information management capabilities. Specifically, funds will allow development of a system to manage collection transactions such as loans, exchanges, and accessions. The Museum will hire a data base administrator (1 workyear and \$57,000) and contract for systems development (\$181,000). The system will support automated generation of loan invoices and other management documents as required by policy. Most of these activities currently use manual systems. In addition, increased data management support (6 workyears and \$162,000) will enable the Museum to automate the substantial backlog of collection data now in manual form.

The collections of the National Museum of Natural History represent one of the largest, most valuable educational and research resources in the world. Modernization of the Collections Information System will make this resource accessible to a broad scientific community for critical diversity and environmental change studies. At the same time, it will enable the Museum to maintain the necessary level of accountability for the National Collections.

Permanent Exhibit Hall Renovations (\$400,000) - NMNH has 30 permanent exhibit halls comprising more than 200,000 square feet of exhibit space. Seventy percent of these halls are more than 20 years old and present outdated cultural interpretation and scientific information to the public. The Museum is committed to systematically re-creating its exhibits, being a leader among U.S. and world museums, actively participating in the serious challenges of improving science education and encouraging multi-cultural respect and understanding.

An increase of \$400,000 in the Museum's exhibition base will enable NMNH to continue work on "The Fourth Generation of Exhibits: Building for the 21st Century," a long-term renovation plan for its 30 permanent halls. Existing Federal resources will not permit timely renovation of major halls. Ideally, renovation should occur at an average rate of one and one-half halls per year, at an estimated mean cost of \$4.0 million per hall. Including the new funding approved by Congress for FY 1991, the Museum's current base for permanent exhibitions is \$3 million, of which \$1.7 million supports the salary costs of exhibits staff. Scheduling for new exhibit construction is, whenever possible, in concert with other Museum repair and restoration projects, major capital renewal, and Museum Support Center move activities. Including the new funding approved by Congress for 1991, the Museum

asks that the requested funds be provided as a no-year appropriation to allow for the large, multi-year, and multi-fund contracts required for major exhibit hall design and construction.

During FY 1992, this increase will support the continuing development of a new Native American Hall, the rebuilding of the Insect Zoo, and the beginning of a new initiative in interpreting global change issues. It will also complement the private funds raised to build a new Geology, Gems, and Minerals Hall. Research and development for a new Human Origins Hall will also continue.

The ultimate goal is to renovate and upgrade all the exhibit halls in the Natural History Building. The modernized halls will display to millions of visitors landscapes and seascapes, living and extinct organisms, and the human experience on the Earth. The Museum strives to complete its hall renovation in order that visitors might better understand the beauties and complexities of our living planet and the human impact on it. Science education, preservation of the natural environment, and cross-cultural and interracial respect and understanding--all critical issues facing U.S. society over the next decade--are at the center of the permanent hall exhibition renovation project.

The National Museum of Natural History must be a leader in defining the unique educational role museums can play in public understanding of these issues, both for Museum visitors and for the national network of museums that benefit from NMNH's experimental and novel interpretive models. The Museum must lead by example, creating exhibits that apply the most current scholarship and the most engaging educational approaches and technologies to communicate the importance of respecting and preserving the living world and its natural and cultural diversity.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - The Museum derives funds from a variety of sources, including the Museum's share of net proceeds of the museum shop and food concessions. During FY 1990, allotments provided for the costs of the Museum director, three staff members, events related to new exhibit openings, and the recruitment of candidate members for the Museum's new advisory National Council.

NMNH benefits from the Institution's many awards programs, which support research, education, and exhibit projects. Funding for FY 1990 supported the "Natural History Video Update," production of the Heliconia Guide, the international symposium on "Disease and Demography in the Americas," preparation of materials about Southeast Asia in collaboration with Southeast Asian community leaders, the Summer Science Internship Program, and the public symposium "Earth Day 1990: Shaping a New Environmental Agenda."

Restricted Funds - The Museum receives support for specific programs and projects through endowments, donations, gifts, grants, and contracts from individuals, foundations, and corporations. In combination with the generosity of private individuals, these resources allow for the pursuit of many long- and short-term research projects and exhibits. In 1990 grants were provided by World Wildlife Fund, the Pew Charitable Trusts, and the Andrew W. Mellon Foundation to support the Biological Dynamics of Forest Fragments Project, a study of the ecology of habitat fragmentation in Brazil. Xerox has provided major support for the NMNH Columbus Quincentenary exhibit, "Seeds of Change."

During FY 1990, Museum staff members conducted a variety of projects with restricted funds, such as research in the Bible lands and on the cultures of the Southwest Bantu people

of Angola, Botswana, and Namibia; ethnological research among the Canela Indians of Brazil; study of the plate-tectonic origins of western North America; and study of collections of endangered archeological and paleontological materials worldwide.

NMNH/MOM manages the Smithsonian Marine Research Station at Link Port (SMSLP), Fort Pierce, Florida. Hunterdon Endowment funds are dedicated to the basic operating support of this oceanographic research facility for use by Smithsonian visiting scientists as well as numerous visiting investigators, both national and international. Research focuses on the life history, systematics, and ecology of a wide spectrum of plant and animal marine life. Seward Johnson Endowment funds provide for the support of the Johnson-Sea-Link submersible owned by the Harbor Branch Oceanographic Institution (HBOI), the host facility.

NMNH/MOM is proceeding with a fund-raising strategy to support construction of a laboratory and residential facilities that will serve the mission of SMSLP and its research initiatives. The favorable location of SMSLP, along with the signing of a long-term lease agreement between the Smithsonian and HBOI, have made this major step forward possible.

Government Grants and Contracts - These funds are provided by various government agencies and departments for special projects conducted at the Museum to take advantage of its unique scientific expertise in systematics. Examples of this type of activity include collections management of biological specimens for the Mineral Management Service's Outer Continental Shelf Environmental Studies contract; the study of neoplasms and related disorders in invertebrates and ectothermic vertebrate animals for the National Cancer Institute; and analysis of polar biological materials and cooperative systematics studies by the Museum's Smithsonian Oceanographic Sorting Center (SOSC) for the National Science Foundation.

NATIONAL AIR AND SPACE MUSEUM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	242	10,100	3	307	47	4,764	1	1,158	1	387
FY 1991 Estimate	229	10,833	3	249	43	4,182	2	4,937	1	379
FY 1992 Estimate	231	11,650	3	201	43	4,121	2	2,734	1	307

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	229	2	231
11 Personnel Compensation.....	6,762	443	7,205
12 Personnel Benefits.....	2,629	256	2,885
21 Travel.....	69	0	69
22 Transportation of Things.....	27	0	27
23 Rent, Communications & Utilities.....	49	0	49
24 Printing & Reproduction.....	82	0	82
25 Other Services.....	537	15	552
26 Supplies & Materials.....	385	103	488
31 Equipment.....	293	0	293
Total	<u>10,833</u>	<u>817</u>	<u>11,650</u>

Analysis of Increase

Necessary Pay.....	617
Program Funds.....	200

ABSTRACT - The National Air and Space Museum (NASM) is an international repository for artifacts and documentation related to the development of aviation, space flight, and space science. Through its exhibitions, research, collections management, and education programs, the Museum serves a wide public and scholarly community interested in the history and technological achievements of aviation and space flight. In addition to its Mall

location, NASM maintains a facility for the preservation, restoration, and exhibition of artifacts at the Paul E. Garber Preservation, Restoration, and Storage Facility in Suitland, Maryland. The Institution is seeking authorization for planning and design of an extension facility at Dulles International Airport for storage and exhibition of its largest aircraft and spacecraft.

For FY 1992, the National Air and Space Museum requests 2 workyears and \$200,000 for exhibitions and staff. The Institution requires \$617,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - NASM continues to strengthen its role as a national resource for public and scholarly interest in the history of air and space technology. Ongoing programs in historical research, collections management, preservation, and restoration of artifacts are central to the Museum's curatorial efforts. Active scientific research programs, aimed at understanding astrophysics and terrestrial and planetary geology are important endeavors of the Museum. The exhibition program uses state-of-the-art techniques and equipment to convey the excitement of the subject matter to the visitor. NASM devotes considerable attention to education and outreach activities, offering workshops, lectures, films, planetarium presentations, docent-led tours, and written materials to schools and visitors.

Research - Research continues to be the foundation of the Museum's efforts as a primary resource center for the science and technology of aviation, space, and geophysical science. Research by the Museum staff encompasses the history of aeronautics and space science and exploration; studies of contemporary developments in these fields; studies in infrared astronomy; and scientific research in geology and comparative planetology, using space probe images and other data in astrophysics. Historic preservation of aircraft and spacecraft and the storage and retrieval of archival and photographic information are two applied research and development programs continuing at the Museum.

The Center for Earth and Planetary Studies is a repository for remote sensing data, allowing researchers access to the collections of images of the planets taken by National Aeronautics and Space Administration (NASA) space probes. Researchers from the Smithsonian and other organizations make extensive use of this facility.

NASM has developed a new generation of free-standing metal mesh reflectors for the Infrared Space Observatory (ISO) using new microelectronic fabrication techniques. These meshes exhibit unparalleled geometric precision with line widths as small as 2.5 microns. Spectrometers on the ISO and elsewhere, equipped with these advanced reflectors, will achieve new levels of sensitivity, making fainter astronomical objects accessible to spectroscopic study at infrared wavelengths.

Exhibitions - In FY 1990, the Museum opened an exhibition commemorating the centennial of Igor Sikorsky's birth, remodeled the "Sea-Air Operations" gallery with a special tribute to the USS Enterprise, and opened a new exhibit centering around the fully restored Grumman Goose. The exchange of a Pershing-II missile for a Soviet SS-20 missile forms the basis of a new exhibit displaying both missiles and commemorating the Intermediate Nuclear Forces Treaty (INF).

In FY 1991, a major World War I gallery will open, emphasizing the first major use of aircraft as weapons of war. This gallery will highlight the grim realities of aerial combat, in contrast to the romanticized myth of "knights of the air." For FY 1992, the

Museum is planning an exhibition commemorating the Columbus Quincentenary, entitled "Where Next, Columbus?" This exhibition will examine prospects for discovering other "new worlds" in space during the next 500 years of exploration.

A new IMAX film, Blue Planet, premiered in early FY 1991. Using footage shot by the astronauts on recent shuttle missions, it explains the nature and vulnerability of global environmental systems. The Museum will also co-produce two other IMAX films. One film will highlight international achievements in space exploration, and the second will focus on aircraft carrier aviation and technology.

Collections Development - Acquisitions for FY 1990 included two Pershing-II missiles, one of which was traded to the Soviet Union for an SS-20 missile. The Museum also received an SR-71 on loan from the U.S. Air Force. Known as the Blackbird, this is the world's fastest aircraft, able to cruise at three times the speed of sound.

Collections Preservation and Restoration - During FY 1990, NASM continued its restoration of the Enola Gay, the B-29 bomber, treating the rear fuselage and two of the four engines. Work continues on two other aircraft from World War II: the British Hawker-Hurricane and the Japanese Aichi Seran. Restoration specialists refurbished the Hughes Racer for exhibition and restored the World War I Voisin night bomber, several engines, and an FE-8 aircraft for inclusion in the planned gallery on World War I. Restoration of the Enola Gay, the Hawker-Hurricane, and the Aichi Seran will continue through FY 1991 and FY 1992. A major focus of the restoration effort will be the completion of the Enola Gay by 1995.

Publications - In FY 1990, NASM staff members published The Space Telescope: A Study of NASA, Science, Technology, and Politics by Robert W. Smith; The First Golden Age of Rocketry: Congreve and Hale Rockets of the Nineteenth Century by Frank Winter; and Aviation Careers of Igor Sikorsky by Dorothy Cochrane, Von Hardesty, and Russell Lee; and Directory of Sources for Air and Space History was edited by Martin Collins. Publications in FY 1991 include Space Technology and Planetary Astronomy by Joseph Tatarewicz; U.S. Women in Aviation, 1940-1985 by Deborah Douglas; Weather from Above: America's Meteorological Satellites by Janice Hill; Boeing 247: The First Modern Airliner by Frank R. van der Linden; and A Spacefaring Nation, edited by Martin Collins and Sylvia Fries. In addition, NASM continues its Smithsonian History of Aviation series with the publication in FY 1990 of Bonfires to Beacons by Nick A. Komons, and Visions of a Flying Machine: The Wright Brothers and the Process of Invention by Peter Jakab. Three additions to this series in FY 1991 will be Airways by Henry Ladd Smith, Airways Abroad by Henry Ladd Smith, and Chkalov by G. Baidukov.

Public Education and Orientation - The Museum's educational programs continue to serve an expanded national and international audience. Outreach initiatives include the City Lights Program, which works with young people ages 14 to 19; Student Tutorial and Recreational Support, with participation by 25 D.C. area schools; and "Say Yes to a Youngster's Future," designed to assist urban communities in establishing family learning centers to meet local needs. The Museum offers workshops, career-day programs, and on-site presentations, as well as free reading materials. NASM and the Aero Club of Washington have joined in an annual summer internship program to assist Washington metropolitan-area youths develop an interest in aviation and space flight careers.

A highlight of FY 1990 was the International Conference on Aerospace History, which explored topics such as "Manned vs. Unmanned Flight," "The Aviator and Astronaut as Icon,"

and "Problems in Writing the History of Technology." A series of lectures and panel discussions on "The Legacy of Strategic Bombing" examined the origins, practices, and consequences of strategic bombing, from its earliest premonitions before World War I through its most intense employment during World War II and its influence on the development of today's strategic nuclear arsenals.

In September 1990, the Museum hosted the Tenth International Planetarium Directors' Congress. Planetarium directors from around the world met in Washington and also visited planetaria in New York, Philadelphia, and Richmond.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the National Air and Space Museum requests 2 workyears and \$200,000 for exhibitions and staff.

Exhibitions and Staff (2 workyears and \$200,000) - The Museum's long-range exhibition program emphasizes the development of exhibits that will encourage visitors to think critically and to understand social, political, and economic contexts that shaped, and were in turn influenced by, aviation and space technology.

The first exhibition in the Museum's new rotating gallery will focus on the helicopter in Vietnam. Examining the many roles of vertical flight, in both combat and other situations, this exhibit will explore how this new technology influenced the planning and conduct of the American military effort in Southeast Asia. Through the use of interactive displays and live demonstrations, the "Principles of Flight" exhibition aims to give the visitor a genuine understanding of the basic physical principles that allow aircraft and spacecraft to fly. To help develop and strengthen the scientific content of "Principles of Flight" and other scientific exhibitions, NASM requires the addition of a staff scientist. To serve the numerous exhibition activities around the Museum, including continual updating of labels, an additional typesetter position and equipment are also essential.

In addition to a staff scientist for scientific exhibitions (1 workyear and \$55,000), a typesetter (1 workyear and \$27,000), and support costs (\$20,000), the requested increase will fund the installation of "Principles of Flight" (\$98,000) and future exhibitions.

These additional resources will dramatically enhance the quality and depth of content of the exhibitions at the Museum. Visitors deserve exhibits that encourage critical thinking and an understanding of the influences that shaped aviation and space technology.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds come from a variety of sources, including the Museum's share of net proceeds from the museum shops and restaurants, a share of the net proceeds resulting from bureau activities (such as the theater and planetarium), and allotments. In addition to meeting expenses of the theater and planetarium, these funds finance fellowships, research chairs, guest lecturers, symposia, special events, and salary and support costs of the Director. A portion of the proceeds from the theater and planetarium provide support for the production of new IMAX films, including Blue Planet and To the Stars, as well as other planetarium shows and Museum programs. Blue Planet, which premiered in late 1990, shows the Earth from space and the effects of both natural and human forces on global environmental systems. The Museum also receives corporate support for these new films. In March 1989, Calling All Stars premiered in the Albert Einstein Planetarium. The show examines the scientific basis

of the search for intelligent life in the universe. The Lindbergh Chair of Aerospace History and the International Fellowship provide continuing support for distinguished scholars to study at the Museum. Other fellowship programs include Guggenheim, Verville, and Martin Marietta internships, which support predoctoral and postdoctoral students, minority students, and distinguished scholars in aviation and space science.

Restricted Funds - Funds provided are in the form of restricted endowments, that specify the use of donations or bequests, and of gifts and foundation grants by individuals, organizations, or corporations for specific purposes. Examples of these funds are the Ramsey Endowment for research relating to naval flight history, the Guggenheim Endowment for lectures and stipends, and the NASM Education Fund. The Sloan Foundation provided grants beginning in FY 1987 for a four-year video history program as well as a workshop, video disc, and curriculum package on aviation history. NASM received numerous corporate donations, both monetary and in-kind, to support the "Beyond the Limits: Flight Enters the Computer Age," "Grumman Goose," "Sikorsky," "Modern Turbine Engines," "Sea-Air Operations" and "WWI" exhibitions in FY 1989 and FY 1990. Additional support was received for the Planetarium Directors' Congress, Embry Riddle Internship Program, Public Science Demonstrations, Exploring Space Lecture Series, General Electric Aviation Lecture Series, laboratory equipment, and various programs and projects throughout the Museum in FY 1989 and FY 1990.

Federal Grants and Contracts - Various agencies and departments provide funds for special projects conducted at NASM because of the Museum's expertise in a given area. Continued funding from the National Aeronautics and Space Administration grant program supports research activity in planetary geology by the Museum's Center for Earth and Planetary Studies, specifically for photogeologic investigation of planetary tectonic features, the structural geology of the Basalt Plains of Washington State, geographic mapping of Mars, and the Planetary Image Facility. In FY 1990, NASA partially funded a new research project to study forest damage in Czechoslovakia due to the effects of air pollution. This is one of the Center's research projects related to the Institution's global change research program. Partial funding from NASA also supported the Space Telescope Historical project, a joint effort of NASM and Johns Hopkins University, and resulted in a book published in October 1989. The Laboratory for Astrophysics has received funding from NASA for continued research in the field of infrared astronomy. The Education Resource Center receives support from NASA and other agencies.

NATIONAL MUSEUM OF AMERICAN HISTORY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	338	15,160	2	146	9	2,014	2	4,261	-	-
FY 1991 Estimate	353	16,720	1	131	-	952	2	1,387	-	-
FY 1992 Estimate	356	17,790	1	131	-	931	2	1,394	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	Base FY 1991	Proposed Adjustments	Est. FY 1992
FTE Allocation.....	353	3	356
11 Personnel Compensation.....	12,040	849	12,889
12 Personnel Benefits.....	2,414	215	2,629
21 Travel.....	160	0	160
22 Transportation of Things.....	168	0	168
23 Rent, Communications & Utilities.....	69	0	69
24 Printing & Reproduction.....	119	0	119
25 Other Services.....	1,062	0	1,062
26 Supplies & Materials.....	418	6	424
31 Equipment.....	205	0	205
Collections Acquisition.....	65	0	65
Total	16,720	1,070	17,790

Analysis of Increase

Necessary Pay.....	970
Program Funds.....	100

ABSTRACT - The National Museum of American History (NMAH) is an educational institution dedicated to understanding the experiences and aspirations of all the American people. Through collections, research and publications, exhibitions, and an array of public programs including lectures, symposia, concerts, tours, and demonstrations, with special emphasis on musical performance, the Museum preserves and interprets the Nation's heritage for scholarly and general audiences. Its collections of artifacts, numbering in

the millions, together with its extensive archival holdings, represent the social, cultural, scientific, and technological development of the United States and constitute one of the most comprehensive history collections in the world, including the National Philatelic and National Numismatic Collections. In all of its endeavors, the Museum makes a special effort to recognize the diverse aspects of American culture and to present that diverse culture to audiences on the Mall and elsewhere in the United States.

For FY 1992, the National Museum of American History requests an increase of 3 workyears and \$100,000 to reinforce the Museum's long-range Exhibition Reinstallation Program. The Institution requires \$970,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The National Museum of American History investigates, collects, preserves, interprets, and honors the heritage of the American people through original research, exhibitions, publications, and public programs designed to increase the understanding of American history.

Collections Acquisition - In FY 1990, the Museum received many significant objects through purchases and gifts. Among those collected by the Department of the History of Science and Technology was the Came Collection of Scientific Apparatus, a premier collection of material used by a scientific popularizer in upstate New York in the 1840s and 1850s. The Division of Transportation had two outstanding accessions: the "Sun Racer" donated by Robert Stempel of General Motors, which won the world's first solar-powered auto race, and the 1989 World Champion "Funny Car" dragster donated by owner-driver Bruce Larson. In the Department of Social and Cultural History, NMAH received the inaugural gown worn by First Lady Barbara Bush in 1989; a collection of black land-grant college photographs that document the development and continuing role of these educational institutions; and the Scott Molloy Labor History Collection, one of the largest and most diverse collections in this country of artifacts relating to the history of workers and their organizations.

Collections Management - In response to audit findings, NMAH designed a comprehensive Master Plan to address cataloguing and registration backlogs. As part of this plan, NMAH has developed a Local Collections Information System (LCIS) that is portable for off-site use and collections moves. NMAH also made significant progress on a structured information plan for the Smithsonian Collection Information System (CIS), a comprehensive data base for collections research and management.

The Department of Conservation completed preparations for construction of a new textiles, costumes, and fragile organics laboratory, scheduled to begin in February 1991. While continuing its normal support to exhibitions and renovation activities, the Department reduced conservation backlogs by rehousing more than 7,700 documents, maps, and World War II posters. The current backlog is approximately 400,000 objects, which presents accountability problems.

On the Mall, the Museum completed one-third of its Master Coordination Plan to renovate the building and reinstall exhibition spaces. This work involves removing and relocating more than 70,000 objects from storage and display. The Museum occupies 36,000 square feet at Fullerton Industrial Park in Springfield, Virginia, and needs more space to complete the requirements of the Master Plan. This space provides critical support for renovations and reinstallations at NMAH. The Museum also completed a new Research Center, which includes a renovated Dibner Library, expanded library storage, and study spaces for

Smithsonian Fellows. To make way for the Smithsonian's new Experimental Gallery in the Arts and Industries Building, the south quadrant of the "1876 Centennial Exhibition" closed, and NMAH returned objects to lenders or sent them to off-site storage. The departments of Domestic Life, Textiles, and Medical Sciences are preparing to move objects to the Museum Support Center in FY 1991.

Exhibitions - Seventeen exhibitions opened in FY 1990. A major permanent reinstallation was "The Information Age: People, Information and Technology," the Museum's largest and most interactive exhibition to date. The show depicts how, over the last 150 years, information technology has changed American society--the way Americans live and interact and the social advantages and costs of these changes. Other notable exhibits appealing to diverse audiences included "Go Forth and Serve: Black Land Grant Colleges Entering Their Second Century," a commemorative exhibition focusing on the origins of the Morrill Land Grant Act of 1890; "VSJ-Varrio San Jose: Scenes from Urban Chicano Experience," a documentary photography exhibit of images produced by Miguel Gandert that depicts contemporary Hispanic life in Albuquerque and the villages of northern New Mexico; "From Parlor to Politics: Women and Reform in America from 1890 to 1925," which examines how the rhetoric and imagery of the feminine gender role were used to foster women's participation in major social and political restructuring of American society during the Progressive Era; and "Contrasts: 40 Years of Change and Continuity in Puerto Rico," a selection of photographs by Jack Delano documenting social and cultural change in Puerto Rico.

Highlights for FY 1991 include the temporary exhibition, "Children in American Culture, 1945-1970," which uses characters of the comic strip "Peanuts" to examine the experiences, concerns, and reactions of children living through post-World War II America. The exhibition "After the Revolution: Everyday Life in America, 1780-1800" will reopen in February 1991 after extensive renovation, including a new Hands-on History Room and performance space, an upgraded introductory theater, a more inviting entrance, and several reinterpreted sections. In FY 1992, two new permanent exhibitions will open. "First Ladies: The Women and the Image" is the replacement for the former First Ladies Hall. While still presenting the Museum's First Ladies' gowns, the exhibit will detail more about the First Ladies themselves and their public lives. In commemoration of the Columbus Quincentenary, the Museum will open a permanent exhibition entitled "American Encounters." Spanning several centuries, the exhibit examines the continuing encounters among Indian, Hispanic, and Anglo-American cultures in New Mexico. It will show the various strategies Indians and Hispanics have devised to preserve the essences of their own cultures as they have been subjected to the demands of increasingly powerful alien cultures.

Research - Significant research and publications accompanied the following exhibitions: "Men and Women: A History of Costume, Gender and Power"; "From Parlor to Politics: Women and Reform in America from 1890 to 1925"; "Go Forth and Serve: Black Land Grant Colleges Entering Their Second Century"; "Workers and Managers: The Crises of Control in American Management"; "A History of Television"; and "Nature Printing." Research also produced the following books of exceptional merit: Greek Revival in America; Orders from France: The Americans and the French in a Revolutionary World; Street Railways and the Growth of Los Angeles; Roosevelt and Churchill: Their Secret Wartime Correspondence; Thomas Jefferson: Statesman of Science; The Bishop's Boys: A Life of Orville and Wilbur Wright; Decorative Arts and Household Furnishings in America 1650-1920: An Annotated Bibliography; and a 12-volume Smithsonian Guide to Historic America. Valuable research continues on Thomas Edison's Menlo Park Laboratory, on subjects relating to a new

timekeeping hall, and on the issues surrounding museums and the ethics of underwater treasure hunting.

Public Programs - In FY 1990, the Museum developed and presented a wide variety of activities and publications aimed at enabling NMAH audiences to achieve a better understanding of the Museum's exhibitions and the diversity of cultures they represent. The Museum held two nationally significant conferences, one on African-American dance traditions and one on jazz performance in museums. It produced 20 free jazz concerts as well as programs honoring Martin Luther King, Jr., African-American women in the labor movement, and African-American classical composers. The Museum produced an additional 72 free concerts of American music, a two-day symposium for teachers of American storytelling traditions, and a month-long series of events relating to the work of the American folklorist Cecil Sharp. Educational efforts included expanding the popular Hands-on History Room, a project to be completed in FY 1991, and collaboration with the National Zoo on a project to increase the use of interpreters at both institutions.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the Museum of American History requests an increase of 3 workyears and \$100,000 to reinforce the Museum's long-range Exhibition Reinstallation Program.

Exhibition Reinstallation Program (3 workyears and \$100,000) - In FY 1982, the Museum of American History initiated a long-term program to reinstall its major permanent exhibitions. This program, which has continued to be the highest priority of the Museum, will allow NMAH to complete the reinterpretation of its permanent exhibit halls. These halls are now 26 years old and occupy roughly two-thirds, or 200,000 square feet, of the Museum's exhibition space. The Museum is simultaneously undergoing extensive, carefully coordinated renovations to the American History Building.

NMAH staff have reinstalled six major exhibition halls since the beginning of the program: "After the Revolution: Everyday Life in America, 1780-1800"; "Engines of Change: The American Industrial Revolution, 1790-1860"; "A More Perfect Union: Japanese Americans and the United States Constitution"; "A Material World"; "The Ceremonial Court"; and "The Information Age: People, Information and Technology." Future reinstallations will include "First Ladies: The Women and the Image," the new First Ladies Hall; "American Encounters," the Museum's commemoration of the Columbus Quincentenary; "Great Expectations: Everyday Life in 19th Century America," which will focus on native Americans and the westward migration, immigration, and the emergence of an urban, industrial nation; "Science in America"; and "Clocks, Capitalism and Culture," a look at how the concept of time affects daily life.

The Museum needs \$100,000 to manage this program of exhibition reinstallation successfully, especially if it is to minimize disruption to the public and the collections during reinstallation. The request will support one exhibits specialist and two exhibits technicians (3 workyears and \$94,000) to maintain the appearance of exhibit halls affected by nearby construction and provide funds (\$6,000) for maintenance supplies. With funding provided, the Museum will continue to disseminate the ideas and aspirations of the American people through exhibitions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - This funding is from various sources, including the Museum's share of museum shop and cafeteria sales, publication royalties,

and various annual allotments. In FY 1991, these funds will support the salary and benefit costs for the position of museum director and the Museum's unique chamber music performance and recordings program.

Restricted Funds - The principal sources of income for these funds are individual or corporate gifts and foundation grants provided for specific purposes. In FY 1989 and FY 1990, NMAH received gifts and grants from the following groups to support the ambitious new interactive exhibit "The Information Age": Ameritech Foundation, AT&T, Bell Atlantic Group, BellSouth Corporation, Computerworld Information Technology Awards Foundation, Hewlett-Packard, NCR Foundation, Nynex Service Company, Pacific Telesis Foundation, Southwestern Bell Telephone, Union Pacific Foundation, and US West.

The Museum also received the following gifts and grants for exhibits produced in 1989 and 1990: a generous gift from United Media to support an exhibition on "Children and the Cold War"; from the American Association of Retired Persons for a photography exhibit entitled "The Seasoned Eye," from the American Federation of Labor, the Gap Foundation, W. J. Usery, numerous union organizations, and private individuals to produce an exhibit on the history of American labor entitled "Workers and Managers"; from the Children's Television Workshop to support an exhibit about the program "Sesame Street"; from the Foundation for Creative America for an exhibit on patent models; from the Association of Research Directors to support an exhibit on "Black Land Grant Colleges"; from the USA Airborne 50th Anniversary Foundation, Inc. for an exhibit entitled "Airborne! The First 50 Years"; from TAPPI for an exhibition on American papermaking; and from Yamaha to fund an exhibit on the history of player pianos. The Museum also opened an exhibit on women in the Progressive Era funded by the Rockefeller Foundation and others.

Gifts and pledges have been received for the following upcoming exhibits. Generous gifts were received from the Friends of the First Ladies, Fujisankei, and Les Dames of Los Angeles to be used for the restoration of the First Ladies' gowns and the reinterpretation and reinstallation of that exhibit, scheduled for December 1991. The Swedish Tobacco Company has given support to an exhibit on "Everyday Life in 19th Century America," opening in March 1993. The American Chemical Society has given a major grant for an exhibit on "Science in America," opening in November 1993, and another five-year grant has been received from OxyChem to sponsor the outreach programs connected with "Science in America."

Other generous gifts have also been received to support a variety of Museum programs. Projects on American advertising were supported by Backer Spielvogel Bates, Inc., Crain Communications, Federal Express, and Nike. The AKC Fund, Inc. and the Mellon Foundation gave support to music programs in the Museum. Unrestricted gifts were received from ADAPSO, American Pharmaceutical Association, and Pepsi Cola for ongoing programs of the Museum.

NATIONAL MUSEUM OF THE AMERICAN INDIAN

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	13	2,841	-	-	-	2	-	-	-	-
FY 1991 Estimate	101 91	7,142	-	-	-	-	-	-	-	-
FY 1992 Estimate	165 155	13,962	1	150	-	-	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	101 91	64	165 155
11 Personnel Compensation.....	2,602	2,193	4,795
12 Personnel Benefits.....	626	672	1,298
21 Travel.....	475	195	670
22 Transportation of Things.....	70	20	90
23 Rent, Communications & Utilities.....	210	422	632
24 Printing & Reproduction.....	30	110	140
25 Other Services.....	2,254	1,237	3,491
26 Supplies & Materials.....	425	138	563
31 Equipment.....	450	1,833	2,283
Total	<u>7,142</u>	<u>6,820</u>	<u>13,962</u>

Analysis of Increase

Necessary Pay.....	699
Program Funds.....	6,121

ABSTRACT - The National Museum of the American Indian (NMAI) provides the Smithsonian Institution with a new and significant vehicle of communication with American Indian people and the public through its collections, research, and public programs. NMAI houses a collection devoted exclusively to the history and art of cultures indigenous to the Americas. The Museum plans to offer a full range of programs demonstrating the historic and contemporary contributions of native peoples of the Western Hemisphere. Future facilities will include a museum on the Mall east of the National Air and Space Museum;

an exhibition and education center in the United States Custom House in New York City; and a collection, study, and research facility at the Museum Support Center in Suitland, Maryland.

For FY 1992, the National Museum of the American Indian requests an increase of 64 workyears and \$6,121,000 for regional training sites (\$50,000); a Native-American Traveling Exhibition Program (3 workyears and \$138,000); Native-American staff development and training (3 workyears and \$200,000); a National Campaign Office (2 workyears and \$448,000); New York facilities maintenance (7 workyears and \$710,000); facilities project management (2 workyears and \$143,000); security for the New York facilities (15 workyears and \$477,000); the Custom House Program (13 workyears and \$1,480,000); equipment and furnishings for the U.S. Custom House (\$1,700,000); and planning and coordination for all locations (19 workyears and \$1,149,000). These increases are offset by a reduction of \$374,000 for one-time costs relating to the care and custody of the collections and the national campaign. The Institution requires \$699,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Museum of the American Indian, Heye Foundation, located in New York City, opened its doors to the public in 1922. The Museum's founder, George Gustav Heye, initiated the collection near the turn of the century as a result of expeditions in this country and in Ecuador, Mexico, the West Indies, the Amazon, and Central America. The collection is one of the world's richest assemblages of artifacts of the indigenous cultures of the Western Hemisphere. Its North American Plains material forms one of the largest groupings found anywhere. The collection represents the great civilizations of the Inca, Aztec, and Maya, as well as the native cultures of the Amazon and the Arctic. From the American Southwest are pottery, dolls, and baskets. The collection includes a photographic archives with more than 80,000 negatives and prints chronicling Indian life.

The Heye Foundation Collection was transferred to the Smithsonian Institution on June 24, 1990, to form the base of the National Museum of the American Indian. The Smithsonian believes the Museum will inspire an exponential increase in Native-American studies and a range of new ideas for exhibitions, research, and insight into historic and contemporary Indian culture.

Federal funding in FY 1991 will allow the Smithsonian to:

- plan for the opening exhibition and ancillary educational programs of the George Gustav Heye Center at the United States Custom House in New York;
- continue the development of plans for programs, exhibitions, research, and collections management;
- continue consultations with Native-American groups and individuals in planning for all programs;
- provide central administrative services;
- provide care and custody of the collection;
- maintain and secure the existing buildings and temporary structures in New York;

- continue to offer services of quality to the general public at Audubon Terrace and access to research scholars at the Bronx Research Branch;
- administer fund-raising efforts for NMAI;
- institute a Native-American staff development and training program.

Funding in FY 1992 and future years will enable the Smithsonian to continue and expand these activities and to construct a museum on the last site on the Mall as well as a collection and research center at Suitland. The Suitland facility will provide a protected environment for collection materials not on display and make them available for research. It will house the collection documentation functions and a resource collection of print materials, together with facilities for conservation treatment.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the National Museum of the American Indian requests an increase of 64 workyears and \$6,121,000 for regional training sites (\$50,000); a Native-American Traveling Exhibition Program (3 workyears and \$138,000); Native-American staff development and training (3 workyears and \$200,000); a National Campaign Office (2 workyears and \$448,000); New York facilities maintenance (7 workyears and \$710,000); facilities project management (2 workyears and \$143,000); security for the New York facilities (15 workyears and \$477,000); the Custom House Program (13 workyears and \$1,480,000); equipment and furnishings for the U.S. Custom House (\$1,700,000); and planning and coordination for all locations (19 workyears and \$1,149,000). These increases are offset by a reduction of \$374,000 for one-time costs relating to the care and custody of the collections and the national campaign.

Regional Training Sites (\$50,000) - Training programs for museum staff working in Native-American communities help ensure the preservation of and access to the cultural patrimony of American Indian people. Through this program, tribal centers, libraries, archives, and museums nationwide participate in a training network. Smithsonian staff and community experts serve as faculty. Community institutions learn new methods and share expertise in working with American Indian communities and collections.

The increase supports two additional training sites in the American Indian Museum Studies network, begun in FY 1991. The Office of Museum Programs (OMP) will develop a curriculum for courses in curatorial research, collection care, education, and exhibitions. OMP will offer two courses at regional American Indian museums in FY 1992. Each site will then serve as an access point to a national instructional network for training at any time.

The requested funds (\$50,000) for the Office of Museum Programs will provide for participant scholarships, faculty training and travel, and instructional materials. The request will also provide partial cost of equipment for the communications network, in partnership with each site.

This program strengthens the ability of local American Indian communities to preserve and interpret their cultural heritage. Consequently, the American public--both Indian and not--has greater access to important stories of diverse American ways of life.

Native-American Traveling Exhibition Program (3 workyears and \$138,000) - The development of a traveling exhibition program for the National Museum of the American Indian will ensure that tribal museums and cultural centers, as well as regional museums

and educational institutions, will benefit directly from NMAI's collections and program resources.

This initiative calls for an extended period of planning and on-the-job training to develop exhibition prototypes and a viable traveling exhibition program for and about American Indian groups. The program will respond to diverse technical settings, some of them equipped with museum staff and installation support, others with no personnel or exhibit-ready services. It will include exhibitions that incorporate not only diverse viewpoints and tribal experiences but also direct Indian participation in the planning process and beyond. The program also will address unique conservation, loan agreement, and object-handling needs, since many exhibitions will involve fragile historical artifacts and collections associated with authenticity and repatriation issues.

Each of the three exhibit coordinators (3 workyears and \$83,000) who will join the staff of the Smithsonian Institution Traveling Exhibition Services (SITES) will receive on-the-job training to develop and coordinate jointly three pilot traveling exhibition projects responsive to different constituencies in the field. The remaining funds (\$55,000) will provide for printing, supplies and materials, and travel. The coordinators will tailor one project to regional museums capable of installing artifact-intensive exhibitions. A second project, targeted to smaller, resource-poor cultural centers and schools, will involve installation-easy formats to provide access to collections at the local level. The third project will rely on experimental installations adaptable to outdoor festivals and other nontraditional settings. In developing these projects, the coordinators will work in tandem with SITES staff to identify advisors and potential audience groups; map exhibit content, education programming, and installation strategies; develop budgets and fund-raising approaches; oversee the competitive bid and design processes; and supervise conservation, lending, insurance, booking, shipping, and exhibit construction procedures.

The intended beneficiaries of the Smithsonian's National Museum of the American Indian extend far beyond Washington, D.C. The Museum's future audiences, whether affiliated with tribal centers, urban-area museums, community organizations, or schools, will expect NMAI to provide expanded program resources adaptable to their own needs and interests. The design of fully operational outreach exhibition services must begin immediately.

Native-American Staff Development and Training (3 workyears and \$200,000) - The National Museum of the American Indian will continue to implement the training initiative begun in FY 1991. This initiative rests on two principal goals. The first goal is the establishment of a staff that approaches collections care, programmatic development, exhibition development, and research with awareness of the historic and contemporary issues, perspectives, and concerns associated with American Indian communities. The second goal is the establishment of fully collaborative training partnerships between the Smithsonian and the American Indian community, including its cultural centers, tribally controlled colleges, and national Indian organizations.

NMAI will identify American Indian persons for three positions to work within the Smithsonian bureaus and program offices. NMAI will award each of these training positions on a competitive basis at entry to mid-level grades. In addition to serving as assistants to senior staff positions not initially occupied by American Indians, the persons holding these training positions will participate in a range of relevant activities, including access to formal professional development courses, workshops, and seminars. While many of these training positions will evolve into the positions currently held by senior staff,

some trainees will return to the Indian community, thereby extending the network of American Indian museum professionals.

The requested 3 workyears and \$200,000 will support:

- salary costs, internships, fellowships, and professional development programs for a broad range of potential participants, including American Indian undergraduate students and graduate students in relevant academic and museum studies fields;
- Native-American faculty from tribally controlled colleges and other institutions;
- community-based museum professionals and community members, particularly those who possess significant knowledge of their tribal history and language and who would benefit from access to the Smithsonian's research resources;
- training programs that will occur within the community as well as on site.

The National Museum of the American Indian Training Program will increase the number of American Indian people in the museum field, in every relevant discipline, at all levels.

National Campaign Office (2 workyears and \$448,000) - In 1991 the Institution established the National Campaign Office for the National Museum of the American Indian to plan and implement a national fund-raising campaign to secure the required matching funds from non-Federal sources as specified by the Federal legislation authorizing the establishment of NMAI. Through the Office of Institutional Initiatives, the NMAI has secured donated office space in nearby Arlington, Virginia, to house the National Campaign staff.

NMAI requests two positions (2 workyears and \$75,000) to supplement the NMAI National Campaign staff and funds appropriated in FY 1991 for the purpose of organizing, coordinating, and directing a membership program. The initial focus of the NMAI membership program will be on prospective donors for construction of the Mall facility. NMAI will seek membership primarily through the use of direct mail techniques. Requested funds also will support contractual services in the areas of prospect research (\$48,000), direct mail design/list acquisition (\$50,000), media placement (\$200,000), and an audio-visual package (\$75,000).

The NMAI membership program will become a permanent component of the Museum's advancement operation. After the Mall facility is constructed, the Museum will continue to seek support from members for NMAI programs.

New York Facilities Maintenance (7 workyears and \$710,000) - Effective and efficient building operations and maintenance are essential for preserving the collections of the National Museum of the American Indian and providing a safe and healthy environment for staff and the visiting public.

The planned opening in FY 1992 of the George Gustav Heye Center in the U.S. Custom House will more than double the square footage of NMAI space in New York. The Office of Plant Services (OPlantS) will operate the facility 24 hours a day to ensure the constant and correct temperature and humidity required to preserve museum collections on display in the building. OPlantS staff will also perform preventive maintenance, and emergency

repairs and minor repairs to building components, consistent with its operations at other Smithsonian museums. The requisite skills are not currently available among NMAI employees. The requested resources will enable OPlantS to hire the appropriate staff to ensure continual operation and repair of NMAI space in the building and to cover the estimated utilities costs for the Custom House facility and the addition to the Research Branch, located in the Bronx. This addition, to be constructed in FY 1991, will provide the space needed to prepare the collections for the eventual move to Washington, D.C.

This request will allow OPlantS to add seven positions (7 workyears and \$257,000). Five air conditioning equipment mechanics, including one leader, will provide continuous operation of the heating, ventilating, and air conditioning systems in the building, and two trade and craft mechanics will perform repairs and preventive maintenance on electrical, plumbing, structural, and fire protection systems. The request includes funding to cover estimated utility costs for the Custom House (\$369,000) and additional utilities associated with the expanded Research Branch (\$47,000). The Institution also requires funding to cover a base deficiency in nonsalary categories of expense for operating other NMAI New York facilities (\$37,000). These costs include contract services for cleaning and for maintenance of specialized equipment such as elevators and for miscellaneous supplies and materials for cleaning and repairing the buildings.

The requested resources will ensure continuous operation of NMAI facilities and protect the capital investment in plant equipment.

Facilities Project Management (2 workyears and \$143,000) - The development of new facilities to house the National Museum of the American Indian will expand public programs and research interpreting Native-American culture and experience and will improve space in which to store, study, and conserve the former Heye Foundation Collection.

The new facilities include: an exhibition and education center in the United States Custom House in New York City; a collection, study, and research facility in Suitland, Maryland; and a Mall museum building. The physical separation of the three buildings as well as technical considerations associated with renovation or construction of monumental buildings of national prominence makes them extremely complex. Smooth execution of the concurrent tasks requires specialized staff to manage the construction of all three facilities from early planning through occupancy.

The Institution will use funds appropriated in FY 1990 and FY 1991 to hire a facilities project manager, assistant project manager, construction manager, and engineer. The resources requested for FY 1992 will enable hiring an architect (1 workyear and \$58,000) to oversee design of the Suitland facility and the Mall museum building. Although the Institution plans to contract for architectural and engineering services for both projects, the Institution needs a staff architect to oversee and administer these contracts. The Project Management Office also will hire a secretary (1 workyear and \$25,000) to provide general clerical support, including processing and tracking of requisitions, contractor change orders and payments, typing, and filing. Support funds (\$60,000) will provide for travel to the design firm, computer equipment for project tracking and office automation, and miscellaneous services and supplies for office operations. Adequate project management staff will ensure successful construction of essential facilities for the Museum.

Security for the New York Facilities (15 workyears and \$477,000) - For FY 1992, the National Museum of the American Indian requests funds to hire additional guards to complete

the permanent guard force for the George Gustav Heye Center in the Custom House and to hire temporary guards to meet security requirements at both the Custom House and Audubon Terrace until the NMAI operation moves to the Custom House. The guard force will reduce the risk of theft, damage, or destruction to the valuable and unique collections of the National Museum of the American Indian.

