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Budget SMITHSONIAN INSTITUTION

Budget Justifications for Fiscal Year 1984



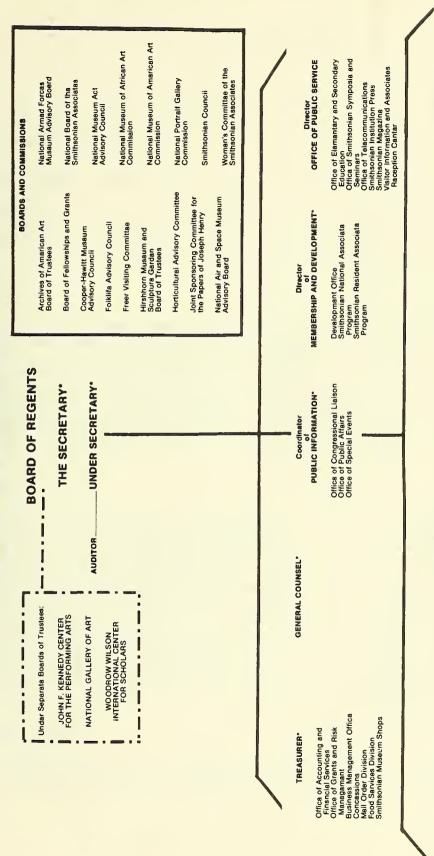
Submitted to the Committees on Appropriations

Congress of the United States

January 1983



SMITHSONIAN INSTITUTION



Assistant Secretary* for SCIENCE

Chesapeske Bay Cantar for Environmental Studies
Nutidis
National Air and Space Museum
National Museum of Natural History/
National Museum of Natural History/
National Museum of Man
National Zoological Park
Office of Blological Conservation
Office of Fallowships and Grants
Rediation Blology Laboratory
Smithsonian Astrophysical Observatory
Smithsonian Topical Research Institute

*Secretary's Executive Committee

Assistant Secretary* for HISTORY & ART

Anacostia Naighborhood Musaum Archivas of Amarican Art Cantar for Asian Art Freer Gallary of Art Sackiar Gallary of Art Cooper-Heavit Museum Division of Parforming Arts Hrishhom Museum and Sculptura Garden of Parforming Arts Garden Musaum of Artican Art National Musaum of Artican Art National Musaum of Amarican Art History Office of American Studias

Assistant Secretary* for MUSEUM PROGRAMS

Conservation Analytical Laboratory National Museum Act Office of Exhibits Central Office of Horicultura Office of Indiricultura Office of International Activities Office of Museum Programs Office of Museum Programs Office of Museum Programs Smithsonian Institution Archives Smithsonian Institution Libraries Smithsonian Institution Libraries Smithsonian Institution Travaling Exhibition Service

Assistant Secretary* for ADMINISTRATION

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SMITHSONIAN INSTITUTION

FISCAL YEAR 1984 ESTIMATES OF APPROPRIATIONS

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GENERAL STATEMENT

Organization and Performance

Founded in 1846, the Smithsonian Institution is an independent, Federal establishment devoted to public education, research and national service in the arts, sciences and history. Centered on the Mall in Washington, D.C., the Institution operates major facilities and activities throughout the country and overseas. It is one of the world's leading research centers and encompasses the world's largest museum complex, attracting approximately 26 million visitors annually to its museums, galleries and zoological park. Additional millions also view Smithsonian traveling exhibitions, which appear across the United States and abroad, and the annual Folklife Festival. As custodian of the National Collections, the Smithsonian possesses more than 78 million art objects, natural history specimens and artifacts. These collections are displayed for the enjoyment and education of visitors and are available for research by the staff of the Institution and by hundreds of visiting students, scientists and historians each year. Other significant study efforts draw their data and results directly from terrestrial, marine and astrophysical observations at various Smithsonian installations.

The Smithsonian complex presently consists of 12 exhibition buildings in Washington, D.C. and New York City in the fields of science, history, technology and art; a zoological park in Washington, D.C. and an animal conservation and research center near Front Royal, Virginia; the Anacostia Neighborhood Museum, which performs research and exhibit activities in a low income area of the city in cooperation with the community; a preservation, storage and air and spacecraft display facility at Suitland, Maryland; two natural preserves in Panama and on the Chesapeake Bay; a radiation biological laboratory in Rockville, Maryland; an oceanographic research facility at Link Port, Florida; astrophysical stations at Cambridge, Massachusetts and at Mt. Hopkins, Arizona, and elsewhere; and supporting administrative, laboratory and storage areas.

Smithsonian Goal

The goal of the Smithsonian Institution is to promote the increase and diffusion of knowledge. To accomplish this goal, the Smithsonian conducts a broad variety of programs alone and in cooperation with other institutions, universities and government agencies in the United States and abroad. These programs include:

- --Collections management: The Smithsonian Institution has the legal responsibility (20 U.S.C. 59) to serve as the official repository of the National Collections which contain more than 78 million art, technological and cultural history objects and natural history specimens and artifacts. The responsibility involves the acquisition, documentation and conservation of these materials along with detailed record keeping or cataloguing, regular inventories and storage or display in secure and atmospherically controlled environments.
- Basic research: Increase of knowledge is accomplished through basic research.

 As an independent Federal establishment, the Smithsonian conducts a broad range of scientific and scholarly research, often in cooperation with other institutions, universities and government agencies.

As a result of basic scientific research, fundamental data are assembled for use by planners and researchers in other organizations, both government and private. Historical research through studies in technological development, art, cultural history, biography and folklife traditions contributes to the knowledge about our heritage and about the nation's growth.

- --Exhibitions, including performances and festivals or celebrations: These presentations constitute one means of diffusing knowledge on a wide scale. In Washington, D.C. and New York City, Smithsonian museums, galleries and the zoological park devote exhibit space to showing significant objects, specimens and animals from the permanent collections. In addition, temporary exhibitions with loan materials enhance these presentations, adding fresh concepts and ideas—further enriching visitor experiences. Through the Smithsonian Institution Traveling Exhibition Service, some 130 exhibitions are seen annually by more than seven million people in 47 states and the District of Columbia. Live performances, festivals, celebrations, lectures and records also are enjoyed by millions of people in the Smithsonian museums, as well as in institutions elsewhere and in private homes throughout the nation.
- --Education: Education programs of the Institution offer enormous variety in content and form; they range from in-depth, scholarly symposia to activities for fun and enjoyment and reach all ages from young children to senior citizens. They include classes and workshops, guided tours by trained docents and radio, television and motion picture programs, sponsored by the individual museums and by centralized offices including Fellowships and Grants, Symposia and Seminars and Elementary and Secondary Education. A significant aspect of the education effort involves production each year of several hundred publications including museum catalogues, books, scholarly monographs, articles, papers, the Archives of American Art Journal and Smithsonian magazine, which is now received by over 1.9 million Resident and National Associates. At any given time, there are likely to be two to three hundred visiting scholars, scientists and students working throughout the Institution in various collections, laboratories and offices. Finally, as another educational endeavor, the Institution's Office of Museum Programs offers assistance to museums across the country and abroad by conducting museum training courses, producing and distributing audiovisual programs on conservation principles and techniques and by awarding grants for professional museum training and research.
- --Collections acquisitions: The Smithsonian museums acquire works of art, artifacts and specimens and other objects in three ways: by collecting, by donation and by purchase. Collecting and donation are and will continue to be the major means for acquiring materials for the collections. However, donations and gifts of collections, for the most part, do not lend themselves to planned development. If the Institution's research and exhibitions programs are to thrive, the collections must grow by thoughtful design. To meet this responsibility and challenge, the Smithsonian seeks to provide special acquisitions funds for the museums. Some Federal funds are requested each year to permit regular planned purchases.

In order to carry out these functions, administration and facilities services units of the Institution provide the required support. The Smithsonian has the responsibility for the maintenance, operation and protection of a large complex of museum and gallery buildings and other facilities. The Institution also provides architectural and engineering services for major repairs, alterations and improvements to the physical plant.

FY 1984 BUDGET PRIORITIES

The central theme of the Smithsonian's FY 1984 budget request is the continued care and management of the collections and the strengthening of management through a coordinated automation effort. Of paramount importance is the Institution's request to continue the equipment purchase program for the Museum Support Center and to establish the major portion of its operating staff. The special collections inventory program is proposed for continuation in FY 1984 and beyond as refinements are made to the substantial baseline inventories which will be completed in June 1983, particularly those of the National Museum of Natural History/Museum of Man and the National Museum of American History. A further increment is proposed for the phased program which was initiated in FY 1983 to acquire updated security equipment throughout all Smithsonian museums. The request also includes resources to support more adequately the Institution's scientific endeavors and to provide proper maintenance of the Smithsonian facilities.

With construction scheduled to begin this spring on the Sackler Gallery in the Quadrangle project, a small sum is being sought to prepare for the exquisite collection of Asian art donated by Dr. Arthur M. Sackler, to be housed in the Sackler Gallery. The Quadrangle project represents a unique and exciting opportunity to share with the people of the nation and the world the cultural heritage of the Near and Far East and Africa. To share further the riches of the National Collections with people throughout the United States who are unable to view them in Washington, D.C., a modest amount is proposed to establish a program to loan for exhibition and study purposes a substantial portion of the generous bequest of Joseph H. Hirshhorn.

There are significant requirements for improvements in the physical plant; the Institution's Five-Year Prospectus - FY 1984 - FY 1988 has identified needs totaling over \$67,186,000 for such improvements. The proposed request in the FY 1984 appropriation continues to place high priority on addressing restoration and renovation needs. Moreover, the FY 1984 construction program emphasizes the renovation of structures, utility systems and general repairs at Rock Creek and at the Front Royal Conservation and Research Center. There is provision in the Zoo request also for two new facilities at the Front Royal Conservation and Research Center which will contribute significantly to the care of the rare and endangered species located there: a new and critically needed veterinary hospital and the final section of a Small Animal Facility.

The Five-Year Prospectus - FY 1984 - 1988, approved by the Board of Regents at its January 24, 1983 meeting, outlined the Smithsonian's operational and facilities plan for that period.

I. Salaries and Expenses

1982 Actual	1983 Base	1984 Estimate
\$131,231,000	\$149,146,000	\$154,354,000

The requested increase of \$5.2 million consists of \$4.0 million for uncontrollable increases and \$4.9 million for program increases offset by a sum of \$3.7 million appropriated for one-time expenses in FY 1983. Uncontrollable increases include projected higher costs in FY 1984 compared with FY 1983 of staff and rental payments, the full-year costs of the positions restored by the Congress in FY 1982 for which part-year funding was provided in FY 1983 and resources to help compensate for the effects of inflation in nonsalary areas. The program increase of \$4.9 million will continue the phased equipment purchases and provide essential staff and operating costs for the

Museum Support Center; strengthen the management of the Institution through a coordinated automation program under the newly established Office of Information Resource Management; continue the initiative established in FY 1983 to improve the safety and security of the National Collections by purchasing new security equipment; support more adequately the Institution's scientific endeavors, and provide proper maintenance of the Smithsonian facilities and an adequate level of architectural/engineering support for the Restoration and Renovation of Buildings Program. A modest but important request is included to prepare for the receipt of the Sackler Collection to be housed in the new Sackler Gallery in the Quadrangle and to care for a important collection of West African textiles which are of artistic interest to the Museum of African Art and ethnographic interest to the National Museum of Natural History/Museum of Man. Resources are included as well to develop a "Union Catalogue" of African art materials contained in the National Museum of African Art and other Smithsonian museums. To share the Hirshhorn bequest with people who are unable to travel to Washington, D.C. a program is proposed to loan a significant number of works from the collection for exhibit and study purposes to institutions throughout the nation. For visitors to the Smithsonian, additional support is sought for the expanded programs of the Visitors Information and Associates' Reception Center. The funding is allocated by activities as follows (organizational allocation appears on pages A-2 and A-3):

	FY 1983 Base	Uncon- trollable Increases	Program Increase	FY 1984 Estimate
Science	\$49,031,000	\$1,346,000	\$515,000	\$50,892,000
History and Art	24,140,000	688,000	350,000	25,178,000
Public Service	1,667,000	49,000	-120,000	1,596,000
Museum Programs	8,626,000	224,000	-275,000	8,575,000
Special Programs	11,331,000	162,000	720,000	12,213,000
Administration	10,663,000	346,000	620,000	11,629,000
Facilities Services	43,688,000	1,149,000	-566,000	44,271,000
Total	\$149,146,000	\$3,964,000	\$1,244,000	\$154,354,000

II. Special Foreign Currency Program

1982 Appropriation	1983 Appropriation	1984 Estimate
\$4,320,000	\$2,000,000	\$9,040,00

This program will allow the Smithsonian to continue a program of grants in those countries where "excess" local currencies are available. Research will be performed in the following areas of Smithsonian Institution interest and competence: archeology and related disciplines, systematic and environmental biology, astrophysics and earth sciences and museum programs. Funds of \$9,040,000 are sought for FY 1984. The request includes amounts of \$4,000,000 for the grants program; \$4,000,000 (the third installment) for the forward-funded reserve for the future programs of the American Institute of Indian Studies; and \$1,040,000 for the second of four increments of the

U.S. contribution to restore and preserve the ancient city of Moenjodaro in Pakistan. The Special Foreign Currency grants program awards to Smithsonian employees currently are limited to a total of \$500,000 and are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended following all appropriate Federal personnel and procurement regulations. The balance of these grants is awarded to applicants whose projects are selected by a panel of reviewers.

III. Facilities Planning, Renovation, Restoration and Construction

1982 Appropriation	1983 Appropriation	1984 Estimate			
\$9,744,000	\$46,500,000	\$12,500,000			

Construction and Improvements National Zoological Park (\$3,500,000) - The FY 1984 appropriation request for Construction and Improvements at the National Zoological Park will be used to construct a Veterinary Hospital and complete the Small Animal Facility at the Conservation and Research Center at Front Royal, Virginia and to continue the program of renovation, repairs and preventive maintenance of facilities at the Rock Creek Zoo and at the Front Royal Conservation Research Center.

Restoration and Renovation of Buildings (\$9,000,000) - The FY 1984 appropriation request for Restoration and Renovation of Buildings consists of repairs to facades, roofs and terraces of various historical and monumental buildings; the upgrading, including planning and installation, of fire detection and suppression systems; the provision of improved access for the disabled; the correction of conditions that could be hazardous to the safety and security of the visiting public, staff and the collections; repairs and improvements to utility systems in several museum and collections storage buildings, including heating, ventilating and air conditioning systems and plumbing and electrical systems; improvements in support of programmatic objectives at the Smithsonian's outlying facilities; and general repairs and improvements that are required for a variety of purposes.

Nonappropriated Funds

This budget is presented to explain the use of nonappropriated funds, as well as appropriated funds, for each Smithsonian bureau that receives a Federal appropriation. Information on the sources and application of all Smithsonian operating funds is detailed under Tab D in this budget request.

In addition to the Federal appropriations, the Institution has two major categories of nonappropriated funding. These are the Smithsonian Trust funds and Federal grants and contracts.

The Trust funds are composed of unrestricted and restricted funds. Unrestricted Trust funds (general and special purpose) originate from a variety of sources including endowment and current fund investment income, food service concessions, sales of Smithsonian books, records and other products based on designs and objects in the collections, the Resident and National Associates Programs (including Smithsonian magazine) and the museum shops. In addition, certain bureaus have their own incomeproducing activities, such as the Theater and Spacearium operations of the National Air and Space Museum. Restricted Trust funds include gifts, grants, endowment and other income designated for specific projects and purposes by the donor. The Freer fund is the largest endowment of the Institution; it is strictly controlled under the terms of the original gift and bequest for the sole use of the Freer Gallery of Art.

The other source of nonappropriated funding, Federal grants and contracts, is made available to the Smithsonian by governmental agencies and departments to support specific types of research, educational or other projects which the Smithsonian can undertake as a result of its expertise or its ability to respond quickly to certain kinds of needs.

Gross revenues of nonappropriated Trust funds are expected to continue to grow as in previous years and reach \$123.4 million by FY 1984. Net income is projected to increase only moderately from \$20.4 million in FY 1982 to \$22.5 million in FY 1984 (of which nearly \$8 million would be for restricted purposes) because of continued inflationary cost increases adversely affecting auxiliary activities.

There are three major purposes to which the unrestricted Trust funds are applied. First, the expenses of the auxiliary and bureau activities, such as the Associates programs (including Smithsonian magazine), and the museum shops are funded from the earned income of these activities. Secondly, central management and administrative service units of the Institution, such as legal counsel, accounting, personnel, supply, budget and others receive Trust fund allotments funded almost entirely from the overhead recovery on grants and contracts administered by the Smithsonian and from administrative fees charged to Trust funded activities. Operating funds also are provided to various units for research and other specific purposes. Finally, a variety of allocations for important Institutional and bureau needs have been made with the approval of the Board of Regents.

This last category has taken on an increasing significance over the last several years as it has had the effect of reducing Federal resource requirements. The most substantial continuing commitment under this category is the \$2.2 million (increased from \$2.0 million in FY 1982) annual allocation for the Institution's Collections Acquisition, Scholarly Studies and Education Program, first approved by the Board of Regents in FY 1978. Of the \$2.2 million, an amount of \$1.1 million is available annually for purchase of objects of outstanding importance to the collections. In FY 1982, the Collections Acquisition portion of the Program permitted the acquisition of major works of art such as Gilbert Stuart's "Edgehill" portrait of Thomas Jefferson (\$500,000); the acquisition of two Chinese hanging scrolls by Shih-T'ao 1641-1707 (\$187,000); and the "Lamb Collection of West African Textiles" (estimated expenditures of \$330,000 in FY 1983). Each of these important acquisitions was supplemented by varying amounts of outside contributions. An additional amount of \$550,000 is designated by the Program for scholarly research projects that do not lend themselves to or are not appropriate for Federal funding. These include multi-disciplinary research projects that can be carried out within and between bureaus and projects that have been awarded external funds, which require matching Trust amounts. The remaining \$550,000 of the \$2.2 million available under this Program is allocated to conduct a wide range of education programs of benefit to the public such as the Office of Elementary and Secondary Education's pilot project to develop educational curriculum learning packets for secondary school students. This project is designed to introduce students and their teachers alike to unique and important Smithsonian collections, such as the late 19th century Bering Sea Eskimo materials of Edward W. Nelson.

Beginning in FY 1979, the Board of Regents approved using the Institution's unrestricted Trust funds for certain programs previously financed with appropriated funds. These consist of the Institution's visiting research and fellowship program and the appropriate Trust fund share of rental costs of administrative units in L'Enfant Plaza, funded in part from rental payments by auxiliary activities occupying space on the Mall. Funds of \$1.6 million are being applied to these programs in FY 1983 and an amount of \$1.7 million is projected for FY 1984 of which \$1.2 million is designated for the visiting research and fellowship program and over \$500,000 for rent, an increase of 67 percent since FY 1979 when \$1.020 million were provided to these programs. A further amount of \$1.2 million in unrestricted Trust funds is being reserved for the Quadrangle Development project in FY 1984, in addition to the approximately \$1.9 million that has been used for initial planning to date and the \$4.5 million that has been set aside for for construction.



TAB A

SALARIES AND EXPENSES



SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

Summary of Increase FY 1984

Appropriation, FY 1983		\$1	44,366,000
Base Legislated Pay Requirement			4,780,000
Base, FY 1983		\$1	49,146,000
FY 1984 Request		<u>\$1</u>	54,354,000
Uncontrollable Increase Program Increase	\$3,964,000 1,244,000		
Total Requested Increase	•	\$	5,208,000.

SMITHSONIAN INSTITUTION
"Salaries and Expenses"

Summary of the 1982 Appropriation and the 1983 and the 1984 Estimates

(Dollars in thousands)

ange		Program	1	135	105 125	1	R	1 9	<u>515</u>	ı	1	1	1	200	100	1	ı	S	1	1	350		-120	-120	
Analysis of Change		Uncontrol- lable	, 01	433	207 107	19	246	21	261 1,346	16	203	116	108	71	\$	19	8	97	19	16	889		36	£ C3	
An		Pos.	1	1	1 1	ı	ı	1	1 1	ı	1	ł	1	1	1	1	ı	ı	1	1	1		ı	1 1	
		1984 Estimate Fos. Amount	390	18,797	6,892 3,319	2,222	7,678	1,017	50,892	904	9,200	4,395	3,180	3,035	1,081	729	843	975	820	514	25,178		264	$\frac{1,032}{1,596}$	
		1984 E	7	503	æ	78	222	23 25	$\frac{327}{1,294}$	6	278	901	9/	80	R	17	22	25	19	2	672		. 12	29 41	
		Total	380	18,229	6,580 3,087	2,161	7,382	996	49,031	390	8,997	4,279	3,072	2,764	937	710	813	879	801	498	24,140		658	1,009	
1983 Base	Supple- mental	Require- ment l	23	770	233 124	71	264	[+]	1,933	21	394	157	107	101	3%	35	21	31	78	70	951		23	41 45	
1983		Appro- priation	357	17,459	6,347 2,963	2,090	7,118	955	47,098	369	8,603	4,122	2,965	2,663	901	675	792	848	773	478	23, 189		635	968	
		Pos.	7	503	æ	84	222	23 52	1,294	6	278	901	9/	8	8	17	77	22	19	10	672		12	75 41 41	
		1982 Actual bs. Amount	333	17,173	5,694 2,923	1,961	6,386	911	44,652	533	8,261	3,850	2,799	2,563	835	979	733	760	671	449	22,080		325	886 1,211	
		1982 Pos.	7	517	85	48	222	77.7	32/ 1,306	6	278	106	9/	8	8	17	77	25	19	2	672		6	2 8	
		Unit	Science Assistant Secretary for Science	Nat'l Museum of Natural Hist./Man	Astrophysical Observatory Tropical Research Institute	Radiation Biology Laboratory	National Air and Space Museum	Chesapeake Bay Center	National Zoological Fark Subtotal, Science	History and Art Ass't Secretary for History & Art	Nat'l Museum of American History	Nat'l Museum of American Art	Nat'l Portrait Gallery	Hrshborn Museum	Center for Asian Art	Archives of American Art	Cooper-Hewitt Museum	Nat'l Museum of African Art	Anacostía Neighborhood Museum	Division of Performing Arts	Subtotal, History and Art	Public Service	A-101 Ass't Secretary for Public Service	A-104 Smithsonian Institution Press Subtotal, Public Service	
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SMITHSONIAN INSTITUTION
"Salaries and Expenses"

Summary of the 1982 Appropriation and the 1983 and the 1984 Estimates

(Dollars in thousands)

hange	Program	-275	- - - 1,720 -1,000 720	620	140 -856 -566	1,244
Analysis of Change	Uncontrol— lable	22 24 122 31 10 10 124	25 26 16 43 25 162	346	45 332 772 1,149	3,964
¥	Pos.			I	1 1 1	80
	1984 Estimate Pos. Amount	858 93 951 1,467 292 495 786	650 678 717 827 835 8,456 12,213	11,629	1,778 14,211 28,282 44,271	154,354
	1984 E	21 22 45 45 6 13 3	5 2 19 - - 116 - -		37 571 396 1,004	3,631
	Total.	836 91 927 3,786 1,436 282 483 785 8,626	625 651 691 811 842 6,711 1,000	10,663	1,593 14,735 27,360 43,688	149,146
1983 Base Supple-	mental Require- ment	41 34 122 57 11 19 291	17 8 24 26 2 2 4 4 4 4	408	56 518 478 1,052	4,780
1983	Appro- priation	795 87 893 3,664 1,379 271 464 782 8,335	608 643 667 785 840 6,707 11,250	10,255	1,537 14,217 26,882 42,636	144,366
	Pos.	21 22 28 45 45 6 13 3	2 2 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	268	37 571 396 1,004	3,551
	1982 Actual Os. Amount	748 132 822 3,212 1,407 279 453 7,788	619 526 531 733 718 4,510 -	9,810	1,367 12,240 24,446 38,053	131,231
	1982 Pos.	22 4 21 99 47 6 6 13 215	5 2 19 - - 8 8	266	37 571 396 1,004	3,535
	Page No. Unit	Museum Programs A-107 Ass't Secretary for Museum Programs A-111 Office of the Registrar A-115 Conservation Analytical Laboratory A-116 Smithsonian Institution Libraries A-119 Office of Exhibits Central A-122 Traveling Exhibition Service A-126 Smithsonian Archives A-128 National Museum Act Subtotal, Museum Programs	Special Programs A-130 American Studies & Folklife Programs A-134 Int'l Environmental Science Program A-137 Academic & Educational Programs A-142 Collections Management/Inventory A-148 Major Exhibition Program A-153 Museum Support Center Equip. & Op. John F. Kennedy Center Trustee Grant Subtotal, Special Programs	A-162 Administration	Facilities Services A-171 Office of Design and Construction A-174 Office of Protection Services A-178 Office of Plant Services Subtotal, Facilities Services	GRAND TOTAL

/1 Includes FY 1983 costs of legislated pay raises and Medicare Hospital Insurance tax.

SMITHSONIAN INSTITUTION FY 1984 UNCONTROLLABLE INCREASES

Additional funds are sought to finance costs that are beyond the control of the Institution. These increases result from law, prevailing practice of wage setting, anticipated higher rental costs and inflation in the costs of supplies, equipment and services. FY 1984 will have one less workday than in FY 1983. Accordingly, funding equivalent to the costs of one day's pay is being relinquished (\$-258,000). No increase is being sought for utilities, postage and communications. Additional funds are sought to provide full-year funding for positions restored by the Congress in FY 1982 (\$453,000). (Part-year funding of \$672,000 for these positions was appropriated in FY 1983.) A total of \$3,964,000 is requested for these uncontrollable increases:

Necessary Pay and Related Benefits	.\$1,556,000
Rental Increases	455,000
Inflation	. 1,500,000
Restored Position Funding	453,000
TOTAL	\$3,964,000

NECESSARY PAY AND RELATED BENEFITS — An amount of \$1,556,000 is required for personnel compensation and benefits for the projected higher costs in FY 1984 of FY 1983 staff. These increases are provided to employees as a result of withingrade and Merit Pay increases (\$1,436,000), legislated pay raises (\$178,000), Hospital Insurance Taxes (\$200,000), and are offset by the cost of one less workday in FY 1984 (\$-258,000). Costs are calculated by a position-by-position analysis taking into consideration approved new hires in the current year, savings from turnover and from filling vacancies at lower grades when possible. For example, approximately one workyear of approved employment is lost for every \$23,000 that must be applied to these costs from funds currently available for salaries and benefits. Moreover, if other object class funds must be applied to these costs, employees are left without adequate supplies and equipment essential to sustain current level programs and functions. The additional personnel costs are attributable to the following externally imposed factors:

(1) Within-grade Step and Merit Pay Increases - Necessary pay funding of \$1,436,000 is required in FY 1984 for within-grade step and Merit Pay increases. For General Schedule employees, these increases are required by 5 U.S.C. 5335. Wage employees are covered by law and prevailing practice, and increases include the part-year cost of new actions in the current year, as well as the cost of annualizing step increases occurring in the previous fiscal year.

The General Schedule portion of the request amounts to \$1,106,000. There are approximately 2,400 General Schedule employees of whom approximately 1,400 are scheduled to receive within-grade increases. The Wage portion amounts to \$210,000. There are approximately 900 Wage employees of whom approximately 300 are scheduled to receive within-grade increases.

The Merit Pay portion of the request amounts to \$120,000. These increases, required under the provisions of the Civil Service Reform Act of 1978, were calculated following guidelines issued by the Office of Personnel Management (OPM). The amount requested for Merit Pay replaces the amount for within-grade increases that would have been paid to Merit Pay employees under the conven-

tional step system and the amount for quality step increases that OPM estimates would have been paid to Merit Pay employees. Funding for the annual comparability adjustment for Merit Pay employees will be included in the Smithsonian's FY 1984 pay supplemental request.

(2) Annualization of Legislated Pay Raises - Funds in the amount of \$178,000 are required to annualize the Executive and Wage pay increases effected in FY 1983. In addition, an amount of \$200,000 is required to annualize Medicare Hospital Insurance Tax costs effected in FY 1983.

In accordance with P.L. 91-656, General Schedule salary scales are adjusted each October to make them comparable to rates paid for similar work in private industry. The total annual cost of the raise that went into effect October 3, 1982, is estimated to be \$2,770,000. This amount represents the full base supplemental requirement in FY 1983 and is included in the FY 1984 estimates. Due to planned pay period dates, no additional funds are required in FY 1984 to annualize these increased costs.

Salary scales for General Schedule employees previously at the pay ceiling were adjusted effective December 18, 1982, in accordance with P.L. 97-377. This adjustment to the pay ceiling results in a total annual cost increase estimated to be \$588,000. The supplemental requirement in FY 1983 amounts to \$465,000 and is included in the FY 1984 estimates. The balance of \$123,000 is requested in FY 1984 to provide full-year funding.

Wage raises are granted under the authority of 5 U.S.C. 5341. Prevailing practices call for Wage pay scales to be reviewed by a Wage Finding Authority in each geographic area. In Washington, D.C., this has resulted in Wage employees receiving a pay increase in October of each year. Smithsonian Wage employees in New York, Maryland, Virginia, Arizona and Panama traditionally receive similar Wage increases at other times. The total annual cost for these pay raises is estimated to be \$770,000. The supplemental requirement in FY 1983 amounts to \$715,000 and is included in the FY 1984 estimates. The balance of \$55,000 is sought to provide full-year funding.

The provisions of P.L. 97-248, the Tax Equity and Fiscal Responsibility Act of 1982, require payment of the Medicare Hospital Insurance Tax for Federal employees not under social security effective January 1, 1983. The employer's share of this tax is equal to 1.3 percent of wages paid up to \$35,700 for each employee. The supplemental requirement in FY 1983 amounts to \$830,000 and is included in the FY 1984 estimates. The balance of \$200,000 is requested in FY 1984 to provide full-year funding.

The FY 1983 pay supplemental requirement totaling \$4,780,000 is distributed by organizational unit on the chart on pages A-2 and A-3.

UTILITY, POSTAGE AND COMMUNICATIONS - Currently a base of \$14,021,000 is available to fund the costs of electricity, steam, gas, fuel oil, water, postage and communications. Although total base funds are estimated to be adequate to meet anticipated costs, adjustments are proposed in amounts available to the major components of the utilities and communications accounts. These base adjustments are necessary due to variances over the years between anticipated and actual rates experienced for electricity, steam, gas, telephones and postage. The following table depicts actual and anticipated use and costs of the major components of the utilities and communications accounts and indicates base adjustments proposed in FY 1984.

ANALYSIS OF UTILITIES COSTS FY 1981 - FY 1984

ELECTRICITY STEAM GAS	
Unit Unit Unit Unit	
<u>Use Cost Use Cost Use Cost Use Cost</u>	Cost
Millions Average Millions Average Per Millions Average	
Fiscal Year of KWH per KWH \$000s of lbs. 1,000 lbs. \$000s of Cu. Ft. Per Cu.	Ft. \$000s
1981 Actual 81.9 .0570 \$4,665 237.8 13.52 \$3,214 .884 .4514	\$399
1982 Actual 83.4 .0594 4,956 222.2 14.28 3,173 .962 .5883	566
1983 Estimate 88.0 .0620 5,458 225.0 14.50 3,262 1.025 .7024	720
1984 Estimate 88.0 .0657 5,784 225.0 15.00 3,375 1.025 .8585	880
· · · · · · · · · · · · · · · · · · ·	
1984 Estimate 5,784 3,375	880
1983 Base <u>5,835</u> <u>4,050</u>	<u>586</u>
Base Adjustment, Base Adjustment, Base Adjustment,	220/
Electricity \$ -51 Steam \$ -675 Gas	\$294
Telephone Costs Postage Costs Fuel Oil/Water	Costs
\$000s \$000s \$000s	~5 ~
1981 Actual \$1,501 \$ 975 \$180	
1982 Actual 1,740 1,058 194	
1983 Estimate 2,000 1,120 250	
1984 Estimate 2,500 1,181 301	
1984 Estimate 2,500 1,181 301	
1983 Base 2,407 842 301	
Base Adjustment, Base Adjustment, Base Adjustment,	
Telephones \$ 93 Postage \$ 339 Fuel Oil/Water \$-0-	

Projected electricity and steam surpluses are attributable to the declining world price of oil, and to energy conservation efforts at the Smithsonian (these are addressed later in this narrative) which have contributed to the Smithsonian's ability to maintain relatively constant levels of consumption even though estimates include new facilities at the National Zoological Park (the Monkey Island Exhibit, the Small Animal Facility and renovation of the Large Hoofed Stock Facility). The increase in electrical consumption between FY 1982 and FY 1983 is attributable primarily to a reorganization effected in FY 1983 which consolidated utilities costs of off-Mall bureaus including the Cooper-Hewitt Museum in New York City, the Smithsonian Tropical Research Institute in Panama and the Smithsonian Astrophysical Observatory in Amado, Arizona. (The utilities accounts of the Radiation Biology Laboratory, the Anacostia Neighborhood Museum and the National Zoological Park had been consolidated previously in FY 1978 into the central Smithsonian utilities account.) For gas, consumption in FY 1984 also is estimated to remain relatively constant although rate increases brought about by the decontrol of natural gas prices have created a base shortage. Increased costs for fuel oil/water are attributable to annual rate increases passed on to consumers by local suppliers.

Telephone costs have risen steadily, although the Institution has made concerted efforts to limit equipment growth. Base adjustments are necessary to provide sufficient funds to cover the costs of higher than anticipated rate increases for local service granted in recent years to the C&P Telephone Company by the Public Service Commission. In addition, base funds have not been sufficient to sustain the cumulative effects of annual rate increases granted by the Federal Telecommunications Commission for operation of the Federal Telecommunications Network Service (FTS) administered by the General Services Administration.

The Institution has begun a comprehensive program aimed at limiting escalating costs for postage. This program, which includes development and transmittal of information to all staff on the need to reduce the volume of all classes of mail, elimination of higher cost priority domestic packages and transfer of obligational responsibility for international air parcel post to individual user organizations, is expected to result in a savings to the Institution of approximately \$50,000-\$75,000 per year in increased postage costs. These actions, together with a base adjustment of \$339,000, will provide sufficient funds to meet increased postage costs in FY 1984.

RENTAL SPACE - This item consists of the proportionate Federal space rental costs of the administrative activities located at L'Enfant Plaza, the Smithsonian Institution Service Center at 1111 North Capitol Street and the Smithsonian Oceanographic Sorting Center at the Washington Navy Yard. The terms of the current leases at L'Enfant Plaza and at the Service Center require the Smithsonian to assume additional costs for operating expenses brought about by increases in maintenance and utility costs. Space rental costs at the Service Center also are expected to increase in FY 1984 consistent with extension of the present lease which expires in June 1984. An amount of \$400,000 is required to cover higher space rental costs at these locations which are estimated to total approximately \$1,765,000 in FY 1984.

It is expected that the Smithsonian's Oceanographic Sorting Center will move to the Museum Support Center in Suitland, Maryland, in the second half of FY 1983. As reported previously to the Congress in the Smithsonian's FY 1983 budget request, space rental savings realized will be applied to the cost of equipping this new collections management facility.

An amount of \$55,000 is requested to cover the rental of library space at the Smithsonian Astrophysical Observatory (SAO) in Cambridge, Massachusetts. These rental costs, covered in previous years with SAO's base salaries and expenses funds, have placed a significant drain on annual operating resources available to the Astrophysical Observatory. Further, since the library is a component of the central library system, it is appropriate that these expenses be borne by the Smithsonian's central space rental account.

ENERGY CONSERVATION EFFORTS - In order to manage use of energy in the most efficient manner possible consistent with proper environmental conditions for the collections, the Institution is continuing its comprehensive energy management program which concentrates on promoting systems efficiency and conservation. Efforts to promote conservation include operation of a complex automated power management system which has resulted in substantial energy cost avoidance. This system minimizes costly peak demand rates by cycling motors on and off on a prescheduled basis, and when necessary, selectively shutting down equipment. Monitoring systems have assisted greatly the Institution's conservation efforts by assuring that all building operating equipment functions efficiently.

Progress made in promoting energy conservation in FY 1982 and FY 1983 and planned for subsequent years includes continuation of the phased program of performing comprehensive building energy audits and renovating heating, ventilating and air conditioning, plumbing and electrical systems in the Institution's facilities. (Plans and progress in developing energy efficient utilities systems are addressed in the Construction portion of the budget.) Improvements in these systems will produce the most significant energy savings to the Institution while providing stable temperature and humidity conditions necessary for the preservation of the collections.

Other continuing efforts to achieve more economical and efficient energy use include reducing lighting levels in work and nonpublic spaces and, whenever possible, in public areas; installing more efficient lighting fixtures with new switching patterns and controls; operation of heating and air conditioning systems at minimum levels required to prevent damage to collections; shut-down of fans and other heavy consumers of electricity during nonpublic hours; continuation of an awards program for employees who submit original suggestions that are implemented to conserve energy; and greater attention to energy conservation in determining space use, in modifying existing space, and in designing new facilities.

Although weather, numbers of visitors and new facilities all affect energy consumption, a measure of the success of the Institution's energy conservation efforts can be seen in the fact that consumption of electricity, steam and gas is expected to remain relatively constant between FY 1981 - FY 1984 (not including the Museum Support Center). Between FY 1978 and FY 1982, the Institution has avoided an estimated \$2.5 million in utilities costs from the energy conservation measures outlined above. These conservation measures have had a direct relationship to the fact that the Smithsonian does not require additional funding for utilities costs in FY 1984.

INFLATION - Resources totaling \$1,500,000 are requested to help offset the cumulative and anticipated costs to the Smithsonian as a result of inflation. The amount requested is calculated on the basis of six percent of the total non-salary object classes of expenses estimated for FY 1983, excluding utilities, rent and Museum Support Center equipment. Inflationary increases represent significant costs that have the cumulative effect of seriously eroding research, exhibitions, collections management, collections acquisition, and education and public orientation programs, as well as facilities management and administrative services. The result of inflation, therefore, is equivalent to a significant cut each year to the base resources of all the Smithsonian's approximately 60 organizational units.

Other Information - Cost increases continue to have a severe effect on the Smithsonian's ability to carry out its program functions as they were intended. One such functional area is scientific research. Scientific supplies and contracts for instrument repair and maintenance are becoming increasingly more costly, far outstripping prices in more common goods and services. The following table lists some items that are purchased regularly and illustrates such increases.

Research and Scientific Supplies and Contracts

Item	<u>FY 1981</u>	FY 1982	Percentage Increase
Electron microscope			
maintenance/year	\$5,064.00	\$5,742.00	13 percent
Deionized water service	2,178.00	2,520.00	16 percent
Petri dishes, per case	61.40	82.90	35 percent
Dry ice, 100 lbs.	9.00	10.50	17 percent
Liquid X-ray			
developer, gallon	8.43	10.66	26 percent
Kodak film, for scanning electron			
microscope, 50 sheets	15.60	18.15	16 percent
Saw blades, diamond, each	90.75	115.00	27 percent
Digital 125 pH/ion meter	850.00	925.00	9 percent

Inflationary cost increases of research-related items used in the sciences, history and art also are evident including those for supplies, books, journals and publishing. For example, chemicals used in analyzing water samples such as hydrochloric acid, sulfuric acid, and mercuric iodide have increased in cost on an average of 24 percent in 1983 over 1982 prices.

The history, art, and scientific scholarly book and journal trade has been prone especially to a rapid rate of inflation. The rate for books is currently 17 percent. The growth of the books and journals budget has not kept pace with the rise in prices as they are affected by inflation. Consequently, journals which report the most timely data are purchased first and the limited remaining resources are used to purchase books for the collections. The Smithsonian Institution Libraries (SIL) expended \$511,000 in FY 1982 for books and journals. Because of severe budget restraints there is a heavy reliance on obtaining books and journals from other libraries. The SIL borrows six times as much as it lends to other libraries. Also, duplicates and lesser used serials are discontinued in an effort to cut annual acquisition costs. The cost of binding serials and damaged books has increased an average of seven percent in FY 1982. The SIL will spend \$74,000 in FY 1983 on binding contracts. The estimated costs for journals, books and binding represents two-thirds of the Libraries' non-salary expenditures.

Publication costs essential to scientific research, as well as to exhibition and educational programs, have been rising steadily. The Smithsonian has been advised by the Government Printing Office that printing costs will increase six percent in FY 1983. These publications are disseminated to schools, libraries, and to the general public.

The increases in costs of materials and supplies caused by inflation places a severe strain on the base resources needed to maintain an active exhibition program. The materials used to mount exhibitions are becoming more costly. The following table illustrates this.

Exhibition Materials

<u>Item</u>	FY 1982	Est. FY 1983	Percentage Increase
Diffusers 24" x 24"	\$ 35.00	\$ 37.45	7 percent
Plexiglas - 4' x 8' x 1/4", (UF3)	120.00	153.60	28 percent
Plexiglas - 4' x 8' x 1/4", clear	69.14	76.48	11 percent
Conduit, 3/4"	57.76	63.54	10 percent
300 W bulbs - case	232.20	248.45	7 percent
Shellac - gallon	14.67	15.55	6 percent
Drywall - 4' x 8' x 1/2", fire-			-
treated	4.24	4.66	10 percent

Measures are taken to lessen the effects of inflation on exhibit preparation costs. For example, the construction of flexible cases reduces the cost and time required to build a customized case for each exhibit. Whenever possible the work to repair and construct an exhibit area is done by Smithsonian staff rather than by outside contractors. Based on previous experience, vendors are anticipating cost increases of 15 percent for plexiglas and plastic products for FY 1984.

The transportation and shipping associated with Smithsonian programs such as the Traveling Exhibition Service, loan programs of the museums and galleries, and the archival efforts of the Archives of American Art are other areas of rapidly escalating costs. Because the collections possess intrinsic as well as

scholarly value, special handling, which increases transportation fees, is a requirement. The size of the collection alone may cause numerous shipping problems and additional costs. To help overcome these escalating costs and to remain within Office of Management and Budget's spending limitations, less desirable means of transporting objects are employed. Staff and vehicles are used in lieu of shipping firms. Some collections are wrapped and sent by mail. Consequently, valuable staff time which otherwise would be devoted to research, exhibition and acquisition programs is diverted because of the need to utilize these alternative measures.

The collections management programs, which are basic to the preservation of invaluable objects, have been affected by the steady price increases of such items as glassine envelopes, polyethylene jars, and shelving. As new specimens become part of the National Collections and when they are returned from being on loan they are fumigated to protect them from insect damage. Stored botanical specimens are sprayed every few years; bird and mammal storage cases are routinely fumigated twice a year. The price of fumigation gas used to perform this function has increased 11 percent in FY 1982 over FY 1981 prices. Steel desiccating cabinets, which are used to hold meteorite specimens, have increased in cost from \$499 per unit in FY 1981 to \$643 in the latter part of FY 1982. This is a price increase of 29 percent. Similar dramatic price increases are observed in the purchase of other materials used for archival purposes. The following table lists several of these items.

Collections Management Equipment

Glass beakers

four - 1981: \$28.20

1982: \$31.59

12 percent

Toluene, cleaning solvent

gal. - 1981: \$14.15

1982: \$17.17

21 percent

Lightcast tape 3", lightweight flexible cast for animals

box of - 1981: \$52.65

ten rolls 1983: \$62.05

18 percent

Disposable scalpel #10 blade

per box - 1981: \$7.12

1983: \$9.63

35 percent

Insect pins

per 1,000 - 1981: \$18.50

1982: \$21.00

14 percent

The National Zoological Park continues to feel the effect of inflationary increases in the cost of feeding the animal collection. Some measures are being taken to circumvent these inflationary pressures. Among them is the growth of hay and alfalfa at the Front Royal Conservation and Research Center to supplement food and bedding purchases. In FY 1982, \$378,000 was expended for food for the collection of over 2,000 animals. This represents an annual increase of 24 percent over the costs incurred in FY 1981 to feed the collection. It is estimated that it will cost \$400,000 to feed the animals in FY 1983. Only salary costs exceed what the Zoo expends for food products for its live collection. Medical supplies for the animals also have risen dramatically. The FY 1983 cost of one variety of penicillin for the animals has increased 39 percent over

FY 1981 prices. It is vital that resources for medical supplies be available for a program whose mission is to improve the health and longevity of its collection.

Significantly higher costs of uniform cleaning services result in reduced availability of funds for protection items. The cost for these necessary services for the Office of Protection Services has increased from \$60,000 in FY 1981 to \$69,000 in FY 1982, an increase of 15 percent. The maintenance cost of the communications system which includes a radio system transmitter and satellite receivers has increased 33 percent. The service contract to test and refill the fire extinguishers annually within the Smithsonian buildings has risen ten percent in cost. The costs associated with maintaining, testing and inspecting the security systems have increased also. It is estimated that \$350,000 will be expended in FY 1983 for security system maintenance and repair, an increase of approximately 13 percent over the cost of similar services provided in FY 1982.

The Institution's facilities management and administrative functions also continue to witness inflationary effects. For example, trash collection service is anticipated to cost nine percent over the FY 1982 cost. Computer maintenance services for the Office of Information Resource Management (formerly the Office of Computer Services) are projected to cost the Institution over \$200,000 in FY 1983. This is an increase of nine percent over FY 1982. The cost of computer programming training courses will increase approximately 15 percent in FY 1983 over FY 1982 costs.

The request of a six percent increase to nonsalary funds is a modest one. Yet, the additional resources of \$1,500,000 proposed are vital to the integrity of virtually all programs of the Institution. If approved, these resources will assist in maintaining the Smithsonian's programs at a level approximating current effectiveness.

NECESSARY PAY FY 1984

(Dollars in thousands)

	Within	Ann	ualiza	tion	0ne	
	Grades &		f Rais		Less	
Unit	Merit Pay	GS	Wage	HI Tax	Day	Total
Assistant Secretary for Science	. 3	3	_	1	-1	6
	• ,	,		1	-1	O O
National Museum of Natural History/	200	2.0	1	2.1	۸.5	227
Museum of Man		32 27	1	31 8	-45 10	227 69
Smithsonian Astrophysical Observatory			5		-10	
Smithsonian Tropical Research Institute.		3	3	4	- 5	46
Radiation Biology Laboratory		3	1	3	-4	21
Chesapeake Bay Center		1	1	1	-2	10
National Air and Space Museum		4	2	11	-15	95
National Zoological Park		3	17	18	-25	124
Assistant Secretary for History and Art.		-	1	-	-1	8
National Museum of American History		7	1	17	-21	116
National Museum of American Art		3	-	7	-9	43
National Portrait Gallery	. 39	2	-	5	- 6	40
Hirshhorn Museum and Sculpture Garden	. 29	3	1	4	− 5	32
Freer Gallery of Art	. 15	_	-	2	-2	15
Archives of American Art		2	-	1	-1	10
Cooper-Hewitt Museum		_	8	1	-2	16
National Museum of African Art		1	_	2		21
Anacostia Neighborhood Museum		-	_	1	-2	7
Division of Performing Arts		2	_	1	_	8
Assistant Secretary for Public Service		1	_	î	_	8
Smithsonian Institution Press		_	_	2	-3	13
Assistant Secretary for Museum Programs.		2	_	2	-1	17
Office of the Registrar			_	-	_	1
		_	_	1	_	10
Conservation Analytical Laboratory			_		-7	
Smithsonian Institution Libraries		3	-	5	•	48
Office of Exhibits Central		-	-	3	-4	15
Smithsonian Traveling Exhibition Service		-	-	_	-	5
Smithsonian Archives		-	-	1	-	8
National Museum Act		-	-	-	-	1
American Studies and Folklife Programs		2		1	-	7
International Environmental Science Prog		-	-	-	-1	2
Academic and Educational Programs			-	1	-1	8
Collections Management/Inventory Program	ı . 3	-	-	2	-	5
Major Exhibition Program	3	-	-	_	-	3
Museum Support Center	. 25	-	-	-	_	25
Administration		14	1	17	-23	135
Office of Design and Construction		1	-	3	-3	14
Office of Protection Services		3	1	21	-31	176
Office of Plant Services		1	12		-28	141
Total	1,436	123	55	200	-258	1,556

^{/1} Health Insurance Tax

RESTORED POSITIONS FUNDING - In FY 1982, the Congress restored a total of 69 positions that were deleted in the March 1981 budget amendment. Half-year funding was provided by the Congress in FY 1983 for all of these positions except for the Protection positions which were funded in full. The "Analysis of Increase" table for each line item in this budget request indicates the dollar amount necessary to provide full-year funding for these positions. The specific positions and associated funds sought for FY 1984 are outlined in the following table.

Unit		Position	Dollars Required (\$000s)
National Museum of Natural History/ Museum of Man	1 1 2 1 2 8	Archeologist Entomologist Museum Technician Custodial Worker Clerk Clerk-Typist	$ \begin{array}{c} 12 \\ 12 \\ 7 \\ 12 \\ 6 \\ \underline{12} \\ 61 \end{array} $
Smithsonian Astrophysical Observatory	1	Safety Specialist	16
Smithsonian Tropical Research Institute	2	Clerk	11
National Air and Space Museum	1	Supervisory Exhibit Specialist	: 11
	1 1 1 1 1 	Spacearium Chief Meteorologist Curator Museum Specialist Photo Archivist	11 11 11 9 9
National Zoological Park	1 1 2 2 -6	Gardener Administrative Assi Clerk-Typist Custodial Worker	10 .stant 11 13 12 46
National Museum of American History	1 1 1 -1 4	Conservator Electrician Exhibit Specialist Photo History Techn	12 9 9 11cian <u>6</u> 36
National Museum of American Art	$\frac{1}{2}$	Clerk-Typist Custodian	6 11 17

<u>Unit</u>		Position	Dollars Required (\$000s)
National Portrait Gallery	$\frac{1}{2}$	Historian Custodian	12 6 18
Hirshhorn Museum and Sculpture Garden	1	Custodian	5
Freer Gallery of Art	1	Oriental Art Restor	er 21
National Museum of African Art	1	Research Curator	13
Smithsonian Institution Libraries	$\frac{1}{\frac{1}{2}}$	Secretary Library Technician	6 5 11
Office of Exhibits Central	1	Forklift Operator	9
Administration	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ \underline{1} \\ \underline{6} \end{array} $	Budget Analyst Clerk Typist Secretary Computer Specialist Supply Clerk Cataloguer	10 6 7 10 5 6
Office of Design and Construction	1	Architect/Engineer	20
Office of Plant Services	1 1 1 1 1 3	Plumber Supply Technician Painter Warehouseman Mail Clerk Custodial Laborer	11 10 10 8 6 18 63
TOTAL	53		453

(Dollars in thousands)

(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NONAPPROPRIATED SOURCES OF FUNDING									
			UNRESTRICTED						FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	7	333	-	89	-	5	1	129	2	188
FY 1983 Base	7	380	-	55	-	4	1	96	2	194
FY 1984 Estimate	7	390	_	65	_	_	_	116	2	204

^{*}FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	7	0	7
Number of Other Positions	0	0	0
11 Personnel Compensation	289	5	294
12 Personnel Benefits	28	1	29
21 Travel & Trans. of Persons	19	2	21
23 Rent, Comm. & Utilities	7		7
25 Other Services	30	1	31
26 Supplies and Materials	7	1	8_
Total	380	10	390

Analysis of Increase

Necessary Pay	6
Inflation	4
Program Funds	0

ABSTRACT - The Office is responsible for planning, coordinating and reviewing the progress of the science bureaus and programs within the Institution. No program increase is requested for FY 1984. Necessary pay of \$6,000 is required for existing staff and an amount of \$4,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Office of the Assistant Secretary for Science advises and assists the Secretary in planning, implementing and reviewing the progress of Smithsonian science programs. The bureaus and other activities reporting to the Assistant Secretary for Science are the National Museum of Natural History/Museum of Man, the Astrophysical Observatory, the Tropical Research Institute, the Radiation Biology Laboratory, the Chesapeake Bay Center for Environmental Studies, the National Air and Space Museum, the National Zoological Park, the Office of Fellowships and Grants, the Office of Biological Conservation (included in this line item), the Smithsonian Marine Station at Link Port, Florida and the International Environmental Science Program. Additionally, this Office provides the Institution's liaison with national and international science organizations and representation on national and international boards and commissions.

Office of Biological Conservation - This central Office serves as an extension of the Office of the Assistant Secretary for Science. It is responsible for assisting in the coordination of the Institution's activities in conservation and for serving as an information center for the Institution and the public on conservation issues. Among its concerns is the status of current national and international efforts devoted to conserving plant and animal species. This includes keeping abreast of the educational and legislative programs associated with these efforts. The Office also functions as a liaison to various governmental organizations in the United States and abroad.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by an annual allotment and are used almost entirely to support two significant international foundations which operate field research stations used by Smithsonian staff members, as well as by the world scientific community. The Seychelles Island Foundation operates the former Royal Society station on the island of Aldabra, located in the Indian Ocean, where biological research is conducted (projected expenditures of \$15,000 in FY 1983 and in FY 1984). Support is continuing for the Charles Darwin Foundation which operates a biological research station in the Galapagos Islands (projected expenditures of \$30,000 in FY 1983 and in FY 1984). As a result of the unique location of both of these research sites and the collaborative nature of these operations with the host country, Smithsonian support facilitates the continued use of these areas for the research community at large. A separate fund also is designated to support the exchange of scholars between the People's Republic of China and the Smithsonian, ranging in interest across the spectrum of natural and physical sciences.

Restricted Funds - These consist of restricted endowments, gifts and grants from individuals, foundations, organizations and corporations which specify the use of the donation or bequest. For example, the International Union for the Conservation of Nature and Natural Resources provided funds to identify and describe the habitats of the endangered plant species of Latin America as part of a global effort to forestall the destruction of plant species mainly in tropical regions (estimated expenditures of \$34,000 in FY 1983). Contributions from various sources provide for continuing support of conservation and science in the Galapagos Islands (estimated expenditures of \$30,000 in FY 1983 and in FY 1984). The FY 1984 estimated expenditures include allotments made to various organizations within the Smithsonian from the Seidell Endowment which provides for dissemination of scientific information; these are shown here since they are administered by this Office (estimated expenditures of \$75,000 in FY 1984). The FY 1982 and FY 1983 expenditures from the Seidell Endowment are reflected in the budget of the organization receiving the funds.

Federal Grants and Contracts - Contract funds have been provided by the Office of Naval Research for the continuation of studies in the area of manpower research and development (estimated expenditures of \$194,000 in FY 1983 and \$204,000 in FY 1984).

(Dollars in thousands)

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				NONA							
	j			UNRESTR				FEDE	RAL GRANTS		
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES	RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1982 Actual	517	17,173	-	60	•	502	6	1,877	31	1,269	
FY 1983 Base	503	18,229	-	11	-	193	6	2,027	29	1,307	
FY 1984 Estimate	503	18,797	-	7	_	193	6	2,303	19	1,050	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	503	0	503
Number of Other Positions	80	0	80
11 Personnel Compensation	13,755	262	14,017
12 Personnel Benefits	1,270	26	1,296
21 Travel & Trans. of Persons	192		192
22 Transportation of Things	50	2	52
23 Rent, Comm. & Utilities	110	5	115
24 Printing and Reproduction	488	76 -50	564
25 Other Services	1,146	74	1,220
26 Supplies and Materials	576	25	601
31 Equipment	628	102	730
Acquisitions for Collections	14		10
Total	18,229	568	18,797
Analysis of Increase			
Necessary Pay		227	
Inflation		145	
Restored Position Funds		61	
Program Funds		135	

ABSTRACT - The National Museum of Natural History/Museum of Man (NMNH/MOM) is one of the world's major centers for research in the natural sciences and on the origins and development of man. The Museum today employs 117 scientists, the largest number engaged in Museum-based natural history research in the world, and continues the Smithsonian's historically strong 19th and early 20th century efforts in collections-based research. The staff of the Museum concentrates its investigations on man, animals and plants, and the Earth. Collections of over 62 million specimens which constitute the holdings of the Museum are held in trust for use by scholars. The Museum's exhibit and education programs reach more than 5,500,000 visitors each year. For FY 1984, an increase of \$135,000 is requested to meet research and curatorial requirements consisting of: \$50,000 to initiate a program for replacement of outmoded scientific equipment; \$50,000 to defray the higher cost of publication of research

findings; and \$35,000 to cover the costs for a curator of African ethnology and art. Necessary pay of \$227,000 is required for existing staff and an amount of \$145,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$61,000 is requested to provide full-year funding for the eight positions restored by the Congress in FY 1982.

PROGRAM - The National Museum of Natural History/Museum of Man maintains the largest scientific reference collections in the Nation (over 62 million specimens) and has the legal responsibility (20 U.S.C. 59) to serve as the repository of all collections of objects of natural history, archeology and ethnology made by the agencies of the government when no longer needed for investigations in progress. Additionally, the NMNH/MOM is the repository for numerous extremely valuable collections obtained from the scientific community, academic institutions and many individuals.

The Museum undertakes four major activities: scientific research, exhibitions, education, and collections management.

Research - The research conducted at the Museum results in important new understandings about man, plants, animals, fossil organisms, rocks, minerals, sediments and materials from outer space. The Museum's 117 scientists publish more than 120 books, scientific papers and articles each year. This research is problem-oriented and geared toward the collections and the study of these in the laboratory and in the field, including observations about their ecological relationships. Subjects of longterm interest include biological and taxonomic studies of the Earth's major life forms, and geology, in all types of habitats, including the oceans; investigations of changing environments and cultures; ecological interactions; and studies of the history of life and cultures. Special consideration always has been given to wildlife conservation and study of endangered cultures, species, and habitats. Staff members carry out both independent and collaborative research, with collaboration extending to scholars in universities and museums around the world as well as with Smithsonian colleagues. FY 1984, special effort will be made to initiate several collaborative research programs in environmentally threatened areas of the world such as the tropical rainforest of central and eastern Brazil, the Eastern Ghats area of India, Aldabra atoll in the Indian Ocean, the Red Sea and other oceanographic areas. Support is being provided from the International Environmental Science Program for several of these projects. The Museum's impressive published record of research in the natural sciences, its large and well-documented collections, and its staff make a significant contribution to the Nation's natural sciences research efforts. The Museum also offers assistance in areas of its expertise to other government agencies, particularly to the Department of Agriculture, the Environmental Protection Agency, the Fish and Wildlife Service, the Geological Survey, the National Oceanic and Atmospheric Administration, the Federal Bureau of Investigation, and others. In addition, the Museum's resources are regularly used by large numbers of scientists, writers, and publishers from other institutions throughout this country and abroad.

The <u>Handbook of North American Indians</u> is a 20 volume series of books about the cultures, artifacts, territories and habits of native North American Indians. This is a special project of the Museum which has met with wide and unanimous acclaim from educators, researchers, and many other people interested in American Indians. The books have been well received and most have gone through at least two printings. Volumes on the Northeast, California, Southwest and Subarctic Indians have been published so far, and two additional volumes, on Southwest and Arctic Indians, will be published in 1983. Each volume is illustrated and contains 60 to 80 separate articles submitted by scholars from throughout the world.

Major research accomplishments for FY 1982 included the following:

- Publication of 47 scholarly papers through the Institution's scientific series, and publication of dozens of additional papers through professional journals outside the Smithsonian.
- Posthumous publication of an annotated catalogue of the bees of the western hemisphere by Dr. Paul Hurd, in which over 1,300 species of bees are treated. These bees are of special interest because of their great diversity in social behavior and floral relationships.
- Publication of "The Atlantic Barrier Reef Ecosystem," an intensive study of the ecosystem of a barrier reef off the coast of Belize, with contributions by more than 65 scientists from the Smithsonian and 30 other museums and universities throughout the world. Complex reef communities are very sensitive to changes in the environment, such as those that may be caused by pollution, and thus are an excellent natural pollution monitoring system.
- Continuing research on longevity and physical stature as indicators of human health indicates that the life of prehistoric hunters was far healthier than that of early farmers.
- Finding in Antarctica's dry valleys of the world's oldest living organisms, lichens that are able to live within the top few millimeters of rocks. Growth rates of these lichens indicate an age in excess of 10,000 years, making them the oldest known organisms on earth.
- Organization and publication as a reference work of a major compendium of information about all known volcanoes.

Exhibitions - Exhibitions presented by the Museum are the most visible of the Museum's programs. The exhibitions are meant to engage and educate the millions of visitors who come to the Museum each year. Since the early 1970s when the exhibits program was rejuvenated, eight major new exhibit halls have been opened. The most recent effort has been devoted to renovation of the halls of paleontology, with the Dinosaur Hall as the centerpiece. All of the halls of paleontology will be completed by 1984, when attention will shift to Life in the Sea and on Land. The exhibits rejuvenation is a cooperative effort between the Department of Exhibits and the scientific staff of the Museum. The staff provides the latest information on the subjects to be treated in the exhibits, and the Department of Exhibits provides the expertise to develop the halls. This collaboration has worked to assure scientific accuracy in the exhibits, as well as attractive and durable displays. A major asset to the Museum's and the Institution's exhibits program is the Thomas M. Evans Special Exhibits Gallery which was opened in 1981. A major show on Bering Sea Eskimos, utilizing objects from the Museum of Natural History's collections, was originated in the Evans Gallery in 1982 and will travel widely with the Smithsonian Institution Traveling Exhibition Service for several years. Another major show, drawn from the Museum's collections on the Wilkes scientific expedition of 1838-1842, which formed the beginning of the National Collections, will be presented in the Evans Gallery in 1984.

Education and National Service - For many years the Museum's education program has provided a wide range of service to the public. Thousands of school children visit the Museum each year where they are provided with docent guides to explain and describe the exhibits. Docent-led tours for the general public are offered during the summer. The Museum's Naturalist Center contains collections of natural history and anthropological collections, and also features an excellent library and volunteer assistants who are available to amateur naturalists wishing to study their subjects in greater depth.

Collections Management - The efforts associated with the care of the collections are of vital importance. The collections currently representing 136 years of field work from throughout the world, in addition to supporting photographs and records, form the permanent tangible record of Earth's history on modern and ancient life. The specimens and data constitute the baseline for ecological, evolutionary and developmental studies from which new knowledge is generated and against which it can be measured. The collections and records are the benchmarks for natural history research. It is worth noting that old collections in the natural sciences do not become antiquated. On the contrary, the value of older collections increases because they are frequently the only records that document former environmental conditions that have since been altered, often radically, under the encroachments of man. These materials are regularly studied by scholars outside the Institution. Not only must the Museum care for existing collections, but it actively must seek new collections which document the many thousands of as yet undescribed species of plants and animals, and other newly discovered conditions of life and history of the Earth. Hundreds of scientists come each year to visit the Museum's collections, or request loans of specimens, and many publications result from this work. Nearly half of the Museum's resources are devoted to the care of these collections.

The National Human Studies Film Archives was established to collect and preserve historical and contemporary ethnographic film and video records. The work of the Archives involves locating, collecting, preserving, and making available for study these visual records of western and non-western life. FY 1983 is a time of transition for the Film Archives. Organizationally, it was transferred from the Center for the Study of Man into the Department of Anthropology. Functionally, the core programs of film acquisition and preservation are being developed and the entire collection is being inventoried to provide a base for a cataloguing system. An outreach program also is being created with a planned mailing of 20,000 brochures to potential users at universities, museums, other archives, and research institutions across the country. In FY 1984, the Archives anticipates no major program changes. The budget reflects a continued commitment to its ongoing program, allowing it to fulfill its mission as the only Archives in the Nation dedicated to the collection and preservation of ethnographic film and video materials.

The Museum's collections inventory is scheduled to be completed in June of 1983. This inventory covers the 62 million specimens in the Museum's collections, with chief focus on valuable specimens, type or major reference specimens, and those specimens being transferred to the Museum Support Center. The inventory will create records on the holdings of the Museum and also will provide information on whether or not specimens offered to the Museum are needed, and what kinds of materials should be concentrated on for collection. The maintenance of the inventory in the future is a high priority for the Museum. The inventory is essential in managing the move to the new Support Center at Suitland, Maryland and also will be extremely helpful in routine collections management, improving access to the collections and enabling curators to answer more questions. The appropriation request for the continuation of the Collections Management/Inventory Program, an explanation of this Program, and a comprehensive funding summary appear in the Special Programs section.

The Museum Support Center represents a major advancement for the National Museum of Natural History/Museum of Man in the discharge of its responsibility for maintenance of the collections in its possession. Moving of collections is scheduled to begin in late 1983, and will continue for the next several years. The Support Center will afford space for the addition of new collections and will relieve present severe overcrowding in the Natural History Building. The move will free two exhibit halls now occupied by staff and collections.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, a total increase of \$135,000 is requested to meet research and curatorial requirements including: (1) \$50,000 to improve the quality of research equipment at the Museum; (2) \$50,000 to defray

increased costs of publications; and (3) \$35,000 for care of the collections of African artifacts and art in the collections of the National Museum of Natural History/Museum of Man and the National Museum of African Art.

Equipment (\$50,000) - The staff of the National Museum of Natural History/Museum of Man includes 117 scientists, each requiring some specialized equipment to carry out his research. Currently, the Museum is able to provide funds for major equipment purchases only on an intermittent basis. There is a pressing need to develop a scheduled equipment replacement program in order to provide the tools needed to keep the Museum's skilled staff in the forefront of scientific investigations, and to assure the maximum efficiency and productivity of the staff. An amount of \$50,000 is sought in FY 1984 to initiate this program. Some examples of equipment which will be purchased include: the Nomarski interference microscopy microscope, which breaks light into its component wavelengths and improves the refinement of detail under high magnification; a Wild microscope and lighting apparatus which affords a much improved depth of field, thus permitting photography to take the place of tedious hand illustration; and a graphics computer which enables scientists to simulate growth patterns and other structural data to increase understanding of the organisms being studied.

Publications (\$50,000) - The main product of the scientific staff of the National Museum of Natural History/Museum of Man is new knowledge which must be disseminated rapidly for maximum value. A major part of the Museum's energies and resources is focused on scientific research. The research productivity of the scientific staff always has been high and is continuing to grow steadily. In FY 1983, the Museum will publish over 120 books, papers, and articles at a cost of approximately \$360,000, while an amount of only \$310,000 is available for publications. An additional sum of \$50,000 is requested for FY 1984 to defray increased costs of publishing lengthy manuscripts of basic research results, higher page charges levied by outside journals in which the Museum's scientists publish, and higher postage and handling charges.

Curatorial Research (\$35,000) - The recent affiliation of the National Museum of African Art with the Smithsonian affords an important opportunity for collaborative work between that Museum and the National Museum of Natural History/Museum of Man. An increase of \$35,000 is requested for FY 1984 to support a curatorial position to serve the African art and ethnology collections in both Museums. In particular, the curator would search out and make available for research and exhibition those objects in the collections of the Museum of African Art, the Museum of Natural History, and other Smithsonian museums such as the Hirshhorn Museum and Sculpture Garden that are of ethnographic interest to NMNH/MOM and artistic interest to the National Museum of African Art. Additionally, the individual would assume curatorial responsibility for such future collection material as may be acquired jointly by the two Museums, participate in scholarly research contributing to the general body of knowledge of African ethnology and art, and collaborate fully in the creation of the Union Catalogue of all Smithsonian African holdings, which is discussed in the National Museum of African Art's section of this budget request.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds — These funds are derived from a variety of sources including the Museum's share of sales in the museum shop, Associates Court and cafeterias; other receipts such as those realized from the sale of exhibit brochures and "By-Word" communications system; tuition grants from local universities; allotments including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program which supported the acquisition of the Lamb collection of African textiles; and several research and education projects. Expenditures through this Program, the Fluid Research Program and the James Smithson Society, totaled

\$299,000 in FY 1982. Expenditures have not yet been recorded for FY 1983 and FY 1984 which explains the variance in totals shown between those years. In addition, funds are used to help finance exhibit hall brochures, field research, audio-visual equipment for exhibit halls, laboratory equipment and supplies, training for anthropology students and support of the Anthropological Archives. In FY 1982, funds in this category provided for a research catalogue on the exhibition "Inua: Spirit World of the Bering Sea Eskimo." Allotments were provided for the continued work on the Handbook of North American Birds to be completed in FY 1983 and for special events related to the opening of new exhibits.