The Smithsonian expects to take possession of the renovated portion of the Custom House in April 1992 and plans to open an inaugural exhibit in the building later in the year. The guards now assigned to the Audubon Terrace exhibit space will relocate to the Custom House to form the core of its permanent security force. The funds requested will provide additional guards to complete the permanent security force required for the facility. The security staff will control access, monitor contractors while they are installing exhibits, and perform other security functions. In addition to permanent staff, the Institution requests temporary guards to meet security requirements at both the Custom House and Audubon Terrace until the NMAI operation moves to the Custom House late in 1992. The full complement of permanent guards, therefore, will be available to transfer to the Custom House at that time. The Office of Protection Services (OPS) will use a portion of the requested resources to provide temporary guards to supplement security requirements at the Custom House during most of FY 1992 and part of FY 1993.

OPS will use the requested funds to hire five permanent and five temporary guards in April 1992, when the Smithsonian takes beneficial occupancy of the Custom House space. The funds also will allow hiring five temporary guards in mid-1992, to cover public opening of the inaugural exhibition and provide for contract services to support the guard force (\$123,000). Hiring in this manner will ensure adequate security coverage of the new facility. Because of the delayed hire dates, the Institution requires only 12 workyears (\$230,000) for these positions. The temporary guards will be in place only until the Audubon Terrace facility is vacated.

The Institution is building an addition to the Research Branch storage facility for preparation of artifacts for eventual move to Washington or the Custom House. The continual movement of artifacts through the loading dock increases the risk of theft or damage. To reduce this threat to security, OPS will establish a guard post at the loading dock. The additional post will control staff access and protect artifacts during movement through the loading dock area as well as in the working area of the addition to the storage facility. The requested funds will provide for two guards (2 workyears and \$51,000) necessary to maintain this guard post seven days a week, providing access control and overall protection of artifacts during the preparation and moving stages.

Protection of the Smithsonian's buildings, exhibits, and visiting public depends on well-functioning fire and security alarms systems. Proper maintenance of the systems guarantees the good working order that ensures performance. The required systems specialist will provide advanced technical expertise in the operation of the security systems in NMAI buildings. In addition, the specialist will supervise the work of the alarms technician, provided in FY 1991. The alarms technician will perform daily inspection and maintenance of alarms devices and equipment in NMAI facilities. Both staff members also will service the security systems at other Smithsonian facilities in the New York area.

NMAI requests funding for a systems specialist (1 workyear and \$48,000) to supervise and oversee the technical security operation of the physical security and fire alarms systems in the New York area. The systems specialist will provide training to the

technical staff. Additional funds (\$25,000) requested for FY 1992 will purchase tools, a radio, and other supplies and materials to support operation and maintenance of the physical security systems in the New York City buildings.

Adequate protection services and on site installation of alarms, locks, and technical security equipment ensure that OPS security standards are met, with no possible compromise of the system. Security escorts of high-value objects during relocation protects them from theft or loss during shipment.

Custom House Program (13 workyears and \$1,480,000) - The Custom House facility of the National Museum of the American Indian, scheduled to open in New York in 1992, will have a well-rounded exhibition and education program. This request for support of the programs planned for this facility will ensure that the Custom House Program demonstrates the aspirations of the new Museum.

A program staff (6 workyears and \$243,000) consisting of an exhibition coordinator, docent/volunteer coordinator, curriculum developer, audio-visual technician, and two clerical positions will support the public activities at the Custom House. In addition, seven building management positions will clean and maintain the public and staff areas of the George Gustav Heye Center in the Custom House (7 workyears and \$167,000).

Included in this request are funds to complete the fabrication and installation of the opening exhibition and to support other costs associated with the public programs of the Center, such as printed materials, films and videos, and lectures and demonstrations (\$1,070,000).

This first completed public element of the National Museum of the American Indian will serve local and national audiences much larger than those during its history as the Museum of the American Indian, Heye Foundation. In addition, this Custom House Program will herald the fuller manifestation of the museum on the Mall in Washington. This request will form the ongoing base for exhibition refurbishment, installations of temporary and permanent exhibitions, and public program activities at the Heye Center in future years.

Custom House Furnishings and Equipment (\$1,700,000) - The Institution requests a one-time amount of \$1,700,000 in FY 1992 to furnish and equip the NMAI Custom House facility. The Institution will renovate space in the U.S. Custom House building in New York City at Bowling Green using appropriated funds (provided in the Construction account) and matching amounts from New York City and the State of New York. Current plans envision occupancy and partial public opening of the building by NMAI in late 1992. In advance of the move of staff and opening of exhibition space, the Institution needs to furnish and equip the building. These costs are not included in the construction cost estimate outlined in the Construction section of this budget request.

The Smithsonian will use the requested funds to purchase and install security wiring, equipment, and devices to protect collections from theft or damage; design and fabricate interior and exterior signage to orient the public and label staff spaces; purchase office furniture; furnish and equip exhibit staging, classroom, and collection storage and conservation areas; and provide information desks and seating for the public. Funding of this request will allow full staff and public use of the new Custom House space.

Planning and Coordination for All Locations (19 workyears and \$1,149,000) - In FY 1992, work will begin on the development of exhibition topics for the National Museum

of the American Indian on the Mall. Curators, research assistants, project managers, and a designer will begin the process of research, object identification, and preliminary design. An education coordinator will develop public programs that reflect an awareness of the perspectives and concerns of American Indian communities. An international program coordinator will assure that the indigenous cultures of Mexico and of Central and South America, which are so well represented in the collections, are properly presented in all aspects of the NMAI program. A technology coordinator will assure the most advanced use of technology in all programs planned for the Suitland collection, study, and research center; the George Gustav Heye Center in New York; and the Mall museum. In addition, three secretaries and an administrative technician will provide assistance to these departments (19 workyears and \$811,000).

Included in this request are funds for travel, supplies, and equipment to support these activities; rent for additional office space for the positions requested; and funds for contract services for Native-American advisors for the national, international, and technology programs and other technical assistance as required (\$338,000).

NONAPPROPRIATED SOURCES OF FUNDING:

The Smithsonian has established an allotment to cover the director and deputy director's salaries and support costs in addition to an unrestricted account to receive income from the National Museum of the American Indian's National Campaign, which began in January 1991. Investment income will be available from the permanent endowment of the Heye Foundation, which was included in the property transfer.

The George Gustav Heye Center of NMAI also receives income from museum shop sales, admissions, and donations.

NATIONAL MUSEUM OF AMERICAN ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	117	5,611	-	209	-	1,877	-	755	-	-
FY 1991 Estimate	124	6,883	1	194	-	682	-	1,019	-	-
FY 1992 Estimate	125	7,212	1	216	-	405	-	605	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	124	1	125
11 Personnel Compensation.....	3,666	258	3,924
12 Personnel Benefits.....	783	71	854
21 Travel.....	56	0	56
22 Transportation of Things.....	51	0	51
23 Rent, Communications & Utilities.....	39	0	39
24 Printing & Reproduction.....	103	0	103
25 Other Services.....	1,446	0	1,446
26 Supplies & Materials.....	275	0	275
31 Equipment.....	114	0	114
Collections Acquisition.....	350	0	350
Total	<u>6,883</u>	<u>329</u>	<u>7,212</u>

Analysis of Increase

Necessary Pay.....	309
Program Funds.....	20

ABSTRACT - The National Museum of American Art (NMAA) seeks to represent the finest achievements of American visual artists working in painting, sculpture, the graphic arts, photography, and crafts. The Museum presents diverse art from all regions, traditions, and cultures in America, including folk as well as fine art. NMAA presents major loan exhibitions and related educational programs for public and scholarly audiences. The Museum fosters research nationwide through fellowship and intern programs, and it maintains

automated data base inventories as a resource for American art scholars. The scholarly staff publishes new research in books, articles, and catalogues for the purpose of underscoring the relationship of art and history. The Renwick Gallery, part of the National Museum of American Art, focuses upon American crafts and decorative arts. NMAA also maintains the Barney Studio House, a period home open for tours and interpretive programs.

For FY 1992, the National Museum of American Art requests 1 workyear and \$20,000 to correct audit deficiencies. The Institution requires \$309,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The National Museum of American Art explores the contributions of the Nation's artists from the 18th century through the present. Through a multi-faceted program of acquisitions, exhibitions, research, publications, and education, the Museum presents and interprets the Nation's artistic heritage for a broad and diverse public.

Collections - The Museum's collections, numbering over 35,000 objects, highlight paintings, sculpture, graphic art, photography, folk art, and contemporary crafts. A special strength is the collection of African-American art from the 19th century through the present, which was enhanced during FY 1990 by the acquisition of paintings by Lois Mailou Jones, Romare Bearden, Jacob Lawrence, and Frederick Brown. The Museum was especially pleased to acquire Luis Jimenez's Vaquero, a 16-foot-high sculpture of a Mexican bronco buster that stands outside the Museum's entrance. After several years of searching, NMAA acquired a very important painting by early 19th-century Romantic artist Washington Allston, and, through the generosity of the artist's heirs, an important canvas depicting The Trial of Red Jacket by John Mix Stanley entered the collection. Wendell Castle's haunting Ghost Clock represents a major addition to the Renwick Gallery's craft collection, while important works by Ernest Trova, Robert Hudson, Masami Teraoka, Luis Tapia, and Aaron Siskind augment the 20th-century collections. In March 1990 the Museum unveiled Singing Head by Elizabeth Catlett, one of the country's foremost black sculptors, with a reception and gallery talks by the artist.

Exhibitions - Among the 18 exhibitions on view during FY 1990 at the Museum and its Renwick Gallery, several major exhibitions stand out. "Masterworks of Louis Comfort Tiffany" attracted record-breaking crowds to the Renwick Gallery. "The Art of Albert Pinkham Ryder" brought together a major body of work by this 19th-century artist who has been called "America's greatest visionary painter." This exhibition featured a scientific study of the artist's work carried out in collaboration with the Smithsonian's Conservation Analytical Laboratory. Exhibitions featuring collections of Irving Penn's photographs, the Frost Collection of American Abstract Art, and Herbert Waide Hemphill, Jr. Folk Art Collection all introduced recent acquisitions. All these exhibitions will join several others on tour throughout the country following their Washington showings.

Projected exhibitions under development include: "The West as America: 1820-1920," featuring paintings, graphics, and sculpture depicting westward expansion; "American Art at the 1893 World's Columbian Exposition in Chicago," co-organized with the National Portrait Gallery and scheduled to open as part of the Smithsonian's Columbus Quincentenary program; and "Homecoming: William H. Johnson and Afro-America, 1938-1946."

In addition to exhibitions, during FY 1990 the Museum opened a new gallery devoted to African-American art of the 19th and 20th centuries.

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Research - The Museum offers extensive reference materials, including data bases, to researchers from a variety of disciplines. The newest of the Museum's unique data bases, the Inventory of American Sculpture, added 5,000 records during FY 1990 and continued to solicit new information on outdoor sculpture throughout the United States through a mailing to 1,000 corporate collectors. Extensive preparation culminated in the transfer of the first of 260,000 records of the Inventory of American Paintings--another of the Museum's unique data bases--into the Smithsonian Institution Bibliographic Information System (SIBIS).

The Museum's Photograph Archives received approximately 10,000 new prints from the Peter A. Juley and Son Collection. With assistance from the Smithsonian Research Resources Program, the Museum began printing images from its Walter Rosenblum Collection, a collection of negatives produced by a free-lance photographer whose clientele included galleries, artists, and collectors in New York City from the post-World War II period through the early 1960s.

Ongoing scholarly research by the professional staff continues to result in publications, exhibitions, and educational programs. Twenty-two research fellows were in residence at NMAA during FY 1990, working on a wide variety of scholarly subjects.

Publications - Smithsonian Studies in American Art, the Museum's scholarly journal, continues to be an important part of its publications program. Co-published quarterly with Oxford University Press, the journal received an Award of Distinction from the American Association of Museums.

Several books recently published or in process are joint ventures with the Smithsonian Institution Press. Highlighted among them are Visual Poetry: The Drawings of Joseph Stella, published in conjunction with an exhibition co-organized with the Amon Carter Museum; Irving Penn Master Images, published in conjunction with an exhibition co-organized with the National Portrait Gallery; Albert Pinkham Ryder, a comprehensive study of the work of this 19th-century artist; Made with Passion: The Hemphill Folk Art Collection in the National Museum of American Art, published in conjunction with a large exhibition of the Museum's holdings from the Hemphill collection, one of the most significant and unusual folk art collections in the United States; and The West as America: Reinterpreting Images of the Frontier, 1820-1920, a large multi-author book published with the assistance of a Getty grant in conjunction with a major exhibition presenting images of westward expansion. All these books will accompany the exhibitions as they travel to several venues throughout the United States.

American Art at the 19th-Century Paris Salons, an important work of scholarship by the Museum's research curator, was co-published with Cambridge University Press with the assistance of a Getty grant.

Education - In FY 1990, the Museum made concerted efforts to increase the cultural diversity of its audiences through public programs, community outreach and collaboration, docent recruitment, and special school programs such as D.C. Chapter I student multi-visits, career awareness seminars, and tours. The Museum designed programs and tours specifically for the handicapped. Interpretive programs included symposia, lectures, demonstrations, family days, family and teacher workshops, storytelling, tours, performances, concerts, films, and the expansion of gallery label texts. Highlights of activities were a symposium in conjunction with the exhibition "The Art of Albert Pinkham Ryder" and "Hindsight and Insights: Scholarship in American Art, 1970-1990," a symposium

celebrating the 20th anniversary of the Museum's fellowship program for pre- and post-doctoral scholars.

In FY 1991, the Museum launched an ambitious nationwide program--known as Save Outdoor Sculpture (SOS)--to conduct an inventory and condition assessment of America's outdoor sculpture. NMAA has designed an aggressive educational campaign to stimulate community involvement in the care and maintenance of outdoor sculptures and to educate people of all ages to an appreciation of this unique artistic and cultural heritage. To build a grassroots understanding of the problems and long-term care of outdoor sculpture, the survey is being performed by volunteers in each state trained to provide on-site examinations of each sculpture. The Museum will use this information to create the only comprehensive national information data base about American sculpture, a permanent resource for conservation and technical information, and for general inquiry from the public. With continued funding in its second year (FY 1992), the survey will be extended to all fifty states.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the National Museum of American Art requests 1 workyear and \$20,000 to correct audit deficiencies.

Audit Deficiencies (1 workyear and \$20,000) - A national museum has the obligation for responsible caretaking of the public collection entrusted to it. In the last several years, the Museum has added more than 3,500 objects to its permanent collection, resulting in a backlog in the processing of artworks not yet accessible for scholars. To maintain the integrity and accessibility of its National Collections, the Museum must exercise responsible caretaking and catalogue all objects in its collections.

Collections management audits by the Smithsonian's Office of the Inspector General have consistently emphasized the need to resolve the backlog in collections cataloguing. As NMAA's collections inevitably continue to grow, resolving the backlog will require additional cataloguing staff and resources.

The Museum requests additional funding to hire a full-time cataloguer (1 workyear and \$20,000) to reduce the acquisitions backlog, which will permit the Museum to strengthen the physical care and management of the collections.

Keeping collections records current has been a high priority for the Smithsonian since the 1980 inventory of collections. With the Museum's addition of significant collections of folk art, photography, abstract art, and crafts--in addition to the acquisition of approximately 1,000 paintings, sculptures, and graphic arts each year--the Museum must maintain an efficient level of collections control to meet the needs of the public and the mandates of the Institution.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - During FY 1990, eight NMAA exhibitions traveled to 15 locations, including Amsterdam, through the Museum's Exhibition Sharing Fund. These tours generate income in the form of participation fees that the Museum charges to borrowing institutions to cover the direct expenses of the tours. The Smithsonian's Collections Acquisition Fund and the Museum's Deaccession Fund financed the purchase of Hermia and Helena by Washington Allston and numerous other works in FY 1990, supplementing Federal acquisition funds. Other unrestricted funds covered salary and support costs of the Director, intern programs, publications, and photographic services.

Restricted Funds - In FY 1990, the Museum received a bequest of \$3.8 million to establish the Luisita L. and Franz H. Denghausen Fund for the acquisition, preservation, and exhibition of American art. The Museum expects additional funds upon final settlement of the estate. Generous gifts from the IBM Corporation, USAir, and the Crosby Kemper Foundation made possible the Museum's exhibition of Childe Hassam, the joint exhibition with the National Portrait Gallery of Irving Penn photographs, and the exhibition of George Caleb Bingham drawings, respectively.

NATIONAL PORTRAIT GALLERY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	89	4,131	-	36	-	274	-	200	-	12
FY 1991 Estimate	89	4,421	-	42	-	61	-	802	-	-
FY 1992 Estimate	90	4,748	-	42	-	76	-	562	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	89	1	90
11 Personnel Compensation.....	2,875	219	3,094
12 Personnel Benefits.....	505	50	555
21 Travel.....	41	0	41
22 Transportation of Things.....	130	0	130
23 Rent, Communications & Utilities.....	45	4	49
24 Printing & Reproduction.....	50	0	50
25 Other Services.....	220	0	220
26 Supplies & Materials.....	155	4	159
31 Equipment.....	30	50	80
Collections Acquisition.....	370	0	370
Total	<u>4,421</u>	<u>327</u>	<u>4,748</u>

Analysis of Increase

Necessary Pay.....	247
Program Funds.....	80

ABSTRACT - The National Portrait Gallery (NPG) is dedicated to the exhibition and study of portraits of people who have made significant contributions to American history and to the study of the artists who created such portraiture. The Gallery sponsors a variety of scholarly and public activities for audiences interested in American art, biography, and portraiture.

For FY 1992, the National Portrait Gallery requests an increase of 1 workyear and \$80,000 to reconfigure collections files. The Institution requires \$247,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The National Portrait Gallery explores the heritage and accomplishments of the American people by collecting, researching, and exhibiting portraits in all media as both historical and artistic documents.

Collections Acquisitions - During FY 1990, approximately 191 acquisitions enhanced NPG's collections. Among the most important of these acquisitions were a 1792 life portrait of Thomas Paine; a self-portrait of Charles Willson Peale; a 1910 poster of Jack Johnson, the first black heavyweight champion; eight pastel portraits by Will Cotton; more than 50 drawings by William Auerbach-Levy; portraits of Helen Keller and the noted bridge authority Ely Culbertson. The Gallery acquired a rare vintage 1926 photograph of Solomon R. Guggenheim by Lazlo Moholy-Nagy, a previously unknown daguerreotype (ca. 1851) of Henry Clay by Frederick de Bourg Richards of Philadelphia, and a rare Man Ray photograph (ca. 1922) of Gertrude Stein posing for the Jo Davidson portrait sculpture, one of the icons of the NPG collections. Time, Inc. transferred an additional 126 Time magazine covers to the Gallery.

Collections Management - A Smithsonian grant funded the creation of a computer-generated inventory data base for the Meserve Collection of Mathew Brady negatives, the rehousing of those negatives in archival storage media, and the making of preservation prints and facsimile negatives from the Mathew Brady imperial format glass-plate negatives of Edwin Forrest, which the Edwin Forrest Home for Retired Actors donated to NPG.

Research - The Catalog of American Portraits (CAP) continues to expand its service to researchers of American history and American art history. In addition to several local collections, researchers surveyed and photographed major portrait collections in St. Louis, Columbia, and Kansas City, Missouri. A contractor from the University of Puerto Rico surveyed and photographed nine major portrait collections in Puerto Rico, adding significant portraits of or by Hispanic Americans to the CAP files. Also, staff added more than 2,000 portrait records, mostly from the southwestern United States, to the CAP computer data base.

The Gallery's Peale Family Papers project continued its work on volume 4 of the selected papers of this famous artistic family and on Charles Willson Peale's autobiography (volume 5). The staff edited a volume of critical essays on Peale's work and continues research for the catalogue raisonne of Rembrandt Peale's work.

Exhibitions - To commemorate the bicentennial of the Federal judiciary system, the Gallery mounted "Portraits of the American Law" during FY 1990. This exhibition featured images of distinguished American jurists from the years of the early Republic to the late twentieth century. Three national law firms provided partial support for the exhibition.

"To Color America: Portraits by Winold Reiss" featured images of various ethnic groups, particularly African Americans and native Americans, by the German-born Winold Reiss. The exhibition proved successful in bringing new audiences to the Gallery. For this exhibition, NPG received support from Burlington Northern Foundation, the Anschutz Foundation, and the Smithsonian Special Exhibition Fund. The Smithsonian Institution Traveling Exhibition Service (SITES) will travel a panel version of this show from 1991 through 1993.

"Irving Penn Master Images," co-organized with the National Museum of American Art (NMAA) and sponsored by USAir, consisted of 120 master photographs that Penn gave to the two museums. The exhibition will tour nationally, and NPG and NMAA are exploring possible foreign venues for the tour. With the Penn exhibition, NPG showed a selection of masterworks from its photograph collections.

Among the most popular exhibitions ever held at the Gallery was "Oliphant's Presidents: Twenty-Five Years of Caricatures," featuring caricatures, sketches, and sculpture by Pat Oliphant of the last six U.S. presidents--from Lyndon Johnson through George Bush. Another popular exhibition was "Five of Hearts," recalling the circle of Henry Adams and his wife Clover, John Hay and his wife Clara, and Clarence King. This Washington circle of friends began in 1880, and its members could claim association with many notable personalities of the era, including every U.S. president from Abraham Lincoln to Theodore Roosevelt.

The last in NPG's series of exhibitions commemorating the Bicentennial of the Constitution opened in November 1990. Co-organized with the Tennessee State Museum, this exhibition focuses on the executive branch of government through an examination of the life and presidency of Andrew Jackson. This exhibition will travel to Nashville.

Other major exhibitions under development include a 1991 exhibition focusing on the artists and journalists who covered World War II, and the Columbus Quincentenary, which NPG will join with the National Museum of American Art to present in 1993. The latter exhibition is based on American painting and sculpture shown at the 1893 World's Columbian Exposition in Chicago.

Publications - In FY 1990, NPG published the Irving Penn Master Images, an exhibition catalogue on Winold Reiss, and an illustrated checklist of all known portraits by Reiss. The catalogue to accompany the Andrew Jackson exhibition was published in November 1990 and a definitive study of Jackson portraits will be published in January 1991.

The University of Delaware Press is publishing the papers from the 1987 conference on The Portrait in Eighteenth-Century America. The Barra Foundation will publish the catalogue of the work of profilist C.B.J. Fevret de Saint-Memin (1770-1852). Magical Mixture Marisol Portrait Sculpture is now in production for the April 1991 exhibition and is being co-published with the Smithsonian Institution Press.

Education - The Education Department interprets the Gallery's collection for its visitors through daily tours, elementary and secondary school programs, and senior citizen outreach programs. The Department also provides its visitors with a multi-cultural view of American history through the lectures, symposia, biographical plays, recitals, concerts, storytelling, and other performances in its ongoing "Cultures in Motion" program. In FY 1990, the Department conducted a symposium titled "The Politics of Portraiture: Icons, Stereotypes and Other Approaches to Multi-cultural Imaging" and a portrait-drawing workshop titled "Diversity in Portraiture," targeting culturally diverse high school art students in conjunction with the Winold Reiss exhibition. The Department also conducted a series of caricature drawing workshops in conjunction with "Oliphant's Presidents."

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the National Portrait Gallery requests an increase of 1 workyear and \$80,000 to reconfigure collections files.

Reconfiguration of Collections Files (1 workyear and \$80,000) - After a review of the National Portrait Gallery's storage and handling of archival data, the Smithsonian's Office of Inspector General has mandated that NPG reconfigure its collections files. This program is essential for the responsible management of the Gallery's collections. With the reconfiguration, the permanent files on the collections will be more securely safeguarded than is now possible.

To comply with the audit mandate, the Gallery must maintain an archival file of accession records in the Registrar's Office in addition to working files in the curatorial departments and must update inventory records more efficiently to record location changes when objects are moved. In case of theft, disaster, or damage to the collections, the information in these records is crucial for insurance and recovery. Registrars and curators require ongoing access to this material, so NPG must coordinate the functional needs of these offices with the need for greater security and control of the records.

To implement these audit recommendations, NPG needs an additional person for the Registrar's Office, equipment for the file transfer, and training to expand its automation. The requested funds will provide a museum technician (1 workyear and \$22,000) to assist in transferring files, copying, labeling, and entering data. Additional funds (\$58,000) will purchase new compact filing units, a computer, a photo-copying machine, and other equipment and supplies needed for the reconfiguration.

Security of files is an essential component of responsible collections management. The collections of the National Portrait Gallery are skyrocketing in value because of inflation in the art market and the rarity of the objects in the Gallery's custody. NPG must provide greater security for its archival records to comply with the mandate from the Office of Inspector General and to fulfill its public-trust obligations.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds come from the Gallery's share of sales in the museum shop, sales of photographic reproductions of collections objects, and participation fees from museums to which NPG loans objects. These funds help defray the costs of public lectures, symposia, special events for exhibition openings, loan exhibition development and management, and research.

Restricted Funds - Designated for specific purposes, these funds are in the form of gifts and grants from individuals, foundations, organizations, and corporations. The Gallery received matching funds from the Tennessee General Assembly for co-sponsoring an exhibition at the Tennessee State Museum and NPG on Andrew Jackson. USAir supported the Washington showing and catalogue of the National Portrait Gallery and National Museum of American Art joint exhibition "Irving Penn Master Images." Mobil Oil Corporation has made a generous contribution in support of the showing of "Camera Portraits, 1839-1989," an exhibition brought to the American public for the first time from Britain's National Portrait Gallery in London. The Gallery received gifts from a number of individual donors and substantial contributions for future activities and general support from the Clarence and Jack Himmel Foundation, Gettysburg College, and the Ruth and Frank Stanton Fund.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	72	3,442	-	66	-	1,190	-	2,648	-	-
FY 1991 Estimate	78	3,634	-	27	-	525	-	1,625	-	-
FY 1992 Estimate	78	3,941	1	222	-	475	-	1,220	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	78	0	78
11 Personnel Compensation.....	2,277	170	2,447
12 Personnel Benefits.....	406	37	443
21 Travel.....	72	0	72
22 Transportation of Things.....	6	0	6
23 Rent, Communications & Utilities.....	56	0	56
24 Printing & Reproduction.....	131	0	131
25 Other Services.....	382	100	482
26 Supplies & Materials.....	91	0	91
31 Equipment.....	57	0	57
Collections Acquisition.....	150	0	150
41 Grants.....	6	0	6
Total	<u>3,634</u>	<u>307</u>	<u>3,941</u>

Analysis of Increase

Necessary Pay.....	207
Program Funds.....	100

ABSTRACT - Public Law 89-788, signed on November 7, 1966, established the Hirshhorn Museum and Sculpture Garden (HMSG) as the Smithsonian's modern and contemporary art museum. While the nucleus of the collection remains Joseph Hirshhorn's original gift, it has been greatly enriched by Mr. Hirshhorn's bequest of the art he had collected since 1966. Other benefactors, such as collectors and artists, gave works to the Museum before the tax law

on donations was changed. Purchases made from funds provided by the Congress, the Smithsonian's Board of Regents, Mr. Hirshhorn, private donors, and sales from the permanent collection have broadened the scope of the collection. The collection is the basis of an active program of exhibitions. The Museum staff conducts extensive research, prepares catalogues, and offers a variety of educational activities.

For FY 1992, the Hirshhorn Museum and Sculpture Garden requests an increase of \$100,000 to support exhibition costs. The Institution requires \$207,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - In keeping with its status as a museum of modern and contemporary art, HMSG conducts programs of research, exhibitions, collections management, acquisitions, and educational activities involving audiences of all ages. Opened to the public on October 4, 1974, the Museum attracts more than one million visitors a year, making it one of the most heavily visited contemporary art museums in the United States.

Research - The Museum's resources include more than 13,000 works of art, a curatorial file providing information on artists and works in the collection, and a library with 36,000 books and exhibition catalogues. The staff researches the provenance, exhibition history, iconographic significance, and physical condition of each work of art in the permanent collection. HMSG is developing a system that will ultimately allow researchers to retrieve information concerning the collection through computer terminals, and permit researchers and students to study works of art not on display.

Exhibitions - The Museum's active exhibition program draws upon its collection as well as other collections. Nearly 700 works from the permanent collection are on display at any time. In FY 1990, HMSG presented three major exhibitions: "Francis Bacon"; "Culture and Commentary: An Eighties Perspective"; and "Bay Area Figurative Art, 1950-1965," organized by the San Francisco Museum of Modern Art. In FY 1991, major exhibitions scheduled include "John Baldessari," organized by the Museum of Contemporary Art, Los Angeles; "Sigmar Polke," organized by the San Francisco Museum of Modern Art; and the "Tenth Annual Awards in the Visual Arts Exhibitions," organized by the Southeastern Center for Contemporary Art, Winston-Salem, North Carolina.

The Hirshhorn staff arranged small exhibitions based on its collections displayed in FY 1990. These exhibits included "Robert Rauschenberg Lithographs: Selections from the Stoned Moon Series," "American Collages," and "Mother and Child."

"Directions" is a series of one-gallery exhibitions of works by emerging artists and solo exhibitions of specific bodies of work by better-known artists. These small-scale shows strengthen the Museum's mission to present international modern and contemporary art and provide a forum that initiates dialogue on subjects that would otherwise be difficult to address. Artists featured in FY 1990 were Susan Solano, Ilya Kabakov, and Christian Marclay.

The innovative "Works" program integrates the Museum's building and grounds into the creative process. HMSG commissions artists to visit the Museum and create temporary site-specific pieces. In FY 1990, artists included Matt Mullican, Dennis Adams, and David Ireland.

Collections Management - The Hirshhorn inventories the collection on a three-year cycle, with annual spot checks. Staff reviews the permanent collection to reshape a

formerly private collection by deaccessioning and disposing of works of art judged to be surplus, redundant, duplicates, or of inferior quality. The proceeds are accumulated to fund new acquisitions. As specified by law, the Board of Trustees of HMSG votes on all deaccessions.

Acquisitions - The legislation establishing the Hirshhorn described the Museum's function as a "museum in Washington, D.C., where modern art could be exhibited and studied ... [to] ... enrich the culture of the Nation." To carry out its mandate, the Museum's collection must always keep abreast of current developments in the visual arts through an active acquisitions program. In FY 1990, the Museum used private funds to acquire Luis Jimenez's The American Dream; Henry Moore's Stringed Figure; Eric Fischl's The Funeral; and Mario Merz's From Continent to Continent. HMSG used Federal funds to purchase Stephen Balkenhol's Man in Black; James McGarrell's Sweet Tenor Bull for Basil; William T. Wiley's Song of the Torturer; and Robin Rose's Sacred Bone.

Education and Public Orientation - To increase appreciation and understanding of specific exhibitions and of modern art in general, the Museum provides visitors with a variety of educational materials, including catalogues, wall labels, and brochures. The brochures range from a single page to illustrated minicatalogues, distributed free of charge to the public. Auditorium events include concerts by the 20th Century Consort, film programs, and lectures by artists, critics, and art historians.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the Hirshhorn Museum and Sculpture Garden requests \$100,000 to support exhibition costs.

Exhibition Costs (\$100,000) - The cost of exhibitions has sky rocketed due to inflation, higher costs for insurance resulting from higher values placed on artworks by their owners, and the necessity of couriers. As a result, HMSG's funding base has eroded. The Museum has absorbed some of the increased costs by reducing the major loan exhibitions shown each year from four to three.

The requested increase will support the higher costs of renting exhibitions organized by other museums; the higher costs of insurance, packing, shipping, and constructing shipping cases; and the higher costs of lumber, paint, wall board, and other materials used in the display. The funds will also support increased courier services. In the past, requests for couriers to accompany artworks during transport were rare, usually reserved for high-value objects or objects of great fragility. With the rising value of art and increase in recent thefts, such requests are now much more common and HMSG expects them to increase.

The loan exhibitions reveal contemporary trends in the United States and abroad, while presenting pertinent historical information to maintain a quality exhibition program. HMSG must not risk further reduction of its schedule of three major loan exhibitions a year.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - HMSG's share of sales from the museum shop, along with various annual allotments, provide these funds. These funds support travel costs for trustees, various special events, the 20th Century Consort and, starting in FY 1990, the salary, benefits, and travel costs for the Museum director.

Restricted Funds - The Museum has four endowment funds deriving from different sources. The first fund is traceable to \$1 million pledged by Mr. Hirshhorn at the signing of the initial agreement that established the Museum. The second derives from monies Mr. Hirshhorn left to the Museum in his will. The third fund comes from the deaccession and disposition of artworks established in accordance with the terms of the original agreement with Mr. Hirshhorn. Finally, the Museum received funds from the Holenia Trust, a Swiss foundation financed by Mr. Hirshhorn. Currently, HMSG can use these four funds only to purchase works of art. The Museum's Board of Trustees has authorized 10 percent of the value of the endowment funds for use as a current purchase fund each year.

ARTHUR M. SACKLER GALLERY/FREER GALLERY OF ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	71	4,280	1	93	-	419	23	3,667	-	-
FY 1991 Estimate	68	5,224	1	96	-	50	42	3,283	-	-
FY 1992 Estimate	77	5,605	1	96	-	50	44	3,683	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	Base FY 1991	Proposed Adjustments	Est. FY 1992
FTE Allocation.....	68	9	77
11 Personnel Compensation.....	2,288	272	2,560
12 Personnel Benefits.....	572	109	681
21 Travel.....	39	0	39
22 Transportation of Things.....	15	0	15
23 Rent, Communications & Utilities.....	41	0	41
24 Printing & Reproduction.....	219	0	219
25 Other Services.....	791	0	791
26 Supplies & Materials.....	679	0	679
31 Equipment.....	480	0	480
Collections Acquisition.....	100	0	100
Total	5,224	381	5,605

Analysis of Increase

Necessary Pay.....	181
Program Funds.....	200

ABSTRACT - The Arthur M. Sackler Gallery, established in 1982, and the Freer Gallery of Art, established in 1906, research, exhibit, acquire, care for, and manage collections of Asian art. In addition, the Freer contains a collection of American art by artists whose work was greatly influenced by Asian art. These two museums support complementary programs. In exhibitions, the Freer Gallery cannot lend or borrow collections, but the Sackler Gallery can exhibit its own collections as well as exhibitions organized by other

institutions. In addition, the Sackler may lend objects from its collections. Collections acquisition for the museums is coordinated so as not to be duplicative, providing the fullest possible resources for original research and exhibitions about, and preservation of, the cultural heritage of Asia.

For FY 1992, the Arthur M. Sackler Gallery/Freer Gallery of Art requests an increase of 9 workyears and \$200,000 for the Freer Gallery of Art to support the increased activity in the newly renovated collection storage and conservation spaces, to maintain a basic exhibition rotation, and more importantly, to reinstall the exhibition galleries for reopening to the public in FY 1993. The Institution requires \$181,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM:

ARTHUR M. SACKLER GALLERY - The Arthur M. Sackler Gallery opened in September 1987 as a museum of Asian arts. An active schedule of major loan exhibitions from collections in the United States and abroad complement exhibitions of art from the Sackler's growing permanent collections. The goal of the Sackler Gallery is to expand the knowledge and appreciation of works of art from Asian and Near Eastern countries and of the human and physical contexts from which works of art emerge through research, exhibitions, conservation, education, and acquisitions.

Research - One of the Sackler's major focuses, research, provides the basis for exhibitions, publications, and collections acquisitions. The research program involves both permanent curatorial and conservation staff and visiting scholars. The Sackler distributes research results to the public through lectures, symposia, collection research files, exhibition catalogues, free gallery guides, brochures, papers, and articles. Major catalogues for the "Jeweler's Eye," "Timur," and "Yokohama" exhibitions are significant examples, as well as the publication of the papers from the Sackler symposium, Investigating Artistic Environments in the Ancient Near East.

The Sackler's publications program includes a quarterly magazine, Asian Art, written for public understanding. This periodical, produced in cooperation with Oxford University Press, uses color plates and informative text to discuss various research activities, the permanent collection, recent acquisitions, and special exhibitions.

In FY 1990, conservation research concentrated on analyzing the lead isotope ratio of Chinese bronzes in the Sackler, Freer, and other collections and on extending identification methods into the field of organic colorants in East Asian paintings. As a joint effort, the Sackler and Freer galleries received a Scholarly Studies grant to study the ancient Near Eastern metalwork collections in both museums.

The Sackler Gallery attracts research scholars and has a limited program of research fellowships and internships. Recipients work closely with curators on topics related to the collections. Scholarly grant programs advance the research and education programs based on the Asian art collections and exhibitions at the Sackler.

Exhibitions - During FY 1990, ten exhibitions opened, including "The Noble Path: Buddhist Art from South Asia and Tibet," "India along the Ganges: Photographs by Raghubir Singh," "Yokohama: Prints from Nineteenth-Century Japan," "Antoin Sevruguin: Portraits from Iran, 1880-1920," and a reinstallation of ancient Chinese bronzes and jades from the permanent collection. The staff also refurbished existing exhibitions.

Future exhibitions will include those originated by the Sackler as well as some organized elsewhere and will draw from international public and private collections as well as from the Sackler Gallery collections. Many Sackler-organized exhibitions will travel to other museums and institutions. Future exhibitions include "Court Arts of Indonesia," "Challenging the Past: The Paintings of Chang Dai-chien," and "Ancient Japan: Art and Culture."

Conservation - The Sackler conservation effort includes research to understand the origin of objects and thereby better develop the proper conservation treatment of them. Expanding conservation facilities in the renovated Freer Gallery Building will also accommodate Sackler program requirements. During FY 1989 and FY 1990, the conservation laboratory staff concentrated on objects for exhibitions such as Buddhist and Tibetan sculpture and Japanese prints. Environmental control of the Sackler exhibition galleries and collection storage areas in the new Sackler Building also required attention. The Freer Gallery of Art section of this narrative discusses the East Asian painting conservation studio, which also conserves Sackler collections.

Education - Through gallery tours, school programs, hands-on tours, lectures, films, concerts, symposia, and in-gallery programs with members of the Asian community from the Washington metropolitan area, the Sackler continued to introduce and interpret Asian art and culture to its visitors. In FY 1989 and FY 1990, the Sackler developed Learning Centers in conjunction with five exhibitions. Weekday programs on Chinese calligraphy, brush painting, music, and storytelling took place in the Learning Center adjacent to "Yani: The Brush of Innocence." The Learning Center for "The Noble Path: Buddhist Art from South Asia and Tibet" had regular presentations by monks from the local Tibetan, Cambodian, Laotian, Vietnamese, and Sri Lankan Buddhist communities. These programs alternated each week with storytelling sessions. In the Learning Center attached to "Yokohama: Prints from Nineteenth-Century Japan," visitors watched video programs, sat on tatami mats to read about Japanese culture, explored how to make a woodblock print, and learned about the geography of Japan. The Sackler showed video programs Monday through Friday.

Collections Acquisition - Although the Sackler Gallery lacks Federal funding for the purchase of objects for the permanent collection, the sale of merchandise at the Sackler museum shop and funds from the Regents Collections Acquisition Program provide minimal Trust funds. The museum acquires art objects of Asia in its broadest terms, from Japan to the Near East. Objects acquired for the collections are of the highest quality in terms of aesthetic standards, cultural history, and physical condition.

During FY 1990, the Sackler Gallery acquired 35 objects by gift, purchase, and transfer. Gifts included 17 objects of Indian, Chinese, Japanese, Cambodian, and Pakistani origins. Purchases with Trust funds included 13 objects. The National Museum of Natural History transferred to the Sackler Gallery five Chinese paintings. To the study collection, 15 objects were added by purchase and gift.

FREER GALLERY OF ART - The Freer Gallery of Art, which opened in May 1923 as the first art museum building of the Smithsonian, houses an Asian collection generally acknowledged to be among the world's finest. The Freer holdings also include late 19th- and early 20th-century American art, including the world's most important collection of works by the American expatriate artist James McNeill Whistler. In addition to the program on American art, the goal of the Freer Gallery, similar to that of the Sackler Gallery, is to expand the knowledge and appreciation of works of art from Asian and Near Eastern

countries and of the human and physical contexts from which works of art emerge through research, exhibitions, conservation, education, and acquisitions. The collections and combined resources of the Sackler and Freer galleries make them an important international center for scholarly research and education in Asian art and culture.

In fall 1988, the Freer Gallery closed for a multi-million-dollar construction and renovation project that will provide underground access between the Freer and the neighboring Sackler Gallery. The renovation will:

- triple the Freer's space for art conservation and technical study;
- increase its collection storage facilities by 70 percent;
- improve the safety in public areas;
- offer greater access to visitors with mobility impairments.

Work on the gallery level and exterior will preserve the original appearance of the building, which is on the National Register of Historic Places.

The Freer is utilizing Federal funds appropriated in FY 1991 and privately raised funds to carry out the reinstallation of the 19 exhibition galleries. These funds, which total \$3.0 million (1/2 Federal and 1/2 privately raised), provide for permanent moveable casework, architectural millwork including object bases and pedestals, lighting control devices, gallery carpeting, special lighting equipment and materials, mounts and supports for objects, label typesetting and screen-printing, illustrations and other graphics, frames for paintings needing physical protection, temporary installation support staff, and security devices.

During the renovation, research and plans for future exhibitions, conservation, education, and acquisitions continue. Collection items are available for study by appointment. The library, shared with the Sackler Gallery, houses approximately 47,000 collection-related volumes and is open to the public for reference.

Research - The Freer and Sackler galleries share research and support facilities and staff. These combined resources serve as an international center for education and advanced scholarship in Asian arts and culture. Curators show the results of these efforts through publications and educational programs. The collections, curatorial and conservation staff, technical conservation laboratories, and the joint library and archives serve the research facilities.

Although the research results are most visible in exhibitions, the Freer disseminates additional research results to the public through collection research files, lectures, and published papers and books. These activities continue even though the renovation has closed exhibition galleries to the public. For example, the Freer staff is currently revising an important Freer catalogue, Chinese Figure Painting, first published in 1973 and now out of print. The research staff has just published a volume entitled An Ideal Country: Paintings by Dwight William Tryon. The Freer holds the world's largest collection of this American artist.

Exhibitions - During FY 1989 and FY 1990, while the exhibition galleries were closed to the public, staff were planning for the reopening in FY 1993. Ongoing research on Charles Lang Freer and the history of the Freer Gallery will provide significant information for these exhibitions. The reopening exhibitions will include the finest pieces in the Freer's Asian and American collections. While the architectural integrity

of the exhibition space remained unchanged, newly refurbished exhibition galleries will offer curators abundant opportunities to present thematic, changing exhibitions drawing on various aspects of the collections. The founder's stipulation that the Freer not display works from outside the collections or lend objects to other institutions will remain.

Conservation - The Department of Conservation and Scientific Research staff perform object conservation and analysis. Beyond their roles as restorers and caretakers, staff members engage in primary research using scientific methods and technical equipment to learn about manufacture dates, geographic origins, and materials. Conservation specialists, trained in traditional Japanese and Chinese methods, repair and remount Asian paintings.

During the Freer renovations, primary concerns are conserving and storing objects and preparing exhibits for reinstallation. Controlling environmental conditions in the temporary storage areas in the Freer Gallery Building during this period requires continuous monitoring by the conservators.

Besides the work related to preserving collections and reopening exhibitions, the East Asian painting conservators look forward to a future program that will train American conservators in East Asian conservation techniques. This program will alleviate the critical shortage in the United States of persons skilled in this specialized field. There are only three facilities in the United States that can restore and mount rare Far Eastern paintings and screens, and these facilities concentrate primarily on works for their respective museums. Object conservators will also use the expanded Technical Laboratory for training purposes.

Education - Each academic year, leading scholars from the Freer and elsewhere, present illustrated lectures on Asian and American art. During FY 1989 and FY 1990, the Freer staff carried out a wide range of research and scholarly activity that was available to the public through educational programs such as lectures. When the Freer reopens, educational materials available in the exhibition galleries will include a free introductory brochure for the visually impaired; free exhibition leaflets introducing various aspects of the Freer collections; and docent-led tours. The education staff is developing educational activities and new plans and programs for the reopening.

Collections Acquisitions - In FY 1990, the Freer Gallery acquired seven objects that complement the existing collection and are of the highest quality in terms of aesthetic standards, cultural history, and physical condition. The Freer acquired the objects by purchase, by gift, and by purchase/gift combination. These included Indian metalwork, Chinese calligraphy, and a piece of Chinese furniture.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the Arthur M. Sackler Gallery/Freer Gallery of Art requests an increase of 9 workyears and \$200,000 for the Freer Gallery of Art to support the increased activity in the newly renovated collection storage and conservation spaces, to maintain a basic exhibition rotation, and initially, to reinstall the exhibition galleries for reopening to the public in FY 1993.

Staffing for the Reopening (9 workyears and \$200,000) - The Freer Gallery Building renovations will triple the space available for art conservation and technical study and increase collection storage facilities by 70 percent. The Freer will require additional

staff initially, to reinstall the exhibition galleries, to accommodate the increased activity in the new spaces, and to maintain a basic exhibition rotation.

The Freer needs nine positions to reopen, including four building management positions to clean and maintain non-exhibit space. Two art-handling specialists will strengthen the physical care and management of the Freer collections both in storage and on exhibition. Three exhibition specialists will, along with existing staff, prepare the opening exhibitions and maintain the modest changing exhibition program currently envisioned for the Freer. The requested positions will also permit flexibility needed to develop affirmative action training programs.

Greater resources will enable the Freer to maintain a basic exhibition program and to have active collection storage areas where on-going research and study of collections by both scholars and the general public can be assured. Students, scholars, and the public will benefit from new presentation and availability of an extraordinary collection of Asian and American art.

NONAPPROPRIATED SOURCES OF FUNDING:

ARTHUR M. SACKLER GALLERY:

Unrestricted General and Special Purpose Funds - Annual allotments to the Arthur M. Sackler Gallery provide funds to defray the costs of some special events associated with the opening of new exhibitions, cover the travel costs for members of the Sackler's Visiting Committee, and provide funds for the staff to do business. The proceeds from sales of Sackler items in the Sackler museum shop help support the purchase of acquisitions, the publication of exhibition catalogues and gallery guides, and the operation of the Sackler museum shop.

Restricted Funds - These funds are contributions in the form of grants and gifts from individuals, foundations, organizations, or corporations for specific purposes. A major grant from a Japanese pharmaceutical company, for example, sponsored the exhibition "Yokohama: Prints from Nineteenth-Century Japan."

FREER GALLERY OF ART:

Unrestricted General and Special Purpose Funds - Annual allotments to the Freer Gallery of Art provide funds to defray the costs of some special events associated with the opening of new exhibitions, cover the travel costs for members of the Freer's Visiting Committee, and cover staff costs to do business. These funds also support the position of historian for the Freer and Sackler galleries. The proceeds from sales of Freer items in the Sackler museum shop help support the purchase of acquisitions, the publication of exhibition catalogues and gallery guides, and the operation of the Sackler museum shop.

Restricted Funds - These funds are contributions in the form of grants and gifts from individuals, foundations, organizations, or corporations for specific purposes.

The major portion of the nonappropriated Trust funds for the Freer comes from the Charles Lang Freer bequest that restricts their use. The funds help finance the Freer's professional curatorial staff, administrative staff, acquisitions for the collections and library, maintenance of the Freer's courtyard, and operation of the Freer museum shop. Funds from the Harold Stern Memorial Endowment support scholarly research in the field of Japanese art. Funds from the Forbes Endowment support research in conservation.

ARCHIVES OF AMERICAN ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	18	1,012	-	96	-	33	-	1,205	-	-
FY 1991 Estimate	23	1,177	-	98	-	-	19	1,762	-	-
FY 1992 Estimate	23	1,254	-	98	-	-	19	1,556	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	23	0	23
11 Personnel Compensation.....	766	61	827
12 Personnel benefits.....	161	16	177
21 Travel.....	22	0	22
22 Transportation of Things.....	2	0	2
23 Rent, Communications & Utilities.....	21	0	21
24 Printing & Reproduction.....	20	0	20
25 Other Services.....	115	0	115
26 Supplies & Materials.....	20	0	20
31 Equipment.....	50	0	50
Total	<u>1,177</u>	<u>77</u>	<u>1,254</u>

Analysis of Increase

Necessary Pay.....	77
Program Funds.....	0

ABSTRACT - The Archives of American Art (AAA), a national research repository with regional centers in New York, Boston, Detroit, San Francisco, and Los Angeles, has the world's largest collection of archival materials relating to the history of American visual arts, including documents, photographs, works of art on paper, and tape-recorded oral and video interviews. The Archives houses original materials in Washington, D.C., and makes microfilm copies of many materials available in the regional centers and through national

and international interlibrary loans. The Archives seeks out, collects, and preserves original materials for study by scholars, students, curators, collectors, and others interested in the history of art and encourages research in American art and cultural history through publications, symposia, lectures, and other public programs.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Archives of American Art. The Institution requires \$77,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Archives of American Art encourages the study of American art and cultural history by collecting, preserving, and making easily accessible for research the primary source materials that are essential to the interpretation and documentation of the arts in America.

Collections Development - In calendar year 1989, the Archives added 121 new groups of papers (approximately 275,000 documents comprising more than 275 cubic feet of original source materials) to its collections. Among these papers are the gallery records of the art dealer Boris Mirski (1898-1974), whose accounts included post-World War II Expressionists Leonard Baskin and Mitchell Siporin, among others; the Makler Gallery (Philadelphia) records, which document the gallery's work with Milton Avery and George Rickey; and the Sande Webster Gallery, a major exhibitor of African-American artists founded in Philadelphia in 1969.

Other papers acquired include those of the painter Edmund C. Tarbell (1862-1938), a Boston Impressionist and head of the Corcoran School of Art from 1917 to 1922; Florence Arquin (1900-1974), a painter, photographer, educator, and writer, with significant material on her lifelong friends Diego Rivera and Frida Kahlo; the art historian William I. Homer (b. 1929) with correspondence to and from many figures in the art world including Ansel Adams, Peggy Bacon, Thomas Hart Benton, Lyonel Feininger, and Georgia O'Keeffe; and eight Winslow Homer (1836-1910) letters. From the West Coast, the Archives acquired four collections documenting California art history during the first half of the 20th century: records of the California Art Club and of the Los Angeles Art Association, personal papers of the painter Francis de Erdely (1904-1959), and a Sonia Wolfson scrapbook.

The Archives conducted 37 oral history interviews during 1989, adding to its collections invaluable information on artists Sam Gilliam, Duane Hanson, Ellsworth Kelly, Rockne Krebs, Faith Ringgold, and Carlos Villa as well as on the art historian and scholar Agnes Martin.

Collections Management - The Archives uses contracted services to conserve, restore, and stabilize fragile or deteriorating documents. Work in process or completed this year includes restoration of a sketchbook by the African-American painter William H. Johnson and a Peggy Bacon drawing of Louis Bouche. Restored photographs include ones of John Marin by Kay Bell Reynal; Maurice Prendergast by Gertrude Kasebier; Charles Sheeler, Edward Steichen, and John Marin by Musya Sheeler; and Gertrude Vanderbilt Whitney by Amemiya.

Microfilming makes material readily available throughout the country and preserves original documents by precluding the need for handling. The Archives continues to microfilm papers on an established priority basis and during the past 12 months completed microfilming 72 collections, producing 148 reels of microfilm--an estimated 177,600 images. In addition, through its Philadelphia Documentation Project, the Archives produced another 38 rolls of microfilm of important collections in Philadelphia institutions.

Research - The Archives' collections are now so extensive that it is impossible to do serious research in American art history without reference to its resources. From April 1989 to April 1990, the research centers across the country received approximately 3,355 visits. Scholars, students, curators, writers, collectors, dealers, and publishers studied 9,927 rolls of microfilm and/or oral history transcripts and original collections. Users borrowed an additional 1,880 rolls of microfilm through the Archives' interlibrary loan program. Staff in the regional centers also responded to more than 900 inquiries and conducted more than 100 tours of and orientations to the Archives' program. More than 200 books, exhibition catalogues, articles, and dissertations published or compiled during the year have used the resources of the Archives.

Public Programs - In FY 1990, the Archives' professional staff lectured and participated in symposia and panel discussions. The Archives also organized and sponsored a panel discussion on "Art, Politics and Democracy" in San Francisco and a symposium in Detroit titled "Roses, Too: Sixty Years of Labor Art Programs." In addition, its scholarly seminars on American art studies continued in Washington, D.C.

The Archives published Art-Related Archival Materials in the Philadelphia Region, a guide that grew out of the first part of the Philadelphia Documentation Project, 1984-1989. The Archives also published booklets on the Walter Pach Papers and the Niles Spencer Papers in conjunction with two exhibitions at the New York Regional Center's document gallery. The Archives organized the Niles Spencer exhibition in cooperation with the Whitney Museum of American Art, which concurrently held a retrospective exhibition of Spencer's paintings at its branch in the Equitable Center.

Finally, the Archives lent numerous documents to exhibitions at, among others, the Musee d'Art Moderne in Paris, the Jane Voorhees Zimmerli Art Museum at Rutgers University, the M.H. deYoung Memorial Museum in San Francisco, and the Pennsylvania Academy of the Fine Arts in Philadelphia.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Provided through annual allotments, these funds defray costs associated with special events, supplement travel expenses incurred by the Archives' Board of Trustees, and provide partial support for general operating costs.

Restricted Funds - Fund-raising activities, gifts, foundation and corporate grants, the Board of Trustees, and a membership program generate funds for the Archives. A substantial portion of this income supports the Archives' general operating expenses, its oral history program, and its publications program.

Special programs supported by foundation and corporate funding include the Philadelphia Documentation Project underwritten by the Pew Charitable Trusts, the retrospective cataloguing and automation project underwritten by the J. Paul Getty Trust and the Andrew W. Mellon Foundation, and national collecting projects underwritten by the Henry Luce Foundation. A major grant from the Brown Foundation as well as income from the Wellin-Taubman Reserve Fund established in 1986 by the Archives' Board of Trustees also help underwrite the costs of general operations.

COOPER-HEWITT MUSEUM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	28	1,511	18	913	7	1,520	1	689	-	10
FY 1991 Estimate	35	1,816	18	940	1	1,075	1	450	-	-
FY 1992 Estimate	35	1,993	17	888	1	1,083	1	266	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	Base FY 1991	Proposed Adjustments	Est. FY 1992
FTE Allocation.....	35	0	35
11 Personnel Compensation.....	880	154	1,034
12 Personnel Benefits.....	111	23	134
21 Travel.....	4	0	4
23 Rent, Communications & Utilities.....	30	0	30
24 Printing & Reproduction.....	50	0	50
25 Other Services.....	463	0	463
26 Supplies & Materials.....	200	0	200
31 Equipment.....	78	0	78
Total	<u>1,816</u>	<u>177</u>	<u>1,993</u>

Analysis of Increase

Necessary Pay.....	177
Program Funds.....	0

ABSTRACT - The Cooper-Hewitt National Museum of Design, located in New York City, explores both the processes and the products of design. It examines the influence objects have on daily life--how they shape and are shaped by culture. The design concerns of the Museum are varied, including urban planning, architecture, industrial design, landscape design, interior design, textiles, fashion, theater arts, advertising, graphic arts, and crafts. The National Museum of Design encourages "good design," explains the design processes, fosters discussion in related fields, and facilitates the dialogue between audience and designer.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Cooper-Hewitt Museum. The Institution requires \$177,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - Cooper-Hewitt is the only museum in the country devoted exclusively to historical and contemporary design. The Museum pursues its mission through exhibitions; publications; provisions for collections study, research, and display; and educational programs for professionals and the public.

Exhibitions - Highlights of Cooper-Hewitt's exhibition schedule reflect the Museum's efforts to achieve a balance between historical and contemporary subjects and explore social issues relating to design. FY 1990 began with the exhibition "The Intimate World of Alexander Calder," comprised of personal works by the sculptor for family and friends. Countless items, including household utensils, furniture, toys, jewelry, wire sculpture, miniature mobiles, and stables, demonstrated how the artist "designed" every corner of his personal universe. "Color, Light, Surface: Contemporary Fabrics" focused on textiles of the last decade, particularly innovative works involving surface effects and color, new fibers, chemically altered fibers, weaving and dye techniques, and the effects of light on textile surfaces. Organized in cooperation with Guiding Eyes for the Blind, Inc., "The Doghouse" presented amusing architect-designed doghouses in the Museum's garden. The project took a playful approach to serious design issues for the blind and accessibility for audiences with any type of disability. "FLORA DANICA and the Heritage of Danish Porcelain, 1760-1990" consisted of more than 150 distinctively styled and painted porcelain pieces and placed the 1790 "Flora Danica" table service in the context of the artistic and cultural development of Danish porcelain.

In the spring of 1991, Cooper-Hewitt will open the first major exhibition devoted to its permanent collections. On view for more than a year, "The Cooper-Hewitt Collections: A Design Resource" will address the history and identity of Cooper-Hewitt, the uniqueness of its collections, and its strengths and idiosyncrasies. The Museum raised \$275,000 for this exhibition. Future exhibitions will also present the work of 20th-century industrial designer Donald Deskey, 20th-century Czech architecture and design, the computer as a design tool, and design for special audiences. As a contribution to the Columbus Quincentenary celebrations, the Museum has planned an exhibition on global imagery, the process of mapping, and the age of exploration.

Publications - Cooper-Hewitt publishes exclusively with privately raised funds. In FY 1990, the Museum published four free brochures, one to accompany each major exhibition, a new effort for Cooper-Hewitt. The Museum produced Housing: Symbol, Site, Structure, the last edition in its noted Immovable Objects series dealing with large-scale design issues. In progress is a collection of articles dealing with basic conservation and collections care issues, originally published by the Museum for the New York Conservation Consultancy and available free of charge to other museums, historical societies, and nonprofit organizations. In early FY 1990, Cooper-Hewitt completed the three-year drive to raise \$400,000 in matching funds to establish the Andrew W. Mellon Fund, a permanent endowment for scholarly research and publication.

Collections Activity - In FY 1990, Cooper-Hewitt enhanced its permanent collection with the acquisition of 854 objects. The most notable were a group of about 20 articles of furniture, lighting, and other furnishings designed by leading French designers in the late 1980s, manufactured and donated by the firm V.I.A.; ten designs for Faience tiles, by the French firm Sarreguemines et Cie; interior designs by Joseph Urban (1928) and Tom

Ellis (1933); and a French furnishing fabric designed in 1925 by Edward Benedictus. Various designers and manufacturers donated, in connection with "Color, Light, Surface," a large group of contemporary fabrics. Cooper-Hewitt is probably the only museum in the world to collect such fabrics.

During the same period, the Museum lent 139 objects to 50 museums and borrowed 1,315 objects. In preparation for outside loans and for use in exhibitions, the Museum's two conservators treated more than 300 pieces. Approximately 300 scholars, private individuals, designers, and corporate interests visited the collections for research purposes. Visitors included the Society of Jewelry Historians; Lighthouse for the Blind; Jack Lenor Larsen Design; Schumacher & Co.; Proctor & Gamble; Ralph Lauren Co.; Scalmandre; Liz Claiborne, Inc.; the Finnish designer Markku Piri; Women's Wear Daily; Elle Decor; Metropolitan Home; and many representatives from museums around the world. The Museum initiated, with Fieldcrest Mills, a series of bed linens based on textiles in the collection. The specialized research library, which complements the collection, saw heavy activity, with 758 visitors using approximately 7,000 volumes. The Museum also took a first step in making the permanent collections more visible to its audience by establishing a permanent acquisition gallery, which presents changing exhibitions of recent acquisitions.

Educational Programs - The Museum served approximately 6,000 adults this year with a wide range of lectures, courses, symposia, workshops, and tours. In FY 1990, Cooper-Hewitt successfully initiated programs for children in connection with the Calder exhibition. From having previously offered no children's programming at all, Cooper-Hewitt, through grants from the Smithsonian's Special Exhibitions Fund, the Helena Rubinstein Foundation, and the Andy Warhol Foundation for the Visual Arts, served nearly 7,000 school children during the run of this show. Moreover, with funding received from the New York State Council on the Arts, the Museum held two beneficial panel discussions with educational consultants to help develop additional children's programming. The Museum also expanded exhibition interpretation programs with special tours developed for blind and visually impaired audiences.

Other outreach efforts included "Nueva York Tropical," a series of free lectures and outdoor concerts that examined the influence of Hispanic Caribbean traditions on many New York neighborhoods. Supported by the Smithsonian's Educational Outreach Fund, the series explored how rural folk forms are transplanted to an urban setting through crafts, music, dance, and the vernacular architecture in buildings such as casitas. The Museum plans to offer three Career Days to New York City region public high school students in the fall, through which students will be in contact with professional designers and architects. One Career Day will specifically focus on the ways in which design addresses social issues by introducing students to architects and public agencies working to create housing for the homeless.

The first academic degree-granting program ever offered by the Smithsonian, the Cooper-Hewitt/Parsons School of Design Graduate Studies Program in the History of European Decorative Arts, is an accredited two-year master's program providing invaluable training for professional, curatorial, and educational positions. This year there were ten students in the graduating class, the seventh since the program's inception in 1982.

Research - In addition to exhibition-related work, collections-based research of note includes the cataloguing and study of 250 pieces of Post-Revolutionary Soviet porcelain; the history of 1,500 Frederick Church drawings and oil sketches and his use of photography

as a source of inspiration; the continued study of new manufacturing processes used in contemporary fabrics; and the study of British and American textile producers of the early 20th-century.

Established to advance the understanding of design and decorative arts as it encourages and supports a promising young scholar, the Peter Krueger-Christie's Fellowship provides a stipend for a one-year period and a travel allowance for research at Cooper-Hewitt. Named in FY 1990, the first Fellow will conduct research on the 20th-century industrial designer Henry Dreyfuss.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - The Museum obtains these funds from a variety of sources, including museum shop sales, product development, individual and corporate memberships, admission fees, donations, fund-raising events, and annual allotments.

Restricted Funds - Designated for specific purposes, these funds derive from grants, bequests, and donations from individuals, organizations, and corporations. In FY 1990, significant gifts funded exhibitions such as "Color, Light, Surface," sponsored by the BASF Corporation; "FLORA DANICA," which was endorsed by Royal Copenhagen; "Drawings by Francesco and Carlo Bibiena," supported by the Arthur Ross Foundation; and "Mondo Materialis," supported by the Steelcase Design Partnership and its member companies. Cooper-Hewitt received funds for exhibitions in planning stages from the J. M. Kaplan Fund for "The Cooper-Hewitt Collections: A Design Resource" and from Mrs. Donald Deskey for an exhibition of the late designer's work. The Museum also received funding for educational and research programs. The Helena Rubinstein Foundation, in conjunction with the Calder exhibition, helped initiate children's programming. Mr. and Mrs. Harvey Krueger and Christie's, Inc. helped establish the Museum's first major research fellowship. The Overbrook Foundation and other donors provided invaluable assistance in achieving the three-year drive to match the Andrew W. Mellon Foundation Challenge Grant. Private support for acquisitions came from the Charles E. Sampson Memorial Fund and the annual Decorative Arts Association benefit (with the help of donors such as Mr. and Mrs. John Marion, Edward Lee Cave, Sotheby's, Mrs. Karen Johnson Boyd, Mr. and Mrs. A. Alfred Taubman, and an anonymous donor).

Government Grants and Contracts - Various government agencies and departments provide these funds for specific program support. The Museum annually seeks funding from the New York State Council on the Arts (NYSCA) for exhibition support and other programs. In FY 1990, NYSCA supported educational programming for children, planning for "The Cooper-Hewitt Collections: A Design Resource," a management study, and cataloguing of the Shapiro Collection of Soviet Porcelain.

NATIONAL MUSEUM OF AFRICAN ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	50	3,473	1	44	-	385	-	23	-	-
FY 1991 Estimate	58	3,719	1	61	-	43	-	47	-	-
FY 1992 Estimate	58	3,891	1	61	-	42	-	32	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	58	0	58
11 Personnel Compensation.....	1,770	136	1,906
12 Personnel Benefits.....	374	36	410
21 Travel.....	45	0	45
22 Transportation of Things.....	40	0	40
23 Rent, Communications & Utilities.....	11	0	11
24 Printing & Reproduction.....	135	0	135
25 Other Services.....	700	0	700
26 Supplies & Materials.....	375	0	375
31 Equipment.....	139	0	139
Collections Acquisition.....	130	0	130
Total	<u>3,719</u>	<u>172</u>	<u>3,891</u>

Analysis of Increase

Necessary Pay.....	172
Program Funds.....	0

ABSTRACT - The National Museum of African Art (NMAfA) is the only museum in the United States devoted solely to the collection, preservation, research, exhibition, and interpretation of the visual arts of sub-Saharan Africa. Although the Museum's primary emphasis is on the traditional cultures of the sub-Saharan region, it also studies and exhibits the arts of the entire continent. While the Museum's programs have their basis in the aesthetics of traditional African art, the Museum cooperates with organizations

whose purposes complement and illuminate the art and cultures of Africa and enhance the visitor's experience and understanding.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the National Museum of African Art. The Institution requires \$172,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The National Museum of African Art educates and instills an appreciation for the cultures and visual arts of Africa. Staff accomplish these goals through the acquisition and care, research, exhibition, and interpretation of works of art of African history, cultures, and aesthetics.

Collections Acquisitions - The Museum acquired 17 important works of art in FY 1990. As creative cultural expressions, three of these sculptures are exceptional historically, technically, and aesthetically. A rare wooden throne from the Hehe peoples of Tanzania augmented the Museum's East African holdings, a region whose art traditions are often neglected. A figurative cast bronze ceremonial ring, from the Yoruba peoples of Nigeria, dating possibly as early as the 14th century is one of 11 known in the world. A power figure from the Teke peoples of the Republic of the Congo collected in the 1930s is a remarkably preserved and unusual conception in wood with additions of impacted clay and sand ritually applied to ensure the object's efficacy.

Collections Management - The Museum successfully implemented a state-of-the-art storage system for the permanent textile collection in FY 1990. Inventory, condition reports, conservation treatment, and organization of storage units for this collection of 600 textiles ensure its preservation and provide for future growth.

In FY 1990, the Museum enhanced its ability to access automated collection records with the development of both a registrarial and a curatorial data base. The Museum also initiated the installation of an IBM local area network in FY 1990. In preparation for downloading about 7,000 records from the Selgem/Honeywell system to the IBM local area network, the Museum reconciled the old Selgem data fields and the curatorial data base. Conservation laboratory research and development conducted in FY 1990 provided the Museum with a comprehensive survey of the indigenous characteristics of the Museum's collections of West African ironwork, Benin bronzes, and Central African ceramics. These data will determine appropriate conservation treatments that will begin in FY 1991.

Research - The Museum's famous Benin bronze collection was the subject of an article on conservation analysis results published in FY 1990 in volume 124 of the Materials Research Society Symposium Proceedings. Two FY 1990 publications grew out of scholarly symposia organized by the Museum in 1987 and 1988: African Art Studies: The State of the Discipline includes revised and expanded research papers on the history and the future of African art studies; History, Design, and Craft in West African Strip-Woven Cloth includes current scholarly field research on strip-weaving traditions. Continuing its commitments to both scholarly research and public exhibition, the Museum's curatorial staff advanced its research on the permanent collections of Central African pottery, African utilitarian art forms, and the life and catalogue raisonné of works by the Nigerian master carver, Olowe of Ise.

American scholars have seldom studied the aesthetic of African nomads, yet 25 percent of African populations are pastoral. Museum research in progress in FY 1990 focused on

the development of a film on the art and architecture of an African nomadic people, the Gabra of Kenya. The completed film will be ready in FY 1991 for educational use.

The Eliot Elisofon Photographic Archives, a major research resource in African art, history, and culture, strengthened its historical holdings. In FY 1990 the most important Archives acquisitions were a collection of more than 400 vintage postcards of Africa documenting costume, architecture, sites and celebrations, ca. 1914-40, and a collection of 34 images documenting the 1943 funerary celebration of a paramount chief in Abuakwa, Ghana. Archives staff continued duplicating and housing original images.

Exhibitions - Among the ten exhibitions on view or in preparation during FY 1990 was "Icons: Ideals and Power in the Art of Africa." This major international loan exhibition explored how African peoples depict five iconic representations symbolic of power and expressive of shared cultural ideals. The sculptures, including works from the Museum's collection, ranged from the 11th to the late 20th centuries. Three films shot on location in Africa for the Museum further illuminated this exhibition.

"Yoruba: Nine Centuries of African Art and Thought," a touring loan exhibition, included 17 archaeological masterpieces from Nigerian museums in Ife and Lagos. Nigeria's National Commission for Museums and Monuments made possible the archaeological loans. The director general of the Commission attended the Washington opening gala and participated in discussions with the Museum's staff.

The exhibition, "Africa Illustrated: Fantasy and Reality before 1900," is a project jointly undertaken by the Museum and the National Museum of African Art Branch of Smithsonian Institution Libraries. In late FY 1991, the staff will install this exhibition in the newly created gallery space reserved for small-scale, innovative, and experimental projects.

Major new permanent installations from the Museum's collection include exhibitions of Central African pottery and of utilitarian objects.

Publications - In FY 1990, the Museum published (in conjunction with the Smithsonian Institution Press) Icons: Ideals and Power in the Art of Africa, an in-depth study of African art that complements the exhibition of the same name. Other books in preparation, based on the Museum's permanent collection, are The Art of the Personal Object and Purpose and Perfection: Pottery as a Woman's Art in Central Africa.

Education - The Museum educates the public about African art through its interpretive programs, including tours, outreach, school and teacher training programs, and symposia and seminars. In FY 1990, staff emphasized documentary, ethnographic, and feature films as well as videotapes to enhance understanding of the contexts of African art. The FY 1990 film series and panel discussions on "African Reverberations: Films about Africa and the New World" effectively explored the complex ties that bind African and African-American creativity and cultures. Films produced by the Museum complement its exhibitions as important educational tools, and the staff use these films well beyond the life of an exhibition.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds come from the Museum's share of net proceeds from the museum shop, courses conducted in cooperation with

Washington metropolitan area public education institutions, and allotments. NMAfA uses these funds to provide additional support for the Museum's education and collections acquisition programs, exhibition openings, publications, and travel costs associated with the Museum's commission meetings. An allotment also supports the salary costs of one employee. In FY 1990, a grant from the Women's Committee of the Smithsonian National Associates Program funded the development of educational materials and programs for the hearing impaired and the deaf. Funds are available from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program, Research Opportunity Fund, and Special Exhibition Fund to support research, education, and exhibition projects.

Restricted Funds - Individuals, foundations, organizations, and corporations contribute these funds in the form of grants and gifts for specific purposes. The Museum receives income from a collections acquisition endowment established in FY 1988. A grant from the Shell Oil Company Foundation received in FY 1989 will support costs for one academic internship and the Museum's Film Series Program. A generous pledge over a five-year period, begun in 1988, augments the Museum's Federal publications funds. A grant from the James Smithson Society supplemented Federal funds to make possible the acquisition of a power figure from the Teke peoples of the Republic of the Congo.

ANACOSTIA MUSEUM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	16	960	1	43	-	32	-	1	-	-
FY 1991 Estimate	21	1,159	1	57	-	-	-	-	-	-
FY 1992 Estimate	21	1,217	1	57	-	-	-	-	-	-

* FTE = Full-time equivalent
 **FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	21	0	21
11 Personnel Compensation.....	564	47	611
12 Personnel Benefits.....	108	11	119
21 Travel.....	5	0	5
22 Transportation of Things.....	10	0	10
23 Rent, Communications & Utilities.....	5	0	5
24 Printing & Reproduction.....	79	0	79
25 Other Services.....	194	0	194
26 Supplies & Materials.....	42	0	42
31 Equipment.....	152	0	152
Total	<u>1,159</u>	<u>58</u>	<u>1,217</u>

Analysis of Increase

Necessary Pay.....	58
Program Funds.....	0

ABSTRACT - The Anacostia Museum is a national resource on African-American history and culture. The Museum's exhibitions, scholarly and applied research, historical documentation, and interpretive and educational programs offer scholars and the public the opportunity to study the history of black America from a unique cultural perspective. The Anacostia Museum, a community-based entity, reaches out to nontraditional audiences.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Anacostia Museum. The Institution requires \$58,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Anacostia Museum focuses on research, collections, interpretation, publications, and exhibitions pertaining to African-American contributions to science, history, art, and culture and to contemporary urban issues. The Museum is viewed as a national prototype as well as a primary resource for materials of African-American history and culture.

Research - During FY 1990, the Museum continued research on the following exhibitions:

- "To Achieve These Rights: The Struggle for Equality and Self-Determination in the District of Columbia, 1791-1991" is scheduled to open in FY 1992. Commemorating the bicentennial of the founding of the District of Columbia, the exhibition will examine the struggle by African Americans to secure equal rights in the Nation's Capital. It will focus on how the laws of Congress and the District of Columbia have affected the political and social standing of African Americans and their struggle to change the laws.
- "Contemporary African American Communities Project" will explore African-American communities from Latin America, North America, and the Caribbean as represented in the Washington, D.C. area. The project began with a program "Africa in Brazil: Cultural Politics and the Candomble Religion."

Collections - The Museum enhanced its collections with 10 gifts from a number of individual collectors including fine art, videotapes, literature, and archeological artifacts. Anacostia has formulated and implemented its collection accession procedures policy. The Museum has processed 520 items under this policy, which includes gifts, purchases, and loans (to and from other institutions). The Museum is placing increased emphasis on collection preservation and accessibility, with plans to pursue a climate controlled storage area.

Interpretation - The Museum presented a wide variety of interpretive programs in the arts during the exhibition "Whose Art Is It, Anyway? The Arts in Public Places." Some of the offerings included workshops in theater, dance, clothing decoration, instrument making, and ceramics. The Museum presented performances (in cooperation with the D.C. Art Works) of such youth groups as the Duke Ellington Band, New Visions Dance Company, and Everyday Theater. The Outdoor Learning Center's George Washington Carver Nature Trail opened in July 1990. Its mission is to encourage a greater appreciation of the environment among African-American youth residing in urban areas. Summer workshop classes associated with the Nature Trail have been booked to capacity.

Publications - In the winter of 1991, the Museum will publish a directory of organizations and institutions that offer programs and information about African-American community life in the Metropolitan Washington area.

In the spring of 1990, the Museum published the first issue of the Newsletter of the Anacostia Museum, a quarterly publication.

"Arts in Public Places," an audio-visual production, presents a variety of the performers available to the public everyday. A film entitled "The Black Church: A Case

for Historical Preservation" is currently under production. The film will examine preservation efforts by a variety of black churches.

Future publications will focus on the struggle to achieve equal rights in the District of Columbia and on African-American communities in the Western hemisphere. The Museum will also publish a catalogue of the exhibit "Whose Art Is It, Anyway? The Arts in Public Places." The catalogue documents community outreach efforts underlying the development of the innovative exhibit and presents highlights of the program. The Museum anticipates a reprint of the children's publication, "A Walking Tour of Old Anacostia," and seeks funding for a catalogue on the artists of "Gathered Vision."

Exhibitions - "Whose Art Is It, Anyway? The Arts in Public Places," an interactive exhibit, which opened in July 1990, to a record breaking attendance, investigates the visual and performing arts in public places. As part of the Museum's mission to explore urban issues, the exhibit and accompanying forum examine decision-making processes for the placement of public art in urban communities.

"Gathered Vision: Selected Works of African American Women Artists" opened November 18, 1990. The exhibit presents the creative efforts of 15 individuals in the Washington area.

Special Projects - The Museum has convened a series of Community Roundtable Discussions with participants from the Museum's staff, Board of Directors, Smithsonian Institution central administration, community activists, historians, staff representatives of other museums. These Community Roundtables will assist Anacostia Museum's administrators in the development of a planning document for the Museum's expansion to facilities at the Poplar Point site.

In collaboration with the Smithsonian Museum Shops, the Anacostia Museum opened a new museum shop during FY 1990. It offers a variety of merchandise related to the Museum exhibits and collections, as well as items representing the diverse history and culture of African Americans.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - An annual allotment supports the salary and benefit costs of an exhibit specialist. The exhibit specialist is responsible for the fabrication of all exhibition components and the construction of special packing crates for traveling exhibitions. Additional funds derived from donations and exhibition rentals purchase supplies and materials to support the Anacostia Museum's programs.

Restricted Funds - These are gifts that organizations and individuals have designated to support specific Anacostia Museum programs.

CONSERVATION ANALYTICAL LABORATORY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	39	2,530	-	-	-	79	-	18	-	-
FY 1991 Estimate	42	2,658	-	-	-	25	-	-	-	-
FY 1992 Estimate	42	2,780	-	-	-	25	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	42	0	42
11 Personnel Compensation.....	1,589	102	1,691
12 Personnel Benefits.....	262	20	282
21 Travel.....	55	0	55
25 Other Services.....	438	0	438
26 Supplies & Materials.....	130	0	130
31 Equipment.....	184	0	184
Total	<u>2,658</u>	<u>122</u>	<u>2,780</u>

Analysis of Increase

Necessary Pay.....	122
Program Funds.....	0

ABSTRACT - The Conservation Analytical Laboratory (CAL) located at the Museum Support Center in Suitland, Maryland, is the Smithsonian's specialized research facility for the conservation and technical study of museum objects. CAL helps the Smithsonian and other museums in the study, preservation, and conservation of objects of artistic, scientific, cultural, and historical importance. CAL staff examines the conservation-related properties of these materials, extracts historical information from their technical record, and improves conservation treatment technology. Staff conservators apply the knowledge gained from scientific research directly to the actual treatment of objects. Experience with a wide range of materials and expertise in analytical and technological studies enables CAL to engage successfully in collaborative research with anthropologists and art

historians. The wide variation in the state of preservation of objects in the National Collections provides the overview needed to define directions in conservation research. CAL also conducts a conservation training program that includes basic and advanced conservation training, supports and organizes workshops and seminars, and disseminates the latest knowledge in the field of conservation and cultural materials research to museums and research professionals throughout the United States and the world.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Conservation Analytical Laboratory. The Institution requires \$122,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Conservation Analytical Laboratory's major programs are archaeometry, conservation research, conservation training, and technical information. These programs, while distinct, share methodologies and requirements for equipment and staff expertise. Their integration within CAL brings a strong mutual, positive reinforcement.

Archaeometry - In this program, physical and natural scientists collaborate with scholars from the arts and humanities to address questions of an art historical or archeological nature. A number of techniques used in these programs require specialized facilities that CAL, through collaborative agreements, operates at the National Institute of Standards and Technology (NIST).

In FY 1992, research on 19th-century paintings by selected American artists, using various technical means including autoradiography, culminated with the preparation of a technical section for the Albert Pinkham Ryder exhibition. This exhibition opened at the National Museum of American Art (NMAA) and will subsequently travel to New York and London. CAL and NMAA jointly organized a national symposium on technical studies in American painting. With funding support from the Samuel H. Kress Foundation and the James Smithson Society, CAL expanded its facilities for autoradiography at the NIST research reactor. CAL staff can now increase the number of paintings studied in collaborative projects with other institutions.

Biogeochemical research at CAL resulted in successful protocols for isolating and identifying immunoglobulin and DNA from archeological skeletal material. This research potentially opens the way to studies of exposures to specific diseases and of genetic relationships in ancient humankind.

As a result of the increased focus on collaborative efforts with Latin American scholars, CAL, in cooperation with the United States Information Agency and the Latin American Scholarship Program of American Universities (LASPAU), organized a seminar for Latin American Fulbright Fellows studying in archeological programs in the United States. This seminar addressed issues of the application of scientific analytical methodologies to archeology.

Conservation Research - Research in this program pursues the identification and characterization of the chemical and physical processes involved in the deterioration of materials in museum collections (conservation science) and the development and evaluation of treatment techniques for unstable collection items (conservation technology). CAL's research scientists and conservators address these research questions in collaborative teams.

The potential for damage to paintings due to shock and vibrations during travel was the subject of a research project performed in collaboration with the National Gallery of Art and the Canadian Conservation Institute. For 1991, these groups are planning an international conference in London on this subject. A series of workshops in the United States will communicate the results of the studies to the museum profession.

Research on the deterioration of modern materials, an ever-increasing problem in museum collections, started with a study on elastomeric materials, especially rubbers, in the collections of the National Air and Space Museum (NASM). The Museum faces problems in preserving items such as the space suits worn by the early American astronauts. The emphasis of this work is on formulating conditions appropriate for the long-term storage of these materials.

Specialists in photographic materials isolated the cause of a deterioration phenomenon in wet collodion glass plate negatives, which constitute a significant part of the photographic collections in several Smithsonian museums as well as other institutions. The staff anticipates that this work will lead to the formulation of more appropriate storage conditions for these materials.

In a multi-year project, the researchers are studying the chemical and physical effects of solvents, which are used in the removal of deteriorated varnishes from oil paintings, on the underlying paint layers. In FY 1990, the researchers produced new data on the potential chemical effects that were of great interest to the museum conservation community.

The analytical services section provided scientific and technical support to conservators and curators throughout the Smithsonian. The staff formulated a priority plan for updating and replacing CAL's scientific equipment. Replacement has become an urgent issue as many of the instruments are nearing the end of their expected useful lifetimes.

Conservation Training - The six students in the first class of the furniture conservation training program graduated at the end of FY 1990. The success of this program is illustrated by the fact that the majority of students in the second class, who finished their first year of course work during the same period, have already found employment as junior staff in conservation departments in major United States museums.

CAL organized eight advanced courses for conservators on subjects such as on-site archeological conservation techniques, display materials, use of the suction table in paper conservation, color theory and measurement, and analysis of historic textile dyes. CAL conservators and scientists taught one semester of specialized courses in the joint CAL-Johns Hopkins University Conservation Science Training Program and supervised the research performed by the students in this program as part of their degree requirements.

In the internship program, five conservators received postgraduate internship training, three preprogram students spent one year working with CAL staff, and three other students trained at CAL during summer internships. Thanks to financial support from the Samuel H. Kress Foundation, one postgraduate intern worked on an archeological excavation at Harappa, Pakistan, under the supervision of a CAL conservator.

Technical Information - CAL technical information staff successfully integrated the extensive bibliographic conservation information file of more than 22,000 entries into

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the international cooperative Conservation Information Network (CIN). The importance and success of this network, of which CAL is a contributing partner, are demonstrated by the rapid increase in demands for literature searches performed by CAL's information specialists on behalf of conservation researchers and students throughout the Smithsonian.

CAL's public conservation information program answered approximately 1,200 questions from the general public.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds derive from the fees charged to participants in the advanced conservation specialist programs sponsored by CAL. These fees partially offset the expenses incurred in organizing the courses. Funds from the Smithsonian's Scholarly Studies Fund and Research Opportunity Fund are available to support a number of ongoing research projects.

OFFICE OF EXHIBITS CENTRAL

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	46	1,908	-	-	-	25	-	-	-	-
FY 1991 Estimate	46	2,012	-	-	-	192	-	-	-	-
FY 1992 Estimate	46	2,126	-	-	-	187	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	46	0	46
11 Personnel Compensation.....	1,460	90	1,550
12 Personnel Benefits.....	305	24	329
21 Travel.....	12	0	12
22 Transportation of Things.....	1	0	1
23 Rent, Communications & Utilities.....	4	0	4
24 Printing & Reproduction.....	1	0	1
25 Other Services.....	48	0	48
26 Supplies & Materials.....	150	0	150
31 Equipment.....	31	0	31
Total	<u>2,012</u>	<u>114</u>	<u>2,126</u>

Analysis of Increase

Necessary Pay.....	114
Program Funds.....	0

ABSTRACT - The Office of Exhibits Central (OEC) offers expertise in all phases of exhibit design and production to Smithsonian museums and bureaus. OEC's specialists and state-of-the-art facilities handle all aspects of Smithsonian exhibitions, including design, graphics, models, and fabrication. OEC also designs and builds shipping containers for Smithsonian traveling exhibitions. OEC exhibition projects involve artifacts both from Smithsonian collections and from other museums and private collections. To improve service

to the public and international sponsors, OEC will coordinate Smithsonian exhibition spaces currently not administered by a Smithsonian museum.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Office of Exhibits Central. The Institution requires \$114,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - FY 1990 was a year of diversity for OEC both in the variety of projects and in the number of clients. The following accomplishments illustrate the range of expertise available from the Office of Exhibits Central:

- Anacostia Museum. OEC edited two exhibit scripts: "P.H. Polk" and "Whose Art Is It, Anyway?"
- Experimental Gallery. For space planning, the Model Shop built a scale model of the new gallery in the Arts and Industries Building. OEC designers are advising on transformation of the existing space into a changing exhibition gallery.
- Hirshhorn Museum and Sculpture Garden. The Sheet Plastics Shop produced about 30 vitrines. The Model Shop is refurbishing a model of Tatlin's Tower for a European tour. Conceived by the Russian architect and artist Vladimir Tatlin, Tatlin's Tower was to be the world's largest building, designed in four tiers that would rotate independently of each other according to the hour of the day and day of the calendar. OEC built the model several years ago for a Hirshhorn exhibition.
- International Center. OEC designed a brochure and the installation for the "Pre-Hispanic Foods" Columbus Quincentenary exhibit.
- National Air and Space Museum. The Model Shop made a 1/16 scale model of a German World War I biplane for an upcoming exhibit. The Shop also built a prehistoric dragonfly based on fossil evidence.
- National Museum of American Art. The Graphics Unit produced period stenciling for a floor mat and the floors of exhibit platforms for "Treasures of American Folk Art from the Abby Aldrich Rockefeller Folk Art Center." The Unit also provided silk-screening and stenciling for "Made with Passion: The Hemphill Folk Art Collection in the National Museum of American Art."
- National Museum of American History. OEC designed, edited, and produced "Go Forth and Serve: Black Land-Grant Colleges Entering Their Second Century." For "Parlor to Politics: Women and Reform in America from 1890 to 1925," the Graphics Unit mounted photographs, silk-screened text panels, and produced the title sign.
- National Museum of Natural History. The Fabrication Unit produced 21 large wall cases to display Chinese hell scrolls, which depict the ten stages through which the souls of the dead atone for their transgressions before reincarnation. OEC also designed the installation for "20th-Century Dinosaurs" in the Evans Gallery. For "Beyond the Java Sea: Art of Indonesia's Outer Islands," the OEC editor worked with Museum curators to edit the script for a wide audience and to write

the gallery brochure. The Model Shop fabricated a mannequin of a warrior. The Fabrication Unit built more than 50 custom exhibit cases and shipping containers. The Graphics Unit mounted photographs and silk-screened interpretive text and labels.