Restricted Funds - These are in the form of restricted endowments which specify the use of the donation or bequest and of gifts and grants provided by individuals, foundations, organizations or corporations for specific purposes. Generally, the funds provide support for a particular exhibit or research project. Among the restricted funds are the Roebling Fund for acquisition of mineral specimens and gems (estimated expenditures of \$15,000 in FY 1983 and in FY 1984); the Drake Fund for purchase of entomological specimens (estimated expenditures of \$9,000 in FY 1983 and \$10,000 in FY 1984); the Sprague Fund for experiments and field research into the physics and chemistry of the Earth (estimated expenditures of \$40,000 in FY 1983 and in FY 1984); the Becker Fund for the study of physical and chemical state of molten rock in volcanic chambers prior to major explosive eruptions (estimated expenditures of \$12,000 in FY 1983) and for geophysical studies of meteorite impact structures (estimated expenditures of \$12,000 in FY 1984); three Seidell Fund awards for publication of reprints on the 1883 Krakatoa eruption in Indonesia, the Catalogue of the Diptera of North America, and Whalebone Whales of the Western North Atlantic (estimated expenditures of \$32,000 in FY 1983); the Exxon Fund for ecological study of coral reefs (estimated expenditures of \$21,000 in FY 1983 and in FY 1984); and funds to support ethnological research among the Canela Indians of Brazil (estimated expenditures of \$32,000 in FY 1983 and \$34,000 in FY 1984). A gift provided funds for the Evans Gallery exhibition, "Japanese Ceramics Today" (estimated expenditures of \$141,000 in FY 1983). Other funding is available through FY 1983 for: research in ornithology (estimated expenditures of \$18,000 in FY 1983 and in FY 1984); field research and training of Latin American archeologists (estimated expenditures of \$10,000 in FY 1983 and in FY 1984); and improvement of the curation, conservation and storage of the Philippine ethnological collection (estimated expenditures of \$183,000 in FY 1983 and \$173,000 in FY 1984).

In FY 1982, the Museum undertook the management of the Smithsonian Marine Station at Link Port, Florida (formerly called the Fort Pierce Bureau), as an integral part of its marine research program. The Hunterdon Endowment Fund is used to support oceanographic research at this facility, located on the central east coast of Florida, a transitional zone offering an unrivaled opportunity for study of a unique complex of both temperate and tropical plants and animals. Research conducted there emphasizes studies of the life histories, systematics and ecology of a wide spectrum of marine Contributing to the research efforts are a resident scientist, Smithsonian visiting scientists, post-doctoral fellows and numerous national and international visiting investigators (estimated expenditures of \$371,000 in FY 1983 and \$400,000 in FY 1984). Support also is provided by the Seward Johnson Endowment Fund for operation and maintenance of the Johnson-Sea-Link submersible program conducted at the facility by the Harbor Branch Foundation (estimated expenditures of \$416,000 in FY 1983 and \$436,000 in FY 1984). The Museum is seeking support from various sources for special exhibitions in the Evans Gallery (estimated expenditures of \$525,000 in FY 1983 and \$660,000 in FY 1984). The Museum also has several other restricted funds, each with anticipated expenditures of less than \$15,000 a year.

Federal Grants and Contracts - These funds are provided by various agencies and departments for special projects which can be conducted at NMNH/MOM because of the Museum's scientific expertise. Examples of Federal contract support are: the Medical

Entomology project funded by the United States Army that conducts basic bio-systematic research on the effects of arthropods, such as mosquitoes, which are of medical significance overseas (estimated expenditures of \$241,000 in FY 1983 and \$233,000 in FY 1984); another project funded by the United States Army to create a computer data fil on the medical importance, distribution, ecology and collection of mosquitoes (estimated expenditures of \$66,000 in FY 1983 and \$69,000 in FY 1984); the "Tumor Registry in Lower Animals" project funded by the National Cancer Institute which facilitates the study of neoplasms and related disorders in invertebrate and cold-blooded vertebrate animals important in human biomedical research (estimated expenditures of \$245,000 in FY 1983 and \$258,000 in FY 1984); a project funded by the National Science Foundation to increase knowledge of polar ecosystems by studying extant collections of flora and fauna (estimated expenditures of \$105,000 in FY 1983 and \$75,000 in FY 1984) and to process and distribute polar biological specimens and data (estimated expenditures of \$140,000 in FY 1983 and \$76,000 in FY 1984); a project funded by the National Oceanic and Atmospheric Administration for environmental assessment and systems analysis of Gouldsboro Bay, Maine (estimated expenditures of \$80,000 in FY 1983); and funds to curate material collected during the Bureau of Land Management's outer continental shelf biological sampling program in the Atlantic and Gulf regions (estimated expenditures of \$152,000 in FY 1983 and \$162,000 in FY 1984).

1	NONAPPROPRIATED SOURCES OF FUNDING									
				UNRESTR			LO OF	TUNDING	FEDER	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Special Purpose		RES	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	78	5,694	65	2,518	2	657	1	171	130	10,551
FY 1983 Base	78	6,580	65	2,438	2	396	1	158	116	10,506
FY 1984 Estimate	78	6,892	65	2,559	2	429	_ 1	176	134	12,332

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	78	0	78
Number of Other Positions	15	0	15
11 Personnel Compensation	3,489	418	3,907
12 Personnel Benefits	316	41	357
21 Travel & Trans. of Persons	77	10	87
22 Transportation of Things	33	1	34
23 Rent, Comm. & Utilities	384	60	444
24 Printing and Reproduction	30	2	32
25 Other Services	1,634	-286	1,348
26 Supplies and Materials	423	-26	397
31 Equipment	194	92	286
Total	6,580	312	6,892

Analysis of Increase

Necessary Pay	69
Inflation	122
Restored Position Funds	16
Program Funds (Net)	105

ABSTRACT - The Smithsonian Astrophysical Observatory (SAO), established in 1890, has as its primary goal the increase and diffusion of knowledge about the Earth and the universe. To accomplish this, SAO conducts a broad program of basic astrophysical research in seven interrelated scientific fields: atomic and molecular physics, high energy astrophysics, optical and infrared astronomy, planetary sciences, radio astronomy and geoastronomy, solar and stellar physics, and theoretical astrophysics.

In support of these investigations, scientific data are obtained from laboratory experiments in Cambridge, Massachusetts; from telescopic observations conducted primarily at the Fred L. Whipple Observatory (formerly referred to as Mt. Hopkins), which is the site of the Multiple Mirror Telescope (MMT); from SAO's laser stations and other

major observatories cooperating with SAO; and from space observations utilizing satellites, rockets and balloons. The reduction and analysis of these data are performed with SAO's large interactive computer system in Cambridge. The resulting astrophysical models and scientific interpretations are published in scientific journals and reports and are distributed widely to the scientific community and to the public through lectures and popular articles.

In FY 1984 an increase of \$530,000 is requested consisting of: 1) \$105,000 to upgrade and replace general laboratory test equipment; and 2) \$425,000 toward correcting the Federal-Trust imbalance. The sum of \$425,000 appropriated in FY 1983 for one-time improvements to the Multiple Mirror Telescope is being relinquished. An amount of \$69,000 is required for necessary pay for existing staff and an amount of \$122,000, is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$16,000 is required to provide full-year funding for the position restored by the Congress in FY 1982.

PROGRAM - The Smithsonian Astrophysical Observatory's continued leadership in astronomy results in part from its diversified approach to research. The breadth and depth of the SAO program, with pioneering projects in several fields, has attracted a talented assembly of scientists and engineers. In turn, this staff has created new research tools to respond to promising avenues of investigation. Although research projects are grouped in seven research divisions, all efforts are integrated so that the results in one division complement those in another. SAO cooperates in almost all of these programs with the Harvard College Observatory (HCO), which together form the Center for Astrophysics (CfA).

Atomic and Molecular Physics - In this division fundamental research is carried out in experimental and theoretical physics and chemistry of atomic and molecular processes. This research relates directly to the understanding of astronomical phenomena as such atomic and molecular processes occur in all astronomical objects. Progress in FY 1982 included the first measurements of the fundamental atomic characteristics that govern the way in which ions of carbon, nitrogen and silicon are excited and emit ultraviolet radiation in many astronomical situations. In addition, accurate calculations were carried out that describe what happens when ionized atoms collide at high energy with atomic hydrogen. Such collisions are commonplace in astronomical objects, but their properties are just beginning to be understood from such calculations. These calculations also provide important insight into how heating occurs in laboratory fusion plasmas. The vital interplay in this division between theory and experiment also resulted in the prediction, identification and confirmation of an ultraviolet feature in the "dayglow" of the upper atmosphere of the Earth. Programs planned for the coming year include extending to other ions the measurements of such fundamental characteristics relevant for the high temperature, low density environment often found in astronomical objects. Important results also are expected from an experiment just started to measure the effects of atmospheric pressure on the characteristics of radio waves emitted by ozone. These results will aid other Center studies of this substance which is essential to life on Earth. Theoretical studies in the coming year will include calculations of properties of ions known to be important both in solar flares and in fusion plasma. To increase the understanding of interstellar chemistry a combined theoretical and experimental investigation will be used to study for the first time the fundamental processes whereby light from stars destroys interstellar molecules. Similar research being undertaken also will help in understanding supernova, the gigantic explosions that overtake some stars at the end of their lifetime and brighten the night sky.

High Energy Astrophysics - Research in high energy astrophysics is concentrated on the study of astronomical objects that emit a substantial fraction of their energy in X-rays. X-rays are absorbed by the Earth's atmosphere so that observations must be

made from rockets, the Space Shuttle, and satellites. SAO is involved in the development of new instrumentation for carrying out future space science missions and in the acquisition and analysis of X-ray data from existing facilities. In FY 1982, SAO scientists analyzed X-ray observations made with the "Einstein" satellite to study the debris from a stellar explosion, or supernova, that left behind two characteristic signatures. The first signature is of an X-ray pulsar, a rapidly rotating neutron star with a mass comparable to our Sun, but collapsed to a sphere about ten miles across, experiencing so intense a force of gravity that its matter is broken down into neutrons. The X-ray studies are used to measure the rate at which a spinning neutron star is slowing down and thereby to estimate its age, in this case about 1,700 years. The second signature of the explosion is from a shell of hot gas, glowing in X-rays and expanding into the surrounding interstellar medium. X-ray and radio studies of this shell indicate an age closer to 20,000 years. This discrepancy of a factor of ten between the two age determinations for objects supposedly formed at the same time by a single explosion, suggests that our standard ideas about remains from supernova explosions and about pulsars need to be reexamined and possibly modified. A second result from the observations with the "Einstein" satellite is the SAO discovery that many faint X-ray sources are associated with distant galaxies and quasars (believed to be sources of enormous energy, perhaps associated with the cores of very distant galaxies). We find that these sources contribute a significant fraction of the socalled all-sky-X-ray background. The existence of this X-ray background has been known for 20 years, but its origin only now is being determined and the largest contributors found to date are the quasars. In turn, this determination allows us to set limits on how much of the X-ray background can be produced by hot gas filling all of space. Limits on the amount of such gas are important for determining whether there is enough mass to cause the expansion of the universe to eventually halt.

Plans for the coming year include the continued analysis of the wealth of data obtained from the "Einstein" satellite and the establishment of an X-ray laboratory to develop advanced detectors needed for future X-ray observatories. The detailed analysis of "Einstein" observations of clusters of galaxies can be used to determine the current stage of development for these collections of 100's to 1000's of galaxies grouped in space. Recent indications from the X-ray data suggest that many of these clusters of galaxies are in an early stage of their development, meaning either that they formed rather recently (compared to the approximately 20 billion year age of the universe) or that they have developed rather slowly, or both. This result, if confirmed, will strongly affect our understanding of the early stages of development of the universe, in particular the formation and interaction of galaxies.

The coming year will also mark major developments in two hardware programs. SAO expects to begin design and construction of "flight" hardware for a prototype Large Area Modular Array of Reflectors (LAMAR) for eventual flight on the Space Shuttle. LAMAR represents a low-cost approach to achieving a very large collecting area for carrying out X-ray studies to determine the energy coming from selected sources as well as to search for possible variations in the X-ray intensity with time. Such studies can provide essential information about the mechanisms by which intense sources of X-ray radiation are generated. The next phase of studies for the Advanced X-ray Astrophysics Facility (AXAF) in conjunction with the National Aeronautics and Space Administration's (NASA) Marshall Space Flight Center also will begin. The AXAF will be a national X-ray observatory having almost ten times the resolution of the "Einstein" satellite, which is no longer operating, and a sensitivity almost 100 times greater than achieved with the "Einstein" satellite. Through the use of the Space Transportation System, AXAF will be a "permanent" X-ray facility (at least 15 years duration), serviceable and maintainable in orbit.

In the coming year plans exist to exploit the great sensitivity of the Multiple Mirror Telescope to search for very faint and distant quasars. These data will be used to describe how the numbers of quasars and their radiated energy change over the life-

time of the universe and to improve our previous estimates of the contribution of these quasars to the all-sky-X-ray background.

Optical and Infrared Astronomy - The division of optical and infrared astronomy operates a major facility in Arizona, the Fred L. Whipple Observatory, site of the Multiple Mirror Telescope. The MMT (operated jointly with the University of Arizona) is being used by dozens of astronomers for studies of galaxies, quasars, star clusters, X-ray sources, and young stars.

A major accomplishment in FY 1982 was the demonstration that many clusters of galaxies are still in their formative stage, and that these clusters are less massive than previously thought. These results thus make stronger the tentative conclusion that the universe does not contain enough "hidden mass" to prevent the universe from continuing to expand forever. Last year also saw the completion of the first stage of the Center for Astrophysics Redshift Survey, a major effort aimed at mapping the distribution of galaxies in space. These results show clearly that galaxies congregate in long strings and sheets, surrounding vast empty regions. This finding poses a major puzzle because current theories of the evolution of the universe do not seem consistent with the size or type of structures which have been observed.

Observations of very distant quasars now occupy much of the effort at the MMT. These objects can be used as probes of the conditions in intergalactic space at times stretching back billions of years. In the coming year these observations will be used to study the chemical elements created in the first three minutes of the "Big Bang" that many believe marked the creation of the universe. Surveys of very faint quasars will be used to confirm that these objects, the brightest known in the universe, mark a stage of violent activity in galaxies soon after they form. The CfA Redshift Survey will be extended in an attempt to clarify the nature of the unexpectedly large structures found in the original survey. First the survey will be extended to cover more of the southern sky and to penetrate more deeply in selected areas of the northern sky. In subsequent years, the overlooked areas of the sky will gradually be filled in. This survey is an enormous undertaking, but of fundamental importance to cosmology. The initial survey already is recognized as one of the most important contributions to the field in the last ten years. In the coming year, the optical finish of the MMT mirrors will be improved so that full advantage then can be taken of the excellent image quality of the site. On the best nights this improvement should allow the images at the MMT to rival those that will be obtained from orbit with the Space Telescope. this area of optical technology, the MMT should become the benchmark against which other ground-based telescopes are compared. The performance of the MMT also will be improved by the development of a detector system for spectroscopy, using one of the Charged-Coupled device chips built for the Space Telescope. This new instrumentation should allow studies of more distant clusters of galaxies and of very faint quasars, especially for work in support of future research with the Space Telescope, scheduled for launch in 1985.

In the coming years further development of the capabilities of the MMT and its instrumentation is planned. In the area of image performance, the next step is to phase the six telescopes so that the full resolution implied by the MMT's "resolution diameter" of 280 inches (the largest of any operating telescope in the world) may be achieved. Further in the future, the development of a new infrared spectrometer is planned, to take advantage of the dramatically improved detectors that are just becoming available. This instrument would open up important new fields of research on very distant active galaxies because the interesting wavelengths of light will appear in the infrared, due to the Doppler effect.

Also in the coming year, the first infrared astronomy experiment flown on the Space Shuttle will be carried out by SAO scientists. This experiment is expected to provide major new data on regions of star formation and on other activities taking place in our galaxy.

Planetary Sciences - One of the most important developments in the planetary sciences in FY 1982 was the discovery by an SAO scientist of a water-and-ice volcano on Europa, Jupiter's fourth largest moon. This discovery was made through a careful examination of photographs taken by the Voyager spacecraft as it passed by Jupiter several years ago. Europa is the second Jupiter satellite found to be erupting a molten substance in the same way lava is erupted on Earth; the other is Io, which erupts molten sulfur. Detecting volcanism on two satellites at different distances from their parent planet provides a more rigorous test of the mechanism (tides created by Jupiter) thought to be responsible for the internal heating that gives rise to volcanic activity.

SAO participated in an expedition to Antarctica sponsored by the National Science Foundation (NSF) in which 378 new meteorites were discovered. Their radioactivity is being measured to determine the length of time they have lain in the Antarctic ice. The several specimens so far measured at SAO show residence times varying from 7,000 to 300,000 years. These measurements will allow both refinement of our knowledge of frequency that meteorites fall on earth and improvement of our estimates of the rate of flow of Antarctic ice, an important factor influencing the Earth's climate.

In the coming year, in addition to continuing these research programs, the chemistry and mineralogy of carbonaceous chondrites, a relatively rare type of meteorite that allows us to look at materials that have changed very little since the earliest history of our solar system, also will continue to be studied. These studies provide information about the temperatures, pressures, and chemistry of the processes that formed the Earth and other planets. Other SAO scientists also will make maps of the icy surface of Ganymede (another of Jupiter's moons), exploiting the photographic survey made by the Voyager spacecraft. Very late in 1984 Halley's comet will begin to be bright enough and close enough to allow measurements of its position to be made at the Oak Ridge Observatory. These positional data are essential to the proper pointing of the instruments to be placed by the Europeans aboard their Giotto spacecraft which will pass close to Halley early in 1986.

Radio Astronomy and Geoastronomy - Research in radio astronomy and geoastronomy is both observational and theoretical and covers a broad range of topics. Using radio antennas separated by thousands of miles and synchronized by atomic clocks, SAO scientists are mapping distant objects in the universe with extremely high resolution. This technique, called Very Long Baseline Interferometry (VLBI), has been advanced in FY 1982 by successful operations at very short radio wavelengths, so-called millimeter waves. These new observations reveal an incredibly small source at the center of a peculiar galaxy. This small, but powerful, source is probably also the source of X-ray radiation and may be powered by a massive black hole. If human eyes had the resolution of the VLBI system, a newspaper in California could be read by an individual located at the distance of Washington, D.C.

Observations were completed for an ambitious project to help determine the size of our Galaxy (the Milky Way). This determination is being accomplished by tracking the gas flows which envelop newly formed stars, made luminous by intense radio emission from trace quantities of water vapor. This experiment not only reveals the distance to the young objects, but also helps us understand the motions of materials surrounding heavily obscured, massive, newborn stars—stars which are about 50 times more massive than the Sun and have exceedingly powerful stellar winds.

The solar system is the classical laboratory for gravity research. Einstein's general theory of relativity and competitive descriptions of gravitation are being tested through the use of a combination of modern radio observations. These data

include radar observations of Mercury, Venus, and Mars; radio tracking of the Viking spacecraft on Mars; and lunar laser ranging to special mirrors ("retroreflectors") put on the Moon during the Apollo missions. In addition to testing relativity, this work yields an abundance of information about the dynamics of the solar system.

Using radio tracking from the Pioneer Venus Orbiter, small irregularities are being mapped in the gravitational potential of Venus. These irregularities are compared to the topography to determine the sub-surface structure of the planet. Since Earth resembles Venus more than any other planet, an understanding of the near-surface structure of Venus helps to both test and develop theories that describe such important terrestrial phenomena as earthquakes and volcanoes.

Among new developments by SAO scientists for the Space Shuttle was the concept of a very long thin wire, called a "tether," as a novel electric power generator. This tether, about one-eighth inch in diameter and 60 miles in length, would be lowered from the Shuttle with a metallic balloon at the free end. As the Shuttle moves through the Earth's magnetic field, an electric current would be generated in the wire between the balloon and the Shuttle. Ten to 20 kilowatts of power could be generated in this fashion. Alternatively, by using a battery on the Shuttle to force a current through the wire, the tether can be used as a motor to raise the orbit of the Shuttle. Another new development was the suggested use of expended Shuttle External Tanks to construct a Space Station. Consisting of two tank clusters in the form of platforms, each about the size of a football field, and displaced, one above the other and about 20 miles apart, this Space Station would be stabilized by rope-like tethers about three-eighths inch in diameter. Also under study is a cryogenically cooled displacement sensor with possible application to the detection of very small changes in the gravity field of the Earth.

Two new atomic clocks, with stability equivalent to one second in 50 million years, are being built for the U.S. Naval Observatory and two are being tested prior to delivery to NASA for deep space tracking. Experiments on maser clocks, operating at very low temperatures, are being continued to improve their stability and to understand more about their fundamental physical processes. Further, experiments are being developed to test more accurately the prediction of Einstein's theory of relativity as it relates to the behavior of clocks.

Solar and Stellar Physics - SAO research in solar and stellar physics continues to center on understanding the physical processes in the Sun and the stars. A rocket experiment flown on July 20, 1982, made the first optical measurements of the solar wind in the outer atmosphere of the Sun where the solar wind originates. Analysis of these rocket data is expected to yield temperatures, densities and velocities of the solar wind in the region where the wind originates. This information will be valuable in reaching an understanding of the forces driving the solar wind, a major unsolved problem. Analysis at SAO of recent observations of the Sun in infrared light led to the discovery of a new class of emissions that can be used to determine the strengths of magnetic fields on the Sun. These infrared emissions can be observed from other stars as well and provide a new tool for stellar studies.

Several hundred stars now have been observed in SAO's program to measure stellar rotation, in collaboration with the Mt. Wilson Observatory, leading to the discovery of activity patterns similar to those on our own Sun, but on a much larger scale. A powerful new computer program has been developed to analyze the outflow of mass from giant stars that are observed to be losing mass about ten million times faster than our Sun. Studying other stars aids in understanding the evolution of the Sun. In the coming years this computer program will be used to analyze observations taken at the

Whipple Observatory and by satellites in space. In early FY 1984 the Third Cambridge Workshop on Cool Stars, Stellar Systems and the Sun will be held at SAO. This biannual international meeting usually attracts over 100 scientists from around the world to discuss current problems and new results in solar and stellar physics.

Theoretical Astrophysics - Theoreticians in this division study and try to understand astronomical systems by means of physical analysis and mathematical modeling. A broad range of topics have been investigated, including: the interiors of neutron stars; the properties of atoms and molecules in interstellar space; the formation of spiral structure in galaxies; high temperature plasmas; and the formation of planetesimals in the early solar system. These studies are relevant to the understanding of a variety of astronomical phenomena observed via visible light, radio waves, X-rays and other forms of radiation that reach the Earth.

In FY 1982 magnetic white dwarfs were studied. These are a class of stars that emit "polarized" X-rays, which are modulated by the rotation of the stars. The generation of radiation in the strong magnetic fields surrounding these stars was studied by modeling the physical properties and geometry of the emitting regions and performing extensive computer calculations of the observable radiation. By comparison of these theoretical results with observations it was possible to deduce many intrinsic properties of these stars. This work will be extended in the coming year to include the dynamics of material falling onto white dwarf stars, which represents the source of the emitted energy. This extension should permit a fuller understanding of the nature of these exotic X-ray sources.

Globular clusters, systems of stars distributed in our galaxy that typically each contain millions of stars and that seem to contain an abnormally large number of X-ray sources, also were studied. Theoretical studies at SAO have explained this association as a result of the formation of binary stars (two stars orbiting about one another), due to the gravitational interactions in the dense cores of the cluster. Many of these binaries will be formed as X-ray emitters, enough to explain the number of X-ray sources observed in the globular clusters. One surprising result of this study is that the mass contained in the cores of globular clusters is very nearly the same from one cluster to another. This similarity is not well explained by current theories and suggests that some improvements in these theories are needed. Various possibilities for such improvements will be investigated in the coming years.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, an increase of \$530,000 is requested consisting of: 1) \$105,000 to upgrade and replace general test equipment, and 2) \$425,000 to be used toward correcting the Federal-Trust imbalance. The sum of \$425,000 appropriated in FY 1983 for one-time improvements to the MMT is being relinquished. The net proposed increase therefore totals \$105,000.

Replacement and Improvement of Test Equipment (\$105,000) - SAO presently has approximately 1,700 items of general laboratory and test equipment with a total replacement value in excess of \$2,000,000. The equipment, consisting of such items as voltmeters, oscilloscopes, spectrum analyzers and vacuum pumps, is used in all laboratory and experimental programs, including maser, laser and detector (both optical and X-ray) development. Since approximately 50 percent of this equipment is ten years old or more, many items have become obsolete and expensive to maintain and their use often results in inaccurate measurements and inefficiencies. In the past SAO acquired general laboratory equipment mainly from excess government property and from portions of grants and contracts. However, sponsoring agencies have restricted the use of grant and contract funds for purchase of general laboratory equipment while the quality of excess government property has declined substantially. The typical replacement cost for

vintage oscilloscopes is approximately \$5,000 per unit. Replacement of vacuum pumps is currently \$12,000 per item. To remedy the situation, an amount of \$105,000 is sought for SAO to begin a program for the replacement and improvement of its general laboratory test equipment.

Federal-Trust Imbalance (\$425,000) - In order to meet the exciting and revolutionary scientific changes in astrophysics of the 1960s and 1970s, SAO's Federal resources were used to develop and maintain a corps of outstanding professional scientific talent. At the same time, with the steady growth in Federal grants and contracts being awarded to SAO, decisions were made to finance nearly all of the administrative support positions such as personnel, fiscal, procurement, and property management from overhead applied against grants and contracts. As a result of this policy, SAO has assembled a world class scientific staff whose research has been consistently in the forefront of scientific discovery. Administratively, however, a financial imbalance has occurred in that the Federal scientific side has not been paying its appropriate share of the administrative services it receives.

Beginning in FY 1983, SAO has made available a sum of \$100,000 from its research budget to replace recent administrative staff reductions with Federal support personnel. A further amount of \$650,000 is needed to balance Federal and Trust funded support. For FY 1984, a sum of \$425,000 is requested to be used to employ, within Civil Service guidelines, approximately 15 administrative personnel currently funded through overhead on grants and contracts in Federal positions. Through this process, SAO would be assured a stable core of administrative personnel to accomplish the support functions regardless of any further fluctuation in grant and contract activity. Moreover, the overhead rate on grants and contracts, currently assessed at 31 percent, could be reduced thus leaving more of grant funds to accomplish their scientific purposes. The further sum of \$225,000 needed to correct the imbalance in full would be derived from future management decisions including but not limited to the conversion of Federal scientific staff positions that no longer would be in the mainstream of SAO's scientific pursuits to administrative support personnel.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funds generally are used to support the administrative positions and other administrative costs of the Smithsonian Astrophysical Observatory. These costs are recovered almost entirely from overhead charged on grants and contracts. Funds also are used for travel and related costs of small individual research grants and scientific lectures and meetings hosted by the Observatory. Special purpose funds include income from external users of the Computer Center which will be spent for research purposes and for computer equipment purchases in future years. Expenditures for the Fellowships and Visiting Scholars Program totaled \$200,000 in FY 1982 with estimated expenditures of \$256,000 in FY 1983 and \$292,000 in FY 1984. Funds also are provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program which supported several projects such as the study of the destruction of astrophysical molecules by radiation and the study of stellar magnetic fields and their influence on the stellar atmosphere. Expenditures through this Program and the Fluid Research Program, together totaling \$277,000 in FY 1982, have not been recorded for FY 1983 and FY 1984 which explains the variance in totals shown between FY 1982, FY 1983 and FY 1984.

Restricted Funds - These are in the form of restricted endowments, gifts and grants from individuals, foundations, organizations or corporations which specify the use for a particular project. Restricted Endowment Funds provide support for studies in geophysics and related physical sciences (estimated expenditures of \$75,000 in FY 1983 and \$59,000 in FY 1984). A grant from the Chemical Manufacturers Association

assists SAO in performing studies of the chemical balance of halogen in the ozone of the stratosphere (expenditures totaled \$53,000 in FY 1982 with estimated expenditures of \$70,000 in FY 1983 and \$74,000 in FY 1984).

Federal Grants and Contracts - SAO receives substantial funding from Federal agency grants and contracts for research which is integrated fully with both governmental and academic institutions in the United States and abroad. The majority of the funding comes from NASA for space science projects, particularly in the high energy astrophysics and geoastronomy/radio astronomy divisions. Some funding from Federal agencies, such as the Naval Research Laboratory and the Air Force, is received to support specific projects in areas of SAO's expertise. Projected FY 1983 expenditures reflect the same level as actual FY 1982 amounts. In FY 1984, a contract to develop the instrumentation for NASA's three meter balloon-borne telescope project and modest increases in most other projects account for the projected higher level of spending.

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Gei	neral	Special Purpose		RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	85	2,923	2	78	-	146	-	81	-	-
FY 1983 Base	86	3,087	2	78	-	100	-	109	-	-
FY 1984 Estimate	86	3,319	2	76	-	102	-	66	_	<u>-</u>

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	86	0	86
Number of Other Positions	8	0	8
11 Personnel Compensation	1,906	46	1,952
12 Personnel Benefits	448	11	459
21 Travel & Trans. of Persons	68		68
22 Transportation of Things	12		12
23 Rent, Comm. & Utilities	26	4	30
24 Printing and Reproduction	80	50	130
25 Other Services	172	25	197
26 Supplies and Materials	245	21	266
31 Equipment	130	75	205
Total	3,087	232	3,319
Analysis of Increase			
Necessary Pay		46	
Inflation		50	
Restored Position Funds		11	
Program Funds		125	

ABSTRACT - The Smithsonian Tropical Research Institute (STRI) is the United States leading tropical biology research center, permanently located in the tropics in the Republic of Panama. Its facilities encompass marine and terrestrial sites located on the Atlantic and Pacific Oceans and on Barro Colorado Island in Gatun Lake. In 1979, with implementation of the Panama Canal Treaties, Barro Colorado Island was declared a Nature Monument under the 1940 Western Hemisphere Convention on Nature Protection and Wildlife Preservation. The custodianship of this Nature Monument was assigned to the Smithsonian Tropical Research Institute on behalf of the United States, Panama, and other nations of the Americas. STRI's goals are to conduct and to promote basic, fundamental and advanced scientific research studies in the biology of tropical organisms and to increase and diffuse knowledge of their ecology, evolution and behavior. STRI also has the responsibility of developing an awareness and conservation of the important tropical environments through an active public education program. For FY 1984, an

increase of \$125,000 is requested to replace outmoded and deteriorated scientific equipment (\$75,000); and to correct a base shortage for publishing basic research results (\$50,000). Necessary pay of \$46,000 is required for existing staff and an amount of \$50,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$11,000 is requested to provide full-year funding for the two positions restored by the Congress in FY 1982.

PROGRAM - During the past year considerable attention by scientists and government leaders continued to be paid to rapidly disappearing tropical ecosystems, particularly, the tropical rainforests. It generally has been accepted that these forests are rich in unexploited potential for the benefit of mankind and that their destruction would result in an immeasurable and irreparable loss of genetic material. Knowledge of the complexity of relationships among tropical organisms, on land and in the sea, could be a critical key to understanding the functioning of natural systems everywhere on the planet Earth.

The amount of existing tropical research activities is tiny compared to the amount of research being conducted in the already well-studied and biologically degraded temperate regions. Knowledge gained in simplified habitats cannot be transferred into the infinitely more complex tropical systems that are under such pressure from burgeoning populations. Yet the whole living world, including mankind, is interdependent and what happens in the tropics affects us all. For example, direct effect of the deforestation of the Amazon Basin on the climate of the United States is not only possible, but to many scientists, an inevitable part of the complex chain of cause and effect. The growing realization of the importance of the tropics has resulted in an increasing demand for use of STRI facilities by scientists throughout the world. In 1982-1983, STRI attracted more visiting scholars than ever before. This is a reflection of the leading role played by the Institute in tropical studies. To meet the needs of its own and visiting scholars, with funds from the Restoration and Renovation of Buildings Appropriation, a new library devoted to tropical sciences has been constructed at the Institute's headquarters site close to the heart of Panama City. This will make STRI's unique library available to a wider community of international scholars and give it a preeminent place in such institutions.

Research conducted by the STRI scientific staff provides long-term continuity that research by visiting scientists cannot match. Since many processes occur over a longer biological time scale than the calendar year, only such continuity can detect long-term vital processes. An example is the advance of the Africanized, so-called "Killer" bee, from eastern South America towards the United States across the landbridge of the Isthmus of Panama. To anticipate this northward movement, STRI appointed a bee specialist to its staff in 1979. The bee itself arrived in South Panama in 1982 and STRI was well-prepared for the event. A unique data bank of pollen grains from lowland moist tropical forest had been established. This is the first ever comprehensive means of identifying the source of pollen grains in the humid tropics. It now covers 1,500 species of plants, a significant achievement. It will enable STRI researchers, and others, to identify precisely the species of plants that are visited by the Africanized bees. This will mean that the ecological effect of an invading species can be quantified in a manner never before possible.

STRI manages a large area, 12,032 acres, of moist tropical forest as a protected reserve, the Barro Colorado Nature Monument. The continued close protection of this area makes long-term studies possible; these are extremely valuable in determining whether or not the complex tropics are stable as is widely claimed. Long-term studies of iguanas and crocodiles have lead to the discovery that there is considerable instability in their populations. For instance, 1982 was a year of unusually high rainfall in the so-called dry season and only two percent of the iguana eggs hatched compared to around 50 percent in normal years. Crocodile hatching showed similar trends. Calculations at STRI, based on statistical analysis of 57 years of rainfall data, show

that the probability of such a wet year is between 1 and 1,000 and 1 and 10,000. Thus there are rare and important climatic events in the so-called stable tropics. The importance of Barro Colorado Island extends beyond its protected state. The Island has yielded a very considerable accumulation of data about many aspects of the forest community and to this rich resource now (1983) has been added the detailed mapping of a half square kilometer of the forest. Every plant greater than one centimeter in diameter has been mapped and all the plants identified. This significant accomplishment already has facilitated studies of crucial aspects of seed dispersal and seedling success; important elements in the dynamics of tropical forest. Studies of plant diseases at Barro Colorado Island show that tree seedlings are differentially susceptible to death by fungus attack depending on whether or not they germinate in sunlit areas or in total shade. This important discovery means that disease may play a previously unsuspected role in determining the species structure of the forest.

A vigorous policy of disseminating ideas through publications and international conferences is pursued by STRI. In 1982-1983, STRI scientists and students participated in six major international congresses as invited speakers and delegates, as well as in numerous smaller conferences and symposia. They also carried on comparative studies in India, Malaysia, Burma, Philippines, Indonesia, Hawaii, Guam, Palau, Costa Rica, Colombia, Venezuela, Senegal, Surinam, Guyana and Cuba. An exploratory visit was made to the People's Republic of China. More than 150 research publications resulted from STRI-supported research.

As the only United States organization devoted exclusively to research, conservation and education in the tropics, the Smithsonian Tropical Research Institute has an obligation to train the young men and women who in the future will dedicate themselves to studying life in the tropics. The general objective of the educational program at STRI is to foster the scientific development of students at the university level, providing them the opportunity for independent thinking (fellowships) and for acquiring training and experience while continuing their education (assistantships). This program allows for a mix of students from the developed and developing countries, with different cultural and educational experiences. During FY 1982 and FY 1983, approximately 100 students from the United States, Canada, Panama, Colombia, Costa Rica, Venezuela, Ecuador, Mexico, Brazil, Peru, Great Britain, and Holland will have participated in this program. Unlike other educational programs, at STRI students from tropical nations are trained in a tropical environment, while students from developed nations, particularly the United States, are exposed to the tropics and its particular problems. During the same period more than 1,300 long- or short-term visitors used STRI facilities, mainly from the United States but also from Latin America and elsewhere. More than 90 university and research institutions were represented by these visitors.

STRI scientists live in the Third World and are faced by direct evidence of the accelerating destruction of the incalculable resources of the tropical forest. Although STRI is a basic research organization, it is located in an area where economic development is rapid, environmental changes are sweeping and human population pressures are high. Its expertise in tropical biology enables STRI to provide scientific advice on many of the problems encountered by developing tropical countries. STRI maintains formal cooperative agreements with a number of national institutions, particularly in Panama and Colombia. Most recently, STRI has concluded an agreement with a number of Panamanian and international forestry and agricultural research bodies on activities related to the management of watersheds, conservation of soils and waters, reforestation, preservation of flora and fauna and management of forest reserves and park areas. This agreement will enhance its contribution to applied research, particularly in protecting the watershed of the Panama Canal, and will result in the establishment of joint research projects to be carried out in the West Bank of the Panama Canal close to the boundary of STRI's Barro Colorado Nature Monument. In FY 1982, STRI's scientists collectively produced an ambitious research proposal

entitled "Alternatives to Destruction" which details studies designed to discover ways to utilize the tropical forest for the benefit of mankind without destroying it. The proposal has been partially funded from private sources as noted in the Nonappropriated Sources of Funding section.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, an increase of \$125,000 is requested for acquisition of major scientific equipment and to keep pace with the increasing cost of publishing long-term research studies and major monographs.

Research Equipment (\$75,000) - An exception to the general neglect of tropical studies is to be found at the Smithsonian Tropical Research Institute which is the only United States government supported research group with extensive facilities for both marine and terrestrial research located in the tropics. To conduct modern research in tropical biology it is necessary to utilize sophisticated techniques. For example, questions concerning animal communication (vocalization of frogs, birds, and mammals), behavior and structure must rely on special laboratory and field equipment. Over the years, the Smithsonian Tropical Research Institute has obtained a sizeable pool of research equipment, much of it through surplus or grant and contract activity. equipment in many cases is over 15 years old and does not meet the requirements of the expanded scientific staff nor incorporate recent technological advances. current equipment budget of \$130,000 allows for only limited upgrading of selected pieces of scientific equipment rather than complete replacement of an instrument with state of the art technology. An additional amount of \$75,000 is sought in FY 1984 to develop a comprehensive equipment replacement program, which will allow the highly skilled staff to stay at the forefront of tropical studies. The pieces of research equipment to be purchased with the additional funds requested in FY 1984 are: a Faxitron x-ray machine (\$22,500); an incident light fluorescent microscope (\$6,000); side scan sonar equipment (\$5,000); a real time analyzer (\$15,000); a high speed refrigerated centrifuge (\$8,000); a dual beam spectrophotometer with automatic scanning and accessories (\$12,500); and a sound level pressure meter (\$6,000). This equipment will be used to assist research on the structure of coral reefs, communication studies in animals, biochemical analysis of animals of the Pacific and Atlantic Oceans and a major study on the breeding habits of pelicans. Similar equipment will be purchased in future years with this proposed fund.

Publication Support (\$50,000) - The dissemination of scientific information to a variety of general and specialized audiences continues to be a vital aspect of STRI's research and education efforts. The results of research are transmitted by publication of reports, articles and books. In FY 1982, over 150 reports and articles were published and made available to the international scientific community and the general public by STRI staff, short- and long-term fellows, and visiting scientists that carried out research in Panama and other parts of the new and old world tropics on a wide variety of biology and related subjects. The number of publications is expected to increase in FY 1983 and FY 1984. In addition, there is a growing need for scientific studies written in the Spanish language in the Spanish-speaking tropical nations where forests are vanishing at an alarming rate. STRI staff have attempted to meet this growing demand for time-sensitive material but publication resources have not kept pace with research results and there is a backlog of unpublished data. In December 1982, the Institute published a translation of a series of key research papers published over the last 15 years. The book, Evolution in the Tropics, is a collection of 22 papers dealing with various aspects of evolutionary biology. STRI's publications base of \$60,000 is not nearly sufficient to cover the costs of publishing its research results in a timely way. The additional amount of \$50,000 sought in FY 1984 is needed to provide an adequate publications base, to meet the increased level of manuscripts produced and published, and to avoid a reduction in both the quality and quantity of publications.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from a variety of sources including receipts and collections from users of Barro Colorado Island Nature Monument facilities (20 U.S.C. 79b(d)) and allotments. They are used to support, in part, the salaries and related costs of the fellowship education program, the senior sabbatical program, insurance, supplies and facilities management. Funds also are used to finance visiting scientists and students, field research, seminars, lectures and to defray the expenses at international scientific colloquia and ceremonial occasions. Monies also were provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program for training in tropical biology, fellowships, field research, and environmental and research education in the tropics. Expenditures under this Program and the Fluid Research Program, totaling \$138,000 in FY 1982, have not yet been recorded for FY 1983 and FY 1984 which explains the variances in the totals shown for those years.

Restricted Funds - Funds provided here are in the form of restricted endowments which specify the use of the donation or bequest and of gifts and grants by individuals, foundations, organizations or corporations for specific purposes. They are used to support: scientific research related to the biological, ecological and behavioral processes on which tropical ecosystems are organized; research related to geophysical events; publication and distribution of research results; and studies relating to endangered tropical environments. Among the restricted endowments is the Becker Endowment Fund, which has supported the studies of damage to tropical rainforests by earthquake-caused landslides in the neotropics and Papua, New Guinea (expenditures totaled \$6,000 in FY 1982). Continuing support from the Exxon Corporation will be used to provide short-term tropical biology fellowships and assistance for students from developing Latin American countries under the supervision of STRI's scientific staff (estimated expenditures of \$44,000 in FY 1983 and \$46,000 in FY 1984); funds from the Mobil Foundation support technical diving research (expenditures totaled \$17,000 in FY 1982 with estimated expenditures of \$16,000 in FY 1983); and a grant is anticipated from the Rare Animal Relief Effort, Inc. to establish an office to coordinate the formation and functioning of student conservation groups throughout Panama (estimated expenditures of \$15,000 in FY 1983). An endowment has been established in memory of Dr. Robert Silberglied, a former entomologist at STRI, to support fellowships in tropical entomology for young biologists (estimated expenditures of \$20,000 in FY 1983 and \$16,000 in FY 1984). The W. Alton Jones Foundation, Inc. has awarded a significant grant to STRI for the purpose of developing alternatives to the destruction of tropical forests. The project will be carried out over a five-year period in the West Bank of the Canal in the vicinity of the Barro Colorado Nature Monument (estimated expenditures of \$358,000 in FY 1983 and \$169,000 in FY 1984). Amounts for this project are not included in the summary chart in order to be consistent with the Institution's Five-Year Prospectus which was prepared prior to the receipt of this foundation grant. STRI also has several other restricted funds each with anticipated expenditures of less than \$10,000 a year.

				NONA						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES!	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	48	1,961	-	_	-	87	-	27	1	85
FY 1983 Base	48	2,161	-	-	_	83	-	29	1	40
FY 1984 Estimate	48	2,222	_	_	_	77	_	24	1	40

^{*}FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	48	0	48
Number of Other Positions	0	0	0
11 Personnel Compensation	1,260	19	1,279
12 Personnel Benefits	123	2	125
21 Travel & Trans. of Persons	17		17
22 Transportation of Things	2	-1	1
23 Rent, Comm. & Utilities	180		180
24 Printing and Reproduction	5		5
25 Other Services	75		75
26 Supplies and Materials	265	20	285
31 Equipment	234	21	255
Total	2,161	61	2,222

Analysis of Increase

Necessary Pay	21
Inflation	40
Program Funds	0

ABSTRACT - Natural or artificial light control the growth and development of plants. Scientists at the Radiation Biology Laboratory (RBL) monitor the quality, duration, and intensity of light in natural environments to understand the nature and extent of its influence on plants. The RBL staff identifies plant pigments responsible for the absorption of light and measures the subsequent regulation of growth by using controlled growth chambers that simulate natural light conditions. The demand for this information is increasing rapidly as pressure mounts to increase plant yield as food and fiber. No program increase is requested for FY 1984. Necessary pay of \$21,000 is required for existing staff and an amount of \$40,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - Research of the Radiation Biology Laboratory emphasizes three principal areas: (1) regulatory biology, (2) environmental biology, and (3) radiocarbon dating. Since its inception in 1929, RBL has pioneered in research to measure sunlight and to

determine its influence on plant growth. The emphasis of RBL's present experimental program is of greater scope than that of any other single photobiology laboratory. The Laboratory has made major contributions in the field of photobiology including: (a) description for the first time of several biological responses to different colors of light, which gives information about the chemical nature of the pigments involved, and (b) development of methods for measuring sunlight that have led to techniques and calibration standards used worldwide.

The production of stored chemical energy by photosynthesis is basic for virtually all life on Earth. The use of this energy is controlled by signals from the environment. A primary objective of RBL has been to explain the influences of the various factors in the environment--light, temperature, humidity, and atmospheric content--on growth and development and to characterize the mechanisms within living cells through which these signals operate. This objective is accomplished by studying these environmental influences on plant growth and development in the laboratory under controlled environmental conditions and then verifying the importance of these processes in nature by monitoring the natural, changing environment. An example of relevant environmental concern has been the development of instrumentation for monitoring the ultraviolet energy received at the Earth's surface from the sun. Many factors--dust particles, ozone concentration, and chemical processes -- may affect the ultraviolet energy passing through the atmosphere. The Laboratory has the most accurate and precise data available for several geographic locations of the naturally occurring fluctuations, both in the ultraviolet and in the visible portion of sunlight. Utilizing these data, conditions can be simulated in environmentally controlled plant growth chambers to assess the effects such changes may cause in the growth of experimental plants. The data also can be used to assess productivity of diverse natural environments and to provide predictive estimates of the responses to changes in the environment, whether man-made or natural. Such programs are by their very nature long-term and require the concerted efforts of a number of scientific disciplines. Disciplines represented at RBL include physiology, cytology, biochemistry, biophysics, physics, engineering, and electron microscopy.

Major accomplishments in FY 1982 include the following:

- 1. For the first time, the color and amount of underwater light received at an average depth of two meters was measured in an estuary for 12 continuous months. The development of such instruments enables scientists to predict more accurately the productivity of plants. This research was done cooperatively by RBL, the National Museum of Natural History/Museum of Man, and the Chesapeake Bay Center for Environmental Studies to provide essential data needed to measure seafood productivity in the Chesapeake Bay region.
- 2. The amount of ultraviolet in sunlight is particularly important to plant growth. RBL scientists have monitored the sun's ultraviolet light for the past 12 years at both Rockville, Maryland and Panama. The change in the amount of ultraviolet light reaching RBL's instruments has varied up to 500 percent from a maximum peak in 1970-72 to a minimum in 1975-77 and a return to a maximum in 1980-82. The measurements were made so that latitudinal or seasonal factors were eliminated. Such changes in total ultraviolet light may be owing to fluctuations in the output of radiation from the sun.
- 3. RBL research has found that plant productivity in greenhouses maintained at low temperatures can be increased by 40 percent if additional infrared heat sources are used to increase leaf temperatures without increasing ambient air temperatures. A practical application of this finding could reduce heating costs in commercial greenhouses.

- 4. Green plants, generally, must have light to develop a fully functional system for photosynthesis. Scientists at RBL discovered a primitive, blue-green algae, Tolypothrix tenuis, that can produce in the dark not only the main light harvesting structures, but also the membranes where photosynthesis occurs. The size, form, structure and pigment composition of the light-harvesting structures are the same from cells grown either in darkness or under red light. This research indicates that primitive cells have the capability of making the photosynthetic apparatus, and only as plant cells became more complex did a requirement develop for controlling growth by light signals from the environment. By thus increasing our knowledge of how photosynthesis might have evolved in plants, scientists eventually should find ways to breed plants that are more useful to mankind in maintaining sufficient food resources.
- 5. Radiocarbon dating at RBL of cane torches found in a cave in eastern Tennessee indicates that the remarkable cave drawings (glyphs) found on the mud walls were inscribed during Middle Woodland times (A.D. 1100 to A.D. 1300). This is the first of such findings in the Americas, and archeologists and ethnographers are still analyzing hundreds of glyphs to learn about the people who drew them.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived primarily from the Institution's Collections Acquisition, Scholarly Studies and Education Program, and the Fellowships and Visiting Scholars Program. In FY 1982, funds provided through the Collections Acquisition, Scholarly Studies and Education Program supported the research on the effect of solar radiation on productivity of submerged aquatic species in an estuarine community (\$51,000). Expenditures under this Program have been recorded for FY 1982 but not yet for FY 1983 and FY 1984. Expenditures for the Fellowship and Visiting Scholars Program totaled \$36,000 in FY 1982, with estimated expenditures of \$77,000 in FY 1983 and \$70,000 in FY 1984.

Restricted Funds - These are provided through donations, bequests and foundation grants that are designated for specific subjects of investigation. These include: the Eppley Foundation grant used to support investigation of biological responses to solar radiation (estimated expenditures of \$22,000 in FY 1983 and \$18,000 in FY 1984); and the Rollins Endowment Fund used to support the study of the physical measurements of radiation (estimated expenditures of \$5,000 in FY 1983 and in FY 1984).

Federal Grants and Contracts - These funds are provided by various Federal agencies and departments for special projects that can be conducted at RBL because of its specific expertise and unique facilities. In FY 1982, a contract was received from the Department of Agriculture to support research on accessory pigments in photosynthesis (expenditures totaled \$33,000 in FY 1982 with estimated expenditures of \$40,000 in FY 1983 and in FY 1984).

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Special Purpose		RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	222	6,386	-	8	31	1,993	2	, 64	2	108
FY 1983 Base FY 1984	222	7,382	-	5	31	2,342	2	70	1	144
Estimate	222	7,678	_	5	31	2,512	2	24	1	81

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	222	0	222
Number of Other Positions	5	0	5
11 Personnel Compensation	5,124	143	5,267
12 Personnel Benefits	503	14	517
21 Travel & Trans. of Persons	41		41
22 Transportation of Things	40		40
23 Rent, Comm. & Utilities	65	9	74
	80	63	143
24 Printing and Reproduction 25 Other Services	565	22	587
	524	16	540
26 Supplies and Materials		29	469
31 Equipment	440		409
Total	7,382	296	7,678
Analysis of Increase			
Necessary Pay		95	
Inflation		89	
Restored Position Funds		62	
Program Funds		50	

ABSTRACT - The National Air and Space Museum (NASM) was created by the Congress to memorialize the development of aviation, space flight, and space science; to collect, preserve, and exhibit aeronautical, space flight and space science artifacts of historical and technical significance; to collect and display the art which relates to aerospace subjects; to serve as a repository for documentary materials and as a center for research into air and space history; and to provide educational material for the historical study of aviation. For FY 1984, an increase of \$50,000 is sought to fund an expanded publications program. Necessary pay of \$95,000 is required for existing staff and an amount of \$89,000 is sought to compensate for the effects of inflation in non-salary areas of expense. A further amount of \$62,000 is requested to provide full-year funding for the six positions restored by the Congress in FY 1982.

PROGRAM - The National Air and Space Museum is the most popular museum in the world. More than 58 million people have visited the Museum since it opened on July 1, 1976. Its success reflects the high quality of the Museum's extensive programs in exhibitions, education, research, collections management, and restoration of historic artifacts. The 23 exhibit galleries trace the development of aviation and space achievements from the beginning of flight through the exploration of the moon and beyond. A central hall illustrates the entire history of flight, with the actual historic artifacts including the 1903 Wright Flyer, the Spirit of St. Louis, the Mercury space capsule Friendship 7, the Gemini 4, the Apollo 11 command module "Columbia," and a moon rock. Exhibitions are complimented by films related to air and space travel shown in the Samuel P. Langley Theater, a specially equipped theater featuring an innovative high-resolution projection system (IMAX) and a five-story movie screen; and the presentations on astronomical and related subjects in the Albert Einstein Spacearium. NASM possesses the world's largest collection of objects related to aviation and space flight, and represents an unparalleled resource for research in aviation and space history. It also acquires, preserves and documents the written, printed and photographic material resulting from air- and space-related research, development and operations.

Exhibitions - In FY 1982, the Museum continued its exhibition and special presentation programs with the opening of exhibits on "25 Years of Space Exploration," a chronology of the major achievements in space set within the context of other major events in American culture and world affairs of the same period; and "Black Wings," a historical tribute to Black aviators, which will later travel to museums across the country under the sponsorship of the Smithsonian Institution Traveling Exhibition Service; the premiere of the new IMAX movie "Flyers" in the Langley Theater; and the new Spacearium show "PROBE." During FY 1983, "Stars," the only major exhibition in the United States to deal specifically with astronomy, will open as a new permanent exhib-Smaller exhibits on the former administrator of the National Aeronautics and Space Administration, James Webb; aviation photography; aviation art; space shuttle art; American Aces from World War I to Vietnam; and the 200th anniversary of the first tethered balloon flight also will be completed. Scheduled for FY 1984 is the opening of a new gallery, entitled "Golden Age of Aviation." This major exhibition will cover the exciting period between 1919 and 1939, including record-setting long-distance flights, ocean flights, air races, and exploration. Other new exhibits for FY 1984 will chronicle the story of bush pilots, who provided communications in the far reaches of the world; the air- and space-related activities conducted during the Truman administration (a Harry S. Truman Centennial exhibit); a display of World War II sea-air photography; and the work of renowned aviation pioneers Edward Heineman and Kelly Johnson.

Public Education and Orientation - The Education Services Division provides tours, develops publications, demonstrations, lectures, seminars, workshops, and audiovisual material for the general public and educational institutions. Over 16,000 special tours for students were conducted in 1982 as well as "Discovery Tours" that allow younger children to touch and try on actual pilot and astronaut uniforms. Family tours, offered during the summer and holiday seasons, serve an average of 1,500 visitors per month. Special tours have been developed for the visually and hearing-impaired visitor.

In FY 1982, the Teacher Resource Center was established to provide educators with aerospace resources and science activities to use in their classrooms, and with materials for distribution to other teachers. In its first year of operation, the Center served over 16,000 professional educators. Another innovative educational approach developed by NASM is the "Regional Resource Program," a national outreach program that trains participants to conduct presentations in aerospace education in their own schools and communities. During FY 1982, these presentations reached an audience of over 25,000 people across the country. In FY 1983, the training program

has grown to include 60 participants from 27 states. The Museum sponsors for the public an extensive series of aeronautics and astronomy lectures including the popular presentation "Noontime with the Stars," and aviation and space fiction films, such as "Star Wars," "The Black Hole," and "The Battle of Britain."

Research - Publications resulting from NASM research in FY 1982 and planned for FY 1983 include: Rocket Societies: Prelude to the Space Age, Vengeance Weapon 2, U.S. Women in Aviation 1919-1929, Engines in Museums Around the World, Aircraft in Museums Around the World, and Sky Interpretations Resource Bulletin.

During FY 1982 and FY 1983, the Center for Earth and Planetary Studies made important strides in research by employing remote sensing. Using a computer, the Center has been able to receive data from the Landsat and Viking missions. This information was used in investigations of different rock and soil types in Egypt and the United States, as recorded from the perspective of Earth orbit. One project has resulted in the identification of sand dune movements of less than 0.5 kilometers from the analysis of these orbital images. In FY 1984, with additional upgrading of the computer, the research capabilities of remote sensing will be further enhanced. Analysis of these images from the satellite data will provide further interpretation of sand movement and deposition patterns on Earth, as well as the geologic mapping of the planet's surface.

The Aeronautics Department currently is devoting most of its research efforts to the forthcoming publication of <u>History of Aircraft</u>. This four-volume work, a hallmark in this subject area, will detail the history of flight from antiquity to the present, including an extensive bibliography with a data book providing a statistical overview of aeronautical history. Research for this project will continue through FY 1984.

In FY 1983, the Space Science and Exploration Department will complete interviews for its oral history project with specific emphasis on pioneers of space astronomy. These interviews will then be transcribed and a subject index will be published and distributed in FY 1984. Research and documentation of the Space Telescope, beginning in FY 1983, will result in a publication of its history in FY 1984, timed to coincide with the launch of the instrument.

Development of Collections - During FY 1982 and FY 1983, eight additional aircraft were acquired for the collections, including the Martin B-57, Lockheed U-2C, the Farman Sport (the Monocoupe which won the 1948 U.S. aerobatic championship), the Bell Model 206-IL helicopter (the first helicopter to fly around the world), a Douglas A-IH, the Ryan STA, and an Antonov An-2 (of Russian design, the largest biplane in operational use).

Space artifacts acquired during FY 1982 and FY 1983 include the Mariner 10 Planetary Probe spacecraft, the 1962 engineering prototype of the Orbiting Solar Observatory, an Apollo Telescope Mount (a cluster of six telescopes) from Skylab, and a camera used in Landsat missions.

The restoration of the Museum's artifacts is conducted at the Paul E. Garber Preservation, Restoration and Storage Facility in Suitland, Maryland. During FY 1982, the restoration of the deHavilland DH-4, Ecker Flying Boat, and Benoist-Korn was accomplished, with work continuing on the more complex Nakajima Irving, Northrop NlM Flying Wing and the Focke-Wulf 190. In FY 1983, additional historic aircraft will be restored including a 1912 Wiseman-Cooke, a Beech-17, and the Wittman "Buster," which will occupy the "Golden Age of Flight" exhibit. Planned for FY 1984 are the restoration of two pre-World War I aircraft, the Maupin Lanteri and Fowler Gage Tractor, and an original World War I fighter, the Spad XIII. Additionally, a special program was begun in FY 1983 to slow the deterioration of the aircraft that have not yet been restored.

The Garber Facility also functions as a public exhibition area with 170 major restored artifacts that cannot be displayed on the Mall due to space considerations. Pre-scheduled tours are conducted featuring the objects on display and the restoration work conducted at the Facility.

The new Department of Records Management has undertaken an important and innovative project in the storage and retrieval of the Museum's photographic collection. Beginning in FY 1982, photographic images have been transferred onto videodisc, thus facilitating greater access to the collections. Descriptive identifications enable the comprehensive indexing to the photographic collections and the immediate retrieval of the photographic image for use by the general public and historians. The actual photographs can then be more permanently stored, but still remain accessible for use when the original is needed. By the beginning of FY 1984, over 200,000 photographic images from the collection will be stored on videodiscs. As a pioneer in the application of the new videodisc technology to the storage of archival collections of visual material, NASM's project is being closely monitored by other museums, corporations and educational institutions as a model for the eventual transformation of their own extensive photographic and specimen collections to videodisc.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, an increase of \$50,000 is requested to support the National Air and Space Museum's expanded publications program. The publications program at NASM is devoted to several audiences, ranging from the general public to scholars in the field of aeronautics, space sciences and technology. To encompass such a diverse field, publications stem from both the research and exhibit programs, and include scholarly books, articles, catalogues and brochures which are distributed free of charge to Museum visitors. NASM's early efforts were concentrated on developing exhibitions. The Museum only recently has developed an active publications program. The number of scholarly works scheduled for publication in FY 1984 is expected to increase significantly compared with previous years. Scholarly works anticipated in FY 1984 include Congreve and Hale Rockets, a history of early military rockets; volume three of U.S. Women in Aviation, 1920-1939, a series describing the achievements of women in the field of aeronautics; and Goddard Rockets, a description of the milestones in the development of liquid fuel rockets. At the same time, printing costs are increasing and high visitor interest in NASM is creating a continuing demand for the distribution of general museum brochures and brochures about special lectures, symposia and the Garber Facility. Presently, an amount of \$50,000 is available in NASM's publications base. An additional sum of \$50,000 would provide funding more consistent with the growing research productivity of the Museum staff and the continued high level of public enthusiasm about aviation and space exploration.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from a variety of sources including the Museum's share of sales in the shops, restaurant and concession fees, net proceeds resulting from bureau activities (such as the Theater and Spacearium) and small allotments. In addition to meeting the expenses of the Theater and Spacearium, they are used to finance fellowships, guest lecturers, symposia and special events for the opening of new exhibits. Portions of the proceeds from the Theater and Spacearium activities are being reserved for the replacement of the film entitled "Flyer" and for support of other Institutional programs. Expenditures in FY 1982 also were used to produce the new Spacearium show "PROBE," which opened in September 1982. This production presents, in an entertaining format, significant advances in planetary knowledge made possible as a result of information obtained by the unmanned spacecrafts "Pioneer," "Venus," "Viking" and "Voyager." Additionally, these funds support the publication costs of the Air and Space magazine, a quarterly publication, distributed to over 15,000 educators nationwide, containing current information on aviation and space topics for use in the classroom. Continuing annual support also is provided from the Lindbergh Chair of Aerospace History for a distinguished visiting scholar at the Museum.

Restricted Funds - Funds provided here are in the form of restricted endowments which specify the use of the donation or bequest, and of gifts and foundation grants by individuals, organizations or corporations for specific purposes. The largest examples of these funds are the Ramsey Endowment Fund used to finance selected research relating to naval flight history (actual expenditures of \$25,000 in FY 1982 and estimated expenditures of \$32,000 in FY 1983 and \$24,000 in FY 1984), and the Guggenheim Endowment Fund which is used for exhibits, lectures, and stipends (actual expenditures of \$4,000 in FY 1982 and estimated expenditures of \$38,000 in FY 1983).

Federal Grants and Contracts - These are provided by various agencies and departments for special projects which can be conducted at NASM because of its expertise in a given area. Continuing support from the National Aeronautics and Space Administration supported studies in planetary research by NASM's Center for Earth and Planetary Studies (actual expenditures of \$15,000 in FY 1982 and estimated expenditures of \$19,000 in FY 1983); the acquisition of equipment and storage facilities for the Regional Planetary Image Facility at NASM (estimated expenditures of \$16,000 in FY 1983 and \$18,000 in FY 1984); and for studies of the moon and planets (actual expenditures of \$50,000 in FY 1982 and estimated expenditures of \$33,000 in FY 1983 and \$16,000 in FY 1984). Based upon prior years' experience, NASM anticipates receiving grants totaling \$80,000 in FY 1983 and \$65,000 in FY 1984.

(Dollars in Chodsands)										
				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Spec	ial Purpose	RES'	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	22	911	1	58	-	119	-	72	10	350
FY 1983 Base	· 23	996	1	63	-	46	-	. 16	8	435
FY 1984 Estimate	23	1,017	1	67	_	41	_	_	2	289

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	23	0	23
Number of Other Positions	6	0	6
11 Personnel Compensation	720	9	729
12 Personnel Benefits	70	1	71
21 Travel & Trans. of Persons	10	1	11
23 Rent, Comm. & Utilities	20		20
24 Printing and Reproduction	5		5
25 Other Services	74	4	78
26 Supplies and Materials	54	6	60
31 Equipment	43		43
Total	996	21	1,017

Analysis of Increase

Necessary Pay	10
Inflation	11
Program Funds	0

ABSTRACT - The Chesapeake Bay Center for Environmental Studies (CBCES) is a 2,600 acre natural area on the Rhode River south of Annapolis, Maryland. The staff does basic research on land/water interactions and conducts an environmental education program. It is one of the world's leading facilities for carrying out research on the relationships between estuaries and their watersheds. The Center's activities are divided into three categories: environmental research, education and public information, and administration and facilities management. No program increase is requested for FY 1984. Necessary pay of \$10,000 is required for existing staff and an amount of \$11,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Center's research program concentrates on the Rhode River and its watershed. The Rhode River is a subestuary of the Chesapeake Bay whose topography, soils, land uses, habitats and biota are representative of the mid-Atlantic Coastal Plain. The research program has gathered valuable data which spans cycles of drought,

unusually heavy rainfall, cold and warm years. These results have thus become extremely useful in analyzing the effects of weather. Long-term studies are underway on weather; precipitation chemistry; land use changes; population dynamics of plants and animals; watershed hydrology; erosion and sediment deposition; water quality of land runoff and tidal waters; and the roles of streamside forest, freshwater swamps, tidal marshes and flats in regulating water quality.

Research at the Center also has focused on the question: How important is it to preserve a forest border between streams and fields? Traditionally, in the coastal plain, streamside forests have been maintained between croplands and the streams into which they drain. On this watershed, forest borders intercept over 90 percent of the sediments and their associated nutrients and 80 percent of the nitrate in runoffs after rainstorms. The streamside forests also removed over 90 percent of the nitrate in subsurface water flowing from the cropland to the stream between storms. Most of these effects occurred in the first 50 feet of forest. These results show that a forested strip at least 50 feet wide along streams removes 80 to 90 percent of the silt and pollutants from adjacent croplands, and maintaining these woods is therefore a very economical way to improve water quality.

Another study examined the water quality interactions between tidal mudflats and adjacent marshes. Scientists measured the movement of nutrients and sediments among a mudflat, a high elevation marsh and a low elevation marsh. They found that mudflats retained and released a greater volume of nutrients per unit area than either type of marsh. The marshes transformed the nutrients trapped in the sediments into soluble forms, which were then released to the mudflat. The results of this research delineate the relative importance of marshes and mudflats in trapping nutrients and sediments and indicate that open water areas are more important per unit of surface area in protecting the quality of coastal water than adjacent marshes. Such findings are important for public officials concerned with natural resources in making decisions on what areas to protect in coastal regions.

Sunlight penetration in muddy coastal waters is a complex, little understood process. Since the ability of these waters to produce plants and fish is often limited by lack of sufficient light, scientists from the National Museum of Natural History/Museum of Man and the Smithsonian Radiation Biology Laboratory are studying how deep and to what degree sunlight penetrates these waters. For several years, scientists have measured the strength of underwater sunlight (in eight segments of the spectrum) as well as 17 other water qualities that affect the character of this kind of light. A mathematical model has been developed which allows comparison of sunlight penetration and effectiveness on plant growth under a variety of environmental conditions. The model now is being tested in a wide variety of coastal situations. The goal is to develop a general model applicable to sunlight penetration in muddy waters, and thus to be able to predict easily the light available for plant growth.

An estuary such as Chesapeake Bay has a relatively short geological life span because it soon fills with sediments. In the Chesapeake, it was thought that much of the bottom sediment originated from runoff during the intense tobacco farming of the 17th and 18th centuries. On the Rhode River, scientists quantitatively are determining sediment deposition at various times: when colonists started farming its banks; during the colonial era; and in recent times. They also will trace the origins of the sedimentary layers, i.e., whether they resulted from bank erosion or sheet erosion by using pollen analysis and carbon-dating.

In FY 1983, field work began on characterizing habitats on the Mexican wintering grounds of some North American song birds. The goal is to determine how alteration of Yucatan forests has affected the abundance of wintering species. The techniques for sampling birds and plants, developed by scientists at CBCES and the National Zoological

Park, permit a rapid and accurate census of birds over large geographical areas. The results of this research should explain how the quality of the wintering grounds in Mexico determines the numbers and kinds of songbirds we have breeding in the northeast each spring. The project is being supported by the World Wildlife Fund.

Educational Research and Public Information - Educational research, development and public program activities at the Center seek to improve the quality and effectiveness of science and environmental education outside school. Most people learn from sources other than school, yet almost all educational research is directed at children during school hours. As a major non-school Institution, the Smithsonian seeks to understand how people acquire science information and thus to improve scientific literacy of the public. The program studies are for both children and adults and develops related educational materials. The staff produces family-oriented science materials for parents to supplement their children's science learning. The first material was tested and prepared for publication in FY 1982 and disseminated in FY 1983.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and from proceeds from the sales of educational brochures and materials, and are used to support the Center's summer ecology program, the work/learn program for graduate and undergraduate students studying at the Center, and the salary costs of a docent coordinator and part-time public program director. An allotment from the Institution's Collections Acquisition, Scholarly Studies and Education Program was used to support the development of family education materials. Funds from this Program and the Fluid Research Program, together totaling \$77,000, have been recorded for FY 1982 but not for FY 1983 and FY 1984 which explains the variance between those years.

Restricted Funds - These are provided through donations and grants from individuals, foundations, organizations or corporations for specific purposes. In FY 1982, funds provided by the Knapp Foundation were used for research on watershed monitoring (expenditures of \$71,000 in FY 1982 and estimated expenditures of \$16,000 in FY 1983).

Federal Grants and Contracts - These funds are provided by various State and Federal agencies for special projects which can be conducted at the Chesapeake Bay Center because of the expertise of the Center's staff and its site characteristics. In FY 1982, funds provided by the National Science Foundation and the Chesapeake Research Consortium were used for a project on "Nutrient Dynamics of the Rhode River Ecosystem" (actual expenditures of \$234,000 in FY 1982 and estimated expenditures of \$141,000 in FY 1983 and \$59,000 in FY 1984). Continuing support from the National Science Foundation was used for "Science Activities for Informal Learning" an educational program designed to increase the scientific awareness of early adolescents (actual expenditures of \$95,000 in FY 1982 and estimated expenditures of \$85,000 in FY 1983). Based upon prior years' experience, the Center anticipates receiving grants totaling \$170,000 in FY 1983 and \$230,000 in FY 1984.