- National Zoological Park. OEC painted two murals: a background for the rhinoceros iguana in the Reptile House and a coral reef background for a Great Barrier Reef aquarium in the Australia House. OEC designed a new entrance and introductory area to the Bat Cave, formerly a holding area beneath the Lion and Tiger exhibit, and produced life-size models of bats. OEC also prepared a preliminary design and scale model for an expanded exhibit about bats.
- Office of Folklife Programs. The Graphics Unit mounted photographs and silk-screened text for the Festival of American Folklife.
- Office of Horticulture. OEC supported the "Trees of Christmas" exhibit and assisted with the dinosaur topiary on the grounds of the National Museum of Natural History.
- Product Development and Licensing. The Model Shop cast a detail from a colonial highboy that will be reproduced commercially for the Museum Shops.
- Resident Associate Program. OEC supported the "Discover Graphics" and "Infinite Illusions" exhibits.
- Smithsonian Institution Libraries. OEC designed and edited the "Science and the French Revolutionaries" exhibit and brochure.
- Smithsonian Institution Traveling Exhibition Service (SITES). "Climbing Jacob's Ladder: The Rise of the Black Churches in Eastern American Cities, 1740-1877" was adapted from an exhibit at the Anacostia Museum. OEC designed the exhibit for travel, edited the script, and produced panels, freestanding units, and shipping containers, and two copies of the exhibit for travel. OEC designed, edited, and produced "The Road to Heaven Is Paved by Good Works: The Art of Reverend Howard Finster" and prepared 40 pieces of folk art for travel, including custom brackets. OEC designed and produced interpretive text and photo panels for "Frank Lloyd Wright: Preserving an Architectural Heritage." The Office also designed and produced brackets for several pieces, and OEC specialists advised the Domino's Pizza Collection on packing fragile stained glass. In addition to 15 new exhibitions that OEC designed and/or produced for SITES, exhibits that ended their tour came to OEC for dispersal. Other exhibits came in for refurbishing before continuing their tour. Among these was "Exploring the Planets," which OEC updated to include new photographs and information about Neptune.
- Smithsonian National Associate Program. OEC designed and/or edited nearly 50 travel brochures.
- Visitor Information and Reception Center. The Fabrication Unit built all the cherry furnishings (except the two desks) in the Smithsonian Information Center. OEC also designed and produced the graphics and directional signage.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Proceeds from the sale of the OEC book A Freeze-Dry Manual through the Smithsonian Institution Press and reimbursements from internal Smithsonian units provide these funds. OEC uses the funds to purchase supplies, materials, and services in support of OEC activities; to defray costs associated with special events; and to supplement travel expenses.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	12	790	8	329	24	1,892	-	576	-	14
FY 1991 Estimate	44	2,363	8	374	-	2,342	-	1,334	-	44
FY 1992 Estimate	44	2,482	8	374	-	2,370	-	700	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	Base FY 1991	Proposed Adjustments	Est. FY 1992
FTE Allocation.....	44	0	44
11 Personnel Compensation.....	1,206	84	1,290
12 Personnel Benefits.....	346	35	381
21 Travel.....	15	0	15
22 Transportation of Things.....	584	0	584
25 Other Services.....	129	0	129
26 Supplies & Materials.....	3	0	3
31 Equipment.....	80	0	80
Total	<u>2,363</u>	<u>119</u>	<u>2,482</u>

Analysis of Increase

Necessary Pay.....	119
Program Funds.....	0

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) expands the Smithsonian's presence beyond Washington, D.C., by circulating exhibitions to public audiences in museums large and small and in schools, libraries, science centers, historical societies, zoos, aquariums, and community centers. SITES exhibitions reach nearly 11 million people annually in the United States and abroad. A commitment to audience access drives the development of all SITES programs. SITES's top priority is increasing the availability of Smithsonian-created exhibitions among people who cannot see them firsthand by visiting the Institution's museums. Facilitating the sharing of exhibitions created

outside the Smithsonian--SITES's second priority--is another way SITES works to respond to diverse program needs and interests.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for SITES. The Institution requires \$119,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Smithsonian Institution Traveling Exhibition Service reconfigures and packages for widespread circulation exhibitions created by the Smithsonian museums and by institutions and organizations outside the Smithsonian. SITES tailors the form and content of these exhibitions to meet the program needs and technical capabilities of diverse museums and cultural and educational facilities worldwide.

In developing exhibitions for audiences of all ages and backgrounds, SITES strives to do more than present artifacts. SITES exhibitions represent a broad range of human perspectives; they pose questions, communicate abstractions, and challenge visitors to make connections between objects, people, places, events, and ideas. By emphasizing diverse viewpoints and by using inquiry as a means of interpreting exhibition themes and images, SITES hopes to encourage people to explore the full breadth of possibilities about themselves, others, and the world around them.

Smithsonian Exhibitions - SITES's FY 1992 schedule offers its largest representation of traveling exhibitions created at the Smithsonian. Among them is a traveling version of "The Information Age," the National Museum of American History's interactive presentation on the relationship between people and communications technology; a National Zoological Park exhibition, "The Good, the Bad, and the Cuddly," about human perceptions of and attitudes toward animals; a Cooper-Hewitt Museum survey of propaganda imagery on porcelain, called "Revolution in Design"; an Anacostia Museum exhibition, "The Real McCoy," about African-American invention; a National Museum of American Art retrospective entitled "Harlem: Photographs by Aaron Siskind"; the National Air and Space Museum's futuristic look at the next 500 years of space exploration called "Where Next, Columbus?"; and the National Museum of Natural History Columbus Quincentenary exhibition, "Seeds of Change." These projects are but a sampling of the 40 Smithsonian exhibitions that, in FY 1992, will constitute nearly 50 percent of SITES's total program.

Exhibition Partnerships - Partnerships with institutions and organizations outside the Smithsonian enable SITES to meet more fully the program needs and interests of the diverse audiences it serves. In FY 1992, for example, SITES will strengthen its ability to respond to ever-growing requests for exhibitions about the environment by co-sponsoring "Fragile Ecologies" with the Queens Museum in Flushing, New York. This survey of art installations highlights the planet's delicate ecological balance and the urgency of environmental preservation. Through a joint program with the National Geographic Society, SITES will circulate an aggressive, instructional exhibition to help reduce geographic illiteracy among school-aged youth. "Seeing without Sight," a traveling exhibition based on a project from Quebec's Museum of Civilization, will enable SITES to address for the first time issues and concerns involving physical disabilities.

Cultural Pluralism - Responding to the Nation's diverse cultural landscape mandates the representation of specific subject matter and the use of exhibition formats tailored to specific audience groups. SITES's efforts to achieve both goals emerge with special strength in its FY 1992 program. More than 13 exhibitions explore facets of the African-American experience, from the music of Duke Ellington to a nationwide photographic

survey, "Songs of My People," created and interpreted by black photographers and writers. A new initiative to boost SITES's representation of native-American exhibitions will begin with the circulation of "Plains Indian Arts" and "Tokpela," a project that sets contemporary Hopi artifacts within three-dimensional environments to convey relationships between modern-day imagery and traditional, spiritual sources. In both exhibitions, SITES will develop installation formats applicable to tribal cultural centers as well as to regional art museums.

Hispanic and Asian peoples, cultural groups not represented strongly in past SITES programs, are at the center of four exhibitions that will tour in FY 1992. These programs are based on an exhibition model that SITES initiated in 1988 to generate participation at the grass-roots level. Using this model, SITES hosts workshops, in advance of detailed exhibition planning, that bring together museum representatives, educators, civic leaders, and prospective financial supporters from every community on a given exhibition tour. Together they map out the content of the exhibit and the format of its design as well as educational programs responsive to the interests and concerns of the audience.

For organizations and groups unable to accommodate the technical requirements of traditional museum installations, SITES will make available inexpensive, alternative exhibitions. In circulating "The Real McCoy," for example, SITES will produce a large-scale artifact exhibit that duplicates the original Anacostia Museum presentation as well as a smaller poster show created for schools, community centers, and regional inventor conventions. Along these same lines, SITES will develop two versions of the National Museum of Natural History's "Seeds of Change" exhibit. One, a collaborative format, will make available research information and design specifications from the Smithsonian's original exhibition to eight of the Nation's regional museums. These museums then will incorporate visual examples from their own collections, thus reinforcing themes pertinent to their communities and audiences. SITES's second "Seeds of Change" exhibit, a poster panel version, will circulate nationwide to libraries--institutions that badly need supplementary programs but have neither the budgets nor technical capabilities to host full-scale museum exhibitions.

To expand yet further its service capabilities to resource-poor institutions, SITES will continue to defray exhibition fees and shipping costs through a partnership with State Humanities Councils. SITES's activities in New Mexico set the model for this arrangement. There, the State Council agreed to fund participation and transportation fees for a group of host museums willing to book SITES exhibitions consecutively. Institutions throughout New Mexico that independently could not have afforded a SITES program thus not only scheduled a show but also created accompanying public programs by pooling their limited funds.

SITES is a high-visibility outreach arm of the Smithsonian. Its exhibitions cover myriad subjects and respond technically to the physical character of diverse settings. With the additional resources provided by the Congress in FY 1991, SITES hopes that its service capabilities will enable more groups than ever before to experience the full range of exhibition programs available from America's foremost cultural address.

The Smithsonian's national presence challenges SITES to strengthen the role of exhibitions as vehicles of broad public education. In fulfilling its mission, SITES therefore seeks to enrich people not only by exposing them to collections and research but also by enabling them to understand and appreciate the information and insights these learning tools can provide.

NONAPPROPRIATED SOURCES OF FUNDING

Unrestricted General and Special Purpose Funds - SITES's annual operating budget comes largely from rental fees collected from museums and other recipients of traveling exhibitions. These fees, supplemented by an allotment, support exhibition development costs including staff salaries and benefits, design and production, publications, materials, outside specialists, and contractual services. The Smithsonian also supports certain SITES exhibitions on a selective basis with monies from the Special Exhibitions Fund.

Restricted Funds - Individuals, organizations, and corporations donate gifts and foundation grants for specific SITES projects. During FY 1990, SITES received support from the Boeing Company for "Moscow: Treasures and Traditions"; from the MacArthur Foundation for a Spanish-language version of "Tropical Rainforests: A Disappearing Treasure"; from Waste Management, Inc., and the National Solid Wastes Management Association for "Garbage!"; and from Northern Telecom for "The Information Age."

MUSEUM SUPPORT CENTER

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	36	4,249	-	-	-	-	-	-	-	-
FY 1991 Estimate	42	4,306	-	-	-	-	-	-	-	-
FY 1992 Estimate	42	5,403	-	-	-	-	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	42	0	42
11 Personnel Compensation.....	1,027	74	1,101
12 Personnel Benefits.....	187	16	203
21 Travel.....	14	0	14
23 Rent, Communications & Utilities.....	4	0	4
24 Printing & Reproduction.....	1	0	1
25 Other Services.....	84	1,007	1,091
26 Supplies & Materials.....	113	0	113
31 Equipment.....	2876	0	2876
Total	<u>4,306</u>	<u>1,097</u>	<u>5,403</u>

Analysis of Increase

Necessary Pay.....	90
Program Funds.....	1,007

ABSTRACT - The Museum Support Center (MSC), located in Suitland, Maryland, is a state-of-the-art facility for the care, conservation, storage, and research of the Institution's collections. MSC provides collections storage in four sections (or pods) for three types of needs: collections storage in cabinets (Pods 1, 2, and a portion of Pod 4); "wet" collections storage on open shelving for biological specimens in alcohol (Pod 3); and "high-bay" storage for very large objects (remainder of Pod 4). MSC also houses the Conservation Analytical Laboratory (CAL) and conservation laboratories for the National Museum of Natural History (NMNH) and the National Museum of American History (NMAH), the

NMNH Laboratory for Molecular Systematics, and other NMNH specialized research laboratories.

The Institution's FY 1992 budget includes no program increase for the Museum Support Center. The Institution requires \$90,000 for Necessary Pay for existing staff funded in this line-item and requests that funding for MSC collections storage equipment and for MSC Move costs remain available until expended. The amount of \$1.007 million, pertaining to a judgment relating to the purchase of storage equipment for MSC, is justified in the Uncontrollable Increases section of this budget.

PROGRAM - The Institution's Museum Support Center provides state-of-the-art facilities for the conservation and preservation of museum objects; conservation training; scientific research; and the storage of museum collections. The Office of the Director oversees the building and all of its operational activities. The Director is accountable for records of the more than 36 million specimens and objects being moved into MSC.

Many collections at NMNH and NMAH scheduled to move to MSC are currently stored in overcrowded, asbestos-contaminated conditions and are thus not accessible for research or exhibit. For example, currently there are native-American objects in two of the Natural History Building's attics which have exposed asbestos insulation. Native-American craftsmen and researchers have been anxious to study these collections for several years, but until manpower and other resources necessary to remove the asbestos from these objects are available, the Institution cannot make them accessible for study.

There are no precedents for the move of millions of objects and specimens within the museum world. The MSC Move staff inspects the objects for pests and conservation problems, cleans them, and properly stabilizes them prior to their move. The collections relocated to MSC are properly curated, less crowded, and subject to better-controlled environmental conditions than collections in most other Smithsonian storage areas. As a result, they have better prospects for long-term preservation and will be significantly more accessible to researchers.

Early in its planning for the relocation of collections, the Smithsonian established the concept of the "Initial Move" with the objective being the phased transfer of millions of designated objects from NMNH and NMAH to MSC over a multi-year period. These "Initial Move" collections will occupy approximately two-thirds of the MSC storage space, and the remaining third will be available for future "Growth."

MSC Collections Storage Equipment - Since FY 1989, the General Services Administration (GSA) has awarded the contracts for six procurements for the majority of the required storage equipment for Initial Move high-density collections. By January 15, 1991, the contractor had installed 1,957 shelving cabinets, 2,784 drawer cabinets, 22,666 drawers, 6,246 shelves, 764 insect cabinets, and 608 botany cabinets.

In early 1991, GSA plans to solicit two additional procurement bids for collections storage equipment: (1) for large drawer and shelving cabinets and (2) for specialized fencing storage units. GSA anticipates completion of installation during 1993 of all procurement storage equipment for the Initial Move.

Following the completion of the procurement, the Institution must address the three remaining requirements. These are the design, purchase, and installation of:

- the "high-bay" collections storage equipment for Pod 4;
- the balance of the "wet" storage equipment for Pod 3;
- the balance of the collections storage cabinets for Pods 2 and 4. (A window of opportunity is open to purchase these cabinets under a current contract for a set price, including a ceiling for annual escalation costs above the base price. However, under this contract, the Smithsonian must order these cabinets by FY 1994 or pay higher prices.)

MSC Move - During FY 1990 and through November 1990, the MSC Move staff cleaned, prepared, and packed 280 historic dolls and 550 textile books and baskets from the Museum of American History's Department of Social and Cultural History. Because MSC Move funds were not adequate to continue this move in FY 1991, NMAH redirected Museum program operating funds to the Move to avoid delaying its Major Capital Renewal Project currently underway and incurring delay claim expenses.

The MSC Move staff also continued to move collections from the National Museum of Natural History, bringing the total to 322,400 specimen lots moved to the "wet" collections storage equipment, 4,259,300 specimens from the Department of Entomology, and more than 42,000 African and Asian ethnological objects from the Department of Anthropology. Relocating these Anthropology collections has made space available on the Mall to house the new NMNH staff funded by Congress in FY 1991 for native-American repatriation efforts. NMNH personnel, with coordination from the MSC Move staff, relocated 4,700 reptile and amphibian collections to MSC.

Although the Institution started moving some collections into the more than 6,000 cabinets available at MSC in FY 1990 and FY 1991, it does not have sufficient resources to relocate significant numbers of collections from the Mall to MSC. It will use its limited funds and personnel to accomplish as much of the relocation as possible in FY 1991. With the current level of base funds, it would take more than 12 years to accomplish the Move. MSC Move base funds total \$298,000. This base covers a small core staff to administer, oversee, and assure quality control for Move activities; and a minimal amount for necessary supplies and equipment related to relocation activities. There are 6 workyears and \$107,000 associated with the program to evaluate the effectiveness of cleaning techniques (to be completed in FY 1991). These additional resources will be redirected in FY 1992 to remove asbestos from museum objects prior to their move, including related supplies and services.

This redirection of \$107,000 to the Move base is critical to the progress of the Move in FY 1992. However, this additional sum will still not be sufficient to permit the move of enough collections out of the Natural History Building attics to correspond with the schedule of the Major Capital Renewal Project as described below. The Move budget would require a minimum of an additional \$800,000 and 24 workyears in FY 1992 to keep pace with the renovation schedule.

MSC MOVE IMPACT ON MAJOR CAPITAL RENEWAL - The Major Capital Renewal Project within the Natural History Building will replace a 30-year-old mechanical system that has outlived its normal life span, breaks down regularly, and is expensive to maintain. The Smithsonian staff and the contract designer assumed, during the planning of this renovation project, that additional resources would become available for the MSC Move in order to keep the Major Capital Renewal Project on schedule. Unfortunately, sufficient MSC Move resources

have not become available to assure compatibility between the rate that collections leave the building and the rate of planned (and funded) Major Capital Renewal work.

For the Natural History Building Major Capital Renewal Project to proceed on schedule, the Smithsonian must move, by mid-FY 1994, those collections presently stored in the Museum's three attics. It must also move other collections from other locations within the Natural History Building to MSC to assure that the renovation project proceeds without delay. Only with adequate Move funding in FY 1992, FY 1993, and FY 1994 can the collections be relocated in a timely fashion to MSC. Once these collections are at MSC, the contractor can remove asbestos from the three attics. The contractor can then proceed to the next phase, using two of these attics as well as other vacated locations as "swing spaces" to house temporarily relocated staff and/or collections. Once the staff and/or collections are relocated to these temporary locations, the contractor can then make the necessary mechanical renovations throughout the rest of the building. Any delay in moving the collections to MSC will delay the Major Capital Renewal Project significantly.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - An allotment has supported the purchase of special laboratory equipment for the Conservation Analytical Laboratory.

PUBLIC SERVICE

ASSISTANT SECRETARY FOR PUBLIC SERVICE

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	25	1,417	46	3,051	-	46	-	113	-	11
FY 1991 Estimate	27	1,680	46	2,782	-	42	-	223	-	-
FY 1992 Estimate	27	1,774	44	2,659	-	49	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	27	0	27
11 Personnel Compensation.....	1,168	74	1,242
12 Personnel Benefits.....	239	20	259
21 Travel.....	21	0	21
22 Transportation of Things.....	1	0	1
23 Rent, Communications & Utilities.....	26	0	26
24 Printing & Reproduction.....	50	0	50
25 Other Services.....	82	0	82
26 Supplies & Materials.....	47	0	47
31 Equipment.....	46	0	46
Total	<u>1,680</u>	<u>94</u>	<u>1,774</u>

Analysis of Increase

Necessary Pay.....	94
Program Funds.....	0

ABSTRACT - The Office of the Assistant Secretary for Public Service encourages program initiatives that advance the Institution's objectives in education and information through multi-media publications, folklife programs, the development of wider audiences, and celebrations focused on the achievements and contributions of women and ethnic minority groups. The Office advises the Secretary on general public service policy issues and program planning. This line-item includes the Smithsonian Office of Wider Audience Development (SOWAD), which advises and assists Smithsonian managers on management policies

as they relate to minority audience participation in exhibitions and other public programs; the Office of Telecommunications (OTC), which produces programs for radio, film, and television relating to Smithsonian research activities; the Visitor Information and Associates Reception Center (VIARC), which coordinates and provides Institution-wide information, orientation and assistance programs; and the Office of Public Affairs (OPA), which publicizes the Institution's exhibits, public events, and research and acquaints the public with the Institution's programs and policies through contacts with news and other media organizations. Although still reflected within the Public Service section for presentation purposes, OTC is now organizationally placed under the Assistant Secretary for External Affairs.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the offices included under the Office of the Assistant Secretary for Public Service. The Institution requires \$94,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM:

I. Office of the Assistant Secretary for Public Service - With base funding of 4 workyears and \$292,000, the Office of the Assistant Secretary for Public Service focuses on the critical issues of cultural diversity and cultural equity. The Office and the units it oversees serve as central channels for the diffusion of information and assistance programs inside and outside the Institution. They disseminate information on the Smithsonian to broad national audiences, plan and execute formal and informal educational outreach efforts, and engage in research and documentation of living cultures. In cooperation with the Smithsonian African-American Association, Asian-Pacific American Group, Latino Working Committee, and other ethnic committees, they develop and execute outreach programs that bring diverse cultural communities and professional sectors to the Institution. The offices reporting to the Assistant Secretary include the Office of Wider Audience Development, the Visitor Information and Associates' Reception Center, the Office of Public Affairs, the Office of Folklife Programs, the Office of Elementary and Secondary Education, the National Science Resources Center, and the Office of Conference Services.

II. Office of Telecommunications - With base funding of 6 workyears and \$340,000, OTC produces programs for radio and television relating to a variety of Smithsonian research and scholarly activities. Distributed nationwide, these diverse programs are an important part of Smithsonian outreach, as they support and interpret the research, exhibition, and educational goals of the Institution.

In FY 1990, the Office developed plans for a major film to acquaint American audiences with the historical and cultural significance of Japanese gardens and their importance in Japan's landscape. It is intended for both television broadcast and extensive educational use.

The Office has joined with the Native American Public Broadcasting Consortium (NAPBC) to produce a 13-part radio series looking at the Columbus encounter and its aftermath from the Native-American perspective. The Corporation for Public Broadcasting has awarded funding toward production and distribution of this special Quincentenary series. The American Indian producer Peggy Berryhill will be the coordinating producer, working with OTC staff. Production will take place throughout 1991, and the programs will air nationally on public radio beginning in early 1992.

The Office developed production, financial, and marketing plans for new programs in the Smithsonian Video Collection series. The first new program will explore the history and continuing vitality of folk art. Following the sales success of the initial five programs and the release of the programs on laser disc, the Smithsonian obtained all rights to the series from Eastman Kodak, the original distributor. OTC will produce future programs for both broadcast and the home video market.

During FY 1990, OTC worked with the International Center to produce a video based on the conference "The Global Environment: Are We Overreacting?" held at the Smithsonian in September 1989. OTC distributed the program, narrated by John Chancellor, to newspaper editors and television news directors around the country, alerting them on crucial environmental issues.

Collaborating with the National Museum of Natural History (NMNH), the Office co-produced four pilot segments for "Natural History Update," a series of short pieces on natural history topics. Conceived by the director of NMNH, Frank Talbot, the pilots premiered in a theater off the Natural History Building rotunda. Subjects included the discovery of a mosasaur fossil in Oxon Hill, Maryland, and the damage to Puerto Rican forests caused by Hurricane Hugo. The Museum is actively seeking funds to continue the project in cooperation with museums around the country.

OTC produced the Smithsonian Information Center videos for the Visitor Information and Associates' Reception Center (VIARC). Designed to help visitors plan their museum tours, the programs have captured a number of industry awards. The 20-minute theater presentation won a Gold Medal at the New York International Film and Television Festival, a CINE Golden Eagle, and a Bronze Plaque at the Columbus Film Festival. The interactive video disc program received the top honor for Best Consumer Achievement in the Nebraska Interactive Videodisc Awards. OTC and VIARC developed a strategy for marketing the 20-minute program as a home video, which will be available in FY 1991. OTC began planning on a new video disc featuring capsule updates on Smithsonian research, with preliminary filming at the Smithsonian Tropical Research Institute in Panama.

Also in FY 1990, OTC produced the Smithsonian's first video wall, a fitting close for the "Information Age" exhibition at the National Museum of American History. Presented on 12 screens, the 15-minute program reprises the main themes of the exhibition, stressing that computers and information-age machines are tools for human use. For the Smithsonian Institution Traveling Exhibition Service, the Office produced a 12-minute video as the center section of an exhibition on the decorative designs of Frank Lloyd Wright. The program explores the difficult preservation problems associated with saving Wright buildings and their specially designed furnishings.

The Office placed increased emphasis on marketing and promotion during FY 1990. The staff began implementing a broad plan for the sale of an earlier OTC film, "The Movie Palaces," to Smithsonian audiences through the museum shops and to a more general audience through mail-order catalogues and historic preservation groups. In addition to marketing and promoting strategies for the orientation video, the Office created strategies for the one-hour environmental program, "The Earth in Our Hands," and the entire Smithsonian Video Collection. These efforts will ensure greater visibility and maximum revenues for Smithsonian programs and help support future productions.

III. Visitor Information and Associates' Reception Center - With base funding of 2 workyears and \$185,000, VIARC is a central support unit responsible for pan-Institution

information, orientation and assistance programs for the public, Associate members, Smithsonian staff, and volunteers. Operating seven days a week, many VIARC services involve coordinating and directing large numbers of volunteers who are a primary source of support for the Institution's public information programs and project assistance behind the scenes.

VIARC information services include the new Smithsonian Information Center located in the Castle, which served over 1.6 million visitors during its first year of operation, representing a 41 percent increase in visitation to the building. With the reopening of the Castle, over 4,000 visitors enjoyed docent-led tours of public areas.

Maintaining seven-day staffing levels at 16 museum information desks in 11 Smithsonian buildings and operating the Information Center required the participation of well over 600 volunteer information specialists. Recruitment efforts to attract volunteers from culturally diverse backgrounds were successful in assuring an average 17 percent representation rate for ethnic minorities in new training classes.

The annual pan-Institution survey of volunteer activities for FY 1990 indicated an overall increase in volunteer support: 5,159 volunteers provided 529,782 hours of support. VIARC's Behind-the-Scenes Volunteer Program registered and placed 1,200 volunteers in FY 1990.

The Public Inquiry Mail and Telephone Information Services Unit continued to expand automation efforts providing staff and volunteers with access to a variety of Smithsonian on-line systems and new VIARC programs. The unit received some 47,000 pieces of correspondence and responded to 338,000 telephone calls.

Use of desk-top publishing in the Information Resources Division aided the completion of 63 publications plus in-house exhibition directories and calendars with faster turnaround on printing projects. The Information Center local area network was upgraded and refined enhancing the efficiency with which information on Smithsonian activities can be provided to visitors.

IV. Office of Public Affairs - With base funding of 14 workyears and \$818,000, OPA acquaints the public with the programs and policies of the Institution by working with newspapers, magazines, television, and radio, as well as with general publications, to gain media exposure for its exhibits, public events, and research. A major goal of OPA is to encourage culturally diverse audiences to take advantage of the many resources of the Smithsonian.

OPA distributes the Smithsonian News Service, a free, monthly package of four feature-style articles on subjects in art, history, science, technology, and contemporary life. The service goes to 1,000 daily and weekly newspapers. OPA translates one story each month into Spanish and sends it along with the English edition to 100 Hispanic and bilingual newspapers in the United States. The New York Times Syndication Sales Corporation provides for distribution of the Smithsonian News Service to newspapers, magazines, and other print media worldwide (excluding the U.S.). Syndication is in English with selected stories in Spanish. In FY 1990, OPA expanded its programs to reach a broader range of ethnic communities, including African Americans, Asian Americans, Hispanics, and Native Americans.

An ad hoc African American Media Advisory Committee formed by OPA met twice in FY 1990 to discuss new ways to reach African-American audiences. Its suggestions have included themes for public service announcements, revisions in the format of the monthly Calendar of Events published by the Smithsonian, expansion of radio advertising, and programs for students in African-American communities. OPA sent two staff members to a meeting of the National Association of Black Journalists and prepared an advertisement for the conference booklet.

The Office neared completion of two brochures for African-Americans. One, called "Explore the African American Heritage at the Smithsonian," is a revision of an existing brochure aimed at school-age children and general visitors. A second brochure, "Resources at the Smithsonian for African Americans," is a more detailed booklet with information on internships, fellowships, employment opportunities, study collections, and other resources. OPA radio advertising campaigns aired in January and February 1990 for Black History Month and in March and April for the Anacostia Museum. The Institution sent out 1,400 information packets as the result of the Black History Month advertisements.

For Latino audiences, preparations for the Columbus Quincentenary began with publicity in Vista and other Hispanic magazines, a well-publicized annual Hispanic Heritage Month program, and consultations with advertising and public relations firms that, if funding permits, could coordinate worldwide promotion for the Quincentenary at the Smithsonian. Two staff members prepared a press kit with updated materials on the Quincentenary that was widely distributed. The Office organized an informational booth and conference brochure advertisement for the National Hispanic Media Conference in San Francisco in April 1990, resulting in numerous new contacts with the Hispanic media. The Office also hosted a briefing on the Quincentenary for the 20-member board of the National Association of Hispanic Publications. Contacts with the Hispanic media will increase as the Quincentenary approaches. The Office plans to prepare radio advertisements and a general brochure to publicize Quincentenary programs.

In FY 1990, OPA launched a new bimonthly newsletter, called Smithsonian Runner, for Native-American audiences. The eight-page newsletter goes to 1,600 Native Americans, including American-Indian journalists in both mainstream and tribal publications. Feedback from Native Americans indicates that the newsletter is well received. In FY 1990, OPA prepared and distributed extensive press kits for the National Museum of the American Indian and coordinated a news conference to announce the new director of the Museum and press activities for regional visits by Smithsonian officials to Indian communities in the West and Southwest. The Office also updated and redesigned a flyer on "Resources at the Smithsonian for Native Americans." In FY 1991, OPA will expand its outreach efforts further with the addition of a permanent American-Indian public affairs specialist.

One OPA project, intended to assist Smithsonian research efforts, was the redesign of Research Reports, a newsletter that reports on the Institution's ongoing research. The publication now appears quarterly instead of three times a year and has several new features, including a column called "Research Vistas," a book review and author profile, and information of special interest to Contributing Members of the Smithsonian National Associate Program, about 64,000 of whom receive Research Reports.

The Office has also focused its efforts on publicizing environmental research and activities. OPA coordinated publicity for the Smithsonian Tropical Research Institute exhibit at the National Museum of Natural History called "Parting the Green Curtain" and for a media and environmental conference held at the Smithsonian in fall 1989. OPA

produced and distributed to 300 television stations a 30-second public service announcement, featuring actor Robert Redford, which discussed the beauty and diversity of Planet Earth and the Smithsonian's research efforts to preserve the environment. The Office also publicized the establishment of the new Office of Environmental Awareness (OEA). The publicity resulted in thousands of requests for a special environmental conservation poster prepared by OEA.

OPA coordinates pan-Institution publicity campaigns, provides assistance to public affairs offices at the Institution, and undertakes publicity for the Smithsonian units that do not have public affairs specialists. Among the special campaigns undertaken in FY 1990 were publicity for the opening of the "Information Age" exhibition at the National Museum of American History, the launch of the Smithsonian Video Collection, the "Smithsonian World" public television series, and the cable television series called "Invention." In FY 1990, OPA also organized several major publicity campaigns for the Anacostia Museum, including its summer festival, "Whose Art Is It, Anyway?"

V. Smithsonian Office of Wider Audience Development - With base funding of 1 workyear and \$45,000, SOWAD develops collaborative relationships with museums, organizations, and individuals to promote cultural diversity and equity. It provides technical assistance to Smithsonian bureaus to strengthen ties with nontraditional audiences and plans seminars for staff and specialists from cultural and educational organizations to explore pertinent themes of contemporary concern bearing on the public interest.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of the Assistant Secretary for Public Service:

Unrestricted General and Special Purpose Funds - Annual allotments provide for the salary, benefits, and support costs of two staff members assigned to the immediate office.

Trust funds also provide salary and benefits for a secretary in the Smithsonian Office of Wider Audience Development and support costs for wider audience initiatives, including the Cultural Education Committee, which fosters the development of pan-Institutional outreach efforts designed to attract diverse cultural audiences. A Special Purpose Fund provides for the Educational Outreach Fund, which fosters research on improved, expanded, and innovative methods of outreach activity. While the projected expenditures for FY 1991 and FY 1992 appear under this Office, the recipient organizations reflect the actual expenditures for FY 1990.

II. Office of Telecommunications:

Unrestricted General and Special Purpose Funds - An annual operating allotment provides support for nine full-time staff members and costs associated with the production of educational and informational materials for the electronic media. The sale of film, video, and audio programs provides additional funds.

Restricted Funds - Individual gifts and grants from private foundations and corporations provide these funds, used by OTC for specific programs. In FY 1990, funds from the Philecology Trust supported production of the one-hour environmental film, "The Earth in Our Hands." A consortium of Japanese companies, including the Kajima Corporation, Hitachi Limited, and the American Family Insurance Company, provided funding for a major film on the history and cultural significance of Japanese gardens, to be completed in

FY 1992. Funds from public television station WQED in Pittsburgh supported development of a special program titled "Earthgame," in which international teams explore solutions to global environmental problems.

Government Grants and Contracts - In FY 1990, the Environment Ministry of the Netherlands provided a grant toward the development of "Earthgame."

III. Visitor Information and Associates' Reception Center:

Unrestricted General and Special Purpose Funds - An annual operating allotment supports VIARC's work as the public service office responsible for pan-Institution information, orientation, and assistance activities.

IV. Office of Public Affairs:

Unrestricted General and Special Purpose Funds - Allotments provide for public outreach activities such as wider audience advertising with the African-American, Asian-American, Hispanic, and Native-American media; public service announcements for radio and television; "Welcome" brochures for museum visitors; monthly newspaper advertisements of general Smithsonian events, and the Smithsonian employee newsletter.

SMITHSONIAN INSTITUTION PRESS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	26	1,238	40	18,403	-	50	-	155	-	-
FY 1991 Estimate	29	1,397	41	17,651	-	-	-	8	-	-
FY 1992 Estimate	29	1,482	41	21,630	-	-	-	14	-	-

* FTE = Full-time equivalent
 **FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	29	0	29
11 Personnel Compensation.....	1,100	71	1,171
12 Personnel Benefits.....	189	14	203
21 Travel.....	3	0	3
23 Rent, Communications & Utilities.....	6	0	6
24 Printing & Reproduction.....	40	0	40
25 Other Services.....	18	0	18
26 Supplies & Materials.....	21	0	21
31 Equipment.....	20	0	20
Total	<u>1,397</u>	<u>85</u>	<u>1,482</u>

Analysis of Increase

Necessary Pay.....	85
Program Funds.....	0

ABSTRACT - A member of the Association of American University Presses since 1966, the Smithsonian Institution Press (SIP) edits, designs, produces, and distributes books, sound recordings, and other printed materials prepared by Smithsonian scientists, historians, and curators as well as scholars from educational institutions around the world. Such materials also include research monographs, technical and scientific series, exhibition catalogues for Smithsonian museums, educational pamphlets, and informational leaflets. In addition, SIP generates unrestricted Trust-fund income through the publication and sale of books and recordings on subjects of general interest that relate

to the Smithsonian collections and research, which are suitable for direct-mail marketing to Smithsonian Associates and the retail trade. Although still reflected within the Public Service section for presentation purposes, SIP is now organizationally placed under the Assistant Secretary for External Affairs.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Smithsonian Institution Press. The Institution requires \$85,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Federal publication activity of the Smithsonian Institution Press is a fundamental extension of the Smithsonian's basic research activities. The scientific, technological, and historical monographs that the Press publishes disseminate research by Smithsonian curators and staff experts to libraries, museums, research institutions, and interested members of the public throughout the United States and abroad. In addition to publishing research findings, SIP edits and designs exhibition catalogues, educational pamphlets, and informational leaflets that serve the millions of visitors to the Smithsonian in Washington, D.C., and the extensive programs conducted nationwide and worldwide.

SIP acts as the official agent of the Smithsonian Institution in procuring services from the Government Printing Office (GPO) to create government forms, museum guides, and instructions, as well as providing professional assistance to Smithsonian authors upon request. SIP also edits, designs, and produces Smithsonian Year, the Institution's annual report to its Board of Regents and the Congress.

University Press Division - The Smithsonian Institution Press received highly favorable reviews in major newspapers and journals for several volumes published in FY 1991, particularly Wild Ice: Antarctic Journeys by Ron Naveen, Colin Monteath, Tui De Roy, and Mark Jones; Deliberate Speed: The Origins of a Cultural Style in the American 1950s by W.T. Lhamon, Jr.; Carry Me Home: Louisiana Sugar Country in Photographs by Debbie Fleming Caffrey; and Benjamin O. Davis, Jr.: American; An Autobiography. SIP contracted the Davis autobiography to Lorimar Productions for a television movie to be shown nationally in December 1991. The Press continues to strengthen and expand the subject diversity of its various lists: natural sciences, art and art history, aviation history, cultural and technological history, anthropology, archeology, history, and music and musicology. The Press has undertaken list building in several additional areas, including ethnic, regional, and minority studies and studies of popular and material culture.

In art and art history, the Press continues to produce its own titles along with titles in collaboration with museums and other art institutions. Notable among Press books in this area were Made With Passion: The Hemphill Folk Art Collection in the National Museum of American Art by Lynda Hartigan; The West as America: Reinterpreting Images of the Frontier edited by William H. Truettner; and the inaugural four volumes in the new "Photographers at Work" series, edited by Constance Sullivan.

The publication of several important titles in FY 1991 demonstrated strong development activity in the Press's science list. Among them, aside from Wild Ice, mentioned above, were Hawks, Eagles, and Falcons of North America by Paul Johnsgard; Sarapiquí Chronicle: A Naturalist in Costa Rica by Allen Young; Heliconia: An Identification Guide by Fred Berry and John Kress (this project was the recipient of a Smithsonian Regent's Publication Fellowship); Nature Reserves: Island Theory and Conservation Practice by Craig Shafer; and Human Paleopathology edited by Donald Ortner and Arthur Aufderheide. This year also

saw the publication of the first volume in the Smithsonian Series in Comparative Evolutionary Biology, The Development and Evolution of Butterfly Wing Patterns by H. Frederk Nijhout.

Federally funded books published during FY 1991 include The Canela (Eastern Timbira) I: An Ethnographic Introduction by William H. Crocker (Smithsonian Contributions to Anthropology, no. 33); Climate and Moisture Variability in a Tropical Forest: Long-term Records from Barro Colorado Island, Panama by Donald M. Windsor (Smithsonian Contributions to the Earth Sciences, no. 29); Studies on Fossil and Extant Vertebrates from San Salvador (Watling's) Island, Bahamas by Storrs L. Olson, Gregory K. Pregill, and William B. Hilgartner (Smithsonian Contributions to Zoology, no. 508); Tule Technology: Northern Paiute Uses of Marsh Resources in Western Nevada by Catherine S. Fowler (Smithsonian Folklife Studies, no. 6); Russian Copper Icons and Crosses from the Kunz Collection: Castings of Faith by Richard Eighme Ahlborn and Vera Beaver-Bricken Espinola, editors (Smithsonian Studies in History and Technology, no. 51).

The Smithsonian History of Aviation Series experienced continued growth with the publication of several classic reprints. Other aviation titles in this series included Howard Hughes and TWA by Robert Rummel and Lightning over Bougainville: The Yamamoto Mission Reconsidered by R. Cargill Hall. In addition to these series volumes, the Press published Farther and Faster: Aviation's Adventuring Years, 1909-1939 by Terry Gwynn-Jones; A Spacefaring Nation: Perspectives on American Space History and Policy edited by Martin Collins and Sylvia Fries; and the 4-volume series United States Women in Aviation.

The social science list showed considerable development as well. New in the Smithsonian Series in Ethnographic Inquiry were Knowledge and Power in a South Pacific Society by Lamon Lindstrom; and Localizing Strategies: Regional Traditions in Ethnographic Writing edited by Richard Fardon. The Smithsonian Series in Archaeological Inquiry issued J. Daniel Rogers's Objects of Change: The Archeology and History of Arikara Contact with Europeans. In connection with the Quincentenary, the Press released Columbian Consequences: The Spanish Borderlands in Pan-American Perspective edited by David Hurst Thomas. This and the catalogue for the Smithsonian exhibition Seeds of Change edited by Herman Viola are the Press' two essential contributions to the Quincentenary observances of 1991-1992. The Press also began to address issues of global change with Breakthroughs on Hunger by Richard Harley, Sharing Innovation: Global Perspectives on Food, Agriculture, and Rural Development edited by Neil Kotler (a publication of the Office of Interdisciplinary Studies), and through the establishment of a co-publishing relationship with the International African Institute.

Finally, the Press began to develop its Museum Studies list more fully with the publication of Exhibiting Cultures: The Poetics and Politics of Museum Display edited by Ivan Karp and Steven Lavine; History Curatorship by Gaynor Kavanagh; and Archaeological Curatorship by Susan Pearce.

Smithsonian Books - Smithsonian Books publishes books for the Smithsonian Associates on subjects relating to Smithsonian collections and research interests. Marketed primarily by direct mail to the Associates and other lists, these books are also available to the general public through licensing arrangements with several trade publishers, including the sales force of the University Press Division. Some of the current titles are the 12-volume Smithsonian Guides to Historic America; Editor's Choice: An Anthology of the First Two Decades of "Smithsonian Magazine"; Lords of the Air: The Smithsonian Book of Birds; Images of America: A Panorama of History in Photographs; In the Age of Mankind: The Smithsonian

Book of Human Evolution; Exploring the West; The Smithsonian Book of Flight; The Smithsonian Book of North American Indians; and Treasures of the Smithsonian. In August 1990, Smithsonian Books published After Columbus: The Smithsonian Chronicle of the North American Indians. In addition, Smithsonian Books has successfully marketed a 60-minute video, The Magnificent Whales. The goal of the program is to continue publishing well-written, carefully researched, commercially successful, and critically acclaimed books and related videos. For FY 1991, Smithsonian Books is developing a publication on the history of the book.

Smithsonian Collection of Recordings - The Recordings Division publishes both popular recordings suitable for direct-mail marketing to Smithsonian Associates and recordings of scholarly interest. At the beginning of FY 1991, the Division released Classic Country Music, a revision of the out-of-print collection of the same name from 1981. It presents 100 songs from the 1920s to the 1980s, documenting the history of country music. Cultural historian Bill Malone wrote the companion booklet to the songs. The Division also released a Christmas album this year, featuring the baroque instrumental sounds of the Smithsonian Chamber Players and baritone Max van Egmond. The title of the collection of traditional carols is Sweet Was the Song. Planned for FY 1991 release are three compact discs showcasing jazz pianist Jelly Roll Morton and a large collection of recordings titled Folk Song America: A 20th Century Revival.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - In addition to the University Press, the Smithsonian Institution Press has two divisions financed entirely with nonappropriated Trust funds: Smithsonian Books, the direct-mail division that publishes popular books based on Smithsonian collections and research, and the Smithsonian Collection of Recordings, which produces and sells sound recordings relevant to the collections and performing arts. The sale of Trust-funded books and recordings, royalties and special publishing services provide these resources. The funds thus produced support the services required to develop, market, warehouse, and distribute records and scholarly and general interest books published in connection with the Institution's research, collections, exhibitions, and other related programs. In addition, the surplus of funds produced from the sale of books and recordings is applied to the general Trust funds of the Institution in support of its many programs and activities serving the people of the United States and the world.

OFFICE OF FOLKLIFE PROGRAMS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	11	1,012	15	865	-	423	-	202	-	412
FY 1991 Estimate	10	1,244	15	817	-	100	-	500	-	850
FY 1992 Estimate	10	977	15	817	-	100	-	600	-	875

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	10	0	10
11 Personnel Compensation.....	493	28	521
12 Personnel Benefits.....	72	5	77
21 Travel.....	60	0	60
22 Transportation of Things.....	10	0	10
23 Rent, Communications & Utilities.....	73	0	73
24 Printing & Reproduction.....	60	0	60
25 Other Services.....	416	(300)	116
26 Supplies & Materials.....	45	0	45
31 Equipment.....	15	0	15
Total	<u>1,244</u>	<u>(267)</u>	<u>977</u>

Analysis of Increase

Necessary Pay.....	33
Program Funds.....	(300)

ABSTRACT - The Office of Folklife Programs (OFF) engages in cultural conservation activities--scholarly research, professional advocacy, and public programs--that promote continuity, integrity, and equity for traditional ethnic, tribal, regional, minority, and working-class cultures both in the United States and abroad. The Office documents and interprets traditional cultural forms in collaboration with community members; disseminates information on traditional cultural forms to the general public; provides access, visibility, and representation for diverse cultures in a national museum setting; assists

traditional communities as they chart their own cultural futures; pursues cultural conservation concerns nationally and internationally; and contributes to the theories and methods of cultural conservation and representation. The Office accomplishes these goals through research projects, the Festival of American Folklife, Programas del Quinto Centenario in commemoration of the Columbus Quincentenary, symposia, community inreach and educational outreach activities, museum and traveling exhibitions, fellowship and training programs, Smithsonian Folkways Records, and the Smithsonian Folklife Studies series of documentary publications, recordings, and films. Cultural documentation associated with these activities constitute the Folklife and Folkways Archives and Collections.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Office of Folklife Programs, but reflects a decrease of \$300,000 to return one-time funding approved for FY 1991 by Congress for OFP's program on American family farming. The Institution requires \$33,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Office of Folklife Programs researches American and worldwide grass-roots cultural traditions and publishes and presents research to scholarly and public audiences through the Festival of American Folklife, Smithsonian Folklife Studies, Smithsonian Folkways Records, and other exhibits and programs. OFP conserves traditions through documentary and archival collections of music, verbal arts and material culture and the encouragement of exemplary tradition bearers. OFP cooperates with other Federal and State agencies to advance the Nation's interest in cultural continuity, conservation, and equity.