NONAPPROPRIATED SOURCES OF FUNDING										
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Spec	ial Purpose	RES'	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982										
Actual	327	9,271	-	18	_	77	-	37	6	297
			1							
FY 1983										
Base	327	10,216	-	5	-	116	- 1	50	6	221
	1									
FY 1984										
Estimate	327	10,577		5	_	92	_	49	6	235

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	327	0	327
Number of Other Positions	30	0	30
11 Personnel Compensation	7,689	155	7,844
12 Personnel Benefits	741	15	756
21 Travel & Trans. of Persons	31	2	33
22 Transportation of Things	16	1	17
23 Rent, Comm. & Utilities	106	5	111
24 Printing and Reproduction	13	1	14
25 Other Services	436	122	558
26 Supplies and Materials	1,024	52	1,076
31 Equipment	114	6	120
Acquisitions for Collections	35	2	37
42 Insur. Claims & Indem	11		11
Total	10,216	361	10,577

Analysis of Increase

124
91
46
100

ABSTRACT - The National Zoological Park, established by Congress in 1890, maintains a large and varied animal collection for exhibition and study. The Zoo serves the informational and educational needs of the public through its research, conservation, and animal health programs on the 168 acre site in Washington's Rock Creek Valley, and the 3,150 acre Conservation and Research Center near Front Royal, Virginia. For FY 1984, an increase of \$100,000 is requested to contract for specialized services in the provision of seasonal and long-range grounds maintenance and preventive maintenance of utilities systems. Necessary pay of \$124,000 is required for existing staff and an amount of \$91,000 is sought to compensate for the effects of inflation in non-salary areas of expense. A further amount of \$46,000 is requested to provide full-year funding for the six positions restored by the Congress in FY 1982.

PROGRAM - The Zoo was established by Congress in 1890 for the "advancement of science and the instruction and recreation of the public." To achieve this purpose, the Zoo maintains at Rock Creek a live collection of approximately 2,000 animals comprising 430 species, selected for their exhibition and educational value, and for research on their conservation in the wild. Exhibits are designed to be as compatible as possible with the animals' natural habitats and are grouped taxonomically to show the variety of physiology, behavior, and evolution. At the Conservation and Research Center in Front Royal, Virginia, over 350 animals from approximately 46 species are housed. These are selected for the long-term breeding potential of animals whose present captive populations are small or unstable or whose natural habitat is endangered.

The Zoo serves the general public with public information, education, and visitor service programs for families and school groups, as well as for the disabled and senior citizens. Approximately three million visitors each year from every state and many foreign countries visit the Rock Creek site. The scientific community is served through the Zoo's dissemination of research results, scholarly publications, cooperation in animal breeding programs, and the exchange of knowledge and experience in education and animal management with other zoos and research centers.

The primary objectives of the Zoo are to care for, exhibit, and conduct research on the different species of animals present in the collection. An active breeding program is supported in order to reduce the number of animals taken from their natural habitats and to increase the number of animals to the point where certain ones may be reintroduced to their natural ranges. These objectives are met through the following programs: Animal Exhibition, Animal Management, Animal Conservation and Propagation, Research, Public Education and Information, and Support Services.

Animal Exhibition - The Zoo conducts a varied and innovative exhibition of animal programs for the education and enjoyment of visitors. The animals are exhibited in secure enclosures designed to meet their physical needs and to be aesthetically pleasing to visitors. A system of six trails directs visitors to these animal exhibits, with signs and posters explaining interesting biological facts about each animal and its natural habitat, including its status in the wild. In FY 1982, progress continued in the renovation of exhibit areas. After nearly two years of work, the Reptile House reopened with larger cases and new lighting, enabling visitors to view the reptiles in more attractive and healthier settings; new areas for the study and breeding of selected reptiles also were created. The major interior construction of the renovated Small Mammal House was finished, with reopening scheduled for early 1983. The building features skylights to provide natural lighting, and will display 50 to 60 species ranging from tiny shrews to dog-sized binturongs, and has been designed for maximum efficiency of operation. The new Monkey Island will open in the spring of 1983 with a colony of Barbary Macaques inhabiting the island terrain, including an 18-foot rock mountain and a waterfall that flows into the wide surrounding moat.

Animal Management - The Zoo seeks to improve the health and longevity of its animals by upgrading its health facilities and expanding medical care, including strict quarantine of new animals to prevent any diseases from infecting the present collections. Other animal health programs include preventive and emergency medical treatment, surgery, dentistry, geriatric and neonatal medicine, with comprehensive medical records maintained for each animal. In FY 1982, Zoo veterinarians treated 2,500 medical cases, of which 250 required hospitalization. Additionally, 180 new animals were quarantined and their health was carefully monitored during the average 35 day examination period. The Nutrition Laboratory was completed and a 24 hour hand-rearing facility was added, in which 26 young mammals, such as the tree kangaroo, golden lion

tamarin, and Bengal tiger already have been raised. Moreover, in the first application of its kind, all the medical records were entered into a computer. This data has been made available to other zoos to improve the medical care of their animals.

Animal Conservation and Propagation - The Conservation and Research Center plays an important role in the research and breeding programs for rare and endangered species. Its facilities provide a unique environment for the establishment of selected breeding programs that cannot be matched in a standard zoo setting. The Center has bred successfully such animals as zebras, Bactrian camels, Scimitar horned oryx, Pere David's deer, maned wolves, lesser pandas, binturong, and selected birds, especially cranes. Breeding programs for Eld's deer, golden lion tamarin, Pere David's deer, and Bali mynah are oriented to their reintroduction to their native habitat.

In FY 1982, the Zoo received notable gifts of animals made to the United States by foreign countries and their leaders, including a pair of bald eagles (a gift from the Federal Republic of Germany for the people of the United States to commemorate the 200th anniversary of the bald eagle for the Great Seal of the United States); and six gharials (a gift from the King of Nepal to President Reagan), endangered crocodilians once numerous and widespread in India and Nepal, but currently living in a drastically restricted habitat as a result of human encroachment. The Zoo expects to breed the gharials for distribution to other zoos for possible reintroduction into the wild.

Research - Research programs, conducted at Rock Creek, Front Royal, and selected field sites abroad, study animals in their natural conditions, as well as in captivity. Emphasis is placed on population genetics, demography, community ecology, reproduction, nutrition, the evaluation of social and mating systems, animal communication, and behavioral development.

Research has indicated high juvenile mortality through inbreeding in zoos. The Zoo is working to solve this problem by demographic and genetic modeling in selected endangered species. Carefully modeled breeding programs should maintain viable captive populations of critically endangered species, such as golden lion tamarins. The Zoo will test these models in FY 1984 and expand the program to cover other endangered species in cooperation with zoos throughout the world.

In a collaborative project with the International Environmental Science Program, the Zoo is attempting to determine whether the golden lion tamarins can be returned to their native habitat in Brazil. A similar effort to reintroduce Rothchild's mynah to Bali is also in process.

The training program in clinical zoological medicine provides pre-doctoral veterinary students in their final year of clinical training an opportunity to work with the Zoo's veterinary staff for a six to eight week period. Over the last five years, 40 students have received this training.

Public Education and Information - The Zoo conducts educational programs for visitors, ranging from activities for preschoolers to presentations for family groups. For students, there are classroom curriculum units, pre-visit lesson packages, films, guided tours, and a six-week instructional class. Emphasis for high school groups is placed on teacher training and instruction on animal behavior, research, and zoo management. Innovative educational material for families is provided at the three minieducational centers known as Zoolab, Birdlab, and Herplab, to distribute detailed information about animals, birds, and reptiles. The newest center, Herplab, concentrating specifically on reptiles, had approximately 8,000 visitors during its first three months of operation since its October 1982 opening.

Support Services - Support Services handle the security, maintenance and repair of the property and equipment. Its responsibilities include the 60 facilities at Rock Creek contained within a 168 acre area, with over 18 miles of paths and roadways and 2.4 miles of perimeter fence; and the Conservation and Research Center including 89 facilities containing approximately 236,000 square feet of space and two and one-half miles of paved roadways, 20 miles of jeep trails and 30 miles of fences.

EXPLANATION OF PROGRAM INCREASE - With its responsibility for the extensive facilities, animal exhibits and landscaped grounds at Rock Creek and Front Royal, the Zoo must utilize its resources efficiently in order to accomplish the broad scope of work involved in the routine daily maintenance of the grounds and facilities. In addition, the Zoo has requirements for grounds work on a seasonal basis, long-range landscaping and upkeep, and the preventive maintenance of the utilities systems in its facilities. The routine daily maintenance work can be scheduled on a consistent, systematic basis, while the majority of the seasonal and long-range work requires specialized skills and capital- and labor-intensive work on a cyclical basis. The Zoo has recognized that seasonal and long-range programs are provided more efficiently by contracting with commercial firms which specialize in offering these services to organizations on a scheduled or on-call basis. For that reason, the Zoo currently contracts for the provision of the supplemental trash removal and janitorial services required during the peak tourist season (\$135,000 per year). The success to date of these programs has lead the Zoo to decide to contract for such services as the cyclical scheduling of pruning, feeding, removal and replanting of trees and the seasonal seeding, cutting and trimming of the public landscaped areas to maintain a uniform level of appearance.

The heating, ventilating and air conditioning (HVAC) systems in the Zoo's 16 major buildings, which must operate 24 hours every day to guarantee the proper environmental conditions necessary for the health and safety of the animals, must depend on periodic comprehensive preventive maintenance inspections and the timely response to critical HVAC problems. The present skilled force at the National Zoological Park can at present only service the most pressing needs. By contracting out for portions of this service, the Zoo can implement a program which will allow for a sound preventive maintenance program and reduce the considerable backlog of present demands. By a program of constant inspection, the frequency and types of problems to the HVAC systems will be greatly minimized.

The requested increase of \$100,000 would enable the Zoo to make greater use of specialized contract services for grounds maintenance (\$20,000) and the maintenance of utilities systems (\$80,000); moreover, the utilization of contractual services for seasonal and long-range work also would allow the Zoo's staff to concentrate on the improved provision of the routine, systematic work necessary for the daily demands of the maintenance of these facilities and grounds.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from fees for general use of the facilities at the Conservation and Research Center at Front Royal, Virginia, including use of the conference area by authorized visitors. Funds also are provided from allotments, including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program, to support ongoing research and education projects. Expenditures under this Program and the Fluid Research Program totaled \$18,000 in FY 1982 but have not been recorded for FY 1983 and FY 1984.

Expenditures also are made for the support and maintenance of facilities at Front Royal (actual expenditures of \$32,000 in FY 1982 and estimated expenditures of \$68,000 in FY 1983 and \$59,000 in FY 1984) and for the purchase of animals for the collection (actual expenditures of \$32,000 in FY 1982 and estimated expenditures of \$31,000 in FY 1983 and \$25,000 in FY 1984).

Restricted Funds - These are provided through gifts and foundation grants and are used to support specific research projects and educational programs. For example, funds provided from the American Association of Zoo Veterinarians were used to support research in the area of artificial insemination (actual expenditures of \$4,000 in FY 1982 and estimated expenditures of \$14,000 in FY 1983 and in FY 1984); and to study viruses in zoo mammals (actual expenditures of \$5,000 in FY 1982 and estimated expenditures of \$9,000 in FY 1983 and \$10,000 in FY 1984). In FY 1983, funds provided through a grant from the Ringling Brothers Circus will be used for the study of antibiotics in various zoo animals (estimated expenditures of \$13,000 in FY 1983 and \$12,000 in FY 1984).

Federal Grants and Contracts - These are provided by various government agencies and departments for research being conducted by the Zoo staff. In FY 1982, continuing support from the National Institutes of Health is being used to promote conservation of the wild population of primates from various countries (actual expenditures of \$108,000 in FY 1982 and estimated expenditures of \$83,000 in FY 1983 and \$88,000 in FY 1984); to study primate social organizations (actual expenditures of \$62,000 in FY 1982 and estimated expenditures of \$30,000 in FY 1983 and \$32,000 in FY 1984); and to develop a Landset digital interpretation facility (actual expenditures of \$28,000 in FY 1982 and estimated expenditures of \$19,000 in FY 1983 and in FY 1984). This research will greatly improve the level of knowledge of tropical ecological systems. In addition, a grant from the National Science Foundation is being used to develop science education materials for families to use to learn about zoology in the informal setting of a zoo (actual expenditures of \$62,000 in FY 1982 and estimated expenditures of \$57,000 in FY 1983 and \$60,000 in FY 1984).

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				NONAPPROPRIATED SOURCES OF FUNDING							
				UNRESTR	ICTED				FEDE	RAL GRANTS	
Fiscal	FEDE	RAL FUNDS	Gen	neral	Spec	ial Purpose	RES'	TRICTED	& C	ONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1982 Actual	9	533	1	96	-	20	-	_	-	-1	
FY 1983 Base	9	390	2	121	- (8	-	1	- 1	-	
FY 1984 Estimate		406	2	124		-	_	51	_	-	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions Number of Other Positions	9 1	0	9 1
11 Personnel Compensation	338	8	346
12 Personnel Benefits	33	0	33
21 Travel & Trans. of Persons 24 Printing and Reproduction	6		6 2
25 Other Services	1	2	3
26 Supplies and Materials	5 5	3	8
Total	390	16	406

Analysis of Increase

Necessary Pay	8
Inflation	8
Program Funds	0

ABSTRACT - The Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, accomplishing and reviewing the activities of the Smithsonian history and art programs. This heading also includes the Joseph Henry Papers, an editorial project to publish the manuscripts of Joseph Henry (1797-1878), the eminent American physicist and first Secretary of the Smithsonian Institution. No program increase is requested for FY 1984. Necessary pay of \$8,000 is required for existing staff and an amount of \$8,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - With a base of four Federal positions and \$186,000, the Office of the Assistant Secretary for History and Art advises and assists the Secretary in overseeing the activities of the Smithsonian history and art bureaus. The Office also coordinates and manages Institution-wide special projects, programs, exhibitions and publications commemorating significant historical events and individuals; administers the Regents' Collections Acquisition Program, which was established to facilitate the purchase of

major acquisitions by Smithsonian museums; administers the Major Exhibition Program; and oversees the publication of books and guides to the history and art collections. The bureaus and offices reporting directly to the Assistant Secretary for History and Art are the Archives of American Art; the Cooper-Hewitt Museum in New York City; the Center for Asian Art, consisting of both the Freer Gallery of Art and the Sackler Gallery of Art; the Hirshhorn Museum and Sculpture Garden; the National Museum of African Art; the National Museum of American Art; the National Museum of American History; the National Portrait Gallery; the American Studies and Folklife Programs; the Joseph Henry Papers; the Anacostia Neighborhood Museum; and the Division of Performing Arts. The latter two organizations were transferred from the Public Service Activity to the History and Art Activity in FY 1983 in order to foster closer collaboration with other Smithsonian history and art museums.

Joseph Henry Papers - The remaining resources identified in the base of this office, five positions and \$204,000, support the Joseph Henry Papers project. Since 1968, the editor and staff of the Joseph Henry Papers project have been gathering, researching and preparing for publication a select 15 volume letterpress edition, supplemented by a microfilm edition, of the papers of Joseph Henry. These papers, which consist of approximately 80,000 documents, have been collected over the years by the project staff. Four volumes of the 15 volume letterpress series and a special volume of Henry's lectures already have been published by the Smithsonian Institution Press. In FY 1983, the fifth volume is scheduled for publication and a major portion of the work on the sixth volume will be completed. In FY 1984, the sixth volume is scheduled for publication and work on the seventh volume will begin. In addition, progress will continue to be made on the supplementary microfilm edition.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided primarily by allotments and are used to pay the salary, benefits, travel and support costs of the Assistant Secretary for History and Art, associate memberships for the Institution in the American Council of Learned Societies and the American Craft Council; and expenses associated with directorship search committees. They also support the Coordinator of Special Programs position in the new Center for Asian Art (estimated expenditures of \$40,000 in FY 1983 and \$42,000 in FY 1984). Special Purpose funds in FY 1982 and FY 1983 continue to provide editorial assistance for the Finders' Guide to Decorative Arts in the Smithsonian Institution, scheduled for publication by the Smithsonian Institution Press in FY 1983.

Restricted Funds - Funds provided here are in the form of gifts and foundation grants by individuals, organizations and corporations for specific purposes. The amounts shown for FY 1983 and FY 1984 represent grants that were anticipated to support a symposium. These grants are no longer anticipated.

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				NONA						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	278	8,261	1	97	1	244	1	378	-	-
FY 1983 Base	278	8,997	1	77	1	266	4	403	-	-
FY 1984 Estimate	278	9,200	1	77	5	498	1	161	_	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	278	0	278
Number of Other Positions	50	0	50
11 Personnel Compensation	7,120	139	7,259
12 Personnel Benefits	698	13	711
21 Travel & Trans. of Persons	45		45
22 Transportation of Things	45		45
23 Rent, Comm. & Utilities	180	3	183
24 Printing and Reproduction	67	3	70
25 Other Services	445	25	470
26 Supplies and Materials	254	14	268
31 Equipment	63	6	69
Acquisitions for Collections	80		80
Total	8,997	203	9,200

Analysis of Increase

Necessary Pay	116
Inflation	51
Restored Position Funds	36
Program Funds	0

ABSTRACT - As the Nation's museum of American cultural and technological history, the National Museum of American History (NMAH) holds in trust almost 16 million artifacts representing material evidence of the American heritage. The Museum's mission is to preserve these important national resources and to provide insight into the entire history of the United States through its collections, exhibitions, research, publication, and education programs. Besides exhibitions in its own building, it maintains the "1876 Centennial" exhibition located in the Arts and Industries building. No program increase is requested for FY 1984. Necessary pay of \$116,000 is required for existing staff and an amount of \$51,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$36,000 is requested to provide full-year funding for the four positions restored by the Congress in FY 1982.

PROGRAM - Over five million people annually visit the National Museum of American History to experience the Nation's history through its exhibitions, performances and education programs. Countless others are reached through loans from the collections to museums throughout the country and by means of lectures, presentations, and publications based on the collections or about various aspects of American history. While continuing to provide basic care for the collections and to meet thousands of public requests for information, loans, and various services, the Museum is concentrating on two areas of prime importance: completing in FY 1983 an inventory of its collections and accomplishing the first major renovation of its exhibition spaces since it opened in 1964. During FY 1982 and FY 1983, the Museum made steady progress in meeting goals in both of these areas.

Under an accelerated inventory program, the inventory of the Museum's collections will be completed by June 1983. Descriptive information on nearly 13 million objects was collected by the end of FY 1982; once the remaining information is recorded and the data entered into the computer, the Museum, in FY 1983 and FY 1984, will begin the process of refining and expanding the data collected. The data collected will be matched with the existing registrarial records to form a permanent source of detailed information on the collections. Such information is essential to the management, exhibition, and study of the collection. The appropriation request for the continuation of the Collections Management/Inventory Program, an explanation of this program, and a comprehensive funding summary appear in the Special Programs section of this budget.

In FY 1984, in addition to efforts to improve its collections management program, particular attention will be paid to upgrading areas where the objects are stored. With the renovation of several of the Museum's buildings at the Smithsonian Institution's Silver Hill storage facility in FY 1982 and FY 1983 and the availability of space at the Institution's Museum Support Center in FY 1984, the Museum will have a unique opportunity to reorganize its stored collections to improve accessibility and to free presently encumbered space on the Mall for exhibitions. The National Museum of American History Archives Center established in FY 1983, for the storage and research of archival collections held by the Museum, will begin systematically to address the special problems involved in the inventorying, cataloguing, and conservation of documentary artifacts, such as those in the Warshaw Collection of Business Americana, so that these materials can be made available for scholarly research.

In early 1982, the Museum began to revitalize its exhibition spaces commencing with the opening of two exhibitions honoring George Washington and commemorating the 100th anniversary of the birth of Franklin Delano Roosevelt mainly using funds first appropriated in FY 1981 under the Major Exhibition Program. "George Washington: A Figure Upon a Stage," which opened on February 22, 1982, the 250th anniversary of his birth, was one of the most comprehensive exhibitions attempted on the subject of the first President of the United States. "FDR: The Intimate Presidency," opened in January 1982, and illustrated the ways in which this dynamic President captured the mood of Americans across the country and brought government in touch with the consciousness of the people.

Work also will continue in FY 1983 on the reinstallation of permanent exhibitions on the first and second floors, and a number of smaller exhibits will be produced to highlight recent acquisitions, such as the Morgan Press Collection of the 19th-century American printing, type, cuts and ornaments; and to commemorate significant events in our Nation's history. In FY 1984, an exhibition on 18th-century life in America will open as the next major step in the revitalization of the Museum's second floor, and an introductory exhibit on American industrialization will be installed in the central area of the first floor. The Museum's plans to revitalize its exhibit spaces and progress to date are described in the Major Exhibition section of this budget.

In addition to the Washington and FDR exhibitions, several smaller scale exhibits were produced also in FY 1982. "Von Steuben: Secret Aid to the Americans," funded and organized by the Foundation for Prussian Cultural Property in Berlin, opened in November 1981, to document the German general's assistance in training Washington's troops before and after the winter at Valley Forge. Others included "The Fall of Parity," which illustrated a concept of physics; and "Tell-Tale Tools," which described the place of tools in our social and technological history.

In FY 1983, notable exhibitions include "Italians and the Creation of America," highlighting the contributions made by Italians to the discovery and founding of America (produced with support from the Radiological Society of North America, Inc.); "Atomic Clocks," describing the discovery and development of timekeeping devices based on the internal movement of atomic particles; "Worker's World: Industrial Village and Company Town," (developed and produced by the Hagley Museum) depicting the difference in lifestyles and work experiences of workers leaving their homes for the industrial centers; and "Brooklyn Bridge," commemorating the centennial of the opening of this famous bridge.

In FY 1982, the Museum's musical performance program concentrated on music and dance from the era of George Washington, with concerts performed by the Smithsonian Chamber Players, co-produced with the Division of Performing Arts, and 18th-century dancing classes, conducted in conjunction with the Institution's Resident Associates Program. The FY 1983 series will highlight some of the Museum's oldest and rarest instruments—Stradivari cello and violin, and an 1892 Steinway piano—in performances commemorating the birthdays of important classical composers.

The Doubleday Lecture Series entitled "From the Top: Sidelines in American Music," was expanded in 1981 to include a lecture by opera singer Beverly Sills and a lecture/performance by John Houseman and members of the Howard University Chorus. The 1982 Doubleday series concentrated on the American Presidency with lectures by John Chancellor, Gary Wills, and Marcus Cunliffe. In FY 1983, the Doubleday theme, "Arts, Letters and Americans," features talks by Studs Terkel, Eliot Wigginton, talks and illustrated performances by Arthur Mitchell and the Dance Theater of Harlem, S. Frederick Starr and the Louisiana Repertory Jazz Ensemble, and a literary classics evening with Eudora Welty, C. Van Woodward and Walker Percy.

Research on a variety of topics in American social and technological history at NMAH culminated in the publication of several books and exhibition catalogues during FY 1982: FDR: The Intimate Presidency, describes Franklin D. Roosevelt's presidency in terms of communications and the mass media of the 1930s; George Washington: A Figure Upon the Stage, studies George Washington as a man and as a national symbol; Yankee Enterprise: The Rise in the American System of Manufactures, explores the origins and effects of mass production in the 19th-century; Emulation and Invention, is an analysis of the thinking behind the major technological innovations of the early 19th-century; The John Bull: 150 Years a Locomotive, is a history of an early American steam locomotive; and So Proudly We Hail, a history of the United States Flag. A significant historical research project was begun this year, with support from the Institution's nonappropriated Trust funded Collections Acquisition, Scholarly Studies and Education Program, to study the development of Afro-American communities in ten major northern cities prior to the Civil War. Other current research projects center on 18th-century cultural and industrial history, as part of the major effort to redevelop the Museum's exhibit spaces.

Additions to the Museum's collections in FY 1982 included the purchase of two vases and a dinner place setting made by the Mount Washington Glass Work, notable for the range and quality of its glass: a five-keyed clarinet, made circa 1850 by Graves & Co. of Winchester, New Hampshire, an important American wind instrument maker; a life-sized mechanical man used as a traveling advertisement for cutting tools, which demonstrates the widespread popularity of the automation concept in 20th-century America; a rare 12-star U.S. Navy commission pennant, 1898-1900; and eight early United States notes, including a 1741 "manufactory bill," from the Land Bank of Massachusetts Bay Colony. Significant gifts included a number of pieces of American art glass by Frederick Carder at the Steuben Glassworks; the Remensnyder Collection of 60 hand tools for trades not previously represented in the Museum's collection; the Morgan typographic library, a rare collection of books on printing and typefounding; the gown and accessories worn by Mrs. Ronald Reagan to the Inaugural Ball in January 1981; a wood and silver snuff box, owned and used by Patrick Henry; a steam "Jack" patented by John Bailey of Boston in 1729 used to turn a spit before the fire, probably the oldest steam turbine still in existence; a bliss drawing press, circa 1883, an early machine used in the process of drawing metal for the production of seamless containers; a collection of paper, photographs and laboratory glassware of Dr. Leo Baekeland, the inventor of the first synthetic plastic; and a 1910 model Stanley steam automobile.

Collecting and research efforts in FY 1983 and FY 1984 will concentrate on the acquisition of contemporary artifacts and the study of 20th-century American history as part of the development of future major exhibitions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from a variety of sources including the Museum's share of sales in the museum shop, restaurant and bookstore, and from allotments including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program. In FY 1982, funds from this Program supported the Museum's Senior Outreach Project which provided an off-site museum experience to senior citizens who are not able to come to the Museum, and several historical research projects such as a study of the development of Afro-American communities in ten northern cities before the Civil War. Expenditures under this Program have been recorded for FY 1982 (\$32,000), but not yet for FY 1983 and FY 1984. Funds also are used to support the permanent position of the director of the Museum; to support field research, publications, and less expensive collection acquisitions; and special events for the opening of new exhibitions. The new exhibit theater entitled "The Time Machine" was expected to commence operations in FY 1984, with the expenditures originally projected to be recovered from admissions fees (approximately \$250,000). This project, however, has been deferred for further study.

Restricted Funds - These are in the form of restricted endowments which specify the use of the donation or bequest, and of gifts and grants provided by individuals, foundations, organizations, and corporations for specific purposes. In FY 1982, a three-year grant from the Ford Foundation provided partial support to enhance the Museum's Affirmative Action Program designed to give minorities experience in the museum profession by the creation of several administrative and research positions (actual expenditures of \$58,000 in FY 1982 and estimated expenditures of \$77,000 in FY 1983 and \$15,000 in FY 1984). Donations from various individuals continue to support the Friends of Musical Instruments Fund which provides performances, special education programs, lectures, and restoration and acquisition of historical musical instruments (actual expenditures of \$18,000 in FY 1982 and estimated expenditures of \$10,000 in FY 1983 and in FY 1984).

In FY 1982, several exhibitions also were made possible through outside sponsors. The "Von Steuben" exhibit was produced with contributions from various German corporate sponsors (actual expenditures of \$35,000 in FY 1982); the catalogue and film that accompanied the FDR exhibit were supported by gifts from Time-Life, Inc., and Radio Corporation of America (actual expenditures of \$46,000 in FY 1982); a gift from the Allstate Insurance Company was used to clean and remount the Star-Spangled Banner (actual expenditures of \$59,000 in FY 1982 and estimated expenditures of \$8,000 in FY 1983); funds from the American Society of Anesthesiologists support the design and production costs of an exhibition on the medical and social consequences of pain (actual expenditures of \$42,000 in FY 1982 and estimated expenditures of \$60,000 in FY 1983 and \$8,000 in FY 1984); funds from Citibank and the American Society of Consulting Engineers support the exhibition "Brooklyn Bridge" (estimated expenditures of \$75,000 in FY 1983 and \$6,000 in FY 1984); and grants from various corporate donors support the exhibition about the oldest operating steam locomotive in the western hemisphere, the "John Bull" (actual expenditures of \$6,000 in FY 1982 and estimated expenditures of \$63,000 in FY 1983 and \$15,000 in FY 1984). Based upon prior years' experience, NMAH anticipates receiving additional grants in FY 1984 totaling \$350,000.

NATIONAL MUSEUM OF AMERICAN ART

(Dollars in thousands)

<u> </u>				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Spec	ial Purpose	RES'	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	106	3,850	-	. 36	1	284	4	142	-	64
FY 1983 Base	106	4,279	-	25	-	90	4	179	-	-
FY 1984 Estimate	106	4,395	-	25	-	96	4.	125	_	-

*FTP = Full-time permanent positions

Program Funds.....

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	106	0	106
Number of Other Positions	35	0	35
11 Personnel Compensation	2,900 285	55 5	2,955 290
21 Travel & Trans. of Persons	45	5	50
22 Transportation of Things	95	2	97
23 Rent, Comm. & Utilities	43	1	44
24 Printing and Reproduction	107	1	108
25 Other Services	237	4	241
26 Supplies and Materials	285	4	289
31 Equipment	52	19	71
Acquisitions for Collections	230	20	250
Total	4,279	116	4,395
Analysis of Increase			
Necessary Pay		43	
Inflation		56	
Restored Position Funds		17	

ABSTRACT - The National Museum of American Art (NMAA), this country's oldest national art collection, is devoted to the acquisition, study, interpretation and exhibition of American painting, sculpture and graphic art. Established in 1829, the Museum since then has borne a number of successive names and from 1937 to 1980 was designated the National Collection of Fine Arts. The change of name in 1980 reflects the Museum's concentration on American art during the past decades. The Renwick Gallery, established in 1972 under the purview of NMAA in a separate building, continues to display American crafts and decorative arts and designs, as well as exhibitions from abroad. No program increase is requested for FY 1984. Necessary pay of

0

\$43,000 is required for existing staff and an amount of \$56,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$17,000 is requested to provide full-year funding for the three positions restored by the Congress in FY 1982.

PROGRAM - NMAA's collection of over 27,000 works of art attempts to represent all aspects of more than 200 years of American art and serves as the basis for active programs of exhibition, research and public education. Its publications have become basic texts for reassessment of the art of America's past, and its exhibitions have brought new appreciation for American artists of both the past and present. The Museum has maintained close contact with art centers in this country and abroad and has encouraged the study of American art through its fellowship and intern programs. NMAA also maintains the Barney Studio House (with a part-time curator paid from nonappropriated Trust funds) as a period home which is open for tours by reservation and is used as a setting for special interpretive programs.

At the beginning of FY 1983, NMAA's staff was reorganized into three divisions—curatorial, museum programs and museum resources—designed to improve and expedite the Museum's operations. The restructuring also will enable the Museum to achieve its mandate as a national resource of American art, by providing services for audiences across the country. In the reorganization, some programs which were aimed at the local school children and could be provided by other local agencies were discontinued. The resources saved from these programs will be used to extend nationally the availability of the Museum's programs by increasing research and scholarly publications, making the collections more accessible outside Washington, D.C. circulating more exhibitions organized by NMAA, and arranging for the publication of the Museum's research indices in American art.

In its resources division, NMAA maintains three major art indexes: the <u>Inventory of American Paintings Executed Before 1914</u>, which began as a Bicentennial project and now has over 220,000 items catalogued by computer; the <u>Smithsonian Art Index</u>, which lists approximately 200,000 items of art housed in the <u>Institution's non-art museums</u>; and the <u>Index of Pre-1877 American Art Exhibition Catalogues</u>, which comprises some 125,000 computer entries disclosing artists' activities, regional characteristics, patronage preference and works which have been lost. In addition, NMAA has, for general reference and research purposes, 150,000 slides and photographs which are on a computerized file and over 70,000 negatives and slides which are being entered on the computer data bank. The library, with 45,000 volumes, serves NMAA and the National Portrait Gallery as well as local and visiting scholars and students, and other Smithsonian bureaus. During FY 1982, the library answered over 3,800 reference questions received by mail, telephone and in person.

During FY 1983, a catalogue of NMAA's collection of more than 6,500 paintings and sculptures will be published, making it available to all libraries, universities and museums in this country and abroad that have an interest in American art. Extensive use of computer programs in preparing the catalogues, eliminates the necessity for typesetting, and has helped to limit costs. A similar publication is planned in FY 1984 for the Index of Pre-1877 American Art Exhibition Catalogues and in FY 1985 for the Inventory of American Paintings Executed Before 1914. Exploratory conferences are in progress for the establishment at NMAA of an inventory of American sculpture and for an extension of the painting inventory to a more recent date. Also in the planning stages are a national journal of American art, to be edited and published by NMAA, and a program for offering NMAA's non-American art on extended loan for study and research at university museums around the country.

NMAA each year guides the research of 12 to 15 pre- and post-doctoral fellows, in residence at the Museum. These scholars, who are selected competitively, come from universities across the country. In a separate training program, 15 undergraduate and

graduate students participate annually in structured internships that combine learning and working experiences. Of the 72 former NMAA fellows and 203 former interns, many are now in responsible positions as museum directors, curators and university professors in 23 states and the District of Columbia. Scholarly activities of the NMAA, in addition to exhibitions and publications, include public lectures, weekly seminars for interns, fellows and staff and scholarly symposia with participants from all over the country.

In its exhibition program, NMAA will continue its emphasis on reexamining works by American artists who have been neglected in the past and on exploring regional aspects of American art. The Renwick Gallery will provide opportunities for exhibition of works by American craftsmen and for the presentation of new ideas, approaches and techniques in the crafts media. Approximately 20 temporary exhibitions—not including rearrangement of the permanent collection galleries—open in the NMAA and the Renwick each year. With each major exhibition organized by NMAA, a substantial catalogue or publication is produced, and when the exhibitions are of important national or regional interest, they are offered to other museums on tour. During FY 1982, the Museum circulated five such exhibitions to 11 museums in the United States. Plans are in progress to expand this valuable outreach program.

During FY 1983, NMAA devoted special exhibitions to individual American artists, reappraising their influence or critical standing today or exploring new aspects of their art. Among these exhibitions were "William H. Johnson: The Scandinavian Years"; "Joseph Goldyne: Monoprints and Monotype"; "Louis Lozowick: Prints, a Retrospective"; "Joseph Cornell: An Exploration of Sources"; "Elizabeth Nourse, 1859-1938: A Salon Career"; "Jose' de Creeft: Sculpture and Drawings"; and "Charles Hawthorne: The Late Watercolors." In FY 1984, exhibitions are planned to feature the following American artists whose works merit fresh attention: John LaFarge (1835-1910); Harry Siddons Mowbray (1858-1928); Erastus Salisbury Field (1803-1900); Lawrence Ladd, one of the "Utica Masters" (active 1865-1895); and Burgoyne Diller (1906-1965).

As a national Museum, NMAA is in a unique position to study regional aspects of American art. In FY 1983 and FY 1984, the following exhibitions dealt with or will treat regional subjects: "Alice Pike Barney: Bringing Culture to a Provincial"; "Americans in Brittany and Normandy: 1860-1910"; "Provincetown Woodcuts"; "Painting and Painters in Washington, D.C., 1800-1915"; and "Art From Idaho."

The Renwick Gallery, as part of its exhibition program, continues to show the work of individual American craftsmen and survey broad areas of craft and design trends. Exhibitions during late FY 1983 and FY 1984 will feature the work of the following artists: furniture— and industrial—designer Russell Wright; glassmaker Harvey Littleton; art nouveau designer Edward Colonna; weaver Annie Albers; and seven American miniature textilists. The Renwick also serves as an important showcase in which to stage exhibitions from foreign countries or of international importance. Among these will be exhibitions on the Scandinavian modern movement and on contemporary Australian ceramics. During FY 1983, Renwick concluded its showing of the popular exhibition "Celebration: A World of Art and Ritual," which made use of the entire gallery and included 600 folk and traditional objects all drawn from Smithsonian collections to illustrate how different world cultures mark the important events and cycles in the lives of their people. A comprehensive series of programs, funded by public and private sources, illustrating cultural ceremonies accompanied the exhibition.

At NMAA and the Renwick, lectures, symposia and films are arranged to complement individual exhibitions. In addition, 60 volunteer docents conducted almost 20,000 visitors on special tours of exhibitions and collections at the NMAA, the Renwick and the Barney Studio House during FY 1982. To make the Museum's art more meaningful to the visiting public, a major reinstallation of the permanent collection is contemplated for FY 1984.

Most of NMAA's FY 1982 Federal appropriation for works of art went toward the purchase of three 19th century American paintings by artists not adequately represented in the permanent collection. One work, "The Lost Balloon" (1882) by William Holbrook Beard, is a haunting enigmatic masterpiece which is recognized as that artist's most important landscape. Among the significant gifts received in FY 1982 were five paintings by 20th century artist Abraham Rattner, bequeathed from his estate. During FY 1982, a total of 696 works entered NMAA's permanent collection, 89 percent of them by gift or bequest.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from many different sources, including the Museum's share of sales in the restaurant and the Museum shop and from allotments including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program. Expenditures under this Program totaled \$49,000 in FY 1982 but have not yet been recorded for FY 1983 and FY 1984 which explains, in part, the variance in totals between those years. In FY 1982, the Museum received a Smithson Society grant to publish a catalogue entitled "Celebration: A World of Art and Ritual." The major exhibition, "More than Land or Sky: Art from Appalachia," required substantial support in FY 1982 although no significant expenditures currently are estimated for this exhibition in FY 1983 and FY 1984. Among other sources of funding are royalties from the sale of publications, honoraria received by staff members while on official duty (such as lecturing and jurying exhibitions); participation fees from outside museums that receive loan exhibitions organized by and initially shown at NMAA; gifts from donors which support NMAA exhibitions or purchases of works of art for the permanent collection; tuition reimbursements from universities for students who are accepted as interns at NMAA; sales of slides and photographs and rental of transparencies to other organizations or individuals; and funding from the Smithsonian Women's Committee and outside organizations for public programs in the Museum.

These funds are used to support designated museum publications and exhibitions; purchase works of art; defray costs associated with meetings of the NMAA Commission; cover the special expenses of curatorial staff members engaged in research related to the permanent collection; provide stipends for summer interns in the professional training program; purchase photographic supplies; support public programs such as lectures and concerts which could not otherwise be funded; supplement special events for the opening of new exhibitions; and organize educational programs which are aimed at national publicizing of NMAA activities related to ongoing exhibitions.

Restricted Funds — Funds provided are in the form of restricted endowments which specify the use of the donation or bequest, and of gifts and foundation grants by individuals, organizations and corporations for specific purposes. Generally, restricted funds provide support for a particular exhibition or collection. In FY 1982, funds provided from the estate of Robert Tyler Davis, former Acting Director of NMAA, supported the purchase of prints and drawings for the permanent collection (actual expenditures of \$12,000 in FY 1982, and estimated expenditures of \$15,000 in FY 1983 and \$10,000 in FY 1984). In addition, donations of \$17,000 were received during FY 1982 for the Joshua C. Taylor Research Fellowship Fund, established in memory of the former NMAA director to support fellowships for research in American art. Funds from the Samuel H. Kress Foundation supported the conservation and preservation of the Juley Collection of historic photographic negatives (actual expenditures of \$52,000 in FY 1982 and estimated expenditures of \$62,000 in FY 1983 and \$65,000 in FY 1984). A grant from the Charles E. Merrill Trust will be used during FY 1983 for the purchase of works for the Doris Magowan Miniature Gallery at NMAA (estimated expenditures of \$20,000 in FY 1983 and \$6,000 in FY 1984). Funds provided by the Laura Barney Trust

are used to maintain the Barney Studio House and to support its programs (actual expenditures of \$65,000 in FY 1982, and estimated expenditures of \$30,000 in FY 1983 and \$31,000 in FY 1984).

Federal Grants and Contracts - These are provided by various government agencies and departments for specific program support. In FY 1982, a grant from the Appalachian Regional Commission supported the exhibition "More than Land or Sky: Art from Appalachia" (actual expenditures of \$64,000). This exhibition brought together art from all 13 states within the the Appalachian region and since its closing at NMAA has been traveling to various locations within that region. No additional grants or contracts currently are anticipated for FY 1983 or FY 1984.

NATIONAL PORTRAIT GALLERY

(Dollars in thousands)

(DOLLALS		acanac,								
				NONAPPROPRIATED SOURCES OF FUNDING						_
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	76	2,799	-	23	-	549	3	228	-	-
FY 1983 Base	76	3,072	-	49	-	47	3	253	-	-
FY 1984 Estimat	e 76	3,180		49	_	58	3	219	_	_

*FTP = Full-time permanent positions

Detail of Federal Funding

		•
Base	Proposed	Est.
FY 1983	Adjustments	FY 1984
76	0	76
· -		21
		
2,026	53	2,079
198	5	203
21		21
90		90
16		16
56		56
141	6	147
151	7	158
43	20	63
330	17	347
3,072	108	3,180
	40	
	· -	
	FY 1983 76 21 2,026 198 21 90 16 56 141 151 43 330	FY 1983 Adjustments 76 0 21 0 2,026 53 198 5 21 90 16 56 141 6 151 7 43 20 330 17

ABSTRACT - The National Portrait Gallery (NPG) was established by Act of Congress in 1962 (20 U.S.C. 756) as a museum for the exhibition and study of portraits depicting men and women who have made significant contributions to the history, development and culture of the people of the United States. No program increase is requested for FY 1984. Necessary pay of \$40,000 is required for existing staff and an amount of \$50,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$18,000 is requested to provide full-year funding for the two positions restored by the Congress in FY 1982.

PROGRAM - The National Portrait Gallery's mission is unique among American museums: the study and presentation of our country's history through the lives of men and women who have contributed significantly to its development, as depicted in a carefully selected collection of portraiture in all media. The arts of portraiture and

biography are the means through which the Gallery offers a continuing exploration of the American people's heritage and accomplishments. The Gallery collects, studies, preserves and exhibits portraits in all media as both historical and artistic documents.

Founded in 1962, and opened in 1968, the Gallery is one of America's younger museums. Its most fundamental activity is to build a collection which is both artistically worthy of its mission and historically representative of the sources and qualities of American culture. Building a collection includes continuing responsibility for thorough research and careful conservation of the objects acquired. Research results are published by curators and historians in articles, monographs and exhibition catalogues. The collections are exhibited continuously in a series of galleries arranged both chronologically and thematically and are cared for by professional conservators on the Gallery's staff. The Gallery also organizes a busy schedule of popular and scholarly temporary exhibitions on a wide diversity of subjects. Each is accompanied by an illustrated catalogue and usually incorporates materials borrowed from museums throughout the country and abroad.

In FY 1982, the Gallery purchased 85 portraits with appropriated funds and obtained 138 others by gift or transfer. Among the most noteworthy acquisitions obtained with Federal funds were the portrait of Henry Clay Frick and his daughter, Helen, by Edmund C. Tarbell; John White Alexander's painting of Samuel Langhorne Clemens ("Mark Twain"); Robert Ingersoll Aitken's bronze sculpture of William Howard Taft; Henry Inman's painting of Tenskwatawa ("The Prophet"); rare ambrotypes of Abraham Lincoln and General George Armstrong Custer; Paul Strand's photographs of John Marin and Alfred Stieglitz; Childe Hassam's etched self-portrait; engraved banknotes by Amos Doolittle bearing the portrait of George Washington; and a rare engraved portrait of Joseph Pilmore attributed to John Norman.

One of the most significant paintings ever acquired by the Gallery, the "Edgehill" portrait of Thomas Jefferson, was purchased in FY 1982 jointly by the Gallery with nonappropriated Trust funds and the Thomas Jefferson Memorial Foundation at Monticello.

Significant gifts during the year included the Isamu Noguchi bust of Helen Gahagan Douglas (given by Melvyn Douglas); the portrait of Willard F. Libby, the Nobel Prize winning physicist, by Alvin Gittins (from Mrs. Libby); Peter Hurd's painting of Alice Roosevelt Longworth (presented by Joanna Sturm); Charles Willson Peale's portrait of his son, Rembrandt (the gift of Donald H. Workman); a remarkable series of photographic portraits by Edward Steichen, from the photographer's estate; and a substantial collection of photographs of Theodore Roosevelt and his family, from Joanna Sturm.

At the first National Portrait Gallery Commission meeting in FY 1983, the Commission recommended the acquisition of portraits of John Frazee, the first native-born professional sculptor; Washington Irving and his Literary Friends; Van Wyck Brooks, American author and critic; Stuart Davis; Edith Wharton; Eleanor Roosevelt; and Russell Sage; as well as photographs (by Paul Strand) of Georgia O'Keeffe, Marsden Hartley, Gaston Lachaise, John Marin, and Alfred Stieglitz; among many other works. Also recommended was a large collection of graphic works pertaining to Abraham Lincoln, woodblock prints of Antonio Frasconi, and several other prints of importance to the collections. At its last meeting in FY 1982, the Gallery's Commission recommended the purchase with FY 1983 appropriated funds of significant works by Rembrandt Peale (of Horatio Greenough) and several other artists.

The Gallery's exhibition program continues to evidence diversity of subject matter and approach. At the beginning of FY 1983, the major exhibition "Charles Willson Peale and His World" opened at the Gallery. The exhibition, which was well attended and acclaimed by the public and critics, covered the entire range of Peale's work as artist, naturalist, and patriot and was accompanied by an equally impressive catalogue and introductory slide show. In the spring of 1983, a traveling exhibition from the Museum of Modern Art, "Hollywood Portrait Photographer," will be shown; in the summer

of 1983, a Bicentennial retrospective of the work of Thomas Sully (1783-1872) will open. Smaller exhibitions scheduled for FY 1983 include, "Portraits from the New Deal"; "Blessed Are the Peacemakers" (Treaty of Paris--the treaty between Great Britain and America that ended the Revolutionary War); "James Barton Longacre," chief engraver of the U.S. Mint in 1844; "Robert Cornelius," one of the first Americans to practice the new art of photography in the early 19th century; along with exhibitions on "Gertrude Vanderbilt Whitney" and "Washington Irving."

Among the major exhibitions planned for FY 1984 are: "National Academy of Design Artist's Portraits," 80 portraits submitted by artists seeking membership in the National Academy of Design; a retrospective exhibition of the work of "Erastus Salisbury Field," a student of Samuel F. B. Morse and a painter of portraits and imaginative historical paintings, organized by the Springfield (Massachusetts) Museum of Art, and presented jointly by the National Portrait Gallery and the National Museum of American Art; "The China Trade," an exhibition commemorating the establishment of commercial relationships between the United States and China in 1784 and 1785; and an exhibition featuring portraits by the early American painters, James Earl and Joseph Wright, to be organized in FY 1984 for presentation early in FY 1985.

The Gallery continues to seek sponsorship and support for a number of its proposed exhibitions. Presently under consideration is an exhibition of the great portraits from Versailles in FY 1984 if sponsorship and funding can be secured, and support is being sought for an exhibition featuring caricatures of famous personalities, drawn in the 1930s and 1940s, by Miguel Covarrubias, the Mexican born caricaturist, who is renowned for his work in "Vanity Fair" magazine. Research continues on "The Black Presence in the Era of the American Revolution," which was first presented in 1973. This exhibition has been rescheduled for FY 1985 or FY 1986. As usual, major publications will accompany these exhibitions.

The Gallery has several publications projects underway in addition to those related to its exhibition program. Work continues on the biennial update of the Illustrated Checklist of the Permanent Collection, most recently published in 1982, and on the multi-year project for a seven or eight volume letterpress edition of The Collected Papers of Charles Willson Peale and His Family, to be published by Yale University Press (Volume I in FY 1983). Nonappropriated Trust funds are supporting the publication of the proceedings of the American Print Conference held at the National Portrait Gallery on American Portrait Prints at the University Press of Virginia, and books should appear in 1983. Also in FY 1983 the Gallery expects to produce a definitive catalogue, The Portrait Engravings of C.B.J.F. de Saint-Memin.

The National Portrait Gallery's public education program includes careful preparation of labels for each portrait, docent-led tours seven days a week, and an imaginative, innovative series of programs designed for use with school groups, senior citizens, the disabled, and other specialized audiences. The Education Department also offers a series of special performance programs throughout the year for the general public. The Department continues its highly popular "Portraits of Motion" series of free, public performances on biographical themes.

In FY 1983, special performance programs include, "Walt Whitman: Liberal and Lusty at Nature," created and presented by Will Stutts; "The Legend of Sleepy Hollow," presented from the Washington Irving classic by The University Players; "The Yellow Wallpaper," a dramatization of pioneer social thinker Charlotte Perkins Gilman's autobiographical short story, presented by Michele LaRue; "Moby Dick," adapted from the Melville novel and presented by Jack Aranson; "John Brown's Body," adapted from the Stephen Vincent Benet play and presented by The University Players; "In Good Company,"

a host of notable Americans from all walks of history, written and presented by the George Washington University Department of Speech and Drama, among others. A special dramatic series, adapted by the John Manson Myers book, The Children of Pride, was presented in collaboration with the Division of Performing Arts; one of the four plays was at the Renwick, the others at NPG. The latest in the Gallery's series of "Living Self Portraits" was an evening with George Abbott, the 94 year-old theatrical writer, director, producer, and actor. One or two more programs are planned in this series in FY 1983.

The Gallery also is experimenting with audiovisual media in its educational programs. A multi-projector slide show was prepared as an orientation to the Peale exhibition. Videotapes of interviews with sports figures were acquired in connection with the HBO (Home Box Office) production of a program on "Champions of American Sport," and a number of other film and video projects are under consideration.

In FY 1983, the National Portrait Gallery will continue to add listings to The Catalogue of American Portraits, a large and growing source of information on portraiture for scholars of American history, biography and art history. The survey has been supported in part by a grant from the Andrew W. Mellon Foundation, as well as the Ambrose Monell Foundation, Thomas Mellon Evans, the Lily Foundation and numerous other private benefactors in the states where surveys have been in progress. Field researchers in FY 1982 examined collections in Maine, Vermont, New Hampshire, Ohio, Indiana, Michigan, Illinois, Minnesota, Wisconsin, and Iowa and the project yielded approximately 5,103 records to be integrated with the existing data base of over 29,263 records. Computer-generated indexes of collections already canvassed have been placed with over 152 individual institutions. The states to be surveyed in FY 1983 are Ohio, Michigan, Indiana, Illinois, California, and Arizona. Including records not yet entered in the machine-readable files, more than 60,000 portraits have been located by the survey. Work in future years will be focused on the completion of the survey and on entering all of the data into a computer.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from several sources including: the National Portrait Gallery's share of sales in the restaurant and museum shop; sales of photographic reproductions of portraits in the collection; staff honoraria; participation fees from museums to which NPG exhibitions are loaned; registration fees for conferences -- such as "Charles Willson Peale: An Interdisciplinary Study of His Work," jointly sponsored by the National Portrait Gallery and The Henry Frances DuPont Winterthur Museum in October 1981; and ticket proceeds from programs such as our "Children of Pride" series, presented in November 1982. These funds are used to help defray the expenses of: public lectures, symposia and special events (some of which are coordinated with the opening of museum exhibitions); associated costs of loan exhibition development and management; NPG Commission travel costs; and for research expenses of staff who are preparing special publications or lectures. Funds provided by allotment will be used to provide partial support for The Catalogue of American Portraits' nationwide seven year survey program (estimated expenditures of \$40,000 in FY 1983 and in FY 1984). In FY 1982, expenditures from the Institution's Collections Acquisition, Scholarly Studies and Education Program supported in part, the purchase of Gilbert Stuart's "Edgehill" portrait of Thomas Jefferson (expenditures of \$500,000 in FY 1982). In accordance with the sale agreement between the Thomas Jefferson Memorial Foundation and the Smithsonian, each institution paid one-half of the \$1 million purchase price and will share the portrait on a three year rotating basis. In FY 1983, additional funds provided by the Collections Acquisition, Scholarly Studies and Education Program will help produce "The Children of Pride: A True Story of Georgia and the Civil War," a four part series about the

decades preceding the Civil War, the Civil War, and Reconstruction; and also support a series of programs for senior citizens, a tri-museum (NPG, the Anacostia Neighborhood Museum and the National Museum of American Art) family weekend program, and programs for junior high and high schools. Expenditures under this Program have been recorded for FY 1982, but not yet for FY 1983 and FY 1984 which explains the variance in totals shown between those years.

Restricted Funds - These are provided for specific purposes in the form of gifts and grants from individuals, foundations, organizations or corporations. In FY 1982, funds from various organizations provided continuing support for the nationwide seven year survey program, The Catalogue of American Portraits (actual expenditures of \$221,000 in FY 1982 and estimated expenditures of \$181,000 in FY 1983 and \$207,000 in FY 1984). The Andrew W. Mellon Foundation multi-year grant of \$340,000 received in FY 1979 is the largest example of these types of grants. In addition, gifts provided by individual donors in FY 1983 were used to support the exhibition "Charles Willson Peale and His World" which opened in October 1982 (estimated expenditures of \$55,000 in FY 1983).

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR					FEDE	RAL GRANTS
Fiscal		RAL FUNDS	L Ł	neral	Spec	ial Purpose	RES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	80	2,563	-	12	1	113	_	98	-	-
FY 1983 Base	80	2,764	-	9	-	66	-	552	-	-
FY 1984 Estimate	80	3,035	_	9	-	61	_	322	_	-

^{*}FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	80	0	80
Number of Other Positions	5	0	5
11 Personnel Compensation	1,912 188 20 98 18 132 94 110 41	34 3 5 27 56 22 30 70 24	1,946 191 25 125 74 154 124 180 65
41 Grants		· · · · · · · · · · · · · · · · · · ·	11
Total	2,764	271	3,035
Analysis of Increase Necessary Pay Inflation Restored Position Funds		32 34 5	

necessary ray	34
Inflation	34
Restored Position Funds	5
Program Funds	200

ABSTRACT - Established by act of Congress (P.L. 89-788, November 7, 1966), the Hirshhorn Museum and Sculpture Garden (HMSG), a major museum of modern art, maintains an active program of public exhibitions, drawing from its own and other collections. The Museum prepares catalogues relating to its exhibitions and collection, and conducts education activities including film programs, lectures, concerts, publications and tours. The Museum also has an active outreach program in the Washington, D.C. metropolitan area. Technical and support units include the offices of conservation, registration, photography and a reference library. For FY 1984, an increase of \$200,000 is requested to support costs of an extended loan program to institutions throughout the country of works of art from the Museum's collection. Necessary pay of \$32,000 is required for existing staff and an amount of \$34,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$5,000 is requested to provide full-year funding for the position restored by the Congress in FY 1982.

PROGRAM - In October 1982, the Hirshhorn Museum and Sculpture Garden celebrated the eighth anniversary of its opening. As one of the major museums of modern art in this country, the Museum operates active programs of exhibitions, research and acquisitions, along with related programs of lectures, films, concerts and educational activities involving audiences of all ages.

The Museum's exhibition schedule — the most important of its public and scholarly activities — calls for four major shows each year. Smaller shows also are planned, based most frequently on the Museum's own collection. Major exhibitions shown in FY 1982 were: "Metaphor: New Projects by Contemporary Sculptors"; "De Stijl, 1917—1931: Visions of Utopia"; "Raphael Soyer, Sixty—five Years of Printmaking"; and "Soyer Since 1960." The smaller exhibitions displayed were: "Five Distinguished Alumni: The WPA Federal Arts Project — An Exhibition Honoring the Franklin Delano Roosevelt Centennial"; "Red Grooms: The Hirshhorn Museum and Sculpture Garden Collection"; "Samuel Murray: The Hirshhorn Museum and Sculpture Garden Collection"; "Sculpture at the Hirshhorn: Photographs by Lee Friedlander"; "Ibero-American Art: Selections from the Hirshhorn Museum Collection"; "European Abstractions on Paper: Works from the Museum Collection"; "Drawings from the Museum's Collection"; "Heirs of De Stijl" (from the collection); "Variations on a Musical Theme: Selection from the Museum's Collection"; "Modern Indian Paintings from the Collection of the National Gallery of Modern Art, New Delhi"; and "Genre Scenes: Works on Paper from the Museum's Collection."

Major exhibitions scheduled in FY 1983 are: "David Smith: Painter, Sculptor, Draftsman"; "From the Life of the Artist: A Documentary View of David Smith" (organized by the Archives of American Art); "Directions, 1983"; "Friedel Dzubas"; and "New Acquisitions." Smaller exhibitions include: "Arts of Pakistan"; "The Eight and the Independent Tradition in American Art"; "Joseph Stella"; and continuing exhibitions of works on paper from the Museum's collection. Major exhibitions scheduled for FY 1984 are: "Utopian Visions in Modern Art: Dreams or Nightmares"; "Artistic Collaborations in the Twentieth Century"; "German Expressionist Sculpture" (organized by Los Angeles County Museum of Art); "Tenth Anniversary: Works on Paper"; "Exhibitions from the Bequest of Joseph Hirshhorn from the Permanent Collection."

To increase visitor appreciation and understanding of specific exhibitions and of modern art in general, the Museum provides visitors with a variety of instructional materials, including explanatory wall labels and brochures. The latter range from the single page to illustrated mini-catalogues and are distributed free of charge to the public. The Museum also conducts a film series including lunchtime films about artists, an evening series of films by artist filmmakers, and Saturday films for young people. Other events held in the auditorium were concerts by the 20th Century Consort and the Smithsonian Chamber Players and a series of lectures including: "Robert Natkin, "March 26, 1981; "Kenneth Snelson," June 5, 1981; "Larry Rivers," interviewed by Stephen E. Weil, July 16, 1981; "R.B. Kitaj," September 17, 1981; "Joe Shannon on Kitaj," October 5, 1981; "An Evening with the Artists of Metaphor," with Robert Morris, Siah Armajani, and Lauren Ewing, December 17, 1981; "Art in Public Places -- WPA Artists of the 30s," with Abram Lerner and Milton Brown; "Metaphor," Howard Fox, January 28, 1982; "An Evening with Red Grooms," April 1, 1982; "All-day Seminar on De Stijl," with Hans Jaffe, Joop Joosten, Annette Michelson, Nancy Troy, Kenneth Frampton, and Charles Millard, moderator, May 8, 1982; "An Evening with the Artist, Raphael Soyer," in dialogue with Abram Lerner, August 3, 1982; and "David Smith: A Symposium," with Clement Greenberg, Edward Fry, Rosalind Krauss, and Karen Wilkin, November 6, 1982.

In order to fulfill the Congressional mandate to maintain its contemporary nature, the Hirshhorn must continue to acquire significant new works. During FY 1982, the Museum acquired 164 works of art of which ten were purchased, seven with Federal funds.

A major recent painting by Willem de Kooning, "Untitled III," 1981, was acquired as well as Robert Motherwell's "Elegy to the Spanish Republic #129." "Black-White Duet with Red" by Leon Polk Smith was acquired with nonappropriated Trust funds. Among the 154 gifts received was an exceptional gift of 67 works on paper by R.B. Kitaj, given by the artist.

In FY 1982, 186 objects were loaned to 50 institutions in the United States and abroad. Among the works loaned were 53 paintings, drawings, and sculptures to the Mint Museum, Charlotte, North Carolina for a Larry Rivers exhibition; 27 paintings, drawings and photographs to the Philadelphia Museum of Art for a Thomas Eakins exhibition; and ten paintings to the Rutgers University Art Gallery, New Brunswick, New Jersey for their "Realism and Realities" exhibition. Loans to foreign exhibitors included five paintings to the National Museum of Modern Art, Tokyo, Japan; three paintings to the Haus der Kunst, Munich, West Germany; and one painting to the Musee des Beaux Arts, Marseilles, France. The Museum also loaned three paintings to the Smithsonian Institution Traveling Exhibition Service for an unprecedented exhibition of American Impressionist paintings which is touring selected museums in Eastern Europe.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, an increase of \$200,000 is requested to support costs of an extended loan program to institutions throughout the nation of works of art from the Museum's collection and the bequest of the late Joseph H. Hirshhorn. The bequest to the Hirshhorn Museum and Sculpture Garden of 6,000 works of art, valued conservatively at \$12 million, from the private collection of the late Joseph H. Hirshhorn, effectively doubles the size of the Museum's collections to 12,000 works of art. The additional works include paintings, watercolors, graphics and sculptures by such well-known artists as Bellows, Picasso, Bracque, Grooms, Manship, Manzu and Rauschenberg. The accession of these works of art into the Museum's collections presents a very welcome opportunity for the Smithsonian to assist smaller art museums throughout the country, thus greatly enlarging the public participation in viewing and experiencing the Museum's art treasures and enhancing its appreciation of modern art.

From the collection of 12,000 works of art, a program has been conceived that would make available approximately 1,000 works to private and state supported museums in urban and rural areas for research and exhibition purposes. Possible approaches presently under study include the extended loan of works of art that would be used to supplement already existing museum collections; loan of catalogued but unresearched material to university museums' art history departments for student research as part of the local curriculum; and creation of state by state loan collections along artistic or thematic lines which could rotate around the country over a given period of time. In FY 1982, the Hirshhorn Museum staff, in anticipation of this bequest, conducted a survey of 50 university museums in order to assess interest in such loans. The museums surveyed were both large and small, private and state, urban and rural. In keeping with the idea of establishing a loan program that would be national in scope, an effort was made to include a museum from each state in the survey. Most of the institutions surveyed expressed high interest in such a program.

A loan program of the scope envisioned will require extensive collections preparation, conservation analysis and cataloguing. Of the increase of \$200,000 being sought, approximately \$70,000 will be used for supplies and equipment for a number of essential preparation and processing services including examination and condition reporting of the 6,000 new acquisitions, photographing, conservation analysis, matting and framing; and \$55,000 is needed to secure suitable space to serve as a staging and processing area. Upon completion of these tasks, the works most suitable for incorporation into the extended loan program will be selected and appropriate arrangements made for their exhibition at other institutions. The balance of the proposed increase (\$75,000) would then cover the cost of crating, shipping and insuring the collections enroute to their respective destinations and preparing an accompanying catalogue, checklist or gallery

guide. This program, while modest in cost, will permit many institutions to exhibit and study works of art from the National Collections and thus will be instrumental in sharing the riches of an outstanding collection of modern art with the rest of the Nation.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided from a variety of sources including the Museum's share of sales in the Museum shop and cafeteria; from other receipts such as fountain coins (approximately \$700 per year); and from allotments including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program. In FY 1982, allotments from this Program were used for the purchase of an eight-part film series "Shock of the New" (\$6,000) and for the American premiere production of the anti-theater play, "The Ephemeral is Eternal," an adjunct to the "De Stijl, 1917-1931: Visions of Utopia" exhibition (\$19,000). Expenditures have been recorded for FY 1982 but not yet for FY 1983 and FY 1984 which explains the variance in the totals shown between those years. Other funds provided are used to finance travel costs associated with meetings of the Museum's Board of Trustees; to defray the costs of special events held in connection with the opening of new exhibitions; and to purchase less expensive works of art such as a painting by Jean-Baptiste Carpeaux, "Ugoloino" (\$10,000); "Lady in the Long Gown" by Bessie Potter Vonnah (\$9,000) and "The Brick Layers" by Constant Meunier (\$9,000).

Restricted Funds - These are provided from individual gifts, bequests and foundation grants which specify the use of the funds. They are used mainly to acquire or to supplement the acquisition of very costly and important major works for the permanent collection. In FY 1982, gifts supported the "De Stijl, 1917-1931: Visions of Utopia" exhibition (\$53,000) and supplemented the acquisition of a painting by Leon Polk Smith, "Black-White Duet With Red" (\$28,000). The Museum is seeking outside support from various sources to acquire or to supplement the acquisition of very costly and important major works for the permanent collection (estimated expenditures of \$464,000 in FY 1983 and \$275,000 in FY 1984).

CENTER FOR ASIAN ART

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Spec	ial Purpose	RES'	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP∜	Amount	FTP*	Amount	FTP*	Amount
FY 1982					_					
Actual	30	835	-	9	-	203	22	1,382	-	-
FY 1983										
Base	30	937	-	9	-	3	21	1,423	-	-
	l									
FY 1984										
Estimate	30	1,081	-	9		3	21	1,444	-	_

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	30	0	30
Number of Other Positions	8	0	8
11 Personnel Compensation	704 69 61 31 50 22	81 8 1 2 . 51	785 77 62 33 101 23
Total	937	144	1,081
Analysis of Increase			

Necessary Pay	15
Inflation	8
Restored Position Funds	21
Program Funds	100

ABSTRACT - Public Law 97-203, signed by the President on June 24, 1982, authorized construction for the Center for Asian Art as part of an international cultural complex which also includes the Museum of African Art.

The Center for Asian Art is a bureau of the Smithsonian Institution, and comprises the Freer Gallery of Art, established May 5, 1906 and the Arthur M. Sackler Gallery, established July 28, 1982. The Freer Gallery of Art has a continuing program to search for and to acquire works of Oriental art of the highest quality and to conserve, study and display those objects as keys to understanding the civilizations that produced them. The Arthur M. Sackler Gallery will be devoted to the acquisition, study, interpretation and exhibition of Asian art. The Center will be administered by one director who is bound by the general policies of the Institution and, insofar as the Freer Gallery is concerned, by the gift and bequest of Charles Lang Freer. For FY 1984, initial program funds of \$100,000 are sought for the salary of an assistant

director of the Center for the Sackler Gallery, and the purchase of fireproof storage equipment for the new collection. Necessary pay of \$15,000 is required for existing staff and an amount of \$8,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$21,000 is requested to provide full-year funding of the position restored by the Congress in FY 1982.

FREER GALLERY OF ART

PROGRAM - The Freer Gallery of Art houses one of the most distinguished collections of Oriental art in the world. The collection consists of 26,049 works of art from China, Japan, Korea, India, and the Near East and spans 5,000 years. Included in the collection are paintings; sculptures; and other objects in stone, wood, lacquer, jade, pottery, porcelain, bronze, gold and silver; and Biblical manuscripts. "The Peacock Room" by James McNeill Whistler highlights an outstanding collection of American art that Charles Lang Freer, the Gallery's founder, considered a bridge between the East and West. Items not currently on exhibition are available for study to students and scholars. In addition to the collections, the Gallery houses a public library of approximately 30,000 volumes relating to the objects in the collections.

The unique Oriental collections of the Freer Gallery, together with notable holdings of American paintings, have made the museum a center for students, scholars and the general public on an increasing basis. This growing interest has been manifested in a steady increase in visitors, in requests for museum tours, in lengthy periods of advance bookings for authentication appointments, and in the number of visiting scholars and dignitaries.

Freer Gallery research facilities, comprising the collections, curatorial staff, library and technical conservation laboratories, form the nucleus of its specialized public service. Research findings are made available to the public through exhibitions, catalogues of exhibitions, articles, free gallery leaflets, and public lectures at the Freer and at other similar institutions. Greater effort has been placed on expanding the research files on the individual pieces in the collection. Research files are made available to visiting scholars and students as well as the general public. In FY 1983, the organization and indexing of the Islamic Archives, a collection of photographs and slides in the Freer that date from the last quarter of the 19th century to 1970, will be completed.

The Gallery's conservation (technical) laboratory not only restores works on paper, metals, ceramics and gems, but is renowned also for its research activities. Technical laboratory research topics in FY 1982 included the behavior of the coppertin-lead alloy system, corrosion in archeological artifacts, identification of a hitherto unknown synthetic Chinese blue pigment, lead isotope ratios in Chinese bronzes and other materials, examination of Islamic metalwork, pigment identification, treatment methods for pastels, examination methods and analytical methods for use on museum objects (radiography, infra-red photography, and X-ray surface analysis, for example), and materials and treatment methods for use in conservation. During FY 1983, research on alloys will continue, papers on color in the copper-tin-lead ternary system and radiographic techniques for objects will be prepared, identification of a Chinese purple pigment will continue, the survey of pigments on Ukiyo-e paintings will be completed, new conservation techniques will be prepared for publication, and technical examination of Islamic metalwork will be completed in preparation for the major "Islamic Metalwork" exhibition in FY 1984.

In celebration of the 60th anniversary of the opening of the Freer Gallery of Art, "Studies in Connoisseurship, 1923-1983" will explore the evolution of research and connoisseurship during Freer's time to the present on Near and Far Eastern objects purchased by Charles Lang Freer. A reprint from Apollo magazine about the objects in

this exhibition will accompany the show which will open to the public in September 1983. As part of the 60th anniversary of the Freer, a Freer Medal will be given to a distinguished scholar in the field of Oriental art.

Japanese exhibitions during FY 1982 included "Japanese Prints" which featured 30 delicately-colored woodblock prints; these 18th and 19th century prints by Utamaro, Hiroshige, and Hokusai included landscapes and scenes of everyday life in Tokyo. "Screens of Genres and Narratives," dating from the 17th to 19th centuries, colorfully depicted the daily lives of the Japanese people during this time period. A selection of ink paintings and ceramics representative of the kinds of objects collected by the Ashikaga Shoguns of the Muromachi period were exhibited as "Luminous Shadows"; a highlight of this exhibition was a Chinese album leaf formerly in the collection of the third Ashikaga Shogun, Yoshi Mitsu.

Research into the influences of one culture on another is also explored in the "Japanese and Chinese Lacquer" exhibition; approximately 60 examples of lacquer containers, utensils and furniture from China and Japan incorporating such techniques as monochrome, carved and colored lacquer and decoration in silver and gold depicted the similarities, the adaptations and direct usage of another culture's techniques with indigenous methods. In another exhibit entitled "Boxed-In: Japanese Ceramics and Their Storage Boxes," 27 works from the Edo period (1615-1686) included teaware and other ceramic objects as well as the lacquer and wooden containers specially created for their safekeeping. The exhibition showed how the inscriptions on the storage boxes may assist—or confound—the process of identifying the associated ceramics.

Plans for FY 1983 include an exhibition of Japanese screens which will illustrate themes from parallel classic literary works, the Tale of Genji from Japan and Yang Kuei-fei from China. A general survey of Japanese ceramics will give a brief overview of the history of Japanese ceramics from a Neolithic Jomon pot and Yayoi jar of the 1st century B.C. to 20th century pieces; this exhibition will include several recent acquisitions which will be on exhibit for the first time.

In early FY 1984, a major exhibition is planned on Buddhist and Shinto art, culminating six years of research. This exhibition will be the first definitive statement on the unusual Buddhist and Shinto art in the Freer dating from the late 12th to early 16th centuries. Particular emphasis will be placed on the relationship between images and liturgies. Four eminent scholars in Japan have come to the Freer supported by grants from the Harold Stern Memorial Fund to participate in the preparatory research, and an illustrated exhibition catalogue will be published. Another exhibition planned for FY 1984 will be "Japanese Drawings" which will include important objects by Hokusai and Kawanabe Gyosai as well as a large portion from the Grut Collection, acquired in 1975 and never before exhibited.

The major exhibition of FY 1983 is "Chinese Art of the Warring States Period: Change and Continuity 480-222 B.C." On view are 151 examples of jade ornaments, lacquerware, bronze vessels and fittings, and other metalwork inlaid with gold and silver designs. Many of the objects had been redated, reevaluated or could be understood more fully because of new knowledge resulting from recent archeological findings in the People's Republic of China. An illustrated catalogue revealing this research accompanied the exhibition.

Plans for FY 1984 exhibitions of Chinese art include "Chinese Figure Painting." New research resulting from many developments over the past ten years has prompted a completely revised, illustrated catalogue and exhibition on the subject of Chinese figure painting. Figure painting had attained the status of a fully developed genre in China long before landscape, but despite this chronological precedence, only one major

publication relating solely to this subject has been available previously. That original publication, "Chinese Figure Painting," now out of print after two printings, was published by the Freer in 1973, marking the 50th anniversary of the Gallery.

Near Eastern exhibitions in FY 1982 included "Nastaliq Calligraphy" which exhibited 12 examples of this elegant and highly prized script developed at the turn of the 15th century and used for all literary imperial manuscripts and particularly for poems by the sultans themselves. Several of the pieces on display were signed by masters of "Nastaliq" who were the most celebrated artists of the Islamic world. In April 1983, an exhibition of "Sasanian Metalwork" will open which will include pre-Islamic objects of various metals, and in April 1984, a major exhibition entitled "Islamic Metalwork" is scheduled to open. This exhibition will be the result of a three-year collaborative research effort of the curator of Near Eastern art and the technical laboratory.

Two American exhibitions, "Winter into Spring" and "To Dream of Fair Women" took place in FY 1982. In "Winter into Spring" a group of late 19th and 20th century landscape paintings of the seasonal theme, common to both East and West and a favorite of Charles Lang Freer, was exhibited. In "To Dream of Fair Women" 20 paintings of women in the romantically beautiful styles of the turn-of-the century artists Thomas Wilmer Dewing, James McNeill Whistler and Abbott Handerson Thayer were exhibited in late 1982. Also on view were two ceramic vessels from the Pewabic pottery of Mary Chase Stratton in Detroit; their colorful, iridescent glazes echoed the rich surfaces of the paintings. This exhibit will continue into FY 1983.

In May 1984, an important exhibition on Whistler will open on the 150th anniversary of the painter's birth. Every Whistler painting, drawing, and watercolor in the Freer collection (approximately 350) will be reproduced in the exhibition catalogue which can be considered a definitive statement on the Freer Whistler collection, one of the two largest collections in the world. The catalogue and exhibition will introduce a number of new topics for research and study on Whistler as well as mark the beginning of the era of Whistler rediscovered.

The Freer's third photographic exhibition "Technical Examination and Conservation at the Freer Gallery of Art" opened on the lower level of the Gallery in September 1982. This exhibition showed the results of scientific examinations and tests on representative objects of different materials, and the conservation methods chosen for the object. A fourth photographic exhibition opened in January 1983 entitled "Charles Lang Freer, The Man and His Gallery." Using photographs and documents from the Freer Archives, the exhibition presents a panoramic view of the life, travels, and collection of Charles Lang Freer.

As part of the Freer's education program during FY 1982, the Gallery offered six Oriental art lectures covering a wide range of topics relating to the holdings of the museum. This popular lecture series will be continued in 1983 with the emphasis on connoisseurship in the past 60 years since the Freer Gallery opened to the public. Other parts of the education program include a free introductory brochure given to the public and mailed to students who write for general information on the Freer, the continuance of the highly successful free exhibition leaflets introducing various aspects of the Gallery's collections, and the tours given by docents. In FY 1982, 12,149 visitors joined the weekday and weekend tours given four times daily (more than a sevenfold increase in the last five years).

Plans are under way for expansion and enhancement of existing Freer programs made possible by the construction of the Arthur M. Sackler Gallery. Through traveling exhibitions in the Sackler Gallery, the study and exhibition of Near and Far Eastern art will be enhanced. (The Freer gift and bequest restricts the lending and borrowing of

all Freer objects.) Consolidation of library holdings and archival material to one location will facilitate research and expansion. The new Gallery also will provide facilities for workshops and seminars which have not been possible before owing to space limitations. Additionally, space will be available in the Sackler Gallery to accommodate a number of research scholars presently limited to one per year in the Freer. Finally, in the space vacated by the staff move from the Freer to the Sackler Gallery, larger collection storage facilities and possibly expanded exhibition areas will be made possible, thus enabling the Freer to increase the size of its collections and exhibitions.

ARTHUR M. SACKLER GALLERY

PROGRAM - The primary goal of the Sackler Gallery is the advancement of the scholarly appreciation and public knowledge of the arts, especially Near and Far Eastern art. Toward this end, Dr. Arthur M. Sackler has pledged a collection of nearly 1,000 objects selected by the Director of the Center for Asian Art to be housed in the new complex of buildings of the Quadrangle construction project. The objects in the initial Sackler collection are in the fields of Chinese, Indian, Southeast Asian and Near Eastern art. Among the artworks selected are 475 Chinese jades spanning a period from Neolithic times (5000 B.C.-1500 B.C.) into the 20th century; 153 Chinese bronzes from the Shang (ca. 1523 B.C.-ca. 1028 B.C.) through the Han (206 B.C.-220 A.D.) dynasties; Chinese lacquer, Near Eastern metalwork, and sculpture from ancient Cambodia, India and Thailand.

The Sackler Gallery may acquire art objects in those fields of central interest to the museum: the arts of Asia in its broadest terms, from Korea to Egypt. Objects acquired for the main collection in the future must be of very high quality with respect to aesthetic standards, art history, and physical condition. Objects may be acquired by gift, bequest or purchase provided that they meet the acquisition criteria and the approval of the Director.

An extensive exhibition program is envisioned. This program will include Gallery originated exhibitions as well as traveling exhibitions organized elsewhere. Exhibitions will be drawn from international public and private collections as well as from the Sackler collection. It is expected that many Gallery organized exhibitions will travel to other museums and institutions. The inaugural exhibition in the new building will display the entire collection of the Sackler Gallery along with certain other major objects on loan from the collections of Dr. Sackler. Under consideration for future exhibitions are Chinese mirrors, Ordos bronzes, Chinese lacquer, Indian and Southeast Asian sculpture, Chinese garment hooks, Sasanian metalwork, Chinese furniture, Near Eastern ceramics, Far Eastern ceramics, and Chinese sculpture. Research catalogues will accompany these exhibitions.

In addition to scholarly publications related to particular exhibitions, an extensive publications program is planned. Under consideration is a journal that would publish scholarly articles relating to objects in the Sackler collections as well as research that encompasses the cultures represented in the collections. The rich collections of the Gallery will attract a large number of research scholars and research fellowships are anticipated. Fellowship recipients would work closely with curators on topics related to the collections.

An expanded oriental painting restoration program also is being planned. There is a critical shortage in this country of skilled persons trained in traditional methods of preserving Far Eastern paintings and screens. Only three facilities capable of restoring and mounting rare Far Eastern paintings and screens exist in this country, and the works in those institutions consume all of the time of those studios. Other institutions must risk sending their artworks to Japan or leave the screens and paintings in despair; yet, Japanese studios are occupied fully with their own collections.

The new restoration program would seek to improve the situation by bringing expert mounters from abroad on a short-term basis to the Gallery and, as the long-term solution, training Americans in the traditional craft of repairing and mounting Far Eastern paintings.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, initial program funds of \$100,000 are requested to support the salary cost of an assistant director of the Sackler Gallery (\$53,000) and to purchase essential collection storage equipment (\$47,000).

To meet the immediate needs of overseeing the initial receipt, registration, and care of the nearly 1,000 art objects in the Sackler gift as well as to begin preparing for the inaugural exhibition, its catalogue and related publications, an assistant director urgently is needed early in FY 1984. Major international exhibitions and acquisitions of exceptional quality expected at the Sackler Gallery require years of organization, research and negotiation, and it is imperative that the new assistant director take the lead in these areas on a full-time basis. While the existing Freer staff necessarily will be engaged with current Freer programs on Asian art, the new assistant director must begin the development and implementation of new programs made possible by the construction of the new building. An amount of \$53,000 for the salary and benefits cost of the new position is requested.

A further amount of \$47,000 is sought for the purchase of approximately 50 fire-proof, steel storage cabinets with locks that are needed for the temporary storage in the Museum Support Center of the 1,000 objects given to the Sackler Gallery. The cost of these cabinets is approximately \$900 each with an additional \$2,000 required for shelf padding and floor carpeting for object handling safety. The Sackler collection is valued conservatively at over \$50 million and it therefore is essential that all reasonable precautions be taken in handling the objects prior to their permanent installation in the new Gallery. Following the transfer of the collection into the newly constructed Sackler Gallery, the cabinets will be used in the Freer's expanded collections storage area.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds — These are provided from allotments and are used to defray the costs of special events associated with the opening of new exhibits and to cover the travel costs of members who attend the Center's Visiting Committee meetings. In FY 1982, approximately \$200,000 from the Institution's Collections Acquisition, Scholarly Studies and Education Program was used for the acquisition of two Chinese hanging scrolls by Shih-T'ao 1641-1707, and for a study by the Freer Gallery's technical laboratory of lead isotope ratios in Chinese bronzes. Expenditures under this Program have not been recorded for FY 1983 and FY 1984 which explains the variance in totals between those years.

Restricted Funds - The major portion of the nonappropriated Trust funds used by the Center stems from the Charles Lang Freer gift and bequest and are restricted by the conditions that are stipulated in that document. The funds are used to help finance expenses of the Freer's professional curatorial staff, administrative staff, acquisitions for the collections and library, the maintenance of the Freer's courtyard and the operation of the Freer museum shop (expenditures totaled \$1,341,000 in FY 1982 with estimated expenditures of \$1,369,000 in FY 1983 and \$1,427,000 in FY 1984). In FY 1982, a grant of \$10,000 was received from the Metropolitan Center for Far Eastern Studies in support of publication costs of the Buddhist and Shinto art exhibition catalogue planned for early FY 1984. Grants also were received from the Hagop Kevorkian Fund to assist with the publication costs of The Imperial Image: Paintings for the

Mughal Court (expenditures totaled \$10,000 in FY 1982); additional support from the National Committee to Honor the Fourteenth Centennial of Islam, Inc., assisted with the completion of the cataloguing of the Islamic Archives, a collection of photographs and slides of the art and architecture of the Near East (expenditures totaled \$15,000 in FY 1982 with estimated expenditures of \$9,000 in FY 1983 and \$7,000 in FY 1984); and the Clark Endowment Fund is supporting the purchase of Japanese paintings (estimated expenditures of \$10,000 in FY 1983 and in FY 1984).

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE!	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP≭	Amount	FTP*	Amount
FY 1982 Actual	17	626	-	3	-	18	11	605	-	-
FY 1983 Base	17	710	-	6	-	-	11	624	_	-
FY 1984 Estimate		729	-	6	_	_	11	607	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	17	0	17
Number of Other Positions	1	0	11
11 Personnel Compensation	553	9	562
12 Personnel Benefits	54	1	55
21 Travel & Trans. of Persons	16	2	18
22 Transportation of Things	3		3
23 Rent, Comm. & Utilities	44	3	47
24 Printing and Reproduction	24	1	25
25 Other Services	5		5
26 Supplies and Materials	7	2	9
31 Equipment	4	11	5
Total	710	19	729

Analysis of Increase

Necessary Pay	10
Inflation	9
Program Funds	0

ABSTRACT - The Archives of American Art is the nation's largest repository of documentary and source materials relating to the history of the visual arts in the United States. Its primary mission is to stimulate research and publication in the field of American art history through the acquisition, preservation, and scholarly use of the papers of American artists, and records of art galleries, museums, and art societies. Microfilm copies of these collections are available to scholars and researchers through the Archives' national network of regional research centers (located in Boston, Detroit, New York, San Francisco, and Washington, D.C.) and through the interlibrary loan program to libraries across the United States. Complementing these written and manuscript collections, the Archives preserves the oral and audiovisual records of interviews with key individuals involved in American art through its Oral History Program. No program increase is requested for FY 1984. Necessary pay of \$10,000 is required for existing staff and an amount of \$9,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Archives of American Art, established in 1954 at the Detroit Institute of Arts, fulfills the need for a centralized repository of documentation on the visual arts in America; the Archives became a bureau of the Smithsonian Institution in 1970, reinforcing the Smithsonian's role as a primary center for the documentation and study of American art. The collections, in excess of eight million items, consist of artists' letters, sketchbooks, diaries, business papers and photographs; extensive holdings of museum and gallery records; 2,000 tape-recorded interviews with artists, dealers, critics, collectors, and museum directors; and a growing collection of audiovisual interviews.

This material, filled with historical data concerning the people and events significant to American culture, provides scholarly resources for research and study in American art history. The Archives' holdings are microfilmed to assure the preservation of the original documents and to provide microfilm copies of the collections for greater accessibility to researchers. These microfilmed sets of the Archives' complete holdings are available for research at the five regional centers located in Boston, Detroit, New York, San Francisco, and Washington, D.C., and also may be borrowed by libraries throughout the United States through the interlibrary loan program.

During FY 1982, a total of 2,900 research visits were made to the five regional centers, a ten percent increase over the previous year; these researchers consulted some 8,600 rolls of microfilm and over 400 oral history transcripts. The interlibrary loan office received 450 loan requests and sent out 1,250 rolls of microfilm to requesting libraries. Research using Archives' collections resulted in the publication in FY 1982 of a substantial number of books, articles, and exhibition catalogues, with the more notable works on the following artists: the painters Worthington Whittredge, Ellen Day Hale, Childe Hassam, William Morris Hunt, J. Francis Murphy, Konrad Cramer, Alfred Jacob Miller, Winslow Homer, Mary Cassatt, Alma Thomas, and silversmith Arthur J. Stone.

In FY 1982, the Archives acquired 320 collections of papers from individuals and institutions. Of particular significance were the diaries of James D. Smillie, a late 19th-century painter and print-maker; A. Hyatt Mayor, a 20th-century art historian and authority on prints; the contemporary painters Charles Seliger and Gene Davis; and Mrs. Walter Gropius, widow of the famous 20th-century architect. Also received were papers of the noted critics and art historians Dore Ashton, John Green, Lucy Lippard, and Irving Sandler. Institutional collections acquired in FY 1982 included the records of the Wadsworth Atheneum in Hartford, Connecticut, San Francisco Art Association, Cranbrook Academy of Art in Michigan, and the McNay Art Institute of San Antonio, Texas.

To assure the conservation and proper storage of the collections received by the Archives, all manuscript, printed, photographic, and microfilm collections must receive appropriate care and treatment, including the use of acid-free containers; a temperature and humidity controlled environment; and continuous monitoring of the collections for infestation and hazardous material such as nitrate negative film.

In addition to conservation activities, the curatorial staff accessions, processes, catalogues, and microfilms the collections. In FY 1982, over half a million items were processed; 300 rolls of new negative microfilm were produced; and 971 rolls of duplicate microfilm copies were made from master negatives and distributed to the regional centers. During FY 1983, an inventory of the works of art contained in the Archives' collections was completed.

The Archives produced 54 oral and audiovisual interviews in FY 1982 as part of its Oral History Program to record recent art history. Oral history interviews were conducted with such individuals as Katherine Kuh, art dealer and critic; James Brooks, abstract painter; Leslie Cheek, former Director of the Virginia Museum; Faith Andrews, collector and historian; and Arthur Pulos, silversmith. Videotaped interviews included painters Roger Brown and John Hegarty, and the sculptor Richard Hunt. The importance of these audiovisual interviews lies in the ability for scholars actually to see the artists they are researching, as they work in their studios, install a finished work, or discuss their life and work, and thereby to come closer to the artists' creative genies than is possible through the written word.

The holdings of the Archives are in frequent demand for documentary use in exhibitions mounted by American museums. In FY 1982, loans to exhibits included: sketches, photographs, and prints from the Raymond Mathewson Hood collection for an exhibit at the Institute for Architecture and Urban Studies in New York City; sketches and a manuscript autobiography from the Worthington Whittredge papers used in a retrospective exhibition at the Morris Museum of Arts and Sciences in New Jersey; and loans for two shows in Massachusetts, at the Essex Institute of Salem and at Smith College in Northhampton. During FY 1983, a large exhibition of letters, sketchbooks, notes, and photographs from the David Smith Papers was held at the Hirshhorn Museum and Sculpture Garden in connection with the Hirshhorn's own major exhibition of Smith's paintings and sculpture. For the exhibition, the Archives also published a catalogue with an introductory essay and a descriptive listing of documents displayed. The Joseph Cornell exhibition at the National Museum of American Art offered another example of a Smithsonian collaborative effort; material from the Archives' Cornell Papers supplemented and clarified the works of art and a symposium on Cornell's contribution to 20th-century sculpture was jointly sponsored by the two bureaus.

The Archives' sponsors and participates in seminars and symposia in order both to foster an awareness of its holdings and to stimulate research and publication in the field. In FY 1982, a two day conference was held in New York City on "Still Life Painting in America," sponsored by the National Academy of Design, the American wing of the Metropolitan Museum, and the Archives; and in Washington, D.C., the Archives conducted a symposium entitled, "Hidden Virtues Revealed: Some Enquiries into Patterns of Recognition," which addressed itself to such subjects as folk art, 19th-century painting in the south and documentary photography. During FY 1983, seminars and symposia will be sponsored on New Deal Art, by the Boston Regional Center of the Archives in cooperation with Boston University; a historical review of the art market, planned for Washington, D.C. in the spring; and a symposium dealing with art and history between the 1876 Centennial and the Chicago World's Columbian Exposition in 1893, in conjunction with an exhibit at the Detroit Institute of Arts entitled "Quest for Unity."

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided to defray costs associated with special events and to supplement a portion of the travel expenses incurred by the Archives' Board of Trustees. In FY 1982, a Smithson Society Award provided support for an audiovisual project in the State of Michigan (\$18,000).

Restricted Funds - These are generated through fund raising activities, the solicitation of gifts, as well as foundation and corporate grants, and a membership program. A substantial portion of this income is used to support the Archives' general operating expenses, including 11 full-time employees, its Oral History Program, and the entire publications program.

Foundation and corporate grants have provided the principal source of support for special projects. In FY 1983, the Weyerhauser Foundation provided \$20,000 for completion of an oral history project in Oregon; the Michigan Council for the Arts granted \$13,000 to help finance an audiovisual project in that state; and a collecting project in Texas received approximately \$250,000 through fund raising that will support acquisition efforts (estimated expenditures of \$100,000 in FY 1983 and in FY 1984).

(Dollars in thousands)

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				NONA						
				UNRESTRICTED					FEDE	RAL GRANTS
Fiscal	FEDERAL FUNDS		General		Special Purpose		RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	22	733	10	365	13	787	3	337		54
FY 1983 Base	22	813	9	352	14	761	3	610	-	85
FY 1984 Estimate	22	843	9	358	14	804	2	578	-	60

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	22	0	22
Number of Other Positions	8	0	8
11 Personnel Compensation	623	14	637
12 Personnel Benefits	62	2	64
21 Travel & Trans. of Persons	4		4
22 Transportation of Things	5		5
23 Rent, Comm. & Utilities	12		12
24 Printing and Reproduction	7	3	10
25 Other Services	24	4	28
26 Supplies and Materials	63	6	69
31 Equipment	13	1	14
Total	813	30	843

Analysis of Increase

Necessary Pay	16
Inflation	14
Program Funds	0

ABSTRACT - The Cooper-Hewitt Museum opened to the public in October 1976 in New York City's Carnegie Mansion. The Museum is a unique repository of design and decorative arts materials. Its collections include drawings, textiles, prints, wallpapers, furniture, jewelry, glass, ceramics, silver, metalwork and other decorative objects. No program increase is requested for FY 1984. Necessary pay of \$16,000 is required for existing staff and an amount of \$14,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Cooper-Hewitt Museum is the only museum in the United States whose programs and collections are devoted entirely to the processes and products of design. Founded in 1895 as the Cooper Union Museum for the Arts of Decoration, this Museum was always intended as more than an art museum. It was deliberately conceived as a working, "hands-on" center for the stimulation of professional design talent. Through the generosity of a series of private benefactors, extraordinary resources were assembled in the Museum's galleries and library for the daily use of the Cooper Union

students, interested professionals, and members of the lay public. Despite the lack of a professional staff until the middle of this century, the Museum evolved into a resource of international significance and recently has been described authoritatively as "one of the most distinguished working collections in the world."

In 1967, the Cooper Union transferred the Museum and its library to the Smithsonian Institution and today is known as the Cooper-Hewitt Museum, the Smithsonian Institution's museum of design. The Museum occupies a 1902 mansion, formerly the residence of Andrew Carnegie and his family, and an adjacent townhouse which the Carnegie Corporation donated to the Institution in 1972 as a permanent home for the Cooper-Hewitt collections and staff. Following a period of renovation to prepare the facility for museum use, its doors opened to the public in 1976. It has become both an architectural landmark and a vital neighborhood center.

The collections of the Cooper-Hewitt are unique in their size, scope and character. No museum in America has a larger collection of drawings; the wallpaper collection is unmatched anywhere in the United States. Holdings in the areas of prints and textiles are similarly broad-ranging. Decorative arts collections include among other specialized areas, jewelry, silver, porcelain and pottery, glass, and furniture. Its library, with an estimated 35,000 volumes (augmented by a group of specialized study archives including a picture file of over two million images), is considered the most important of its kind in this country.

The Museum's first responsibility is to care for and preserve its collections. Despite antiquated and incomplete records, excellent progress has been made in a comprehensive collection inventory project, executed with the aid of specially appropriated funds, since FY 1977. As of November 1982, over 164,000 objects have been itemized in a computerized inventory listing, and current plans call for completion of the original project on schedule in FY 1983. (The appropriation request for the continuation of the Collections Management/Inventory Program, an explanation of this Program and a comprehensive funding summary appear in the Special Programs section.) Progress also is being made in the effort to document photographically the most significant holdings; to improve the storage conditions for drawings, prints, and textiles; and to take maximum advantage of storage space in the existing facilities. A pair of small but well-equipped conservation laboratories (one for textiles, the other for paper objects), is now established. In addition, with the assistance of a recent grant from the New York State Council on the Arts, the Museum serves as a Conservation Advisory Center for the State of New York.

The Museum offers a full complement of workshops, lectures, seminars, tours and special classes on decorative arts and design. In FY 1982 and early FY 1983, approximately 6,000 persons (many of them members, but also including the general public) enrolled as students for classes and workshops, attended lectures, or took tours arranged around the design topics featured in the Museum's ongoing programs of collecting and exhibitions. A four-day crafts fair was attended by approximately 6,000 people; over 9,000 people were served by specially designed and innovative outreach programs directed to school children, senior citizens, and community groups. This effort, in particular, was assisted by the Museum's selection as a participant in the city's Cultural Voucher Program. The Museum's traditional relationship to design education reached a new stage in FY 1982 with the successful inauguration of a two-year course of study that leads to a master's degree in the history of decorative arts. Administered jointly by the Cooper-Hewitt and Parsons School of Design, this unprecedented program drew 400 inquiries and 60 applications for positions among the first class of 25 students. A similar response is anticipated in the next round of applications. It is expected that the graduates of this program will take advantage of their exposure to the Museum's library and collections and begin professional careers in curatorships or other design fields that will benefit museums across the country, as

well as the general public, in the years ahead. In addition to the master's program, the Museum also offers year-round and summer internship opportunities as a means to explore the museum profession and assist in our public service programs.

Most people visit or learn of the Museum through its extremely active program of publications and exhibitions. A diverse and imaginative series of projects in these areas repeatedly has delighted and informed an enormous audience of Americans who are interested in design and its meaning in their lives. In FY 1982, a popular series of inexpensive "collection handbooks" was extended by six titles: 19th-Century American Landscape Drawings, Buttons, Columns, Fashion Prints, Lace, and Architectural Drawings. Plans for FY 1983 include an additional six booklets of this sort, concentrating on samplers, book arts, garden design, floral motifs, interior designs, and theater design. More ambitious publications (usually made possible by grants from private benefactors) in FY 1982 included a landmark design study of Scandinavian Modern: 1880-1980, published by Harry N. Abrams, Inc., to accompany the exhibition of the same title, and City Dwellings and Country Houses: Robert Adam and His Style, which also accompanied a major exhibition organized by the Cooper-Hewitt. CITIES, a provocative collection of statements, essays, criticisms and other reactions to America's urban landscape, also was produced during FY 1982 in a tabloid format as the latest in a series of special publications dealing with the design of "immovable objects." Another special publication project is the 15 volume series on antiques produced by the Museum and distributed by the Book-of-the-Month Club; in FY 1984, studies of enamels and miniatures are expected to join the FY 1983 work on boxes as the latest titles to appear in this group.

Cooper-Hewitt exhibitions are uniformly well-received by critics and the public alike. The Smithsonian Institution Traveling Exhibition Service (SITES) continues to circulate three versions of shows originally produced at the Museum that spotlighted subjects as diverse as antique matchsafes, urban open spaces, and the humble (or not-so-humble) shopping bag. "Subways," originally shown in the New York City subway system, has been installed in the newly-constructed Atlanta subway system. The Museum continues an extremely active lending program, making its collection available to museums and institutions in the United States and abroad.

Exhibitions produced and shown by the Museum in FY 1982 included: "Americans in Glass"; "Magazine Covers"; "Writing and Reading"; "Suburbs"; "In Small Stages: Puppets from the Cooper-Hewitt Collection"; "Puppets: Art and Entertainment"; "City Dwellings and Country Houses: Robert Adam and His Style"; "Architectural Fantasy and Reality"; "Hawaii: The Royal Isles"; "English Majolica"; "The American Landscape"; "The Jacquard Loom: Recent Experiments"; "Basketry: Tradition in New Form"; "Button, Button"; "The Column: Structure and Ornament"; "Lace"; "Scandinavian Modern: 1880-1980"; "Fashion Prints: 125 Years of Style"; and "Interior Design: The New Freedom."

In FY 1983 and FY 1984, major exhibitions will analyze the phenomena of "American Picture Palaces" and the early career of America's greatest architect, Frank Lloyd Wright. Large-scale exhibitions on theater design documents, the art of architectural photography, and contemporary Italian design trends also will be mounted. The Museum has been singularly honored, in addition, to be permitted to bring to America an exhibition which has been made possible by the consent of Her Majesty Queen Elizabeth II. "Faberge: Jeweler to Royalty, From the Collections of Her Majesty Queen Elizabeth II and Other British Lenders" will open on April 15, 1983. Rounding out the exhibition schedule for FY 1983 will be smaller studies of the work of Louis Comfort Tiffany, selected artistic schemes for the embellishment of the Museum's facade, canes and walking sticks, 20th-century American prints, and objects from the Cooper-Hewitt's own collections made of copper, brass, bronze, and other metals.

The work of building the collections also continues at a steady pace, and is guided by an increasingly sharpened sense of the Museum's identity, priorities, and special potential. No Federal funds are available for collections acquisitions; 2,074 objects were donated to the Museum in FY 1982 by 61 donors, and 33 objects were purchased with private funds. In FY 1983, the Institution's policy governing the Regents' Special Acquisitions Fund has been extended to permit the Museum's participation, a measure that will be of invaluable assistance in the process of further developing the collection.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from a variety of sources including museum shop sales, product development, membership and admission fees, donations, fund raising events, and allotments. The allotments support salaries of the director, administrative officer and members of the curatorial and registrarial staff and defray expenses associated with the openings of new exhibitions. Specific funds are used to support various educational programs, museum shop expenses, exhibitions and publications for the Museum (expenditures totaled \$787,000 in FY 1982 with estimated expenditures of \$761,000 in FY 1983 and \$804,000 in FY 1984).

Restricted Funds - These funds are provided from grants, bequests and other donations from individuals, foundations, organizations or corporations for specific purposes. Generally, they provide total or partial support for a particular program or exhibition at the Museum. In FY 1982, grants were received from: Warner Communications, Inc. in support of the exhibition "American Picture Palaces" (\$10,000); The Helena Rubinstein Foundation for a scholarship in the Cooper-Hewitt and Parsons School of Design Master's Degree Program (\$10,000); Hearst Foundation for support of the exhibition "Fashion Prints" (\$10,000); The J. M. Kaplan Fund for work in the picture archives (\$20,000); and the American-Scandinavian Foundation for support of the exhibition "Scandinavian Modern: 1880-1980" (\$109,000). In FY 1983, grants from C. E. Heath & Co., Ltd. and Warner Communications, totaling over \$200,000, will support the exhibition "Faberge: Jeweler to Royalty, from the Collection of Her Majesty Queen Elizabeth II and Other British Lenders"; and funds from The Andrew W. Mellon Foundation continue to support various exhibitions and publications (estimated expenditures of \$44,000 in FY 1983 and \$33,000 in FY 1984). The Museum expects to continue its successful fund raising activities with assistance from the Smithsonian's Office of Membership and Development. This coordinated fund raising effort will be launched in FY 1983 and will begin to lay the groundwork for a major capital campaign, to be initiated in the near future, in support of major building renovation, general operating expenses, exhibitions, publications, and other programs at the Museum (estimated expenditures of \$325,000 in FY 1983 and \$330,000 in FY 1984).

Federal Grants and Contracts - These funds are provided by various government agencies and departments for specific program support. In FY 1982, the Museum received funds from the New York State Council on the Arts to support exhibition installation costs, planning expenses and the conservation advisory program (expenditures totaled \$20,000 in FY 1982 with estimated expenditures of \$20,000 in FY 1983 and \$60,000 in FY 1984). The Museum is seeking funds from various sources to support ongoing exhibitions (estimated expenditures of \$65,000 in FY 1983).

NATIONAL MUSEUM OF AFRICAN ART

(Dollars in thousands)

(1011011			NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED					FEDE	RAL GRANTS	
Fiscal	FEDE	RAL FUNDS	Ger	neral	Spec	ial Purpose	RES'	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	25	760	1	76	1	21	4	109	_	-
FY 1983 Base	25	879	1	25	1	30	3	83	-	-
FY 1984 Estimate		975	-	8	1	33	3	77	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	25	0	25
Number of Other Positions	5	2	7
11 Personnel Compensation	594	60	654
12 Personnel Benefits	58	6	64
21 Travel & Trans. of Persons	16	2	18
22 Transportation of Things	11	2	13
23 Rent, Comm. & Utilities	2		2
24 Printing and Reproduction	46	2	48
25 Other Services	55	15	70
26 Supplies and Materials	53	13	66
31 Equipment	14	-4	10
Acquisitions for Collections	30		30
Total	879	96	975

Analysis of Increase

Necessary Pay	21
Inflation	12
Restored Position Funds	13
Program Funds	50

ABSTRACT - Following the signing of Public Law 95-414 by the President authorizing the Museum of African Art to become part of the Smithsonian Institution and the subsequent supplemental appropriation passed in FY 1979, the Museum of African Art, established as a private museum in 1964, officially became part of the Smithsonian in August 1979. Its purpose is to foster public understanding and appreciation for African art, which only recently has become recognized as one of the great art traditions of the world. For FY 1984, an increase of \$50,000 is requested to fund the development of a Union Catalogue of all African materials held by various museums of the Smithsonian Institution. Necessary pay of \$21,000 is sought for existing staff and an amount of \$12,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$13,000 is requested to provide full-year funding for the position restored by the Congress in FY 1982.

PROGRAM - Through its exhibitions, collections, research, and education programs, the National Museum of African Art endeavors to promote an interest in and an understanding of the diverse cultures of sub-Saharan Africa, its art and its people. The Museum, presently located on Capitol Hill, occupies a row of nine townhouses, including the first Washington, D.C. residence of Frederick Douglass, the 19th century Black abolitionist, orator, publisher, and public official. The complex contains 12 public galleries, in which approximately 500 objects are displayed; a storage area for the Museum's permanent collection of approximately 7,000 objects, representing all the major regions of Africa; the Eliot Elisofon Photographic Archives of approximately 100,000 slides, photographs and unedited film segments on African art, culture and environment, bequeathed to the Museum by this renowned Life photographer; a reference library of approximately 4,000 titles on African and Afro-American art, culture and history; an auditorium with a seating capacity of 150; a graphics studio; education and administration offices; and a museum sales shop, which specializes in contemporary African craft objects. In FY 1983, the Museum staff will continue to develop plans to move the collection and staff to its permanent location on the Mall in the new center for African, Near Eastern and Asian art. Construction of the center will begin in the spring of 1983.

At its present Capitol Hill location, nearly two million people have visited the Museum's galleries and attended its various extension programs since it opened in 1964; some 19,000 groups have participated in the Museum's special orientation sessions on African culture and art, conducted by African and American members of the Museum's staff. During FY 1982, more than 500 groups of students ranging from pre-school to college level received special staff- or docent-led tours and attended African craft workshops and demonstrations. The Eliot Elisofon Photographic Archives processed requests from educational institutions, museums, scholars and the public for more than 3,000 reproductions of photographs in its archives. The Museum's library, which regularly distributes its current acquisition list and special bibliographies, responded to approximately 1,000 telephone and mail inquiries. The library also prepared an annotated bibliographic guide to African art, which now is used widely as a reference resource for college courses and for training sessions at the Museum.

The Museum's continuing public education program of museum orientation sessions, African crafts workshops for children and adults, arts and crafts demonstrations by artists-in-residence, lectures, symposiums, films, performances and extension programs are directed toward the overall goal of using art to cast new light on traditional African cultures. In conjunction with its exhibitions in FY 1982 and FY 1983, the Museum conducted a film and lecture series, musical performances, crafts, workshops, storytelling sessions and an indoor/outdoor day-long "Festival of Animals," which featured African music and dance as well as demonstrations with live animals frequently depicted in African art. The exhibition, "African Emblems of Status," included not only public lectures, films and storytelling, but also a newly-instituted series of weekday evening gallery talks related to the exhibition. Intended for small, adult groups, these talks have proven extremely popular. During Black History Month, the Museum presented a program honoring Langston Hughes, the famous Black American poet, which was enthusiastically received by a standing room audience. In the spring of 1983, a fashion show will be held in the galleries to demonstrate the rich splendor of African fabrics, designs, clothing and articles of personal adornment.

School groups visiting the Museum received pre- and post-tour educational packages to highlight their museum experience; and in co-sponsorship with the National Museum of Natural History/Museum of Man and the National Zoological Park, a new program for junior high school students, "Animals and Animal Imagery," was produced in FY 1982. This program, drawing upon the Museum's exhibit, "Thinking with Animals, African Images and Perceptions," helped students to learn the many ways in which animal symbolism as a

spiritual force is incorporated in African art. In FY 1983, outreach programs directed at local schools were expanded with the development of a docent-led program, entitled "Have Loom-Will Travel," which involves specially trained docents traveling to schools with slides, hands-on materials and an African loom model to discuss the manufacture, uses and social significance of African textiles. An additional outreach program is directed at audiences normally unable to visit the Museum: senior citizens, the physically disabled, emotionally disabled and the institutionalized. As part of its continuing program to provide a showcase in the Washington, D.C. area for contemporary African artists of all disciplines, the Museum presented, in November 1982, a troupe of Zairean dancers, musicians and actors, and in April 1983, a performance by a Nigerian group is planned.

The National Museum of African Art's exhibition program has continued its thematic emphasis on various aspects of African art and culture. In order to illuminate aspects of African philosophy, religion, cosmology and moral tenets, the finest objects in the Museum's permanent collection are exhibited along with objects on loan from other museums. Following exhibitions in FY 1982 dealing with funerary arts, "Life....After-African Funerary Sculpture"; philosophical concepts, "Thinking With Animals: African Images and Perceptions"; and the depiction of foreigners in African art, "The Stranger Among Us," the first exhibition in FY 1983 was titled "African Emblems of Status." This exhibition presented a survey of the ways in which African peoples have used a broad variety of materials, forms and symbolic structures to identify, honor and celebrate the status of individuals. Other thematically focused exhibitions in FY 1983 will include "From the Earth: African Ceramic Art" and "African Art in Color." Each exhibition treats a narrow range of materials, forms and ideas concentrating on particularly distinctive examples of African art. In FY 1984, a major exhibition, "African Islam: The Artistry of Faith," will continue the Museum's emphasis on thematic concepts with a splendid array of African art objects which shows the effects of the arts, culture, religion and ideologies of Islam. This exhibition, to be on view for six months, will be followed by an exhibition featuring major new additions to the Museum's collections.

For adults and college level students, the following universities and educational institutions in the Washington, D.C. area offer courses on African art in conjunction with the Museum; Georgetown University, "Art of Black Africa"; the U.S. Department of Agriculture Graduate School, "Masks in African Art," "Collecting African Art," and "Understanding Africa Through Its Art"; and a workshop, "African Art Conservation." A total of 16 graduate and undergraduate students served as interns at the Museum during FY 1982. As part of the Museum's efforts to recruit minority students from historically Black colleges as interns, three of the interns received support from the Smithsonian's Office of Fellowships and Grants' "Collaborative Education Program."

Docents are also an important element of the Museum's education program, and in FY 1982, 38 docents served at the Museum as tour guides and special event coordinators, and participated in outreach programs. In FY 1983, more than 50 new docents are undergoing training for daily and weekend activities.

Throughout the year, the Museum's educational and curatorial staff conduct lectures and tours for groups of museum professionals from this country and abroad on topics such as public programming, museum education and the development of volunteer programs, and host visiting scholars from Africa and the United States. In April 1982, Professor Rowland Abiodun of the University of Ife, Nigeria, was in residence at the Museum under the auspices of the Fulbright Program and the International Communication Agency; with the support from the Smithsonian's Office of Fellowships and Grants, Dr. Gwen Mikell of the Anthropology Department of Georgetown University, spent two months researching African ceramic arts in the Museum's collection.

As in previous years, most of the Museum's acquisitions were obtained through donations. In FY 1982, more than 232 African objects and five 19th century Afro-American works were donated; however, certain significant objects were acquired through purchase using both Federal and nonappropriated Trust funds (from the Institution's Collections Acquisition, Scholarly Studies and Education Program). These objects included a unique Bambara wood sculpture from the Bambara people of Mali; two magnificent cast bronze objects from the Benin Kingdom of Nigeria; and, in a joint purchase with the National Museum of Natural History/Museum of Man, a large and comprehensive collection of West African textiles, the Lamb Collection. The Bambara sculpture, one of a limited number of this type in existence, is from a particular atelier in the Segou region of Mali. The Benin objects, a funerary memorial head dating from the 15th-16th century and a bronze plaque from the 16th-17th century, represent the first major acquisitions of this kind for the Museum. The African textile collection, formerly owned by Alastair and Venice Lamb of Great Britain, is without parallel with regard to its scope and the quality of the individual objects of which it is comprised. Its value to the Museum is enhanced further by the fact that it is documented extraordinarily well.

In the area of collections management, the Museum completed the inventory of its collections in FY 1982 and renovated its major collection storage areas. Exhibition galleries throughout the Museum have been refurbished, and necessary repairs have begun on the exterior of the Frederick Douglass house. A special exhibition gallery, devoted to the life and times of Frederick Douglass, has been refurbished with support from the Smithsonian Women's Committee and from a private donor. The addition of an elevator and ramps to the Museum permits disabled persons to have access to all exhibition areas of the Museum.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, an increase of \$50,000 is requested to fund the creation of a Union Catalogue of all of the African art objects in the National Museum of African Art, the National Museum of Natural History/Museum of Man and other Smithsonian museums such as the Hirshhorn Museum and Sculpture Garden. The project will be coordinated closely with the National Museum of Natural History/Museum of Man which has an interest in African objects of ethnographic value. By consolidating information on African holdings that is dispersed in the collections of several Smithsonian museums, research and exhibition activities of the Museum of African Art and the Natural History Museum would be facilitated greatly. Moreover, with the recent recognition of African art as a major art tradition, there is a growing interest in the field by researchers. This interest is creating a demand for more comprehensive and higher quality reference and research literature. The Union Catalogue would be an invaluable resource to researchers from within the Smithsonian and elsewhere by presenting information on the collections in a systematic format. The proposed increase would be used to hire a temporary research assistant to assure that the information compiled is accurate according to the most recent research in the field, especially important since early collection information for African material often is imprecise (\$17,500); to hire a temporary museum technician to assist in editing inventory records to assure conformance and compatibility with the records of other Smithsonian museums (\$14,500); to obtain contractual services and supplies to photograph individual objects for identification purposes, including film and other photographic supplies, processing and printing (\$15,000); and to cover the cost of computer time used in the project (\$3,000).

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from the Museum's share of sales in the museum shop, membership contributions, courses conducted in cooperation with metropolitan area public education institutions and allotments. They are used to support the cost of certain museum publications, opening of new exhibitions, salary of the acting director and to defray travel costs associated with meetings of the Board of Trustees.

Restricted Funds - Funds provided here are in the form of grants and gifts from individuals, foundations, organizations or corporations for specific purposes. Generally, they provide support for a particular project or exhibit. For example, in FY 1982 grants received from the Smithsonian Women's Committee and a private donor provided for the refurbishment of an exhibition gallery devoted to the life and times of Frederick Douglass (\$2,000). A grant from the Friends of the National Museum of African Art provided partial salary support for an African member of the Museum's education staff (\$5,000). Funds from various individuals, organizations and corporations provided support for the Department of Academic Studies which conducts credit courses each semester in cooperation with local universities (estimated expenditures of \$75,000 in FY 1983 and \$77,000 in FY 1984).

ANACOSTIA NEIGHBORHOOD MUSEUM

(Dollars in thousands)

(DOTTATS THE EHOUSANDS)										
				NONA						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Special Purpose		RES	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	19	671	1	24	-	17	-	3	-	-
FY 1983 Base	19	801	1	30	-	2	-	1	-	-
FY 1984 Estimate		820	1	32	-	2	-	11	_	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	19	0	19
Number of Other Positions	5	0	5
11 Personnel Compensation	512	6	518
12 Personnel Benefits	45	1	46
21 Travel & Trans. of Persons	4		4
22 Transportation of Things	4		4
23 Rent, Comm. & Utilities	38		38
24 Printing and Reproduction	25		25
25 Other Services	60	2	62
26 Supplies and Materials	97	10	· 107
31 Equipment	16		16
Total	801	19	820

Analysis of Increase

Necessary Pay	7
Inflation	12
Program Funds	0

ABSTRACT - The Anacostia Neighborhood Museum was founded in the Anacostia section of Washington, D.C., in 1967 by the Smithsonian Institution to provide the opportunity and the resources for a continuing museum experience for community groups and individuals; to serve as a cultural resource for the people of Anacostia and to attract them to the Museum and other facilities of the Smithsonian; and to contribute to exhibitions throughout the Institution relating to Black peoples' contributions to science, history, and art in America. The Museum also serves as a source of materials on Black American history for similar institutions around the Nation and demonstrates to other museums and neighborhoods, with similar geographic and social patterns, new ways to lead previously uninvolved groups into the worlds of science, history and the arts. order to foster closer collaboration with other Smithsonian history and art museums, the Anacostia Neighborhood Museum was transferred organizationally in FY 1983 from the Public Service to the History and Art Activity. No program increase is requested for FY 1984. Necessary pay of \$7,000 is required for existing staff and an amount of \$12,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - As a center for experimentation in the ways museums can reach and involve segments of the population they are not reaching, the Anacostia Neighborhood Museum brings a culturally enriching experience to those who otherwise might not have the opportunity to share such an experience. It is now recognized as an increasingly important resource of Black history and culture. The Museum has gained an international reputation as a center for ethnic studies through its own exhibitions, traveling exhibitions, research efforts, publications, and education programs. While open to the full range of scholarship and culture, major concentration is placed on Black American studies, an emphasis that is served by increasing involvement in joint research with other Smithsonian Institution organizations, with the academic community, archival repositories, and other research institutions.

In keeping with its goal to serve as a cultural resource for the people of Anacostia, the Museum opened, in FY 1983, a show entitled "Here, Look at Mine," an exhibition of the work of John N. Robinson, a 72 year-old self-taught Black artist and life-long resident of Anacostia, who at age 64 was given a highly successful retrospective exhibition at the Corcoran Gallery of Art. Robinson's works portray the sunny landscapes of old Anacostia--rolling hills, tidy homes, colorful gardens and wire fences--and features celebratory scenes of his family life. The title of the show, "Here, Look at Mine," is a joyful scene of his nine grandchildren seated around the dining room table proudly showing off their latest drawings. The Museum also mounted a companion show to introduce the lithographs and watercolors of a younger Black artist, Larry Lebby, a Washington native. Although the artists are from different generations and economic backgrounds, both emphasize social consciousness and a spiritual kinship in their work by concentrating on family ties.

In FY 1983, as part of its mission to produce exhibitions relating to Black peoples' contributions to art, history, and science in America, the Museum opened the exhibition "Ed Dwight: Sculptor of the Black West." The exhibition of 38 bronzes, by this nationally known sculptor, depicted the Black experience in the opening of the western frontier of the United States. Also in FY 1983, the Museum completed the research and design for the exhibition, "The Renaissance: When the Negro was in Vogue," scheduled to open in FY 1984. The "Renaissance" exhibition, which will be the most ambitious ever undertaken by the Museum, will feature sheet music and first editions of the literary works of such noted "Harlem Renaissance" era artists as Langston Hughes, Claude McKay, Countee Cullen and James Weldon Johnson. Materials from the exhibition will be made available to scholars for research.

In FY 1983, as part of its efforts to serve a national constituency, a traveling version of the popular exhibition, "Mary McLeod Bethune and Roosevelt's Black Cabinet," will be circulated by the Smithsonian Institution Traveling Exhibition Service and a smaller version will travel to local schools, churches, universities, civic associations and government agencies. The exhibition, which was initiated as part of the Institution's observance of the centennial anniversary of the birth of Franklin Delano Roosevelt, tells the story of the role that Bethune and other major Black advisors played during FDR's New Deal Administration. It was well received by the public. In FY 1983, the popular traveling exhibition, "Black Women: Achievement Against the Odds," will be revised and updated for presentation in FY 1984. Due to an increase in the number of requests from members of the academic community, historical and research associations, the Museum will produce in FY 1984 multiple copies of the exhibitions, "Out of Africa: From West African Kingdoms to Colonization" and "Black Women: Achievement Against the Odds," for circulation by the Smithsonian Institution Traveling Exhibition Service.

The education department is continuing to extend its services to schools and the community and in FY 1983 a 60-page curriculum guide entitled, "Anna J. Cooper: A Woman of Courage," was developed. Based on the successful Anna J. Cooper exhibition that depicted the struggle for quality education for young Blacks, the curriculum will be an important educational resource for use by students and their teachers. The education department also completed a conceptual plan for the Museum's first major children's exhibition, "Anacostia As It Was: Black Life in the 1800s." A study on a double labeling system which includes special labels for the hearing impaired also was completed in the past year.

Plans are underway currently to strengthen the research departments in order to promote the scholarly integrity and professional soundness of all of the Museum's programs. Also, in FY 1984 the Museum will begin to implement plans to relocate from its present facility on Martin Luther King Avenue to a small annex to be constructed next to the Museum's exhibit laboratory. (The appropriation request and an explanation of the project appear in the Restoration and Renovation of Buildings portion of this budget request.)

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funds are provided by an annual allotment to cover the salary and benefits costs of an exhibits specialist. During FY 1983 and FY 1984, this specialist will work on the "Ed Dwight: Sculptor of the Black West" exhibition; a Harlem Renaissance exhibition; and an updated version of the "Black Women" exhibition. Additional funds are provided from exhibit rentals, catalogue sales and donations, and are used to purchase supplies and materials to support the Museum's programs and community activities. In FY 1982, funds also were provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program to support the Museum's Educational Outreach Program (\$16,000). Expenditures under the Collections Acquisition, Scholarly Studies and Education Program have been recorded for FY 1982, but not yet for FY 1983 and FY 1984.

Restricted Funds - These are in the form of gifts from individuals, organizations and corporations and are designated for the general support of the Museum's programs.

DIVISION OF PERFORMING ARTS

(Dollars in thousands)

	NONAPPROPRIATED SOURCES OF FUNDING									
				NONA	FUNDING					
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES!	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982										
Actual	10	449	22	8,265	-	75	-	19	-	-
FY 1983										
Base	10	498	13	639	_	-	-	92	-	-
FY 1984										
Estimate	_ 10	514	13	474	_	_		29		-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	10	0	10
Number of Other Positions	1	0	11
11 Personnel Compensation	340 31	7 1	347 32
21 Travel & Trans. of Persons	9		9
23 Rent, Comm. & Utilities	3		3
24 Printing and Reproduction	10	1	11
25 Other Services	90	5	95
26 Supplies and Materials	10	1	11
31 Equipment	5	1	6
Total	498	16	514

Analysis of Increase

Necessary Pay	8
Inflation	8
Program Funds	0

ABSTRACT - The Division of Performing Arts (DPA) conceives, develops and produces performances, special events, celebrations, colloquia, and conferences which bring additional life and meaning to the collections and exhibits of the various Smithsonian museums and galleries. Particular emphasis in performance programs is placed on American aesthetic traditions and the use of historic instruments in the collections of the National Museum of American History. In order to foster closer collaboration between the Division and Smithsonian museums, programs of the Division of Performing Arts except Recordings were transferred organizationally in FY 1983 from the Public Service to the History and Art Activity. The Trust funded Recordings Program was placed under the SI Press because of its marketing expertise. The Federal funds provided to the Division of Performing Arts help support its professional staff salary costs and the expenses of developing program plans; Trust funds derived from ticket sales and other sources serve primarily to support costs of the performing arts events themselves. No program increase is requested for FY 1984. Necessary pay of \$8,000 is required for existing staff and an amount of \$8,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Division of Performing Arts plans, researches and produces live performances throughout the Smithsonian, and serves as a focal point for diverse studies of the performing arts. Performance emphasis includes jazz, country, western, blues, gospel, chamber music, spirituals and performances on historic instruments. Performances are organized to achieve the maximum learning experience through participation and audience interaction.

The Smithsonian Jazz Repertory Ensemble, comprised of musicians from around the country, toured eight American cities in 1982 and continued to revive and perform music which previously had been lost to the public. Work continued also on a book of musical scores with notation from historical performances recorded in the "Smithsonian Collection of Classic Jazz." Such scores enable music educators to teach jazz history through the use of printed materials. Also in FY 1982, the Smithsonian Chamber Players performed 12 concerts on the priceless period instruments in the collection of the National Museum of American History, and released a three-record set of Handel's "Sonatas for Diverse Instruments," recorded the Mozart Concerti for two and three pianos, and began recording a three-record set of Haydn Divertimenti. In addition to Washington performances, the Chamber Players toured eight cities and completed its fourth annual residency at the Festival Music Society in Indianapolis. Of special interest were a nationwide broadcast by satellite for National Public Radio and additional programs aired by Minnesota Public Radio. In addition, 12 programs of chamber music enlivened the 19th century environment and collections of the Renwick Gallery, and the 20th Century Consort performed in four concerts of contemporary music at the Hirshhorn Museum and Sculpture Garden.

The "Living Museum" programs of the Division of Performing Arts use performances and demonstrations to aid public understanding of the exhibits and collections of Smithsonian museums. Performances reach large audiences on the Mall and serve a national audience through dissemination of audio and video tapes, program booklets, learning guides, scripts, scores, and listings of musical recordings. Recent examples of "Living Museum" programs were "The Spring Celebration," which explored the history of American popular entertainment; and the "Holiday Celebration" highlighting Christmas traditions, produced in collaboration with the National Museum of American History; a music concert series related to the "Art from Appalachia" exhibition at the National Museum of American Art; music for the opening of the George Washington exhibition at the National Museum of American History; four performances and lecture demonstrations of music, theater, and dance from Asia in cooperation with the National Museum of Natural History/Museum of Man; six musical programs at the National Museum of American Art's Barney House; and the production of a play, "The Ephemeral is Eternal," as part of the De Stijl exhibition at the Hirshhorn Museum and Sculpture Garden.

In FY 1982, the Division's Black American Culture Program presented "Black American Blues Songs: A Study in Poetic Literature," a weekend of concerts and workshops on Black American blues as poetry and song. In addition, a week long colloquium brought together gospel music scholars and pioneers in a salute to Reverend C. A. Tindley, the Methodist Philadelphia minister whose songs laid the foundation for the new Black gospel music. A traveling exhibit featuring a photo essay of the Civil Rights Movement with a sound track presenting the songs and recollections of the participants of the Civil Rights Conference held in Washington, D.C., continued on tour under the auspices of the Smithsonian Institution Traveling Exhibition Service. The touring show visited 12 cities in FY 1982, will tour nine more in FY 1983, and has two scheduled in FY 1984.

The American Musical Theater, as an unique art form, has been celebrated at the Smithsonian with performances ranging from vaudeville to reconstructions of early 20th century operettas. During 1982, public offerings included a reconstruction of Rudlof Friml's Rose-Marie; a musical biography of composer Vincent Youmans entitled

Oh Me, Oh My, Oh Youmans; Soiree for Six, a selection of fast paced songs and sketches representing 1950s cabaret-style musical theater; and Rendezvous with the '30s, a musical evening narrated by John Houseman which explored musical theater of the depression era through songs and the personal reminiscences of Mr. Houseman.

The Discovery Theater introduced young audiences to the performing arts in FY 1982 with over 320 performances presented to 52,000 children and adults in an eight month, thematic series which explored the art of storytelling through puppet theater, story theater, song, and Shakespeare. Live performances and educational materials available in the Discovery Theater's Learning Guide give young audiences a better understanding of the historical and cultural context of the performing arts. In FY 1983, the Discovery Theater series will explore multi-cultural myths, tales, fables, and legends.

In many cases, research work which led to these performances and publications is used by National Public Radio and Public Television, in published reference works, in instructional courses at all educational levels and by critics in virtually all media dealing with the arts. DPA materials also have provided impetus for further research and documentation by independent scholars and specialists. The research done by the staff is reflected regularly in performances, recordings, writings and lectures.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - During FY 1982, these were derived primarily from the sales of recordings (such as the "Smithsonian Collection of Classic Jazz" and the "Smithsonian Collection of Classic Country Music"), publications and from ticket sales for performance events. These funds supported 22 staff positions and the work of the DPA in producing new recordings, concerts and publications and for the distribution of educational materials. (The transfer of the recordings program from DPA to the Smithsonian Institution Press in FY 1983 accounts for the reduction of expenses between FY 1982 and FY 1983.) In FY 1982, monies also were provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program to support the annual "Spring Celebration" (\$42,000) and the "Holiday Celebration" (\$13,000) held in the National Museum of American History; the colloquium and concert "Black American Blues Song: A Study in Poetic Literature" (\$17,000); and Smithsonian Chamber Players performances in schools (\$3,000). Expenditures under this Program have been recorded for FY 1982 but not yet for FY 1983 and FY 1984. Income in FY 1983 and FY 1984 is derived from ticket sales and from an allotment and is used to provide partial support for the concerts, special events, celebrations, colloquia and conferences.

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations and corporations for specific purposes. In FY 1982, these funds supported performances, popular entertainment research such as the study of American popular entertainment and the historical studies of Jazz (actual expenditures of \$19,000 in FY 1982 and estimated expenditures of \$92,000 in FY 1983 and \$29,000 in FY 1984).

(Dollars in thousands)

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				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Gei	neral	Special Purpose		RES	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982										
Actual	9	325	18	738	_ !	161	-	219	-	-
FY 1983									l	
Base	12	658	18	777	-	160	- [- 1	- 1	-
FY 1984										
Estimate	12	564	19	849	- [111	- [-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	12	0	12
Number of Other Positions	3	0 .	3
11 Personnel Compensation	404	7	411
12 Personnel Benefits	38	1	39
21 Travel & Trans. of Persons	23	-20	3
22 Transportation of Things	2	- 2	
23 Rent, Comm. & Utilities		17	17
24 Printing and Reproduction	6	31	37
25 Other Services	175	-145	30
26 Supplies and Materials	8	13	21
31 Equipment	2	4	6
Tota1	658	94	564

Analysis of Change

Necessary Pay	8
Inflation	18
Program Funds	-120

ABSTRACT - The Office of the Assistant Secretary for Public Service advises and assists the Secretary in the development of programs to achieve the Institution's objectives in education and public service; coordinates and administers the programs under its review; and cooperates with other Smithsonian bureaus to plan and implement their programs and activities in public service. The Office of Telecommunications and the Visitor Information and Associates' Reception Center (VIARC) also are included under this heading. For FY 1984, an increase of \$80,000 is requested for the Visitor Information and Associates' Reception Center in support of its expanded programs for the benefit of the general public. The amount of \$200,000 appropriated in FY 1983 for the one-time production of a film on the Treaty of Paris is being relinquished in FY 1984. Necessary pay of \$8,000 is required for existing staff an amount of \$18,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

- PROGRAM I. Immediate Office, Assistant Secretary for Public Service: With base resources of five positions and \$233,000, the primary functions of the Office of the Assistant Secretary are to stimulate, coordinate and supervise the activities of the Smithsonian's educational and public service programs, including the Office of Telecommunications, the Visitor Information and Associates' Reception Center, the Smithsonian Institution Press, the Smithsonian magazine, the Office of Elementary and Secondary Education, and the Office of Symposia and Seminars. In the past year, the Anacostia Neighborhood Museum and the museum-related programs of the Division of Performing Arts were transferred to the History and Art Activity in order to facilitate closer working relationships between these units and other museums; the Division of Performing Arts' Recordings Program was transferred to and became a division of the Smithsonian Institution Press. In addition, the International Exchange Service has been placed under the Assistant Secretary for Administration as a shipping function.
- Office of Telecommunications: With base resources of five positions and \$158,000, the Office of Telecommunications is responsible for the development of Smithsonian policies and objectives in the use of telecommunications as one of the Institution's primary vehicles for providing public service and education; and for the production of films, television and radio programs for distribution to public and commercial broadcast media, as well as educational and civic organizations. In order to consolidate the film and electronic media resources of the Institution, related film and video production activities from the Office of Exhibits Central (two positions and \$69,000) and the Office of Museum Programs (one position and \$25,000) were transferred to this Office at the end of calendar year 1982. In the Smithsonian's FY 1983 Appropriation, an amount of \$200,000 was provided for the production of a film marking the 200th anniversary of the Treaty of Paris, which will be produced by this Office. The film portrays the negotiations leading to the Treaty which formally ended the Revolutionary War. Scheduled for completion in early 1984, the film will be circulated widely in this country and abroad through public television and cable television, and will be distributed to schools and libraries in the United States.
- III. Visitor Information and Associates' Reception Center (VIARC): With base resources of two positions and \$67,000, the Visitor Information and Associates' Reception Center is the Institution's public service bureau providing a wide variety of central information and assistance services to the public under three activity headings: the Seven Day Information Service, the Staff/Volunteer Service, and the Public Inquiry Mail Service.

EXPLANATION OF PROGRAM CHANGE - Established in 1970, the Visitor Information and Associates' Reception Center functions as a central point for a wide range of information and assistance programs for the general public, Smithsonian National Associates, and Smithsonian staff through the involvement and coordination of large numbers of volunteers. Although the need to provide programs specifically for the National Associates visiting the Smithsonian served as the primary initial motivation to create VIARC, its mission to provide general public information and assistance has expanded greatly during the past decade. Programs for the general public presently include: the operation of 14 information desks in eight museums, staffed every day of the year except Christmas Day by a corps of 400 volunteer Information Specialists; the Telephone Information Program, operating seven days a week, which responds to over 300,000 public telephone inquiries annually; the presentation of a daily visitor orientation program; and the Public Inquiry Mail Service unit, handling the research, response and referral of some 30,000 mail inquiries annually. Moreover, during the peak tourist season (from May through Labor Day), VIARC maintains an outdoor information program dispensing information and brochures to visitors from a number of mobile carts on the Mall. Currently, Federal funding is used primarily for the personnel costs of the Center's Public Inquiry Mail Service's activity, and for temporary program assistants. The Institution's nonappropriated Trust funds support 12 positions and almost all support requirements. In recognition of its expanded role in the development and provision of

visitor services, an increase of \$80,000 is requested in order to provide Federal support for the Center commensurate with its enlarged scope of activities for the general public. The funds will be used for the support costs of rental equipment (\$17,000); printing and reproduction (\$30,000); contractual services (\$19,000); supplies and materials (\$12,000); and equipment purchases (\$2,000).

The amount of \$200,000 appropriated in FY 1983 for the Office of Telecommunications to produce a film on the Treaty of Paris is not required in FY 1984.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - I. Office of Telecommunications: These funds are provided by allotments and support six full-time staff members in FY 1983 and a projected seven staff members in FY 1984, and expenses associated with the production of educational and informational materials for television, radio and films. Three ongoing series of programs are now reaching the American public regularly through radio and television. "Here at the Smithsonian," the innovative series of two-minute video features, was successfully inaugurated in FY 1982, and already has developed a subscriber list of 40 key television stations nationwide. The series has won a Gold Medal from the International Film and TV Festival of New York. At the same time, "Smithsonian Galaxy," the radio series which inspired "Here at the Smithsonian," continued to increase its subscriber list which now includes 225 stations both in the United States and abroad reaching an audience of approximately 20 million people. Smithsonian," the magazine series now entering its 14th year, continues to win high praise from public radio managers and audiences alike. Under supervision of the Office, a half-hour film commemorating the American-French victory at Yorktown has been completed and will debut with a White House screening and national showing on the Public Broadcasting System. The half-hour film "In Open Air: A Portrait of the American Impressionists," continued its tour of five European cities with a major Smithsonian Institution Traveling Exhibition Service exhibition and will soon go into circulation with a major distribution firm. With an FY 1983 grant of \$3 million from the McDonnell Foundation, the Smithsonian, in co-production with WETA-TV in Washington, D.C., is developing a major series of seven one-hour programs for national public television entitled Smithsonian World. The pre-production phase of the series was completed in the fall of 1982 with an earlier McDonnell Foundation grant of \$490,000, and the first of the seven programs is tentatively scheduled to premiere in the winter of 1984. The Smithsonian World series of television specials will be drawn from the humanities and arts, as well as the sciences, reflecting the great number of activities of the Smithsonian Institution. This amount is not included in the summary chart in order to be consistent with the Institution's Five-Year Prospectus which was prepared prior to the receipt of this foundation grant.

New projects now under development include a videotape biography series in conjunction with the National Portrait Gallery; a cable TV consortium venture with the National Geographic; a co-production agreement for a children's series geared for syndicated commercial television; a cooperative science series with the Agency for Instructional Television for junior high school students; and additional exploration of potential television productions by the Institution.

II. Visitor Information and Associates' Reception Center: Unrestricted General and Special Purpose Funds are provided by allotments and used primarily to support 12 full-time staff members associated with the Center's work as the Institution's public service bureau responsible for the information and assistance activities described in the Program Statement.

Restricted Funds - Office of Telecommunications: These funds were received from the Yorktown International Bicentennial Committee, Inc. for the film commemorating the 200th anniversary of the Battle of Yorktown (actual expenditures of \$219,000 in FY 1982). No further grants are anticipated for FY 1983 or FY 1984.

SMITHSONIAN INSTITUTION PRESS

(Dollars in thousands)

-	(JOIZGIO I										
1					NONA						
					UNRESTR	ICTED				FEDERAL GRANT	
	Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES	TRICTED	& CONTRACTS	
	Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
	FY 1982										
	Actual	29	886	24	6,640	-	-	-	-	-	-
	FY 1983 Base	29	1,009	33	11,479	-	-	-	-	-	-
	FY 1984 Estimate	29	1,032	35	11,975	-	_	_	_	_	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base	Proposed	Est.
	<u>FY 1983</u>	Adjustments	FY 1984
Number of Permanent Positions	29	0	29
Number of Other Positions	2	0	2
11 Personnel Compensation	808	12	820
12 Personnel Benefits	79	1	80
21 Travel & Trans. of Persons	1		1
22 Transportation of Things	2		2
23 Rent, Comm. & Utilities	8	2	10
24 Printing and Reproduction	74	5	79
25 Other Services	29	3	32
26 Supplies and Materials	6		6
31 Equipment	2		2
Total	1,009	23	1,032
Analysis of Increase			

Analysis of Increase

Necessary Pay	13
Inflation	10
Program Funds	0

ABSTRACT - The Smithsonian Institution Press is responsible for the editing, design, production and distribution of printed materials prepared by historians, scientists and curators. Such materials include research monographs, technical and scientific series, exhibit catalogues for Smithsonian museums, education pamphlets and information leaflets. The Press also acts as the Smithsonian's agent with the United States Government Printing Office in contracting for printing services and procuring of needed Federal printed materials and publications. No program increase is requested for FY 1984. Necessary pay of \$13,000 is required for existing staff and an amount of \$10,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The SI Press is organized into three divisions: the Scholarly Books Division including a broad series of scientific and technical monographs, supported with appropriated funds; the Direct-Mail Books Division which publishes popular books based on Smithsonian collections and research; and the Recordings Division which produces and sells sound recordings relevant to the collections and performing arts interests, and research and study efforts of the Smithsonian. The latter two divisions as well as some scholarly publications are financed with nonappropriated Trust funds. (In FY 1983, the Recordings Program was transferred from the Division of Performing Arts to the SI Press in order to consolidate the direct-mail planning and the sales of books and records. The Direct-Mail Books Division, formerly Smithsonian Exposition Books, had been merged with the Press in FY 1982.) The reorganization is expected to strengthen the Institution's strong presence in the book publishing field by unifying its books and records development, production, business management, marketing and sales activities.

The publication activity of the Press is a fundamental extension of the Smithsonian's basic research activity. The scientific, technological and historical series monographs published by the Press make the results of research conducted by Smithsonian curators and staff experts available to major libraries, museums, scientific institutions and interested members of the public both domestically and internationally. In addition to publishing research findings, the Press edits and designs exhibit catalogues, educational pamphlets and information leaflets which serve the millions of visitors to the Smithsonian and the extension programs conducted all over the nation.

After review of a manuscript for adequacy of preparation, and, in the case of non-Federally funded projects, for suitability and pertinence to Smithsonian interests, the Press staff conducts all phases of the editing, designs the publication's format and guides the manuscript through the composition, printing and binding stages—through the Government Printing Office in the case of Federally funded publications and with commercial establishments for those financed by other sources. The distribution section of the Press is responsible for receiving, warehousing and shipping all Federally funded publications.

During FY 1982, the Press published 53 monographs in the Smithsonian Contribution series including: Plains Indian Studies: A Collection of Essays in Honor of John C. Ewers and Waldo R. Wedel, Douglas H. Ubelaker and Herman J. Viola, editors; Inclusions in the Allende Meteorite, Brian Mason and S. R. Taylor; The Atlantic Barrier Reef Ecosystem at Carrie Bow Cay, Belize, I: Structure and Communities, Klaus Rutzler and Ian G. Macintyre, editors; Fossil Vertebrates from the Bahamas, Storrs L. Olson, editor; Social and Physical Maturation in Captive Lion Tamarins, Leontopithecus rosalia rosalia (Primates: Callitrichidae), R. J. Hoage; Pacific Plate Biogeography, with Special Reference to Shorefishes, Victor G. Springer.

The Press also edits, designs and produces <u>Smithsonian Year</u>, the Institution's annual report to the Regents and to the Congress, and procures and distributes within the Institution a variety of necessary manuals, reports and directories, including copies of Congressional materials and reports from government agencies.

The Smithsonian Institution Press staff in FY 1982 continued to receive recognition for quality production, design and editing. Books recognized for excelling in one or more of these areas include: How Humans Adapt, R. B. Kitaj, Celebration: A World of Art and Ritual, More than Land and Sky, and Renaissance of Islam: Art of the Mamluks.