Research - Teams of American and Soviet scholars are conducting fieldwork in Eskimo, Russian, Ukrainian, Armenian, and Bukharin Jewish communities in both the United States and the Soviet Union to analyze continuity and changing traditional culture in the two societies. Other major research projects examine cultural creolization in the New World, the folklife of New Mexico, the culture of recent African immigrants, the occupational culture of the White House, the Jewish Sephardic diaspora, Arab-American culture, and Australian and Pacific Island folklife. Staff scholars continue their individual work on African-American and Hispanic culture, American Indian music, South Asian folk knowledge, Brazilian Indian culture, African narrative, and the folklife of Southeast Asian immigrants to the United States. Visiting fellows have studied Caribbean music, native-American narrative, African-American sociolinguistics, and Anglo-American ballads.

Festival of American Folklife - The Festival of American Folklife, held annually on the National Mall since 1967, educates a broad public to human cultural diversity and encourages tradition bearers by giving national recognition to their artistry. The Festival provides a national and international model for the research-based presentation of cultural traditions. The 1991 Festival will feature programs on the continuity of pre-Columbian native-American cultures, the culture of American family farming, the folklife of Indonesia, and a 25th anniversary music stage. The 1992 Festival will feature the state of New Mexico, the occupational and family folklore of the White House, the culture of the Sephardic Jewish diaspora, and a special Columbus Quincentenary program on the new forms of creolized or syncretized culture that arose in the New World as a result of the juxtaposition of diverse peoples.

Publications - The Smithsonian Folklife Studies series recently released monographs on Tule Technology and an ethnographic film on Korean Onggi Pottery. Publications celebrating the 25th annual Festival of American Folklife will include a case study of

the Festival's impact, a cookbook, a compilation of the "best" program book articles, a manual for festival production, and a Festival history by Ralph Rinzler, the Smithsonian's Assistant Secretary for Public Service Emeritus and the Festival founder. The Smithsonian Institution Press will publish three books resulting from OFP-sponsored Quincentenary symposia--Seeds of the Past: Continuities in Native American Agriculture, Seeds of Commerce: Economic and Cultural Consequences of Caribbean Plantation Society, and Seeds of Industry: Transformations of Local Culture.

Smithsonian Folkways Records - Folkways continues to produce new research-based recordings with liner notes, rerelease older material in cooperation with Rounder Records, and operate an archival cassette fulfillment operation for noncommercial recordings. Major projects include a 20-volume set of recordings on Indonesia sponsored by the Ford Foundation and done cooperatively with the Indonesian Ethnomusicological Society, a series on the "Musics of the Americas," world music videos with JVC (Victor Company of Japan, Ltd.), and recordings of the "Musics of Struggle" with Columbia Records. Recent releases on Doc Watson, Joe Hill, the music of the Georgia Sea Islands, the Hispanic music of Islenos in Louisiana, and Tuvan throat singing of central Siberia have earned critical acclaim and indicate the wide scope of current projects.

Exhibitions - OFP-produced exhibits on "Family Folklore," "The Grand Generation," and "Stand by Me: African-American Expressive Culture in Philadelphia" continue to tour museums and community centers across the United States.

Education and Public Programs - OFP will try to continue the Summer Folklore Institute for community and lay scholars. This unique program enables 12 community scholars from across the country to join with museum, academic, and technical experts to enhance their skills in documenting, preserving, and presenting folklife traditions. OFP plans to produce a comprehensive manual directed at training lay scholars using curriculum materials developed at the Institute since 1989. OFP also continues to sponsor public programs in the museums and elsewhere. In 1990, OFP sent Hawaiian hula dancers, a bluegrass band, a tap dancer, a New Orleans jazz band, and a Mexican-American duet to the Soviet Union to give Ukrainian farmers, factory workers, and city dwellers a sampling of American grass-roots culture.

Archives - The Folklife and Folkways Archives contains audiotapes, records, videotapes, photographic images and film, paper files, and books documenting folklife traditions from all parts of the United States and most regions of the world. Highlights of the collection include 40 years of world music documentation and field notes used in Folkways Records production, fieldwork reports for 25 years of the Festival of American Folklife, narratives of occupational folklife, family folklore, immigration stories, American musical traditions, and the performance traditions of Anglo-American, African-American, native-American, Hispanic, and various Euro-American groups. Recent additions include the Cook Collection of Caribbean musics and songs of struggle collected at the Festival of American Folklife.

Public Service - OFP cooperated with the State of Hawaii to remount the program on Hawaiian folklife done at the 1989 Festival in Honolulu. The State, working with OFP, plans a continuing annual festival as well as a permanent cultural center for the study and presentation of Hawaiian and Pacific cultures. OFP worked with the U.S. Virgin Islands to remount its 1990 Festival program on the islands and create a permanent installation and research center. OFP continues to work with Michigan, Massachusetts, Oklahoma, and

other states on festival and folklife support, as well as with other nations including Indonesia, Mexico, Australia, the Soviet Union, China, Pakistan, and Senegal.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Allotments, along with concessions at the Festival of American Folklife, provide funds that help support program, research, and development costs of the Festival. The Smithsonian's Educational Outreach, Special Exhibitions, and Research Opportunities Funds and the International Exchange Program help support the Summer Folklore Institute, museum exhibits, travel to scholarly meetings, and Soviet-American research.

Restricted Funds - Grants and gifts from foundations and corporations provide these funds in support of Festival programs, Folkways Records, and other projects. In FY 1990, the Ford Foundation began its three-year support of an Indonesian recording project. Smaller gifts and grants from the Music Performance Trust Funds, Inter-American Foundation, Bill and Camille Cosby, and the Grateful Dead indicate the range of support for OFP projects.

Government Grants - Various state and local governments provide these funds to support performances and programs at the annual Festival of American Folklife. In FY 1990, OFP received funding from the government of the U.S. Virgin Islands in support of its program at the Festival.

ACADEMIC AND EDUCATIONAL PROGRAMS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE*	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1990 Actual	14	839	9	483	-	98	-	175	-	2
FY 1991 Estimate	17	848	9	817	-	2	-	8	-	-
FY 1992 Estimate	17	894	9	756	-	5	-	20	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	17	0	17
11 Personnel Compensation.....	588	36	624
12 Personnel Benefits.....	120	10	130
21 Travel.....	8	0	8
22 Transportation of Things.....	6	0	6
23 Rent, Communications & Utilities.....	1	0	1
24 Printing & Reproduction.....	20	0	20
25 Other Services.....	71	0	71
26 Supplies & Materials.....	28	0	28
31 Equipment.....	6	0	6
Total	<u>848</u>	<u>46</u>	<u>894</u>

Analysis of Increase

Necessary Pay.....	46
Program Funds.....	0

ABSTRACT - Research and education are among the principal objectives of the Smithsonian. To attain these goals, the Institution promotes scholarly and academic ties with other learned institutions and offers resources to the general public as well as the academic community. Scholarly and academic ties develop and flourish through programs in higher education, symposia and seminars, and learning opportunities at the elementary and secondary levels. This line-item includes the Office of Interdisciplinary Studies (OIS),

the Office of Elementary and Secondary Education (OESE), and the National Science Resources Center (NSRC).

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the units included under Academic and Educational Programs. The Institution requires \$46,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM:

I. Office of Interdisciplinary Studies - With base funding of 4 workyears and \$177,000, the Office of Interdisciplinary Studies organizes interdisciplinary symposia, colloquia, and other events for specialized and public audiences focusing on contemporary life and global concerns. To serve as a catalyst for the exchange of ideas and expansion of knowledge among Smithsonian scholars, researchers, educators, and administrative staff, the Office also convenes Institution-wide seminars, treating relevant, often controversial disciplinary issues pertaining to research, exhibition, and education programs and policies. Many programs result in published books, as well as other educational materials for schools, universities, libraries, and the general public; a semiannual newsletter is a vehicle for disseminating information on OIS projects and interdisciplinary studies more broadly.

"Ways of Knowing," an intramural series begun in 1987, continues to meet quarterly. In addition, this past fiscal year OIS began two other ongoing intramural seminars. One is "Cultural Diversity." The bimonthly sessions take a fresh look at numerous issues concerning cultural diversity. The goal of the series is to enable Smithsonian colleagues to implement the Secretary's emphasis on exemplifying the Nation's pluralism in their work. The first seminars in the fall of 1990 explored the meaning of cultural diversity and its implications for the Smithsonian. Future programs will consider the role of planning, funding, and cooperation with other institutions.

"Research at the Smithsonian," the second new series, highlights the range of research activities of the Institution. It fosters communication among scholars and researchers in different fields and bureaus, on the one hand, and with scholars and educators, on the other, thus strengthening the links between research and public outreach. The inaugural seminar, held in October 1990, featured a presentation contrasting recent work in mapping of the Universe and the forest canopy. Future programs will continue to examine not only the variety of research enterprises but also basic questions in various areas of research that have important implications for scholars generally (e.g., research ethics, problems and opportunities in conducting research internationally, peer review, etc.).

The third annual world food colloquium, entitled "Sharing Innovation: Global Perspectives on Food, Agriculture, and Rural Development," took place on October 17, 1989, in conjunction with the awarding at the Smithsonian of the 1990 World Food Prize to Dr. Verghese Kuren. Featuring speakers from six nations of Asia, Africa, and Latin America, the colloquium focused on research and technology transfer. Two hundred people attended the all-day colloquium and 600 participated in the evening World Food Prize ceremonies at Baird Auditorium.

Harnessing the widespread curiosity and interest of students in outer space and space travel as means to excite them about the study of science and technology in general was the subject of a July 1990 science education workshop held jointly with the National Air and Space Museum. Sixty science teachers and curriculum specialists from Washington

metropolitan school systems heard presentations by Smithsonian astronomers and educators. A major outcome of the July workshop was a request by the Catholic Archdiocese of Washington, D.C., to organize a workshop for 80 of its school principals at the Smithsonian to examine models of space science education and the applications in archdiocesan instruction and curricula.

"Democracy and Rights," the Office's first video for secondary schools, received several awards for excellence in educational media. A second video, "Citizen Stories: Democracy and Responsibility in American Life," again being produced jointly with the Close-Up Foundation will focus on the community service contributions of young Americans. The video is scheduled for release in the summer of 1991.

II. Office of Elementary and Secondary Education - With base funding of 8 workyears and \$400,000, the Office of Elementary and Secondary Education is the Smithsonian's central office for formal and informal educational programs. It serves as the focal point for developing pan-Institutional policies and goals for education. In this role, the Office develops and disseminates programming that applies resources from across the Institution to the needs of elementary and secondary schools both locally and nationally. Publications, professional training for teachers, and internships for students are among the programs offered in the arts, sciences, and humanities. Charged with improving elementary and secondary education throughout the United States, OESE assists individual bureaus and offices in developing educational programs and materials with appropriate educational organizations. Outreach programs, designed to bring diverse educational and cultural communities to the Institution, receive particular attention. OESE develops museum resources for teachers and students, locally and nationally, through publications, a teacher education program, special education projects, and internships for precollege students.

During FY 1990, OESE expanded its publications program. The new Resource Guide for Teachers catalogues all of the Smithsonian's materials available for educational use, along with those produced by the Kennedy Center, the National Gallery of Art, and Reading Is Fundamental. In collaboration with a commercial publisher, OESE initiated a series of curriculum kits for high school teachers and students. In addition to lesson plans and student activities, the kits contain facsimiles of documents, other primary source materials, and audiotapes. The first four units in the series, set for publication in FY 1991/FY 1992, will present materials from the Smithsonian's music collection to enable teachers to integrate American history and music. OESE also completed the last four units of "The Peoples of the Americas," a Columbus Quincentenary project. The Office will distribute this multi-cultural preschool kit across the hemisphere, with a commercial publishing company handling printing and fulfillment. Art to Zoo, a quarterly journal for teachers, reached approximately 90,000 educators (and more than 2 million students) in more than 20,000 schools.

For the District of Columbia area teachers, OESE organized a symposium, "Word of Mouth: Storytelling and Multicultural Education." The event was attended by more than 300 teachers. OESE also inaugurated a partnership program with the D.C. Public Schools. One project, a collaboration that brings Smithsonian resources to the school's curriculum needs, will focus on different grade levels at two schools. In these "lab schools," teachers, students, principals, and Smithsonian staff will work together to improve the quality of education. In summer 1991, another project will support internships for teachers to explore ways that multi-cultural resources at the Smithsonian can be used to enhance the D.C. public schools' curriculum.

For educators across the country, OESE's Regional Workshop Program, now in its eighth year, continued to work with local communities, to serve as catalyst for strengthening relations between museums and schools. In FY 1990, OESE held regional workshops in Amarillo, Texas, and in Wilmington, North Carolina, drawing 750 teachers. In FY 1991, the Office will conduct regional workshops in Charleston, South Carolina; Wichita, Kansas; and Tallahassee, Florida. An FY 1990 evaluation of the program enabled OESE to make revisions responsive to the needs of participating communities.

As part of the Institution's response to the Rehabilitation Act of 1973, OESE has promoted efforts for Institution-wide accessibility for disabled persons at the Smithsonian. In FY 1990, the Office distributed a training manual and videotape, Part of Your General Public Is Disabled, to national and international museums. In addition, the Office provided sign language interpreters for public programs and training sessions for docents, at the Smithsonian and in museums across the United States.

In summer 1990, OESE sponsored the 15th annual internship program for graduating high school seniors. Forty students from 27 states participated. OESE staff placed students in Smithsonian curatorial divisions and other offices to work on projects in their fields of interest. In addition, OESE piloted an eight-week internship program designed to meet the specific academic and economic needs of District of Columbia Public School students.

III. National Science Resources Center - With base funding of 5 workyears and \$271,000, the National Science Resources Center is a joint undertaking of the Smithsonian Institution and the National Academy of Sciences to improve the quality of science and mathematics teaching in the Nation's schools. NSRC identifies, develops, and disseminates science and mathematics teaching materials that are imaginative, classroom tested, and scientifically up-to-date. The Center also organizes leadership development institutes for science teachers and other school system personnel. These institutes encourage the sharing of resources and help build a talent pool to staff local program improvement efforts. NSRC programs stress the involvement and collaboration of teachers and scientists and place special emphasis on increasing the numbers of underrepresented minorities and women engaged in the study of science.

The Smithsonian Institution and the National Academy of Sciences have established an advisory board for NSRC that includes representatives from several major corporations, eminent scientists, and educational leaders in the United States. The board counsels the NSRC executive director on broad policy issues and helps set priorities for the Center's program activities.

To increase the scientific and technological literacy of young children, NSRC has undertaken several projects to improve the teaching of science in the Nation's elementary schools. School systems and other organizations that are initiating these projects use NSRC's elementary science resource collection and computer information data base, which include bibliographic information and brief annotations about the materials in the resource collection. NSRC's Science for Children: Resources for Teachers, developed from the data base, includes information about the materials in the elementary science resource collection and a directory of science museums and other organizations that provide hands-on science kits and assistance to elementary school teachers.

"Science and Technology for Children" (STC) is a four-year NSRC elementary science curriculum project that is developing curriculum units for grades 1-6 in the areas of physical science, life science, earth science, and technology. STC units are simple,

inexpensive materials designed to teach science and link science to the broader elementary school curriculum of mathematics, reading, writing, art, and social studies. Teachers across the country field-test the STC units to refine and validate them.

NSRC is developing a network of teachers, scientists, science educators, and school administrators who are working to improve the teaching of elementary school science. NSRC also sponsors leadership development institutes to prepare selected teachers, science supervisors, school system administrators, and scientists to organize hands-on elementary science programs in their school districts. These institutes help school systems design effective in-service education programs, establish science materials support systems, and develop the community support needed to reform their science programs.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of Interdisciplinary Studies:

Unrestricted General and Special Purpose Funds - An annual allotment provides funds for salaries and benefits and other related administrative costs. In addition, funds support the planning and development of institutional programs, public events, educational materials, and publications, including costs for honoraria, printed materials, editorial assistance, publications, audio and video services, and travel for outside speakers.

Restricted Funds - Funds provided are in the form of restricted endowments that specify the use of donations or bequests on behalf of sponsoring organizations such as individuals, foundations, corporations, and Federal agencies. Examples of these funds are the Sergei N. Grimm Endowment, which finances research related to urban planning, and the Barrick W. Groom Endowment, which supports interbureau and interdisciplinary programs. During FY 1990, OIS received a grant from the International Life Sciences Institute Nutrition Foundation of Washington, D.C., for support of the October 1990 international food, agriculture, and nutrition colloquium held in cooperation with the ceremonies at the Smithsonian honoring the World Food Prize laureate. The Annie Laurie Aitten Charitable Trust of New York has helped fund OIS's educational videos.

II. Office of Elementary and Secondary Education:

Unrestricted General and Special Purpose Funds - The OESE's programs for young people are supported by Institution Trust funds. Internship programs for graduating high school seniors provide hands-on learning experiences for young people from the Washington metropolitan area and across the Nation.

Trust funds also support OESE's publications program as well as its Quincentenary curriculum development project on the "Peoples of the Americas." The major effort of the publishing program is a series of curriculum kits for teachers. Under an agreement with Golden Owl Press, Inc., OESE is developing and writing the materials, while the commercial publisher will be responsible for printing and fulfillment.

Restricted Funds - Corporate grants support OESE efforts for teachers. In-kind contributions from American Airlines provide the transportation for the Regional Workshop Program, which serves communities in the United States by promoting the use of museums as educational resources. A grant from Brother International Corporation supports the development, publication, and distribution of a secondary school curriculum kit.

III. National Science Resources Center:

Unrestricted General and Special Purpose Funds - An allotment from unrestricted funds provides partial funding for the core operations of the National Science Resources Center. These resources support salaries and help develop, with the assistance of the National Academy of Sciences, program initiatives to attract further support from the private sector.

INTERNATIONAL CENTER

INTERNATIONAL CENTER

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	12	853	10	598	-	252	-	64	-	107
FY 1991 Estimate	13	981	10	648	-	150	-	-	-	-
FY 1992 Estimate	13	1,044	11	709	-	150	-	-	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	13	0	13
11 Personnel Compensation.....	459	56	515
12 Personnel Benefits.....	60	7	67
21 Travel.....	29	0	29
23 Rent, Communications & Utilities.....	12	0	12
24 Printing & Reproduction.....	28	0	28
25 Other Services.....	371	0	371
26 Supplies & Materials.....	17	0	17
31 Equipment.....	5	0	5
Total	<u>981</u>	<u>63</u>	<u>1,044</u>

Analysis of Increase

Necessary Pay.....	63
Program Funds.....	0

ABSTRACT - The International Center (IC) monitors, coordinates, and enhances Smithsonian-wide international endeavors. The Center provides support for the diverse range of Smithsonian international programs through the work of several independent divisions: the Office of International Relations; the International Gallery; the Office of Quincentenary Programs; the Office of Conference Services; the Smithsonian Institution/Man and the Biosphere Biological Diversity Program; and the Office of Environmental Awareness. Through the International Center, the Smithsonian also supports international research programs such as the Council of American Overseas Research Centers.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the International Center. The Institution requires \$63,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - From its inception, the Smithsonian has been an international institution. During the course of the past 140 years, Smithsonian researchers have spanned the globe, forming unique collections and establishing a worldwide network of correspondents and collaborators. Today the Institution's international activities take place on a number of different levels, from informal scholar-to-scholar contacts to highly structured Institutional programs.

In FY 1985, the Smithsonian established the Directorate of International Activities to advance the global objectives of the Smithsonian's charter by facilitating its international research and encouraging collaborative work abroad. Following an internal program review in FY 1987, the Institution reorganized the various parts of the former Directorate of International Activities into a new International Center in April 1988. A fundamental objective of the Center is to help place the Institution's scholarly work at the service of the general public as it seeks to understand a changing international scene. Located in the S. Dillon Ripley Center of the Quadrangle Complex, the International Center provides facilities for discourse and exhibitions on a wide array of international matters. Bureau-generated programs fostered by the International Center include conferences, symposia, seminars, exhibitions, lectures, performances, film showings, and workshops. An International Activities Council, composed of the Assistant Secretaries for Research, Museums, Public Service, and External Affairs, provides oversight and policy guidance for the International Center as well as for the broad range of international programs undertaken throughout the Institution.

As part of the reorganization that established the International Center, the Smithsonian created or combined several offices, each of which provides Institution-wide support or coordinating services: the Office of International Relations, the International Gallery, the Office of Quincentenary Programs, and the Office of Conference Services. Responsibility for the individual offices of the International Center is divided among the Assistant Secretaries on the International Activities Council.

Office of International Relations - The Office of International Relations (OIR), which reports to the Assistant Secretary for External Affairs, provides basic liaison support and coordination for the international aspects of Smithsonian research and museum programs. This responsibility includes:

- supplying guidance and information on foreign affairs and international relations;
- facilitating communications and logistical arrangements for research and participation in meetings abroad;
- assisting in drafting and negotiating agreements relating to international cooperative programs;
- assisting foreign scholars and officials who visit the Smithsonian or participate in its programs in the United States;

- compiling and updating the "Profile of Smithsonian International Activities" data base;
- obtaining passports and visas for Smithsonian travelers.

The Office also manages the Smithsonian Foreign Currency Program and other international research exchange grants programs.

International Gallery - The International Gallery, which reports to the Assistant Secretary for Museums, presents exhibitions that deal with significant global topics from various disciplinary points of view or cultural perspectives. The first three exhibitions presented in the International Gallery--"Generations," "Tropical Rainforests: A Disappearing Treasure," and "Caribbean Festival Arts"--illustrate this emphasis.

The International Gallery's current exhibition is "Moscow: Treasures and Traditions," a survey of the art of Moscow from the 15th century to the present. Organized by the Smithsonian Institution Traveling Exhibition Service (SITES), the exhibition will be open through February 1991.

Office of Quincentenary Programs - The Office of Quincentenary Programs, which reports to the Assistant Secretary for Research, coordinates and supports the development of a wide range of programs and activities commemorating the 500th anniversary of Christopher Columbus's landfall in the Americas. Research relating to the Quincentenary commemoration extends to collaboration with national and international ambassadors, attaches, scholars, institutions, boards, and commissions. The resulting programs, including exhibitions, festivals, symposia, seminars, lectures, publications, films, and other educational materials provide an alternative interpretation of emergent cultures and issues following the 1492 encounters in the Americas.

In March 1990, the Office of Quincentenary Programs published the first issue of The New World, a newsletter providing information about activities at the Smithsonian and the significance of the Quincentenary commemoration. More than 10,000 individuals, libraries, and organizations received the newsletter. The Office also began planning for the Institute of the Americas, a new initiative that will facilitate scholarly exchange in the Americas.

Office of Conference Services - The Office of Conference Services (OCS), which reports to the Assistant Secretary for Public Service, coordinates logistical arrangements for conferences and seminars initiated by scholars and staff throughout the Institution. Each year the Smithsonian sponsors approximately 50 professional meetings, ranging from small workshops to major international conferences. For many years, the responsibility for handling all of the logistics of each meeting, from preconference planning through implementation and postconference wrap-up, rested exclusively with the sponsoring research or curatorial department. Faced with these additional duties, the responsible departments or bureaus often found it necessary to hire temporary coordinators. To more efficiently coordinate the planning and implementation of conferences, the Institution created a central Office of Conference Services in 1988. This Office now works with sponsoring bureaus, offering the necessary level of support for meetings on a case-by-case basis.

Support for International Research - In addition to the new offices established within the International Center, the Smithsonian continues to support other programs in international research under the International Center umbrella. Primary among these

programs are the Smithsonian Institution/Man and the Biosphere Biological Diversity Program, the Office of Environmental Awareness, and the affiliated, independent Council of American Overseas Research Centers.

Smithsonian Institution/Man and the Biosphere Biological Diversity Program - The Smithsonian Institution/Man and the Biosphere Biological Diversity Program (SI/MAB) which reports directly to the Assistant Secretary for Research is involved in biological diversity and global change on two fronts -- research and training.

Research conducted and coordinated by SI/MAB scientists, along with investigators from cooperating organizations, involves the inventory and long-term ecological monitoring of biological diversity in many distinct ecosystems. This research is conducted in biosphere reserves (designated protected areas) as well as areas that have been subjected to environmental degradation from various causes.

In developing countries, endangered ecosystems are also home to human populations whose own survival is threatened. SI/MAB is addressing the problem of meeting human needs and conserving biological diversity through professional education and training in sustainable natural resource use.

SI/MAB conducts professional education and training programs in developing countries where environmental problems have been identified by host-country resource managers. SI/MAB program scientists design and implement training programs in conjunction with the host country, international organizations, and experts to further ensure that each nation's conservation priorities are addressed. By conducting programs in the countries where the problems exist, the program participants, Smithsonian researchers, and host-country decision makers are able to work together on site toward solving environmental concerns.

Through its work, the SI/MAB Biodiversity Program has created institutional linkages with universities, governmental agencies, and the private sector in many developing countries. The United States Agency for International Development (USAID), UNESCO-Man and the Biosphere, the World Heritage Program, the World Wildlife Fund, Conservation International, the Nature Conservancy, host country governments, and private sector donors have sponsored SI/MAB activities.

Important goals of the program in FY 1992:

- Provide regional training courses in all aspects of biological diversity conservation, the management of protected areas, ecology, and agroecology;
- Arrange exchanges of scientific and technical expertise through consultations and training workshops, conduct workshops/symposia on ecological monitoring of protected areas; training in natural resources conservation, and professional training and experiences in developing countries;
- Conduct long-term ecological research in tropical rainforests in Puerto Rico and the Bolivian and Peruvian Amazon;
- Develop two educational modules to be used as educational and reference material tailored to meet the specific needs of developing country decision makers in the areas of conservation and biological diversity;

- Develop a network of scientists, educators, decision makers, and others that are linked to the SI/MAB Program in addressing global change issues on biological diversity.

Office of Environmental Awareness - Established at the Smithsonian Institution in April 1990 to address growing concern about the world's environment, the Office of Environmental Awareness (OEA) aims to gather and disseminate information about a wide range of environmental issues. OEA is administered by the International Activities Council, and works with Smithsonian bureaus and outside groups to reach the general public and professional audiences through exhibitions, publications, conferences, and workshops.

In FY 1992 OEA will initiate a three-year project on oceans conservation issues. The project will involve a public forum, symposium volume, and an exhibition. Each segment of the Oceans project will explore a wide variety of marine-related environmental issues affecting near-shore and open oceans, including ocean dumping, exploitation of natural resources, the destruction of coral reefs, and coastal development. The SI science bureaus will cooperate with OEA in planning and implementing the Oceans project, beginning with a two-day public forum scheduled for November 1991.

Council of American Overseas Research Centers - American overseas research centers are the recognized extensions of major American universities and museums and thus constitute an important channel through which current and historical research about other countries invigorates American institutions. Centers located in Italy, Greece, Turkey, Cyprus, Tunisia, Morocco, Iran, Egypt, Jordan, Israel, Yemen, India, Pakistan and Hong Kong have provided fellowship funds, access to local research resources, logistical support, liaison with host-country officials, and library and housing facilities to thousands of American academics. Their physical facilities serve as the principal point of contact for U.S. Scholars and their host-country colleagues, and publication and seminar programs disseminate research results abroad and throughout the United States. While centers differ greatly from each other in size, program and tradition, their private structure and the unbiased research produced through their sponsorship make them all respected foci of American academia in the countries in which they operate.

The Council of American Overseas Research Centers (CAORC) facilitates and coordinates the work of its 14 member institutions. Founded in 1981, the Council serves as the forum through which member centers identify and address common concerns. It fosters collaboration among research centers to strengthen academic programs and administrative procedures and sponsors international research projects. The Council undertakes the establishment of new centers in countries and regions where research exchange opportunities are lacking.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Allotments provide funds to support planning and development of research and exhibition programs for the International Center and administration of Columbus Quincentenary activities. A special purpose fund provides stipend support for international scholarly exchanges aimed at strengthening the Smithsonian's institutional linkages.

Restricted Funds - Restricted funds consist of gifts, grants, and other donations from individuals, foundations, organizations, and corporations for specific purposes. These include undertaking research abroad, supporting exchanges of researchers and

collections, mounting exhibitions, screening films, and staging performances and other public presentations in the International Center.

ADMINISTRATION

ADMINISTRATION

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	310	19,700	210	11,867	2	2,790	-	1,123	-	11
FY 1991 Estimate	377	38,028	218	15,640	2	2,140	-	156	-	-
FY 1992 Estimate	392	29,835	218	17,003	2	1,737	-	157	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	377	15	392
11 Personnel Compensation.....	13,420	1,680	15,100
12 Personnel Benefits.....	4,763	332	5,095
21 Travel.....	170	2	172
22 Transportation of Things.....	13	0	13
23 Rent, Communications & Utilities.....	82	944	1,026
24 Printing & Reproduction.....	100	0	100
25 Other Services.....	18,144	(12,788)	5,356
26 Supplies & Materials.....	761	527	1,288
31 Equipment.....	571	1,110	1,681
41 Grants.....	4	0	4
Total	<u>38,028</u>	<u>(8,193)</u>	<u>29,835</u>

Analysis of Increase

Necessary Pay.....	1,410
Program Funds.....	4,358
Disaster Preparedness.....	200
Personnel Payroll System.....	120
Administrative Services Center.....	1,000
Workers' Compensation.....	(60)
Reduction of One-time Items.....	(15,221)

ABSTRACT - Administration includes central management, planning, oversight, and review provided by the Offices of the Secretary, Under Secretary, the Assistant Secretary for External Affairs, the Assistant Secretary for Finance and Administration, General Counsel, Inspector General, and the Treasurer. The Assistant Secretary for Finance and Administration oversees a wide range of specialized administrative and technical offices, including Accounting and Financial Services, Equal Opportunity, Financial Management and Planning, Human Resources (formerly Personnel Administration), Information Resource Management, Management Analysis, Planning and Budget, Printing and Photographic Services, Procurement and Property Management, Risk Management, Sponsored Projects, and Travel Services. In addition, Facilities Services (responsible for Architectural History and Historic Preservation, Design and Construction, Environmental Management and Safety, Plant Services, and Protection Services) is included here. The Treasurer oversees the Business Management Office, Concessions, Mail Order, Museum Shops, and Product Development. Offices reporting to the Assistant Secretary for External Affairs include Congressional Liaison, Membership and Development, and Special Events. These units receive both appropriated funds and nonappropriated Trust funds for their operating expenses in approximate balance to the overall funding of the Institution. However, Trust funds entirely support some offices, such as the Business Management Office, Risk Management, and Sponsored Projects.

For FY 1992, the requested increase for administrative units totals 15 workyears and \$4,358,000. In keeping with the President's commitment to improve the management of the Government, the increase will augment the Inspector General function (3 workyears and \$327,000); allow the Office of Human Resources to keep up with the growing Institutional demand for its services (7 workyears and \$406,000); greatly enhance the management of information systems by the Office of Information Resource Management (5 workyears and \$3,572,000); and strengthen procurement system controls for the Office of Procurement and Property Management by implementing procurement-related automation (\$53,000). In addition, the Institution requires \$1,410,000 for Necessary Pay for existing staff funded in this line-item.

In addition, included in the Administration line-item, but justified in the Uncontrollable Increases section of this budget, are resources to allow the Office of Risk Management to implement an Institutional Disaster Preparedness Program (\$200,000); and support for the Office of Accounting and Financial Services related to Personnel Payroll System charges from the National Finance Center (\$120,000). Also justified in the Uncontrollable Increases section are resources to replace the Institution's Administrative Service Center (\$1,000,000).

Decreases totaling \$15,281,000 offset the requested increases. These include a \$300,000 reduction for the West Virginia Feasibility study, a \$60,000 reduction in Workers' Compensation funding, and the \$14,921,000 appropriated in FY 1991 for the John F. Kennedy Center for the Performing Arts.

PROGRAM - The Office of the Secretary, with the assistance of the Office of the Under Secretary, is responsible for planning, direction, and management. The Office of the Assistant Secretary for Finance and Administration, with the assistance of the director of Facilities Services, is responsible for financial, administrative, and facilities services.

The Office of Congressional Liaison, Office of Membership and Development, and Office of Special Events report to the Assistant Secretary for External Affairs. The Office of Congressional Liaison establishes and maintains the Institution's relationships with the

Congress; presents Smithsonian policies, programs, and plans to the Congress; and develops and clears legislative proposals and supplemental materials. It also coordinates and oversees Smithsonian participation at legislative hearings; serves as liaison with Federal agencies and organizations with related interests; and provides constituent services for the Congress and the Administration.

The Office of Membership and Development provides fund-raising support to Institution-wide priorities and selected bureau projects and programs.

The Office of Special Events plans, arranges, and oversees luncheons, receptions, and dinners associated with exhibition openings, seminars, lectures, and meetings. In addition, the Office prepares and distributes a monthly master calendar of special events.

Financial management duties rest in the Office of Accounting and Financial Services, the Office of Financial Management and Planning, the Office of Risk Management, and the Office of Sponsored Projects. These offices handle accounting, payroll, financial reporting, financial systems development, Treasury and bank relations, investment management, insurance matters, and administration of grants and contracts.

The Office of the General Counsel (OGC) advises the Smithsonian Board of Regents, the Secretary, and others on all legal matters arising from the administration of the Institution. In FY 1990, OGC provided legal oversight and counseling on such matters as the transfer of the Heye Foundation Collection to the National Museum of the American Indian; repatriation of native-American remains and artifacts; negotiations for the establishment of the Postal Museum; negotiations for the establishment of the National Air and Space Museum Extension; review of Smithsonian policies and procedures according to Department of Health and Human Services' guidelines on misconduct in science; and the establishment of debt-for-nature programs (discounted Latin American debt exchanged for local currency to fund research and conservation efforts in Latin America).

The Office of Inspector General (OIG) provides audit and investigative services to the Institution. Internal audits increase program efficiencies, economies, and effectiveness. Contract audits address claims, cost proposals, and cost and pricing data arising from contracts, grants, or other financial agreements. Investigative activities address issues of fraud and abuse related to Smithsonian programs and monies. The results of these inquiries serve as a basis for appropriate criminal, civil, or administrative remedies. In FY 1990, OIG issued semiannual reports to the Office of Management and Budget and to Congress.

The Office of the Treasurer oversees the Business Management Office, certain Institutional income-producing activities, including museum shops, mail order, product development and licensing, and concessions. For FY 1991, a one-time appropriation of \$300,000 provided resources to complete a study to determine the feasibility of locating a fulfillment center in West Virginia to house mail order and other Institutional fulfillment activities. The Business Management Office is planning and managing a sequence of studies, using outside contractors, to satisfy the requirements of the FY 1991 appropriation bill for the Department of the Interior and related agencies (Public Law 101-512). Completion of these studies is planned for FY 1992. The Treasurer's Office requests no additional funds for FY 1992.

The Office of Equal Opportunity (OEO) plans, conducts, and monitors a positive action program to ensure equality in employment practices and program activities. Two major

accomplishments during FY 1990 included incorporating affirmative action and equal opportunity into the planning and budget process and the publication of an affirmative action plan covering employment, placement, and advancement of disabled individuals. Working closely with the newly established Deaf and Hard-of-Hearing Advocacy Group, OEO helped to enhance the productivity of hearing-impaired employees by providing for sign language interpreters and assisting managers and supervisors with accommodations for disabled employees. Additionally, OEO assisted in planning the implementation of the Step Up '90 Program, which incorporates classroom training with on-the-job training for participants.

The Office of Human Resources (OHR) plans, directs, and executes a comprehensive program of human resources management for the Smithsonian's diverse employee population. Within the framework of public policy, law, and regulation, OHR provides leadership for a range of personnel and related services responsive to the work force needs of the Institution, including the processing of more than 16,000 personnel actions a year. Areas of responsibility assigned to OHR include recruitment and staffing, employee orientation, position management and classification, the merit promotion program, pay and performance systems, benefits administration, technical policy guidance, employee and labor-management relations, training and development, employee counseling, and personnel program evaluation. Additionally, OHR oversees workers' compensation, unemployment insurance, and all automated personnel processing and record-keeping systems. During FY 1990, OHR, with the Office of Information Resource Management, developed a personnel action tracking system which allows for future expansion to make it directly available to all bureaus and offices. Implementation of a tax system will begin after installation of a local area network.

The Office of Information Resource Management (OIRM) provides leadership in information technology throughout the Institution in planning, systems development, and support activities. In the planning arena, OIRM coordinated office and bureau contributions to the development of the Institution's first information resource management plan. OIRM completed a five-year communications study that will lead to the development of an integrated and modern communications network. In conjunction with pan-Institutional groups, OIRM began to define standard terminology and methods for potential automation of office and bureau functions. In the systems development arena, OIRM added new Collections Information Systems (CIS) data bases within the National Air and Space Museum, the National Museum of American Art, and the National Museum of Natural History. These efforts automated an additional 988,500 collections-related records. OIRM expanded the functions and data bases of the Smithsonian Institution Bibliographic Information System (SIBIS), which now supports more than 3,000 on-line inquiries per day. In the support arena, significant accomplishments included increasing computing capacity by approximately 300 percent and expanding communications access to distant units, including the Smithsonian Tropical Research Institute in Panama. OIRM expanded access to electronic mail to more than 1,000 staff and established connections to the international academic community.

The Management Analysis Office provides advisory assistance to Smithsonian administrative operations. The Office studies organizations, systems, and procedures; prepares and distributes management's policy statements and operational guidelines; undertakes a periodic internal controls review; oversees the forms management program; and publishes a biweekly staff bulletin.

The Office of Planning and Budget (OPB) coordinates Institution-wide planning and produces the Five-Year Prospectus. The Office formulates the Institution's Federal and nonappropriated Trust fund budgets for approval by the Secretary and the Board of Regents.

OPB prepares justifications for approved budgets for submission to the Office of Management and Budget and to Congress and subsequently interacts with each on related matters. OPB monitors established budgets to ensure that spending plans advance planning goals and comply with pertinent limitations. During FY 1990, OPB activities emphasized planning improvements, better management information, and implementing initial phases of a new personnel cost projection system.

The Office of Printing and Photographic Services (OPPS) has the broadest Smithsonian-wide customer base of any service organization in the Institution. The OPPS photographic mission consists of three categories: the taking of photographs, the processing of photographic materials, and the archival preservation of photographs. The Office has developed one of the finest environmental storage units anywhere in the world. By combining these advanced storage capabilities with new video disc technologies, this unit will pioneer many techniques for the preservation of photographic images while making them simultaneously and universally available.

As the principal acquisition office for the Smithsonian Institution, the Office of Procurement and Property Management (OPPM) contracts for most goods and services that support Smithsonian programs, projects, and facilities. In addition, the Office coordinates major Smithsonian projects, awards contracts, and follows through until contract completion and acceptance by the Smithsonian.

The Travel Services Office (TSO) provides the most efficient service to Smithsonian travelers at the most economic rates available. TSO uses special fares and rates as well as government discounts for airlines, hotels, and car rentals to the maximum extent possible. During FY 1990, TSO provided support to the various committees and task forces associated with the new National Museum of the American Indian. In addition, more than 30 conferences and workshops received domestic and international travel assistance.

During FY 1990, the Office of Facilities Services (OFS) created special teams to investigate several issues affecting quality and timely service, human resources, and equal opportunity. The results of these efforts will contribute to Institutional goals to increase professionalism and productivity, heighten awareness of and sensitivity to cultural diversity, and expand opportunities for minorities and women in professional and managerial positions. It also will improve tracking and sharing of information on facilities management activities and improve the quality of the physical plant.

The Office of Architectural History and Historic Preservation (OAHP), part of Facilities Services, researches the architectural history of Smithsonian buildings and publishes books and scholarly articles based on that research. The Office has oversight responsibility for the Institution's obligations in historic preservation, including design review of construction projects. OAHP also creates the historical ambiance appropriate to the architectural style of the two original Smithsonian buildings through its management and use of the Smithsonian Furnishings Collection.

The Office of Environmental Management and Safety (OEMS), part of Facilities Services, monitors occupational safety and health and reviews, disseminates, and implements the requirements of all new fire, safety, health, and environmental laws, regulations, and standards. In FY 1990, OEMS completed comprehensive fire, safety, and environmental program evaluations at 21 Smithsonian facilities. In addition, OEMS conducted a radiation survey and developed a formal construction safety program. OEMS developed a waste minimization program to reduce hazardous waste generation and resultant disposal costs.

EXPLANATION OF PROGRAM INCREASE - For FY 1992, the requested increase for administrative units totals 15 workyears and \$4,358,000 as detailed below:

<u>ACTIVITY</u>	<u>FTE</u>	<u>AMOUNT</u>
Office of Inspector General	3	\$ 327,000
Office of Human Resources	7	406,000
Office of Information Resource Management	5	3,572,000
Office of Procurement & Property Management	0	53,000

Office of Inspector General (3 workyears and \$327,000) - The requested increase will provide OIG with an Automatic Data Processing (ADP) audit capability, administrative support for audit and investigative functions, and additional office space for these activities.

OIG requests two positions (2 workyears and \$105,000) for senior auditors with experience in ADP auditing and related support costs (\$26,000). In recent years, the Smithsonian has increasingly computerized administrative and program activities. Audit resources, with technical knowledge of ADP systems, are not available to review and monitor ADP systems during development and maintenance steps. These resources will permit the Office of Inspector General to devote full-time audit coverage to the Smithsonian ADP systems.

The Office of Inspector General also seeks additional administrative support. At this time, two Trust-funded positions provide administrative support for OIG's 18 professional positions. The requested position (1 workyear and \$34,000) and support costs (\$12,000) are imperative to produce OIG audit and investigative reports and operate and maintain various OIG data bases. This administrative position will allow OIG professional personnel to commit additional attention to audit and investigative activities.

To meet office space requirements, OIG also seeks \$150,000 to expand its office space. Current OIG operations have fully utilized assigned office space, which has become increasingly inadequate. There is now little room for records and property retained during OIG investigations, for audit work papers and reference documents, or for interviews conducted by OIG investigators. In addition, office space does not exist for projected staff additions. The requested increase will permit OIG to properly serve in the administration of the Institution.

Office of Human Resources (7 workyears and \$406,000) - The requested resources will supplement the currently deficient personnel services and capabilities of the Office of Human Resources and bring them into better alignment with the staffing growth that has taken place throughout the Institution during the 1980's. These staff resources will enable the Office to be more responsive to requests for necessary personnel transactions and advice without the extended delays that increasingly frustrate deserving employees and prolong the period that positions remain vacant.

Enhanced personnel services (7 workyears and \$305,000) will address the following urgent needs. One full-time recruiter will target minority sources for affirmative outreach efforts, develop methods for identifying and attracting qualified job candidates, and maintain a usable, up-to-date applicant supply file. Two policy/program specialists will develop and implement human resource management programs to address a variety of the Smithsonian's most critical contemporary needs. Four personnel service specialists will

join the current operations staff to ensure that day-to-day technical assistance needs do not go unmet.

At present, many of the Office's professional staff have no access to a personal computer or printer. In addition, the Office requires new word-processing software in order to be compatible with most other Smithsonian offices. A computer equipment and software purchase/replacement program (\$75,000) will enable more timely and efficient personnel action processing, report generation, and ultimately electronic forms applications. This request also includes funding (\$26,000) to expand the training of staff in personal computer-applications and other essential personnel specialty areas.

The National Academy of Public Administration's report of May 1989 concluded that each of the above elements should be part of a plan to develop and improve the Smithsonian's human resource system. In addition, the Institution's museum and research directors have strongly endorsed the need for additional staff in OHR. This request will assure that OHR has the necessary resources to meet the needs of the Institution.

Office of Information Resource Management (5 workyears and \$3,572,000) - The Smithsonian Institution is far behind its counterparts in academic, research, and cultural institutions in terms of its use of computing and communications technologies. The Institution has made only limited progress in updating its computer systems over the past several years. It is largely unable to take advantage of advanced technology to foster more effective information processing. Using today's (and tomorrow's) technologies to become more efficient requires a significant long-term investment, well beyond the Institution's available base funding. Like other invisible program infrastructure needs, the requirement for additional computing resources does not constitute a new or growing program. Instead, it represents an essential tool to carry out current programs according to contemporary standards. Addressing the computing "infrastructure gap" is central to today's research, education, and administrative objectives and lays the foundation for the future. The components of this request follow.