In FY 1982, examples of Press scholarly publications were: <u>Inua Revealed</u>: <u>Spirit World of the Bering Sea Eskimo</u> edited by William W. Fitzhugh and <u>Susan H. Kaplan</u>, <u>Eastern Chipmunks</u>: <u>Secrets of Their Solitary Lives by Lawrence Wishner</u>, Red Phoenix:

The Rise of Soviet Air Power, 1941-1945 by Von Hardesty, and George Washington: A Figure Upon The Stage by Margaret Klapthor and Howard Morrison. More popular books published by the Direct-Mail Division include The National Museum of American History co-published with Harry Abrams, by Shirley Abbott and Thread of Life: The Smithsonian Looks at Evolution by Roger Lewin.

Publishing schedules for FY 1984 will be determined to some degree on the basis of the demands received from the Press's client bureaus and offices, which depend in turn on the allocations of funds made available to these bureaus for publishing purposes. The Press anticipates that the number of manuscripts submitted for publishing consideration will continue to increase, partly as a result of the addition in the past few years of new museums with active publishing programs. The Press was responsible for 279 Federal publications in FY 1982. Of these, 226 were general publications and 53 were scientific monographs in the Smithsonian Contributions series.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from sales of Trust funded books, records, royalties and special publishing services. They are used to support 33 full-time staff members in FY 1983 (35 projected in FY 1984), and defray editing, production, design, promotion and distribution costs for scholarly and general trade publications, popular books and records which are published in connection with the Institution's research, collections, exhibits and other programs.

OFFICE OF THE ASSISTANT SECRETARY FOR MUSEUM PROGRAMS AND

OFFICE OF MUSEUM PROGRAMS

(Dollars in thousands)

(DOTTELD I										
				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Gei	General		ial Purpose	RES	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	22	748	-	17	+	62	-	23	-	19
FY 1983 Base	21	836	-	6	-	47	2	540	-	-
FY 1984 Estimate	21	858	_	6	_	56	2	532	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	21	0	21
Number of Other Positions	2	<u> </u>	
11 Personnel Compensation	688	15	703
12 Personnel Benefits	68	2	70
21 Travel & Trans. of Persons	14		14
23 Rent, Comm. & Utilities	21	^2	23
24 Printing and Reproduction	6	2	8
25 Other Services	23	3	26
26 Supplies and Materials	9	1	10
31 Equipment	7	-3	4
Total	836	22	858

Analysis of Increase

Necessary Pay	17
Inflation	5
Program Funds	0

ABSTRACT - The Office of the Assistant Secretary for Museum Programs coordinates and provides direction to the Institution's central museum management and program support activities; maintains liaison with national and international museum organizations; undertakes special studies for museum operations and methodologies; and assists and advises the Secretary on these and related matters. The Office also furnishes advice and technical assistance to other museums; performs studies on the effectiveness of museum exhibits, programs and management methods; conducts training seminars and workshops for museum personnel; and disseminates technical information on museum practices. Closely aligned to the immediate Office of the Assistant Secretary are the Office of Museum Programs and the Office of International Activities. The Office of Horticulture and the South Group Buildings Management, which are under the

direct supervision of this Office, are included in the Facilities Services section of this budget request since their functions relate more closely to those of the Office of Plant Services. No program increase is requested for FY 1984. Necessary pay of \$17,000 is required for existing staff and an amount of \$5,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - I. Immediate Office, Assistant Secretary for Museum Programs: With base resources of seven positions and \$325,000, this Office administers, oversees, and reviews and supports the Office of the Registrar, the Conservation Analytical Laboratory, Office of Exhibits Central, Smithsonian Institution Libraries, Smithsonian Archives, National Museum Act, Office of Museum Programs, Office of International Activities, Smithsonian Institution Traveling Exhibition Service, Office of Horticulture, and the South Group Buildings Management.

In cooperation with other units of the Institution, the Office coordinates and supports projects related to the development and improvement of facilities, operational methods, and exhibition programs of the Smithsonian museums, including the Museum Support Center (MSC) and the Collections Management/Inventory Program. The Office has worked closely with the General Services Administration (GSA) and the museums that will occupy the facilities of the Museum Support Center in the development of the specifications for the storage equipment to be used, in the planning for the transfer of the collections, and in the formulation of operating needs. The Office is coordinating the development of a conservation training program at the Center to be administered by the Conservation Analytical Laboratory. (The conservation training program is addressed in the Special Programs section of the budget request under Museum Support Center.) The Office of the Assistant Secretary for Museum Programs also has administered the accelerated program of collections inventory begun in FY 1979. (The explanation of the Collections Management/Inventory Program is presented in the Special Programs section.)

Within the museum profession, the Office works closely with museum organizations and professionals, both nationally and internationally, to support the enhancement of scholarly, exhibition, and educational functions of museums; to encourage the development and application of new techniques for museum administration and practices; and to establish and improve museum training programs, particularly in conservation.

\$322,000, the Office of Museum Programs: With base resources of nine positions and \$322,000, the Office of Museum Programs conducts specialized training programs for museum personnel in American museums, including some programs designed particularly for the Native American community; arranges internships in museum practices; and assists visiting museum professionals from the United States and abroad. The Office plans and conducts special conferences on museum matters and provides program supervision for the Museum Reference Center, which is the major library source for museological information in the United States. The Office also produces informational audiovisual presentations on conservation and museum practices for distribution to museums and educational organizations. (In order to consolidate the film and electronic media resources of the Institution, resources of one position and \$25,000 were transferred from the video production unit of the Office of Museum Programs to the Office of Telecommunications at the end of FY 1982. The Office of Museum Programs will continue to develop and produce audiovisual presentations with the technical assistance and expertise of the Office of Telecommunications.)

The Museum Training Program offers courses in the form of seminars and workshops taught primarily by the Smithsonian staff for individuals employed by museums throughout the United States and abroad. In FY 1982, over 300 of these professionals attended 28 workshops held at the Smithsonian and in other locations. In addition, in FY 1981 and FY 1982, a series of six workshops for presentation in other cities, co-

sponsored and funded by local museums and museum organizations, were conducted on museum education, exhibition, conservation, registration, security, and museum management. During FY 1983, the Office of Museum Programs conducted the first national seminar on "Museums and Older Adults" in Los Angeles with 55 participants.

In FY 1982, approximately 80 museum professionals and students from the United States and other countries participated in the museum practices internship program conducted by the Office of Museum Programs. In cooperation with various bureaus and offices of the Institution, interns were placed throughout the Smithsonian with units that could provide the appropriate experience for each individual. As the need for specialized knowledge of museum practices continues to grow, the number of interns coming to the Smithsonian is expected to increase in FY 1983 and in FY 1984. Plans for FY 1984 also include career seminars and training programs in museology for university staff members engaged in teaching museum studies. The Office of Museum Programs sponsored and developed program itineraries for approximately 100 professional visitors from the United States and abroad during 1982. These professional visits are expected to increase in FY 1983 and FY 1984 as more museum professionals look to the Smithsonian Institution for assistance and services.

III. Office of International Activities: With base resources of five positions and \$189,000, the Office of International Activities fosters and coordinates international aspects of Smithsonian research and museum programs. The Office serves the Institution's interests abroad through continuing liaison with agencies of the United States Government, and with foreign governments, international organizations, and private institutions. In addition, the Office obtains passports and visas for Smithsonian travelers, assists in foreign arrangements and contacts to facilitate research and other official business, and provides assistance to foreign dignitaries, scholars and students participating in Smithsonian programs in this country. In the course of the year, the Office provided advisory and informational services for more than 200 Smithsonian projects involving activities abroad. In FY 1982, the Office published a Handbook for International Activities to serve as a guide for Smithsonian personnel involved in international projects and also initiated a quarterly newsletter to provide current information on research exchanges in foreign areas for all concerned staff.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from proceeds from sales of tapes and slides on conservation theory and practice, sold at cost to museums and related educational organizations, and from allotments. The funds are used to purchase supplies, services and equipment for training in conservation information programs and for special events related to these programs as well as national and international museological activities. In FY 1982, an award from the James Smithson Society provided support for the "Yorktown Exhibition" (expenditures of \$20,000 in FY 1982). Funds also were provided in FY 1982 from the Institution's Collections Acquisition, Scholarly Studies and Education Program (\$20,000) for a new edition of the listing of "Museum Studies Programs in the United States and Abroad." Expenditures under this Program have been recorded for FY 1982 but not yet for FY 1983 and FY 1984.

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations and corporations for specific purposes. In FY 1982, the Kellogg Foundation awarded a three-year grant to the Office of Museum Programs to foster the educational influence of museums through colloquia, workshops, residencies and the use of videotapes for museum professional leadership throughout the United

States and through establishing linkages between museums and other community resources such as universities, school systems, libraries, corporations and community organizations (estimated expenditures of \$536,000 in FY 1983 and \$531,000 in FY 1984).

Federal Grants and Contracts - These are provided by Federal agencies for specific purposes. A grant from the Department of Labor supported training opportunities for Native American museum personnel through internships, workshops and inter-museum cooperative agreements (expenditures of \$18,000 in FY 1982). No grants currently are anticipated for FY 1983 and FY 1984.

OFFICE OF THE REGISTRAR

(Dollars in thousands)

<u> </u>				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Gen	neral	Spec	ial Purpose	RES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP☆	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	4	132	-	-	-	<u>-</u>	-	-	-	-
FY 1983 Base	2	91	-	-	-	_	-	_ :	-	_
FY 1984 Estimate		93			_		_	_	_	_

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	2	0	2
Number of Other Positions	0	0	0
11 Personnel Compensation	71	1	72
12 Personnel Benefits	6		6
21 Travel & Trans. of Persons	3		3
25 Other Services	8	1	9
26 Supplies and Materials	3		3
Total	91	2	93

Analysis of Increase

Necessary Pay	1
Inflation	1
Program Funds	0

ABSTRACT - The Office of the Registrar is responsible for Institutional development, oversight and coordination of collections management policies, including advice to management concerning accountability procedures and information management techniques for all museum objects and specimens held by the Smithsonian. It is charged with overseeing collection inventories and with helping Smithsonian units identify and satisfy their collection information needs. No program increase is requested for FY 1984. Necessary pay of \$1,000 is required for existing staff and an amount of \$1,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - From the 1880s until 1976, the Office of the Registrar provided centralized registration services for the collections that are in the Museums of Natural History and American History. Through the years, centralized support of these collections had become antiquated and inadequate while little centralized support was being provided for other collections. Consequently, traditional registration functions were completely decentralized over a two-year period which ended in 1976. At that time, the emphasis was shifted from record-keeping to improvement of systems and policies, and the mission of the Registrar's Office was expanded to provide support for all bureaus in the Institution.

Following the designation of collections inventory control as an urgent Institutional priority, the Office oversaw the development of the Smithsonian's policy and plan for conducting collections inventories in all museum bureaus. These policies are revised regularly as circumstances require. Coordination and monitoring of collections inventory processes are continuing responsibilities of this Office. Members of the staff assist individual museums in defining and meeting their information needs for collections management and, where appropriate, in the development of requirement specifications for computer-supported information systems. This effort is pursued in concert with the Office of Information Resource Management. In further support of these activities, the Registrar's Office continues to conduct seminar programs, initiated in FY 1978, for Smithsonian personnel several times a year in the information management aspects of collections management. Additional workshops on collections management also are held at least twice a year in cooperation with the Office of Museum Programs for museum professionals throughout the country. Other continuing responsibilities of the Office include coordinating the Smithsonian Registrarial Council, through which interbureau registrarial business is conducted and cooperative procedures are developed; and coordinating the work of the Institution's Collections Policy and Management Committee. which has expanded its activities and established a number of subordinate task forces to conduct specific projects. The Office also maintains contacts with national and international organizations and associations concerned with the application of computers to collections management functions and with other museums involved with the development of innovative automation processes.

(Dollars in thousands)

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				NONA						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	21	822	-	-	-	-	-	-	-	-
FY 1983 Base	21	927	-	-	-	-	-	-	_	-
FY 1984 Estimate	21	951	-		_	_ !	-	_	_	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	21	0	21
Number of Other Positions	1	0	1
11 Personnel Compensation	606 59 25 2 17 22 70 51	9 1 3 3 3 4	615 60 25 2 18 25 73 54 79
Total	927	24	951
Analysis of Increase	•		
Necessary Pay Inflation Program Funds		10 14 . 0	

ABSTRACT - The Conservation Analytical Laboratory (CAL) is primarily responsible for advising and assisting Smithsonian museums in the study and the preservation of the National Collections. It provides extensive conservation, analytical, information and educational services for this purpose. No program increase is requested for FY 1984. Necessary pay of \$10,000 is required for existing staff and an amount of \$14,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Conservation Analytical Laboratory (CAL) was established in 1963 to serve the museums of the Smithsonian Institution. Staffed by conservators, scientists and information officers, CAL provides expert services for the study and treatment of the collections. These services include: scientific examination of objects; treatment for protection and preservation; analyses of objects to establish facts of interest to scientists and historians; developing, recording and providing data essential for a full understanding of museum collections; advising on environmental conditions within

the Smithsonian museums where valuable objects are displayed or stored; and conducting and assisting conservation training programs. A major responsibility of CAL is to provide conservation treatment of objects which cannot be treated locally, which present special problems or which require more specialized equipment than is available in the museums.

During FY 1982, CAL acted on 373 requests from museums and other bureaus of the Institution. Among the objects treated were 21 for the exhibition "George Washington, a Figure upon the Stage." These included Washington's silver chest, shaving kit, campaign bags, red ivory chessmen, a footstool, an inlaid table and a mirror. Many of these required close cooperation between CAL conservators and conservation scientists to evolve an optimum treatment to preserve and enhance the appearance of the object while retaining its archival information and value. This collaboration between conservator and scientist is typical of the approach that CAL can bring to problems ranging from Tiffany candlesticks to prehistoric pottery and other buried artifacts. The treatment process is documented so as to be available for reference. the conservation staff provided written and oral advice, expanded the number of its treatment guideline sheets to 420 pages, and distributed over 19,800 sheets to conservators and the public in answer to inquiries. The CAL staff presented 20 lectures to international and national meetings, and through the National Associates Regional Program to specialized audiences and to conservation workshops administered by the Office of Museum Programs. Some of these will result in papers for journal publication. A reprint file also is maintained of over 8,000 reprints of relevant documents from sources ranging from "Instrumentation and Methods in Physics Research" to the "Bulletin of the Australian Institute for Conservation of Cultural Material."

Data processing furnishes vital support to CAL both for statistical compilation of scientific data and for access to conservation reports. Access through CAL's own computer terminal to the index of the "The Art and Archeology Technical Abstracts" which is stored in a computer held at the British Museum Research Laboratory, makes this material easily retrievable. Additional abstracts, gathered and prepared by CAL staff from national or local sources, currently are indexed through an optical reader system. It is anticipated that this data, when time permits, can be entered into a computer to supplement the international data already processed. Research and treatment reports prepared by CAL staff are edited carefully so that they may be of greatest use to other conservators who may wish to consult the data they contain. The editor of these reports also subsequently prepares key words and abstracts for entry into an automated retrieval system. In developing key word lists, CAL has striven to employ those used by "The Art and Archeology Technical Abstracts" and the International Centre for Conservation in Rome. The aim is to have CAL's resources become part of a body of conservation information that will be an important component of the growing international network of data bases.

CAL science serves two general areas. One is associated closely with the treatment of objects and the preservation of the collections. For this, prompt response and timely results may be crucial. Other science activities of CAL relate to providing art historians, archeologists and anthropologists with detailed investigations on the properties and natures of materials and the manner in which these materials were combined or formed. The technical knowledge gained in this fashion can provide important new understanding. These two areas of research, though closely related, have somewhat different intellectual motivations. Conservation science is concerned primarily with the preservation and treatment of objects. The analyses of objects or their materials, such as pigments, ceramics, fibers, alloys, or corrosion products using advanced instrumentation, serve to determine appropriate conservation procedures. Based upon such examination, advice is given to conservators for conservation procedures appropriate for specific objects. CAL cooperates with the specialized laboratories of

the National Museum of Natural History/Museum of Man, the Freer Gallery of Art, the National Gallery of Art, the National Archives, the National Bureau of Standards, the Brookhaven National Laboratories and other organizations with whom close contacts are maintained.

Archeometry is the discipline that integrates the natural science analysis of objects with their archeological, anthropological, art historical and cultural backgrounds. It provides curators, archeologists and historians with basic research data concerning date, attribution and technologies of earlier production methods. The work of the archeometry staff of CAL is complemented by post-doctoral fellows, visiting scientists and research associates in Archeometry. In addition to working in CAL laboratories, fellows, research associates and visiting scientists work in such laboratories as those at the National Bureau of Standards, the United States Geological Survey or the Department of Mineral Sciences of the National Museum of Natural History/Museum of Man which are appropriate to the nature of the research being performed. These fellowships have been developed to allow post-doctoral candidates the opportunity to bring their specialized training and interests to study problems associated with archeometric research. Two such fellowships were awarded in FY 1982. These archeometric research studies which cover a variety of fields and the use of the resources of both Smithsonian and other institution's collections are often long-range in scope. They present further depth of insight and new avenues of investigation as gaps are filled in with the available data. Thus work continues on the source of early iron blooms found in the vicinity of Baffin Island, Canada, and on ceramics (3500 B.C.) from Tal-y-malyan, Iran. New work includes the system of ceramic production in the prehistoric Little Colorado district of Arizona, studies of scoriae from metal working areas and obsidian from Tal-v-malvan (adding a further dimension to the ceramic studies), studies of fifteenth and sixteenth century production of Spanish Majolica and of nephrite artifacts from sites in Labrador. A major aspect of CAL's archeometric studies involves cooperation with the National Bureau of Standards and a regular series of co-sponsored seminars. Several of these have resulted in important publications.

To a considerable extent, the damage that occurs to works of art can be minimized by museum staffs if they are thoroughly conversant with environmental requirements and understand the various processes that result in the degradation of objects. To provide for a better informed constituency and to supplement guidelines and personal consultations, CAL continues to offer a series of 80 videotaped orientation lectures each fall and winter for all interested Smithsonian Institution staff. In addition, it participates in workshops sponsored by the Office of Museum Programs, and staff members take an active part in the meetings of the Washington Conservation Guild.

The Director of CAL will have responsibility for the Smithsonian Training Program in Conservation which will be initiated in 1984 at the Museum Support Center. The curriculum offered at the Support Center will be conducted in association with area universities. In order to facilitate these actions and maintain coordination with other training and conservation work under CAL's jurisdiction, all personnel and equipment of the Conservation Analytical Laboratory will be brought together in laboratory and training space at the Museum Support Center by the third quarter of FY 1983. A more detailed explanation of the new Conservation Training Program and its resource requirements is included in the Museum Support Center narrative in the Special Programs section.

SMITHSONIAN INSTITUTION LIBRARIES

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR					FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Gei	neral	Spec	ial Purpose	RES!	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	99	3,212	8	229	-	1	-	16	-	-
FY 1983 Base	99	3,786	8	220	-	-	-	59	-	-
FY 1984 Estimate	99	3,633	8	246		_	_	8	_	_

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	99	0	99
Number of Other Positions	4	0	4
ll Personnel Compensation	2,230	54	2,284
12 Personnel Benefits	206	5	211
21 Travel & Trans. of Persons	17		17
22 Transportation of Things	2		2
23 Rent, Comm. & Utilities	45		45
24 Printing and Reproduction	157		157
25 Other Services	254	5	259
26 Supplies and Materials	390	35	425
31 Equipment	485	-252	233
Total	3,786		3,633

Analysis of Change

Necessary Pay	48
Inflation	63
Restored Position Funds	11
Program Funds	-275

ABSTRACT - The Smithsonian Institution Libraries (SIL) is a major American research library, providing library and information services to support the research, exhibit, public service and education programs of the Institution. In addition, SIL provides public service directly through its own exhibits, publications, research, internships and seminars. For FY 1984, the amount of \$275,000 appropriated for automation in FY 1983 is being rejustified in the Administration section of this budget under the Office of Information Resource Management to continue the process of implementing an integrated, automated library system. Necessary pay of \$48,000 is required for existing staff and an amount of \$63,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further \$11,000 is requested to provide full-year funding for the two positions restored by the Congress in FY 1982.

PROGRAM - The Smithsonian Institution Libraries serves the Institution and the public through support of Smithsonian research, museum and administrative units; through direct participation in the building of national bibliographic networks; and through programs of publications, exhibitions, loan and information services. Its collections of approximately 900,000 volumes and over 20,000 serial subscriptions are available through a system of 36 branch libraries located in the Washington, D.C. area and in the Smithsonian bureaus outside of Washington, including the Smithsonian Astrophysical Observatory (Massachusetts), the Cooper-Hewitt Museum (New York City), and the Smithsonian Tropical Research Institute (Panama). In addition, SIL is the purchasing agent for all books, journals and related materials in the Smithsonian. Fundamental to SIL planning is the growing national realization that electronic technologies have advanced to the stage that they will permit new modes of information transfer and resource sharing in the 1980s. SIL contributes its cataloguing to a national data base shared by 4,000 libraries. Intensive planning has taken place during the past several years toward adapting currently available computer technology to create a single, automated system that will accommodate all library services, including acquisition, cataloguing, information retrieval, transmission of library data between branch libraries, and management information. Funds of \$275,000 appropriated by the Congress in FY 1983 are being used to acquire software for such an integrated system. A further amount of \$275,000 is included in this budget request for the system, as justified in the Administration section under the Office of Information Resource Management.

The SIL is organized into three operational divisions: bibliographic systems, concerned with automated control of all SIL inventories and providing standard descriptions of all holdings; collections management, responsible for acquisition, preservation and housing of library collections essential to Smithsonian work; and research services, charged with direct, personal assistance to and interpretation for the scholarly clientele of the Libraries. Cost of the Libraries' system is controlled by the centralization of certain operations: an interdisciplinary reference/information center, an acquisitions and cataloguing division, a consolidated administrative staff, and conservation activities. The branch libraries of the system are dispersed throughout the Institution; they provide direct and local services to researchers through pertinent book collections and specialized reference services. Many collections of SIL are among the finest in the United States. Especially noteworthy are the natural history, decorative arts and design, and Dibner history of science and technology resources. Collection costs are kept down by borrowing from other research libraries, particularly the Library of Congress.

The activities of SIL may be described in terms of collections management, reference services, and outreach.

Collections Management - This function includes selection and deacquisitioning, conservation, space planning and collections management policies for this large library system. A Collection Development Policy Committee continuously is reviewing current practices in book and journal selection. The SIL maintains one of the finest book conservation programs in the United States. The Book Conservation Laboratory is responsible for preserving the most valuable of SIL's materials from the deterioration which has resulted from improper storage conditions. In addition, SIL is exploring inexpensive ways to preserve all its holdings, including a mass deacidification project.

Since 1974, SIL has been adding its current cataloguing (inventorying) to a nationally available electronic data base, the Online Computer Library Center, Inc. (OCLC), thus sharing with other libraries in the reduction of cataloguing costs. Since FY 1981, this SIL electronic data is no longer printed onto traditional catalogue cards

but is produced from information contained in the computer onto microfiche, eliminating maintenance of 36 card catalogues. In FY 1982, SIL began to add pre-1974 bibliographic records to the national data base. These became part of the microfiche catalogue and will form the data base for the new automated system.

Reference Service - SIL provides a full range of reference services typical for a large research library and is developing automated reference services as they become cost effective. Since FY 1978, SIL has employed on-line data bases for the arts (e.g., Art Modern), the sciences (e.g., Chemical Abstracts) and the humanities (e.g., History Abstracts). These up-to-the-minute searches shorten the time it takes to do research. Currently, 200 on-line data bases are in use; this program is expected to become an increasingly substantial part of the SIL budget over the next few years.

Steady use also is being made of the collections of other research libraries—and by them of SIL's collections. Since FY 1980, much of this sharing has been initiated via the electronic mail feature of the OCLC system. As older SIL manual records have been added to OCLC electronic data base, the quantity of items requested by other libraries from SIL has increased dramatically, so that the SIL now loans as much as it borrows. During FY 1982, library staff answered over 90,000 reference inquiries, of which approximately one-quarter required extensive assistance to the researcher, including on-line searches. In addition, over 44,000 requests for use of materials in the collection were made by Smithsonian researchers and almost 23,000 loans were made to other libraries through the Interlibrary Loan System.

Outreach - The Smithsonian Institution Libraries, as a library system serving the largest museum research complex, increasingly has been aware of its national and international responsibilities, especially in the area of exhibitions and seminars. A translation program administered by SIL with Special Foreign Currency Program funds has made available to scholars about 900 otherwise inaccessible scientific monographs.

In FY 1982, exhibits were mounted on the work of the SIL's Book Conservation Laboratory; on the SIL's 250,000 pieces of literature relating to American commerce and industry; and on the extraordinary gift of rare ornithological volumes from John H. Phipps. In FY 1983, four exhibits are planned, including one to tie into the National Air and Space Museum's exhibit to commemorate 200 years of ballooning. As a further example of SIL outreach, the Museum Reference Center provides information to over 2,000 persons and institutions a year in every state.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and are used primarily to support eight full-time positions and various support costs such as supplies, book binding and training.

Restricted Funds - These are provided through gifts and grants from individuals, foundations, endowments, organizations and corporations for specific purposes. For example, awards from the Seidell Endowment Fund are being used to supplement the cost of conversion of traditional catalogue cards to a machine readable format and to publish a catalogue of the manuscripts in the Dibner Collection (estimated expenditures of \$44,000 in FY 1983). Gifts from Mr. Dibner are being used to establish stipends for research on the Dibner Collection (estimated expenditures of \$4,000 in FY 1983 and in FY 1984).

OFFICE OF EXHIBITS CENTRAL

(Dollars in thousands)

				NONA						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	General		ial Purpose	RES'	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982										
Actual	47	1,407	-	_	-	-1	-	-	-	-
	1									
FY 1983	ļ			:						
Base	45	1,436	-	-	- 1	7	-	-	-	-
	1									
FY 1984										
Estimate	45	1,467	-		-	4	-			

^{*}FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	45	0	45
Number of Other Positions	2	0	2
11 Personnel Compensation	1,180	22	1,202
12 Personnel Benefits	116	2	118
21 Travel & Trans. of Persons	3		3
25 Other Services	15		15
26 Supplies and Materials	101	6	107
31 Equipment	21	<u> </u>	22
Total	1,436	31	1,467
Analysis of Increase			
Necessary Pay		15	
Inflation		7	
Restored Position Funds		9	
Program Funds		0	

ABSTRACT - The Office of Exhibits Central (OEC) prepares exhibitions and exhibit-related products for the museums, bureaus, programs and other offices of the Institution that do not have, or have limited, internal exhibit producing capabilities. The OEC also provides specialized and supplementary assistance to all other bureaus and offices. No program increase is requested for FY 1984. Necessary pay of \$15,000 is required for existing staff and an amount of \$7,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$9,000 is requested to provide full-year funding for the position restored by the Congress in FY 1982.

PROGRAM - The OEC designs, edits, produces, installs and maintains exhibitions, fabricates models, and provides other specialized services to the bureaus of the Institution in support of exhibition and exhibit-related activities. These services expand the capabilities and resources of units without full-time or specialized exhibition staff and supplement the capabilities of those units that have their own staff. In addition to exhibit production, consultation and referral of certain work to other sources during especially busy periods are important parts of OEC operations. Complete or partial exhibition services are provided by OEC depending on the specific needs of the requesting unit. Highly specialized OEC capabilities include design and editorial services, freeze-dry taxidermy and all types of model making. In coordination with the Office of Museum Programs, the OEC provides training in exhibition media and techniques in workshops for museum professionals throughout the world. New techniques, systems and procedures used in exhibits fabrication are reported to the museum community. Inshop training also is provided on a continuing basis for qualified interns sponsored by universities and museum training programs in the United States and abroad. OEC specialists also are regularly invited to consult or teach exhibition training courses at other museums; and to assist government agencies, such as the National Park Service Foundation and the Office of the Architect of the Capitol, which seek advice on the creation of models or exhibits that they produce for informational or educational purposes.

The OEC has received and completed an average of 250 separate projects each year since being established in 1972. Specific projects may involve less than a week or more than a year to complete depending on the scope and complexity of the work. Projects include installations of temporary, special interest exhibitions of limited duration and exhibition components (and models) that will be used for indefinite periods in the permanent exhibitions halls of Smithsonian museums. Particular assistance also is provided to the Smithsonian Institution Traveling Exhibition Service (SITES), for which OEC annually works on more than 40 separate projects. These services include design, editing, and production of complete exhibits. Examples of exhibits that the OEC produced for SITES during FY 1982 are "Ban Chiang: Discovery of a Lost Bronze Age," containing approximately 200 artifacts from the archeological discoveries at the village of Ban Chiang in northeastern Thailand; "Perfect in Her Place: Women at Work in Industrial America," tracing the contribution of women's labor from the 19th century through World War I (adapted from an exhibition researched and organized by the National Museum of American History); and "Venini Glass," a retrospective exhibition of 144 glass works produced by this company, which revived the art of glass-blowing and introduced bold designs, innovative techniques, and pure, rich colors.

Also scheduled during FY 1983 are workshops; the development of brochures; the editing of labels and other exhibit-related text materials; the production of graphics, models and accessories for several museums and program offices; the provision of services in support of the Folklife Festival; and other activities for a variety of Smithsonian programs.

At the end of FY 1982, the OEC's Motion Picture Unit (with base resources of two positions and \$69,000) was transferred to the Office of Telecommunications as part of a consolidation of film and electronic media resources of the Institution. During its ten years of operation as part of OEC, the film unit has been eminently successful and received over 40 national and international awards for its presentations. During FY 1982, the work of the Motion Picture Unit included the production of "Mirror of Kings," in cooperation with the Freer Gallery of Art, based on the SITES exhibition "Renaissance of Islam: Art of the Mamluks"; and "American Picture Palaces," complementing an exhibition at the Cooper-Hewitt Museum on the art and architecture of palatial movie theaters.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by tuition fees received from local universities, reimbursements and the sale of film prints. They are used to fund temporary clerical assistance, miscellaneous supplies, support costs for exhibits design and construction and travel related to consultation with other museums on exhibition techniques and developments.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED		_		FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral		ial Purpose	RES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	6	279	20	1,167	-	48	1	238	-	112
FY 1983 Base	6	282	19	1,164	-	_	1	355		-
FY 1984 Estimate	6	292	21	1,178	_	_	_	200	_	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	6	0	6
Number of Other Positions	0	0	0
11 Personnel Compensation	182 18	5	187 18
21 Travel & Trans. of Persons	7	1	8
22 Transportation of Things	42	3	45
23 Rent, Comm. & Utilities	7		7
25 Other Services	10		10
26 Supplies and Materials	1		1
31 Equipment	15	1	16
Total	282	10	292

Analysis of Increase

Necessary Pay	5
Inflation	5
Program Funds	0

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) provides an important national service by offering carefully selected, well designed and widely circulated exhibitions covering a broad range of subject matter in the fields of art, design, technology, history, science, anthropology, education and the environment. These include exhibitions from the Smithsonian's collections as well as those organized and loaned by numerous other museums in the United States and abroad, foreign governments and various individuals and organizations throughout the world. No program increase is requested for FY 1984. Necessary pay of \$5,000 is required for existing staff and an amount of \$5,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - SITES, the largest and most comprehensive exhibition program of its kind in the world, is currently in its 30th year of providing exhibition services to qualifying museums and various organizations in the United States. The exhibitions are complete programs accompanied by curatorial and registrarial information, handling

instructions, technical information, public affairs materials, educational activities and catalogues. SITES provides a broad program as diverse as the various disciplines and subject matter represented in the collections and museums of the Smithsonian Institution.

SITES exhibitions are seen by millions of people each year through their local museums, galleries and educational and cultural institutions. SITES also has become an essential element in the program and resource planning of thousands of exhibitionsponsoring organizations. Organizations benefit directly from traveling exhibitions by being able to schedule a traveling exhibition for a fraction of the cost that would be required were they to develop the exhibition and its accompanying materials themselves. The Federal support received by SITES assists in allowing exhibitions to be developed, toured and provided to these organizations at affordable costs. During FY 1982, an average of 110 exhibitions was on tour at any given time. Notices of availability of these exhibitions reached over 7,000 institutions on SITES mailing list through the annual catalogue, the quarterly newsletter and special mailings. During FY 1982, 29 new exhibitions joined SITES program, of which 20 contained original objects, and nine were panel exhibitions, attended by an estimated seven million persons in 47 states and the District of Columbia, in addition to Mexico, Canada, France, Germany, Austria, Puerto Rico and Panama. During FY 1983, it is expected that the number of exhibitions on tour will average 130. SITES is an authority on the complex multifaceted operations of traveling exhibitions and provides continuous professional assistance to the museum field on a variety of topics including shipping, insurance, contract matters, installation techniques, security and upgrading space for exhibitions. SITES works closely with other Smithsonian programs and museums in order to provide this information in a complete and coordinated manner.

The FY 1983 Federal base of six positions and \$282,000 represents approximately 16 percent of SITES operating budget. The remainder is either self-generated through fees charged for the service, provided by nonappropriated Trust funds of the Institution, or by grants and contracts. Federal assistance is essential for achieving one of the goals of the Smithsonian Institution Traveling Exhibition Service, which is to assure that fees paid for exhibitions remain within the budgetary reach of the participating museums and galleries. Currently, SITES is able to maintain a list of exhibitions that rent for \$300 or less. This target makes it possible for hundreds of potential exhibitors with limited financial resources to benefit most from Smithsonian traveling exhibitions, for they generally lack their own exhibition design and production capabilities. The growth in the number of these smaller organizations is astounding. SITES receives an average of 200 requests for information monthly; of that number, about 30 are added to the mailing list. With the growing number of organizations drawing on SITES' resources and with inflation placing a severe burden on museums throughout the country, the need for well developed, low cost exhibitions is stronger than ever.

New Exhibitions

Based on Smithsonian Sources:

FY 1983: "Aspects of Color: Works on Paper from the Hirshhorn Museum and Sculpture Garden"; "Assignment Aviation: Paintings from the Stuart M. Speiser Photo-Realist Collection"; "Black Wings: The American Black in Aviation"; "Black Women: Achievements Against the Odds"; "Colorful Kite Tales"; "Franklin Delano Roosevelt: The Intimate Presidency"; "Inua: Spirit World of the Bering Sea Eskimo"; "Matchsafes"; "Out of Africa"; "Raphael Soyer: 65 Years of Printmaking, Selections from the Hirshhorn Museum and Sculpture Garden"; "The Seasonal Trade Holiday Gift Greeting Cards"; "The Shopping Bag"; "Television."

FY 1984: "American Art, 1920-1940: Reflections of the Land"; "American Porcelain: New Expressions in an Ancient Art"; "The Artist and the Space Shuttle"; "Family Folklore"; "In Touch: Printing and Writing for the Blind in the 19th Century"; "The Meserve Collection"; "Southeastern Potteries"; "Twenty-five Years of Space Exploration."

Based on Other Sources:

FY 1983: "A Celebration of Birds: Louis Agassiz Fuertes and His Art"; "American Drawings IV"; "Aymara Weaving: Ceremonial Textiles of 19th Century Bolivia"; "Ban Chiang: Discovery of a Lost Bronze Age"; "Building a New World: Black Labor Photographs"; "Drawings and Watercolors by John Singer Sargent in the Corcoran Gallery"; "Iceland: Fire of the Arctic"; "Images of China: East and West"; "Jacquard Textile Experiments"; "Jamaican Art"; "Kentucky Quilts"; "Kings, Heroes, and Lovers: Pictorial Rugs from the Tribes and Villages of Iran"; "Marine Mammals of the World"; "Master Drawings from the National Gallery of Ireland"; "The Natural History of Sexuality"; "Noritake Art Deco Porcelains"; "Odessey: Mirror of the Mediterranean"; "Spectacular Vernacular: Traditional Desert Architecture from West Africa and Southwest Asia"; "Studied Beauty: Portraits by Cecil Beaton"; "Symbols of Faith"; "Upland Game Birds of North America."

FY 1984: "Americans at Home, 1850-1950"; "The Art of Cameroon"; "Beaumont Newhall: A Retrospective"; "The Biblical Paintings of James Tissot"; "The Holy Land"; "Italian Bronzes from the Kunsthistorisches Museum, Vienna"; "Jack Lenor Larsen"; "L'Amour de Maman"; "The Long Road Up the Hill: Blacks in Congress"; "Mary McLeod Bethune, 1875-1955"; "Native Harvests: Plants in American Indian Life"; "Neon Then and Now"; "Past Visions of American Futures"; "The Precious Legacy: Judaic Treasures from the Czechoslovak State Collections"; "Taking the Biscuit: Victorian and Edwardian British Biscuit Tins, 1863-1915"; "Turn of the Century Europe: Belgian Style"; "World Print IV."

The following number of exhibitions were scheduled in FY 1982 by state:

Alaska	2	Montana	3
Alabama	3	North Carolina	13
Arkansas	8	North Dakota	1
Arizona	4	Nebraska	1
California	18	New Hampshire	1
Colorado	13	New Jersey	5
Connecticut	3	New Mexico	3
District of Columbia	10	Nevada	1
Delaware	2	New York	19
Florida	29	Ohio	23
Georgia	7	0klahoma	5
Iowa	13	Oregon	3
Illinois	16	Pennsylvania	11
Indiana	6	Rhode Island	1
Kansas	7	South Carolina	3
Kentucky	10	Tennessee	16
Louisiana	6	Texas	23
Massachusetts	9	Utah	3
Maryland	12	Virginia	4
Maine	1	Vermont	2
Michigan	10	Washington	5
Minnesota	6	Wisconsin	9
Missouri	14	West Virginia	8
Mississippi	4	Wyoming	4

Total: 233 cities served in 47 states and in Washington, D.C. with 380 exhibitions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived primarily from rental fees collected from museums, universities, historical societies and other users of the traveling exhibitions. Supplemented by an allotment, they support 19 full-time positions in FY 1983 (21 projected in FY 1984) and virtually all exhibition development costs including publications, materials, outside specialists and contractual services. In FY 1982, funds provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program were used to develop and produce educational materials to accompany the traveling exhibitions (\$48,000). Funds from the Smithson Society will be applied to the development of a Sculpture Learning Exhibition Program during FY 1983 (\$33,000). Expenditures under these programs have not been recorded yet for FY 1983 and FY 1984.

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations or corporations for specific purposes. Generally, they provide support for specific exhibitions. For example, in FY 1982 continuing support from United Technologies was used for the "Renaissance of Islam" exhibition (\$20,000); additional funds from the Glenmede Foundation were used for the support of the "Ban Chiang" exhibition (\$53,000); the "American Impressionism" exhibition was supported by the Armand Hammer Foundation (\$20,000), the Allbritton Foundation (\$50,000) and the Prendergast Foundation (\$5,000). In FY 1983, Mobil Oil Corporation will support the costs of the "Art of the Cameroon" exhibition (estimated expenditures of \$273,000 in FY 1983 and \$27,000 in FY 1984); Champion International will endorse the exhibition "Toward 1984: Futurism" (estimated expenditures of \$31,000 in FY 1983 and \$173,000 in FY 1984); the Barra Foundation has donated \$30,000 for the tour of "An American Icon: George Washington"; Aramco has provided partial support for the exhibition "Traditional Crafts of Saudi Arabia" (\$10,000).

Federal Grants and Contracts - These are provided by various Federal agencies for the development and touring of specific exhibitions. In FY 1982, continuing support from the United States Geological Survey was used for exhibition preparation and catalogues to accompany the exhibition "West Comes East," and a special grant of \$108,000 from the United States Information Agency contributed to the travel costs of circulating the exhibition "American Impressionism" to Europe. SITES does not anticipate receiving any Federal grants and contracts during FY 1983 or FY 1984.

SMITHSONIAN ARCHIVES

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
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Fiscal		RAL FUNDS	Gei	neral	Spec	ial Purpose	KES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	13	453	2	42	-	_	-	_	-	-
FY 1983 Base	13	483	2	48	-	-	-	_	-	-
FY 1984 Estimate	13	495	2	52	-	-	_	-	-	_

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions Number of Other Positions	13	0	13
Number of Other Positions		· · · · · · · · · · · · · · · · · · ·	
11 Personnel Compensation	372	7	379
12 Personnel Benefits	36	1	37
21 Travel & Trans. of Persons	4		4
22 Transportation of Things	1		1
24 Printing and Reproduction	3		3
25 Other Services	38	1	39
26 Supplies and Materials	16	2	18
31 Equipment	13	1	14
Total	483	12	495

Analysis of Increase

Necessary Pay	8
Inflation	4
Program Funds	0

ABSTRACT - The Smithsonian Archives provides archival and records management services to support the research, collections management, educational, and administrative functions of the Institution. No program increase is requested for FY 1984. Necessary pay of \$8,000 is required for existing staff and an amount of \$4,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Smithsonian Archives is the official memory of the Institution and an important research resource for historians of American science and culture. The Archives is responsible for a central research repository, an off-Mall records storage center, centralized information systems for archival documentation dispersed throughout the Institution, and management of all official records. Its goal is to preserve official records, specimen-related records and the papers of distinguished research staff and to provide access to these for administrators, scholars and scientists.

The Archives accessioned some 2,600,000 documents in FY 1982, bringing its total holdings to over 19,000,000 documents, or 46 percent of the 41,000,000 documents in the Institution for which it is responsible. An additional 12 percent dispersed throughout the Institution is accessible through the Archives' central information systems. The balance, 42 percent, remains to be brought under archival control. Major transfers during the year were received from the Smithsonian Science Information Exchange, the National Museum of American History, the Office of the Secretary, the Office of Programming and Budget, the National Museum of Natural History/Museum of Man and the Hirshhorn Museum and Sculpture Garden.

During FY 1982, the Archives processed some 2,200,000 documents for research use, and responded to 780 reference requests. Of these, 341 were from Smithsonian administrators and 439 from Smithsonian or outside scholars. In addition, 650 retrievals were made from the United States National Museum accession records.

The Archives records management program disposed of 276,000 documents of no historical or legal value in FY 1982, at a savings to the Institution of almost \$16,000. Microfilming of Smithsonian records continued with 88,370 images processed during the year.

Archives and records management programs were established during the year in the Hirshhorn Museum and Sculpture Garden, the National Portrait Gallery, and the National Air and Space Museum. Work also was begun at the Smithsonian Tropical Research Institute, Office of the General Counsel, and Office of Audits; programs are expected to be fully operational in these offices in FY 1983. In addition to the continuing program at the Smithsonian Astrophysical Observatory, discussions were begun with Observatory staff on the appraisal and preservation of machine-readable data resulting from their projects.

During FY 1983, the Archives plans to work on archives and records management programs for the National Zoological Park, the Smithsonian magazine, the Office of Symposia and Seminars, the Office of Information Resource Management, the Anacostia Neighborhood Museum, and the National Museum of African Art, in addition to maintaining existing programs. The Archives also plans to upgrade its efforts to promote use of its collections in FY 1983, continue work on its information systems, reduce the processing backlog by 500,000 documents, and microfilm 100,000 images.

In FY 1984, the Archives will make a major effort to establish archives and records management programs in the Office of Equal Opportunity, Office of Fellowships and Grants, Office of Membership and Development, Division of Performing Arts, and the Office of American and Folklife Studies. The Archives also will expand its oral history program and improve and expand its automated information systems.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and are used to cover salaries of two archivists and various support costs (estimated expenditures of \$48,000 in FY 1983 and \$52,000 in FY 1984).

(Dollars in thousands)

(DOTTALS I	11 - 110	abanab)								
				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Spec	ial Purpose	RES'	TRICTED	& C(ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982										
Actual	3	735 -	-	-	-	-	-	-	-	-
FY 1983										ĺ
Base	3	785	-	-	-	-	-	-	-	-
FY 1984										
Estimate	3	786	-		_	-	-	-	-	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	3	0	3
Number of Other Positions	0	0	0
11 Personnel Compensation	64	1	65
12 Personnel Benefits	6		6
21 Travel & Trans. of Persons	9		9
24 Printing and Reproduction	6		6
25 Other Services	11		11
26 Supplies and Materials	2		2
31 Equipment	1		1
41 Grants	686		686
Total	785	1	786

Analysis of Increase

Necessary Pay	1
Inflation	0
Program Funds	0

ABSTRACT - The National Museum Act (NMA) is a technical assistance program under which grants are made for specific proposals to enhance the quality of museum operations by supporting training in museum work, encouraging research and special studies for the improvement of museum methods and practices and assisting in the dissemination of technical information to the museum profession. Reauthorization is being sought for the National Museum Act at the \$786,000 level for FY 1984 and for such sums as may be necessary for FY 1985 and FY 1986. No program increase is requested for FY 1984. Necessary pay of \$1,000 is required for existing staff.

PROGRAM - Funds appropriated to the Smithsonian Institution for the National Museum Act are granted to museums, professional museum-related associations, and universities for projects to encourage the improvement of museums by providing training opportunities for museum professionals and by assisting in the resolution of museum problems through special studies and research activities. The National Museum Act Advisory

Council, appointed by the Smithsonian Institution, advises and assists the Secretary in determining priorities and assessing the quality of projects for which support is requested under the Act. The membership of the Advisory Council encompasses the principal museum disciplines—art, science and history—and broadly represents all regions of the United States. Only those proposals which demonstrate thoughtful planning, careful structure and sound administration are recommended by the Advisory Council for support.

Since the Program's inception, grants have been provided for fellowships, internships, seminars and workshops, and travel-study projects, many of them concentrating on studies in museum conservation. The Act also has enabled professional museum organizations and associations to offer improved technical services to museums and their employees and has contributed to studies and research resulting in more effective museum performance and more advanced conservation practices. Persons who have been trained in museum practices and as conservators, with the support of the National Museum Act, now are making important contributions to the profession. The types of research projects and special studies supported by the National Museum Act in museology and conservation are unique and generally have not received support from other funding sources. This research has produced many advances, not merely in museum management practices but in innovative technologies for the conservation of collections. Although the resources available to the National Museum Act have been modest, the results of its grant programs have made a major improvement in the quality of the services that museums provide. The NMA remains as the only form of support concentrating in these specific areas for museums.

In FY 1982, 139 applications for support were received and reviewed, and 56 grants, totaling \$676,000 were made. Thirty-five of these, for a total of \$500,000, were related to museum conservation training and research activities. Research grants made in FY 1982 supported such activities as an investigation of the development of special acrylic substances used to consolidate and preserve porous stone materials that have been used in works of art and in building construction; studies on methods for preserving very old albumen photographic prints and for cleaning techniques for daguerreotypes; and the collection of data, for use by conservators, on the useful life of protective coatings and adhesives.

For the FY 1983 program, 140 applications, requesting \$2,800,000 in support, have been received and will be reviewed in March 1983. These include 39 applications submitted under the Museum Internship Program; 11 submitted under the Graduate Professional Education and Training Program; 36 applications for Conservation Stipends; 30 applications for Special Studies and Research projects; 15 applications for Seminars; and nine applications under the Services to the Field Program.

In order to coordinate efforts and to meet, insofar as possible, the increasingly complex needs of museums, the staffs of the National Museum Act and of the Office of the Assistant Secretary for Museum Programs work closely with individuals, museums, educational institutions and professional organizations involved in museum training and research activities. The staff of the NMA also consults regularly with those who administer Federal programs which assist museums and participates in the deliberations and activities of the "Working Group on Museum Policy" of the Interagency Committee on the Arts and Humanities.

AMERICAN STUDIES AND FOLKLIFE PROGRAMS

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ger	neral	Spec	ial Purpose	RES	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	5	619	11	513	-	39	-	32	4	324
FY 1983 Base	5	625	9	450	-	42	-	3	-	100
FY 1984 Estimate	5	650	10	453	-	36	_	5	_	100

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	5	0	5
Number of Other Positions	24	0	24
11 Personnel Compensation	308	7	315
12 Personnel Benefits	29		29
21 Travel & Trans. of Persons	10	1	11
22 Transportation of Things	5		5
23 Rent, Comm. & Utilities	10	2	12
24 Printing and Reproduction	53	4	57
25 Other Services	145	19	164
26 Supplies and Materials	45	7	52
31 Equipment	20	-15	5
Total	625	25	650

Analysis of Increase

Necessary Pay	7
Inflation	18
Program Funds	0

ABSTRACT - The Offices of American Studies and Folklife Programs conduct research on the material aspects of American civilization and on the traditional folk cultures of the United States. Foreign folklife traditions are studied as well to shed light on cultures which have taken root in American soil. Among its activities, the Folklife Program produces the Festival of American Folklife, which is the largest annual cultural event in the Nation's Capital. No program increase is requested for FY 1984. Necessary pay of \$7,000 is required for existing staff and an amount of \$18,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Office of American Studies sponsors a graduate program in American material culture in cooperation with various universities in and out of the Washington, D.C. area. Four or five seminars a year are offered for academic credit and are taught by the Director of the program and by cooperating scholars. In addition to the regular

American Studies courses offered to graduates, a number of folklife courses have been added to the offerings in the past two years, taught by members of the Folklife Unit of the Smithsonian and by folklife personnel outside the Institution.

Since its inception, the Office of Folklife Programs has directed its attention to the identification, analysis, documentation and presentation of the rich variety of folk traditions which form the foundation of American culture. It has concentrated as well on those old-world folklife traditions which have counterparts in this country. Infusing these interests is a commitment that folk artists, their skills and their creations receive the respectful and understanding recognition they deserve. In order to bring about such recognition, this Office publishes documentary and analytical studies; produces the Festival of American Folklife; collaborates with other Smithsonian bureaus on producing folklife exhibitions such as the Renwick exhibition, "Celebration: A World of Art and Ritual," developed in conjunction with the National Museum of American Art and funded by the Major Exhibition Program; presents living folk traditions within the context of Smithsonian exhibitions; and engages in cooperative projects with other government agencies interested in traditional culture.

Publications - The staff of the Office of Folklife Programs is involved in a broad range of publication projects which documents and analyzes folklife traditions. These publications have grown out of research and presentation programs with which the Office has been involved. In some cases, private sector corporations or foundations have underwritten the costs of producing a scholarly book or documentary film. Such funding is important, since the Federal base of approximately \$50,000 in support of publications is large enough to print only a portion of the scholarly output of the staff. Illustrative of private support, Pantheon Press has published a book in FY 1983 on family traditions that were collected during six years of research associated with the Festival of American Folklife, and private sources currently are funding two documentary films which originated with past Festival programs. In addition, the Office produces a monograph/film series which examines areas of traditional culture. The combination of scholarly monograph with ethnographic film, treating complementary aspects of the same subject, has proven a useful and important development for the study of folklore and anthropology. Between FY 1983 and FY 1984, four monographs with accompanying films will be published, two monographs will be in process and their accompanying films will be completed, and two new projects will be initiated. This monograph/film series, entitled The Smithsonian Folklife Studies Series, is proving to be a significant resource for scholars and students in the social sciences.

The Festival of American Folklife - During the past 16 years, the Festival has developed a large and loyal constituency throughout the nation. It also has stimulated local interest in the traditional arts in the regions from which folk artists have been brought to the Festival. Such interest, in turn, has fostered research projects, local mini-festivals modeled after the Smithsonian's and regional markets for traditional craftsworkers and performing artists. The 17th annual Festival, which will be held on the Mall for two weeks during the summer of 1983, will highlight the richly varied folklife traditions of the State of New Jersey. Plans for the Festival include, as well, a major presentation of French and Franco-American culture in observation of the 200th anniversary of the signing of the Treaty of Paris, the event that officially marked the conclusion of the American Revolutionary War. For the 18th Festival in FY 1984, tentative plans call for major programs from Hawaii and Alaska in honor of the silver anniversaries of these states.

Exhibitions and Live Folklife Presentations - As a result of the initiative of the Secretary's Folklife Advisory Council three years ago, the Office of Folklife Programs--in collaboration with the National Museum of American Art's Renwick Gallery-has been involved in the planning and production of a 16-month long exhibition of folk and traditional art at the Renwick. The exhibition, entitled "Celebration: A World of

Art and Ritual" opened March 17, 1982, and will close July 10, 1983. It fills all seven of the Renwick galleries with 600 objects drawn from the collections of nine Smithsonian museums, representing 62 cultures on five continents and the Pacific Islands.

To enrich this unique exhibition, the Office of Folklife Programs has produced and continues to plan several activities within the context of the exhibition during its public showing. These activities include a lecture series, ethnographic film series and traditional folklife presentations to be mounted on a monthly basis in the Renwick's Grand Salon. In addition, publications associated with the exhibition include an illustrated catalogue, a checklist of objects, a teacher's manual, a guide to local celebrations, and a scholarly book on the substance and symbols in world celebrations.

During FY 1982 and FY 1983, research has been under way to develop an exhibition on the surviving traditional potteries in the southeastern United States. The exhibition, entitled "Southeastern Potteries," is being organized jointly by the Office of Folklife Programs and the Smithsonian Institution Traveling Exhibition Service (SITES). It will begin a 26-month tour in November 1983 and will be presented at the Smithsonian from June 1 through July 8, 1984, at the National Museum of American History. In conjunction with the exhibition, the Office is planning a pottery program which will include craft demonstrations of turning, glazing and firing of the potteries represented in the exhibition.

Planning has begun in FY 1982 and FY 1983 and will continue in FY 1984 to bring from India a widely praised exhibition entitled, "Aditi - A Celebration of Life." The exhibition, which would be funded through the Major Exhibition Program, is scheduled to open in the Evans Hall of the National Museum of Natural History/Museum of Man in June 1985. (The exhibition and its associated activities are described in detail in the Major Exhibition Program portion of this budget.)

Cooperative Projects - The Office of Folklife Programs has been involved in several collaborative endeavors with governmental agencies interested in traditional culture. In FY 1982 and FY 1983, the Office worked with the Folk Arts Program at the National Endowment for the Arts to develop programs for the 15th and 16th annual Festivals of American Folklife highlighting the talents of the folk artists who have received support and encouragement from the Endowment. A similar program is being developed with the Endowment for the 17th Festival in the summer of 1983. In addition, a summer long exhibition is being planned for the National Museum of American History which will feature works by the recipients of the Endowment's second annual National Heritage Fellowship Awards. These awards are given each year to 15 traditional craftsworkers and performing artists who have made significant contributions to the culture of the United States.

A second cooperative venture in FY 1983 involves working with the American Folklife Center at the Library of Congress in the development of a program for the 17th Folklife Festival. This program will explore the traditional roles and functions of ethnic schools in the United States and will be modeled after the Festival's highly successful Family Folklore Program which, over a number of years, has collected family lore from Festival visitors.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided from allotments, tuition reimbursements from universities for students participating in various training programs and from concessions sales relating to the Folklife Festival. In FY 1982, partial support was provided for the Renwick exhibition, "Celebration: A World of Art and Ritual" (\$100,000). In FY 1983, support will continue to be provided

for the "Celebration" exhibition (\$25,000); and will pay the salary, benefits and other costs of nine full-time employees of the Folklife Program (\$422,000) of which \$250,000 is attributable to the annual Festival. With tuition reimbursements from area universities, the Office of American Studies pays expenses associated with the administration of joint programs in American civilization with George Washington University and the University of Maryland (estimated expenditures of \$19,000 in FY 1983 and in FY 1984).

Restricted Funds - These are provided in the form of gifts and grants from private foundations or corporations for specific purposes. In FY 1982, gifts were provided from private sources for an ongoing film footage editing and research project (actual expenditures of \$14,000) and from the Jameson Irish Whiskey Company for additional support for the "Celebration" exhibition at the Renwick.

Federal Grants and Contracts - These have been provided by various state, local and foreign governments for support of exhibitions and performances at the annual Festival of American Folklife and also are used for specific programs such as the St. Patrick's Day festivities at the opening of "Celebration: A World of Art and Ritual." For FY 1982, funds were received from the State of Oklahoma to highlight the folklife traditions of Oklahoma at the 16th Festival held in the summer of 1982 (actual expenditures of \$259,000). Support also was received from the International Cultural Society of Korea to present traditional Korean craftsmen and performing artists at the 16th Festival (actual expenditures of \$39,000). For FY 1983, funds have been received from the State of New Jersey to present the State's folklife traditions at the 17th Festival in the summer of 1983 (\$252,000). This Office projects additional grant expenditures in FY 1983 for support of the annual Festival (\$81,000). For FY 1984, grant expenditures for the annual Festival and for the "Southeastern Potteries" exhibition also are projected (\$300,000). The majority of these amounts for FY 1983 and FY 1984 are not included in the summary chart in order to be consistent with the Institution's Five-Year Prospectus which was prepared prior to the anticipation of these grants.

(Dollars in thousands)

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				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDERAL GRANTS	
Fiscal	FEDE	RAL FUNDS	Ger	neral	Special Purpose		RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982										
Actual	2	526	-	-	- 1	-	-	_	-	-
FY 1983			l i							
Base	2	651	-	-	-	,—	-	-	-	-
			[[[
FY 1984			1							
Estimate	2	678		_	-	1	-	-	_	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	2	0	2
Number of Other Positions	11	0	11
11 Personnel Compensation	179	2	181
12 Personnel Benefits	17		17
21 Travel & Trans. of Persons	93	2	95
22 Transportation of Things	7		7
23 Rent, Comm. & Utilities	1		1
24 Printing and Reproduction	5		5
25 Other Services	217	9	226
26 Supplies and Materials	62	5	67
31 Equipment	70	9	
Total	651	27	678

Analysis of Increase

Necessary Pay	2
Inflation	25
Program Funds	0

ABSTRACT - The International Environmental Science Program (IESP) coordinates the Institution's long-term monitoring and study of ecosystems. The goal is to evaluate biological diversity in order to understand and eventually predict consequences of human activities. The Program is a multi-bureau, interdisciplinary effort at two permanent Smithsonian sites—the Tropical Research Institute (STRI) in Panama and the Chesapeake Bay Center for Environmental Studies (CBCES) in Maryland as well as at several temporary tropical sites. No program increase is requested for FY 1984. Necessary pay of \$2,000 is required for existing staff and an amount of \$25,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Smithsonian's long tradition in international research and unparalleled collections of natural history objects make it well qualified to sustain long-term scientific studies abroad. The IESP provides support costs for teams of scientists to monitor natural variations in specific environments that are still

unstressed by humans. Recent studies by the National Academy of Sciences, the Council on Environmental Quality and the Office of Technology Assessment have emphasized the need for additional monitoring programs in both the tropic and temperate zones. The State Department sponsored a conference in November 1981 entitled "Strategy Conference on Biological Diversity," which emphasized that the rapid rate of tropical deforestation, loss of suitable soil and the need to inventory and monitor certain ecosystems is of critical strategic and scientific concern to the United States. It is estimated currently that perhaps three million species of plants and animals exist in the tropics but only one-sixth of them have been identified. Monitoring done by the International Environmental Science Program fulfills the needs emphasized in the State Department conference and helps develop new monitoring systems elsewhere.

The Program has monitored for over a decade the entire estuarine system of the Rhode River, Maryland, the tropical forest of Barro Colorado Island (BCI), and the Galeta Reef on the Atlantic side of the Panama Canal. The goal is to assess relative stability of these three ecosystems over several decades. Such long-term monitoring distinguishes between natural and man-made disturbances to a system.

At CBCES, a major accomplishment of IESP in FY 1982 was the analysis of change in rainfall over an eight-year period. During this time, scientists recorded a steady increase in the acidity of rainfall at the Center's weather station, from a yearly average pH of 4.45 to nearly 3.8 (over a five-fold increase). During 1982, the lowest pH recorded in rainwater was 3.0 which is as acid as table vinegar. Investigations have begun to determine the effects of this very acid rainfall on fish in the streams that flow into the Chesapeake Bay. In other areas of the United States, it has been shown that these low pH levels (high acid) have seriously affected many species of fish. In addition, this increase in acid rain was shown to cause the displacement of such essential plant nutrients as magnesium, calcium and potassium from the plant/soil pool at a rate that could soon cause adverse effects on local forests.

On Barro Colorado Island in Panama, scientists have found that tonka bean trees (whose seeds are used in perfumes and as tobacco flavoring) cannot reproduce in tropical forests if mammalian seed eaters are very abundant. On Barro Colorado Island, which does not have any large carnivores (such as ocelots and jaguars), and where there is no hunting, there are almost no tonka bean seedlings; on adjoining mainland areas where there are carnivores to eat the seed eaters, the trees are reproducing effectively. This is one of the first documented cases of how the presence of carnivores can determine tree composition in a tropical forest.

At Galeta on Panama's Atlantic Coast, the IESP's computer-controlled system measures the growth of marine communities. This new system replaces the less accurate method of measuring coral growth by hand. Studies of the life history of marine algae on the reef flat at Galeta show that its reproduction was predominantly vegetative whereas in deep water where the algae was subject to less environmental stress, reproduction was predominantly sexual.

With support from foreign governments, conditions at the Program's temporary sites are being monitored in Brazil, Venezuela, Nepal, People's Republic of China, Peru and the Sinai of Egypt. In FY 1983, the Sinai site will be replaced by new sites on Aldabra atoll in the Indian Ocean, and in the Poco d'Anta Reserve in southeastern Brazil. The Program's goal is to inventory and monitor the plants and animals there before human activity alters the land.

Recent estimates suggest that less than two percent of the original forest habitat remains in coastal southeastern Brazil. Among the threatened species is the golden lion tamarin, a small monkey which is now the national symbol for nature conservation in Brazil. For the past decade, Smithsonian scientists have been conducting research

on the reproduction of captive tamarins and are breeding them so successfully that there are now more in zoos than in the wild. Smithsonian scientists and their Brazilian colleagues, plan to start reintroducing tamarins to the Poco d'Anta Reserve. For the reintroduction to be successful the behavior of wild and captive-born tamarins will be monitored by radio collars, in order to learn exactly what these animals need to survive in the wild.

Aldabra is a remote atoll in the Indian Ocean and its relatively undisturbed condition makes it an ideal living laboratory to understand the mechanisms of how new species are formed. In FY 1983, the Institution will begin a five-year monitoring program of the Island's flora and fauna especially the marine invertebrates and the algae.

Program accomplishments for FY 1982 include:

Venezuela -- Monitoring of primate populations (monkeys) demonstrated genetic variations unlike those of similar populations previously studied in the tropics. This discovery will aid scientists in testing hypotheses in sociobiology and evolution.

Amazon -- Work on unique Amazonian fish uncovered an important example of glandular modification to produce a chemical that attracts potential mates, which may explain how fish find each other to breed in such muddy waters. Although the use of chemical attractants is well known in insects and other land animals, it is very rare in fish.

Nepal -- The first long-term study of hog deer was started. Preliminary results indicate that this little known deer exists in much larger numbers than expected in the Chitwan National Park, where it is important prey of tigers and leopards. In recognition of Smithsonian supported research over the past decade, the Government of Nepal has created the King Mahendra Fund for Nature Conservation to complement available Smithsonian Institution funding of the Smithsonian's research camp in the park.

People's Republic of China -- A reproductive physiologist worked with Chinese scientists in artificially inseminating Giant Pandas in the wild, and studying the complex reproductive physiology of this species in captive situations in Chinese zoos.

Sinai -- Scientists surveyed the desert using satellite images, and are mapping sand dunes in the northern Sinai and studying the distribution of drainage basins. These data are crucial for controlling future development in the region.

In FY 1982 the Program published 19 papers on the Amazon ecosystem, and a major book entitled Biological Diversification in the Tropics; ten papers on the llanos region of Venezuela; five articles on the deer of Nepal; publications in press are on the Giant Panda habitat in China, and on the geographical characteristics of the Sinai. Thirteen publications resulted from the Program's research in Panama and on the Rhode River ranging from the effects of herbicides on aquatic vegetation to the ecology of neo-tropical forests.

ACADEMIC AND EDUCATIONAL PROGRAMS

(Dollars in thousands)

				NONA						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES'	TRICTED	& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	19	531	2	167		693		117	-	15
FY 1983 Base	19	691	2	168		928	-	111	-	
FY 1984 Estimate	19	717	2	168		1,006		144	_	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	19	0	19
Number of Other Positions	4		4
11 Personnel Compensation	520	14	534
12 Personnel Benefits	53	2	55
21 Travel & Trans. of Persons	16	2	18
23 Rent, Comm. & Utilities	3		3
24 Printing and Reproduction	69	3	72
25 Other Services	23	2	25
26 Supplies and Materials	4	3	7
31 Equipment	3		3
Total	691	26	717

Analysis of Increase

Necessary Pay	8
Inflation	18
Program Funds	0

ABSTRACT - Research and education are among the principal objectives and responsibilities of the Smithsonian. In order to foster and stimulate the pursuit and dissemination of knowledge, the Institution has promoted scholarly and academic ties with other learned institutions since its establishment and has offered its resources for learning—its collections, professional staff, libraries and laboratories—to the general public and to the academic community. These ties are developed and maintained through competitive awards for research projects, programs in higher education, symposia and seminars, and learning opportunities at the elementary and secondary levels. No program increase is requested for FY 1984. Necessary pay of \$8,000 is required for existing staff and an amount of \$18,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - Office of Fellowships and Grants: The Office of Fellowships and Grants manages Smithsonian fellowships, coordinates related academic programs and administers the Special Foreign Currency Program which provides grants to American institutions, including the Smithsonian itself, for research in "excess" foreign currency countries. Resources for administration of these programs are included here, as are costs of Institutional fellowships. Estimates for costs of the Special Foreign Currency Program are presented in the separate request for that appropriation.

Academic Programs - The National Collections in the Smithsonian's care, and the scholars who curate and study them, together offer unparalleled resources for specialized study in many disciplines, resources which are not available at any university but are essential to many scholars' research efforts. University education rests on the study of manuscripts or printed material and reproductions of artifacts. At the Smithsonian, historical/anthropological objects, original works of art, natural history specimens, living animals and plants and ecological systems are available directly for study. Thus, the Smithsonian provides an important complement to university education.

The Institution opens its resources to students and scholars throughout the country and profits from interchange with them. Residential fellowships provide access to the full range of Smithsonian resources. They are awarded throughout the Institution with nonappropriated Trust funds, enabling fellows to work in all research areas of the Institution and pursue interdisciplinary projects drawing upon the resources of several bureaus. Additional fellowships are offered through nonappropriated Trust funds or appropriated funds designated for the bureaus, providing research and training opportunities more closely tied to current bureau programs and interests.

The Office of Fellowships and Grants coordinates Smithsonian internships—publicizing opportunities to students and organizations, distributing applications, administering internship stipends and along with other Smithsonian offices and bureaus, assisting in the activities of the Smithsonian's internship council. In FY 1982, 72 students were awarded internship stipends, 27 more than in FY 1981. Of these, 21 minority students were supported with nonappropriated Trust funds as part of the Smithsonian Institution's efforts to increase minority participation in its academic and educational programs. The interns were placed in twelve different bureaus, working on various projects. In addition the Office awarded six fellowships to minority faculty members. In FY 1982 the Office also assumed responsibility for the Cooperative Education Program, using established relationships to place students in positions at the Institution throughout the Institution. It is hoped that some permanent employment opportunities would develop through these efforts. In FY 1983, the Institution is continuing these special efforts through internships, faculty fellowships and cooperative education appointments.

Office of Symposia and Seminars: The Office of Smithsonian Symposia and Seminars designs broad interdisciplinary programs linking the humanities and sciences for a wide range of audiences. These activities produce a free exchange of ideas among advanced scholars, intermediate students, professionals and the concerned lay public. As a special extension of the Institution's education outreach effort, the Office addresses contemporary issues for the increased understanding of the implications of new knowledge.

In November 1982, the Office helped to organize a week-long symposium in Caracas, Venezuela, marking the centenary of the death of Charles Darwin. Based on colloquia, two collections of essays were published in 1982 and 1983 following the Einstein Centennial: The Joys of Research and The Muses Flee Hitler: Cultural Transfer and Adaptation, 1930 - 1945. Continuing the Bicentennial celebration, the Office is planning a two-day program of events at American University and the Smithsonian Institution during September 1983 in commemoration of the signing of the Peace of Paris - the treaty that formally ended the Revolutionary War. In cooperation with the Department of Cultural Resources of the State of North Carolina, a festival is being planned for June 1984, commemorating the four

hundredth anniversary of the first English settlement in the New World at Roanoke Island, North Carolina. Planning continues also toward the observance of the 200th anniversary in 1987 of the ratification of the United States Constitution. The Institution's eighth international symposium, "On the Road to 1984: Closed and Open Societies," to be held in 1984, will honor George Orwell and focus on the post-1984 management of high technology.

The Office started a second decade of seminars on "Voluntarism and the Public Interest in American Society" and coordinated the Smithsonian's participation in the National Town Meeting on the Arts, held in Washington, D.C. in September 1981. It also is studying prospects for continuing the seminar series "High School Scholars at the Smithsonian," after a successful prototype program involving gifted rural North Carolinians. With foundation financing, students who do not have easy access to major metropolitan educational resources are brought to Washington, D.C. for dialogues with Smithsonian curators of art, science and technology.

Office of Elementary and Secondary Education: A major objective of the Office of Elementary and Secondary Education (OESE) is to make Smithsonian resources for learning available to both local and national school communities. By working with all of the Smithsonian education offices, OESE provides pan-Institutional programming for elementary and secondary schools. OESE programs include: planning and conducting workshops and seminars for teachers; preparing publications and audiovisual materials for teachers and students; conducting a summer intern program for high school students, and a Career Awareness Program for District of Columbia Public School ninth-graders; and, coordinating a range of activities and services for disabled visitors.

To encourage cooperation and exchange of information among the Smithsonian education offices and between those offices and local schools, OESE offers a number of programs. Two publications—"Let's Go" (a monthly newsletter) and "Smithsonian Sourcebook" (an annual booklet)—are used to inform teachers about the variety of educational opportunities available to teachers and students of all grade levels at the Smithsonian. These publications are sent to more than 11,000 teachers in the Washington, D.C. area. During FY 1982, a workshop and seminar program for teachers attracted more than 850 participants to 34 programs, including six summer courses enabling the development of curriculum units based on the Smithsonian's collections. Summer programs for teachers include an orientation series introducing participants to a range of Smithsonian resources, as well as a series of in-depth one-week seminars on museum teaching methods in art, history and science. In FY 1982, the seminar titles covered diverse topics including "Insects in Your Classroom," "Victorian Architecture," and "American Cultural History Through Art."

To share these same teaching concepts with a national audience, "Art to Zoo," a classroom newspaper, continues to be distributed to over 50,000 teachers and to museum education departments throughout the United States. Also, a slide loan package entitled "The Museum Idea," was circulated in FY 1982 free of charge, reaching more than 1,400 students. During the summer of 1982, OESE sponsored, in cooperation with the University of Virginia, a graduate level course for a national audience of school librarians, teachers and curriculum specialists, on the subject of "Using Museums To Teach Writing." In addition to continuing these programs in FY 1983, a series of OESE sponsored regional workshops will be offered in communities across the United States to promote the use of museums as educational resources. Approximately 2,000 teachers are expected to be reached through the Regional Workshop Program.

In FY 1982, the Office continued its work to make Smithsonian programs accessible to disabled visitors by providing interpreters at special events, lectures and tours. The Office provided guidance to the various Smithsonian museums who were seeking ways to provide more effective programming for retarded, hearing impaired and blind visitors. In

addition, sign language classes were offered to approximately 75 Smithsonian educators, guards and other employees to teach them how to communicate with hearing impaired visitors, and, a training film on how to communicate with hearing impaired visitors was produced for the Smithsonian guards. All of these programs will be continued in FY 1983.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided from allotments which are primarily designated for the Institution's fellowship program (estimated expenditures of \$780,000 in FY 1983 and \$860,000 in FY 1984, an increase of \$150,000 in Institutional support since FY 1982). Smithsonian fellowships serve the national academic community, as well as the Smithsonian's own research staff and are an important part of the Institution's endeavors. Fellows provide intellectual stimulus to the work of Smithsonian curators and scientists by offering new ideas and conveying the latest developments in their fields. Intellectual exchange continues beyond the fellowship year, through lasting collaborations, correspondence, visits and joint publications. The Institution's staff members enthusiastically support the program, spending substantial time and effort to ensure its success. Smithsonian staff works regularly with visiting fellows and are active each year in selecting them. In FY 1982, 95 awards were made to fellows from 64 colleges or universities. Since 1965, 1,031 awards have been made to fellows from 212 schools.

In addition to fellowships for students and younger scholars, a few awards are offered at the senior level to scholars and scientists of proven accomplishments. Now in its fourth year, the Regents Fellowship Program, supported with nonappropriated Trust funds, continues to bring distinguished visiting scholars to the Institution (estimated expenditures of \$120,000 in FY 1983 and in FY 1984). Offered for the first time in FY 1983 are the Webb Fellowships, named in honor of the distinguished former Administrator of the National Aeronautics and Space Administration and Regent Emeritus of the Smithsonian Institution, and designed to promote excellence in the management of cultural and scientific not-for-profit organizations. Awards are for persons from within and outside the Institution (estimated expenditures of \$25,000 in FY 1983 and in FY 1984).

Allotments are provided to pay salary and support costs of the Director of the Office of Symposia and Seminars and of a staff member in the Office of Fellowships and Grants, and to support the summer high school intern program of the Office of Elementary and Secondary Education. This program, now in its eighth year, gives 25 graduating high school students an opportunity to participate in a learning-service program in the Smithsonian museums.

In FY 1982, funds have been provided through the Institution's Collections Acquisition, Scholarly Studies and Education Program to the Office of Elementary and Secondary Education for the printing and testing of an anthropology curriculum resource kit (\$7,000); and to the Office of Symposia and Seminars to support the Smithsonian's seventh international symposium, "How Humans Adapt: A Biocultural Odyssey" (\$16,000). Expenditures under this Program have been recorded for FY 1982 but not yet for FY 1983 and FY 1984.

Restricted Funds - These consist of restricted endowments, gifts and grants from individuals, foundations, organizations or corporations which specify their use for a particular project. For example, an endowment from the Walter Rathbone Bacon Scholarship received by the Office of Fellowships and Grants supports fellowships in research at the Smithsonian Tropical Research Institute in Panama and other locations outside the United States (estimated expenditures of \$16,000 in FY 1983 and \$20,000 in FY 1984). The Office of Symposia and Seminars received various gifts and grants in FY 1982 for partial support of the seventh international symposium (\$64,000) and projects additional gifts and grants for support of the eighth international symposium planned for FY 1984 (estimated expen-

ditures of \$20,000 in FY 1983 and \$70,000 in FY 1984). The Office of Elementary and Secondary Education received a grant from the Morris and Gwendolyn Cafritz Foundation to provide a series of outreach programs with the District of Columbia Public Schools (estimated expenditures of \$31,000 in FY 1983 and \$34,000 in FY 1984), and is seeking funds from various sources to support a docent training program for the disabled (estimated expenditures of \$40,000 in FY 1983 and \$20,000 in FY 1984).

Federal Grants and Contracts - These funds are provided by various governmental agencies for specific support. In FY 1982, the Office of Symposia and Seminars received \$10,000 from the Fogarty International Center/National Institutes of Health to cover the travel cost of participants in the seventh international symposium.

(Dollars in thousands)

	NONAPPROPRIATED SOURCES OF FUNDING										
					NONA	FUNDING					
					UNRESTR	ICTED				FEDERAL GRANTS	
	Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES	TRICTED	& CONTRACTS	
	Year	FTP*	Amount	FTP*	Amount	FTP≭	Amount	FTP*	Amount	FTP*	Amount
	FY 1982										
	Actual	-	733	-	-	- [-	-	-	-	-
	FY 1983										
	Base	-	811	-	-	-	- 1	-	-	-	-
-				1							
	FY 1984										
	Estimate	-	827	_		-	-	_	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	0	0	0
Number of Other Positions	54	0	54
11 Personnel Compensation	619	5	624
12 Personnel Benefits	51		51
21 Travel & Trans. of Persons	5		5
23 Rent, Comm. & Utilities	40	6	46
25 Other Services	96	5	101
- Total	811	16	827

Analysis of Increase

Necessary Pay	5
Inflation	11
Program Funds,	0

ABSTRACT - In September 1978, the Institution developed a plan for scheduling and performing inventories of its collections. The successful operation of this plan continues to be a high Institutional priority. In FY 1979, a special appropriation of \$500,000 was made to the Institution to accelerate the process. Appropriations of \$500,000 (adjusted by pay supplemental appropriations and funds provided for inflation) were made in FY 1980 and FY 1981 to continue the Inventory program. Appropriations of \$760,000 in FY 1982 and of \$785,000 in FY 1983 (also adjusted by pay supplemental appropriations and funds provided for inflation) were provided to continue the inventory effort. These funds were applied to major inventory projects in the three museums where the need for additional effort was of greatest urgency: the National Museum of Natural History/Museum of Man (NMNH/MOM) and the National Museum of American History (NMAH), both of which will move some of their collections to the Museum Support Center (MSC) starting in 1983, and the Cooper-Hewitt Museum, whose collections had not been inventoried fully prior to the Museum's transfer to the Smithsonian. With these resources, supplemented by the museums' own base funds, activities have been able to be scheduled to complete the goal of collecting and recording data on the museums' collections in time to meet the June 1, 1983 target date established in 1978 for the

first inventory cycle. Effective use of inventory data requires a continuing effort to refine that data, to match it to existing collection records, and to reconcile any real or apparent differences between the two sets of information which may be discovered. No increase is sought for FY 1984. However, in future years, the same level of support provided by the Collections Management/Inventory Program will be critical for the ongoing record matching and reconciliation process. Accordingly, in FY 1985, the Institution plans to propose reorganizing the Collections Management/Inventory appropriation into the bases of the museums which will have the most substantial amount of continuing work and of the organizations providing support to the effort. These consist of NMNH/MOM, NMAH, possibly the Cooper-Hewitt Museum, and the Office of Information Resource Management. Necessary pay of \$5,000 is required for special inventory staff and an amount of \$11,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - In 1978, the Institution established that a complete inventory of its collections was a major priority and an essential part of its continuing collections management program. The importance of the activity was emphasized by setting June 1, 1983 as a completion date for the first inventory cycle. Work was begun immediately to develop appropriate plans and inventory procedures for each of the many and diverse types of collections in the museums of the Institution. The specific inventory plans prepared by each museum, including timetables, information requirements and procedures, are based on the nature and size of its collections and conditions under which the collections are stored. There has been a continuing effort to improve the efficiency of the process and all the Smithsonian museums holding collections will have completed their initial inventories by June 1983. A collections inventory of this magnitude never before has been undertaken in the museum world.

As of the end of December 1982, five of the Institution's museums (National Museum of African Art, Freer Gallery of Art, Hirshhorn Museum and Sculpture Garden, National Portrait Gallery and National Zoological Park), utilizing their base resources, had completed their inventories. Two additional museums (National Museum of American Art and National Air and Space Museum), also using their base resources, have made excellent progress in their tasks and have planned to complete their inventories by June 1983.

Since 1979, funds appropriated for the special Collections Management/Inventory Program have been allocated to supplement the base resources of those museums holding vastly larger numbers of objects in their collections (National Museum of Natural History/Museum of Man, with an estimated 62 million specimens and National Museum of American History, with approximately 16 million objects) and to the Cooper-Hewitt Museum whose collections had not been inventoried prior to their transfer to the Institution. With combined base and special Collections Management/Inventory resources, these museums also will complete the initial inventory of their collections by June 1983 and through extensive use of computers will have created a record containing basic inventory data on all of their collections by that date. However, because of the sheer volume of the numbers of objects in the collections of the two largest museums (NMNH/MOM and NMAH) and the diversity of those collections, time has not permitted the capture of inventory data for all of the collections at the level of detail most useful, and indeed necessary, for full implementation of all collections management activities. Inventory plans took into account the amount of information required for creating a record on all collections. Valuable objects and specimens (i.e., those having high intrinsic monetary values), type specimens (i.e., those which set standards for the species), and many of the items to be relocated to the Museum Support Center were inventoried on an item-by-item basis (called an "item" level inventory); other objects and specimens have been inventoried in batches of systematically related items (referred to as a "collection level" inventory) and for these, more detailed and refined inventory records must be established and the information entered into the

inventory data base. The application of automated data processing to the inventory process over the last five years has brought the Institution to the threshold of a new era in the management of its museum collections. However, other critical tasks also must be performed or completed in order to use fully the inventory data base for ongoing and future collections management procedures which are themselves designed to provide the highest possible level of effective continuing control of museum collections. These tasks include refining and expanding inventory data; matching inventory data to existing catalogue records (some of which were created more than 100 years ago) and to other transaction records involving collections; reconciling real or apparent differences; and maintaining the inventory data base as collections grow and as such routine collections transactions as loans, deaccessions, and relocations for research, exhibition or storage purposes take place. Continuation of existing levels of resources for these purposes is essential for the fulfillment of important long-term objectives and for the maintenance of the progress and momentum which have been achieved with personnel now trained for the task. In future years, starting with FY 1985, the Institution plans to propose that the resources provided in the past for the special Collections Management/Inventory Program be incorporated into the base resources of the museums with the largest and most complex collections. This will permit them to sustain these procedures and operations as part of their normal operations. A portion of the resources also is expected to be applied to the base of the Office of Information Resource Management to support the need for increased automated data processing capabilities.

For FY 1983, the special inventory appropriation was allocated for the most part to the NMNH/MOM, NMAH, and the Cooper-Hewitt Museum, with smaller allocations made to the Office of Information Resource Management and the Office of the Registrar. These resources, in combination with base resources of the museums, have been applied to the completion of the first inventory cycle by June 1983, the refinement of inventory detail, and the preparation for matching inventory and catalogue records. Resources requested for FY 1984 will support a continuation of these procedures.

At NMNH/MOM, a total of \$952,000 is designated in FY 1983 for the collections inventory work, of which \$559,000 is from the Museum's base funds and \$393,000 is from the Collections Management/Inventory Program funds. The first inventory cycle is scheduled to be completed in June 1983, and will cover all of the 62 million specimens in the Museum. NMNH is giving first priority to item level inventories of valuable specimens (those having high intrinsic monetary value) and to unusually important specimens such as type specimens (those which set standards for the species) as well as those which represent endangered species. Much of the material to be moved to the Museum Support Center also is being inventoried at the item level. By mid-December 1982, the inventory of valuable, type and MSC specimens was 88 percent complete. By the same date, more than 44 million specimens had been inventoried in larger batches in what the Museum calls a "collection level" inventory. By June 1983, NMNH/MOM will have created nearly three million inventory and catalogue records.

Collections Management/Inventory Program support will be required in FY 1984 and beyond to carry out important inventory maintenance functions. Highest priority will be given to updating the inventory lists whenever there are changes in the contents of collections or in important inventory attributes such as the specific location of specimens or specimen names. Many of these changes are the result of normal use and growth, but a large number of them will result from the movement of many of the inventoried collections to the Museum Support Center or their relocation within the Natural History building in conjunction with that move. An inventory control system fully using computing capabilities is being installed at the MSC which will use the inventory data bases to provide invoices and checklists for specimens being moved, to track specimens, and to control and monitor the collections contents at the MSC. Considerable inventory work needs to be done to adapt the current data files to the new system and

to update the information during the move. Another important inventory maintenance activity is the regular, periodic verification of inventory lists to assure that undetected losses or mistakes have not occurred, especially in high value collections such as gems, minerals and the anthropology collections. Significant inventory data will be verified during the move to the Museum Support Center, and verification schedules, appropriate to the nature of the specimens, will be established for other inventoried collections.

Extensive inventory work also is required on matching the shelf-inventory records compiled during the initial inventory with catalogues and registration records to discover discrepancies which must be resolved. This activity already is advanced in the archeology/ethnology collections, but will require several more years of in-depth research to be complete. Similar activity also is planned for other valuable collections such as the gems, minerals and valuable mollusks. Checking will not be possible for inventories of some collections for which specimen lists were not compiled in the past; the first complete lists of those collections have been produced during the course of the inventory. Examples of these are the stratigraphic collections of fossils, portions of the National Anthropological Archives, and the algae collections.

NMNH/MOM also will conduct new item level inventories of collections inventoried only to the collection level during the initial inventory cycle. First priority will be given to selected collections to be moved to the Museum Support Center, such as some of the stratigraphic collection of fossils, other selected collections of fossils, and selected insect collections, notably the tick collection which will be moved from the Rocky Mountain Laboratory in Hamilton, Montana. Second priority will be given to collections of high actual or potential interest to scholars or the public. While this priority group will receive little attention in FY 1984, it will become an area of major activity in subsequent years as the work on the MSC move and the reconciliation of records nears completion.

At NMAH, in FY 1983, a total of \$634,000 is designated for collections inventory work, of which \$368,000 is from the Museum's base resources and \$266,000 from the Collections Management/Inventory Program funds. For FY 1984, the Museum proposes to use similar amounts from the same sources for its collections inventory work. By the end of FY 1982, the Museum had collected descriptive information and created inventory records on 13 million of the approximately 16 million objects in its collections. Inventories had been completed of collections stored in the Mall building for the following Divisions: Costume, Domestic Life, Extractive Industries, Graphic Arts, Musical Instruments, Textiles, Electricity and Modern Physics, Mechanical and Civil Engineering, Naval History, Physical Sciences, and Transportation. Special techniques for recording vital information on the 12.5 million stamps and 800,000 coins and metals were developed to solve problems initially encountered in inventorying these large numbers of highly valuable but delicate items. The inventory of the National Philatelic Collections is projected to be complete by February and the National Numismatics Collections by June 1983. The inventory of Mall collections of the remaining Divisions (Community Life, Ceramics and Glass, Political History, Mathematics, Mechanisms, Medical Sciences, Military History, and Photographic History) will be complete by April 1983.

The completion of the initial inventory will establish an invaluable source of identifying information on the collections which will serve as a principal tool for managing and controlling the collections in the future and as a point of departure for historical research and exhibition development. Additional ongoing work will be required to collect more data at the level of detail necessary for full implementation

of the Museum's collections management program and for research. To form a comprehensive file on each object, computer records created during the inventory also must be matched and consolidated with registrarial and accession records compiled over the past century. Further, to be effective completely, the inventory must be updated and maintained continually to record new acquisitions and loans as well as to reflect changes in location or condition of objects. In FY 1984, the Museum will concentrate on these areas and will continue to utilize staff and other resources from both base and Collections Management/Inventory Program funds. Technical staff available under the special inventory appropriation will provide direct assistance to the curatorial and registrarial staff to acquire more detailed inventory data and to maintain the inventory files. The Museum also plans to use increased computer capabilities to provide access to the data required by the curatorial staff for recording and consolidating new and revised collections data and to facilitate the use of the information for collections management and research activities.

In FY 1983, the Cooper-Hewitt Museum will apply a total of \$120,000 to its inventory program, of which \$50,000 will come from its base resources and \$70,000 from the Collections Management/Inventory Program funds. For FY 1984, similar amounts will be required to enable the Museum to refine its inventory data, to match its records that now are entered into a computer with original manually-created records dating back as far as 1896, and to identify and reconcile any differences between them.

By December 1, 1982, a physical inventory of the Cooper-Hewitt Museum's collections was 93 percent complete and had accounted for more than 164,000 of an estimated 175,000 objects. The Museum plans to complete its initial inventory in June 1983. With the assistance of the Smithsonian Archives, the Museum's original accession records now are being microfilmed to provide working copies for comparison and reconciliation with the more recent computer listings. Planned inventory activities include creation of two new lists of objects to be used in the matching and reconciliation process. One of these lists will include objects noted during physical inventory which had not been assigned identifying accession numbers by the Cooper Union prior to being transferred to the Smithsonian. The other list will consist of objects found in the original accession lists but which have not been identified during the physical inventory. Inventory staff will work in each of the Museum's departments with these two lists, matching objects and records and accurately marking the objects with correct accession numbers. At the same time, inventory staff will create a location index to control collections as they are moved to different storage areas, put on exhibition, or placed on loan. In addition, the location index will facilitate future spot-inventory checks.

The Museum also will use inventory and collections management resources to establish improved and more detailed listings of its study collections of prints and drawings and of its archival collections of design materials.

Most of the balance of the Collections Management/Inventory Program appropriation, \$56,000 in FY 1983, is designated for the Office of Information Resource Management to enable it to maintain its capability to handle the great quantities of data being produced by the inventory projects. Funds of \$1,000 have been provided in FY 1983 to the Office of the Registrar to be used for travel to the Cooper-Hewitt Museum in New York City, for periodic advisory meetings on the coordination of its inventory projects with essential registrarial functions.

With Collections Management/Inventory Program funds added selectively to the resources of those museums faced with the largest and most complex inventory tasks, it will be possible to complete the initial inventory on schedule. These resources, combined with effective systems devised for the inventory, have permitted steady progress to be made and a tremendous amount of work to be accomplished. In addition, the development of computer programming for gathering pertinent and basic inventory data has helped to create a solid foundation for future inventory cycles and for collections

management programs. The inventory effort has been of enormous practical and intellectual value to the Institution; the experience acquired in applying innovative methods and techniques to inventory work also will be of benefit to collections management programs and responsibilities of museums everywhere. Continuation of this support in future years will permit further refinement of inventory data, matching and reconciliation of existing accession records with the new data, and maintenance of substantially improved collections management activities.

The following table summarizes the allocation of Collections Management/Inventory Program funds in FY 1983, proposed allocations for FY 1984, and the bureau funds that are applied to this work.

COLLECTIONS MANAGEMENT/INVENTORY PROGRAM

(Dollars in thousands)	Natural History	American History	Cooper- Hewitt	<u>Other</u>	Total
FY 1983 Base Resources	\$559	\$368	\$ 50	\$ -	\$ 977
FY 1983 Estimated Portion of \$785,000 /1	393	266	70	<u>56 /2</u>	785
TOTAL FY 1983	\$952	\$634	\$120	\$56	\$1,762
FY 1984 Base Resources	\$559	\$368	\$ 50	\$ -	\$ 977
FY 1984 Estimated Portion of \$827,000 /3	409	285	73	60 /4	827
TOTAL FY 1984	\$968	\$653	\$123	\$60	\$1,804

^{/1} FY 1983 appropriation.

^{/2} In FY 1983, this amount has been allocated as follows: Office of Information Resource Management (formerly Office of Computer Services), \$55,000; Office of the Registrar, \$1,000.

Proposed FY 1984 base including costs of FY 1983 pay raises (\$26,000) and funds sought for necessary pay and inflation (\$16,000).

For FY 1984, this amount is planned to be allocated as follows: Office of Information Resource Management, \$59,000; Office of the Registrar, \$1,000.

MAJOR EXHIBITION PROGRAM

(Dollars in thousands)

			NONAPPROPRIATED SOURCES OF FUNDING						
			UNRESTR	ICTED				FEDE	RAL GRANTS
FEDE	RAL FUNDS	Gen	neral	Spec	ial Purpose	RES'	TRICTED	& C	ONTRACTS
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
-	718	-	-	_	-	-	-	-	-
							•		
	842	- 1	-	-	-	-	_	-	-
-	885	-	-	-	1	-	-	-	
	FEDE FTP*	- 718 - 842	FEDERAL FUNDS Ger FTP* Amount FTP* - 718 - - 842 -	NONA	NONAPPROP UNRESTRICTED	NONAPPROPRIATED SOURCE UNRESTRICTED FEDERAL FUNDS General Special Purpose FTP* Amount FTP* Amount FTP* Amount - 718 - 842	NONAPPROPRIATED SOURCES OF UNRESTRICTED FEDERAL FUNDS General Special Purpose RES' FTP* Amount FTP* Amount FTP* - 718	NONAPPROPRIATED SOURCES OF FUNDING	NONAPPROPRIATED SOURCES OF FUNDING

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	0	0	0
Number of Other Positions	9	0	9
11 Personnel Compensation	122	17	139
12 Personnel Benefits	11	1	12
21 Travel & Trans. of Persons	21		21
22 Transportation of Things	14	33	47
24 Printing and Reproduction	74	-15	59
25 Other Services	524	- 9	515
26 Supplies and Materials	73	-4	69
31 Equipment	3	20	23
Total	842	43	885

Analysis of Increase

Necessary Pay	3
Inflation	40
Program Funds	0

ABSTRACT - The Major Exhibition Program provides centralized support for exhibitions too costly to be funded within individual bureaus' base resources. For FY 1984, a total of \$885,000 is sought for three such exhibitions: (1) initial funding of \$60,000 to begin preparation of a major display of the traditional arts of India, including the presence of craftsmen and artisans whose work help preserve the rich heritage of the Subcontinent, to open in FY 1985 in the Evans Hall of the National Museum of Natural History/Museum of Man; (2) a sum of \$300,000 to mount and open the exhibition "The Holy Land," a major assemblage of archeological artifacts documenting the ancient history of the Levant, to open May 8, 1984, and subsequently travel to museums in other cities in the United States; and (3) an amount of \$525,000 to continue the program of updating and improving the permanent public spaces of the National Museum of American History, with emphasis on 18th century cultural history and industrialization.

PROGRAM - As explained previously in recent budget justifications, the Institution's various museums, especially the National Museum of American History, have a critical need for a long-term program which selectively can augment available base funding in order to produce large new exhibitions. This is important not only in replacing out-moded displays which no longer provide a public service with new exhibits of more timely interest, but also in providing an immediately accessible vehicle for disseminating important research findings of the professional staff. Additionally, as centrally administered by the Assistant Secretary for History and Art, the Major Exhibition Program avoids permanent increases to any museum's base funding, thus retaining flexibility for varying allocations based on merit and need, and providing for direct and continuing Congressional oversight.

The Major Exhibition Program initially was supported by the Congress with appropriations of \$750,000 in FY 1981 and \$840,000 in FY 1982 and in FY 1983. With these funds, two major exhibitions together with accompanying catalogues have been produced: "Celebration," the first comprehensive display of the Institution's folklife objects as drawn from nine Smithsonian museums and occupying all of the exhibit spaces at the Renwick Gallery; and "George Washington, A Figure Upon the Stage," the first major retrospective exhibition of our first President held anywhere in the world during this century, which opened at the National Museum of American History (NMAH) on the 250th anniversary of his birth. In addition, the NMAH has made major progress toward designing and preparing for installation the first in its "Life in America" exhibition series, which will survey American social history from the 17th to the 20th century, and will make significant progress in FY 1983 toward the important task of improving visitor orientation displays in its grand concourses and rotundas on the first and second floors.

For FY 1984, funding for the following three major exhibition efforts is requested: Aditi - A Celebration of Life - In India, the stages of the human life cycle inspire enormous activity in the traditional arts. These arts, because of their resilience and beauty, are deeply implanted in Indian life and survive today as they have for centuries. "Aditi," the Hindi word denoting creative power--abundant, joyful, and unbroken--which sustains the universe, is an exhibition which will illuminate the ideals, values, and experiences which together provide a coherent understanding of the many worlds of the Subcontinent through India's crafts, music and rituals.

"Aditi" will include 1,500 objects and present 40 craftsmen and performing artists. The visitor to "Aditi" will proceed through 14 sections, each concerned with a different aspect of the life cycle: from birth, coming of age, courtship, marriage, and death, to a child's preparation for becoming a full member in the cultural life of the community. At each juncture, the exhibition literally is brought to life by traditional artists—dancers, bardic singers, musicians, and puppeteers; toymakers, painters, and weavers; and the jugglers, magicians and acrobats of India—making it far more than a handsome display of interesting objects. As mounted in New Delhi (1978) and in London (1982), "Aditi" can stand as a model for dynamic exhibitions, so successfully has it joined objects, artisans and a compelling theme in the presentation of folk traditions.

Under the supervision and with the logistical, design, and production management of the National Museum of Natural History/Museum of Man, the Smithsonian Office of Folklife Programs, and the Indo-United States Subcommission on Education and Culture, the exhibition is being developed for the United States by the Indian designer and authority on Indian traditional culture Rajeev Sethi, who directed the project at its New Delhi and London showings. He will consult with several of America's leading experts on Indian culture concerning the installation of the exhibition at the Evans Hall of the National Museum of Natural History/Museum of Man, opening in June 1985. In conjunction with the exhibition, several Smithsonian bureaus are considering related

activities: an India program at the 1985 Smithsonian Folklife Festival, tours to craft—making areas of India by the Smithsonian Associates, a catalogue by the Smithsonian Institution Press, ethnographic film programs, and scholarly seminars. The exhibition and its associated activities at the Smithsonian will mark the opening period of a year long "Festival of India," a series of cultural events in cities across the United States which is being coordinated by the Indo-United States Subcommission on Education and Culture. The Subcommission was established by the Secretary of State in 1974 to encourage cultural exchange between the United States and India.

Although the major portion of the expenses of assembling and mounting this exhibition at the Smithsonian will occur in FY 1985, certain preliminary costs totaling \$60,000 are needed in FY 1984. These fall in several areas: object selection from United States museums (\$5,000); conservation of objects (\$10,000); photography (\$5,000); design of exhibition cases and pedestals (\$10,000); costs associated with writing and editing the exhibition script and labels (\$15,000); and a portion of the costs of preparing the exhibition catalogue (\$15,000). A preliminary estimate of the remaining expenses in FY 1985 which would be sought from the Major Exhibition Program for shipping, insurance, design, fabrication, installation, printing, and costs associated with the presentation of the craftsmen and performing artists amounts to \$250,000.

The Holy Land - The ancient people of this geographically tiny part of the world played an astonishingly large role in human history. Their three interrelated systems of belief--Judaism, Christianity and Islam--have shaped the intellectual, spiritual and ethnical life of all Western and Middle Eastern societies, and have had profound effects upon many African and Asian cultures as well.

Ancient life in the Middle East was shaped by its physical and social environments. In particular, the Holy Land, as part of the Levantine area along the eastern coast of the Mediterranean Sea, formed a busy corridor between the great foci of early civilizations; peoples, trade and commerce, and conquering armies passed through it at various times in history, all leaving their mark on the indigenous culture of the region. This culture—known in historic times as Canaanite—had developed a considerable sophistication in its adaptation to the physical environment, in its technological innovation, and in its unusual talent for absorbing the influx of diverse foreign elements without losing its own distinctive character.

This major international exhibition, "The Holy Land," describes the cultural and technological development in this area during the last 100,000 years, from the Paleolithic Period through the Crusades. Characteristics of Canaanite and later Israelite cultures and the emergence of the three great religions will be illustrated with objects arranged by historical period.

Under the scholarly direction of the noted Smithsonian cultural anthropologist, Dr. Gus Van Beek, working with his professional counterparts and collections in the Middle East, and with the logistical assistance and production management of the Smithsonian Institution Traveling Exhibition Service (SITES), the exhibition will open May 8, 1984, in the Evans Gallery of the National Museum of Natural History/Museum of Man. The exhibition subsequently will travel under the auspices of SITES to museums in five or six other American cities. Featured among the objects on display will be one of the Dead Sea Scrolls and fragments of other writings of the Essene community at Qumran, as well as representatives of other documents such as seals and ostraca, befitting a culture that expressed creativity through the written word. Vessels and utensils from religious cults, together with figurines of Canaanite and Philistine deities, symbols of different faiths, and burial chests or ossuaries will illustrate diverse religious practices. Sculptures in stone, clay, metals and bone, and objects of daily life—such as furniture inlays, household vessels, cosmetic utensils and jewelry—will present a view of these cultures. The topography, environment and man's utilization of natural

resources will be described in panels featuring maps and examples of objects imported into the ancient Levant. Line drawings, photographs, objects, and perhaps models will show the diversity of architecture and design elements as they changed through time by local innovation and influences from abroad. Altogether, between 150 and 200 objects will be presented in the exhibition and, where appropriate, label text will cite corresponding references from the Bible.

Funds of \$75,000, appropriated in FY 1983, are being used to cover certain preliminary costs. Included are travel costs related to object selection, photography and the negotiation of loan agreements (\$10,000); partial design costs for the installation of the exhibition at the Smithsonian and for the traveling version of the show (\$20,000); and a portion of the costs of preparing the catalogue to accompany the exhibition (\$45,000).

For FY 1984, an additional amount of \$300,000 is sought for the following purposes: completion of design (\$26,000); crating, shipping and insurance of borrowed objects (\$74,000); space preparation (\$40,000); production of exhibit cases and brackets (\$50,000); conservation provisions (\$16,000); supplies and materials (\$20,000); and installation expenses (\$74,000). Work will be accomplished by temporary employees or through contract, whichever is less expensive and most suitable to the task. The costs of managing the subsequent United States tour of this exhibition will be met by normal participation fees paid to SITES by the host museums.

American History - The upgrading and clarification of the exhibit spaces in the National Museum of American History continue to be major elements of this Program. Early in 1982, a ten-year exhibition plan to reconfigure the major public spaces of the Museum was completed. The goals of this plan are to address the Museum's new, clearer mandate as a Museum of American History and to upgrade over eight and one-half acres of existing installations and orientation areas, many of which date from the 1960s. The Museum's work toward realization of this plan has begun with the revitalization of areas of its first and second floors to present a range of perspectives on American History: exhibitions on the first floor will introduce the visitor to the history of this country through developments in technology and science; visitors to the second floor will view the past in terms of social and cultural developments. Further, the central corridors and rotundas on these two floors will serve as orientations to and connections between these exhibits and provide vistas highlighting large and important artifacts such as the Star Spangled Banner and the Foucault pendulum.

Initial work began in FY 1981 with the reconfiguration of the central corridors and rotundas. Escalators, which cluttered the north and south entrances to the Museum, were removed, and the stairwells connecting the Museum's exhibition floors were opened. A new signage system was installed at that time to guide the public through exhibition halls as work proceeded. The central artifact of the second floor entrance area--the Star Spangled Banner -- then was cleaned, and protected from light and dust by means of a large, opaque decorated cover which is lowered once an hour accompanied by music and narration to reveal the original flag to the public. In the first half of 1983, textile panels depicting major artifacts from the Museum's collections will be installed to complete the design for improved visitor orientation within the Museum's Mall entrance area. Central area work continued in 1982, when arches incorporating what is believed to be the earliest surviving cast iron building facade in the United States-the 1850 front of Brock's store in Philadelphia--were installed in the Museum's central first floor space, the Pendulum area. Behind the arches, which are hung with double doors, a turn-of-the-century Palm Court will be constructed in 1983, incorporating the original structural and decorative elements of the first Horn and Hardart food automat facility at one end, and original interior of a period confectioner's shop at the other. This space, which will open onto a refurbished ice cream parlor, will provide the public with an area in which to gather and rest between exhibitions and will give the Museum a place to assemble groups for tours and other educational programs.

With funding of \$525,000 requested for FY 1984, the revitalization of the Museum's permanent exhibit spaces will be furthered by work on three new exhibitions. A major exposition on the "Industrialization of America," thematically linking many of the existing machinery displays on the Museum's first floor, will open in FY 1984. It will illuminate the forces behind the transfer of industrial technologies from England to America and will document the subsequent course of the industrial revolution in this country through the exhibition of objects representing major trends and innovations through the mid-19th century. An amount of \$150,000 is needed to complete the design and construction of this exhibition.

In the central rotunda of the first floor, the span of arches bordering the Palm Court will form the backdrop of a second major exhibition entitled "Materials." This installation will serve to orient visitors to all of the Museum's exhibitions by interpreting and commenting upon the wide range of natural and man-made substances from which human ingenuity has fashioned the artifacts on display. Opening in FY 1985, the exhibition will trace man's ever-widening mastery of materials, from stone and wood to sophisticated alloys and chemical polymers, and will show some of the expected and unexpected effects of these substances on our scientific and cultural development. An amount of \$50,000 is needed in FY 1984 for the research and design expenses of this exhibition.

Work on the third new exhibition began in December 1982, when the 15-year-old "Hall of Everyday Life in the American Past" was closed, and remodeling began in preparation for the first installment of its successor, "Life in America," which will depict American social and cultural development from the 18th century through the 20th century. Period rooms and artifacts will demonstrate how ways of life have differed among people of varied occupations, social situations and financial means. For FY 1984, a sum of \$325,000 is requested for construction, fabrication, and installation of the 18th century portion of this exposition series.

Finally, opening in 1983 next to the First Ladies' gowns, a small gallery called "Treasures from the Collections" will feature changing exhibitions of some of the Museum's most significant historical objects, ranging from Thomas Jefferson's "Declaration of Independence" desk, to Eli Whitney's original cotton gin model, to Samuel F. B. Morse's original telegraph key. (The "16 Elm Street" exhibition, which was conceived originally as both an introduction to American history and a dramatic display of the Museum's largest artifact, has been deferred for more comprehensive planning. When ready, this installation will be funded principally from private sources.)

(Dollars in thousands)

((bolidio in enecounts)									
				NONA						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Gen	neral	Spec	ial Purpose	RES	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982										
Actual	8	4,510			_	1	-	_	-	-
FY 1983										
Base	36	6,711	-	_	-	250	-	-	_	-
FY 1984										
Estimate	116	8,456		_	_	-	_	-	-	-

^{*}FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	36	80	116
Number of Other Positions	0	0	0
		,	
11 Personnel Compensation	629	1,561	2,190
12 Personnel Benefits	62	153	215
21 Travel & Trans. of Persons		15	15
22 Transportation of Things	700		700
23 Rent, Comm. & Utilities	772	3	775
25 Other Services	142	80	222
26 Supplies and Materials	543	-320	223
31 Equipment	3,863	253	4,116
Total	6,711	1,745	8,456

Analysis of Increase

Necessary Pay	25
Inflation	0
Program Funds	1,720

ABSTRACT - The construction of the Museum Support Center (MSC) will be completed in February 1983 when the Smithsonian Institution will assume beneficial occupancy of the building from the George Hyman Construction Company and the General Services Administration. Since FY 1981, the Institution has been preparing for the occupancy of the Museum Support Center by developing specifications for the equipping of the Center; and by beginning to implement the Conservation Analytical Laboratory's new Conservation Training Program and prepare for the location of a branch of the Smithsonian Institution Libraries at the Center. Beginning in FY 1983 with initial staffing and associated support funds appropriated by the Congress, the Institution began the task of providing for program direction of the Center, and for security and buildings and grounds maintenance.

For FY 1984, an amount of \$8,456,000 is requested for the following purposes: to provide the major portion of basic staffing capabilities (116 positions and \$3,811,000--an addition of 80 positions and \$2,020,000 over the FY 1983 base); to continue the purchase of the high density, three-tiered collections storage system (\$2,385,000); to complete the purchase of laboratory and office equipment for the various components to be located at the Center (\$1,510,000); and to provide the second increment toward the transfer of the collections to be moved to the Museum Support Center (\$750,000).

PROGRAM - Construction of the MSC began in January 1981. Work on the building itself will be finished in February 1983. The completed structure provides a total of 251,000 net assignable square feet of which 146,000 will be used for storage of museum collections and 105,000 will be assigned for laboratory, work area, conservation training and service purposes. Several individual bureaus and units of the Institution will be involved in the operation and use of the Center.

With base funding of seven positions and \$342,000, the Conservation Analytical Laboratory (CAL) will expand its conservation capability through the use of the new laboratories at the MSC and also initiate a conservation training program. The conservation training program will fill an essential national need. During the last several years, the Institution has worked with Washington, D.C. area universities to develop plans for the coordination of academic components of the training program with the practical hands-on experience and instruction that will be offered in the specially planned conservation facilities at the Center. Preliminary curriculum requirements have been developed and are being reviewed and refined through consultation with leaders of the conservation profession, particularly with those having experience in conservation training. Work will concentrate in FY 1983 on moving the Conservation Analytical Laboratory to the MSC; completing the establishment of the training facility; coordinating Smithsonian conservation resources to be used in the program; developing a joint faculty; and establishing intern qualifications and admission requirements in preparation for the admission of a small initial class in late 1984.

The Smithsonian Institution Libraries (SIL) will operate a branch library at the Center to serve the museums that are assigned space there as well as the Conservation Analytical Laboratory's research, treatment and training functions. An amount of \$24,000 is included in the base for SIL to continue support for the librarian who has been assembling the MSC branch library materials.

In addition to the Conservation Analytical Laboratory and Smithsonian Institution Libraries' staffing, the Congress provided in FY 1983 an additional 28 positions and \$500,000 for core staffing needed to operate the Museum Support Center in FY 1983 and provided the authority for the Institution to reprogram an additional 28 positions and \$500,000 for the Center's operations. A further amount of \$328,000 for support costs was appropriated. A comprehensive staffing request for programmatic and support functions is included in the FY 1984 justification of increase.

The plans for the transfer of the collections to the Center are well under way. It is expected that this move will require a period of three or more years. In FY 1983, an amount of \$1,100,000 was appropriated for expenses associated with the transfer and some associated equipment. A second increment of funds for the move is being sought for FY 1984.

Work on preparing detailed performance specifications for the collections storage equipment began in September 1980; funds of \$2,051,000 were appropriated in FY 1981 for the completion of the specifications and acquisition of the first increment of the equipment which will provide open shelf storage for bottles containing alcohol preserved specimens from the Smithsonian Oceanographic Sorting Center and portions of the Departments of Vertebrate and Invertebrate Zoology of the National Museum of Natural

History/Museum of Man. Bids were opened on July 9, 1982, for this equipment and the low bid was within fund availability. Contracts have been let and completion of the initial installation of "wet storage" is scheduled for November 1983. "Wet storage" will occupy one of the four storage pods of the Support Center. Simultaneously, the Institution also has been overseeing the planning and contracting by the General Services Administration for the collections storage equipment required by the National Museum of Natural History/Museum of Man, the National Museum of American History, and other museums and galleries. The storage system envisioned for the collections of the museums will permit efficient, high density storage on three eight-foot high storage levels, similar to multi-story library stacks. These systems use fixed self-supporting metal racks and cabinets that can hold a variety of cases, shelves and drawers as needed to meet the specific requirements of each of the collections. Plans for this storage equipment currently are being refined to permit solicitation of bids in March 1983 for procurement, in a series of installments of the three-tiered self-supporting storage racking system for dry storage. Each rack will hold storage compartments with various sized drawers or shelves or other components as are appropriate for the collections being stored.

Funds of \$5,982,000 appropriated in FY 1982 and FY 1983 will be used toward the purchase of the storage equipment system. A further increment for the storage system also is requested for FY 1984.

To date, a total amount of \$2,813,000 has been appropriated for the purchase of laboratory and office equipment required to make spaces at the Museum Support Center which are assigned to designated departments and units of the Institution functional and usable. These units and departments include the Conservation Analytical Laboratory, National Museum of Natural History/Museum of Man, National Museum of American History, Office of Protection Services, Smithsonian Institution Libraries, Office of Printing and Photographic Services and the Office of Horticulture. A final increment for the purchase of this equipment and furnishings is sought in this request.

EXPLANATION OF PROGRAM INCREASE - The FY 1984 request for the Museum Support Center is divided into three categories: operation and support requirements; expenses associated with the move of the collections; and one time costs for equipment.

A. Operation and Support Requirements

A total of 116 positions and \$3,811,000 is requested to meet the needs of several Smithsonian units having responsibilities for various aspects of MSC operations. This represents an increase of 80 positions and \$2,020,000 over the FY 1983 base (including estimated utilities funds of \$772,000 appropriated in FY 1983). Resources are sought for the program direction of the Museum Support Center, for the Conservation Analytical Laboratory which is being relocated there, including the Conservation Training Program and for a branch of the Smithsonian Institution Libraries and a segment of the Office of Printing and Photographic Services. Security, buildings and grounds maintenance which comprise the major portion of operating resources, are included as well.

In addition, there is provision for estimated utilities expenses. The following chart summarizes FY 1983 base resources for operation and support requirements, and additional resources sought for FY 1984.

Museum Support Center Operating Requirements

(\$000)						
	FY	1983	Pr	oposed	F'	Y 1984
	_ <u>B</u>	ase	In	crease	Re	equest
	Pos	<u>\$</u>	Pos	<u>\$</u>	Pos	\$. \$
Office of Director		118	6	154	6	272
			_			
Building Manager	2042	35	29	475	29	510
Conservation Analytical						
Laboratory	7	342	11	504	18	846
Smithsonian Institution						
Libraries	1	24		1	1	25
Printing and Photographic						
Services			1	36	1	36
Protection Services	16	285	17	357	33	642
Plant Services	12	215	13	429	25	644
Office of Horticulture			3	64	3	64
Utilities		772				772
TOTALS	36	1,791	80	2,020	116	3,811

- (1) Office of the Director Additional resources of six full-time permanent positions and \$154,000 are sought for FY 1984 in addition to a base of \$118,000 for supplies and services. The positions consist of a director, a secretary, a registrarial assistant, two conservators, and a clerk-typist. The director is charged with responsibility for overall program development and operations at the Museum Support Center. With support from the shipping and automatic data processing offices and the registrarial assistant, the director also coordinates and oversees the implementation of inventory control and information management procedures for all items which come to the Museum Support Center during the move from the National Museum of Natural History/Museum of Man, the National Museum of American History, and other museums. The registrarial assistant is responsible for documenting accessions and loans, in coordination with the shipping officer, and for recording movement of collections. The conservators will advise on the preparation and treatment primarily of anthropology collections as they are moved to the Support Center, and prepare fragile objects prior to their movement to the Center.
- (2) Building Manager, Museum Support Center Building management has a base of \$35,000 for cleaning and maintenance supplies. Additional resources of 29 full-time permanent positions and \$475,000 are sought for FY 1984. Under the MSC director, the Office of the Building Manager is responsible for providing shipping and receiving functions, administrative support, and cleaning and maintenance of the physical plant. Three positions (a building manager, a secretary and an administrative clerk) will provide the necessary direction, administrative services and facilities management. An additional two positions will be required to fulfill the important shipping and receiving functions at the Center. While the receiving activities will have their heaviest emphasis in the course of the relocation of the collections, under normal operations substantial movement both in and out of the Center will be typical. Objects and specimens will be leaving the Center for exhibition or study while items will be sent to the Center for storage, curation or treatment. A technician and clerk will be responsible for receiving, controlling and routing incoming material; for maintaining appropriate records; and for appropriately insuring and posting packages and crates leaving the Center.

A further 13 janitorial positions and 11 general laborer positions will perform the cleaning and maintenance of the building including servicing of light fixtures, movement of equipment and collections within the building and generally making a significant contribution toward keeping the collections in an environment which is clean, orderly and sanitary.

(3) Conservation Analytical Laboratory - For FY 1984, 11 new positions and \$504,000 are requested in addition to the seven positions and \$342,000 provided for the MSC between FY 1981 and FY 1983. (Including the new positions being sought, the base of the Conservation Analytical Laboratory, which is being relocated to the MSC, will be 39 positions and \$1,797,000.)

Included in this request are additional funds of \$220,000 to purchase supplies and to maintain the Museum Support Center's fumigation chamber. Each item will be inspected upon entering the Center and, if required, will be fumigated to eliminate the possibility of insect, rodent or bacterial contamination. For the large fumigation chamber (9 x 9 x 22 feet) approximately \$800 in fumigants are used for each operation. Several different fumigants will be required based on method of fumigation, material to be treated, organisms to be eliminated, and external environmental conditions at the time of fumigation.

For collections management, six positions consisting of two conservators, a microanalyst, an archeometrist, a clerk-typist, and a fumigation technician are needed to reduce the backlog of items requiring conservation treatment at all Smithsonian museums and to continue the sharing of conservation data with other museums and research organizations in the United States and abroad.

For the Conservation Training Program, five positions are requested in addition to the three positions currently authorized. Each student will require guidance, supervision and advice while working in "hands-on" situations with actual items from the collection requiring conservation. In addition to the oversight provided to the program by the director, three conservators will acquaint interns with availability and use of specialized equipment, methods and alternatives in dealing with specific problems and will serve as intermediaries between the interns and museum curators who have ultimate responsibility for the collections being treated. An information officer will work with reports which are drafted by a conservator on every item treated. These reports are detailed and precise descriptions of the condition and nature of the items treated, the need for conservation, and the individual steps in the treatment process. A syllabus coordinator will provide liaison among the Institution, area universities, and trainees to assure that the total curriculum meets the current standards for conservators and that the academic requirements of the universities are being met. Two clerk-typists will provide necessary office support.

- (4) Office of Printing and Photographic Services Base resources of one full-time permanent position and \$36,000 are sought for FY 1984 to allow a photographer to document the collections stored at the Museum Support Center and record the steps taken in conservation treatment by the Conservation Analytical Laboratory. These functions are necessary both for inventory control, as well as professional conservation documentation and instructional purposes for the Conservation Training Program.
- (5) Office of Protection Services An increase of 17 positions and \$357,000 is sought for FY 1984 in addition to base resources of 16 positions and \$285,000. Of the proposed increase, an amount of \$292,000 is for salary costs and \$65,000 is required for essential communications supplies and maintenance services for the proprietary security system, uniforms and accessories, and supplies for the care of the K-9 corps assigned to perimeter protection of the MSC.

The Office of Protection Services (OPS) has the responsibility of providing internal and external security for the Museum Support Center 24 hours a day, as well as health services to MSC and the Suitland storage and aircraft facilities. A total of 31 guards on three shifts is needed to staff 14 posts inside and outside the building. The major interior post is the control room which will monitor activity and control access through the use of closed circuit television, motion and audio detectors, electric locks, card reading devices and intercoms. K-9 teams will provide perimeter and exterior area security for the 26 acre site. In addition, one alarms maintenance mechanic will be required to maintain the security devices, sensors and electrical locks which are integral parts of the proprietary security and fire alarm system. This system has been designated as a prototype, which will be expanded during the next several years to all Smithsonian museums in the Washington, D.C. metropolitan area. An additional position for a nurse also is sought to establish a health unit at the Center.

(6) Office of Plant Services - An increase of 13 positions and \$429,000 is sought in FY 1984 in addition to base resources of 12 positions and \$215,000. Of the increase requested, an amount of \$409,000 is for salary costs and \$20,000 represents the cost of a van and associated maintenance supplies.

The Office of Plant Services (OPlantS) operates and maintains the utilities systems and provides necessary building maintenance and transportation. Twelve maintenance mechanics are required to operate high pressure steam generators and other components of the heating, ventilating and air conditioning (HVAC) systems 24 hours a day, seven days a week. These systems must maintain stable temperature and relative humidity conditions at levels necessary for the preservation of the collections stored at the Center. The systems must be monitored to insure that the equipment is operating within acceptable levels of efficiency, energy consumption and safety.

Eight preventive maintenance mechanics will perform scheduled maintenance tasks for the complex HVAC systems (which constitute 53 percent of the total Museum Support Center construction costs), and the fire and smoke detection systems. An adequate preventive maintenance program, carried out in accordance with manufacturers' recommendations, will limit costly emergency repairs and protect the collections that are sensitive to changes in temperature and humidity conditions. Moreover, it is necessary to conduct basic preventive maintenance in order to receive the benefit of manufacturers' warranties.

Four trade and craft mechanic positions (an electrician, a painter, a plumber, and a carpenter) are required to install laboratory equipment and fixtures including sinks, branch plumbing, electrical outlets, exhaust hoods and ductwork, counter tops and compressed air systems which will be purchased or installed separately from the construction contract. These four positions also will be utilized for normal repair and maintenance work on the complex systems as the building ages.

Mail and transportation services will require one additional driver position and the purchase of a van and associated supplies. Since there will be permanent offices at the Museum Support Center, the pick-up, delivery and distribution of mail will be an essential service to the proper functioning of the facility. Two daily round-trips will be necessary between the Center and Mall buildings. This will be accomplished in conjunction with transporting curators and scientists, whose offices will remain on the Mall but who must have access to their collections at the Museum Support Center. In routine conduct of daily business, it also will be necessary for other operating and administrative staff to be able to travel to and from the Center without long delays or the unnecessary expenditure of fuel that would be required by individual trips.

(7) Office of Horticulture - Base resources of three positions and \$64,000 are sought for FY 1984. The Office of Horticulture is responsible for grounds maintenance of the 26 acres at the Museum Support Center site. Grounds maintenance includes upkeep of the perimeter fence line for security purposes, care and mowing of grass, snow removal, leaf collection and disposal, trash removal, insect and pest control, and the planning and maintenance of landscaping. Three full-time gardeners would be augmented by seasonal help when workloads exceed their capabilities.

B. Moving Expenses

A further amount of \$750,000 is sought in FY 1984 for expenses associated with the move from the National Museum of Natural History/Museum of Man, the National Museum of American History and other areas, in addition to the amount of \$1,100,000 appropriated in FY 1983. It is anticipated that a final increment of \$750,000 will be needed in FY 1985. The plans for the transfer of the collections to the Center are well under way. It is expected that this move will require a period of over three years. Considering that a move of the scale needed to occupy the Museum Support Center has not been carried out previously, the Institution has established a planning council, under a move coordinator, that is responsible for all aspects of the transfer. A full schedule has been established using the "critical path method." This method is a system for identifying all of the activities involved in the task and for organizing these activities into a logical, timely and cost effective sequence.

C. Equipment

Since FY 1980, the Institution has been overseeing the design of specifications for the collections storage system to be located in the Museum Support Center. To help fund equipment requirements, the Institution is using a sum of \$750,000 in nonappropriated Trust funds for a portion of conservation equipment, and in future years will redirect rental funds presently used for the Oceanographic Sorting Center which will be housed in the Center. The Institution also, since FY 1981, has been planning and purchasing laboratory equipment and furnishings for the units and offices that will be located at the Museum Support Center, including departments of the National Museum of Natural History/Museum of Man and the National Museum of American History, a branch of the Smithsonian Institution Libraries, components of the Office of Horticulture and the Office of Protection Services and the Conservation Analytical Laboratory. The following table shows funds appropriated to date for collections storage and "other" equipment, the amount appropriated in FY 1983 for equipment and the proposed change for FY 1984.

Museum Support Center Equipment

(\$000)

	Appropriations to Date (including FY 1983)	FY 1983 Approp.	Proposed Change	FY 1984 Request
Collections Storage	\$ 8,033	\$2,757	\$-372	\$2,385
Other	2,813	1,063	447	1,510
TOTALS	\$10,846	\$3,820	\$ 75	\$3,895

1. Collections Storage Equipment - An amount of \$2,385,000 is requested in FY 1984 to continue acquisition of collections storage equipment for collections of the National Museum of Natural History/Museum of Man and the National Museum of American History to be added to the amount of \$2,051,000 appropriated in FY 1981 for the "wet storage" system and a total of \$5,982,000 appropriated to date for the remaining system. This equipment is needed to continue the planned program of acquiring and installing storage equipment over a period of several years to permit the steady and uninterrupted transfer of collections from overcrowded Mall museums to the Museum Support Center.

Funds appropriated to date have been obligated through transfer to the General Services Administration for expenditure upon the conclusion of the bid process expected to commence in March 1983. The appropriations to date and the sum of \$2,385,000 sought for FY 1984 are required for components of the storage systems for the National Museum of Natural History/Museum of Man's collections in anthropology, botany, mineral sciences, paleobiology, the remaining collections in vertebrate and invertebrate zoology, as well as collections of the National Museum of American History. The results of the bid solicitation will permit the development of firmer estimates for the total costs of this unique storage system than are available presently. The scheduled program for equipment procurement and installation is the keystone to accomplishing an efficient occupancy of the MSC with a minimum of collections damage and program disruption.

- 2. Other Equipment and Furnishings An amount of \$1,510,000 is requested in FY 1984 for the purchase of equipment required to make spaces assigned in the MSC to designated departments and units of the Institution functional and usable. Because of the time required to design and specify much of this equipment, and to have it available when the MSC is ready for occupancy, the Institution initiated its "other equipment" purchases with funds of \$660,000 appropriated in FY 1981; additional appropriations of \$1,090,000 and \$1,063,000 were provided in FY 1982 and FY 1983 respectively. The funding sought in FY 1984 will be used to complete the purchase plan. The following describes the use of these funds and the needs of the affected organizational units for FY 1984.
- (a) National Museum of Natural History/Museum of Man, with funds of \$500,000 in FY 1982 and \$984,000 in FY 1983, has concentrated on acquiring laboratory equipment and furnishings which will be necessary to have in place when the building opens. This includes such built-in items as laboratory sinks, chain hoists, exhaust and fume hoods, cabinets and laboratory drawer units. An amount of \$1,388,000 is requested in FY 1984 to complete this phased equipment acquisition and will include such laboratory items as incubators, vacuum ovens, and an air abrasive unit as well as custodial equipment, including safety ladders and carts for the movement of collections between the storage areas and the conservation and processing laboratories.
- (b) National Museum of American History used funds of \$200,000 and \$105,000 appropriated in FY 1982 and FY 1983, respectively, to equip the Museum's conservation laboratory at the MSC. The amount of \$60,000 in FY 1984 will conclude the outfitting of this laboratory by acquiring such equipment as portable X-ray equipment, laser cleaning apparatus and a comparison microscope for documentation of numismatic and graphic art specimens.
- (c) The Smithsonian Institution Libraries will provide bibliographic services and support to the bureaus and units assigned space in the MSC. An amount of \$12,000 will complete the purchase of shelves and other library furnishings begun in FY 1982 with \$32,000 and continued in FY 1983 with \$10,000.

(d) The Conservation Analytical Laboratory will move from the Mall to the MSC during 1983. The amount of \$50,000 requested in FY 1984 will supplement the \$450,000 and \$135,000 appropriated in FY 1981 and FY 1982, respectively, and will be used to purchase bench equipment such as microscopes and a spectrophotometer for the examination, analysis and treatment of objects in the collections.

(Dollars in thousands)

(BOITAID I				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RES'	TRICTED	& C	ONTRACTS
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	266	9,810	162	5,607	-	91	-	130	-	-
FY 1983 Base	268	10,663	162	6,523	-	98	-	124	-	-
FY 1984 Estimate	268	11,629	162	6,977		101	-	70	_	

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	268	0	268
Number of Other Positions	16	0	16
ll Personnel Compensation	7,403	183	7,586
12 Personnel Benefits	1,298	18	1,316
21 Travel & Trans. of Persons	62	13	75
22 Transportation of Things	24		24
23 Rent, Comm. & Utilities	' 199	23	222
24 Printing and Reproduction	117	6	123
25 Other Services	936		936
26 Supplies and Materials	426	72	498
31 Equipment	198	651	849
Total	10,663	966	11,629
Analysis of Increase			
Necessary Pay		135	

Necessary Pay	135
Inflation	167
Restored Position Funds	44
Program Funds(Net)	620

ABSTRACT - The Administration activity grouping includes central management oversight and services provided by the Offices of the Secretary, Under Secretary, Assistant Secretary for Administration, General Counsel, Treasurer, Coordinator of Public Information, and the Director of Facilities Services (responsible for the Offices of Design and Construction, Plant Services and Protection Services). It also includes specialized administrative and technical offices, which include the Offices of Audits, Contracts, Equal Opportunity, Information Resource Management, Management Analysis, Personnel Administration, Printing and Photographic Services, Programming and Budget, Supply Services and Travel Services. Offices reporting to the Treasurer, include Accounting and Financial Services, Grants and Risk Management, and Business Management. Funding also includes the International Exchange Service and the Workers' Compensation account.

Overall, these organizational units receive both appropriated funds and nonappropriated unrestricted Trust funds for their operating support in approximate balance to the funding of the Institution. Some offices, however, such as Business Management, are funded entirely with nonappropriated Trust funds reflecting the nature These organizational units provide support and services to all of their work. programs and activities of the Institution. For FY 1984, an increase of \$750,000 is requested for the development of information systems for bibliographic, collections management, research and administrative purposes. An amount of \$130,000 related to the international exchange of government documents is being relinquished in FY 1984 in view of the amendment to Section 1719 of Title 44, United States Code, which provides for the costs of distribution of materials to foreign governments to be borne by the initiating agency. Therefore, the net program increase requested is \$620,000. Necessary pay of \$135,000 is required for current staff and an amount of \$167,000 is required to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$44,000 is requested to provide full-year funding for the six positions restored by the Congress in FY 1982.

PROGRAM - Within this activity, the Office of the Secretary with the assistance of the Office of the Under Secretary is responsible for the management and administration, including policy determination, program planning, legislation, financial management and the direction and review of performance of activities. The Office of the Assistant Secretary for Administration, including the Director of Facilities Services, is responsible for administrative and technical services and for design, construction, building operation and maintenance, and protection services.

The Office of the General Counsel provides legal counseling to the Board of Regents, the Secretary, and to more than 50 line programs and support offices on the administration of programs; coordinates and directs involvement in litigation or other adversary proceedings to which the Institution is a party; adjudicates administrative claims arising out of operations; and generally monitors all activities for legal implications vis-a-vis new developments in the law. Such matters include: the fiduciary obligations and responsibilities of the various museum boards and officials in executing their duties; the conformance to Smithsonian standards of conduct by its employees; fiscal policies and procedures required for federally appropriated funds, as well as trust principles applicable to the Institution's endowment funds; employment policies and procedures, involving civil service laws, the civil rights laws, and the labor laws; contract awards and agreements, and claims and disputes arising therefrom; Federal and state tax considerations for various Smithsonian operations; collections acquisition procedures for purchases, gifts, loans, and bequests; intellectual property rights arising out of publishing, performing arts, and collections acquisition activities; and real and personal property transactions.

The Office of the Treasurer has direct responsibility for financial management. This includes the direction of financial planning, accounting, payroll, financial reporting, administration of grants and insurance, handling of bank relations, oversight of investments, and management of certain auxiliary activities. Components of the Office of the Treasurer include Accounting and Financial Services, Grants and Risk Management and various Business Management Offices, including Museum Shops, Mail Order Division, Food Services, Belmont Conference Center and Parking Operations.

The Office of the Coordinator of Public Information is composed of the Offices of Congressional Liaison, Public Affairs and Special Events. These Offices are responsible for providing information about the Smithsonian and its programs to the general public and the Congress, for developing and overseeing legislation pertaining to the Institution, and for coordinating special events associated with exhibit openings, lectures and other presentations. The Office of Public Affairs is responsible for acquainting the public, via the communications media, public information programs and

other means, with programs and policies. It uses news releases, the Smithsonian News Service, other feature articles, calendars of events, radio-TV public service announcements, guides, visitor brochures and other publications, and contacts with individual journalists and news conferences to inform the public. The Office also produces a monthly staff newspaper.

The Office of Audits, which reports to the Under Secretary, is responsible for performing internal and external audits independently and in collaboration with public accountants. The internal audit function includes auditing Federal programs as well as nonappropriated Trust funded activities on a recurring basis. The Office reports the results of audit findings and makes recommendations to aid management at all levels in program administration. The external audit function involves the audit of documentation in support of claims, cost proposals and cost and pricing data arising from contracts, grants and other financial agreements.

The Contracts Office assists in obtaining Federal grants and contracts for special programs and projects, negotiates certain specialized contracts and manages components of the Trust personnel benefits program.

The Office of Equal Opportunity plans, conducts and monitors a positive action program to provide equality in employment practices and program activities. Major efforts include an affirmative action program, program and facility access for disabled persons, employee counseling and complaint adjudication, upward mobility, programs for women and Hispanics and community outreach to minority and women's groups in Washington, D.C. and elsewhere.

The Office of Information Resource Management was established in April 1982. The establishment of this Office recognizes that word and data processing have importance to every aspect of Institutional operations. The purpose of this new Office, which incorporates the Office of Computer Services and a portion of the Office of the Registrar staff, is to identify information needs and their relationships, including relationships that will unify the work of bureaus and offices, and to provide solutions to those requirements in integrated and cost effective ways using the most appropriate methodologies and equipment. The Institution plans to move from computer services dominated by a central computer and programming staff to a well planned decentralized computer and communications network system which will give all users greatly increased abilities to use equipment directly and to gain access to the total data available throughout the Institution.

The Management Analysis Office provides staff assistance and advisory services in support of administrative operations. The Office performs studies of organization, systems and procedures; prepares and distributes announcements and instructions governing operations; and conducts a forms management program.

The Office of Personnel Administration provides personnel services, advice and assistance to managers and employees. Within applicable laws, rules and regulations and Institutional policies, the Personnel Office has functional responsibility for recruitment, staffing, equal opportunity, position classification and wage administration, performance appraisal, merit pay, employee relations, union management relations, employee training and career development, employee assistance program, retirement counseling, employee benefits processing, Workers' Compensation, unemployment insurance processing, records maintenance and processing, personnel policy development, and personnel program evaluation.

The Office of Printing and Photographic Services (OPPS) is the central office for technical advice, guidance and production on photography, printing, and duplicating services to curatorial, scientific, technical and administrative staff. Photographic services include studio and on-site photography, photography of research related field work, photographic copy restoration, printing, presentation of negatives under archival conditions, and sales of materials to the public.

The Office of Programming and Budget formulates the consolidated Federal and nonappropriated Trust fund budgets for review and approval by the Secretary and the Board of Regents. Approved budgets are developed for submission to the Office of Management and Budget (OMB) and to the Congress, and the Office serves as liaison with both the OMB and the Congress on budgetary matters. Appropriated and nonappropriated Trust fund budgets are administered and monitored to help assure that program needs are met, budgetary goals are achieved and that accountability is maintained. The Office participates in the development of the Five-Year Prospectus and advises management on matters pertaining to program planning and development.

The Office of Supply Services is responsible for the policy, planning and coordination of the procurement, contracting, property management and supply program. The Office procures supplies, materials, contractual services and equipment. Programs for business with small, minority and women-owned firms are set and monitored. The Office also maintains all property records and performs and oversees periodic equipment inventories to ensure proper accountability, utilization and security.

The Travel Services Office plans itineraries and makes arrangements for travel, ensuring that it is accomplished in the most efficient and economical manner possible with particular attention to saving funds by the use of contract and discount fares.

The International Exchange Service serves as a focal point for the exchange of scientific, cultural, and other educational materials between academic institutions in the United States and foreign countries.

Progress in Administrative Support - Major emphasis over the past year and continuing for the current and budget years includes the development of the Quadrangle project, the supervision of the administrative and support activities to assure their responsiveness to needs, and strengthening of the Institution's equal opportunity and affirmative action programs. Continued attention is being given to legal oversight of and counseling on the Smithsonian's programs and improvement of financial management, accounting, monitoring, reporting, and auditing systems to assure control and accountability as a public responsibility. A number of specific developments merit reporting in the areas of financial and personnel management, equal opportunity, management information systems, public information, and photographic services.

A new and consolidated personnel/payroll/budget computer system, presently under development will become operational in mid-1983. In this system, a consistent and uniform data base will be developed, maintained and used to serve budget, personnel, financial, equal opportunity, and affirmative action needs. Improved monitoring, reporting, and projecting of information will be possible. This project is a combined effort of the Personnel, Accounting, Budget, Equal Opportunity, Information Resource Management and Management Analysis Offices. Further financial management improvement is being made under the Treasurer's direction through seminars and specialized training, expanded financial reports, and the establishment of two additional accounting service units in Smithsonian activities which expedite processing of accounting documents and guide and assist with proper procedures. These units will become operational in 1983. For further public accountability, the annual audit of Trust funds by an independent public accounting firm has been extended to include appropriated funds. Furthermore, the Institution's Federal Accounting Principles and Standards were approved by the General Accounting Office. A new procurement/accounts payable system will be installed to provide better and more timely status information, better service to vendors, and strengthened cash management.

Personnel management efforts have emphasized the requirements of the Civil Service Reform Act of 1978 for civil service employees, comparable policies and procedures for Trust employees, and equal opportunity and affirmative action for all employees and job

applicants. Performance appraisal, merit pay, and other systems are being monitored and improved as necessary. Policy and procedural materials are being examined, evaluated, and revised to assist Smithsonian bureaus and officers in good personnel practices. New recruitment pamphlets and fact sheets are being developed to assist applicants. In addition to implementation of the new personnel system, it is expected that changes to the Federal retirement and health insurance programs and the requirements of the Workers' Compensation and unemployment insurance programs will require substantial personnel work.

Equal opportunity efforts are having some success with improvements in representation of minority persons and women in professional jobs and in the upper grades. There has been steady improvement in program and facility accountability for disabled persons. There have been greatly expanded opportunities for training and career development for minority students and scholars and there has been concerted action to develop working relationships with Washington, D.C. universities and with the historically Black colleges and universities. Under the auspices of the Office of Fellowships and Grants, 20 internship appointments and five faculty fellowships were made primarily from these schools. In addition, there have been special actions to provide information, assistance, and exhibits to minority and women's groups and organizations. Goals for procurement from small and minority businesses were met.

In the area of information management, the most significant development was the establishment of a central office to provide planning, direction, and technical support. In ongoing activity, the first steps were taken towards the installation of a Smithsonian-wide communications network to permit using and sharing information. This network will allow linking computers, word processors, and other equipment among offices, laboratories, and other work sites. Continued support is being given to data handling projects for research, collections management, and administrative purposes. Particularly useful are registration and booking systems in support of Associates, Traveling Exhibition Service, and Volunteer programs.

Among public information services, the Smithsonian News Service provides the daily and weekly press with a regular package of four articles on art, history, and science subjects. Over 1,400 newspapers, with a total combined readership of 40 million persons, are using News Service articles which received major awards in 1982 and 1983. Efforts to make these materials more widely available are continuing. Readership of the monthly Calendar of Events is close to two million persons in the Washington, D.C. area. Radio and television public service announcements are helpful to prospective visitors. The results of a test public service announcement offering a "trip planner" by mail are being studied. More than one million copies of English and foreign language information brochures are used by visitors. A special guide for disabled persons has been issued and revised to include improvements in accessibility of facilities.