Central Computer Support (4 workyears and \$3,500,000) - These resources satisfy a combined strategy for addressing the requirements of the Smithsonian's central computing center and of its library and archival functions. A central mainframe computer now supports the Institution's collections and research activities. Current projections indicate that this facility will reach full capacity this year. The first phase of the new Smithsonian-wide Accounting and Management Information System will come on-line during FY 1991, putting additional demands on the mainframe's capacity.

A separate library and archival computer system is currently beyond its useful life and is no longer fully supported by the vendor. A replacement system is critical to continue automated library and archival functions, including cataloguing, serials control, and circulation.

The Institution has concluded that it must replace the central mainframe with a newer generation model with much greater capacity to meet its rapidly increasing programmatic and administrative requirements. At the same time, the current central mainframe can serve as the successor hardware for the present library and archival system. This strategy will not only save a considerable investment on new hardware for library and archival purposes, but will also permit compatibility with the central operation. The other potential cost savings is that each system can serve as the backup for the other. This replacement strategy will also improve the performance of the Smithsonian Institution Library's current

automated functions and enable linkage to INTERNET and to future implementations of the National Research and Education Network (NREN), thereby strengthening public access.

The Institution requires \$3.5 million to accomplish its objective and meet its increasing computing needs. An amount of \$1,946,000 covers the cost of a new mainframe computer and related software and peripherals as well as the addition of two computer operators (2 workyears and \$54,000). The remaining \$1,500,000 will purchase software and peripherals, in combination with the used mainframe, for the replacement library and archival system. This amount also allows for two computer specialists (2 workyears and \$96,000) to develop, implement, and maintain the replacement library and archival system.

Combining strategies for these diverse requirements is an efficient and effective way to use resources. Reuse of the existing mainframe computer for a new library and archival system averts the need for two major computer purchases, with an estimated cost savings of approximately \$1 million. Without new and expanded computing capacity for the Smithsonian Institution Libraries, the Institution faces serious degradation of its library and archival services and its ability to meet its public mandate.

Management and Development (1 workyear and \$72,000) - The Smithsonian Institution, like other large, complex organizations, increasingly depends on a variety of computer systems to carry out its various responsibilities. Wider interactive user audiences typify modern systems, thus requiring appropriate controls, standards, procedures, and policies to ensure that access is restricted to appropriate individuals. An ever-increasing menace from computer "hackers" threatens to degrade or otherwise corrupt information and even deny use of systems and the information they contain. The Computer Security Act of 1987 (Public Law 100-235), outlines Federal Executive Agency responsibilities related to computer security. The Smithsonian is not a Federal agency as defined by the statute; however, it recognizes the wisdom of such laws and strives to comply with the spirit if not the letter. Various audits and internal controls reviews have also pointed to weaknesses in the area of computer security.

From a Smithsonian perspective, several of its automated systems require more stringent attention to security, since they involve control of the Institution's financial, personnel, and other capital assets. Currently, a coordinated set of security policies, procedures, and standards covering Smithsonian computer systems does not exist. Existing security provisions are sporadic and inadequate.

The requested position (1 workyear and \$68,000), while filling a need within the Office of Information Resource Management, has Smithsonian-wide applicability in providing policy, standards, and guidance in computer security and the closely related area of contingency planning. The position and associated support costs (\$4,000) requested will allow the Institution to address this documented deficiency.

The effect of not receiving this funding would be continuation of the present ad hoc efforts to address information security within the limitations of present staff and their available time.

Office of Procurement and Property Management (\$53,000) - The Institution has invested much time, effort, and money into office automation to simplify and expedite production of contracts; improve management information, including requisition status reports and records maintenance and control; enable quicker reporting and better accounting data; and strengthen internal controls. Further, this effort will eventually interface with the new

Smithsonian-wide Accounting and Management Information System. Yet overall transaction processing time (i.e., from requisition to payment) has not declined substantially, because of the disproportionate time it now takes for information to flow among the Office of Procurement and Property Management, requisitioning offices, receiving activities, and the Office of Accounting and Financial Services. To aggravate this, records show an increase in transactions processed by OPPM. In FY 1990, the total volume of transactions grew 16 percent over FY 1989.

Most transactions currently involve paper documentation. An electronic forms transfer system offers a cost-effective solution both to reduce paper flow and expedite handling of procurement transactions. An internal task force is now planning the method of implementation. The requested funding of \$53,000 will provide the hardware, software, and contracted services for this system.

The electronic forms transfer will enable a more cost-effective method of procuring goods and services that underpin Smithsonian programs. As an acknowledged management improvement, it will greatly facilitate the smooth and efficient presentation of museum programs to the general public.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funding of these centralized services from both appropriated and nonappropriated sources produces a ratio of Federal and Trust-fund administrative support approximately in proportion to the operating program expenditures of the Institution as a whole. The amounts shown under Unrestricted General Funds represent administrative expenditures for those units that are organizationally under Administration. Other units that receive administrative allotments appear in the appropriate section of the budget request. For example, administrative costs for the Smithsonian Astrophysical Observatory appear within its Nonappropriated Trust Funds section. This section also includes expenditures for producing, distributing, and marketing photographic material and slide sets and funds to help defray the costs of the Office of Printing and Photographic Services. The Office of Equal Opportunity receives a program allotment that supports community outreach through exhibits and publications specifically aimed at women and minorities. Funds also provide for the identification and implementation of new financial and administrative management systems. Special Purpose funds include gifts received through unrestricted bequests that, in accordance with the Bylaws of the Board of Regents, subsequently transfer to the endowment. Anticipated expenditures in the Special Purpose category include support of studies in ornithology, computer conversion costs, a computer cost center, and small amounts used for legal seminars and research.

Restricted Funds - This category includes foundation grants for scientific research publications and general research projects and expenditures against investment income earned on endowment bequests.

FACILITIES SERVICES

OFFICE OF DESIGN AND CONSTRUCTION

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	42	2,579	9	382	-	4	-	-	-	-
FY 1991 Estimate	48	3,072	9	449	-	-	-	-	-	-
FY 1992 Estimate	48	3,263	9	449	-	-	-	-	-	-

* FTE = Full-time equivalent
 **FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	48	0	48
11 Personnel Compensation.....	2,100	159	2,259
12 Personnel Benefits.....	351	32	383
21 Travel.....	35	0	35
22 Transportation of Things.....	1	0	1
23 Rent, Communications & Utilities.....	25	0	25
24 Printing & Reproduction.....	91	0	91
25 Other Services.....	319	0	319
26 Supplies & Materials.....	90	0	90
31 Equipment.....	60	0	60
Total	<u>3,072</u>	<u>191</u>	<u>3,263</u>

Analysis of Increase

Necessary Pay.....	191
Program Funds.....	0

ABSTRACT - The Office of Design and Construction (ODC) provides architectural, engineering, and facility planning services to support the development, operation, maintenance, repair, and improvement of the Smithsonian's physical plant. These support services include short- and long-range feasibility analyses, master plans, design and engineering studies, design development, contract document preparation, project management, contract administration, and preparation of cost estimates for budgets and construction.

The staff reviews contracts, plans interior design and space renovations, provides technical consulting support, and operates construction field offices.

The Smithsonian is not seeking additional funding for FY 1992 programmatic increases for the Office of Design and Construction. The Institution requires \$191,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - The Office of Design and Construction provides the facilities planning and project management expertise necessary to plan, design, construct, and administer all construction, renovation, restoration, and repair projects for the Smithsonian buildings, museums, and research facilities. These facilities are located in the Washington metropolitan area, Arizona, Florida, Maryland, New York City, and Panama. The Office administers:

- ongoing repair projects to existing buildings, generally accomplished within one or two funding years;
- major projects involving cyclical renovation or replacement of building equipment or components, generally accomplished over many years, both because of cost and to avoid major disruption of activities;
- projects primarily driven by need to provide adequate and appropriate space for ongoing programmatic activities rather than by repair or preservation considerations, that include change or improvements to existing space or minor additions, and that cost less than \$1 million and have little or no impact on operating cost;
- construction or acquisition of new space with a project cost of more than \$1 million, which constitutes significant facilities expansion or requires significant additions to operating resources.

Facilities Planning - The facilities planning staff provides short- and long-range facilities planning services that require preparing master facility plan studies and related analyses and coordinating funding and construction strategies for overall Repair and Restoration (R&R) and Construction programs. Professional planners prepare detailed preliminary facility requirements data for future-year projects. During the planning process, the staff provides a forum and guidance for establishing construction priorities and develops strategic plans. Most recent examples of facilities planning work include:

- a conceptual option for space allocation for the George Gustav Heye Center in New York City;
- a program update, massing study, and preliminary cost estimate for a multi-phased Suitland collection storage and research center that will allow the Smithsonian to address its storage needs well into the next century;
- the start of a Smithsonian-wide facilities inventory that will serve as a planning tool to identify existing resources, deficiencies, and future needs, enabling the Smithsonian to improve control over expensive facilities construction, leasing, and relocations.

Project Management - The Office provides project management assistance to Smithsonian bureaus and offices. The project managers and support staff provide professional and technical support to guarantee a safe, proper environment for visitors, staff, and the National Collections. Through the Repair and Restoration program, the staff works to preserve, repair, rehabilitate, and correct code violations of an aging physical plant. Through the Construction program, the staff works to design and construct new facilities. The staff also provides professional assistance to bureau directors on exhibition construction and space modification projects. These services include:

- providing careful orchestration of planning, design, and construction activities at specific bureaus and offices;
- preparing contract documents including designs, specifications, and cost estimates for construction projects;
- monitoring construction activities to ensure strict compliance with contract requirements and all safety and health standards;
- reviewing exhibit designs prepared by museum staffs to ensure compliance with safety, health, and accessibility requirements and compatibility with existing building systems.

Repair and Restoration, Construction, Salaries and Expenses appropriations, and Trust funds support various facilities and exhibition projects. ODC's professional staff administers construction contract services and architectural engineering service contracts. In addition, the staff reviews exhibit installation projects and supervises interior design and space related projects. Recent major repair, restoration, and construction projects include:

- additions and alterations to the Freer Gallery Building, including the link to the Quadrangle;
- window replacement and roof and facade repairs at the Smithsonian Institution Building;
- construction of the Tupper Laboratory and Conference Center at the Smithsonian Tropical Research Institute (STRI) in Panama;
- major construction at Barro Colorado Island in Panama;
- construction of the base camp at the Whipple Observatory;
- roof replacement at the Air and Space Building and the Cooper-Hewitt's Carnegie Mansion;
- replacement of PCB-contaminated transformers;
- removal of asbestos from various facilities;
- repairs in various buildings and museums, including fire protection, improved disabled access to buildings, and health and safety improvements.

During FY 1990 about 170 projects were active in ODC. About 40 were administered as construction contracts and the remainder were in a planning or design phase. In addition, staff reviewed about 100 exhibit installation projects.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds provide salary and partial support costs as ODC services both Trust and federally funded programs.

OFFICE OF PROTECTION SERVICES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	657	23,044	-	21	-	-	-	-	-	-
FY 1991 Estimate	800	26,190	-	8	1	87	-	-	-	-
FY 1992 Estimate	801	28,103	-	23	1	97	-	-	-	-

* FTE = Full-time equivalent
 **FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	800	1	801
11 Personnel Compensation.....	17,570	1,524	19,094
12 Personnel Benefits.....	3,587	383	3,970
21 Travel.....	60	0	60
22 Transportation of Things.....	3	0	3
23 Rent, Communications & Utilities.....	50	0	50
24 Printing & Reproduction.....	10	0	10
25 Other Services.....	3,884	0	3,884
26 Supplies & Materials.....	362	6	368
31 Equipment.....	659	0	659
42 Insurance Claims and Indemnities.....	5	0	5
Total	<u>26,190</u>	<u>1,913</u>	<u>28,103</u>

Analysis of Increase

Necessary Pay.....	1,873
Program Funds.....	40

ABSTRACT - The Office of Protection Services (OPS) protects the visitors, staff, collections, and facilities of the Smithsonian Institution by providing guard, physical security, and medical services.

For FY 1992, the Office of Protection Services requests an increase of 1 workyear and \$40,000 to hire a technical review analyst for security systems planning and

management. The Institution requires \$1,873,000 for Necessary Pay for existing staff funded in this line-item.

PROGRAM - OPS is a security and health services support organization responsible for protecting the collections, facilities, and other property of the Smithsonian from damage, destruction, or loss from any cause and for creating and maintaining a safe and healthy environment for visitors and staff. Included within this broad mission is a responsibility for determining the protection requirements of Smithsonian facilities and meeting these requirements by operating a guard force; procuring, installing, and maintaining an alarms network and responding to its signals; installing and maintaining locks and other security hardware in Smithsonian facilities; planning and providing occupational health services for employees and taking appropriate action to eliminate health hazards from the workplace; and providing emergency medical treatment for the injuries and sudden illnesses of visitors and staff. To accomplish its mission, OPS employs a large force of security officers and a staff of administrators, training specialists, alarm systems specialists and technicians, investigators, museum security specialists, a medical officer, nurses, and emergency medical technicians.

The security force operates 24 hours a day, every day of the year, to patrol and provide access control at the major Smithsonian facilities in and near Washington, D.C., the Cooper-Hewitt Museum and the National Museum of the American Indian in New York City, and the Smithsonian Tropical Research Institute in Panama. Uniformed guards, plainclothes officers, and K-9 (canine) officers are stationed at entrances and patrol galleries inside and grounds around Smithsonian buildings day and night. They respond to emergencies and operate and respond to the signals of an alarms network that covers all Smithsonian facilities.

An expansive network of locks, alarms, and other devices is necessary to control access to and protect Smithsonian facilities and property. OPS advises curators and exhibitors on appropriate security systems and plans, designs, acquires, installs, and maintains security systems in Smithsonian facilities in the Washington metropolitan area. In addition, OPS provides advice on security systems for facility, exhibit, and collection protection to Smithsonian organizations outside Washington and to museums, libraries, churches, historic sites, and corporations.

OPS has developed the Smithsonian Institution Proprietary Security System (SIPSS) to provide complete internal control of the equipment used in and the information provided by its security systems, to improve the timeliness of OPS response to the signals received through its alarm installations, and to control the costs associated with operating a security system. OPS has completed the SIPSS installation in all Washington-area facilities and will convert the remaining security systems to SIPSS during the next year.

OPS conducts or arranges for security management surveys to determine protection requirements of Smithsonian facilities, investigates alleged and actual violations of the law occurring on Smithsonian premises, and escorts many shipments of valuable objects to and from the Smithsonian. The investigative program resolves collection losses, thefts, and other internal matters referred to the Office. Similar assignments affecting the Smithsonian's retail operations are also referred to OPS for advice and investigation. Successful resolution of collections losses and thefts requires coordination with the United States Attorney, the Department of Justice, and the court system.

OPS provides occupational medicine services and an Employee Assistance Program (counseling and referral) for Smithsonian employees. The medical officer, occupational health nurses, employee assistance counselors, and emergency medical technicians assist in identifying and eliminating hazardous work environments, monitor the health of employees exposed to certain occupational hazards, provide first aid for on-the-job injuries of employees, and conduct programs for a drug-free workplace in the Smithsonian Institution. Major program elements include medical surveillance of employees exposed to specific hazards (e.g., asbestos, loud noise, and certain toxic chemicals); medical evaluation of individuals in jobs with hazardous duties or functions (e.g., underwater diving); employee counseling and referral for treating substance abuse and emotional problems; training for management personnel in how to deal with impaired employees; routine medical treatments (e.g., allergy shots and dressing changes) prescribed by an employee's private physician to reduce the amount of time employees must spend away from the workplace for simple health care; immunizations for Smithsonian employees on official travel orders; health education; CPR and first aid training for employees; major disease screening programs; and monthly inspections of all Smithsonian food service facilities. The medical officer represents the Smithsonian on committees of scientific societies, including local and national occupational medical organizations and specialized groups engaged in Institutional concerns such as the medical aspects of scientific diving. OPS provides occupational medicine services at the Smithsonian's Washington area facilities and at major remote facilities.

OPS will continue to develop the occupational health programs it is already operating and will undertake additional required and recommended programs when the space needed to administer these programs becomes available. The programs OPS expects to grow most rapidly are employee assistance counseling, drug testing, monitoring of employees exposed to toxic chemicals, screening tests for major preventable/treatable diseases, and preemployment physicals for certain high-risk positions.

EXPLANATION OF PROGRAM INCREASE: For FY 1992, the Office of Protection Services requests an increase of 1 workyear and \$40,000 to hire a technical review analyst for security systems planning and management.

Security Systems Planning and Management (1 workyear and \$40,000) - The OPS Security Systems Division coordinates plans for interior design and space renovations. The Division provides technical support to review construction projects to ensure that appropriate security devices and measures are incorporated into the designs of exhibits and other space renovations. Ensuring that the security systems meet proper standards will enhance the safety of Smithsonian visitors and staff and the security of the collections.

OPS will use the requested resources to hire a technical review analyst (1 workyear and \$34,000) to assist in planning and managing electronic security requirements in exhibits and renovations projects. The employee will review proposed projects, provide detailed scopes of work to be accomplished under contract, and oversee installation of security systems and devices. The position will enable OPS to ensure that necessary electronic security requirements are incorporated into construction and renovation plans and are properly and appropriately installed. The position will also oversee the installation of SIPSS hardware and software. OPS will use additional funding (\$6,000) to purchase supplies and materials including computer hardware.

The Security Systems Division has been short-staffed for the past five years. OPS has diverted resources from other critical activities to review plans for an increasing number of projects such as the National Museum of the American Indian in New York City

and on the Mall. A planning and management person will ensure that these plans include appropriate electronic security devices.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by an allotment and by reimbursements for the use of guard services at special events and lectures at Smithsonian facilities. These funds are used to purchase supplies, materials, and equipment.

OFFICE OF PLANT SERVICES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
	FTE*	Amount	General		Special		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1990 Actual	469	40,262	6	786	1	193	-	1	-	-
FY 1991 Estimate	492	42,833	6	1,235	7	566	-	3	-	-
FY 1992 Estimate	492	44,942	6	1,233	7	567	-	2	-	-

* FTE = Full-time equivalent

**FTP = Full-time permanent

Detail of Federal Funding

	<u>Base FY 1991</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1992</u>
FTE Allocation.....	492	0	492
11 Personnel Compensation.....	13,520	938	14,458
2 Personnel Benefits.....	2,401	201	2,602
21 Travel.....	23	0	23
22 Transportation of Things.....	1	0	1
23 Rent, Communications & Utilities.....	23,222	970	24,192
24 Printing & Reproduction.....	1	0	1
25 Other Services.....	643	0	643
26 Supplies & Materials.....	2,689	0	2,689
31 Equipment.....	326	0	326
Collections Acquisition.....	6	0	6
42 Insurance Claims & Indemnities.....	1	0	1
Total	<u>42,833</u>	<u>2,109</u>	<u>44,942</u>

Analysis of Increase

Necessary Pay.....	1,139
Utilities.....	860
Rent.....	110

ABSTRACT - The Office of Plant Services (OPlants) operates, maintains, and repairs 14 museum and art gallery buildings and many other work and collection storage areas located in the Washington metropolitan area and New York City. In support of research, exhibitions, education, and other public programs, OPlants provides utilities,

transportation, mail services, exhibits renovation, and other program services. OPlantS also provides technical service and assistance to several Smithsonian units located outside the Washington metropolitan area, including the Smithsonian Tropical Research Institute in Panama, the Fred Lawrence Whipple Observatory in Arizona, and the Smithsonian Environmental Research Center in Edgewater, Maryland.

The Office of Horticulture, South Group Facilities Management, and Quadrangle Facility Management are also part of this line-item. The Office of Horticulture maintains the Smithsonian grounds and a greenhouse-nursery to service the Institution's horticultural needs. South Group Facilities Management offers a full range of maintenance services for the Arts and Industries Building and Smithsonian Institution Building. Quadrangle Facility Management offers similar services for the Arthur M. Sackler Gallery, the National Museum of African Art, and the S. Dillon Ripley Center, located in the Quadrangle Complex.

For FY 1992, the Institution requires \$1,139,000 for Necessary Pay for existing staff funded in these line-items. An increase of \$970,000 justified in the Uncontrollable Increases section of this budget will support the Institution's utilities and rent.

PROGRAM:

I. Office of Plant Services (OPlantS) - The Office of Plant Services operates, maintains, and repairs more than 5 million square feet of museums and art galleries in Washington, D.C., and New York City. The Office maintains building interiors and exteriors, elevators, escalators, mechanical and electrical equipment, and lighting and refrigeration components. It also oversees emergency property repairs. The Office provides trade and craft support for the Institution, including plumbing, electrical, woodcrafting, painting, and plastering efforts. In addition to supporting Smithsonian research projects and office relocations and modifications, OPlantS supports exhibition installations and public events throughout all Smithsonian facilities.

The Office uses an automated Facility Monitoring System to continually analyze and control mechanical equipment throughout the Institution. This system monitors areas of buildings requiring stable humidity and temperature control and alerts a control center when deviations from normal conditions occur. Because this automated system identifies abnormalities so quickly, immediate adjustments avoid costly repairs and prevent damage to the National Collections.

The Office has an automated Preventive Maintenance System to ensure increased reliability, decreased repair costs, and longer life by scheduling regular preventive maintenance on building operating systems. This system schedules preventive maintenance for fire prevention systems, guard stations, and automatic lighting as well as roofing systems and heating, ventilating, and air conditioning systems in all museums and the Smithsonian Environmental Research Center.

The Office maintains and operates a supply warehouse to stock and distribute frequently used building maintenance and custodial supplies and materials. To obtain the best prices, OPlantS purchases materials in bulk and stores them for future distribution. In addition to supporting office relocations and modifications, OPlantS offers packing, crating, warehousing, and moving services for museum objects and collections. The Office also provides a full range of transportation services for the Institution, as well as mail services and postage monitoring.

In FY 1990, OPlantS provided program support to museums and other Smithsonian organizations, including preparation of space for 95 new exhibitions. Notable among these exhibitions were "Dinamation" and "Underwater Sea Life" at the National Museum of Natural History; "Yoruba" at the National Museum of African Art; "Culture and Commentary" and "Francis Bacon" at the Hirshhorn Museum and Sculpture Garden; "Information Age" at the National Museum of American History; "Tiffany" at the Renwick Gallery; and "Igor Sikorsky" and "Flight in the Arts" at the National Air and Space Museum. OPlantS craftspeople renovated office space to accommodate changing program needs in various locations; completed energy conservation projects at the Air and Space, Anacostia, and Natural History buildings; and continued installing automated exhibit lighting systems. The building inspection program identified and estimated additional facility repair needs to be performed by OPlantS and/or contract personnel under the Repair and Restoration of Buildings program. Unfunded requirements identified by the inspection program form the basis of the annually compiled backlog of essential maintenance and repair.

The Potomac Electric Power Company again commended the Office of Plant Services for aggressive participation in its electrical Load Curtailment Program.

II. Office of Horticulture - The Office of Horticulture (OH) applies the discipline of horticulture in educational, scientific, research, exhibition, and display activities throughout the Smithsonian. There are more than 100,000 plants and artifacts in OH's collections, and much of the plant material is used in Smithsonian museum interior and exterior displays. OH also uses garden furnishings from the collections and plants propagated and grown at the Smithsonian greenhouse-nursery in landscape design. Grounds management personnel research, install, and maintain the plants. OH units extensively use sources within the Horticulture Branch Library to support these programs. Exterior pest control, removal of trash from the gardens, and snow and ice removal are also the responsibility of this office.

In FY 1990, the Women's Committee of the Smithsonian National Associates Program provided a grant to institute a new computerized engraving system for plant identification labels and interpretive signs. The new labels have proved to be a successful addition to the education and fulfillment of the visitors.

The Office of Horticulture has expanded its mission by offering internships to area and regional university students interested in horticulture or landscape architecture. Through this program, the OH employed three horticulture students from the University of Maryland and one student from Murray State University. The benefits and knowledge gained from this program contributed to their knowledge of adapting the science of horticulture to a museum setting.

OH is currently testing, with intent to purchase, a computerized irrigation system that will enable the OH to monitor all Smithsonian irrigation systems on-line. This system will permit the OH to have a running tally of water usage by building. By monitoring water usage, the system will identify leaks in individual lawn irrigation zones. Upon identifying a leak, the system will automatically close down the zone identified as using too much water or malfunctioning, then advance to the next zone. All data is stored and available in a central computer. The acquisition of this program will enable the Grounds Management Division personnel to control and manage water costs, and identify problems associated with the system.

OH gardeners installed three seasonal plantings in the Mary L. Ripley and Enid A. Haupt gardens. OH used more than 125,000 spring bulbs, pansies, ornamental cabbage and kale, flowering annuals, and tropical plants in the flower beds and special gardens in over 82 acres of grounds managed by the OH.

The staff made progress in correcting soil composition and compaction in the Enid A. Haupt Garden. OH improved percolation in this roof-top garden through such techniques as mechanical aerification, vertical borings filled with Turface to improve water movement; and natural aerification through the introduction of earthworms.

OH focused special emphasis on the older trees and shrubs on the Smithsonian grounds, particularly the large elms along Constitution Avenue. Spraying, cabling weak branch crotches, and pruning of these valuable assets to our environment to help prolong their lives. Safety issues were also addressed by elevating limbs for clearance, and pruning to improve illumination of grounds.

During FY 1990, the Grounds Management Division replaced many trees that had died due to disease, insect infestation, or mechanical damage. Notable among trees replaced were 17 Mount Fuji flowering cherry trees (Prunus subhirtella) in the Hirshhorn Sculpture Garden, four American elms (Ulmus Americana) along Constitution Avenue, and new plantings of Chinese elms (Ulmus parvifolia) on the National Air and Space Museum restaurant terrace.

III. South Group Facilities Management - South Group Facilities Management is responsible for cleaning, minor maintenance, labor services, lamping, craft services, shipping and receiving, and special events. This office contracts for trash removal and pest control and coordinates construction projects, office moves, and cleaning associated with renovation projects located in the Arts and Industries and Smithsonian Institution buildings.

IV. Quadrangle Facility Management - Quadrangle Facility Management provides a wide variety of support services to the Education Center of the S. Dillon Ripley Center, Museum of African Art, Arthur M. Sackler Gallery, Resident Associate Program, National Associate Program, Smithsonian Institution Traveling Exhibition Service, and International Center. These services include space scheduling, custodial labor, rigging, minor maintenance, lamping, shipping and receiving, and related services. The automated scheduling and maintenance program greatly enhances the reliability and effectiveness of housekeeping, public events, and related support services.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds:

I. Office of Plant Services - Allotments provide unrestricted Trust funds to cover salaries and support costs in the Office of Plant Services. These allotments also provide the Trust-fund share of space rental costs for administrative activities located at L'Enfant Plaza.

Reimbursements from Trust-funded client organizations provide Special Purpose Funds for support services offered by OPlantS. These funds purchase supplies, services, and equipment.

II. Office of Horticulture - Reimbursements from Trust-funded client organizations provide support to OH through the purchase of supplies, services, equipment, and landscaping material.

III. South Group Facilities Management - The primary source of nonappropriated funds is from reimbursements for special events. The amount varies depending upon the nature of the event and the requirement for overtime. The funds have been used to purchase special event equipment, computer hardware, and software.

IV. Quadrangle Facility Management - Reimbursements received from Trust-funded organizations are for special events. The amount varies each year depending on the nature of the events and the overtime required. The funds assist in the purchasing of supplies, services, and equipment for special events.

NATIONAL ZOOLOGICAL PARK
CONSTRUCTION AND IMPROVEMENTS

1990 Appropriation	\$ 6,423,000
1991 Appropriation	\$ 6,636,000
1992 Estimate	\$ 8,000,000

Appropriations to this account provide funding for:

- repairs, alterations, and improvements to plant property;
- additions to existing facilities and minor new facilities, including exhibits;
- plans and specifications for construction;
- renovation, restoration, and construction of new facilities outlined in the Master Plan.

The Zoo contracts for most construction and improvement projects. If the contractor's estimates are above acceptable cost levels, a more economical alternative is to hire permanent or temporary labor to accomplish the work. The account also funds related expenses such as relocation of animals during the renovation or construction of facilities and major grounds maintenance resulting from storm damage.

In keeping with the 1889 charter, the National Zoological Park endeavors to "administer and improve" the Zoo for "the advancement of science and instruction and recreation of the people" (20 U.S.C. 81). The National Zoological Park (NZN) complex includes 163 acres in the Rock Creek Valley of Washington, D.C., and a 3,150-acre Conservation and Research Center (CRC) located in Front Royal, Virginia. Since 1890, exhibition and public educational functions have been centered in the Rock Creek Valley portion of the National Zoological Park. Conservation, training, research, and breeding are carried on at both Rock Creek and the Conservation and Research Center. Since 1975, CRC has assumed primary responsibility for Zoo programs to save threatened and endangered animal species.

The composition of the FY 1992 request is as follows:

ROCK CREEK MASTER PLAN:	
Amazonia Gallery	\$1,650,000
Hall of Humankind	2,975,000
CONSERVATION AND RESEARCH CENTER DEVELOPMENT PLAN:	
Water Systems and Hydrants (Phase II)	\$ 600,000
RENOVATION, REPAIR, AND IMPROVEMENTS:	
Rock Creek	\$1,975,000
Conservation and Research Center	<u>800,000</u>
TOTAL REQUEST	\$8,000,000

ROCK CREEK MASTER PLAN - The National Zoo's Rock Creek facilities have been undergoing major renovation and improvements through implementation of the Master Plan. Congress has appropriated a total of \$57,830,000 over the period from FY 1974 to FY 1990 to carry out major portions of the Master Plan. Full implementation of the Master Plan, as revised in 1986, will place the National Zoological Park among the world's finest zoos.

Amazonia Gallery (\$1,650,000) - This request will fund the final phase of the Smithsonian Tropical and Global Environmental Science Gallery. The Zoo's FY 1991 appropriation provided initial funding of \$2,985,000. Once completed, the Gallery will serve to educate and inform visitors about global problems and tropical biology.

The Gallery will show visitors the small-scale wonders of tropical biology by focusing on the intricate and exciting interactions that make the environment work. In addition, it will provide a window in Washington on the riches of Smithsonian science. The Gallery will feature contributions to an understanding of the tropics from the Smithsonian Tropical Research Institute, National Museum of Natural History, National Zoo, and others. The Gallery will highlight the processes of investigation and discovery as well as the discoveries themselves. It will cover topics such as the complexity of interactions among plants and animals, global environmental issues, and conservation. Visitors will see scientific research in a way that will get them involved in asking questions and seeking answers.

The Smithsonian Tropical and Global Environmental Science Gallery will enable the Zoo to explain, in a dramatic and exciting way, the global implications of environmental change in the tropics. The final message will be optimistic, emphasizing that human ingenuity and inventiveness can provide solutions to current problems. It will also exemplify the rising commitment of people to the conservation of the Earth's irreplaceable natural riches.

Hall of Humankind (\$2,975,000) - This project will modernize an aged and outmoded Monkey House. In FY 1991, the Zoo received \$295,000 for the design of this project, and with the request for FY 1992, the Zoo will pioneer a new exhibit strategy for great apes and monkeys, using living animals to extend and explore human knowledge of ourselves. The existing Monkey House does not convey any of our new understanding of the animals' advanced cognitive capacities. The modernized facility will display animals that can use tools, communicate by sign language, draw creatively, and use television as a source of information and entertainment. An orangutan or chimpanzee group will illustrate language use, the critical human adaptation. The apes are capable of learning sizable vocabularies of gestural signs or computer-generated symbols and of using these "words" with proper syntax and punctuation to communicate needs and emotions to humans and other apes. The exhibit will also be a laboratory, and the research will be the exhibit. The visitor will be introduced to the cognitive sophistication of apes (and be reminded of our shared heritage). Displays on human and ape vocal anatomy and on brain size and asymmetries and their relationship to language, manipulation, and musical and mathematical talent will be included in this living exhibit.

The Hall also will have monkeys, orb-weaving spiders, leaf-cutting ants, and honeybees to show analogues of the social, communicative, and agricultural accomplishments of humans. The Zoo's Hall of Humankind will complement new exhibits on human origins at the National Museum of Natural History.

CONSERVATION AND RESEARCH CENTER DEVELOPMENT PLAN - The Zoo's Conservation and Research Center (CRC) conserves wildlife, particularly vertebrate species threatened with extinction. Its facilities are dedicated to the captive propagation of selected birds and mammals, and its research and breeding programs are carried out collaboratively on five continents. The Zoo has established a Development Plan for the facility which calls for establishment of an infrastructure that will serve equally well all the major functional

paths that the Center may follow in the next 20 years. The following project for FY 1992 conforms to the Center's Development Plan.

Water Systems and Hydrants - Phase II (\$600,000) - Renovation of CRC's 70-year-old water holding and distribution system is vital to the operation of the Center. With funds appropriated in FY 1991 (\$585,000), the Center will upgrade the water distribution system. The second phase of this project, scheduled for FY 1992, will incorporate major repairs to both the Center's water storage tanks. New tank liners will be installed to help maintain the quality of the water for the facility.

RENOVATION, REPAIR, AND IMPROVEMENTS:

Rock Creek (\$1,975,000) - The National Zoological Park is responsible for the repair and preventive maintenance of existing facilities. The Zoo strives to maintain a safe environment for its visiting public and staff, provide ecologically suitable and comfortable enclosures for the animals, and maintain all buildings in good condition. The funding requested for FY 1992 will help ensure that the Zoo's preventive maintenance program will not have a large backlog of major repair projects.

The Zoo's Rock Creek facilities, located on 163 acres, include more than 450,000 square feet of buildings and 160,000 square feet of roofs. Along with the Park's perimeter fence measuring 10,564 linear feet, the Zoo's in-ground utility distribution system includes more than 4,600 linear feet of high voltage electrical lines, approximately 4,000 linear feet of medium voltage electrical lines, 16,000 linear feet of water mains, 6,000 linear feet of gas mains, 28,000 linear feet of sewer lines, and 14,000 linear feet of storm drains. The Park's preventive maintenance program includes the care of these utility systems to ensure safe operation of the facilities.

The major projects scheduled for the Rock Creek facility in FY 1992 include:

- reroofing at least one major building;
- interior painting and safety and handicap accessibility upgrade of one major building;
- preventive maintenance of HVAC systems;
- renovation and replacement of interpretive signage;
- renovation of the quarantine facility;
- renovation of the research animal colony building.

The National Zoological Park requests \$1,975,000 to continue its program of renovation, repair, and preventive maintenance at the Rock Creek facility. Funding at this level will enable the Zoo to provide the required level of maintenance to all buildings.

Conservation and Research Center (\$800,000) - The Zoo's Conservation and Research Center at Front Royal is a nonpublic facility devoted to the conservation of endangered wildlife through programs in propagation, research, and international training. The 3,150-acre facility includes more than 89 structures ranging from animal shelters to research laboratories and residences. The property has 2 1/2 miles of roads, 20 miles of jeep trails, and more than 30 miles of fences.

Funding requested in FY 1992 will enable the Center to continue the required maintenance and upkeep of these diverse facilities. Specific projects scheduled for FY 1992 include:

- renovation of the existing fire station;
- renovation of the carpenter shop and supply building as research laboratories;
- renovation of the plumbing shop, paint shop, and mechanic shop as research residences;
- construction of a new warehouse for small equipment;
- renovation of Bldg. 159 at the Crane yards.

The \$800,000 that NZP requests for FY 1992 will support the Center's preventive maintenance program and help reduce costly repairs at this important facility in the future.

REPAIR AND RESTORATION OF BUILDINGS

1990 Appropriation.....	\$26,468,000
1991 Appropriation.....	\$31,191,000
1992 Estimate.....	\$31,600,000

Smithsonian facilities include 15 museums and gallery buildings in Washington, D.C., and New York City and total more than 5.5 million square feet of building space. These museum buildings house research and collections management activities and a wide range of exhibitions in the fields of science, history, technology, and art. The Institution also operates and maintains restoration, storage, aircraft, and spacecraft display facilities in Suitland, Maryland, and New York City; centers for biological research, conservation, and education in Panama and on the Chesapeake Bay near Edgewater, Maryland; a center for astrophysics in Cambridge, Massachusetts; and the Whipple Observatory on Mt. Hopkins in Arizona. These facilities range in age from new to more than 140 years old, and many appear on the registers of historic landmarks.

The Repair and Restoration of Buildings (R&R) account pays the cost of repairs, corrective measures to meet life safety and health regulations, and replacement or renovation of major building components or equipment. This budget document discusses the repairs and renovations at the National Zoological Park as a separate justification.

The heavy public use of buildings and the demand for constant temperature and humidity levels to protect the National Collections exacerbate the natural aging process of building materials, equipment, and systems. The Smithsonian now achieves longer than average predicted life for most equipment. It is a measure of the effectiveness of the Smithsonian's preventive maintenance program that this is accomplished in spite of the fact that the 24-hour operation places the equipment under a more severe duty cycle than is normal. Eventually even effective preventive maintenance and regular repair programs will not be able to keep the equipment components of building systems operating. The Institution must overhaul heating, ventilation, and air conditioning (HVAC) systems and electrical and plumbing systems periodically to replace deteriorated equipment, wires, ducts, and pipes. It must repair the effects of weather on the exterior of buildings and guard against interior damage. In addition, the enactment of new codes and regulations calls for building modifications to ensure a safe and healthful environment and access for visitors and staff with disabilities.

In past years, funding levels for maintenance, repair, and preservation of buildings have not kept pace with the rate of deterioration. A substantial backlog of essential repair work exists. These repairs are vital to ensure the continued reliable functioning of building equipment and systems, long-term preservation of the buildings, or compliance with life safety and health codes and standards. The most recent (January 1991) estimate of the backlog of currently unfunded projects is \$216 million. This figure represents some reduction from the January 1990 level of \$229 million, for which Congress appropriated \$31.2 million in FY 1991. It is important to note, however, that the backlog is not a static list of repair projects that can be reduced by each annual increment of funding. Every year a number of problems that did not previously exist must be added to the backlog. For example, a piece of equipment might fail or reach the end of its useful life; or a roof might develop serious leaks where a significant problem was not evident the year before. Newly promulgated life safety and health codes and heightened sensitivity to environmental hazards may require work not formerly recognized as needed. In addition, a number of factors contribute to increased cost estimates for repairs already included in the backlog. In some cases, additional deterioration or damage caused by delay increases the cost of individual projects. More detailed studies of previously identified

problems and the inflationary effect of project delays also contribute to higher cost estimates for the work. Only sustained major funding will allow the Institution to reduce the backlog in an orderly manner to ensure preservation of its buildings for continued use by future generations.

The Smithsonian separates projects under the R&R program into two categories and accordingly requests funding in two subaccounts. The first subaccount, Major Capital Renewal, includes funds for the cyclical replacement of major building systems and equipment and major renovation projects required to ensure long-term preservation of the buildings. These projects are different in magnitude, expense, and planning complexity from the more routine ongoing restoration work, repair projects, or replacements undertaken when a piece of equipment fails. More than half the identified backlog consists of these major replacement requirements for HVAC and electrical systems at the Natural History, American History, Smithsonian Institution, Arts and Industries, Renwick Gallery, and American Art and Portrait Gallery buildings.

The second R&R subaccount is Repairs, Restoration, and Code Compliance. Funding requested through this subaccount will eliminate, over a period of time, the remainder of the backlog of repairs and other work needed to meet safety and health requirements. This subaccount encompasses six categories of routine maintenance and repair projects. This budget request presents an aggregate amount for each of the six categories, with a description of the kinds of work planned.

The composition of the FY 1992 R&R budget request follows:

REPAIR AND RESTORATION OF BUILDINGS

MAJOR CAPITAL RENEWAL		\$12,480,000
REPAIRS, RESTORATION, AND CODE COMPLIANCE		
General Repairs	2,605,000	
Facade, Roof, and Terrace Repairs	3,640,000	
Fire Detection and Suppression Projects	1,560,000	
Access, Safety, and Security Projects	4,225,000	
Utility Systems Repairs	4,950,000	
Advanced Planning and Inspection	<u>2,140,000</u>	
Subtotal		<u>\$19,120,000</u>
TOTAL REQUEST		\$31,600,000

Following the narrative description of the program for FY 1992, a listing shows all planned projects by building and R&R category.

MAJOR CAPITAL RENEWAL:

Projects in this category involve replacing major building systems and components that have outlived their useful lives. Complete replacement ensures long-term operation and preservation of the building. Modifications to the building also improve energy efficiency, meet fire detection and suppression requirements, and correct hazardous conditions. By coordinating these kinds of tasks, the Institution saves money and avoids repeated disruption to activities in the building. The Smithsonian achieves operating efficiencies as well by designing new building systems and components to work together.

For example, by installing multiple-paned windows and increasing insulation, the Smithsonian can install heating and cooling equipment with lower capacity. The equipment costs less to purchase and install, and long-term operating costs are lower. The impact of renovation work on programmatic activities is a key factor in planning a major project. Work of this magnitude causes serious disruption to activities in the building. The Institution must relocate staff and collections from the areas under construction to prevent damage, allow staff to continue working during the construction period, and ensure continued public access and safety.

For FY 1992, the Smithsonian requests \$12,480,000 for the projects described below:

American History Building (\$6,750,000) - A 1982 study of the HVAC system of the American History Building, now 26 years old, recommended replacement of the deteriorated heating, ventilation, air conditioning, and refrigeration equipment systems and controls. Replacement of these systems will ensure continuous provision of required environmental conditions in an energy-efficient manner. The study also recommended modifications to the building envelope to increase energy efficiency. The Institution recently completed the required window and roof replacement and facade repairs using previously provided funding.

The 1986 Master Coordination Plan established a detailed schedule for replacing the HVAC and related systems. This plan also incorporated anticipated life safety and fire protection improvements and asbestos removal work so that workers could isolate vertical portions of the public areas of the building and accomplish all work required in each segment at the same time. This scheduling of complex but interrelated projects results in less disruption to the Museum's activities and saves money through a single contract for each vertical portion. The final phase of the project will incorporate all work required in the office areas of the fourth and fifth floors. A separate follow-on project will perform similar work in the basement of the building.

Work in each vertical quadrant includes replacing the air-mixing boxes, controls, and air-handling equipment; installing new sprinkler, smoke detection, and emergency lighting systems; constructing new fire walls and other fire protection improvements originally outlined in the Fire Protection Master Plan; installing conduit and cabling to support the security and communications networks; and removing asbestos present in mechanical rooms and other areas of the building. The Museum is coordinating this project with its exhibit renewal program. The project includes the cost of relocating artifacts and personnel displaced in the course of the work.

The first phase of this project began with funding received in FY 1987 (\$1.2 million) and FY 1988 (\$1.6 million) and included all work required in the east quadrant of the building. The Institution completed this phase in FY 1989. Work on Phase II, in the west central quadrant, began with funding received in FY 1989 (\$2.1 million) and was recently completed. The Institution recently initiated Phase III, in the west quadrant, with \$3,675,000 appropriated in FY 1990. The contractor will complete this phase in 1991. The \$3,790,000 received in FY 1991 will support Phase IVa construction in the east central quadrant and design of the final phase of work (Phase IVb), which will include construction on the fourth and fifth floors. The Institution requests \$6,200,000 in FY 1992 for Phase IVb construction, which will complete the project.

The Smithsonian also requests \$550,000 to initiate HVAC replacement and related work in the basement of the Museum, work that was not included in the original scope of the Major Capital Renewal project. Problems over the past several years, associated with air

circulation and exhaust fumes and the deterioration of HVAC and electrical equipment make it imperative that the systems be replaced with equipment of sizes and types suited to present and projected usage of the space. During the replacement procedure, the Museum will remove asbestos from existing equipment. The funds requested for FY 1992 will prepare design documents for the first phase of the basement work and begin the relocation of staff and collections affected by the construction. Future requests will fund the construction costs.

Natural History Building (\$5,730,000) - Over the past several years the Institution undertook a number of separate studies of the Natural History Building to address energy conservation, fire detection and suppression, communications, security upgrading, asbestos abatement, and other remedies to building deficiencies, especially in the HVAC and electrical systems. As a result of these studies, the Institution realized the magnitude of the work required and initiated a Master Implementation Plan to ensure that the Natural History Building is maintained in an effective manner. The Institution will schedule work in a way to minimize disruption within the building and reduce costs by grouping tasks. The Museum will coordinate the exhibit reinstallation program with the renovation project. The Institution proposes to fill in the East Court space with a new building to provide permanent space for expansion of the Museum's current activities. The Museum will use this new building during the renovation project as staging space, to allow relocation of staff and collections affected by the renovation work to a safe space while work is in progress. Construction of this building will require relocation of the current chiller plant to a new vault under the parking lot as well as accommodation for other functions now in the East Court space. The Construction section of the budget request includes a justification for the East Court Building.

Guided by a Fire Protection Master Plan developed in 1979, fire protection improvements and asbestos removal and containment work are well under way. However, the replacement of the HVAC and critical electrical equipment is the more significant aspect of this project and thus governs the overall work schedule. The majority of the HVAC equipment is now more than 25 years old and requires replacement to avoid system failure. The automatic temperature control system is obsolete and does not operate satisfactorily. The age of 90 percent of the electrical lighting and power panels in the building is in excess of 20 years. Some of the electrical panels date from 1910 and present a potential safety hazard. Other panels installed in the 1960s, which met standards at the time, are not UL (Underwriters' Laboratory) approved today as meeting established safety standards, and replacement circuit breakers are no longer available. The main high-voltage switchgear equipment, which serves all the transformers for the Natural History, Arts and Industries, and Smithsonian Institution buildings, is approximately 40 years old. The Smithsonian must completely replace these components and other related electrical equipment because repair parts are no longer available.

The Institution completed a detailed plan for the replacement of building systems at the Natural History Building in fall 1989. The plan spreads the work over a number of years to provide the most cost-effective construction sequence, minimize disruption of programs, and obviate Museum closings. The scope of work includes:

- replacing the HVAC system with a new centralized system located in new penthouses over the east and west wings;
- replacing the chiller plant with updated equipment in a new vault beneath the southeast corner of the parking lot;

- modifying the building envelope, specifically by replacing the roof over the wings and installing roof insulation, replacing single-glazed windows in the wings with double-glazed windows, replacing roof rain leaders, and installing air locks or vestibules at entrances and loading docks;
- centralizing laboratories with new exhaust air systems;
- improving the automatic temperature control system;
- connecting the equipment to a central control and monitoring system.

The project will incorporate remaining fire protection work originally conceived under the Master Plan. Work will also include removing or encapsulating asbestos insulation located in the attics and attached to equipment, ductwork, and piping throughout the building.

Funds appropriated in FY 1986 (\$235,000) supported the Master Implementation Plan and the evaluation of the potential requirements for interim measures to keep the facility operational through the construction period. With amounts of \$100,000 and \$475,000 received in FY 1987 and FY 1988 respectively, the Institution completed planning for the renovation project and began assessing requirements for the relocation of staff and collections affected by the construction. The plan includes a detailed schedule and cost estimate on which to base future budget requests. The Institution is using funds appropriated in FY 1989 (\$1,000,000) and FY 1990 (\$9,950,000) and a portion of the funds received in FY 1991 for design and construction of the new underground chiller plant and detailed design of the mechanical penthouses over the east and west wings and roof and window work. The FY 1991 funding will also begin the window restoration and replacement portion of the project; ensure immediate replacement of electrical and HVAC equipment that fails before its scheduled replacement; and plan the relocation of staff and collections that will be displaced during the construction period.

For FY 1992, the Institution requests \$5,730,000 to construct the new penthouses and equip the east wing penthouse, replace and reinsulate the roof systems over the wings, continue window restoration, and ensure emergency replacement of failed equipment (\$4,330,000); design the next phase of the project (\$900,000); and prepare staff and collections for relocation during the construction (\$500,000).

REPAIRS, RESTORATION, AND CODE COMPLIANCE:

Projects in this category include:

- minor, unscheduled, but essential repairs to sidewalks, roads, parking lots, waterproofing, electrical and lighting systems, plaster walls, and marble floors;
- repairs to facades, roofs, skylights, terraces, and window frames;
- installation of heat and smoke detection systems, sprinkler and chemical suppression systems, fire doors and fire-rated walls, and exit capability improvements;
- improvements to ensure access for people with disabilities, asbestos abatement, renovations to elevators, correction of exhaust or ventilation problems,

installation of emergency electrical generator systems, and security modifications and lighting;

- repairs and energy conservation improvements to HVAC, plumbing, electrical, and communications systems;
- advanced design of future-year projects and long-range planning for repair and restoration of Smithsonian facilities.

For FY 1992, the Smithsonian requests \$19,120,000 for the projects listed below:

General Repairs (\$2,605,000) - Funds requested in this category support a wide variety of projects. These funds provide resources for minor, unscheduled, but essential repairs that the Institution cannot anticipate specifically or that do not fit into one discrete category. For FY 1992, the Institution requests \$2,605,000 for such projects as:

- structural repairs to the pier at the Naos site of the Smithsonian Tropical Research Institute;
- repairs to sidewalks, parking lots, and roads at various locations;
- general repairs to off-Mall facilities;
- emergency repairs required throughout the Smithsonian.

In addition, the funds will allow the completion of renovation and repair of the Freer Gallery Building to correct electrical and lighting problems and repair or replace badly deteriorated plaster walls and cracked marble floors on the gallery level.

Facade, Roof, and Terrace Repairs (\$3,640,000) - Maintaining the integrity of the exteriors of all Smithsonian buildings is critical. This maintenance will prevent major structural and interior damage and deterioration due to age, water intrusion, and weathering. Proper care will ensure a safe environment for visitors, staff, and collections. In addition, energy conservation and environmental control demands weather-tight exteriors. Work in this category includes a variety of projects accomplished cyclically and varies with the life of the materials used. For example, roofs need replacing nearly every 20 years; facade joints need recaulking and repointing about every ten years; and window frames and other exterior trim need repainting every five years. Several Smithsonian buildings now require large-scale restoration. The Institution plans to offer additional protection for building exteriors through an enhanced preventive maintenance and repair program.

For FY 1992, the Institution requests \$3,640,000 for facade, roof, and terrace repairs. Planned projects include roof inspection, repair, or replacement at the Natural History Building, the Hirshhorn Building, and the Silver Hill Facility, and skylight replacement at the Freer Gallery Building. Work will continue at the Smithsonian Institution Building to restore the facade stones. Other projects funded from this subaccount include:

- waterproofing the planter boxes at the Air and Space Building to correct water infiltration into basement areas;

- repairing the deteriorated caulking in the facade joints of the Museum Support Center;
- dismantling the statue above the entry to the Arts and Industries Building to prevent further deterioration and determine the cost of required restoration;
- repairing and painting wooden and metal facades and building elements at a variety of locations.

Fire Detection and Suppression Projects (\$1,560,000) - A major Institutional priority is to provide the best fire protection and safety measures available under today's standards and with state-of-the-art technology. Every major Smithsonian facility has a fire protection master plan. For FY 1992, the request of \$1,560,000 will continue fire protection master plan work in the Air and Space, American Art and Portrait Gallery, Cooper-Hewitt, and Hirshhorn buildings. The Institution will also make fire protection improvements at the Natural History, American History, and Arts and Industries buildings, at the Research Branch of the Museum of the American Indian, the Museum Support Center, and various locations at the Smithsonian Tropical Research Institute. Work will include the installation of heat and smoke detection systems, sprinkler and chemical suppression systems, fire doors and walls, and the improvement of exit capability.

Access, Safety, and Security Projects (\$4,225,000) - The Institution continues to emphasize providing better access for persons with disabilities, improving environmental conditions for the health and safety of visitors and staff, and correcting facility conditions that threaten the security of the National Collections.

For FY 1992, the Institution requests \$4,225,000 for a number of important projects in these areas. Among the projects planned for correction of hazardous conditions are:

- continuing the asbestos abatement program;
- inspecting and renovating elevators at the Natural History Building and the Research Branch of the new Museum of the American Indian to ensure safe operation;
- repair of the exterior emergency doors at the American History Building to provide safe egress routes in the event of evacuation;
- installing emergency power or lighting systems in various facilities, including the Smithsonian Environmental Research Center, the Smithsonian Tropical Research Institute, and the Research Branch of the Museum of the American Indian, to maintain safety during power outages;
- correcting exhaust and ventilation problems in the Natural History and American Art and Portrait Gallery buildings and the Museum Support Center;
- installing explosion-proof fixtures in a chemical storage room at the Museum Support Center.

The Smithsonian will begin a multi-year project to correct a number of deficiencies that impede accessibility to the public spaces and amenities by persons with disabilities. The work will include improving entry by wheelchair at the Natural History and American

Art and Portrait Gallery buildings, eliminating obstructions and overhead hazards, correcting elevator deficiencies, changing placement of drinking fountains, improving emergency warning systems, and providing seating space for wheelchair users and listening systems for the hearing impaired.

Projects for FY 1992 to improve security of the collections, staff, and visitors include:

- expanding the security system at the Smithsonian Astrophysical Observatory in Arizona;
- improving illumination around buildings and in parking lots on the Mall, at the American Art and Portrait Gallery Building, the Smithsonian Environmental Research Center, and the Museum Support Center for more effective surveillance.

Utility Systems Repairs (\$4,950,000) - Funds in this category will maintain, repair, and upgrade the heating, ventilating, and air conditioning systems, and plumbing, electrical, and communications systems throughout the Institution's facilities. Ongoing renovations, repairs, and replacements of deteriorated equipment components are essential for ensuring reliable and energy-efficient operation of utility systems. The long-term preservation of the National Collections is dependent upon stable temperature and humidity conditions.

Energy management remains a high priority at the Smithsonian. Opportunities to conserve energy by adjusting equipment and modifying operations have already been implemented. The most significant energy savings opportunities that remain will result from upgrading HVAC systems, replacing obsolete equipment, and extending central automated controls for existing systems. The Institution modifies existing HVAC systems to accommodate programmatic growth, changes in the use of buildings, and the environmental needs of collections as they become better understood. The Institution uses an integrated approach to renovations and modifications to plan for long-range, systematic HVAC improvements that will meet museum environmental requirements in an energy-efficient manner.

Comprehensive HVAC studies and energy audits for most of the buildings facilitate planning of other improvements. The scope of HVAC studies includes field investigations of age, condition, efficiency, and performance of existing equipment, controls, and current operating conditions; reviews of existing drawings, specifications, operating manuals, and hygrothermograph records; analyses of the relationship between the building structures and HVAC systems; and assessments of programmatic needs for environmental control. The data gathered by these studies provide a basis for determining redesign or replacement needs of existing HVAC systems; developing construction cost estimates; identifying favorable payback opportunities; and establishing priorities for the repair, replacement, or modification of such equipment components as air-handling units, refrigeration machines, cooling towers, heat exchangers, automatic temperature and humidity controls, pumps, pipes, fans, filters, ductwork, and related electrical and plumbing systems. At the same time, energy audits investigate all factors relating to energy use, such as power-consuming equipment and building conditions (doors, windows, insulation, floors, and partitions). After identification of energy conservation opportunities and evaluation of costs and potential energy savings, plans will guide the renovation and improvement work. This process identified a number of major system replacements that the Major Capital Renewal

subaccount will fund in addition to minor repairs and renovations requested in the Utility Systems Repairs category.

Funding of \$4,950,000 requested in FY 1992 in this category will support routine repair, replacement, and modification projects. These projects include:

- replacing the transformer supervisory system serving most of the museums on the Mall;
- continuing miscellaneous HVAC repairs at the Hirshhorn Building;
- replacing a cooling tower at the Air and Space Building;
- repairing utility systems at the Cooper-Hewitt Museum, including plumbing repairs at the McAlpin-Miller House, boiler replacement at the Fox House, and energy study implementation at the Carnegie Mansion;
- cleaning the air ducts at the American History Building;
- repairing the electrical system and improving air and water distribution systems at the Research Branch of the Museum of the American Indian.

Several planned utility improvement projects include continuing code compliance and energy conservation measures at the Renwick Gallery and the Arts and Industries buildings, installing state-of-the-art automated controls on HVAC equipment, replacing electrical wiring and junction boxes at the Natural History Building, and upgrading the electrical transformers at the Barro Colorado and Frijoles sites at the Smithsonian Tropical Research Institute.

Advanced Planning and Inspection (\$2,140,000) - Funds in this category support projects to identify and analyze long-range repair and restoration needs and to design future-year projects in advance of funding requests. The amount of \$2,140,000 requested in FY 1992 will allow the Smithsonian to contract for planning and design a greater number of projects in the backlog of essential maintenance and repair than was possible in previous years. Funds requested for FY 1992 will also continue development under contract of an integrated master plan and electronic data base for all facilities, which will assist in managing the Institution's extensive physical plant and maintaining effective strategic planning.

The significant increase in funding in this category over previous years reflects the Institution's commitment to eliminating the backlog more quickly by improving planning and cost estimating and reducing costs in the R&R program. The ability to identify in advance of funding requests the precise requirements and costs of individual projects is key to the success of this effort. Thorough planning and development of design concepts will provide detailed estimates and identify logistical considerations that will allow staff to plan repair strategies and establish immediate and long-range budget requirements. In addition to improving the accuracy of cost estimates, design of projects in advance of funding will save the Institution in escalation costs by enabling staff to award construction contracts as soon as resources are appropriated. Needed repairs will also be accomplished much sooner, thus preventing further deterioration and ensuring faster compliance with codes.

The higher funding level requested for FY 1992 will allow Smithsonian staff to complete planning and design in advance of appropriations for a greater portion of the projects to be included in the FY 1993 R&R program. Staff will also undertake preliminary design of some of the projects expected to be in the FY 1994 program. The Institution will gradually increase the amounts requested in future fiscal years for advanced planning and design to allow preliminary design of the majority of projects in the R&R program prior to budget request. Increased advanced planning and design capability will improve significantly the overall cost effectiveness of the R&R program and will speed the elimination of the backlog of essential maintenance and repair work.

REPAIR AND RESTORATION OF BUILDINGS
Detail of FY 1992 Request by Building

FACILITY, ACCOUNT, AND PROJECT TITLE	SUBCATEGORY	ESTIMATED COST
<u>Air and Space Building</u>		
REPAIRS, RESTORATION, AND CODE COMPLIANCE		
Planter Box Waterproofing	Facade	500,000
Fire Protection Master Plan Implementation	Fire	300,000
Cooling Tower Replacement	Utility	<u>1,300,000</u>
TOTAL FOR FACILITY		\$ 2,100,000
<u>American Art and Portrait Gallery Building</u>		
REPAIRS, RESTORATION, AND CODE COMPLIANCE		
Fire Protection Improvements	Fire	50,000
Exhaust System Modifications	Access	100,000
Exterior Building Lighting	Access	<u>100,000</u>
TOTAL FOR FACILITY		\$ 250,000
<u>American History Building</u>		
MAJOR CAPITAL RENEWAL		
Master Coordination Plan, Phase IVb		
Construction		5,800,000
Relocation		400,000
Basement HVAC Improvements		
Design		250,000
Relocation		<u>300,000</u>
SUBTOTAL		\$ 6,750,000
REPAIRS, RESTORATION, AND CODE COMPLIANCE		
Panic Hardware Installation	Fire	25,000
Exterior Doors Repair/Replacement	Access	25,000
HVAC Duct Cleaning	Utility	<u>300,000</u>
SUBTOTAL		\$ 350,000
TOTAL FOR FACILITY		\$ 7,100,000
<u>American Indian Museum, Research Branch</u>		
REPAIRS, RESTORATION, AND CODE COMPLIANCE		
General Repairs	General	50,000
Fire Protection Modifications	Fire	30,000
New Doors and Partitions	Fire	35,000
Emergency Lighting System	Access	15,000
Elevator Repair	Access	10,000
Miscellaneous Electrical Repairs	Utility	45,000
Ductwork Modifications	Utility	15,000
Water System Upgrade	Utility	<u>15,000</u>
TOTAL FOR FACILITY		\$ 215,000

Anacostia Building

REPAIRS, RESTORATION, AND CODE COMPLIANCE

General Repairs	General	<u>40,000</u>
TOTAL FOR FACILITY		\$ 40,000

Arts and Industries Building

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Facade Statuary Refurbishment	Facade	160,000
Magnetic Door-Holding Devices	Fire	130,000
Chiller Room Modifications	Utility	130,000
Rare Books Room HVAC System Modifications	Utility	<u>70,000</u>
TOTAL FOR FACILITY		\$ 490,000

Cooper-Hewitt Museum

REPAIRS, RESTORATION, AND CODE COMPLIANCE

General Repairs	General	130,000
Sprinkler System, McAlpin-Miller House	Fire	285,000
Plumbing Repair, McAlpin-Miller House	Utility	150,000
Energy Study Implement. Carnegie Mansion	Utility	405,000
Boiler Replacement, Fox House	Utility	<u>300,000</u>
TOTAL FOR FACILITY		\$ 1,270,000

Freer Gallery Building

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Gallery-Level Renovation	General	675,000
Skylight Replacement	Facade	<u>1,500,000</u>
TOTAL FOR FACILITY		\$ 2,175,000

Hirshhorn Building

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Roof Replacement	Facade	750,000
Fourth Floor Art Storage Fire Protection	Fire	200,000
Miscellaneous HVAC Projects	Utility	<u>600,000</u>
TOTAL FOR FACILITY		\$ 1,550,000

Museum Support Center

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Facade Repairs	Facade	80,000
Fire System Annunciator	Fire	50,000
Laboratory Exhaust Modifications	Access	450,000
Exterior Lighting and CCTV Modifications	Access	200,000
Explosion Proofing Room Ell05	Access	<u>50,000</u>
TOTAL FOR FACILITY		\$ 830,000

Natural History Building

MAJOR CAPITAL RENEWAL

Master Plan Improvements		4,330,000
Design		900,000
Relocation		<u>500,000</u>
SUBTOTAL		\$ 5,730,000

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Roof Repair	Facade	300,000
Chiller Plant Fire Protection Modifications	Fire	200,000
Elevator Repairs	Access	95,000
Vertebrate/Paleo Prep Lab Ventilation	Access	120,000
Miscellaneous Electrical Repair	Utility	<u>160,000</u>
SUBTOTAL		\$ 875,000

TOTAL FOR FACILITY \$ 6,605,000

Renwick Gallery Building

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Energy Study Implementation	Utility	<u>700,000</u>
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TOTAL FOR FACILITY \$ 700,000

Silver Hill Facility

REPAIRS, RESTORATION, AND CODE COMPLIANCE

General Repairs, All Buildings and Grounds	General	200,000
Road Repairs	General	150,000
Roof Repairs	Facade	<u>100,000</u>

TOTAL FOR FACILITY \$ 450,000

Smithsonian Astrophysical Observatory

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Road Repairs and Improvements	General	525,000
General Repairs, Whipple	General	160,000
General Repairs, Oak Ridge	General	15,000
General Repairs, Cambridge	General	25,000
Security System, Whipple	Access	<u>10,000</u>

TOTAL FOR FACILITY \$ 735,000

Smithsonian Environmental Research Center

REPAIRS, RESTORATION, AND CODE COMPLIANCE

General Repairs	General	100,000
Security Lighting, Mathias Building	Access	25,000
Emergency Power Study Implementation	Access	<u>275,000</u>

TOTAL FOR FACILITY \$ 400,000

Smithsonian Institution Building

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Facade Restoration (Masonry)	Facade	<u>50,000</u>
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TOTAL FOR FACILITY \$ 50,000

Smithsonian Tropical Research Institute

REPAIRS, RESTORATION, AND CODE COMPLIANCE

General Repairs	General	150,000
Pier Structural Repairs, Naos	General	85,000
Fire Protection, Various Sites	Fire	255,000
Emerg. Power, Elec. Generator, Tivoli	Access	400,000
Transformer Replacement, BCI and Frijoles	Utility	<u>60,000</u>

TOTAL FOR FACILITY \$ 950,000

Miscellaneous Locations

REPAIRS, RESTORATION, AND CODE COMPLIANCE

Grounds, Sidewalk, and Parking Lot Repairs	General	100,000
Emergency Repairs	General	200,000
General Facade Renovations	Facade	200,000
Asbestos Abatement	Access	1,000,000
Emergency Power Study Implementation	Access	400,000
Security Lighting, Mall Buildings	Access	450,000
Institution-Wide Accessibility Implementation	Access	500,000
HVAC Controls Upgrade	Utility	200,000
Transformer Supervisory System Replacement	Utility	500,000
Advanced Planning and Design	AdvPlan	1,890,000
Combined Master Plan for All Facilities	AdvPlan	<u>250,000</u>

TOTAL MISCELLANEOUS \$ 5,690,000

TOTAL REQUEST, REPAIR AND RESTORATION OF BUILDINGS \$31,600,000

CONSTRUCTION

1990 Appropriation.....	\$ 8,320,000
1991 Appropriation.....	\$15,407,000
1992 Estimate.....	\$25,100,000

The FY 1992 appropriation request for Construction represents an investment in the Institution's long-range program goals. The Institution has growing requirements for physical plant expansion and modification to support existing and future programs. The Smithsonian staff has assembled these needs into a comprehensive long-range capital improvement program that will phase solutions to these needs over the next decade. The FY 1992 Construction request will address the most urgent components of this program. Funding of these projects is essential to maintain vitality in the Institution's far-reaching programs of research, collections management, public exhibitions and education, and other services.

This year's Construction request is as follows:

MAJOR CONSTRUCTION

Old General Post Office Building Renovation	1,700,000
National Museum of the American Indian	2,400,000
Natural History East Court Building	<u>15,000,000</u>
Subtotal	\$19,100,000

CONSTRUCTION PLANNING 1,000,000

MINOR CONSTRUCTION, ALTERATIONS, AND
MODIFICATIONS

	<u>5,000,000</u>
TOTAL	\$25,100,000

MAJOR CONSTRUCTION:

Old General Post Office Building (\$1,700,000) - The General Post Office Building is bounded by 7th, 8th, E, and F streets in Northwest Washington, D.C. Its original wing (on the E Street side of the building) is the work of America's first native-born professional architect, Robert Mills of South Carolina. Mills also designed the Patent Office Building, the original plan for the Washington Monument, and the Treasury Building. The General Post Office Building is the fifth oldest public building in Washington and has never been renovated or restored. The building's fine architectural detailing, however, is for the most part still intact and unchanged from the original and thus warrants full restoration. The Pennsylvania Avenue Development Corporation, within whose area the building lies, supports the timely, well-executed renovation of this significant building, as do the Government of the District of Columbia and the National Capital Planning Commission.

On October 19, 1984, the President signed Public Law 98-523 authorizing transfer of the General Post Office Building from the General Services Administration (GSA) to the Smithsonian Institution without reimbursement. The legislation also authorized appropriations of up to \$40 million to the Institution for the renovation of the building. GSA is currently using the building for temporary housing of a number of Federal agencies. Custodianship of the building will transfer to the Smithsonian when renovation funding is available.

The Institution proposes to use the Old General Post Office Building on a transitional basis to support the research and collections activities of the three principal Smithsonian bureaus directly engaged in the field of American art--the National Museum of American Art, the National Portrait Gallery, and the Archives of American Art. Each of these units has a serious need for additional space for collections of works on paper, offices for existing staff and visiting researchers, and public use. In addition, the shared research library, presently located in the Patent Office Building, will need to be transferred to the Old General Post Office Building to provide better service to its patrons.

The use of both the Patent Office Building and the Old General Post Office Building will allow for an unparalleled complex at Gallery Place devoted to advancing the understanding of the unique contribution made to the world by American arts and culture and underscoring the differences and similarities between the artistic traditions of America's diverse citizenry and those of other nations. At the same time, the Institution will fulfill its obligation toward the long-term preservation of this historic landmark.

Studies undertaken by a number of architectural and engineering firms--including a recent January 1991 study--indicate that the building can be used for the purposes described herein, but only after extensive renovations are undertaken.

Most of the building systems are in very poor condition. Asbestos insulation encases exposed plumbing in almost every space. Because the drinking water is unsafe, occupants must use bottled water. Other conditions include:

- an overloaded electrical system that is in poor condition and a potential fire hazard;
- an unreliable steam heating system with corroded and heat-leaking exchanger tanks;
- deteriorated pumps and other mechanical equipment;
- window air conditioners, in various states of repair;
- very old, unreliable central air conditioning units that only serve limited areas of the building.

The building has no fire safety systems, such as water sprinklers and smoke detectors, and the existing fire alarm system consists of old, unreliable pull stations. One of the building's two small passenger elevators is automatic and reportedly has several deficiencies, and the other requires an operator. Both are very old and reportedly subject to frequent breakdowns. Recent roof repairs did not replace the rain gutters and interior downspouts, and these are subject to intermittent failure, causing leaks in the building. Window frames have dry rot, and the poor condition of the exterior stone facade exacerbates interior water problems. The basement area of the building is substantially uncovered earth, admitting moisture and rodents. The interior courtyard, a paved parking area over a wooden structure, may be structurally unsound. Major restoration is necessary to arrest deterioration and to make the building safe for continued occupancy.

The Institution proposes a comprehensive program to preserve the historic nature of the building, to bring it up to code, and to adapt it for Smithsonian use. The planned work includes:

- repairing the stone facade;
- replacing rain gutters and interior downspouts and repairing interior water intrusion damage;
- restoring all original interior and exterior architectural finishes;
- restoring or replacing all windows;
- repairing all electrical and plumbing systems;
- reinforcing floors;
- providing new insulation, a vapor barrier where necessary, and a heating and air conditioning system with industrial quality controls;
- installing smoke detection and sprinkler systems along with security equipment;
- sealing and finishing the dirt areas of the basement to contemporary code standards;
- rebuilding and replacing elevators, installing escalators, and other modifications necessary to ensure accessibility for people with disabilities;
- providing a new delivery and loading dock area;
- removal of certain cross-walls and installing openings in the interior partitions.

The proposed renovations will preserve the building for future generations and will provide an energy-efficient, safe, and secure environment for collections, staff, and visitors. Congress authorized \$40 million for building renovation in 1984. The Institution will use the \$1,700,000 requested for FY 1992 for the initial design phase, which will provide a detailed cost estimate for full renovation of the building. The Smithsonian will request funds in subsequent years to complete design and most of the required renovations within the present authorization.

Postponement of this project will increase the risk of irreparable damage or further deterioration of the building. Moreover, each year additional deterioration increases the cost of renovation and repairs. Inflation contributes to higher costs as well. Failure to make the most urgent improvements will prevent the Smithsonian from making full use of the building. Under current plans for funding the design phase in FY 1992 and initiating construction in FY 1993, it will be 1995 before the renovation is complete. Continued delay will adversely affect the Institution's ability to conduct core programs in American art (presently housed in inadequate facilities in the Patent Office Building) for the benefit of the public and future generations of citizens concerned with America's diverse culture. The need to provide these units with sufficient transitional space is critical. The reuse of space in the Patent Office Building depends on the timing and sequencing of

events in the Old General Post Office Building. Larger programmatic issues affecting the future direction of American art at the Smithsonian depend on the resolution of the Old General Post Office facility.

National Museum of the American Indian (\$2,400,000) - On November 28, 1989, President Bush approved Public Law 101-185 establishing the National Museum of the American Indian. The basis of the new museum is the Heye Foundation Collection, which includes more than one million native-American objects and artifacts from all parts of the Western Hemisphere. The New York State Supreme Court approved the transfer of the Foundation's collection to the care and custody of the Smithsonian, effective June 24, 1990. The agreement between the Smithsonian Institution and the Museum of the American Indian, Heye Foundation, signed in May 1989 also provides for transfer of the Foundation's endowment and most of its other property, including an 86,000-item archives.

The creation of this new national Museum is the culmination of almost a decade of negotiations among the Foundation, the City and the State of New York, and, more recently, the Smithsonian Institution. When the new Museum is completed in the late 1990s, it will stand as a tribute to the many and varied contributions of American Indians, Eskimos, Aleuts, native Hawaiians, and other native-American cultures. In Congressional testimony describing the prospective of the Museum, Secretary Robert McC. Adams said, "It is likely to alter beyond all expectation public understanding of American Indian people."

Public Law 101-185 authorizes the Institution to provide facilities for the Museum in three locations:

- a major museum building to be constructed on the Mall in Washington, D.C., on land reserved for Smithsonian use by Congress in 1975;
- an exhibition and education facility located in a portion of the United States Custom House in lower Manhattan, to be known as the George Gustav Heye Center;
- a collections storage, conservation, and research facility on the site of the Museum Support Center in Suitland, Maryland.

The Institution anticipates four major sources of funding for construction of these facilities: New York City, the State of New York, Federal appropriations, and private donations. The Institution received an appropriation in FY 1990 for programming and planning all three facilities and for design of the Custom House conversion. For FY 1991, the Smithsonian received \$7,391,000 to prepare the Custom House space, to begin design of the Suitland building, to continue planning for the Mall museum, and to complete planning and programming for the new Museum as a whole. The Smithsonian requests a total of \$2,400,000 for FY 1992 to continue development of these facilities. The details of this request are as follows:

The Museum on the Mall - The Institution will construct a new building on the National Mall near the foot of Capitol Hill, adjacent to the world's most frequently visited museums. Congress reserved the last remaining construction site on the Mall for the Smithsonian in 1975. The location will provide excellent exposure for native-American artifacts and related museum activities centered on native-American culture. The Institution expects that this facility will house permanent and changing exhibitions, reference and collection areas, an auditorium and theater, museum shops, public education facilities, and space for research and other programs.

The Institution projects the total cost of construction of the Mall building to be in the neighborhood of \$106 million, assuming a construction start in 1994. The Smithsonian plans to fund two-thirds of the cost from Federal sources and expects that the balance will result from a national fund-raising campaign. Initial planning efforts will define the program requirements and refine the construction and equipment estimate as well as relevant logistical and operating requirements and costs. With \$720,000 received in FY 1990, the Institution will begin overall programming and planning for the new Museum as well as detailed planning for the Mall museum building. Funds appropriated in FY 1991 (\$430,000) will complete programming for the Museum as a whole and continue preliminary planning of the Mall building. The Institution requests \$1,000,000 in FY 1992 to begin conceptual design. The current schedule calls for completion of the building in FY 1999 and its public opening in 2000.

The United States Custom House, New York City - The Institution will convert space in the United States Custom House in lower Manhattan to house an extension of the National Museum of the American Indian. The New York facility, to be named in memory of George Gustav Heye, will contain space for exhibitions, education, and other public service programs. The Institution projects the cost of preparing portions of the U.S. Custom House for museum use to be approximately \$24 million. The State of New York and New York City have each pledged to contribute one-third of the cost, or up to \$8 million each, toward construction of the George Gustav Heye Center. The Institution received \$600,000 in FY 1990 for planning and design of the Custom House facility and \$6,000,000 in FY 1991 for construction. The Institution requests \$1,400,000 in FY 1992 to complete construction of the Center. This will preserve the 2:1 match of funds provided by New York City and the State to those obtained by the Institution. The current schedule calls for an inaugural exhibition at this facility in FY 1992 and a full opening in FY 1994.

The Suitland Building - The Institution plans to construct a facility adjacent to the Museum Support Center to provide for proper housing and study for the former Heye Foundation Collection. This building will locate this extensive collection of Indian artifacts near the Indian artifacts from the National Museum of Natural History, thus consolidating resources for conservation, preservation, and collections-related research activities. The Institution currently expects the storage facility to cost approximately \$44 million to design, build, and equip, based on a construction start in 1992. The Smithsonian will use \$300,000 appropriated in FY 1990 for preliminary planning purposes. This planning will identify a specific site and building configuration, provide details such as geotechnical data, and help refine construction cost estimates and schedules. The amount of \$961,000 appropriated in FY 1991 will permit initial design of the building. The Institution will include funds to complete design, construction, and equipping of the building in a future-year request. Upon completion of the building in FY 1997, the Institution will relocate the Heye Foundation Collection from its New York storage site.

Natural History East Court Building (\$15,000,000) - The Natural History Building on the Mall houses more than 1,200 employees of the Smithsonian Institution and several government agencies, including 159 scientists and their associated staff. Each year these individuals, along with more than 2,000 visiting scientists, conduct basic collections-related research in a broad range of subjects critically important in advancing scientific knowledge and understanding natural phenomena. In addition to the large force of scientific staff and other personnel, the building also houses substantial collections, numbering well over 100 million biological specimens and anthropological artifacts, and 30 public exhibition halls with associated educational and outreach activities. A number

of other Smithsonian organizations also occupy the building, including the Smithsonian Institution Libraries and the Office of Plant Services.

The National Museum of Natural History (NMNH) faces two significant challenges regarding space for the immediate future: accommodating a total building renovation of the heating, ventilating, and air conditioning (HVAC) system; and relieving severe overcrowding. The Museum proposes to meet these two challenges by constructing a building inside the Natural History Building's East Courtyard.

In the immediate years ahead, the Museum must deal with a complete renovation of the Natural History Building's aging HVAC system. This project, funded from the Repair and Restoration of Buildings account, will also include asbestos removal, window replacement throughout the building, and some work on fire protection and security systems. This project will affect all operations of the Museum during the seven to ten years it will take to complete. Large portions of the collections will be moved back and forth. Entire exhibition spaces will be closed to the public and reopened. Most staff members and virtually every activity will have to relocate temporarily. Given the extent and duration of the HVAC renovation, the Institution seeks to minimize disruption, particularly of the Museum's scientific productivity and public programs. The decade of the 1990s is crucial for the Museum's scientific enterprise because of the growing concerns about the loss of biodiversity and the issues relating to global environmental change.

The second major challenge is severe overcrowding of staff and activities. During the past 25 years, the Museum has responded to challenges facing the scientific community at large, such as the rapid destruction of the diversity of life in the tropics and the need to address global change. To meet these challenges, the Museum has increased its efforts and enlarged both its programs and staff. Authorized positions have increased from 331 in 1972 to 589 in 1991, a net increase of 258 full-time permanent employees. As a consequence, the Museum has divided and subdivided offices, laboratories, and collection spaces; and closed four large exhibit halls indefinitely to accommodate staff space needs. NMNH is using two halls as staging areas to prepare collections for transfer to the Museum Support Center (MSC) in Suitland. Even when the Museum completes collections transfer, however, there will not be enough space available to accommodate all the staff functions in the Natural History Building or to house under adequate conditions the Museum's diverse programs.

To meet its challenges regarding space, the Museum considered several alternatives. To accommodate temporary relocations for the HVAC renovation, the Museum must find substantial temporary space, either off-site or on-site. Off-site leased space would not provide adequate conditions and facilities without being prohibitively expensive in direct costs and in the toll the move would take on the academic and public life of the Museum. On-site relocation, requiring 125,000 square feet of staging space under the optimum seven-year plan for renovating the HVAC system, would close down a major portion of the public exhibition space and have a strongly negative impact on the visiting public.

After weighing its options, the Museum settled on the East Court Building proposal to resolve both these space problems. The new East Court in-fill building will interconnect directly with the existing building and ultimately become an integral part of the Natural History Building.

During the HVAC renovation project, the East Court Building will add approximately 80,000 net square feet to the Natural History Building. This space will serve both as

"swing space" for temporary relocation of offices, laboratories, and collections and as space for the permanent relocation of functions now housed elsewhere in the Natural History Building. The space vacated by the permanent relocation of activities to the East Court Building will also become "swing space" for the HVAC renovation project. The result is 80,000 net square feet available within the building for "swing space" during the renovation project. Although this amount falls short of the estimated need, the Museum can manage the necessary relocations by temporarily compressing some of the activities and collections within the Natural History Building and by using a limited amount of exhibition space for the duration. At the end of the HVAC construction period, the Museum will have 80,000 square feet of permanent space to accommodate currently overcrowded research laboratories, offices, collection areas, and public exhibit, education, and other outreach and Institution support activities.

The estimated cost of design and construction of the East Court Building is \$25 million. This estimate includes the cost of relocating the greenhouse, osteology preparation laboratory, and building trades shops located in buildings presently in the East Courtyard. The estimate for furnishing and equipping costs is an additional \$5,000,000. In 1990, Congress enacted Public Law 101-455 authorizing the Institution to construct the new building and authorizing appropriations totaling \$30,000,000.

The Institution is completing the necessary planning for the new building using Construction Planning funds and will use \$1.5 million appropriated in FY 1991 to design the new building. The current schedule calls for design completion in mid-1992. The Smithsonian requests \$15,000,000 in FY 1992 to allow award of the construction contract in summer 1992. Although the full cost of construction is estimated at \$23,500,000, the \$15,000,000 requested will allow work to begin on the building according to the critical path schedule for the HVAC renovation. The amount requested represents the minimum level needed to begin construction. The request will provide more than one-half the expected contract cost, as required in government contracting regulations, and will cover the full amount of expected outlays during the first part of construction. In 1993, the Institution will require the remaining amount of construction funds (\$8.5 million) to fully fund the contract as well as funds (\$5 million) to equip the building. Funding of the East Court Building will allow the Institution to proceed with its plans to renovate the Natural History Building and at the same time provide valuable permanent space for the Museum's programs.

CONSTRUCTION PLANNING - An essential part of an effective facilities development program is the ability to assess requirements and make detailed long-range plans. A comprehensive long-range planning program identifies major issues affecting each expansion project, including program needs, spatial ideas, operating logistics and costs, and preliminary construction cost estimates. The Institution initiated an improved long-range planning capability with funds received in FY 1989. Staff will continue planning future projects with Construction Planning funds received in FY 1990 and FY 1991.

For FY 1992, the Smithsonian requests \$1,000,000 to continue development of a comprehensive long-range capital improvement program. This planning process will result in better-defined plans and better cost estimates for future-year construction projects prior to authorization and budget requests. The Institution is currently considering a facilities expansion or improvement program that could total \$700 million over the next ten years. Annual resources of \$1.0 to \$1.5 million will ensure continued feasibility studies, planning, and concepts upon which to base precise designs and more accurate cost estimates for construction of these and other projects. With these resources the

Institution will also establish operating and logistical support requirements and make required environmental assessments for critical capital improvement projects. This information will assist Smithsonian management decision making and provide the basis for review commission and Congressional approval.

The absence of planning resources means that estimates will be rough. Project requirements, such as space and configuration, construction and operational costs, and environmental and logistical factors will be no more than approximations. Without planning resources, capital improvement planning also lacks coherence and unified direction. To avoid these problems, the Institution requests continued support for its long-range planning program.

MINOR CONSTRUCTION, ALTERATIONS, AND MODIFICATIONS - Projects in this category include:

- minor new construction (under \$1,000,000 in estimated cost);
- alterations and modifications to buildings to meet programmatic objectives in the areas of research, collections management, exhibitions, and public services.

For FY 1992, the Smithsonian requests \$5,000,000 for the projects described below.

American Art and Portrait Gallery Building (\$390,000) - The National Museum of American Art's collections are growing at the pace of about 1,000 items per year. Space is no longer available in the building to house additional objects in an appropriate climate-controlled and secure environment, nor is space available at the Museum Support Center, the Silver Hill Facility, or the facility at 1111 North Capitol Street. Off-site leased storage is costly and impractical. The Museum plans to construct a mezzanine in the space currently occupied by the Office of Research and Fellows and improve attic storage space. The planned restorations will increase art storage space in the American Art and Portrait Gallery Building and provide additional office and work areas. Modifying the space will require selected demolition, construction of a mezzanine floor and partitions, upgrading of electrical and HVAC service to both areas, and installation of storage racks. An elevator will transport large art pieces between the floors. Construction of the mezzanine and improvement of the attic space will allow the Museum to correct overcrowding in art storage areas and staff activities.

Arts and Industries Building (\$250,000) - The Arts and Industries Building (A&I) houses four major exhibition halls. It also houses essential program and administrative activities on the Mall, including those that require public access, such as Public Affairs, Museum Programs, Elementary and Secondary Education, and the National Science Resources Center. Other central support organizations located in this building include Protection Services, Information Resource Management, and Planning and Budget. There is an immediate and continuing need to renovate space to offer more functional work areas for current administrative and program requirements. The Institution has used funds provided in FY 1988, FY 1989, and FY 1990 and will use \$275,000 appropriated in FY 1991 to continue renovation of space and acquisition of modular furniture to increase future flexibility. For FY 1992, the Smithsonian requests \$250,000 to modify an additional 4,000 - 5,000 square feet. Funding for this ongoing project will support the Institution's efforts to use the space in the Arts and Industries Building efficiently.

Cooper-Hewitt Museum (\$300,000) - For FY 1992, the Smithsonian requests funds for renovation of the McAlpin-Miller House and the newly acquired Fox House at the Cooper-Hewitt Museum in New York City.

The McAlpin-Miller House is a five-story brownstone townhouse adjacent to the Carnegie Mansion, which houses the exhibits of the Cooper-Hewitt Museum. The Museum uses the McAlpin-Miller House for offices and collections storage. The building is inefficiently laid out, and access to the collections stored there is difficult. Climate controls do not meet museum standards for storage of artifacts. Space utilization is low due to the extensive network of corridors, and much of the building is in violation of fire safety regulations because of limited access. The Museum is preparing a space study of the building with \$35,000 appropriated in FY 1990. This plan will integrate architectural renovation of the building with mechanical, electrical, and plumbing repairs funded under the Repair and Restoration of Buildings account. The Institution will begin the architectural changes to the first floor of the building with \$75,000 appropriated in FY 1991. The FY 1992 request includes \$100,000 to continue the modifications on the second floor. The Institution will request funds in future years to complete the remaining floors of the building. The project will reconfigure the existing space layout by relocating or removing certain interior partitions, develop exit corridors, modify rest rooms to comply with disabled access guidelines, repair and refinish wood floors, and repair and repaint remaining walls, ceilings, and wood trim. This work will allow more efficient use of the space for the Museum's activities and greater staff access to the collections. Modifications will also help preserve the artifacts by improving environmental control and other storage conditions.

In 1989, the Cooper-Hewitt purchased the Fox House, next door to the McAlpin-Miller House. This important acquisition will provide much-needed expansion space for the Museum. The Fox House was built in 1905 as a single-family residence and converted to apartments and professional offices in 1945. A number of residential tenants will remain in the building for the next few years. When the current leases expire, the Institution will renovate the entire building for full museum use. Meanwhile, the Museum must make a number of short-term changes to the unoccupied portions of the building. The Smithsonian will use \$260,000 provided in FY 1991 to renovate approximately four currently vacant floors. The FY 1992 request includes \$200,000 to renovate the remaining floors that are expected to be vacated by tenants. The work includes removal of unused kitchen and shower facilities on each floor, new lighting, plaster repair and painting, new floor covering, repair and refinishing of wood millwork and trim, and upgrading of corridors and stairwells to improve fire protection zones and egress routes. This funding will enable the Cooper-Hewitt to use this building to solve its most urgent space problems.

Freer Gallery Building (\$910,000) - The Institution requests funding for two projects at the Freer Gallery Building: site work and landscaping modifications, and auditorium renovation.

The Institution is currently renovating the Freer Gallery Building with funds received between FY 1986 and FY 1991. The Institution plans to modify pedestrian circulation in the area between the Freer and the Smithsonian Institution Building to accommodate the increased pedestrian traffic resulting from the opening of the Kiosk entrance to the S. Dillon Ripley Center in the Quadrangle Complex. Changes will include redirecting or upgrading the driveway and the walkways around the building and installing better signage for pedestrians. Landscaping improvements will provide better visual interplay between

the Freer and the Castle. The Institution received \$40,000 in FY 1991 for design of these modifications and requests \$360,000 in FY 1992 for construction.

The auditorium in the Freer Gallery Building is showing signs of age. The seat upholstery and carpeting is wearing thin, and walls and finishes are cracked and deteriorated. The projection booth is too small to accommodate the proper equipment, and the lighting is inadequate. For FY 1992, the Institution requests \$550,000 to correct these conditions. The Freer will replace the carpeting and seats, restore or recover the plaster walls and ceiling, expand the projection booth, and install new lighting. Funding of this project will ensure appropriate facilities for the Freer's active schedule of educational events for the public.