With regard to photographic service, an environmentally-controlled chamber for the long-term storage of photographic negatives and transparencies was completed in FY 1982. A computer program was developed in conjunction with the Smithsonian Archives to collect data for a catalogue of the Institution's photographs. Approximately 26,000 nitrate negatives were converted to safety film in a continuing effort to eliminate this hazard throughout the Institution. In addition, the photography office assumed management of inventory photography projects for the National Museum of American History's jewelry, numismatic, and philatelic collections.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, an increase of \$750,000 is sought to improve and make more available to staff and other users three important Institutional information resources: bibliographic collections; object/specimen collections; and financial management information. In all three areas, expanded computing capabilities

are the means for more effective delivery of information to the users. Of the \$750,000 increase, \$275,000 represents a continuation of funds appropriated for library automation in FY 1983, and \$475,000 represents closely related initiatives. An amount of \$130,000 related to the international exchange of government documents is being relinquished in FY 1984 in view of the amendment to Section 1719 of Title 44, United States Code, which provides for the costs of distribution of materials to foreign governments to be borne by the initiating agency. Therefore, the net program increase requested is \$620,000.

Modern computers provide flexible and easy-to-use systems for building and using data and information. The major need for the Institution at this time is improved software. Software is the part of the computer system which causes the machine to execute a series of steps or procedures; for example, software can cause the computer to alphabetize a random list of names. Modern software permits users who know very little about computers to carry out complex operations using instructions supplied by the computer itself. Software presently available to the Institution is less flexible, and in many cases requires computer experts to assist all but the most experienced users. The major purpose of this request is to provide the Institution with better computer software.

(1) Bibliographic Collections (\$275,000) - In FY 1983, Congress appropriated an amount of \$275,000 for establishment of an automated library system. An integrated system is being established which will encompass the Smithsonian Institution Libraries and many other collections. The system also will include the full range of library functions: acquisitions, cataloguing, information retrieval, transmission of information to remote locations, and management information systems such as library usage reports. This new system is replacing an older piecemeal approach to library functions in which, for example, most transactions involved in ordering a book are repeated when the book is catalogued.

The objectives of this automated system are to support wider and more effective use of the Institution's book, manuscript, and graphic resources and to make available to Smithsonian staff automated bibliographic resources in centers across the country. Staff members will be able to perform searches of a catalogue that is entered into a computer, providing much more flexible and timely access to bibliographic materials than the present manual catalogue permits. Users will receive such information as book location, citations, abstracts, and eventually complete texts where it is appropriate. The searching capabilities that computers can provide are especially important for maximum use of the Smithsonian's dispersed bibliographic collections.

The effect on library staff productivity will be significant. Modern automated library systems can free staff from many clerical tasks, permitting them to concentrate on such professional work as information evaluation. Book inventory will be accomplished through use of bar-code labels and readers. Integration of book ordering and book cataloguing systems, for example, will eliminate staff time devoted to redundant entry of bibliographic information.

The capability acquired for the Smithsonian Institution Libraries will be applied in other areas. For example, Smithsonian curators will be able to use the system to maintain their own annotated bibliographies.

In FY 1983, funds are being used to purchase software and related equipment including terminals and bar-code readers/printers, to support automation of book circulation and to obtain contract services to initiate the system. A further amount of \$275,000 is requested for FY 1984 for telecommunications and for terminals, printers and facsimile transmission devices to provide the full capabilities of the system for Smithsonian Institution Libraries' branches.

(2) Specimen/Object Collections (\$250,000) - Over the past five years, the Smithsonian baseline inventory program has created records in the Smithsonian computer for millions of specimens and objects. The primary purpose of the baseline inventory is accountability—the positive identification, location, and security of the National Collections. But much more than accountability now is possible. Using the inventory as a foundation, Smithsonian curators could perform more sophisticated research and collections management activities.

In order to realize this potential, the Institution must provide more flexible and powerful computing capabilities. The greatest need is for modern software to replace SELGEM, the Smithsonian-developed software system for handling collections information dating from the late 1960s. SELGEM is especially restrictive when curators wish to search their files for answers to complex research questions. The requested funds will be used to purchase, rather than develop, software since that is more cost-effective in today's computer environment. The new software ultimately will serve all of the Institution's art, history, and science museums, but the needs of the National Museum of American History will receive immediate attention.

The following describes in more detail the computer capabilities which are needed to support curators and collections managers in building specimen-related information systems:

(a) Maintain the Inventory - Records of museum collections are dynamic, reflecting both accessions and changes in information about current holdings. Curators and collections managers must be provided with computer capabilities to add and change records in very large volumes.

As the Institution moves toward centralized off-Mall storage of its collections, the demands increase for a computerized system to support common collections storage and yet meet individual museum needs.

(b) Enrich the Inventory Record - The baseline inventory record necessarily provides only information required for control and accountability purposes. Other information about inventoried specimens exists in a vast accumulation of manually prepared records and records that are entered into computers, especially accession files, catalogues, and conservation records. Baseline inventory records must be reconciled with catalogue and other records, and the whole made into an integrated system.

To support these curatorial and collections management activities, computer capabilities are required which assist in conversion of manual files and reconciliation with baseline inventory records. Modern software is necessary to make the best use of very expensive curatorial staff time.

(c) Support Use of Assembled Information - One major goal of information system building is improved access to the collections for research. With increasingly rich resources of information available, the Institution has the potential for greatly enhanced student, public, and scholarly use of its collections. Specimens can be selected for study or exhibit by asking questions which automated systems can answer much better than manual systems.

Information systems that utilize the computer have great potential for expanding use of the Institution's collections beyond traditional scholarly boundaries. Computer systems can be used remotely by the public, with appropriate responses for different knowledge and interest levels.

Smithsonian computer capabilities are weakest in this area of information retrieval. SELGEM, the current collections management software, requires extensive knowledge of computers for operation. Inexperienced staff need a programmer to ask

questions of the system, and response time is slow. These characteristics make the system undesirable for many Smithsonian staff and for most of the public. Extensively used information files—the Marine Mammal data base for example—present information retrieval requirements which SELGEM cannot meet.

Modern software exists which can support these research needs. One of the impressive achievements of modern computers is that they are increasingly easy to use. Users can turn on the computer, follow procedures guided by the computer itself, and do much of the work previously performed by programmers. Users get what they need more easily and more quickly.

(d) Increase Computer Staff Efficiency - The Information Resource Management (IRM) staff help to develop specimen-related information systems throughout the Smithsonian museums. Burgeoning demands for automated information systems require improvements in the Smithsonian's computer environment, where programmers are required regularly to assist users in daily tasks. Too much staff time is devoted to day-to-day tasks which users could better do for themselves.

A modern software environment will free IRM staff to develop information systems—catalogue and registration systems for example—while permitting users to ask questions of files largely without assistance. The result will be much more efficient use of expensive computer staff resources.

(3) Financial Management (\$100,000) - Automation of financial record keeping and reporting is essential to the production of accurate and comprehensive data required for internal control and the efficient management of resources. Accordingly, accounting activities were among the earliest functions which were automated at the Smithsonian. The majority of existing computer programs, however, have been developed for general purposes, geared to the monthly reporting cycle. To improve ability to make the best possible use of existing resources and to meet reporting requirements, managers throughout the Institution need access to more current accounting information to establish obligations and identify available funds. New software capable of producting specialized reports currently is available and needed for system improvements.

Major efforts to integrate personnel and payroll data have led to implementation in FY 1983 of a new human resources system which is designed to consolidate previously uncoordinated information bases. Similar improvements and upgrading are necessary to other elements of the Institution's financial management system, to permit full integration of all financial data, including for example, the funds accounting information on all acquisitions and orders of bibliographic materials to be produced by the new library system.

The requested funds will be expended to initiate development and acquisition of financial management software to permit full integration of all financial data, simplify input and updating of information, and make available to managers more timely and improved reports.

(4) Communications Enhancements and Staff Training (\$125,000) - Communication links among the computers which process information and the offices, laboratories, and public areas which use information systems are an essential ingredient in any automated environment. Access to common data bases—such as bibliographic holdings or financial data—from sites throughout the Institution, requires communications links to support flows of information in every direction. Such information flows, occurring at high speeds and with great reliability, cannot be achieved using telephone lines. To accommodate these communication requirements the Smithsonian has begun installation of a local area network of coaxial cable equipped with switching and monitoring devices.

The increased computer-to-computer communications which these lines make possible can support shared equipment within the Institution and bring additional information to users. To extend this network will require \$50,000 both for additional planning (these systems require mathematical and engineering analysis) and for partial implementation.

As the communications network makes it possible for Smithsonian staff previously acquainted only with their own automated systems to use many other Smithsonian information resources, the Institution will need to provide training programs. New software in the users' own area also calls for training. A further amount of \$25,000 is requested for training in these areas. In addition, the staff requires orientation in the use and benefits of office automation equipment, especially word-processors which could substantially increase office productivity. A final amount of \$50,000 is requested to establish an automated office training laboratory. The laboratory will be staffed by present personnel and integrated into Institutional training and advancement programs.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by allotments and are derived in part from overhead recovery on grants and contracts administered by the Smithsonian and from administrative fees charged to Trust funded activities. Funding of these centralized services from both Federal 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 represent administrative expenditures before the application of overhead recovery of \$5,338,000 in FY 1982 and estimated recovery of \$5,700,000 in FY 1983 and \$5,900,000 in FY 1984. (Administrative costs and overhead recovery for the Smithsonian Astrophysical Observatory (SAO) are reflected within SAO's nonappropriated Trust funds section.) Also included are 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 received a general allotment for the continuation of the Cooperative Education Program. These funds are used by the Offices of Equal Opportunity, Fellowships and Grants, and Elementary and Secondary Education for fellowships, internships, and grants for minorities, cooperative education, women's council, outreach efforts to minority and women's groups and organizations, and the career awareness program in junior and senior high schools (estimated expenditures of \$125,000 in FY 1983 and in FY 1984). Funds also have been provided for the continued development and implementation of a new personnel and payroll system which, when operational in FY 1983, will provide a consolidated information base for a wide variety of personnel, budgetary and other financial data (estimated expenditure of \$110,000 in FY 1983 and in FY 1984). Special Purpose funds include gifts received through unrestricted bequests, which in accordance with the Bylaws of the Board of Regents, are subsequently transferred to endowment. Anticipated expenditures in the special purpose category include support of studies in ornithology and small amounts used for seminars, related research and expenditures for the annual Christmas dance of the Smithsonian's Women's Committee, the net proceeds of which are distributed to individual bureaus for scientific research or education projects.

Restricted Funds - Included in this category are endowment bequests and foundation grants for ornithological and biological research and annuity payments to a former Under Secretary of the Institution.

OFFICE OF DESIGN AND CONSTRUCTION

(Dollars in thousands)

			NONAPPROPRIATED SOURCES OF FUNDING						
			UNRESTR	ICTED				FEDE	RAL GRANTS
FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RESTRICTED		& CONTRACTS	
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
37	1,367	7	226	-	-	-	-	-	-
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37	1,778	7	266	-	-	-	-		
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*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	37	0	37
Number of Other Positions	0	0	0
11 Personnel Compensation	1,248	31	1,279
12 Personnel Benefits	122	3	125
21 Travel & Trans. of Persons	13		13
22 Transportation of Things	2		2
23 Rent, Comm. & Utilities	34	2	36
24 Printing and Reproduction	33	1	34
25 Other Services	58 .	143	201
26 Supplies and Materials	53	3	56
31 Equipment	30	2	32
Total	1,593	185	1,778

Analysis of Increase

Necessary Pay	14
Inflation	11
Restored Position Funds	20
Program Funds	140

ABSTRACT - The Office of Design and Construction (ODC) provides professional architectural and engineering services to the Institution in support of the development, operation, repair and improvement of its physical plant. These services include planning and feasibility analysis, design and engineering, cost estimating, project management, construction contract administration, space planning and interior design. For FY 1984, an increase of \$140,000 is sought to establish additional capability to procure contract services for planning, design, cost estimating, specialized studies and analyses, and construction management. Necessary pay of \$14,000 is required for existing staff and an amount of \$11,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$20,000 is requested to provide full-year funding for the position restored by the Congress in FY 1982.

PROGRAM - The Office of Design and Construction provides planning, engineering, architectural and related administrative services to the Institution and its facilities located in the Washington, D.C. metropolitan area, as well as at the Chesapeake Bay Center in Maryland, the Whipple Observatory in Arizona, the Cooper-Hewitt Museum in New York and the Tropical Research Institute in Panama. Services provided by ODC's professional electrical, mechanical and structural engineers, architects and construction managers include the development of multi-year facility master plans and budgets: feasibility studies of project requests and facility programs; architectural and engineering analyses; design and specifications development; construction cost estimating; and construction contract supervision. In addition, ODC reviews designs prepared by the museums' exhibit staffs to ensure compliance with safety, health, accessibility and other technical standards; maintains a central library for cataloguing, filing and identifying all plans, drawings and specifications; and provides expertise to Smithsonian executive staff on matters pertaining to planned construction and facility development or utilization, Which may include presentations to the National Capital Planning Commission and the Commission of Fine Arts.

The primary function of ODC is to administer the Institution's Restoration and Renovation of Buildings (R&R) program. Consequently, ODC's workload is related directly to the size of this program, which has increased from an appropriation of \$2,100,000 in FY 1979 to \$8,450,000 in FY 1983 and a proposed \$9,000,000 in FY 1984. The growth of the R&R account reflects the Institution's priority to ensure adequate maintenance of an aging and complex physical plant, to upgrade fire detection and suppression systems, to eliminate architectural barriers and correct unsafe conditions, and to reduce energy consumption. Increased emphasis in these program areas has required more highly specialized expertise. At the same time, ODC has taken a number of steps to improve staff efficiency and effectiveness. These include the development of procedures to improve the process of monitoring work flow, project status and documentation of reporting these activities; the reassessment and revision of procedures for improving internal communication and coordination among ODC's planning, design and construction divisions; the reassessment and revision of procedures for improving construction contract administration and documentation; and the establishment of an annual training program to improve the staff's technical proficiency and knowledge of contracting regulations and procedures. In addition, ODC has refined the facilities budget planning process to provide a more effective basis for the annual identification, selection and funding of construction and R&R projects. In doing so, museum directors and building managers are involved more directly in the identification of projects for their respective facilities, as well as in the long-range planning effort.

EXPLANATION OF PROGRAM INCREASE - In FY 1984, an increase of \$140,000 is sought to augment a base of \$58,000 for contracting for intermittent professional architectural/engineering and other specialized services to enable the Institution to hold down requirements for permanent staffing, expedite the flow of work, cope with peak workload periods in a cost-effective way, handle urgent needs that cannot be anticipated, and obtain highly technical services or specialized studies where it would not be possible or practical to maintain a permanent staff capability. Examples of such efforts have included the use of topographical specialists and surveyors, construction cost estimators, scheduling experts, a stone restoration specialist, and an historic preservation specialist who has studied environmental effects on the durability of building facades. Contract services also are used to augment staff capability in monitoring construction contractor performance to ensure that work is performed according to specifications and completed on schedule. For example, contract inspection services currently are used in connection with the Arts and Industries Building roof and facade project. Funds provided in FY 1984 will enable ODC to contract for the expansion of the existing

micrographic system and to initiate planning and development of a computer graphics program to improve the accuracy and accessibility of base documents used in preparing construction contract documents. Other contract services primarily will provide long-range planning, master planning, facility condition analysis, facility budget development, and other specialized needs as they are identified.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by an allotment used primarily to cover salaries and some support costs (estimated expenditures of \$211,000 in FY 1983 and \$266,000 in FY 1984). The Office charges a portion of its expenses to Trust funds, reflecting the fact that it provides services for Trust funded as well as federally funded projects.

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED				FEDE	RAL GRANTS
Fiscal	FEDE:	RAL FUNDS	Ge	neral	Spec	ial Purpose	RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	571	12,240	-	6	-	67	-	-	-	-
FY 1983 Base	571	14,735	-	6	-	10	-	-	-	-
FY 1984 Estimate	571	14,211	_	6	-	10	-	_	_	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	57 1	0	571
Number of Other Positions	105	0	105
11 Personnel Compensation	10,661	160	10,821
12 Personnel Benefits	1,044	16	1,060
21 Travel & Trans. of Persons	24	4	28
23 Rent, Comm. & Utilities	26	5	31
24 Printing and Reproduction	2	1	3
25 Other Services	1,710	-340	1,370
26 Supplies and Materials	141	20	161
31 Equipment	1,122	-390	732
42 Insur. Claims & Indem	5		5
Total	14,735		14,211
Analysis of Change			
Necessary PayInflation		176 156	
Program Funds		- 856	

ABSTRACT - The Office of Protection Services (OPS) is responsible for security, fire protection, safety, and health programs of the Smithsonian. For FY 1984, a net program decrease of \$856,000 is proposed. Additional funds of \$1,702,000 were appropriated in FY 1983 to initiate a security equipment acquisition and replacement program. Of this amount, \$1,336,000 was designated for one-time purchases and \$366,000 represented continuing needs. For FY 1984, the Institution is seeking an amount of \$480,000 for purchases associated with the program to upgrade and strengthen the security system. This represents a program decrease of \$856,000. Necessary pay of \$176,000 is required for existing staff and an amount of \$156,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Office of Protection Services provides security, fire protection, safety, and health services for visitors and staff of the Smithsonian Institution. The authority of OPS to administer these programs derives from P.L. 82-206 and P.L. 88-391, which relate to the policing of Smithsonian buildings and grounds, and from P.L. 91-596 and Executive Order 11807, which relate to occupational safety and health.

OPS provides the full range of protective services, 24 hours a day, every day of the year in 11 major museums and art galleries, and other facilities in Washington, D.C., and at the Cooper-Hewitt Museum in New York City. More than 5,000 employees work in these facilities, which are visited by approximately 26 million people each year. The Office provides technical assistance and advisory services to all Smithsonian bureaus and administers occupational safety and health programs for the National Zoological Park, the Smithsonian Tropical Research Institute, the Chesapeake Bay Center for Environmental Studies and the Smithsonian Astrophysical Observatory.

The security force operates 24 hours a day, seven days a week. Uniformed guards and K-9 officers and plainclothes officers are assigned in the galleries, around the grounds, and at entrances during the day and night. They respond to alarms, conduct security and fire patrols after the museum buildings are closed to the public, investigate accidents, report fire and safety hazards and malfunctions associated with mechanical and electrical equipment, and provide information to museum visitors. Security coverage for museums is based on the concept of posts, the areas for which security officers are responsible. A post may be one point (for example, a museum entrance) or an area varying in size and determined by its use; crowd conditions; the value of objects on display; the vulnerability of those objects to accidental damage, vandalism, or theft; the effective field of vision of the assigned protection personnel; and the ability to use electronic devices. The number of guards required to staff one post may vary from one (a post staffed eight hours a day, five days a week) to five (a post staffed 24 hours a day, seven days a week).

In order to provide adequate security coverage within current staffing limitations, OPS has begun to experiment with service contracts for certain occupations. In Washington, D.C., the contract first undertaken in FY 1981 for operation of checkrooms and elevators that were once staffed by guards has been continued, and at the Cooper-Hewitt Museum, OPS currently is experimenting with the use of contract guards.

Security officers employ a number of electronic and mechanical aids in the performance of their duties. A communications network enables them to respond quickly to all emergencies and to coordinate their activities. An average of 650 alarm signals, each demanding immediate response, is received from the various sensors of the extensive alarms network every day. During FY 1982, the number of felonious incidents and misdemeanors committed reached 301. The number of cases requiring investigation by the Security Services Division numbered 121.

The security force is supported by a professional and administrative staff which includes training specialists, safety specialists, fire protection engineers, alarm systems specialists, and investigators and museum security specialists. This staff conducts in-depth studies of protection needs; escorts valuable shipments; formulates long-range plans for improved security and safety; and installs and maintains alarms, including the equipment for the new proprietary security system.

A key part of the Institution's upgraded protection program involves the conversion to an electronic security and fire alarm system that is completely owned and operated by the Smithsonian. Plans call for the conversion to occur during the next decade. The purposes of converting to a proprietary security system are to gain faster response times to security and fire protection alarms; to improve the quality of and to

control information transmitted from the security devices and fire sensors to the building security offices and the central control room; to manage and control systems maintenance; and to eliminate reliance on leased equipment, outside sources of power and related contractual services, the costs for which are escalating rapidly. The fire detection and security sensors that are elements of this system will be linked to eight local control rooms and to a central control room that monitors all activity and provides emergency backup control. Closed-circuit television controlled by the computer would allow the control room operator to assess the problem. Patrolling guards would be dispatched to the area of the activated sensor for appropriate action. The current estimate for the total phased conversion, planned to be accomplished by FY 1990, with Salaries and Expenses (S&E) and Restoration and Renovation of Buildings funds, is \$9,500,000. OPS currently has an S&E base of \$440,000 for the proprietary alarm system. (Funding for the system used for making building alterations and for purchasing permanently installed equipment also is included in the Restoration and Renovation of Buildings account.)

Fire and safety programs include training in preventive techniques; reviews of construction, renovation, and exhibit installation drawings; annual fire inspections of facilities; and annual safety and industrial hygiene inspections. These measures have resulted in long-range plans for installation of new and upgraded fire detection and suppression systems and for compliance with safety regulations. Fire safety presentations are made to approximately 80 percent of the Smithsonian staff each year. The safety staff works to eliminate hazards of accidents and occupational illnesses. Locations in which asbestos has been discovered are monitored carefully, and projects to remove or contain asbestos as well as the effort to eliminate the dangers of cellulose nitrate film in the Institution's collections are proceeding on schedule. Safety shoes, safety glasses, and other equipment are provided for employees as necessary. The safety staff continues to promote safety awareness among employees by coordinating the work of safety committees in every facility, by offering several training programs, and by publishing a safety newsletter for all employees.

Providing health services for the welfare, assistance, and emergency medical needs of visitors and staff is an important function of the Office. OPS is continuing to offer health services on a regular basis to employees at many of the outlying facilities at which medical services were not available before FY 1981 and is nearing the final stages of the effort to reorient the Health Services Division so that its primary mission is effective occupational medicine rather than emergency assistance. The Health Services Division, now composed of a staff doctor and six nurses, administered 18,993 treatments in FY 1982, an average of approximately 52 a day. Among the non-emergency services offered to employees were immunizations for seasonal diseases, examinations for occupational illnesses, and screening tests for chronic illnesses such as diabetes and hypertension.

EXPLANATION OF PROGRAM CHANGE - Based upon comprehensive studies of security conditions at all museums and facilities of the Institution, the Office of Protection Services has identified numerous areas where security systems are not adequate and opportunity exists for theft, break-in, or vandalism. For many years, the Institution has met security requirements on the basis of reacting to the most critical need of the moment. As a result, the security of the National Collections has been uneven and in some instances inadequate for meeting changing conditions. Several museums have systems which are obsolete or function only intermittently with frequent attention required. Others have large areas of nonpublic space which are not monitored and where access is not controlled, or have only lock and key arrangements which provide a minimum of security but which would not deter a determined unauthorized entrance. In order to correct these deficiencies, an amount of \$3,000,000 will be required in the next several years for new, upgraded security equipment. The Institution initiated its request for this upgrading program in FY 1983 when funds of \$1,336,000 were

appropriated for one-time purchases, and \$366,000 was provided for continuing needs. For FY 1984, the Institution is seeking an amount of \$480,000 to be retained for one-time purchases, building on the programs initiated in FY 1983 to strengthen perimeter security and purchase additional closed-circuit television. This results in a net program decrease of \$856,000.

Perimeter Security (\$391,000) - Although most Smithsonian facilities have adequate security around windows and doors, certain ones do not have any security devices at all, while others have security devices that are old, worn out and unreliable. To help correct this situation, funds of \$290,000 appropriated in FY 1983 are being used to purchase and install balanced magnetic contacts on exterior doors and trap doors and glass break or new vibrator sensors for windows to replace marginally functional aluminum strips, the reliability of which is affected by changes in temperature and humidity. The sum of \$391,000 sought for FY 1984 will be used to purchase and install magnetic contacts for an additional 21 exterior doors and trap doors and glass break or new-type vibrator sensors for 455 windows.

Closed-Circuit Television Surveillance (\$89,000) - Closed-circuit television (CCTV) can provide observation of locations such as hallways, stairwells, and collection storage areas in which guards are not usually posted. Funds of \$110,000 appropriated in FY 1983 are being used for the purchase of 53 CCTV units. A further amount of \$89,000 sought for FY 1984 will be used to purchase and install 28 additional cameras and controlling equipment which can be monitored electronically by guards located in control rooms. Most of these cameras will have motion detection alarm capability.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by an allotment and from reimbursements for the use of guard services at special events and lectures at Smithsonian facilities. They are used for the purchase of supplies, materials, and equipment.

(Dollars in thousands)

				NONAPPROPRIATED SOURCES OF FUNDING						
				UNRESTR	ICTED	-			FEDE	RAL GRANTS
Fiscal	FEDE	RAL FUNDS	Ge	neral	Spec	ial Purpose	RESTRICTED		& CONTRACTS	
Year	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1982 Actual	396	24,446	5	986	1	-12	-	2	-	-
FY 1983 Base	396	27,360	5	871	1	-	-	1	-	-
FY 1984 Estimate	396	28,282	5	935	1	1	-	2	_	- 1

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1983	Proposed Adjustments	Est. FY 1984
Number of Permanent Positions	396	0	396
Number of Other Positions	27	0	27
11 Personnel Compensation	9,009 954 14 15,303 7 876 1,073	294 29 6 455 19	9,303 983 20 15,758 7 895 1,188
31 Equipment	124	4	128
Total	27,360	922	28,282
Analysis of Increase Necessary Pay		141 113 455 63 150	

ABSTRACT - The Office of Plant Services (OPlantS) operates, maintains and repairs 12 museums and art gallery buildings and a number of other work and collections storage areas located in the Washington, D.C. metropolitan area and in New York City. OPlantS provides utilities, transportation, mail and telephone services in support of research, exhibit, education and other public programs. In addition, technical service and assistance are made available to other Smithsonian units located outside of the Washington, D.C. area. For FY 1984, an increase of \$150,000 is sought to improve the operation and maintenance of the heating, ventilating and air conditioning systems and to strengthen the general interior and exterior building repair program at the Cooper-Hewitt Museum in New York City. Necessary pay of \$141,000 is required for existing staff and an amount of \$113,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$63,000 is requested to

provide full-year funding for the eight positions restored by the Congress in FY 1982. An amount of \$455,000 for rental space costs is being requested in the Uncontrollable Increases section.

PROGRAM - I. Office of Plant Services - With base operating resources of 326 positions and \$10,025,000, OPlantS operates, maintains and repairs the Smithsonian's physical plant on or near the Mall, including approximately 2.6 million net usable square feet in 11 museums and art galleries. In addition, it operates, maintains and repairs 53,000 square feet of space in the Cooper-Hewitt Museum in New York City. Services also are provided to other work and storage areas including space in leased facilities. This includes maintenance of building interiors, exteriors and all mechanical and electrical equipment -- such as elevators and escalators, lighting and refrigeration components -- and emergency repairs to property which must be accomplished by service contract. Operational responsibilities for utilities funding and management include the maintenance of large and complex air conditioning, heating and ventilating systems and electronic environmental control systems for the comfort of visitors and for the protection of buildings, natural history and anthropological specimens and objects, paintings, sculptures and objects of American history and technology. Trade and craft assistance, including carpentry, painting, plumbing, sheetmetal and electrical work, is provided every year to hundreds of program requirements such as research projects, special public events, office relocations and modifications and exhibition installations at all museums. A backlog of requests for building maintenance projects has developed over the course of the last several years. To reduce the backlog, the Institution recommended that OPlantS redirect work hours previously devoted to exhibit and program work to the repair of Smithsonian facilities. In FY 1982, program and exhibit work hours were reduced by 35 percent and in FY 1983 will be reduced by an additional 25 percent. This reduction has enabled OPlantS to meet more effectively its primary responsibility for maintenance and repair of buildings, facilities and equipment, while providing a basic level of program and exhibits support.

OPlantS also maintains a supply warehouse at the Smithsonian Institution Service Center where common and widely used supplies and materials, purchased in bulk to obtain the most favorable price, are stored and distributed. Custodial services, while decentralized to each museum, receive cleaning supplies and equipment from the Office of Plant Services. Packing, crating, warehousing and moving services are carried out for museum objects and collections. OPlantS also has responsibility for communications systems including the management and funding of telephone installations and services (Federal Telecommunications Network System and local calls) and the processing of and payment for mail. Transportation services, repair and operation of vehicles are carried out by the Office as well.

The Computerized Preventive Maintenance System for scheduling preventive maintenance requirements continued to provide for a highly reliable and efficient physical plant operation. The preventive maintenance program schedules periodic attention for all fire prevention, automatic lighting, guard stations, roofing systems and heating, ventilating and air conditioning mechanical equipment in all Washington, D.C. museums, and the Chesapeake Bay Center for Environmental Studies. For the past three years, FY 1980 - FY 1982, there were no equipment failures that could be attributed to a lack of proper maintenance. This record represents a significant accomplishment considering the age of much of the mechanical equipment in the Smithsonian buildings and attests to the reliability and effectiveness of the preventive maintenance program. In FY 1982, the Computerized Preventive Maintenance System issued 62,297 scheduled maintenance orders, and completed 59,992 or 97 percent of them.

The Computerized Facilities Monitoring System, which was completed in FY 1980 and analyzes the operation of various mechanical equipment in major Smithsonian museums, continues to work effectively. The System uses sensors at over 1,882 points on

equipment and automatically alerts a central control center to equipment malfunctions. These automatic alerts have aided in avoiding costly repairs during the past several years.

OPlantS also continues to play a major role in contributing to overall Smithsonian energy conservation efforts, discussed more fully in the Uncontrollable Increases section.

II. Office of Horticulture — With base resources of 29 positions and \$1,156,000, the Office of Horticulture uses the disciplines of horticulture to conduct comprehensive educational, scientific, research and exhibition programs. The Office performs a number of functions which include providing interior and exterior landscape management services from design through installation and maintenance; research and development of historically styled gardens for museum grounds and special exhibitions; interior plantings; maintenance of Smithsonian grounds including care of trees; operation of a greenhouse nursery complex; and the development and conduct of educational and display programs related to horticulture. Responsibilities of the Office also include exterior grounds pest control, snow and ice removal from sidewalks and parking lots in 15 locations on and off the Mall, and trash policing of Smithsonian grounds.

III. South Group Buildings Management - With base resources of 41 positions and \$933,000, South Group Buildings Management is responsible for cleaning, routine maintenance, labor services, relamping, maintenance contract administration, shipping and receiving for the Arts and Industries and Smithsonian Institution Buildings and responding effectively to urgent situations which may affect their maintenance.

EXPLANATION OF PROGRAM INCREASE - For FY 1984, an increase of \$150,000 is sought to improve the operation and maintenance of the heating, ventilating and air conditioning systems, and to strengthen the general building interior and exterior repair program at the Cooper-Hewitt Museum in New York City. The Museum occupies a mansion (the Carnegie House, once the residence of Andrew Carnegie and his family) and an adjacent townhouse (the Miller House). These buildings, constructed between 1902 and 1904, house collections that are unique in their size, scope and character, consisting of drawings, wallpapers, prints, textiles, jewelry, silver, porcelain, pottery, glass and furniture. In addition, the Museum's library, with an estimated 35,000 volumes (augmented by a group of specialized study archives including a picture file of over two million images) is considered the most important of its kind in the country. Because nearly all of the Cooper-Hewitt collections are directly affected by changes in temperature and relative humidity, it is imperative that the heating, ventilating and air conditioning systems in the Miller and Carnegie Houses be maintained in proper working order.

From FY 1976 until FY 1983, the utility systems have been maintained by Cooper-Hewitt personnel. The combination of a shortage of resources and lack of technical expertise has resulted in a number of premature equipment failings. For example, in 1981, one of the two boilers installed in 1974 had to be replaced at a cost of \$35,000. The other boiler is currently leaking and may have to be replaced also. These types of boilers should have a life expectancy of over 15 years with proper maintenance. In 1982, an air conditioning compressor installed in 1975 stopped working. Again, proper maintenance of this equipment should insure more than seven years of usefulness.

Following a comprehensive review and assessment of the Cooper-Hewitt utilities systems, operational and maintenance responsibilities were transferred in FY 1983 from the Cooper-Hewitt to the Office of Plant Services. In order for OPlantS to fulfill these responsibilities without reducing essential services provided to other facilities, additional resources are necessary. The increase of \$150,000 requested for

FY 1984 will enable OPlantS to establish an effective physical plant operation, maintenance and repair program at the Cooper-Hewitt Museum similar to the one established for buildings in Washington, D.C. Responsibilities will include: operation, maintenance and repair of the heating, ventilating and air conditioning system; maintenance and repair of building structures including roof, exterior and interior walls, floors and other buildings components; maintenance and repair of installed water, waste and electrical systems; and maintenance and repair of elevators, sidewalks, on-site walls and fences and underground systems installed in the gardens. Of the amount sought, \$119,000 will be used to hire four journeymen mechanics using existing base positions who will operate, maintain and repair the Cooper-Hewitt's utility systems; \$15,000 is needed to extend the current Smithsonian preventive maintenance system to the Cooper-Hewitt, to contract for water treatment, and to rent a data communications line which will link the facilities monitoring sensors installed on equipment at the Cooper-Hewitt with the central facilities monitoring computer located in Washington, D.C.; \$10,000 will cover the purchase of maintenance supplies; and \$6,000 will defray support travel costs of supervisory and crafts personnel from Washington, D.C. to New York to perform periodic preventive maintenance and necessary repairs.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and are used primarily to cover salary costs of five full-time positions (estimated expenditures of \$106,000 in FY 1983 and \$113,000 in FY 1984) and to provide for the payment of the Trust fund share (approximately 40 percent) of the Smithsonian's annual costs for the use of the Federal Telecommunications Network System and for the Trust fund share of space rental costs for administrative units located in L'Enfant Plaza (estimated expenditures of \$724,000 in FY 1983 and \$778,000 in FY 1984). Special Purpose Funds are provided primarily from user reimbursement for services rendered to Trust funded units and are used to purchase supplies, services, equipment and landscaping materials.

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations or corporations for specific purposes. The Office of Horticulture will design, coordinate and install the 300,000 square yard American Garden in the VI International Gartenbau - Austellung in Munich, West Germany, scheduled to open in April 1983 and close in October 1983. The funding for the Garden (\$170,000) will be entirely through donations from individuals and organizations. This amount is not included in the summary chart in order to be consistent with the Institution's Five-Year Prospectus which was prepared prior to the receipt of these funds.



TAB B

MUSEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)



SMITHSONIAN INSTITUTION MUSEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)

1982 Appropriation.....\$4,320,000 1983 Appropriation.....\$2,000,000 Equivalent in Excess

For FY 1984, the Smithsonian requests an appropriation of \$9,040,000 equivalent in foreign currencies which have been determined by the Treasury Department to be in excess of the normal needs of the United States. This appropriation will be used to continue a program of grants to United States institutions for research in those

countries where excess local currencies are available.

This appropriation will be used:

- -- to continue a program of grants to United States institutions for research in those countries where excess local currencies are available. Of the total \$4,000,000 requested for the grants program, \$2,700,000 will be available for continuing projects and \$1,300,000 will support new projects;
- -- for the third installment, \$4,000,000 equivalent in Indian rupees, for the forward-funded reserve in support of future programs of the American Institute of Indian Studies (AIIS);
- -- for the second of four increments of the United States contribution to the international effort to restore and preserve the ancient city of Moenjodaro in Pakistan. Funding of \$1,040,000 equivalent in Pakistani rupees is requested for FY 1984.

Obligations of Funds by Program Area (dollar equivalents)

Amahaalama aal Dalama	FY 1982 Actual	FY 1983 Estimate	FY 1984 Estimate
Archeology and Related	62 755 000 1/	41 765 000	27 265 202 1/2/
Disciplines Systematic and	\$3,755,000 <u>1</u> /	\$1,765,000	\$7,865,000 <u>1/2/</u>
Environmental Biology	445,000	272,000	505,000
Astrophysics and Earth		·	· ·
Sciences	64,000	32,000	145,000
Museum Programs	237,000	41,000	260,000
Grant Administration 3/	66,000	25,000	65,000 3/
Science Information		•	´ -
Program (Translations)	4/0-	40,000	300,000 4/
Total	\$4,567,000	\$2,175,000	\$9,140,000

Includes obligation for U.S. contribution for Moenjodaro: FY 1982, \$960,000; FY 1984, \$1,040,000.

Includes obligation for AIIS forward-funded reserve: FY 1984, \$4,000,000.

Includes transfers to the State Department for "Foreign Affairs Administrative Support."

Includes estimates for the Science Information Program for translations.

PROGRAM OF GRANTS FOR RESEARCH

The Smithsonian 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. For FY 1984, an appropriation of \$4,000,000 equivalent in excess foreign currencies is sought for the grants program.

The Smithsonian program is a major source of excess foreign currency support for research carried out by United States institutions in the excess currency countries and is distinguished from other Special Foreign Currency Programs in that 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 research and training activities of collaborating institutions abroad, for 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 contribute to the integration of the world-wide advancement of science which serves to narrow the gap between the industrial and the developing nations.

The Importance of Research in the Natural Sciences and Cultural History

The density of world population and of technological development have had significant effects on the natural environment and on society. Research sponsored by the Smithsonian in the natural sciences and in cultural history is aimed at improving understanding of the environment, the management and protection of scarce resources, and the cultural setting within which social changes take place.

Grants awarded by the Smithsonian in systematic and evolutionary biology have contributed to the understanding of the individual and the surrounding environment. In FY 1982, grants supported the following projects of special interest:

- --Paleontological investigation in Pakistan has led to the discovery of the oldest and most primitive whales known to science.
- --Scientific data resulting from the study of the snail host of a blood fluke parasite has contributed to the development of biological controls against one of man's most serious parasite diseases, urinary schistosomiasis.

In astrophysics and earth sciences, contributions were made to the study of the earth and its management. For example:

--Examination of marine fossil deposits in central Tunisia have made possible the dating of important vertebrate events such as the arrival of the horse in North Africa.

Smithsonian grants in cultural history and in museum programs contribute to the understanding of the individual and society and foster understanding of diverse cultures. In FY 1982, grants supported the following projects:

- --Extensive field work on local Burmese languages has resulted in the development of a trilingual dictionary of two Burmese dialects and English. This dictionary will be used for language teaching in the Burmese school system which has reintroduced the use of English as part of the class curriculum.
- --Excavations at Wadi Kubbaniya in Egypt uncovered a well preserved human skeleton of the Middle Paleolithic age, some 60-80,000 years old, which has been declared a national treasure by the Government of Egypt.

--Excavations at Oriyo mound in Gujarat, India, show evidence of the return to the pastoral nomadism way of life in 1500 B.C. after 800 to 1,000 years of organized city dwelling.

Further, with emphasis on information exchange through small workshops, symposia and field conferences, the Smithsonian is encouraging international research in specialized areas, such as environmental research, wildlife and ecosystem studies, and museum techniques. In FY 1982, for example, U.S. scholars received support for participation in exchanges on the subjects of late Cenozoic climatic changes, Pakistani archeology, Tibetan studies, biological diversity, Hindu studies and high energy gamma rays.

The Importance of Multi-Year Grants

Beginning in FY 1979, the Smithsonian Foreign Currency Program began a policy of multi-year funding of major programs, whenever sufficient funds were available. Such funding is important because rational planning requires the advance commitment of professors and graduate students as well as of facilities. Multi-year grants, with annual disbursements subject to satisfactory review of progress by the advisory councils, allow participating institutions to coordinate such projects into their long-range scholarly programs, by providing some assurance of funding for the duration of the project.

Further, the Smithsonian has been able to use multi-year grants to protect successful projects from sudden termination when excess currency accounts were abruptly exhausted. This happened in Poland and Tunisia in 1976 and in Egypt in 1981. With multi-year funding over a three-year period, ten projects in Egypt were funded to reasonable conclusions and three continuing projects gained sufficient time to seek other funding sources.

India is currently projected for removal from the excess currency list before 1990. The Smithsonian hopes to provide stabilized funding before that time through multi-year grants and, through building a substantial forward-funded reserve for the American Institute of Indian Studies.

Benefits to United States Institutions

Since the inception of the program in FY 1966, Smithsonian grants have been made to 225 United States institutions in 41 states and the District of Columbia to support more than 750 individual projects. Publications known to have resulted from program grants totaled more than 1,350 at the end of FY 1982.

The benefits to United States institutions and host country go beyond the accumulation of data, extending to collections of original biological specimens and the archeological and ethnographic materials that are acquired in the course of field research. These remain available for further study and interpretation by other generations of scholars long after the research teams supported by the Smithsonian have dispersed and their conclusions have been published. More than 100 such research collections have been placed in United States universities and museums. A similar number of collections has been added to the research resources of the excess currency countries.

The advantages of the program have extended to a far larger number of institutions than the 225 United States institutions which have received grants directly. For example, three of the grantee institutions are consortia of United States scholarly institutions. They are the American Institute of Indian Studies (AIIS) in Chicago, Illinois, with 37 institutional members; the American Research Center in Egypt (ARCE)

in New York City, with 27 institutional and approximately 600 individual members; and the American Schools of Oriental Research (ASOR) in Cambridge, Massachusetts, with 135 member institutions.

Smithsonian grants have supported the research in India of 472 AIIS fellows over the 15-year period from FY 1968 through FY 1982. The fellows were drawn from 62 United States institutions in 23 states. Program grants also have supported more than 75 ARCE projects over the 17-year period from FY 1966 through FY 1982, and since FY 1977, 60 ARCE fellows have received Smithsonian support. Nine ASOR excavations in Israel and Tunisia provided research opportunities for more than 260 senior U.S. scholars and field training for more than 324 graduate students. The Indo-American Fellowship Program, initiated in FY 1977 under the auspices of the Indo-U.S. Subcommission on Education and Culture, has sent 58 scholars from U.S. institutions to India.

Scientific Review Under the Smithsonian Program

The Smithsonian program considers proposals from any qualified American institution for research in fields of traditional Smithsonian competence. The program seeks the advice of experts in the disciplines to be studied in reviewing the proposals and annually convenes advisory councils of senior scholars from across the nation. Following the recommendation in the House-Senate Conference Report 95-1672 dated September 29, 1978, the National Science Foundation reviews the credentials of the members of the advisory councils and certifies their competence. The councils discuss and evaluate the proposals, taking into consideration the experts' opinions, and provide specific advice to the Smithsonian regarding the selection of proposals recommended for support and the priorities among them.

Foreign currency awards to other institutions are executed as normal Federal contracts, with the American grantee institutions providing for full fiscal accountability. The Smithsonian audits each grantee's periodic financial reports and where grantees maintain records abroad, conducts site audits to ensure that appropriate accounting procedures are followed.

Whether funded originally on a multi-year or on a one-year basis, projects lasting more than one year are subject to an annual review of scientific progress by the advisory councils before another year of funding is approved. In addition, Smithsonian staff scientists and program advisory council members visit projects in the field when firsthand scientific reports are considered necessary. Smithsonian policy requires that grantees publish scientific results and that scientific collections be readily accessible to the scholarly community.

The Importance to the Smithsonian of Awards for Research

Access to funds for independent research is an essential factor in enabling the Smithsonian to attract and retain leading researchers and thereby to maintain a standard of excellence as a research institution. In this context, the Institution's initial request in FY 1966 for an appropriation of excess foreign currencies made it clear that Smithsonian scholars would compete for these funds. The appropriation justification in that year stated that the Institution would "...award and administer foreign currency grants...for maximum benefit of all participating institutions, as well as the Smithsonian." This appropriation has provided Smithsonian scientists an opportunity to pursue new and innovative research.

Under the Special Foreign Currency Program guidelines, Smithsonian proposals are reviewed by the same councils of distinguished scholars as are proposals from other institutions. Continuing projects also are subject to annual reviews. (These processes are described above in the section entitled "Scientific Review under the Smithsonian Program.") The Special Foreign Currency Program awards to Smithsonian employees, as to other scholars, often involve participants from other organizations and universities as collaborators. No Smithsonian employee, nor any other grantee,

receives personal compensation to duplicate or supplement their salary. Program awards cover only field research costs in the excess currency country, travel to that country, and the cost of publications resulting from research conducted in "foreign currency" countries.

The awards to Smithsonian employees are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended in accordance with Federal procurement and personnel regulations.

FORWARD-FUNDED RESERVE FOR THE AMERICAN INSTITUTE OF INDIAN STUDIES

Since 1967, the Smithsonian has provided annual funding through its competitive grants program to the American Institute of Indian Studies for fellowships, research, symposia and publications and for administrative costs. The Smithsonian has helped sustain this Institute and other American research centers abroad for more than a decade because of their significant contributions to scholarship and science without regard for national boundaries and their special service to American scholars conducting research.

While the amount of Indian currency available to the U.S. government is still large, it is a finite fund in inactive accounts. With inflation rates in India at a high level, it will probably disappear more quickly than had been anticipated in the past. The U.S. Embassy is currently suggesting five to seven years remaining of excess status. Since the end of "excess" currency status historically has happened suddenly, the Institution proposes to reserve funds for the AIIS to avoid a situation similar to the one which developed in Egypt. (In late 1978, funds for new American research in Egypt dried up suddenly, placing in doubt the future of American archeology and cultural history studies there and jeopardizing the continued existence of the very successful Cairo Center of the American Research Center in Egypt.)

By building a substantial foreign currency reserve fund, the Smithsonian hopes to assure that AIIS will be financially secure on a long-term basis, and to encourage other such centers to make the effort necessary to develop funding from other sources for the period beyond that of support by the Smithsonian. Toward this end, amounts of \$500,000 in FY 1980 and \$750,000 in FY 1981 have been appropriated. In FY 1984, a further sum of \$4,000,000 equivalent in Indian rupees is requested for addition to the forward-funded reserve. The reserve is to be maintained intact, until such time as the depletion of the United States Indian rupee account causes its removal from the "excess" currency list.

INTERNATIONAL EFFORT TO SALVAGE MOENJODARO

In 1921, two important discoveries were made in the Indus Valley of India, now Pakistan, when archeologists discovered the remains of the cities of Harappa, near Lahore, and Moenjodaro, about 250 miles north of Karachi. These two cities apparently are the products of the Harappan civilization which flourished over 4,500 years ago, from about 3,000 B.C. to 1,500 B.C. Moenjodaro, a city of a square mile, is the larger and more impressive of the two sites. From the standpoint of planning, sanitation and social organization, this city anticipated developments which only blossomed several thousand years later.

The excavated ruins at Moenjodaro have been threatened since their discovery by two main causes of destruction: floods of the Indus River and highly saline ground waters have caused the serious deterioration of the excavated remains.

Since the 1960s, the Government of Pakistan has appealed to the international community for assistance in salvaging Moenjodaro by diverting the river, lowering the water table, providing remedial action to stabilize threatened buildings and preventing disintegration of those that have not yet been seriously damaged, and installing

appropriate landscaping. UNESCO responded to Pakistan's appeal and, in 1974, agreed to lead an international fund raising campaign. In the interim, the Government of Pakistan, with the assistance of UNESCO, has conducted a series of technical studies relating to river control, dewatering and other methods conducive to the eventual preservation of the site.

On October 10, 1979, an agreement between UNESCO and the Government of Pakistan for the preservation and development of the monumental site of Moenjodaro was signed. Following this, an Executive Committee of the campaign was set up to advise the Director-General of UNESCO on all aspects of the project. The Committee has held several meetings during which various aspects of the plans were reviewed.

To date, UNESCO has raised approximately \$2.3 million, mainly from governmental contributions of member states, and the Government of Pakistan has made an initial commitment of \$2 million for the project. The funds raised thus far have been deposited in an international trust fund for Moenjodaro. Considering that the total budget for the project is now estimated at more than \$13 million, the Committee is seeking new or additional contributions.

The project, long in the planning stage, is underway, with a ground water control design now in place. Tender documents are being prepared for water pumps, for the consolidation and treatment of the remaining structures and for landscaping. Salt-resistant plants will be planted for erosion control and to provide suitable protection from wind-driven sands.

In FY 1982, the Institution transferred to UNESCO the appropriation of \$960,000 equivalent in nonconvertible Pakistani currency as an initial contribution from the United States toward this important project. The Smithsonian is seeking the second of four increments of funds for this project in FY 1984, a sum of \$1,040,000 equivalent in Pakistani rupees, aiming at a total United States contribution of \$4,000,000 equivalent.

Obligations of Funds by Country (dollar equivalents)

	FY 1982 Actual	FY 1983 Estimate	FY 1984 Estimate
Burma	\$ 17,000	\$ 5,000	\$ 26,000
Guinea	-0-	-0,-	-0-
India	3,218,000 <u>1</u> /	1,978,000 <u>1/3</u> /	7,717,000 <u>1/2/3/</u>
Pakistan	1,332,000 4/	192,000	1,397,000 4/
Total	\$4,567,000	\$2,175,000	\$9,140,000

I/ Includes transfers to the State Department for "Foreign Affairs Administrative Support."

Status of Smithsonian SFCP Funds (dollar equivalents)

		FY 1982 Actual	FY 1983 Estimate	FY 1984 Estimate
Unobligated Balance Start of Year	\$	141,000	\$ 135,000	\$ 60,000
Appropriation		4,320,000	2,000,000	9,040,000
Recovery of Prior Years Obligations	s '	241,000	100,000	100,000
Unobligated Balance, End of Year	-	- 135,000	- 60,000	- 60,000
TOTAL OBLIGATIONS	\$	4,567,000	\$ 2,175,000	\$ 9,140,000

^{2/} Includes obligation for AIIS forward-funded reserve: FY 1984, \$4,000,000.

^{3/} Includes estimates for the Science Information Program for translations.

^{4/} Includes obligation for U.S. contribution for Moenjodaro: FY 1982, \$960,000; FY 1984, \$1,040,000 estimate.



TAB C

FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION



FACILITIES PLANNING, RENOVATION, RESTORATION AND CONSTRUCTION

	Summary		
Account	FY 1982 Appropriation	FY 1983 Appropriation	FY 1984 Estimate
Construction and Improvements, National Zoological Park	\$1,104,000	\$ 1,550,000	\$ 3,500,000
Restoration and Renovation of Buildings	7,680,000	8,450,000	9,000,000
Construction: Quadrangle Development	960,000	36,500,000	
Totals	\$9,744,000	\$46,500,000	\$12,500,000

The FY 1984 appropriation request for construction and improvements at the National Zoological Park will be used to support two projects at the Conservation and Research Center: the completion of the Small Animal Facility and the construction of a Veterinary Hospital; and to perform essential renovation, repair and improvement projects at the Rock Creek Park Zoo and at the Conservation and Research Center in Front Royal, Virginia.

The Restoration and Renovation of Buildings appropriation request consists of repairs to facades, roofs and terraces of various historic and monumental buildings; the upgrading, including planning and installation, of fire detection and suppression systems; the provision of improved access for the disabled, and the correction of conditions that could be hazardous to the safety and security of the visiting public, staff and collections; repairs and improvements to utility systems in several museum collections storage buildings, including heating, ventilating and air conditioning systems and plumbing and electrical systems; improvements in support of programmatic objectives at the Smithsonian's outlying facilities; and general repairs and improvements that are required for a variety of purposes.

Justification for these programs and projects appears in the following section.

CONSTRUCTION AND IMPROVEMENTS NATIONAL ZOOLOGICAL PARK

1982	Appropriation\$1,104,000
1983	Appropriation\$1,550,000
1984	Estimate\$3,500,000

This appropriation is for use at the National Zoological Park to fund repairs, alterations and improvements to existing facilities including exhibits; to prepare plans and specifications for construction; and to perform renovations, restorations and new construction for implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973. The Zoo's facilities include 168 acres in the Rock Creek Valley of Washington, D.C. and a 3,150-acre Conservation and Research Center located near Front Royal, Virginia. Construction and improvements are accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are above acceptable costs in relation to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase of supplies, materials and equipment and/or the use of current staff or temporary labor is the most economical alternative. Furthermore, occasionally it is necessary to fund other related expenses from this account, particularly those associated with the displacement of animals as a result of the construction program or major grounds maintenance in repair of storm damage.

Status of the Construction Program - The National Zoological Park was established in 1890 under the Board of Regents of the Smithsonian Institution, which was authorized to "administer and improve" the Zoo for "the advancement of science and instruction and recreation of the public" (20 U.S.C. 81). The Zoo administers two permanent facilities. Exhibition and educational functions have been centered since 1890 on some 168 acres in Rock Creek Valley of Washington, D.C. Complementary animal conservation and breeding functions have been conducted since 1975 on a 3,150-acre site near Front Royal, Virginia.

The National Zoo's Rock Creek facilities have been undergoing major renovations and improvements since FY 1974 through implementation of the Master Plan. With the transfer of selected and critical animal breeding functions to Front Royal, the elimination of costly projects and the scaling down of others, the total Rock Creek Master Plan program has been reduced from an original plan of 41 major projects with a cost estimate of \$118,000,000 to 30 projects and a current estimate of \$75,500,000. National Zoo is more than halfway through its construction program, a plan which will make the Park among the world's finest zoos. The total of \$37,000,000 appropriated to date has been spent on 25 new exhibits and support facilities either completed or under construction. With funds appropriated in FY 1980, the renovation of the Reptile House was completed during FY 1982. This historical structure, with its thoroughly modern new interior, features larger cases and new lighting, allowing visitors to view the reptiles in more attractive and healthier settings. The major interior renovation of the Small Mammal House, funded in FY 1980, also has been completed, with reopening scheduled for early 1983. Nearing completion, with funds appropriated in FY 1981, is the Monkey Island Exhibit. This new exhibit will open in the spring of 1983, housing a colony of Barbary Macaques (monkeys). It will feature an 18-foot rock mountain and a waterfall that flows into a wide surrounding moat. The Monkey Island Exhibit is the final major facility in the Central Area Complex. Funds appropriated in FY 1983 are being used to design the Entranceway and Olmsted Walk Exhibits. These consist of a series of small exhibits planned along the central walkway and the modernization of the Connecticut Avenue pedestrian and vehicle entrances. Actual construction funds estimated at \$4,500,000 are expected to be requested beginning in FY 1985. The two-year gap between planning and construction is necessary because of the extra attention that must be paid to the aesthetics of exhibits designed along Olmsted Walk, the main artery of the Zoo.

The Zoo presently is reevaluating plans for completion of the Rock Creek Master Plan, particularly with respect to the timing and scope of the Aquatic Habitats Exhibit. In the interim, immediate attention is being given to meeting the most important requirements at the Conservation and Research Center and to maintaining the existing facilities located in Rock Creek Park and at the Conservation and Research Center. For FY 1984, an amount of \$3,500,000 is requested to support two projects at the Conservation and Research Center: the completion of the Small Animal Facility (\$700,000) and the construction of a Veterinary Hospital (\$1,400,000); and to continue the renovation, repairs and improvements at Rock Creek (\$1,000,000) and at Front Royal (\$400,000).

Small Animal Facility (\$700,000) - The Conservation and Research Center's Small Animal Facility was designed as a three-winged building. With funds appropriated in FY 1981, the 2,200 square foot center wing, which contains all of the support spaces, and a 17,190 square foot east wing, which houses small animals, including marmosets, tree kangaroos, dik-diks, marsupial tiger cats, tarsiers, banded palm civets, otter civets, and lesser red panda, have been completed. An amount of \$700,000 sought for FY 1984 will be used to construct the west wing containing 10,800 square feet of space. The west wing will be used as a breeding facility and will house various small birds such as Bald Ibis, Red Bird of Paradise, Lesser Bird of Paradise, Gardner's Bower Bird, Bornean Great Argus Pheasant, Palowan Peacock Pheasant, Jobi Island Ground Dove and Blue Crowned Pigeon. The building also will serve as a backup holding facility for the Rock Creek collection.

Veterinary Hospital (\$1,400,000) - An amount of \$1,400,000 is requested to construct a 14,000 square foot Veterinary Hospital which is badly needed at the Conservation and Research Center. The hospital will include X-ray and treatment rooms, surgical rooms, laboratories, a pharmacy, animal wards, autopsy and food preparation rooms, and administrative and storage areas. The hospital will have a number of special requirements which contribute to the cost of construction. Among these are ceramic tile in the surgical area, lead lining in the X-ray preparation area and doors of individualized specifications in the surgery, treatment and other areas. At the present time, veterinary examinations at Front Royal that cannot be performed in the field take place in the makeshift one-room facility that contains no built-in medical equipment. Moreover, if surgery is required, the veterinarian stationed at Rock Creek must bring the necessary equipment to Front Royal, or, if possible, the animal must be transported to Rock Creek at great difficulty. The health risks to the animals of having only a makeshift, inadequate facility are serious. Moreover, there has been a progressive increase in the medical case load since the Conservation and Research Center was acquired. In FY 1982, 808 animals were treated compared with 307 in FY 1978. Anticipated future growth and expansion of the animal collection at Front Royal will require an adequate health care facility. The proposed hospital will meet the present and future needs of the Conservation and Research Center.

Renovation, Repairs and Improvements: Rock Creek (\$1,000,000) - An amount of \$1,000,000 is required to continue the program of renovation, repairs and preventive maintenance of existing facilities at Rock Creek where there are over 60 facilities of varying ages and 168 acres of land containing over 18 miles of heavily used paths and roadways. These are in need of regular attention in order to prevent future, more costly repairs and construction. Renovation, repairs and improvements funds are used to complete necessary repairs to mechanical, electrical, plumbing and support systems; grounds, paths and roadways; animal support and housing; and to pay for temporary relocation of animals during the time when repairs are being done.

The Zoo plans to use the amount sought in FY 1984 for the following projects:

-- repair and improve the filtration system at the Sea Lion Exhibit (\$350,000). The existing filtration system, installed in 1975, presently is not adequate to provide the water quality that is necessary in the 300,000-gallon exhibit. In addition, new technology has been developed subsequent to 1975 in the form of

better and safer filter materials that will permit a much more effective system than was possible originally. The proposed funding will be used to completely overhaul and upgrade the existing filtration system to within the state-of-the-art standards.

- -- repairs to the Bird House Exhibit (\$350,000). This facility was completed and occupied in 1964. With the exception of the addition of shade enclosures in FY 1975, there have been no major repairs or renovations to the Bird House during the past 15 years. The proposed amount for FY 1984 will be used for repairs to the basement drainage system, renovation of the indoor flight cage, and replacement with energy efficient fixtures of the outdated light fixtures and the replacement of a gas boiler.
- -- repairs to the Hospital and Research Facility (\$300,000). The building's heating, ventilation and air conditioning (HVAC) system is ten years old and the roof is 15 years old. Both the HVAC system and the roof have reached their useful lives and need to be replaced. The requested sum will be used for these replacements as well as for the correction of minor design deficiencies discovered through 15 years of use and experience, such as non-skid quarry tile in hallways, renovation of the loading dock, renovation of the incinerator and installation of hospital ceramic tile in designated rooms.

Renovation, Repairs and Improvements: Front Royal (\$400,000) - An amount of \$400,000 is requested to continue the program of renovation and repair of existing facilities at the Conservation and Research Center, Front Royal, Virginia. The Conservation and Research Center includes 89 facilities of various types containing approximately 236,000 square feet of space and two and one-half miles of paved roads, 20 miles of jeep trails, and 30 miles of fences all of which must be maintained. Funds also will be used for upgrading the Center's utility systems.

NATIONAL ZOOLOGICAL PARK Construction Program 1974-1988

TOTAL	3,000 3,156 2,343 7,834 13,700 2,999 5,979 10,126 505	4,300 201 4,850	59,493		11,437	70,930		650 1,680 1,400 825 1,870	8,425
Repro- grammings	+26 -157 +834 -1 -431 -264 -15	7	7-		+7	ı			1
1988					1,500 /4	1,500		000	2,000
1987	13,000/2	1,500	14,500		1,400	15,900			
1986	700	3,900	2,600		1,250	6,850		725	2,425
1985		400	2,400		1,100	3,500		100	270
1984					1,000	1,000		700	2,100
1983		350	350		1,000	1,350			
1974-82	$ 3,000 \frac{1}{2,500} \\ 2,500 \\ 7,000 \\ 3,000 \\ 6,410 \\ 10,390 \\ 520 \\ 500/3 $	200	36,650		4,180	40,830		650 980	1,630
Activity	Lion-Tiger Facility Elephant/Bird House Education-Administration Building General Services Facility Parking Facility Lower Rock Creek Valley Beaver Valley Area Central Area Waterfowl Pond and Small Cats Aquatic Habitats	Health & Research Hill (Incl. noic House Renovations) Master Graphics Entranceway & Olmsted Walk Exhibits	Subtotals	II. Renovations, Repairs & Improvements	Rock Creek	Totals, Rock Creek	III. Conservation and Research Center Development Plan	Hoofed Stock Barn Small Animal Facility Veterinary Hospital Maintenance Facility Primate Facility Large Hoofed Stock Facility	Subtotals

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TOTAL		6,954	15,379	86,309
Repro- grammings			ı	ı
1988		650 /4	2,650	4,150
1987		009	009	16,500
1986		450	2,875	9,725
1985		450	720	4,220
1984		400	2,500	3,500
1983		200	200	1,550
1974-82		4,204 /5	5,834	46,664
Activity	IV. Renovation, Repairs & Improvements	Conservation & Research Center	Totals, Conservation & Research Center	GRAND TOTALS

Excludes \$275,000 for planning appropriated in FY 1973.

Citizen participation through parking revenues will contribute \$3,000,000 to the estimated construction cost of \$16 million by FY 1987.

The Aquatic Habitats project is presently shown as rescheduled beyond this planning period. A reevaluation of the schedule will be made, however, in light of Congressional interest in earlier development. 13

In subsequent years, major repairs and maintenance are expected to require \$1,500,000 at Rock Creek and \$650,000 at the Conservation and Research Center annually. 7

Excludes \$125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings Account. /5

RESTORATION AND RENOVATION OF BUILDINGS

1982	Appropriation	.\$7,680,000
1983	Appropriation	.\$8,450,000
1984	Estimate	.\$9,000,000

The Smithsonian's facilities are comprised of 4.5 million square feet of building space located in 12 museum and gallery buildings in Washington, D.C. and New York City housing research and collections management activities and a wide range of exhibitions in the fields of science, history, technology and art. In addition, the Institution operates and maintains the preservation, storage, aircraft and spacecraft display facilities and the Museum Support Center at Suitland, Maryland; centers for biological research, conservation and education in Panama and on the Chesapeake Bay near Annapolis, 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 well over 100 years old. The Restoration and Renovation of Buildings (R&R) account is used to finance repairs, alterations and improvements of a long-term nature and benefit to these facilities which have a replacement value of approximately one billion dollars. (The repairs and renovations at the National Zoological Park are presented separately in this budget submission.) Work is conducted primarily by contract, except when suitable contractors cannot be located or when accomplishment of the work by other means is the most effective and economical solution (such as the purchase of supplies, materials and equipment with funds made available from this appropriation, and the use of on-board staff). Facilities planning, design and related studies also may be funded from this account, as may the construction of major and minor additions and new temporary or minor permanent buildings.

Projects undertaken with resources in this account support the research, care and preservation of collections; the safety, security and health of the public and staff; the elimination of architectural barriers to assure accessibility for disabled persons; energy conservation efforts; and the maintenance, repairs and development of a valuable physical plant and surrounding areas.

Substantial work is required to keep Smithsonian facilities in good repair and efficient operating condition. This is essential for several reasons, perhaps one of the most significant being that the majority of the Institution's museums are included on the National Register of Historic Places, which imposes a special responsibility under the provisions of the National Historic Preservation Act to ensure that they are maintained in a manner that is consistent with their architectural character.

Moreover, museums should be places where visitors derive pleasure from viewing the collections and learning about what they symbolize or what they can tell us about our own history. Museums can be vital and dynamic places that communicate knowledge in a lively and enjoyable manner. In order to promote this sense of excitement, the physical condition of the museums must be suitable. No matter how well presented the exhibit, if its environment is unpleasant or unhealthy, its effectiveness will be decreased substantially.

The proper care and protection of the National Collections are, of course, crucial reasons to maintain the Institution's facilities. The Smithsonian's legal responsibility to serve as the official repository of the National Collections (20 U.S.C. 41, et seq.) does not mean the Institution merely accepts and stores art objects, natural specimens and artifacts. They must be conserved properly. This means their environment must be safe. The collections can be damaged irreparably by inadequate environmental control. The environment must be stabilized so that the millions of objects in the collections do not become damaged. Appropriate temperature and humidity conditions must be maintained in order to protect museum artifacts. If the relative humidity changes, organic substances, such as wood, paper and fabrics, change dimensions. For

example, the fibers in woven textiles will begin to rub against each other as they expand or contract and eventually wear themselves down, destroying the material. This is true of material in good or poor condition, although the older the object the more advanced the deterioration. The Star Spangled Banner, for instance, came to the Smithsonian in very bad condition--literally worn to threads--and now must be kept in a specially controlled environment. In general, if the humidity increases to very high levels, mold can begin to grow and eat away the material or deposit colored matter in it. If the humidity drops to too low a level, the material can become brittle and break. Light levels also affect organic substances; too much can cause serious deterioration. In paintings, for example, excessively intense or prolonged exposure to light can lead to faded colors, discolored varnishes, weakened and broken fibers and embrittled paper. Inorganic materials also are subject to deterioration. For example, metals will corrode if exposed to too much dust which contains acidic salt, or to sulfur dioxide which can be found in polluted air. As a result of these detrimental conditions, stringent requirements are imposed on collections management procedures. The heating, ventilating and air conditioning systems, therefore, must work well and as efficiently as possible. In the older buildings, which were not designed with the complex equipment necessary to meet these requirements, the systems need to be replaced completely; in other buildings they need to be repaired and improved. Furthermore, electrical, mechanical and plumbing systems must be maintained and repaired as must facades and roofs. When these are in a state of disrepair, they pose hazardous environments for both the visitors and staff, as well as for the collections.

Visitor and staff safety and security also demand that the facilities are in proper repair. The Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.) requires that all employers meet certain safety and health standards for the protection of their employees. Fire detection and suppression equipment must be upgraded and modernized in order to provide the level of protection consistent with today's technology. Sprinklers, smoke detectors and fire doors are needed and exits must be improved in older buildings to meet the requirements of a greater number of visitors. The importance of dependable and comprehensive fire protection coverage cannot be overemphasized. Health, safety and security considerations also present the need for altering buildings. Asbestos insulation must be contained or removed and, if necessary, replaced with substitute insulation materials.

Greater awareness and attention to the needs of disabled persons have resulted in the establishment of additional requirements for all of the Institution's facilities in order to make them more accessible to all visitors and staff. These requirements are met in new exhibits and construction projects. The Hirshhorn Sculpture Garden, for example, was renovated to provide easier access for disabled persons into and within the Garden.

Finally, new program objectives for research at the Smithsonian's outlying facilities present additional requirements for repair and improvement and renovation work. These requirements must be met to provide the efficient operation and appropriate support of the programs at the various research bureaus. By maintaining and developing the facilities, the Smithsonian can continue to provide leadership in several major fields of study.

The Institution's Five-Year Prospectus identifies specific categories of work which are estimated to cost approximately \$67.2 million between FY 1984 and FY 1988 (in 1984 dollars). The FY 1984 request of \$9,000,000 represents an increase of \$550,000 over the FY 1983 R&R appropriation and emphasizes the Institution's continuing commitment to establish an adequate level of annual funding for this account in consideration of the size, diversity, age, condition and character of the Smithsonian facilities.

The justification for this year's budget request follows:

1.	General repairs and improvements	\$ 345,000
2.	Facade, roof and terrace repairs	4,800,000
3.	Fire detection and suppression systems	1,085,000
4.	Access for the disabled, safety and security	
	and correction of hazardous conditions	785,000
5.	Utility systems repairs and improvements	1,370,000
6.	Other projects	615,000
	Total	\$9,000,000

GENERAL REPAIRS AND IMPROVEMENTS (\$345,000): Funds requested in this category support a wide variety of projects that do not lend themselves to discrete categorizations; they also support minor unscheduled, but essential, repairs that cannot be anticipated specifically. Examples of projects include unforseeable repairs or replacements of building systems or components which fail unexpectedly; modifications to create additional or more effective space for program activities; renovations of exhibition and other public space; and repairs to facility support systems. For FY 1984, an amount of \$345,000 is requested, of which \$150,000 is designated for emergency repairs, and \$120,000 is for minor repairs at off-Mall facilities such as plumbing, electrical, lighting and floor and wall repairs. A further sum of \$75,000 is needed for design of a new kitchen/dining facility in the dormitory complex on Barro Colorado Island at the Smithsonian Tropical Research Institute (STRI) in Panama and for interior repairs to the kitchen structure and its installed equipment. Minor renovations are essential to correct potential fire and safety hazards and to relieve insect and rodent problems. Funding for a replacement facility currently is planned in a subsequent year.