Museum Support Center (\$555,000) - The Institution requests \$555,000 in FY 1992 to complete construction of a 3,000-square-foot free-standing greenhouse at the Museum Support Center. The greenhouse will house living plant collections for anatomic, cytologic, taxonomic, and molecular systematics research for the National Museum of Natural History's Laboratory for Molecular Systematics and Department of Botany. Growing space in close proximity to the laboratories is vital to ongoing research programs. The greenhouse's heating and cooling system will provide full climate control and limit insect and pest intrusion. A system of walkways and entries will minimize the impact of staff movement on the controlled atmosphere and further limit insect and pest intrusion. Completion of the greenhouse will enable continuation of a number of important research programs that, with new scientific techniques, are beginning to unlock the fundamental nature and properties of plant growth.

Natural History Building (\$120,000) - For FY 1992, the Institution requests funding to continue modifications to office and laboratory space at the Natural History Building. Authorized National Museum of Natural History workyears have increased from 331 in 1972 to 591 in FY 1991. Many research students, scholars, and visiting scientists also occupy space in the building. The main portion of the building was constructed more than 80 years ago, and the wings more than 25 years ago. Although some modifications have been made to the building over the years, its present configuration does not serve the current staff and Museum functions well. The Museum must now renovate the building to accommodate the large increase in staff over the past 20 years. In addition, advanced equipment technology now in use in research requires specialized building modifications. These modifications will allow the Museum to stay on the cutting edge in these areas.

The continuing transfer to the Museum Support Center (MSC) of the National Museum of Natural History's collections and the relocation of many staff of the United States Geological Survey out of the building present a much-needed opportunity to reorganize and renovate the space within the Natural History Building to address the needs of growing programs. The Museum can relieve major space problems in the building by relocating various functions after first reconfiguring the newly vacated space for more efficient use. The Museum is using funds received in FY 1990 (\$100,000) and FY 1991 (\$100,000) to provide high quality renovated space within the building. For FY 1992, the Institution requests \$120,000 to continue this work. The Museum estimates a cost of more than \$600,000 in FY 1990 dollars for a few of the highest-priority space modification projects. Continued funding of this project will relieve severe crowding as well as make more appropriate and efficient use of available space in the building. The Institution will request funding in future years to continue space modifications.

Silver Hill Facility (\$900,000) - The Institution requests \$900,000 to construct a storage building to house collections of the National Museum of American History and the National Air and Space Museum. The collections storage buildings at Silver Hill, Maryland, cannot accommodate current storage requirements. The two museums have collected important artifacts over the past 15 years, and the buildings are filled to capacity. Additional acquisitions require further compression of collections presently stored in the buildings and expose artifacts to potential damage from unstable environmental conditions and insect and rodent infestations in the buildings. For FY 1992, the Institution requests \$900,000 to construct a pre-engineered building to relieve the overcrowded conditions. The new building will provide about 20,000 square feet of storage space. A 20-foot ceiling height, minimal heating and ventilation, low ultra-violet lighting, and fire and security safeguards will provide a sound basic environment for larger, less fragile artifacts. Although the Institution's plans to construct an Air and Space Extension will provide substantial storage facilities for the National Air and Space Museum and projected development on the site of the Museum Support Center will expand storage space for the National Museum of American History, the building requested here will ease immediate storage problems. When the collections move to these facilities, the Institution will use the new Silver Hill building for other urgent Institutional storage needs.

Smithsonian Astrophysical Observatory (\$600,000) - For FY 1992, the Institution requests \$600,000 for conversion of the building that houses the Multiple Mirror Telescope (MMT) to accommodate a new mirror. Scientists at the Smithsonian Astrophysical Observatory (SAO) have developed a method of doubling the light-gathering capability of the MMT and increasing its field of view more than one hundred times, by replacing the six 72-inch mirrors with a single 6.5-meter mirror. The converted telescope will allow astronomers to study far more efficiently more than twice as much of the universe than is now possible, including phenomena currently inaccessible. The Major Scientific Instrumentation line-item of the Salaries and Expenses account will fund development and construction of the mirror and associated equipment and controls. The Institution requests \$600,000 under the Construction account to modify the MMT building to support the new mirror. Conversion of the building, rather than construction of a new one, will significantly reduce the overall cost of the new telescope. A design study now under way has identified an economical solution to the building modification that still allows its unique features to be used for the benefit of the converted telescope. The funds requested will extend the large shutters on the building to accept the new mirror, install louvers for improved air circulation, modify laboratory space to house large instruments and optics, and strengthen the rail on which the building rotates to withstand increased wind loads. Funding of this project will significantly expand SAO's research capability and ensure that Smithsonian astronomers remain in the forefront of the field into the 21st century.

Smithsonian Environmental Research Center (\$100,000) - For FY 1992, the Institution requests funding for completion of laboratory support space at the Smithsonian Environmental Research Center for the migratory bird program, which Congress approved in FY 1991. The facility will allow researchers from three Smithsonian bureaus to integrate their data in this critical field, while allowing them easy access to national policymakers in the Washington metropolitan area.

The Institution plans to add laboratory "modules" to SERC's newly completed Mathias Laboratory Building to accommodate this program. SERC will use \$350,000 appropriated in FY 1991 to construct the laboratories. The Institution requests \$100,000 in FY 1992 to construct associated support space, including rest rooms, a walk-in cold room, janitorial storage with slop sink and mop drain, an instrument room, and laboratory storage area.

Construction of laboratory and support space will allow this valuable new research program to go forward uninterrupted in meeting important national and international goals. Future-year requests will construct additional laboratories to support new and existing research programs.

Smithsonian Institution Building (\$50,000) - The Smithsonian Institution Building houses the Office of the Secretary and other senior management of the Institution. Recent changes in the use of the building require minor modifications to the building to provide the necessary support facilities for staff activities. The Institution will begin alterations to staff offices with \$100,000 received in FY 1991. For FY 1992, the Institution requests \$50,000 to continue this work to ensure the efficient operation of these key organizations.

Smithsonian Tropical Research Institute (\$300,000) - The Institution requests funding in FY 1992 for dock site improvements at the Gamboa site of the Smithsonian Tropical Research Institute (STRI).

The research site at Gamboa is on the Panama Canal about 15 miles northwest of Panama City. Previously, the primary mainland docking facility serving Barro Colorado Island (BCI) was located at Frijoles, northwest of Gamboa and accessible only by railroad from Gamboa or Panama City. Because the railroad is unsafe, STRI use of the railroad is no longer possible. STRI has a temporary arrangement with the Panama Canal Dredging Commission to use its docking facilities at Gamboa to transport personnel and supplies to BCI. In FY 1989, Congress appropriated \$300,000 for a new STRI dock facility at Gamboa. Since that time, however, STRI has determined that, because of its more convenient location for logistical and support purposes, Gamboa should replace BCI as the primary location for large vessel docking and boat repairs. The Institution requests \$300,000 in FY 1992 for necessary site improvements to support the expanded functions of the Gamboa dock. The work includes dredging, constructing a breakwater, and providing a sheltered area for performing fiberglass work and other repairs to small boats. Funding of this project will enable STRI to continue vital water-based operations and carry out maintenance for its fleet of vessels.

Alterations and Modifications Planning and Design (\$525,000) - For FY 1992, the Smithsonian requests \$525,000 to plan and design future Minor Construction, Alterations, and Modifications projects. As in other categories of construction activities, such as Major Construction and Repair and Restoration of Buildings, planning is essential for an effective facilities management program, and earlier design starts will improve the accuracy of construction cost estimates. The requested resources will allow the Institution to assess future requirements for changes to existing facilities to accommodate programmatic growth and changes in program direction. Planning studies will evaluate space requirements and make engineering analyses; the staff will also prepare concept designs for buildings and sites and estimate total project costs. Careful research and early design of future needs will result in more accurate cost estimates in advance of budget requests and more timely obligation of construction funds once received.

SMITHSONIAN INSTITUTION
Annual Visitation
FY 1986 – FY 1990

	<u>FY 1986</u>	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>
MALL					
SI Building /1	1,035,653	1,160,655	228,409	-	1,507,351
Arts & Industries Building	1,047,397	1,228,911	1,458,532	1,324,126	994,162
National Museum of Natural History	5,962,073	7,886,520	7,365,665	6,453,481	6,162,953
National Air and Space Museum	7,752,544	7,750,323	9,237,847	8,397,694	7,542,401
Freer Gallery of Art /2	308,236	303,613	309,367	-	-
Sackler Gallery /3	-	7,095	547,874	446,697	405,913
National Museum of African Art /3	-	14,555	643,460	420,603	428,859
Ripley Center /3	-	4,674	518,763	380,953	251,908
National Museum of American History	5,143,334	5,626,565	6,359,369	5,527,747	5,704,389
Hirshhorn Museum and Sculpture Garden	1,057,753	1,033,629	1,278,052	1,048,103	937,060
OFF-THE-MALL					
American Art & Portrait Gallery	346,057	344,358	349,255	408,684	422,509
Renwick Gallery	124,850	218,047	143,020	123,393	315,849
National Museum of African Art /4	32,915	-	-	-	-
Anacostia Museum /5	36,314	12,668	37,682	28,814	43,419
Cooper-Hewitt Museum	190,751	152,618	140,839	128,474	197,012
Museum of the American Indian /6	-	-	-	-	7,994
National Zoological Park /7	3,300,000	3,500,000	3,100,000	3,200,000	3,400,000
GRAND TOTAL	<u>26,337,877</u>	<u>29,244,231</u>	<u>31,718,134</u>	<u>27,888,769</u>	<u>28,321,779</u>

1/ Closed to the public January 1988. Reopened to the public November 1989.

2/ Closed to the public September 1988.

3/ Opened to the public September 28, 1987.

4/ Off-Mall location closed to the public June 1986.

5/ Closed to the public January to April 1987. Reopened May 1987 at new location.

6/ Reporting period July - September, 1990.

7/ Number of visitors is an estimate based on a sampling system.

COLUMBUS QUINCENTENARY PROGRAMS

The Smithsonian's Columbus Quincentenary Programs commemorate the voyages of Christopher Columbus and the subsequent encounter among Europeans, Africans, and indigenous peoples of the Americas. Through exhibitions, scholarly and public symposia, publications, educational programs, traveling exhibitions, radio and television, the commemoration will focus on the cultural, historical, and scientific implications of the hemispheric encounter. Twenty bureaus and offices, coordinated by the Office of Quincentenary Programs, will participate in the observance. The Smithsonian's Quincentenary commemoration will serve as the basis for a permanent program emphasizing the history and cultures of the Americas. Descriptions of Quincentenary programs and the participating bureaus are listed below.

Cooper-Hewitt Museum - The Cooper-Hewitt Museum will present an exhibition titled "Global Images: The Process of Mapping" that shows how maps have documented world views through the ages, and how their design reflects changing perspectives and technologies. The exhibition opens in the fall of 1992.

Hirshhorn Museum and Sculpture Garden - The Hirshhorn Museum and Sculpture Garden will present an exhibition titled "Four Latin American Pioneers of Modernism: Torres-Garcia, Rivera, Lam, and Matta" featuring works by Joaquin Torres-Garcia, Diego Rivera, Wifredo Lam, and Roberto Matta--20th-century Latin-American artists who have explored new frontiers of expression. The exhibition will open in June 1992.

National Air and Space Museum - The National Air and Space Museum will produce a world atlas based on satellite images and publish a user's guide to the atlas. In addition, an exhibition titled "Where Next, Columbus?" will examine space exploration in the next 500 years, the solar system, the search for extraterrestrial life, and the scientific technologies that are a part of extensive exploration. The exhibition will open in spring 1992.

National Museum of American Art - The National Museum of American Art will present an exhibition titled "The West as America, 1820-1920." Through major 19th-century paintings, the exhibition will examine the myths that formed a national bias for expansion. The Museum is collaborating with the National Portrait Gallery on an exhibition titled "American Art at the 1893 World's Columbian Exposition in Chicago."

National Museum of American History - The National Museum of American History is developing a major exhibition titled "American Encounters." The exhibition focuses on encounters among indigenous, Spanish, and Anglo-American cultures in New Mexico and the subsequent adaptation of Indian and Hispanic cultures. An annual series of small case exhibitions and public symposia has begun, leading up to the opening of "American Encounters" in October 1992.

National Museum of Natural History - The National Museum of Natural History will develop a major exhibition organized around the concept "Seeds of Change." The exhibition will examine plant, animal, and disease exchanges between the Old and New Worlds that transformed the cultural and ecological landscape of the Americas. The Museum is also sponsoring a wide range of symposia, educational programs, and publications associated with the exhibition. The exhibition will open in October 1991.

National Portrait Gallery - In FY 1993, the National Portrait Gallery will present, in collaboration with the National Museum of American Art, an American paintings and sculpture exhibition based upon the 1893 World's Columbian Exposition in Chicago.

Office of Elementary and Secondary Education - The Office of Elementary and Secondary Education will develop a series of multi-cultural education packets written in English, Spanish, and Portuguese. The packets will introduce preschool age children to the cultural and animal life of the Americas. During 1991, the Office will present a symposium on the effects of cultural transplantation--from Latin America and to the United States--on the folk art traditions of storytelling, textile arts, and music. The Office will also produce a video recording of the symposium. A special issue of the Office's Art to Zoo will show teachers how to use multi-cultural resources in their communities for teaching about Latin America.

Office of Folklife Programs - The Office of Folklife Programs will present a "Living Exhibition on the National Mall"; a series of three symposia dealing with cultural expression from agricultural, commercial, and industrial societies in the Americas; a scholarly program of folklore, ethnographic, and ethnomusical research; and associated publications. In 1991 and 1992, the Festival will feature indigenous cultures of the Americas. Smithsonian radio programs, teacher training workshops, and exhibition program books will augment the exhibitions.

Office of Public Affairs - The Office of Public Affairs will promote Smithsonian Quincentenary activities through print, media publications, television, public service announcements, and radio advertisements.

Office of Quincentenary Programs - The Office of Quincentenary Programs coordinates the Smithsonian's Columbus Quincentenary commemoration. The Office will continue publishing The New World, a quarterly newsletter with English and Spanish editions to highlight the Smithsonian's Quincentenary programs.

Smithsonian Institution Press - The Smithsonian Institution Press is publishing a three-volume series entitled the Columbus Consequences. The series will address the social, demographic, ecological, and ideological impact of Columbus's landing. Scheduled for publication prior to the 1992 observances, the project explores early European/native-American interaction of Spanish colonial settlements in the New World.

Smithsonian Institution Traveling Exhibition Service - The Smithsonian Institution Traveling Exhibition Service will design and distribute traveling versions of several exhibitions. Among them are the International Gallery's "Tropical Rainforests: A Disappearing Treasure"; the National Air and Space Museum's "Where Next, Columbus?"; the National Museum of American History's "Contrast: 40 Years of Continuity and Change in Puerto Rico"; and the National Museum of Natural History's "Seeds of Change."

National Zoological Park - The National Zoological Park will highlight the unique tropical ecosystem in an exhibition titled "Amazonia." The exhibition will provide closeup views of the complex webs of partnership and competition that exist among plants and animals of the rainforest and discuss the global impact of the rainforest's destruction.

Other Quincentenary Activities - Several Smithsonian bureaus are collaborating on a five-part television series, "The Buried Mirror," written and narrated by Mexican author Carlos Fuentes, which will examine Spanish and indigenous contributions to the Americas and the emergence of "new cultures" in both historical and contemporary contexts. The Resident Associates Program will develop complementary programs such as lectures, seminars, workshops, and performances with a focus on Quincentenary-related exhibitions and programs.

The accompanying table identifies Federal funding, appropriated in FY 1990 estimated in FY 1991, and requested for FY 1992 to support Columbus Quincentenary programs.

Federal Funding for Columbus Quincentenary Programs
FY 1990 - FY 1992

	<u>FY 1990</u> <u>Approp.</u> <u>(\$000s)</u>	<u>FY 1991</u> <u>Approp.</u> <u>(\$000s)</u>	<u>FY 1992</u> <u>Request</u> <u>(\$000s)</u>
National Museum of Natural History	455	462	462
National Air and Space Museum	41	41	41
National Museum of American History	350	609	609
National Museum of American Art	45	60	60
National Portrait Gallery	15	40	40
Hirshhorn Museum and Sculpture Garden	20	50	50
Cooper-Hewitt Museum	24	24	24
Smithsonian Institution Traveling Exhibition Service	55	55	55
Office of Public Affairs	0	15	15
Smithsonian Institution Press	0	15	15
Office of Folklife Programs	105	210	210
Office of Elementary and Secondary Education	38	15	15
Office of Quincentenary Programs	<u>86</u>	<u>116</u>	<u>131*</u>
 TOTAL	 1,234	 1,712	 1,727

*Annualized position from FY 1991.

SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

1990 Appropriation.....	-0-	---	
1991 Appropriation.....	-0-		-- Equivalent in Excess
1992 Estimate.....	-0-	---	Foreign Currencies

PROGRAM OF GRANTS FOR RESEARCH

The Smithsonian Institution, through its Special Foreign Currency Program, makes grants to United States universities, museums, and other institutions of higher learning, including the Smithsonian itself, primarily for research and advanced professional training in fields of traditional Smithsonian competence.

Excess currencies appropriations directly funded the Program through FY 1986. Outlays from the budget authority appropriated through FY 1986, including the Forward-Funded Reserve for the American Institute of Indian Studies, will continue into the mid-1990s. In addition, since FY 1986, the Smithsonian has received allocations of U.S.-owned Indian rupees from the funds appropriated to the Department of State in FY 1985 for the establishment of the U.S.-India Fund for Educational, Cultural, and Scientific Cooperation. (OMB Bulletin 91-03, issued on November 12, 1990, indicates that the Secretary of the Treasury has designated Burma as an excess currency country for FY 1991 and FY 1992.)

For more than 20 years, the Special Foreign Currency Program has been a major source of support for research carried out by United States institutions in those countries for which excess foreign currencies are available. The full responsibility for the design, execution, and publication of research results rests with a scholar working within the program of a United States institution. Smithsonian foreign currency grants strengthen the fundamental research and training activities of collaborating institutions abroad, since most projects directly involve host country institutions and scholars. Enduring professional ties, which result from joint efforts and scholarly exchange, contribute to the strongest form of United States cultural relations with other nations. These ties also contribute to the global integration of research data in the sciences. As a result of this interaction, the gap between industrial and developing nations' scholars has narrowed. Moreover, research sponsored by the Program aims, in part, at improving understanding of the environment and the management and conservation of scarce natural and cultural resources that are threatened by the rapid growth of world population and technological development.

In FY 1990, ongoing research supported by these grants included the following projects of special interest:

- archeological and geomorphic studies at Harappa in Pakistan that are enhanced with studies of present-day traditional bead makers in Khambhat, India;
- a multi-disciplinary study that brought U.S. social scientists together for a third time to observe an Indian ecophysiological study of airbreathing fishes that provides information on effects of the environment on an important food source;
- an exchange between U.S. and Pakistani folklorists, anthropologists, and linguists that gives Pakistani researchers access to current Western research techniques in music, foodways, language, and art;

- documentation of Mughal gardens of Pakistan that provides not only heretofore unknown scholarly information, but also lays the foundation for the authentic restoration of these important sites.

Further, with emphasis on the exchange of information through small workshops, symposia, and field conferences, the Program encourages international research in specialized areas. In FY 1990, for example, U.S. scholars received support for participation in exchanges on the subjects of astronomy, wetlands ecology, traditional medicine, children's books, genetics, health and disease, and zoo management.

FORWARD-FUNDED RESERVE FOR THE AMERICAN INSTITUTE OF INDIAN STUDIES

Since 1967, the Smithsonian has provided annual funding through the Special Foreign Currency Program to the American Institute of Indian Studies (AIIS) for its fellowships, research, symposia, and publications programs as well as its administrative costs. The Smithsonian has helped sustain this Institute and other American research centers abroad for the last 20 years because of their significant contributions to scholarship and science without regard for national boundaries and because of their special service to American scholars.

With Special Foreign Currency Program funding received from FY 1980 through FY 1985, the Smithsonian established a forward-funded reserve of \$7,170,000 equivalent in rupees. This reserve enabled the AIIS to sustain its programs after the removal of India from the excess currency list in 1985. Since FY 1986, AIIS, with oversight from the Smithsonian, has drawn upon the funds from this reserve for its fellowship program and administration costs in India. The Institution continues to examine annual proposals through its peer review system before releasing funds from the reserve account to AIIS. The reserve should support AIIS programs through the 1990s in conjunction with continued support from the U.S.-India Fund. In 1990, the U.S. Congress authorized the deposit of the reserve in interest-bearing (rupee) accounts, a plan that will help to continue the viability of the fund for many years.

U.S.-INDIA FUND FOR EDUCATIONAL, CULTURAL, AND SCIENTIFIC COOPERATION

In FY 1985, Congress appropriated \$110 million equivalent in U.S.-owned Indian rupees to the Department of State to establish the U.S.-India Fund for Educational, Cultural, and Scientific Cooperation. Since FY 1986, the Smithsonian has received allocations from this fund to continue programs in India similar to those administered under the Special Foreign Currency Program, which would otherwise have ended when India lost excess currency status in 1985. The Institution received an amount of \$1.4 million in FY 1986, \$1.5 million in FY 1987, \$1.8 million in FY 1988, \$1.75 million in FY 1989, and \$2.5 million in FY 1990. In FY 1991, the Institution received \$1.85 million. Based on current usage, the fund will be totally liquidated by 1998.

January 1991

Federal Expenditures for Consulting Services
(All Charged to S&E Funds)

In accordance with 31 U.S.C. 1114(A) and OMB Circular A-120 the following consulting services are identified for FY 1990. Similar services for FY 1991 are those tentatively identified from discussion or advance procurement plans. Services for FY 1992 have not been identified.

<u>FY 1990</u>	<u>Amount</u>	<u>Project</u>
Personnel Appointments		None reportable
Contracts	30,834	A study to audit and evaluate Smithsonian's health Services programs
	30,000	Technical, professional research services to act as museum advisor for Arthur M. Sackler Gallery and the Freer Gallery of Art
	38,000	Technical, professional research services for National Museum of the American Indian
	23,547	Technical, professional services concerning organizational openings of National Museum of the American Indian
 <u>FY 1991</u>		
Personnel Appointments		None reportable
Contracts	150,000	Technical, professional services for National Museum of the American Indian

SMITHSONIAN INSTITUTION

Appropriation: Salaries and Expenses

Appropriation language and citations:

20 U.S.C. 41 provides for the establishment and operation of the Smithsonian Institution "...for the increase and diffusion of knowledge among men..." This section delineates the full scope of Smithsonian authority. Examples of secondary authorities within this primary authority may be cited as follows:

1. For necessary expenses of the Smithsonian Institution, as authorized by law, including research in the fields of art, science, and history;

20 U.S.C. 50, 53a, 69, 75b, 76bb, 77a, 78, 80a, 80m provide that (1) "...all objects of art and of foreign and curious research, and all objects of natural history, plants, and geological and mineralogical specimens...shall be so arranged and classified...as best to facilitate the examination and study of them..." (2) "Appropriations are authorized for...the making of solar observations at high altitudes..." (3) "The Secretary of the Smithsonian Institution is hereby authorized...to continue independently or in cooperation anthropological researches among the American Indians and the natives of lands under the jurisdiction or protection of the United States..." (4) "The Gallery shall function as a free public museum for the exhibition and study of portraiture and statuary depicting men and women who have made significant contributions to the history, development, and culture of the people of the United States and of the artists who created such portraiture and statuary." (5) "The Joseph H. Hirshhorn Museum and Sculpture Garden...shall be used for the storage, exhibition, and study of works of art..." (6) "The national air and space museum shall...provide educational material for the historical study of aviation and space flight." (7) "The Secretary of the Smithsonian Institution is authorized to cooperate with any State, educational institution, or scientific organization in the United States for continuing paleontological investigations..." (8) "It shall be equipped with a study center for scholarly research into the meaning of war, its effect on civilization, and the role of the Armed Forces..." (9) "...the Board may...conduct programs of research and education (in the Museum of African Art)..."

2. development, preservation, and documentation of the National Collections;

20 U.S.C. 50, 50a, 59, 69, 75e, 76c, 76cc(a), 77a, 80a, 80m, 81 provide that (1) "...all objects of art and of foreign and curious research, and all objects of natural history, plants, and geological and mineralogical specimens...shall be delivered to such persons as may be authorized by the Board of Regents to receive them, and shall be so arranged and classified...as best to facilitate the examination and study of them..." (2) "The Smithsonian Institution is authorized to include in its estimates of appropriations such sums as may be needful for the preservation and maintenance of the John Gellatly art collection." (3) "All collections of rocks, minerals, soils, fossils, and objects of natural history, archaeology, and ethnology...when no longer needed for investigations in progress shall be deposited in the National Museum." (4) "The Secretary of the Smithsonian Institution is hereby authorized...to continue independently or in cooperation...the excavation and preservation of archaeological remains." (5) "...the Board may - (1) purchase, accept, borrow, or otherwise acquire portraiture, statuary, and other items for preservation, exhibition, or study." (6) "...the Regents are authorized...to acquire

(by purchase or otherwise) and sell contemporary works of art or copies thereof..." (7) "There is established in the Smithsonian Institution a Board of Trustees...which shall have the sole authority (i) to purchase or otherwise acquire...works of art for the Joseph H. Hirshhorn Museum and Sculpture Garden..." (8) "The national air and space museum shall...collect, preserve, and display aeronautical and space flight equipment of historical interest and significance..." (9) "...the Smithsonian Institution shall collect, preserve, and exhibit military objects of historical interest and significance." (10) "The National Zoological Park is placed under the direction of the Regents of the Smithsonian Institution, who are authorized to transfer to it any living specimens, whether of animals or plants, in their charge, to accept gifts for the park...to make exchanges of specimens..." (11) "...the Board may purchase, accept, borrow or otherwise acquire additional works of art or any other real or personal property for the Museum (of African Art); preserve, maintain, restore...or otherwise hold any property of whatsoever nature acquired..."

3. presentation of public exhibits and performances;

20 U.S.C. 75b, 76c, 76bb, 77a, 80a, 80m provide that (1) "The Gallery shall function as a free public museum for the exhibition and study of portraiture and statuary..." (2) "In order to encourage the development of contemporary art and to effect the widest distribution and cultivation in matters of such art, the Regents are authorized to...conduct exhibitions..." (3) "The Joseph H. Hirshhorn Museum and Sculpture Garden...shall be used for the storage, exhibition, and study of works of art..." (4) "The national air and space museum shall...collect, preserve, and display aeronautical and space flight equipment of historical interest and significance..." (5) "...the Smithsonian Institution shall collect, preserve, and exhibit military objects of historical interest and significance." (6) "...the Board may...display...any property of whatsoever nature acquired (for the Museum of African Art)..."

4. collection, preparation, dissemination, and exchange of information and publications;

20 U.S.C. 53a provides that "Appropriations are authorized for the...preparation of manuscripts, drawings, and illustrations for publication."

44 U.S.C. 1719 provides that "For the purpose of more fully carrying into effect the convention concluded at Brussels on March 15, 1886, and proclaimed by the President of the United States on January 15, 1889, there shall be supplied to the Library of Congress not to exceed one hundred and twenty-five copies each of all Government publications, including the daily and bound copies of the Congressional Record, for distribution, through the Smithsonian Institution, to foreign governments which agree to send to the United States similar publications of their governments for delivery to the Library of Congress."

5. conduct of education, training, and museum assistance programs;

20 U.S.C. 65a provides "The Director of the National Museum under the direction of the Secretary of the Smithsonian Institution shall - (1) cooperate with museums and their professional organizations in a continuing study of museum problems and opportunities, both in the United States and abroad; (2) prepare and carry out programs by grant, contract, or directly for training career employees in museum

practices...(3) prepare and distribute significant museum publications; (4) perform research on, and otherwise contribute to, the development of museum techniques..."

20 U.S.C. 77a provides that "The national air and space museum shall...provide educational material for the historical study of aviation and space flight."

20 U.S.C. 79a provides that "The purpose of setting aside such an area [Barro Colorado Island] is to preserve and conserve its natural features...thus providing a place where duly qualified students can make observations and scientific investigations for increase of knowledge, under such conditions and regulations as may be prescribed by the Smithsonian Institution."

20 U.S.C. 79e as amended by P.L. 96-89 and P.L. 98-57 provides that "There are authorized to be appropriated annually...such sums as are necessary for the administration of sections 79-79e of this title and for the maintenance of laboratory or other facilities..."

The Panama Canal Treaty and ancillary agreements vest in the Smithsonian Tropical Research Institute responsibility to serve as custodian of the Barro Colorado Nature Monument. The Panama Canal Act of 1979, P.L. 96-70, implements the provisions of the Panama Canal Treaty.

20 U.S.C. 80m provides that "...the Board may...conduct programs of research and education (in the Museum of African Art)..."

6. maintenance, alteration, operation, lease (for terms not to exceed thirty years), and protection of buildings, facilities, and approaches;

20 U.S.C. 53a, 76g, 76ee, 79b, 80m, 81 provide that (1) "Appropriations are authorized for the maintenance of the Astrophysical Observatory and...for repairs and alterations of buildings and grounds occupied by the Smithsonian Institution in the District of Columbia and elsewhere..." (2) "There are authorized to be appropriated annually such sums as may be necessary to maintain and administer the Gallery..." (3) "There is authorized to be appropriated...such additional sums as may be necessary for the maintenance and operation of such museum and sculpture garden." (4) "The Smithsonian Institution shall...be responsible for the construction and maintenance of laboratory and other facilities on the area provided for the use of students authorized to carry on studies within the confines of the area..." (5) "...the Board may...preserve, maintain...any property of whatsoever nature acquired (for the Museum of African Art)..." (6) "The National Zoological Park is placed under the direction of the Regents of the Smithsonian Institution, who are authorized...to administer and improve the said Zoological Park for the advancement of science and the instruction and recreation of the people." Public Law 101-512 making appropriations for the Department of the Interior and Related Agencies for the fiscal year 1991 extended the maximum term from ten years to thirty years.

7. not to exceed \$_____for services as authorized by 5 U.S.C. 3109;

5 U.S.C. 3109 provides that "When authorized by an appropriation or other statute, the head of an agency may procure by contract the temporary (not in excess of 1

year) or intermittent services of experts or consultants or an organization thereof, including stenographic reporting services."

8. up to 5 replacement passenger vehicles;

31 U.S.C. 638a provides that "Unless specifically authorized by the appropriation concerned or other law, no appropriation shall be expended to purchase or hire passenger motor vehicles for any branch of the Government other than those for..."

9. purchase, rental, repair, and cleaning of uniforms for employees;

5 U.S.C. 5901 provides that "There is authorized to be appropriated annually to each agency of the Government of the United States...on a showing of necessity or desirability, an amount not to exceed \$125 multiplied by the number of employees of the agency who are required by regulation or statute to wear a prescribed uniform in the performance of official duties and who are not being furnished with the uniform."

40 U.S.C. 193t provides that "The special police provided for in section 193n of this title [Smithsonian Institution]...may be furnished, without charge, with uniforms and such other equipment as may be necessary for the proper performance of their duties..."

10. of which not to exceed \$_____ for the instrumentation program, collections acquisition, Museum Support Center equipment and move, exhibition reinstallation, the National Museum of the American Indian, and the repatriation of skeletal remains program shall remain available until expended;

Wording added by the Congress in (1) Public Law 100-446 making appropriations for the Department of the Interior and related agencies for the fiscal year 1989 and (2) Public Law 101-512 making appropriations for the Department of the Interior and Related Agencies for the fiscal year 1991 to permit the Institution to establish no-year funding within the Salaries and Expenses account for (1) the development of major scientific instrumentation and (2) purchases for museum collections; the costs of purchasing collections storage equipment and the preparation of objects and the move of collections to the Museum Support Center; the design, production, and reinstallation of museum exhibitions; the operating costs associated with the new National Museum of the American Indian; and the repatriation of skeletal remains program.

31 U.S.C. 718 provides "No specific or indefinite appropriation made subsequent to August 24, 1912, in any regular annual appropriation Act shall be construed to be permanent or available continuously without reference to a fiscal year unless it belongs to one of the following...or unless it is made in terms expressly providing that it shall continue available beyond the fiscal year for which the appropriation Act in which it is contained makes provision."

11. and, including such funds as may be necessary to support American overseas research centers and a total of \$_____ for the Council of American Overseas Research Centers:

Wording added by the Congress in Public Law 99-190 making appropriations for the Department of Interior and Related Agencies in 1986. Public Law 100-446 making appropriations for the Department of the Interior and Related Agencies for the fiscal year 1989 modified reference to add specific dollar sum to be provided to the Council of American Overseas Research Centers.

12. Provided, That funds appropriated herein are available for advance payments to independent contractors performing research services or participating in official Smithsonian presentations.

31 U.S.C. 529 provides that "No advance of public money shall be made in any case unless authorized by the appropriation concerned or other law."

13. Provided further, that \$ _____ of the amount appropriated under this head shall be made available to the Trustees of the John F. Kennedy Center for the Performing Arts for repayment of an accumulated operating deficit.

Wording added by the Congress in Public Law 101-512 making appropriations for the Department of the Interior and Related Agencies for the fiscal year 1991 to provide funding to be made available to the Trustees of the John F. Kennedy Center for the Performing Arts for repayment of an accumulated operating deficit.

SMITHSONIAN INSTITUTION

Appropriation: Museum Programs and Related Research
(Special Foreign Currency Program)

Appropriation language and citations:

1. Funds previously appropriated in this account for the American Institute of Indian Studies Forward Funded Reserve may be invested in India by the United States Embassy in India in interest-bearing accounts with the interest to be used along with other funds in the account to support the ongoing programs of the American Institute of Indian Studies.

Language added in Public Law 101-512 making appropriations for the Department of the Interior and Related Agencies for fiscal year 1991 to enable funding appropriated in this account from FY 1980 through FY 1985 for the Forward Funded Reserve to be invested in interest-bearing accounts.

SMITHSONIAN INSTITUTION

Appropriation: Construction and Improvements,
National Zoological Park

Appropriation language and citations:

1. For necessary expenses of planning, construction, remodeling, and equipping of buildings and facilities at the National Zoological Park,

20 U.S.C. 81 provides that "The National Zoological Park is placed under the direction of the Regents of the Smithsonian Institution, who are authorized...to administer and improve the said Zoological Park for the advancement of science and the instruction and recreation of the people."

2. by contract or otherwise,

Wording for clarification only.

3. to remain available until expended.

31 U.S.C. 718 provides "No specific or indefinite appropriation made subsequent to August 24, 1912, in any regular annual appropriation Act shall be construed to be permanent or available continuously without reference to a fiscal year unless it belongs to one of the following...or unless it is made in terms expressly providing that it shall continue available beyond the fiscal year for which the appropriation Act in which it is contained makes provision."

SMITHSONIAN INSTITUTION

Appropriation: Repair and Restoration of Buildings

Appropriation language and citations:

1. For necessary expenses of repair and restoration of buildings owned or occupied by the Smithsonian Institution, by contract or otherwise, as authorized by section 2 of the Act of August 22, 1949 (63 Stat. 623),

20 U.S.C. 53a provides that "Appropriations are authorized...for repairs and alterations of buildings and grounds occupied by the Smithsonian Institution in the District of Columbia and elsewhere..."

2. including not to exceed \$_____ for services as authorized by 5 U.S.C. 3109,

5 U.S.C. 3109 provides that "When authorized by an appropriation or other statute, the head of an agency may procure by contract the temporary (not in excess of 1 year) or intermittent services of experts or consultants or an organization thereof, including stenographic reporting services."

3. to remain available until expended:

31 U.S.C. 718 provides "No specific or indefinite appropriation made subsequent to August 24, 1912, in any regular annual appropriation Act shall be construed to be permanent or available continuously without reference to a fiscal year unless it belongs to one of the following...or unless it is made in terms expressly providing that it shall continue available beyond the fiscal year for which the appropriation Act in which it is contained makes provision."

4. Provided, That contracts awarded for environmental systems, protection systems, and exterior repair or restoration of buildings of the Smithsonian Institution may be negotiated with selected contractors and awarded on the basis of contractor qualifications as well as price.

Wording added to allow for negotiations with the most competent firms for restoration and renovation work where it can be certified that such work must be performed to meet the special needs of historic structures, the protection of collections, or public safety.

SMITHSONIAN INSTITUTION

Appropriation: Construction

Appropriation language and citations:

1. For necessary expenses for construction,

20 U.S.C. 53a provides that "Appropriations are authorized...for repairs and alterations of buildings and grounds occupied by the Smithsonian Institution in the District of Columbia and elsewhere..."

2. to remain available until expended:

31 U.S.C. 718 provides "No specific or indefinite appropriation made subsequent to August 24, 1912, in any regular annual appropriation Act shall be construed to be permanent or available continuously without reference to a fiscal year unless it belongs to one of the following...or unless it is made in terms expressly providing that it shall continue available beyond the fiscal year for which the appropriation Act in which it is contained makes provision."

3. including \$_____ for the East Court building of the National Museum of Natural History, subject to authorization:

Wording added by Congress in Public Law 101-512 making appropriations for the Department of the Interior and Related Agencies for the fiscal year 1991 to prohibit funding the East Court building until authorization was complete.

4. Provided, That notwithstanding any other provision of law, the Institution is authorized to transfer to the State of Arizona, the counties of Santa Cruz and/or Pima, a sum not to exceed \$_____ for the purpose of assisting in the construction or maintenance of an access to the Whipple Observatory.

Wording added to allow the Institution to transfer funds from within this account to assist in providing access to the Whipple Observatory in Arizona.

FY 1991 APPROPRIATION
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(Dollars in Thousands)	FY 1991 CONGRESSIONAL APPROPRIATION	LEGISLATED REDUCTION (0.524%)	DISTRIBUTE FROM NMAI LINE-ITEM \1	DISTRIBUTE AFFIRMATIVE ACTION \2	REORGANIZATIONS AND PERMANENT REPROGRAMMINGS	REVISED FY 1991 APPROPRIATION
RESEARCH						
Assistant Secretary for Research	1,663	(9)	0	47	(25)\3	1,676
Astrophysical Observatory	12,056	(63)	0	47	0	12,040
Smithsonian Tropical Research Institute	6,400	(34)	0	0	25 \3	6,391
Smithsonian Environmental Research Center	2,068	(11)	0	86	0	2,143
National Zoological Park	15,787	(83)	0	0	108 \4	15,812
Smithsonian Institution Archives	646	(3)	0	39	0	682
Smithsonian Institution Libraries	5,763	(30)	0	0	(159)\5	5,574
International Environmental Science Program	832	(4)	0	0	0	828
Major Scientific Instrumentation	4,907	(25)	0	0	0	4,882
Subtotal	50,122	(262)	0	219	(51)	50,028
MUSEUMS						
Assistant Secretary for Museums	1,498	(7)	139	0	101 \6	1,731
National Museum of Natural History	29,857	(156)	1,044	39	0	30,784
National Air and Space Museum	10,796	(57)	0	39	55 \7	10,833
National Museum of American History	16,675	(87)	0	86	46 \8	16,720
National Museum of the American Indian	10,222	(54)	(2,959)	0	(67)\9	7,142
National Museum of American Art	6,872	(36)	0	47	0	6,883
National Portrait Gallery	4,444	(23)	0	0	0	4,421
Hirshhorn Museum and Sculpture Garden	3,713	(19)	0	47	(107)\10	3,634
Arthur M. Sackler Gallery/Freer Gallery	5,252	(28)	0	0	0	5,224
Archives of American Art	1,183	(6)	0	0	0	1,177
Cooper-Hewitt Museum	1,727	(9)	0	46	52 \11	1,816
National Museum of African Art	3,739	(20)	0	0	0	3,719
Anacostia Museum	1,165	(6)	0	0	0	1,159
Conservation Analytical Laboratory	2,672	(14)	0	0	0	2,658
Office of Exhibits Central	2,023	(11)	0	0	0	2,012
Smithsonian Traveling Exhibition Service	2,282	(12)	0	93	0	2,363
Museum Support Center	4,329	(23)	0	0	0	4,306
Subtotal	108,449	(568)	(1,776)	397	80	106,582

FY 1991 APPROPRIATION

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(Dollars in Thousands)	FY 1991 CONGRESSIONAL APPROPRIATION	LEGISLATED REDUCTION (0.524%)	DISTRIBUTE FROM NMAI LINE-ITEM \1	DISTRIBUTE AFFIRMATIVE ACTION \2	REORGANIZATIONS AND PERMANENT REPROGRAMMINGS	REVISED FY 1991 APPROPRIATION
UNIT						
PUBLIC SERVICE						
Assistant Secretary for Public Service	1,657	(9)	48	0	(16)\12	1,680
Smithsonian Institution Press	1,404	(7)	0	0	0	1,397
Office of Folklife Program	1,251	(7)	0	0	0	1,244
Academic and Educational Activities	852	(4)	0	0	0	848
Subtotal	5,164	(27)	48	0	(16)	5,169
INTERNATIONAL CENTER						
	986	(5)	0	0	0	981
ADMINISTRATION						
	38,519	(202)	432	(616)	(105)\13	38,028
FACILITIES SERVICES						
Office of Design & Construction	2,929	(15)	222	0	(64)\14	3,072
Office of Protection Services	25,289	(133)	1,034	0	0	26,190
Office of Plant Services	42,863	(226)	40	0	156 \15	42,833
Subtotal	71,081	(374)	1,296	0	92	72,095
GRAND TOTAL	274,321	(1,438)	0	0	0	272,883

\1 DISTRIBUTION OF POSITIONS AND FUNDS APPROPRIATED IN THE NATIONAL MUSEUM OF THE AMERICAN LINE-ITEM FOR VARIOUS SUPPORT OFFICES AND THE TRANSFER OF THE REPATRIATION PROGRAM TO THE NATIONAL MUSEUM OF NATURAL HISTORY.

\2 DISTRIBUTION OF POSITIONS AND FUNDS APPROPRIATED FOR THE INSTITUTION'S AFFIRMATIVE ACTION INITIATIVES--STEP UP '90 AND AFFIRMATIVE CULTURAL TRANSITION PROGRAM.

\3 TRANSFER OF FUNDS FOR MOLECULAR BIOLOGY PROGRAM FROM THE ASSISTANT SECRETARY FOR RESEARCH TO THE TROPICAL RESEARCH INSTITUTE.

\4 TRANSFERS OF ONE POSITION FROM THE OFFICE OF DESIGN AND CONSTRUCTION AND ONE FROM THE OFFICE OF PLANT SERVICES.

\5 TRANSFERS OF ONE POSITION TO THE NATIONAL MUSEUM OF AMERICAN HISTORY AND ONE TO THE ASSISTANT SECRETARY FOR EXTERNAL AFFAIRS.

\6 TRANSFER OF ONE POSITION FROM THE OFFICE OF THE SECRETARY.

\7 TRANSFER OF FUNDS FROM THE HIRSHORN MUSEUM AND SCULPTURE GARDEN.

\8 TRANSFER OF ONE POSITION FROM THE SMITHSONIAN LIBRARIES.

\9 TRANSFER OF ONE POSITION TO THE ASSISTANT SECRETARY FOR PUBLIC SERVICE.

\10 TRANSFERS OF FUNDS TO THE NATIONAL AIR AND SPACE MUSEUM AND ONE POSITION TO THE COOPER-HEWITT MUSEUM.

\11 TRANSFERS OF ONE POSITION FROM THE HIRSHORN MUSEUM AND SCULPTURE GARDEN.

\12 TRANSFERS OF ONE POSITION TO THE OFFICE OF THE SECRETARY AND ONE FROM THE NATIONAL MUSEUM OF THE AMERICAN INDIAN.

\13 TRANSFERS OF: ONE POSITION FROM THE ASSISTANT SECRETARY FOR PUBLIC SERVICE; ONE POSITION FROM THE SMITHSONIAN LIBRARIES; ONE POSITION TO THE ASSISTANT SECRETARY FOR MUSEUMS; AND FUNDS TO THE OPLANTS RENTAL ACCOUNT FOR ADDITIONAL ADMINISTRATIVE SPACE.

\14 TRANSFER OF ONE POSITION TO THE NATIONAL ZOOLOGICAL PARK.

\15 TRANSFERS OF ONE POSITION TO THE NATIONAL ZOOLOGICAL PARK AND FUNDS FROM ADMINISTRATION FOR ADDITIONAL ADMINISTRATIVE SPACE.

SMITHSONIAN INSTITUTION LIBRARIES



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