FACADE, ROOF AND TERRACE REPAIRS (\$4,800,000): Maintaining the integrity of the exteriors of all Smithsonian buildings is critical to preventing major structural damage and deterioration due to age and weathering and to ensuring a safe environment for visitors, staff and collections. Energy conservation also demands watertight and weather tight exteriors. Work in this category includes a variety of major projects that must be accomplished periodically according to the life cycles of the materials used. For example, roof replacements are needed about every 20 years; facade joints must be recaulked and repointed about every ten years; and, window frames and other exterior trim should be painted every five years. Several Smithsonian buildings require large-scale renovation and work is under way to assure that in the future adequate protection of the exteriors of these buildings can be provided through a routine maintenance and repair program.

Examples of projects that have been completed recently include the final phase of the application of a new roof membrane at the American Art/Portrait Gallery Building; replacing the windows at the Hirshhorn Building; the last major phase of the American History Building's terrace repairs; window repairs at the Natural History Building; resetting the roof drains at the Freer Gallery Building; and roof repairs to several buildings at the Suitland, Maryland facility. Projects that are in progress are recaulking the facade at the American History Building; the pointing and caulking of the exterior and courtyard facades at the American Art/Portrait Gallery Building; cleaning the Hirshhorn Building's facade; and the first phase of repairs to the decorative marble trim and brickwork of the Cooper-Hewitt's Miller House in New York City. Planning and design are under way for facade and roof repairs at the Air and Space Building, and have been completed for the roof replacement at the American History Building and the column and stone facade repairs at the American Art/Portrait Gallery Building.

Excellent progress now is being made in the renovation of the facade of the 120-year-old Renwick Gallery Building, and the funding sought for FY 1984 will be used to complete the work. The Institution has proceeded carefully on this renovation project in order to assure that the eventual repairs will provide a permanent solution to the problem while maintaining sensitivity to the building's status as a National Historic Landmark.

Portions of the Renwick Gallery Building's facade, as originally designed and constructed, have been experiencing excessive deterioration from age and weathering. An attempt to repair the facade was undertaken in FY 1968 under the management of the General Services Administration (GSA). At that time, damaged sections of the stonework were repaired or replaced with molded synthetic replicas, and all exterior surfaces then were painted with a sealant material. By 1975, these restored sections began to fail, and large pieces of stone fell from the building. Funds appropriated in this account in FY 1978 and FY 1979 were used, in part, to contract professional services necessary to investigate the problem and develop plans for corrective action.

The results of these investigations revealed that the materials used under the construction contract awarded by GSA failed to adhere to the building's original sandstone because of the significant differences in their chemical properties.

Moreover, moisture had become trapped in the stone resulting in an even greater decay during subsequent freeze/thaw cycles. Further analysis indicated that at least 88 percent of the original sandstone needed to be replaced because of its advanced state of decay. Precast concrete was selected as the replacement material because it is the most economical alternative, as durable as natural materials, capable of duplicating the existing sandstone facade, and maintaining an appearance that is esthetically compatible with the building's historical landmark status.

During FY 1980, detailed measured drawings of the actual dimensions of the stone were completed for all stonework to be replaced. Full-scale precast concrete samples were produced and subjected to advanced weathering tests. In October 1980, these concrete samples were presented to the Commission of Fine Arts for inspection. The Commission agreed that the samples appeared to be good reproductions of the original decoratively carved sandstone, but requested that the Institution obtain updated construction cost estimates for both the precast concrete and the natural stone. In FY 1981, the Commission of Fine Arts and the District of Columbia Joint Committee on Landmarks approved the Institution's selection of precast architectural concrete as the best replacement material. The first major construction phase began in late fall of 1981. This phase, which includes production of latex molds and plaster models of the sandstone detail, is expected to be completed in the spring of 1983.

To date, an amount of \$3.65 million of the \$5.45 million required has been appropriated for this project. Funds appropriated in FY 1978 and FY 1979 (\$300,000) were used for the investigation, analysis and development of restoration plans. The latex molds and plaster models are being produced with the \$600,000 appropriated in FY 1980 and part of the \$1 million appropriated in FY 1981. The balance of the FY 1981 funds, the \$750,000 appropriated in FY 1982 and the \$1 million appropriated in FY 1983 are being used to begin the last major construction phase. This phase consists of precasting in concrete the building parts that are to be replaced, removing the deteriorated stone facade, replacing windows and installing the precast concrete building parts. An amount of \$1.8 million is requested for FY 1984 to complete the last construction phase.

An amount of \$2.5 million is requested for FY 1984 to continue the multi-year renovation of the roof and exterior of the historic Arts and Industries Building in order to assure watertightness, energy efficiency and the protection of work

already accomplished. Funds of approximately \$1.25 million were appropriated in FY 1977 and FY 1978 for the first phase of exterior renovation work. These were applied toward replacing the roof of the courts, four halls and rotunda; repairing rotunda and hall windows; replacing some gutters and downspouts; selected repointing in the most deteriorated areas; and other related repairs. With the \$225,000 appropriated in FY 1980, the Institution contracted for professional architectural/ engineering services to provide the necessary analysis, documentation, cost estimates, detailed drawings and specifications for the remaining work. The final design effort now is complete and the architect/engineer is preparing the final phases of the construction bidding documents. Funds of \$3.93 million appropriated since FY 1981, are being used to continue the exterior restoration on a quadrant-by-quadrant basis. Funds appropriated during FY 1982 and FY 1983 were used to restore the northwest quadrant, the west facade, and the southeast quadrant. An amount of \$2.5 million is requested for FY 1984 to restore the northeast quadrant and the north towers. Restoration work includes the removal and replacement of existing (range, pavilion and tower) roofing, flashing and underlayment; removal of abandoned or nonoriginal elements, such as skylights, roof vents, exhaust hoods and mechanical equipment; and the repair, relocation or replacement of the roof drainage and guttering systems. Other major aspects of the project include replacement and improvements to window components (frames, sashes, glazing, painting, weather stripping and hardware) and the incorporation of an electronic security system; the provision of fire exit windows; reconstruction, cleaning and repointing of exterior masonry; the removal of nonoriginal equipment located on the facade of the building, such as window air conditioning units, exhaust fans and steam pipes; and the restoration of some of the building's original elements, such as lighting standards at the entrances, cast iron gates and ornamental metal. The total project cost is estimated to be \$10.9 million: the balance of \$3 million is expected to be sought in FY 1985 to complete the project.

An amount of \$500,000 is requested to begin the first construction phase of the roof replacement at the American History Building. The roof is nearly 20 years old and with the exception of repairs to the lower and main roofs, no major repairs have been accomplished to date. Leakage resulting from prolonged periods of rain has been observed and poor drainage is a problem. The project will begin with the replacement of the fourth floor roof. An amount of \$650,000 is expected to be sought in FY 1985 to complete this project.

FIRE DETECTION AND SUPPRESSION SYSTEMS (\$1,085,000): The Institution is continuing to upgrade fire protection systems in all buildings in order to provide a level of safety consistent with today's standards and technology. Work in this category includes the installation of heat and smoke detection systems; sprinkler and chemical suppression systems; fire doors and walls; and the improvement of exit capability, particularly in older buildings. Improved systems are installed as exhibitions are changed.

The Natural History and American History Buildings represent the largest areas with the least protection, and efforts are being made to correct major deficiencies in these buildings. A fire protection master plan for the Natural History Building was developed in FY 1979, and steady progress has been made since then in carrying out the plan.

With funds appropriated in FY 1979 through FY 1982 (\$1,375,000), construction has been completed on the sprinkler and smoke detection systems for the Natural History Building's west wing; the master fire control panel; and the installation of water supply risers, alarm conduit and wiring required for the east wing. The construction of the east wing sprinkler and smoke detection systems was started in 1982. Funds appropriated in FY 1983 (\$350,000) will be used to complete the east wing sprinkler piping, to install sprinklers and detectors in the ground floor and part of the third

floor in the main building, to correct paint shop deficiencies, to install fire alarm conduit risers, terminal cabinets and connect these to the master control panel and to install detectors in the west court. An amount of \$350,000 is requested in FY 1984 to begin to install sprinkler systems in the third and fourth (attic) floors of the original building; to install fire walls between both wings and the main building; and to install sprinkler and smoke detection systems in Exhibit Hall 5 "Fossil Mammals." It is expected that an amount of approximately \$2.5 million will be required through FY 1990 to complete the fire protection master plan work in the Natural History Building.

A fire protection master plan for the American History Building has been completed. This plan outlines phased improvements similar to those under way or planned for the Natural History Building, including upgrading and/or adding sprinkler and detection systems; upgrading the existing emergency power supply and distribution system; upgrading the fire pumps; installing a new fire alarm system; and undertaking architectural modifications to improve the efficiency of fire zones and exit capability. With funds of \$915,000 appropriated between FY 1980 and FY 1983, the fire protection master plan was completed; the fire door separations were designed for the first floor; the design and installation of a new ten-inch water main from the street to the building and main sprinkler risers throughout the building are in progress; and the design and installation of electrical trunk lines for smoke detection systems and sprinkler annunciation alarms also are in progress. For FY 1984, an amount of \$350,000 is requested to provide for additional automatic sprinklers and smoke detection throughout two-thirds of the basement level. It is expected that an amount of \$4.65 million will be required to complete the fire protection work in the American History Building.

Funding of \$150,000 is requested in FY 1984 to continue the fire protection project at the Smithsonian Institution Building. Sprinkler systems, smoke detectors and fire-rated partitions will be installed throughout the building. With the \$145,000 appropriated in FY 1983, smoke detection systems will be designed and smoke detectors installed. A sum of \$150,000, to be proposed in FY 1985, will complete the project.

To complete fire protection measures initiated on Barro Colorado Island at the Smithsonian Tropical Research Institute in Panama with \$100,000 appropriated in FY 1983, a further amount of \$100,000 is sought in FY 1984. The fire protection improvements include an outside fire protection water distribution system with six outside hose outlets, internal wet pipe sprinkler piping systems for each facility and an outside water tank with a minimum storage capacity of 10,000 gallons.

An additional amount of \$135,000 is requested in FY 1984 for two fire protection projects. For the Whipple Observatory at Mt. Hopkins in Arizona, \$50,000 is sought to install fire alarms in four buildings and to connect all of the individual systems to a remote central control station; and for the Freer Gallery Building, \$85,000 is sought to complete the fire protection measures initiated with the \$100,000 appropriated in FY 1983. These consist of the installation of sprinkler systems in the Freer Gallery Building's basement and sales room.

ACCESS FOR THE DISABLED, SAFETY AND SECURITY AND CORRECTION OF HAZARDOUS CONDITIONS (\$785,000): The legislated requirements to assure the accessibility of facilities to all persons are being met in new exhibits and construction projects. Although many facilities still require modifications to meet current standards, significant progress has been made in eliminating architectural barriers. Examples of recent accomplishments include the removal of asbestos insulation from the attic spaces in the American Art/Portrait Gallery Building; the initiation of procurement of equipment and building alterations needed for the conversion to an electronic security and fire alarms system that is proprietary to the Institution; safety improvements to one of the National Museum of American History's storage buildings at the Suitland

facility; rest room modifications needed to provide better access for disabled persons at the Natural History, American History, Air and Space and Renwick Gallery Buildings; and the installation of a dust collection system in the American History Building's object processing facility to protect employees and improve fire safety.

The safety and security of collections, visitors and staff also necessitate facilities modifications. Major attention will continue to be placed on the containment or removal of asbestos materials located in various Smithsonian facilities. Asbestos has been identified in the American Art/Portrait Gallery Building; the American History and Natural History Buildings; the Arts and Industries Building; and in a number of buildings at the Suitland facility. Additional areas contain asbestos, primarily the mechanical equipment rooms in several other buildings. Funds of \$850,000 appropriated for this purpose between FY 1981 and FY 1983 were applied toward the containment and removal of asbestos in the attics, mechanical equipment rooms, skylight areas and exhibit halls of the American Art/Portrait Gallery Building; in the carpentry shop in the Natural History Building; and in the television studio in the American History Building. A further amount of \$300,000 is requested for FY 1984 to continue the asbestos abatement program at the American History Building. The total cost estimate of this project over a ten-year period is \$4 million.

An amount of \$185,000 is requested to carry out the recommendations of a safety study conducted at the Air and Space Building in 1982. The study determined that during emergency conditions there is a lack of adequate emergency lighting in the public gallery areas, theater, spacearium, security office, health unit, building manager's office, fire stairs and public garage. Also, a new 70 kilowatt emergency generator and an emergency telephone system are needed.

Another major project planned for accomplishment during the next decade is the conversion to an electronic security and fire alarm system that is owned and operated by the Smithsonian. The purposes of converting to a proprietary security system are to gain faster response times to security and fire protection alarms; to improve the quality and control of information transmitted from the security devices and fire sensors to the building security offices and the central control room; and to eliminate reliance on leased equipment, outside sources of power and related contractual services, the costs for which are escalating rapidly. Construction will involve modifying eight building security offices in the Washington, D.C. area to accommodate the installation of new equipment to be purchased by the Smithsonian (mini-computers, data panels, etc.); rewiring all alarms; and installing underground cables to provide for a communications system. All work during the changeover from non-Smithsonian equipment will be accomplished in a manner that allows for uninterrupted electronic security service. Current cost estimates for FY 1982 through FY 1988 for the R&R portion of the phased conversion is approximately \$2.2 million. Funds appropriated in FY 1982 (\$300,000) and FY 1983 (\$300,000) were used to purchase permanently installed equipment, including communications processors and printers, for the central control room in the Smithsonian Institution Building. This equipment will be connected to the control room at the Museum Support Center. A further amount of \$300,000 is requested in FY 1984 to begin procurement of similar equipment for the American History Building's security system and modifications needed to connect the central control room to the American History Building security system. The American History Building was selected first for conversion because it has the most complex alarm system and the building's protection office is relocating from the first floor to the basement, which will involve moving the alarm system. (Funding of \$440,000 for the proprietary security system also is included in the Salaries and Expenses (S&E) base of the Office of Protection Services for purchase of security devices and fire protection sensors that are associated with the system. The Restoration and Renovation of Buildings account is being used to fund building modifications and permanently installed

equipment.) Installation of the system is expected to be completed by FY 1990 and is anticipated to cost \$9.5 million in S&E and R&R funds.

UTILITY SYSTEMS REPAIRS AND IMPROVEMENTS (\$1,370,000): Funds appropriated in this category are used to maintain, repair and upgrade the heating, ventilating and air conditioning systems (HVAC) and plumbing and electrical systems in the Institution's facilities. Proper maintenance and improvements of these systems are essential for increasing energy efficiency and for providing stable temperature and humidity conditions necessary for the preservation of the collections. Scheduled repairs and replacements of deteriorated equipment components require a consistent level of funding, and major renovations and repairs are required in many Smithsonian buildings where utility systems were not designed with the aid of today's energy saving technologies.

The Institution is making a concerted effort to conserve energy (see the Uncontrollable section for a description of these efforts). The most significant energy savings, however, will be realized by the application of substantial resources in this account toward upgrading HVAC systems, replacing obsolete equipment and improving the efficiency of environmental zones. HVAC systems have been modified over the years as the Institution's programs have grown, as the functions of the buildings have changed and as the environmental needs of the collections have become understood better. Prior to 1972, energy conservation did not represent a primary consideration. An integrated approach now is required in order to plan for long-range, systematic HVAC improvements that will meet museum environment requirements in an energy efficient manner.

Comprehensive HVAC studies and energy audits have been conducted for most of the buildings in order to begin planning for improvements to be accomplished in future years. The scope of the HVAC studies included field investigations of age, condition and performance of existing equipment, controls and current operating conditions; reviews of existing drawings, specifications, operating manuals and hygrothermograph records; an analysis of the relationship between the building structures and the HVAC systems; and an assessment of programmatic needs for environmental control. The data gathered by these studies is providing a basis for determining redesign or replacement needs of existing HVAC systems; for development of construction cost estimates or revision of previous cost estimates; and for establishment of priorities for the repair, replacement or modification of such component equipment as air handling units, chillers, condensers, compressors, cooling towers, automatic temperature and humidity controls, pumps, pipes, fans, filters, ductwork and related electrical and plumbing systems. At the same time, energy audits are being performed to investigate all factors relating to energy use, such as power consuming equipment and building conditions (doors, windows, insulation, floors and partitions, etc.). Current energy consumption and costs are being evaluated; energy conservation opportunities are being identified; projected savings are being calculated; and plans are being developed to carry out the recommended energy conservation measures.

For FY 1984, an amount of \$1.37 million is sought to continue work on HVAC renovation projects begun in FY 1981 and FY 1982 and to initiate some new projects.

At the American History Building, a comprehensive HVAC study initiated using funds of \$100,000 appropriated in FY 1981, was completed in 1982. Additional monies appropriated in this category between FY 1981 and FY 1983 (\$1,035,000) are being used to begin to replace 12 deteriorated air handling units which will be installed in FY 1983. For FY 1984, an amount of \$250,000 is requested to continue HVAC renovation with the replacement of the cooling tower which is over 20 years old and in a deteriorated condition. Repair costs would exceed three-fourths of the replacement costs.

The HVAC system in the American Art/Portrait Gallery Building also is being upgraded. Improvements include a new system of automatic temperature and humidity controls; the replacement of obsolete chillers and associated pumps, pipes and controls; balancing of the air and water systems, including new dampers and valves; modifications to the return air system; and all related electrical and plumbing work. The scope of the design also includes the repair and recaulking of the building's existing windows and the addition of storm windows and solar film. The first phase of construction was initiated with funds appropriated in FY 1982 (\$225,000) and FY 1983 (\$700,000). An amount of \$800,000 is requested for FY 1984 to complete this phase of the HVAC construction.

An amount of \$170,000 is requested in FY 1984 for the development of two utility master plans. A sum of \$40,000 is sought for a utility master plan investigating the scope of utilities required for a possible permanent site for the Whipple Observatory base camp near Amado, Arizona. This study will explore and evaluate the capacity of the electrical and sewage systems to absorb the additional load of a permanent base camp. For the Chesapeake Bay Center, an amount of \$130,000 is sought to develop a master plan with emphasis on a detailed sewer system study, and exterior utilities including lighting systems.

An additional amount of \$100,000 is requested to implement energy conservation study recommendations to replace two cooling towers at the Hirshhorn Building; and an amount of \$50,000 is sought for the Freer Gallery Building to replace 25 year old deteriorated electrical wiring with new wiring which will have better insulating properties.

OTHER PROJECTS (\$615,000): Projects in this category support the maintenance and development of the Institution's outlying facilities and other projects designed to meet programmatic objectives in the areas of research, collections management and education. Recent accomplishments in this category include the completion of the Whipple Observatory's road safety improvements, completion of first renovation phase of the Smithsonian Institution Libraries in the Natural History Building and safety improvements to one of the National Museum of American History's storage buildings at the Suitland facility.

-- Anacostia Neighborhood Museum - Exhibit Laboratory (\$450,000)

Currently the Anacostia Neighborhood Museum's main exhibit facility is located in the leased Carver Theater on Martin Luther King Avenue. Although modest space modifications have been performed, the theater is still inadequate to carry out the Museum's exhibit and educational functions. The building is old and in need of costly renovations, particularly replacement of the heating, ventilating and air conditioning systems. Also, the theater is located in a high crime area which is a deterrent to the public visiting the Museum. For FY 1984, an amount of \$450,000 is requested to construct a 6,000 square foot addition to the Anacostia Neighborhood Museum's Exhibit Laboratory located on National Park Service property in Fort Stanton Park. The Exhibit Laboratory is a 10,500 square foot building which currently houses exhibit, shop, storage, research and some administrative activities. The new addition would provide space for exhibitions, administrative offices and the education department.

-- Smithsonian Institution Libraries - Space Modifications (\$165,000)

With funds of \$200,000 appropriated in FY 1980, the design and first renovation phase were completed for the space modifications of the Smithsonian Institution Libraries located in the Natural History Building. The design for these areas

includes: renovating the central reference division to provide study space and quiet reference areas for scholars; installing dropped ceilings to accommodate a computer system; and converting stack space into offices for staff members. For FY 1984, an amount of \$165,000 is requested to continue modifications to the Smithsonian Institution Libraries areas. These modifications include: establishing suitable reading areas for periodicals and microforms; providing a reference and storage area for maps and atlases; constructing two small study rooms for visiting scholars; and creating a work area for computer terminals used to search commercial data bases.

RESTORATION AND RENOVATION OF BUILDINGS PLANNED PROGRAM FY 1983 - FY 1988

E-	FY 1984-88	6,108	450	2,500	3,000	245 390	1,150 175	200	1,250	1,800	14,795	300	1,850	300	320 855	5,675
	1988	720	150		3,000		175				3,325	75	400	001		925
	1987	1,100	150							25	175	75	400	001	250	1,175
FISCAL YEARS	1986	1,725	150			245			1,250	165	1,810	75	350	001	160	1,035
FISCA	1985	2,218		3,000		390	650	200		145	4,685	75	350	150	160	1,455
	1984	345		2,500			200		,	1,800	4,800	350	350	150	235	1,085
	1983	300		2,000			20		200	2000	3,300	75	350	145	285	1,205
(Dollars in thousands)		GENERAL REPAIRS AND IMPROVEMENTS	FACADE, ROOF AND TERRACE REPAIRS American Art/Portrait Gallery (AA/PG) -repair stone facade	Arts and Industries Bullding (A&I) -roof and exterior renovation	expansion Museum reserrance press space expansion Museum of American History (MAH)	-north and south entrance door replacement -remove ramp and canopy/waterproof	<pre>-roof replacement -planning/design fountain renovation</pre>	Museum of Natural History/Museum of Man (MNH/MOM) -caulk and point facade	National Air and Space Museum (NASM) -roof, facade and terrace repairs	Renwick Gallery - tacade renovation All other projects in this category	Subtotal, Facade, roof and terrace repairs	FIRE DETECTION AND SUPPRESSION SYSTEMS A&I - sprinklers and smoke detection MAH - fire profection master plan	MASM - crtcad gmole detection master plan	Nash - extend smoke detection system Smithsonian Institution Building - smoke detection Suitland Wastilty - fire protection collection	storage buildings All other projects in this category	Subtotal, Fire detection and suppression systems

RESTORATION AND RENOVATION OF BUILDINGS PLANNED PROGRAM FY 1983 - FY 1988

	Total FY 1984-88		1,	6,888	6,300	560 5,950	7,300	600 1,000 1,640	25,350
	1988	50	500 200 100	850	2,500	700	3,400	150	6,880
	1987	150 210 230	500 200 400	1,690	2,000	2000	3,400	150 500 300	8,550
FISCAL YEARS	1986	140	500 200 400	1,540	1,800	130 1,800	500	150 350 460	6,190
FISCA	1985	710	200 400 150	2,023		130	200	150 150 530	2,360
	1984		185 300 300	785	800	100		220	1,370
	1983		350	599	200 700 500	30 375	350	50	2,380
(Dollars in thousands)		ACCESS FOR THE DISABLED, SAFETY AND SECURITY AND CORRECTION OF HAZARDOUS CONDITIONS Access for the disabled - various buildings MAH - card access system MNH/MOM - six safety and security projects	NASM - emergency telephone and lighting system Asbestos removal/containment Mall security lighting Proprietary security system Emergency power study	Subtotal, Access, safety and security	UTILITY SYSTEMS REPAIRS AND IMPROVEMENTS A&I - HVAC renovation/energy conservation /1 AA/PG - HVAC renovation Freer Gallery of Art - HVAC renovation	-energy study and improvements MAH - HVAC renovation/energy conservation	AND MACE TENDOVALION/ ENERGY CONSERVATION/ electrical and plumbing renovation NASM - energy conservation study and improvements; HVAC repairs	<pre>Smithsonian institution building - electrical renovation Cooper-Hewitt - HVAC/electrical/plumbing repairs All other projects in this category</pre>	Subtotal, Utility systems repairs and improvements

/ Heating, ventilating and air conditioning (HVAC)

RESTORATION AND RENOVATION OF BUILDINGS PLANNED PROGRAM FY 1983 - FY 1988

(Dollars in thousands)			FISCAL YEARS	YEARS			
	6001	, 00.		7001	7		_
	1983	1984	1985	1986	198/	1988	FY 1984-88
OTHER PROJECTS							
Chesapeake Bay Center - Calf Barn modification	0		C C	200			200
MAH -improve Suitland Buildings 16, 1/, 19	300		200	450		6	950
MNH/MOM - north entrance canopy						885	885
-space modifications			260				260
Whipple Observatory							
-road safety improvements	300						
-new vehicle maintenance facility				575			575
-design/construction of administration building			55	086			1,035
-water catchment			20				50
-design/construction visitor's center				20	400		450
SI Libraries modifications (MNH/MOM)		165	180				345
Smithsonian Tropical Research Institute							
-master planning, upgrading and additions				450	200	1,200	2,150
Anacostia Neighborhood Museum - construct lab							
annex		450					450
Day Care Center			400				400
Space utilization studies - various buildings			110	70	90	20	320
Subtotal, Other projects	009	615	1,855	2,775	066	2,135	8,370
The state of the s							
GRAND LUIALS - RESCORATION AND RENOVATION OF Buildings	8,450	000,6	14,596	15,075	13,680	14,835	67,186

Introduction

This report is an overview of Smithsonian facilities identifying individual building conditions and a summary of repairs and improvements for the period FY 1984 through FY 1988 that are appropriate for funding within the Restoration and Renovation of Buildings account. The total cost estimate for these facility requirements from FY 1984 through FY 1988 is \$67.186 million. Restoration and Renovation of Buildings Appropriation account categories are as follows: General Repairs; Facade, Roof and Terrace Repairs; Fire Detection and Suppression Systems; Access for the Disabled, Safety and Security and Correction of Hazardous Conditions; Utility Systems Repairs and Improvements; and Other Projects.

ANACOSTIA NEIGHBORHOOD MUSEUM

The Anacostia Neighborhood Museum leases a building in Anacostia which provides space for exhibition, education and administrative functions. This facility is in disrepair and unsuitable for long-term occupancy. The Museum's Exhibits Laboratory, constructed in 1976, is located at Fort Stanton Park on National Park Service property. This 10,500 square foot building houses administrative, exhibit, shop, storage and research activities. Although the Exhibits Laboratory is in good condition, modifications are required to provide access for the disabled and improved fire protection.

Funding is being sought in FY 1984 for the design and construction of an annex to the Exhibits Laboratory for approximately 6,000 square feet to replace the leased facility in Anacostia. Additional funds will be requested in this planning period to provide access to rest rooms for the disabled, for the installation of an elevator, fire protection, and routine maintenance. Total anticipated costs for the period FY 1984 through FY 1988 are estimated at \$640,000.

(Dollars in thousands)	Fiscal Year					
Work Description	1984	1985	<u>1986</u>	<u>1987</u>	1988	
General Repairs Sprinklers Install Elevator	20	20 25	20 55	20	20	
Disabled Access - Rest Room Design and Construction - Laboratory Annex	450	10				
TOTALS	470	55	75	20	20	

ARTS AND INDUSTRIES BUILDING

The Arts and Industries Building, constructed between 1879 and 1881, contains more than 140,000 square feet of exhibition, staff and storage space. The most recent restoration and renovation of the exhibition halls and entrances was completed for the Bicentennial Celebration.

Extensive renovation of the Arts and Industries Building roof and exterior is in progress to ensure watertightness and energy efficiency. Remaining work for two roof quadrants includes roof replacement, replacement of gutters and downspouts, repairs and replacement of window components and pointing and caulking. Interior painting and repairs are required as a result of damage caused by water intrusion. Improvements to the building's heating, ventilating and air conditioning (HVAC) system are required to establish better control over temperature and humidity variations. HVAC improvements include: installation of an energy conserving system to help regulate temperatures; addition of reheat coils; modification of controls on air handling units; addition of new steam humidifiers; replacement of cooling tower; and relocation of unsightly roof mounted mechanical equipment. Other utility projects include the upgrading of electrical wiring and removal of abandoned electrical and plumbing conduit. Additional smoke detection and sprinkler systems also are required.

These and other building requirements are estimated to cost approximately \$12.97 million through FY 1988 with additional funds anticipated beyond this period to complete the building's renovation.

(Dollars in thousands)		Fiscal Year						
Work Description	<u>1984</u>	1985	1986	1987	1988			
General Repairs		50	50	50	50			
Interior Paintings and Repairs		75	50	50				
OPS - Industrial Hygiene Lab								
and Office		35						
Install New Ceiling, 1st Fl., S.W.								
Corridor		30						
Roof & Facade Renovation	2,500	3,000						
Smoke Detection/Sprinklers		75	75	75	75			
Security Lighting - East Garden		30						
Plumbing Repairs		50						
HVAC Renovation/Energy Conservation			1,800	2,000	2,500			
Tunnel Renovation		150	150					
Space Utilization Study		50						
TOTALS	2,500	3,545	2,125	2,175	2,625			

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

The Chesapeake Bay Center on the Rhode River, a sub-estuary of the Chesapeake Bay located near Edgewater, Maryland, was established by the Smithsonian in 1965. The Center is located on approximately 1,800 acres acquired by the Smithsonian since 1963, and an additional 800 acres restricted by covenant to Smithsonian use. Current facilities include an administration building with a laboratory addition, an education and dormitory building, a new maintenance building, several small farm buildings and several trailers. A new water system has been installed to meet domestic water needs, as well as to provide fire protection. The newer facilities are in good condition, but require additional fire protection and alarm systems, as well as modifications to provide access for the disabled. Also, the Center's sewage system is inadequate and needs to be updated to be compatible with the improved water distribution system.

It is estimated that \$1.015 million will be required during the planning period FY 1984 through FY 1988 to perform road repairs and improvements, correct fire protection deficiencies, accomplish modifications required for access for the disabled, upgrade the sewage system and make modifications to provide improved laboratory facilities.

(Dollars in thousands)		Fiscal Year					
Work Description	1984	1985	1986	1987	1988		
Road Repairs General Repairs Roof Repairs	20	50 30 15	100 30	100 30	100 30		
Fire Alarm System Visitor Center - Disabled Access - Rest Room		10 25					
Administration Building - Disabled Access		23	25				
Master Plan/Sewer System Study Utility Improvements Calf Barn Modifications	130	30	30 200	30	30		
TOTALS	150	160	385	160	160		

COOPER-HEWITT MUSEUM

The Cooper-Hewitt Museum, acquired by the Smithsonian in 1968, is housed in the historic Carnegie Mansion and the adjoining Miller House (brownstone) in New York City.

Built in the early 1900s, the 64 room mansion was renovated with nonappropriated Trust funds in the early 1970s, and opened to the public in 1976. The renovation project and subsequent efforts have restored the mansion to a good condition. However, due to its age, repairs and improvements are required. Modifications are necessary for safety and security, as well as to provide access for the disabled. Also, HVAC modifications are needed to improve energy efficiency.

It is estimated that \$1.4 million will be required to accomplish necessary repairs and improvements during the planning period FY 1984 through FY 1988.

(Dollars in thousands)		F	scal Year				
Work Description	1984	1985	1986	1987	1988		
General Repairs Window Replacement Wood Flooring - Repair, Replacement (1st. Floor) Fence Restoration - Repair and Painting Elevator Improvements - Miller House Roof Repairs - Carnegie Mansion Emergency Generator Disabled Access Ramp - Carnegie Mansion Electrical/Mechanical/Plumbing	20	20 100 30 45 40 45	10 10	20	20		
Study - Miller House HVAC/Electrical/Plumbing Repairs		150	350	20 500			
TOTALS	20	430	390	540	20		

AMERICAN ART/PORTRAIT GALLERY BUILDING

The Old Patent Office Building, constructed between 1836 and 1866, was transferred by the General Services Administration to the Smithsonian in 1958. The building, a National Historic Landmark, was renovated from 1965 to 1968. Currently, it houses the National Museum of American Art, the National Portrait Gallery and the Archives of American Art, providing approximately 250,000 square feet of space for exhibitions, collections storage and staff activities. The building is in good condition but exterior repairs and mechanical system replacement are required.

Extensive recaulking and repointing of the building's facade and major repairs to the roof will be completed using prior year funding. It is anticipated that major repair and replacement of a portion of the stone facade will be necessary late in this planning period. This stone, which is similar to local stone used at the United States Capitol Building, is in poor condition. The heating, ventilating and air conditioning system requires major upgrading to correct existing deficiencies and to improve environmental control and energy efficiency. In addition, fire safety improvements and conversion of the parking garage to staff area are needed.

Approximately \$1.98 million will be sought in this planning period for these and other building requirements.

(Dollars in thousands)			<u>Fi</u>	scal Ye	ar	
Work Description		1984	1985	<u>1986</u>	<u>1987</u>	1988
Space Improvements - America	n Art		90			
General Repairs - Storage Spa	ace			120		
Window and Trim Painting			40			
Stone Repairs				150	150	150
Sprinklers - 7th St. Corrido	r		50			
Public Address System					150	
Upgrade Exterior Security Li	-		50			
Building Accessibility Study	/					
Implementation			20		100	
Dust Abatement - Shop Areas			20			
HVAC Renovations		800				
Electrical/Plumbing Repairs			50			
Space Utilization Study			40			
	TOTALS	800	360	270	400	150

FREER GALLERY OF ART

The Freer Gallery of Art, constructed between 1916 and 1921, was opened to the public in 1923, providing 68,000 square feet of exhibition, staff and collections storage space. The building is in good condition; however, major upgrading of utilities is required. A project is in progress to renovate major elements of the building's utility systems, including fire suppression, electrical, heating, ventilating and air conditioning. There also is a requirement to provide access for the disabled at a major entrance.

Completion of the major elements of the fire, electrical and HVAC modifications and improvements will be accomplished in FY 1983. Other minor repairs and improvements including skylight repairs are programmed through the five-year planning period. These requirements are estimated to cost approximately \$900,000.

(Dollars in thousands)		Fi	iscal Ye	ear	
Work Description	1984	1985	1986	<u>1987</u>	1988
Attic Space Modifications (Office and Rest Room)			40		
Office General Repairs Skylight Repairs		50 40	30	30	
Sprinklers - Basement/Book Store Public Address System Installation	85			100	
Disabled Access - Entrance Disabled Access - Rest Rooms			300		
(North Foyer) Electric Wiring Replacement	50		25		
Plumbing Repairs			50	50	50
TOTALS	135	90	445	180	50

HIRSHHORN MUSEUM & SCULPTURE GARDEN

The Hirshhorn Museum and Sculpture Garden, opened to the public in 1974, provides 226,000 square feet of exhibition, staff and collections space. Recently, a major project was completed that provided access to the Sculpture Garden for the disabled. Also, a project is being completed to correct staining on the facade.

The Museum plaza has incurred surface deterioration and some cracking. Repairs to the most deteriorated surfaces have had limited success and it is expected that the entire plaza will have to be replaced. A study is planned to determine the feasibility of excavating beneath portions of the plaza in order to construct additional exhibit space. A comprehensive energy conservation survey for the building has been completed. Adjustments and alterations to the building's heating, ventilating and air conditioning systems are required to conform to current museum environmental standards.

These projects and other minor improvements are expected to cost about \$4.025 million during this planning period.

(Dollars in thousands)	Fiscal Year					
Work Description	1984	1985	1986	1987	1988	
General Repairs Pave Tunnel - Tunnel Storage		50 70	50	50	50	
Space Study - Plaza Resurfacing		, 0			3,000	
Minor Safety/Security Projects		30				
New Rest Room Construction		40				
Sprinklers - Extension to Mechanical/						
Electrical Rooms			105			
Energy Study Implementation	100	100	100	200		
Heating/Cooling Coil Replacement		30	30			
Space - Master Plan Study						
TOTALS	100	340	285	250	3,050	

NATIONAL MUSEUM OF AFRICAN ART

Located on Capitol Hill in Washington, D.C., the National Museum of African Art occupies the historic Frederick Douglass House, seven contiguous townhouses and several other structures. The Smithsonian acquired these properties in 1979. They are estimated to average about 100 years in age and are of poor quality construction and unsuitable as a museum. Upon acquisition, the Smithsonian installed an elevator in the Douglass House, added security systems, provided access for disabled persons and renovated approximately 1,750 square feet of patio space. These projects cost approximately \$320,000 and were intended to eliminate the most serious safety and access problems. It is estimated that a continuing cost of approximately \$50,000 per year will be required to provide minimal repair and maintenance of the structures and supporting building systems. Examples include repairs to the roofs, and to plumbing, heating, cooling and electrical systems. Through FY 1986, these are estimated to cost \$120,000. No other major improvements are planned, pending the relocation of the Museum to the Quadrangle.

(Dollars in thousands)		Fiscal Year				
Work Description		1984	1985	1986	1987	1988
General Repairs			50	50	*	*
	TOTALS	20	50	50	_	-

^{*} Museum will move in early 1986.

NATIONAL MUSEUM OF AMERICAN HISTORY

The National Museum of American History, which opened to the public in 1964, contains approximately 213,000 square feet of exhibition, staff and collections space. Although in good condition, the building requires continuation of the phased upgrading of its fire protection systems, heating, ventilating and air conditioning systems and facade, roof and terrace repairs.

Further work on the Fire Protection Master Plan is continuing in FY 1983. Phase I of the major HVAC improvements, recommended by an energy conservation study developed in FY 1982, will start in FY 1983. Other improvements for collections protection and overall energy conservation include preservation of the building's facade, completion of terrace repairs and replacement of the roof.

These and other requirements are estimated to cost \$10.665 million between FY 1984 and FY 1988.

(Dollars in thousands)		<u>F</u>	iscal Y	ear	
Work Description	1984	1985	1986	1987	1988
Security Office Relocation		175			
Registrar's Facility Alterations		70			
General Repairs		100	100	100	
Terrace Repair - Ramp/Canopy Removal/Glass					
Installation		390			
North-South Entrance Doors - Replacement			245		
Roof Replacement - Design and Construction	500	650			
Fountain Renovation - Planning & Design					175
Fire Protection Master Plan Implementation	350	350	350	350	350
Card Access System				210	
4th Floor Security		100			
Disabled Access - Modifications			50	50	50
HVAC/Energy Implementation		1,200	1,800	2,000	700
Cooling Tower Replacement	250		·		
TOTALS	1,100	3,035	2,545	2,710	1,275

NATIONAL MUSEUM OF NATURAL HISTORY/MUSEUM OF MAN

The National Museum of Natural History/Museum of Man was completed in 1911, and identical east and west wings were added in 1963 and 1965, respectively. In 1975, an open interior court was enclosed and divided into three levels to create additional space primarily for public use, bringing the total building area to 1,000,000 square feet.

The most important requirement for this building is continuation of the phased installation of fire detection and suppression systems. The fire protection program, which also includes related architectural modifications, will continue through the planning period and beyond. In the utility systems category, heating, ventilating and air conditioning improvements are required in order to achieve energy conservation, to control temperature and humidity and to improve air circulation. Some of these projects to be completed include repair of the main cooling tower, replacement of the HVAC control system and replacement of air handlers. Electrical and plumbing renovations are required in attics and tunnels to replace and to remove deteriorated and obsolete equipment. Projects needed to protect the building's exterior, some which also would improve energy efficiency, include repointing and recaulking the facade, replacing window locks and gaskets, and reglazing and repairing windows. Space modifications for exhibition purposes are planned, as well as modifications to improve access for the disabled in staff and public areas, and modifications to improve library facilities. These and other building requirements are estimated to cost approximately \$13.038 million between FY 1984 and FY 1988.

Work Description	1984	1985	1986	1987	1988
Hall 16 Demolition - Skylight Renovation		100			
Staff Rest Rooms - W. Loading Dock		35			
Baird Auditorium - Mechanical Lift Study		8			
Hall 30 - Demolition		120			
Hall 9 - Demolition		40			
General Repairs				150	150
Facade - Caulking & Pointing		500			
Fire Protection - Master Plan Implementation	1 350	350	350	400	400
North-South Entrance Modifications		165			
Mall Entrance Gate Repairs		25			
Dome Safety Ladder and Platform		25			
Mineral Science Security Entrance Foyer		25			
New Interior Handrails				150	
Hall 16 Access		125			
West Court - Replace Mexican Floor Tiles		120			
Disabled Access Modifications			80	80	
HVAC/Energy Conservation Implementation			500	3,400	3,400
Attic & Tunnel Renovation		50	50	50	50
North Entrance Canopy					885
S.I. Libraries - Space Modifications	165	180			
Miscellaneous Space Modifications		560			
TOTALS	515	2,428	980	4,230	4,885

NATIONAL AIR AND SPACE MUSEUM

The National Air and Space Museum, which opened to the public in 1976, provides approximately 500,000 square feet of exhibition, staff and support space, including a parking garage. Roof, facade and terrace repairs are needed due to water intrusion and weathering problems.

Corrective facade work has started and is expected to include recaulking, repair of some marble and related flashing, reinsulation at parapets, and flashing of copings. The terrace will require reconstruction of waterproof membrane, replacement of drains and a new paving system, and these repairs are projected to begin subsequent to the planning period. HVAC system modifications and implementation of energy conservation measures, primarily associated with the mechanical systems, are projected in the current five-year plan, as well as additional fire and safety programs.

These and other requirements are estimated to cost \$3.32 million through FY 1988.

(Dollars in thousands)	Fiscal Year				
Work Description	1984	1985	1986	1987	1988
Install Removable Plate Eliminators					
in HVAC System		40			
General Repairs			100	100	
Paint Structural Trusses			125		
Roof Replacement			1,250		
Sprinklers - Kitchen Ceiling		20			
Extend Smoke Detection Systems			100	100	100
Emergency Telephone, Lighting & Stair					
Modifications	185				
Energy Study - Implementation			1,000		
Reinsulate Air Handling Unit Return			·		
Plenums		50			
Replace Reheat Coils		150			
•					
TOTALS	185	260	2,575	200	100

RENWICK GALLERY OF ART

The Renwick Gallery of Art, constructed between 1859 and 1874, was originally designed to house the Corcoran Gallery of Art. In 1897, the Corcoran moved to its current location and the building was purchased by the government. It was transferred to the Smithsonian in 1965 for restoration to its original purpose as an art museum. The building is a National Historic Landmark.

The brick portion of the facade is in good condition, but the exterior stone and windows have deteriorated seriously; stone and window replacement are under way and will be completed with funds requested in FY 1984. Scheduled replacement of mechanical equipment, installation of emergency lighting and new security systems and general maintenance projects are planned through FY 1988.

These requirements are estimated to cost \$2.21 million in this planning period.

(Dollars in thousands)	Fiscal Year				
Work Description	1984	1985	1986	1987	1988
General Repairs Facade Renovation and Window Replacement	1,800		30		
Security Modifications Roof Repairs	·	25	25 50	25	
Sprinklers - Basement Emergency Lighting		65	50		
Install Public Address System				50	
Energy Study Implementation Dust Collection System - Shops		20	30		
Space Utilization Study - Basement				40	
TOTALS	1,800	110	185	115	-

WHIPPLE OBSERVATORY, MT. HOPKINS, ARIZONA

Established in 1968, the Frederick L. Whipple Observatory is located on 390 acres and buffered by an additional 4,350 acres of National Forest Service land on Mt. Hopkins, near Tucson, Arizona. Facilities on the mountain include a Multiple Mirror Telescope at the summit and other telescopic observation and support structures, dormitory/dining facilities and water storage facilities. Support and administrative activities are located in leased space 20 and 1/2 miles from the Observatory. A major multi-year project has been completed to improve road safety and access, as well as to reduce future maintenance. Although existing structures are serviceable, some changes are required to improve efficiency. Development of a utility master plan is scheduled for FY 1984.

During the planning period, it is anticipated that approximately \$2.42 million will be required for routine road maintenance, design and construction of an administration building, a visitor's center and a vehicle maintenance facility to provide better support of observation activities.

(Dollars in thousands)	Fiscal Year				
Work Description	1984	1985	1986	1987	1988
General Repairs Fire Alarm System Improvements Master Plan - Utility	20 50 40	50	50	50	50
Vehicle Maintenance Facility Administration Building - Design and			575		
Construction Water Catchment Visitors' Center - Design and		55 50	980		
Construction			50	400	
TOTALS	110	155	1,655	450	50

SMITHSONIAN INSTITUTION BUILDING

The Smithsonian Institution Building was constructed from 1847 to 1855. It provides 55,000 square feet of exhibition and staff space.

The major requirement for FY 1984 is completion of the smoke detection system. Future needs include renovation of electrical wiring systems, study and implementation of an energy conservation program and alterations in the basement for more efficient use of space. Also planned for this period are window repairs, improved security systems and an East Garden sidewalk.

These requirements are estimated to cost \$2.195 million during this planning period.

(Dollars in thousands)	Fiscal Year				
Work Description	1984	1985	1986	1987	1988
General Repairs		10			
Plaster Repairs - North Staircase		100			
Windows - Repair, Paint, Upgrade Security		125	50	50	50
East Garden Sidewalk			500		
Solar Screens - South Windows		25			
Roof and Facade Study			30		
Smoke Detection Systems	150	150			
South Tower Egress			65		
Energy Study and Implementation		20		100	
Electrical Wiring Renovation		150	150	150	150
Basement Master Plan Study and Implementation	on		50	50	50
Main Entrance - Space Utilization Study			20		

TOTALS

150

580

865

350

250

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

During the years 1940 to 1946, marine and terrestrial research facilities on Barro Colorado Island (BCI) and elsewhere in Panama were transferred by act of Congress to the Smithsonian Institution. Currently, facilities of the Tropical Research Institute are located at BCI, Galeta Point, Balboa (Ancon and Tivoli sites) and Naos Island. Some 50 structures scattered throughout 17 acres of land provide a site for tropical research. The condition of existing buildings, piers and utilities varies with each facility, and a study to determine future needs for these facilities is underway. Many of the buildings and their operating systems have deteriorated and are inadequate to meet programmatic needs.

In addition to a master plan, there are other requirements which need to be met within the planning period. These include BCI fire protection improvements, continuation of water and sewage system installations at Galeta and BCI, installation of an emergency generator and a communications system, and construction of a petroleum storage facility. Renovation or replacement of buildings and facilities include the kitchen/dining building and dormitory on BCI and terrestrial laboratories at the Tivoli site. The cost of these requirements for the planning period is approximately \$2.93 million.

(Dollars in thousands)

Fiscal Year

Work Description	1984	1985	1986	1987	1988
General Repairs	20	50	50	50	50
BCI - Kitchen - Repairs and Design	75				
BCI - Fire Protection	100				
Emergency Generator Installation		50			
Petroleum Storage Facility		25			
Communication System		45			
BCI - Water/Sewage Upgrade		75			
Galeta - Sewage System Upgrade			150		
Galeta - Electrical System Upgrade		40			
BCI - New Dormitories - Design and					
Construction			450		
Tivoli - Terrestrial Laboratories					1,200
New Kitchen/Dining Building -					
Construction				500	
TOTALS	195	285	650	550	1,250

SUITLAND FACILITY, SUITLAND, MARYLAND

Twenty-five metal buildings and several other structures located on 21 acres at Suitland, Maryland, provide collections storage, conservation, restoration and exhibits support space principally for the Mall museum operations of the National Air and Space Museum, National Museum of American History and National Museum of Natural History/Museum of Man. The floor area of these buildings is approximately 312,000 square feet. They were designed originally for temporary storage of materials and equipment that are not affected by environmental conditions. However, renovation of certain buildings is required to ensure that proper environmental conditions exist for collections storage and exhibit purposes. Also, asbestos insulation must be replaced and fire detection and suppression systems installed. Constant attention to maintenance and upgrading will be essential to long-term museum use of these buildings. An amount of \$1.583 million is estimated for these projects between FY 1984 and FY 1988.

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Fiscal Year

Work Description	<u>1984</u> <u>1985</u>	1986	1987	1988
Fence and Road Program	75			
NASM - Covered Storage	60			
NASM - Bldgs. 21 and 24 - Balconies			100	
Exterior Painting and Roof Repairs		60		
Fire Protection - MAH Bldgs.	160	160		
Security Lighting - Upgrade	8			
Security Fence - Drainage	10			
MAH Bldgs Improvements (Nos. 17 & 19)		450		
TOTALS	- 813	670	100	_

MISCELLANEOUS PROJECTS

Additional Institution facility requirements include: the containment or removal of exposed asbestos insulation at a number of buildings; installation of a central proprietary security system, initially for the National Museum of American History, and later for other Mall buildings; bronze door restoration; security lighting improvements; emergency repairs; and a day care center.

These requirements are estimated to cost approximately \$5.775 million through FY 1988.

(Dollars in thousands)	Fiscal Year				
Work Description	1984	1985	1986	1987	1988
Emergency Repairs	150	100	100	100	100
Bronze Doors - Restoration & Maintenance		25	25	25	25
Sidewalk Repairs		50	25	25	25
Signage Study - Interior/Exterior		50			
Fire Protection - Pre-design/Development		200			
Asbestos Abatement	300		500	500	500
Security Lighting (Mall Bldgs.)		200	200	200	200
Emergency Power Study (All Facilities)		150			
Day Care Center		400			
Proprietary Security System	300	400	400	400	100
TOTALS	750	1,575	1,250	1,250	950

TAB D

SOURCE AND APPLICATION OF OPERATING FUNDS



SMITHSONIAN INSTITUTION

OVERALL SOURCES AND APPLICATION OF FUNDS

The following tables and schedules show the operating funds provided to the Institution as well as the application of these funds. Appendix E, which follows, contains the Institution's financial report to the Congress and the public and also shows the Smithsonian's financial position for FY 1982.

Schedule 1 summarizes the sources and application of all funds of the Institution—Federal appropriations, grants and contracts from government agencies and nonappropriated Trust funds, both restricted and unrestricted. The schedules following this summary show total expenditures for all types of funds for each of the line items discussed in the Salaries and Expenses appropriation request. Figures for nonappropriated Trust funds for FY 1983 and FY 1984 have been approved by the Board of Regents. These figures also have been submitted to the Office of Management and Budget. It must be emphasized that for both of these years, the estimates for Trust funds are subject to change due to the unpredictability of donations, grants and contracts to the Institution, fluctuations in visitor attendance and uncertain economic factors affecting restaurant and shop revenues, Associates memberships and other auxiliary activities.

For FY 1984, overall gross operating funds of the Institution from all sources are projected to equal \$292.2 million, while net operating income, after deduction of expenses related to auxiliary and bureau activities, is projected at approximately \$191.3 million. The Federal appropriation request for Salaries and Expenses (\$154.4 million) would amount to approximately 53 percent of the total gross operating revenues or approximately 81 percent of net operating revenues. Federal grants and contracts received from government agencies are expected to total approximately \$14.4 million. Nonappropriated Trust funds are derived from gifts, investment income from endowments and current fund balances, and from the net proceeds of auxiliary activities (the Smithsonian magazine and other Associates programs, shops, food service, and book and mail order sales). Gross revenues of nonappropriated Trust funds are expected to continue to grow as in previous years and reach \$123.4 million in FY 1984. Net income, however, is projected to only increase from \$20.4 million in FY 1982 to \$22.5 million in FY 1984 (of which nearly \$8 million would be for restricted purposes) because of continued inflationary cost increases adversely affecting auxiliary activities.

The intended use of the Federally appropriated funds is explained in detail in the preceding sections of this request. The uses of nonappropriated Trust funds are similarly described. In summary, nonappropriated Trust funds are applied, in part, to the portion of administrative expenditures unrecovered from overhead charges and to a large number of allotments to the bureaus for programmatic efforts. The largest of these is the \$2.2 million per year program initiated in FY 1978 (an increase of \$200,000 over FY 1983) to provide funds for the Collections Acquisition, Scholarly Studies and Education Program. Beginning in FY 1979, the Board of Regents also approved the use of the Institution's unrestricted Trust funds for certain programs previously financed with appropriated funds. These programs, which continue to be financed by unrestricted Trust funds, are the Smithsonian's Institutional Fellowship Program, the Trust fund share of rental costs for administrative units in L'Enfant Plaza and rental payments by auxiliary activities occupying space on the Mall. For FY 1983, an amount of \$1.6 million will be applied to these programs and an amount of \$1.7 million is projected for FY 1984. Continuing in FY 1983 and extending through FY 1985, additional amounts of unrestricted Trust funds are being set aside for Quadrangle development.

Finally, assuming that actual financial results for FY 1984 are as projected currently, there should be sufficient surplus to allow a continuing transfer of approximately \$2 million to Smithsonian endowment funds to provide income for future years.

All projections are monitored closely throughout the year with adjustments to estimates dictated by actual results.

	FY 1981	FY 1982	Budget FY 1983	Projected FY 1984
Institutional Op	erating Fun	ds		
FUNDS PROVIDED				
Federal Appropriations - Salaries & Expenses	\$122,478	\$131,170	\$144,366/1	\$154.354
Federal Agency Grants & Contracts	14,172	13,217	13,032	
Nonappropriated Trust Funds:	2.,27.	10,21	10,002	,
For Restricted Purposes	6,378	6,821	7,734	7,710
For Unrestricted & Special Purposes:	0,570	0,021	,,,,,,	,,,,,
Auxiliary & Bur. Acts. RevenuesGross	88,381	97,350	103,583	111,235
Less Related Expenses	(75,924)	(88,596)	(93,424)	(100,930)
acos included appended	(73,321)	(00,330)	(33, 124)	(100,750)
Auxiliary & Bur. Acts. Net Revenue	12,457	8,754	10,159	10,305
	,	.,	,	,
Investment, Gift, and Other Income	4,887	4,808	4,363	4,501
20.1012011, 2221, 232 2332				
Total Net Unrest. & Spec. Purp. Revenue	17,344	13,562	14,522	14,806
istal met careout a spect raip. Merenae	27,0	20,000	2.,222	21,000
Total Unappropriated Trust FundsGross/2	99,646	108,979	115,680	123,446
Net	23,722	20,383	22,256	22,516
nce .	23,722	20,303	22,230	22,510
Total Operating Funds ProvidedGross	236,296	253,366	273,078	292,191
Net	\$160,372	\$164,770	\$179,654	\$191,261
	3100,372	\$104,770	\$177,054	9171,201
FUNDS APPLIED				
Science	\$ 62,703	\$64,837	66,722	\$72,286
Less SAO Overhead Recovery	(2,470)	(2,487)	(2,429)	(2,550)
History & Art	25,614	28,020	28,902	30,241
Public Service	3,421	2,309	2,480	2,495
Museum Programs	8,084	8,539	9,565	9,624
Special Programs	7,284	9,533	15,864	16,716
Associates and Business Management	312	543	697	386
AdministrationFederal/3	8,782	9,934	10,255	11,629
Nonappropriated Trust Funds	5,740	5,733	6,659	7,039
Less Smithsonian Overhead Recovery	(5,014)	(5,338)	(5,700)	(5,900)
Facilities Services	36,501	39,327	43,734	45,490
1401111100 00171000	30,301			43,430
Total Operating Funds Applied	150,957	160,950	176,749	187,456
Transfers (Nonappropriated Trust Funds)	,	,		
Unrestricted Funds-To Plant	2,550	1,064	1,275	1,225
To Endowments	2,550	2,259	2,021	2,021
Restricted FundsTo Endowments	108	318	120	120
Total Operating Funds Applied & Trans. Out	\$156,165	\$164,591	\$180,165	\$190,822
CHANGES IN FUND BALANCES				
Restricted Purpose (Incl. Fed. Agency Grants				
& Contracts)	\$ 1,276	s (45)	\$ (369)	\$ 257
UnrestrictedGeneral Purpose	42	5	(111)	(123)
Special Purpose	2,704	404	(31)	305
Federal Appropriation/4	185	(185)		
Total	\$ 4,207	s 179	\$ (511)	\$ 439

YEAR-END FUND BALANCES				
Restricted Purpose	\$ 5,951	\$ 5,906	\$ 5,537	\$ 5,794
UnrestrictedGeneral Purpose	5,043	5,048	4,937	4,814
Special Purpose	12,599	13,003	12,972	13,277
Federal Appropriation/4	185			
Total	\$ 23,778	\$ 23,957	\$ 23,446	\$ 23,885
		**********	-	~
OTHER FEDERAL AP	PROPRIATION	S		
	0 0 150			0 0 0/0
Foreign Currency Program	\$ 3,650	\$ 4,320	\$ 2,000	\$ 9,040
Construction	15,829	9,744	46,500	12,500
Total Federal Appropriations (Incl.	\$141,957	\$145,234	\$192,866	\$175,894
S&E above)				

^{/1} Excludes pay supplemental request of \$2,390,000. The full cost of the FY 1983

legislated pay raises and Medicare Hospital Insurance Tax is \$4,780,000.

/2 Figures do not include gifts and other income directly to Plant and Endowment Funds:

FY 1981 - \$2,696,000; FY 1982 - \$2,197,000.

/3 Includes unobligated funds returned to Treasury: FY 1981 - \$64,000; FY 1982 - \$124,000.

^{/4} FDR Centennial appropriation available through FY 1982.

Source and Application of Operating Funds Budget FY 1983

D-4

(Doilars in thousands)			oon ce au	Budget	t FY 1983	1					
	Total	11	Federal	ral	Unrestricted	1 1	Trust Funds	spi	-	_	Federal Grants
	A11 Fu	Funds	Appropriation	lation	General	*	Spec. 1	Purpose	Trust Funds		Contracts
	F/T		F/T		F/T		F/T		F/T	F/T	
FUNDS PROVIDED	Emp1.	s	Emp1.	\$	Empl.	Ş	Emp1.	S	Empl. \$	Emp1	۱. \$
Federal Appropriation	-	144,366	3	144,366	1	1	!	1	ı	ī	1
Investment /1	1	6,201	1	ı	!	2,800	1	585	- 2,816		
Gifts, Grants and Contracts	1	17,375	1	1	ı	20	ı	152	- 4,141	41	- 13,032
Auxiliary Activities Revenues											
Associates - Magazine	1	49,779	1	ı	I	49,779	ı	I	ı	1	!
- Other	1	12,185	1	1	I	12,185	1	1	ı	1	1
Museum Shops and Mail Order	1	19,431	1	1	1	19,431	1	!	!	1	1
Concessions, Parking & Food Svcs	ı	5,891	ı	1	ı	5,891	ı	ı	1	1	!
Other Auxiliary Activities	ı	13,057	ı	ı	!	13,057	1	ı	ı	1	-
Total Auxiliary Activities	1	100,343	ı	1	ı	100,343	ı	1	I	i	;
Bureau Activities	1	3,240	ı	1	1	1	!	3,240			-
Miscellaneous	1	1,553	ı	1	1		1	726	7		
Total Income	-	273,078		144,366	1	103,243	1	4,703	7,7	34	-13,032
Less Expenses: Auxiliary Activities						l					
Associates - Magazine	98	43,079	ı	ı	98	43,079	1	ı	!	!	!
- Other	65	11,734	ı	ı	78	11,734	1	1	ı	1	!
Museum Shops and Mail Order	181	18,674	ı	ı	181	18,674	1	1	ı	1	1
Concessions, Parking & Food Svcs	7.1	3,875	ı	1	71	3,875	1	!	1	1	!
Other Auxiliary Activities	72	13,644	1	ı	59	13,644	1	ı	1	1	!
Total Auxiliary Activities	475	91,006	I	1	475	91,006	1	!	ı	!	1
Bureau Activities	36	2,418	ı	1	1	1	36	2,418	ı	1	1
Net Funds Provided	-	179,654	1	144,366	1	12,237	1	2,285	7,7 -	34	- 13,032
FUNDS APPLIED (Net/Act. Expense)											
Science (Net)	1,543	64,293	1,294	47,098	89	226	∞	1,567	7	555 163	12,8
History and Art	740	28,902	672	•	14	703	2	704	49 4,221	21	- 85
Public Service	29	2,480	41	1,603	18	777	1	100		!	!
Museum Programs	223	9,565	210	•	10	274	ı		3	954	!
Special Programs	73	15,864	62	11,250	11	618	1	3,782	1	114	- 100
Other Activities	13	269	ı	ı	13	681	ı	2	1	14	!
Facilities Services	1,016	43,734	1,004	42,636	11	1,088	-	6	1		!
istration (Net)	428	11,214	~ 1	•	160	- 1	1	i		7	
	4,095	176,749	3,551	144,366	305	5,104	14	6,264	62 7,9	983 163	3 13,032
TRANFERS to (From)											
Current Funds	1	(250)		ı	1	3,723	ı	(3,973)		}	!
Endowment Funds	1	2,141	1	1	ı	2,021	1	ı	1	120	1
1	ı	1,525	1	1	1	1,500	1	25			1
FUND BALANCE - Beginning of Year	ı	23,957	1	1	1	5,048	1	13,003	- 5,7	719	- 187
CHANGE IN FUND BALANCE	1	(511)	1	-	1	(111)	1	(31)	- (3	369)	
FUND BALANCE - End of Year	-	23,446	1	1		4,937	1	7/6,21	- 5,3	20	18/
/1 Net of Investment Manager's Fees	•										

/I Net of Investment Manager's Fees. *Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds Estimate FY 1984

The first byte provided The first byte byte byte byte byte byte byte byt	All Funds Appropriation General * Spec Funds From the Formal Form	(Dollars in thousands)			5	Estimate								F
Fig. 1 Fig. 2 Fig. 2 Fig. 2 Fig. 3 Fig. 4 F	Fig. State Appropriation General * Spec. Purp Fig. Fig. State Fig. F		Tota	3.I	Fede	ral	Unrest	- 1	리	gpu	Kestri	cred	redera	I Grants
Page	FFT FTT S FMT S FMPT S	,	All Fu	spur	Appropr	tation	Genera	1	ı	Purpose	Trust	Funds	and Co	ntracts
Name	tts - 154,354		F/T		F/T		F/T		F/T		F/T		F/T	
The control of the	trivities	FUNDS PROVIDED	Emp1.	s	Empl.	S	Emp1.	\$	Empl.	\$	Emp1.	\$	Emp1.	\$
Auxiliary Activities Revenues - 16,284 2,850 - 607 - 2,827 - 14, Auxiliary Activities Revenues - 22,611 52,611 52,611 2,611 13,762 13,762 13,762 13,762 13,762	Tites	Federal Appropriation	1	154,354	-	•	1	1	1	1	1	ı	ı	1
Auxiliary Activities Revenues - 18,712 52,611 50	trives - 18,712	Investment /1	ŀ	6,284	ı	1	ı	2,850	1	209	ŀ	2,827		1
Auxiliary Activities Produces - 0.2611 2.2611 13.762	trivitties	Gifts, Grants and Contracts	1	18,712	1	ı	1	50	1	180	ı	4,091		14,391
Associace - Other Associates - Other Assistant Services - Other Associates - Other Assistant Services - Other Associates - Other Associates - Other Assistant Services - Other Associates - Other Assistant Services - Other Associates - Other Ot	THE STATE ST	Auxiliary Activities Revenues												
Husseum Shops and Mail Order	Litylities	Associates - Magazine	ı	52,611	1	1	ı		ı	ı	1	1	1	ı
Witnesses Shorts Factorities - 20,875 13,736 13,765 107,470 107,470 107,470 107,470 107,470 107,470 107,470	as Svcs	- Other	1	13,762	1	1	1	13,762	1	I	ı	1	!	I
Concessions, Parking & Proof Sves	es - 13,736 6,486 6,486 13,736 13,736 13,736 13,736 13,736 13,736 13,736 13,736 13,606 154,354 - 110,420 5 - 100,470 5 - 1,606 1,606 154,354 - 110,420 5 - 100,470 5 - 1,606 1,606 154,354 - 110,420 5 - 100,420 5 - 100,420 5 - 100,420 5 - 100,420 5 - 100,420 100	Missim Shone and Mail Order	1	20,875	1	1	ı	20,875	1	1	1	ı	ı	ı
Other Auxiliary Activities Total Auxiliary Activities Wiscellaneous Wisce	Decis Sees - 13,736 113,736 3,755 107,470 154,354 - 110,420 3 Tivities			207 2		,		707 7		1		1		İ
Other Auxillary Activities 13,136 - - 11,136 -	es - 13,736 107,470 3 - 107,470 154,354 - 110,420 - 5 - 1,606 154,354 - 110,420 - 5 - 1,606 154,354 - 110,420 - 5 - 1,606 154,354 - 110,420 - 5 es 46,411 - 66 13,037 - 66 13,037 - 6 ood Svcs 78 4,571 78 4,571 - 78 es 491 98,105 184, 20,350 - 78 es 491 98,105 191,261 - 154,354 - 12,315 - 2 ense) 1,544 69,736 1,294 50,892 68 234 8 1 ense) 1,544 69,736 1,294 50,892 68 234 8 1 ense) 1,544 69,736 1,294 50,892 68 234 8 1 ense) 1,544 69,736 1,294 50,892 68 234 8 1 ense) 1,544 69,736 1,294 50,892 68 234 8 1 ense) 1,544 69,736 1,294 50,892 68 234 8 1 ense) 1,544 69,736 1,294 20,139 - 3 ense 7,7 13,768 25,178 12,213 12 1,207 1 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,768 268 11,629 159 968 - 2 ense 7,7 13,736 2 ense 7,7 11 - 2 ense 7,7 1	sions, Parking & Food	1	0,480	ı	1	I	0,400	! 	t	l 	١,	I	ı
Purpeal Activities -107,470 -10. -107,470 -10.	es - 107,470 107,470 3,765 50	Other Auxiliary Activities	1	13,736	ı	1	1	_^	1	1	1	1	1	1
Bureau Activities - 3,765 50 - 5,316 - 7,710 - 16, 18, 18, 18, 18, 18, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19	TITION TO SERVING THE NOTE OF	Total Auxiliary Activities	1	107,470	1	ı	ı	•	1	1	1	I	ı	I
## Secolates - Magazine	- 1,606 50 - 50 - 50 - 50 - 50 - 50 - 50	Bureau Activities	1	3,765	1	1	1	1	1	3,765	1	ı	ı	ı
Associates - 10, 420 - 5,316 - 7,710 - 14, 480 Lease standing Activities	ctfivities 86	Miscellaneous	ı	1,606	1	1	ı	50	ı	164	1	792	ı	ı
Associates - hagazine Associates - hagazine Associates - hagazine Be	activities 86 46,411 - 86 46,411 - 66 13,037 - 66 13,037 - 66 13,037 - 66 13,037 - 66 13,037 - 66 13,037 - 66 13,037 - 66 13,037 - 78 4,571 - 78 4,571 - 78 4,571 - 77 13,736 - 40 2 2,825 191,261 - 154,354 - 12,315 - 2 2 2,178 13 697 5 10 304 - 12,315 - 2 2 2,178 13 697 5 10 304 - 12,22 9,624 210 8,575 10 304 - 3 36 11,017 45,490 1,004 44,271 12 1,207 1 13 84	Total Income	1	292,191		4.3	1	7				7,710	1	33
Associates - Magazine - Associates - Magazine - Other	B6 46,411 86 46,411 66 13,037 - 66 13,037 - 66 13,037 184 20,350 184 20,350 184 20,350 184 20,350 184 20,350 184 20,350 184 20,350 184 20,350 13,736 13,736 2,825 491 98,105 2 40 2 8 8 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1													
Museum Shops and Mail Order Other Auxiliary Activities April 28,105 - 191,201 - 191,201 - 191,201 - 191,201 - 191,204 - 191,201 - 191,20	ben Svcs		86	46.411	1	ı	98	•	1	ı	1	1	1	t
Museum Shops and Mail Order 184 20,350 184 20,350 0 Concessions, Parking & Pood Sves 78 4,571 778 4,571 7 Concessions, Parking & Pood Sves 78 78 1,571	bense) 184 20,350		99	13,037	1	1	99	13,037	1	1	1	ı	1	ı
Concessions, Parking & Food Sves 78 4,571 78 4,571 77 13,736 77 13,736 77 13,736 77 13,736 77 13,736	ben Sycs 78 4,571 78 4,571 691 98,105 40 2 2 2,825 191,261 - 154,354 - 12,315 - 2 2 2 30,241 672 25,178 13 697 5 60 2,495 41 1,596 19 849 - 154 60,736 1,294 50,892 68 234 8 1 1 1,514 69,736 1,294 50,892 68 234 8 1 1 1,514 60,736 1,294 50,892 68 234 8 1 1 1,514 60,736 1,294 50,892 68 234 8 1 1 1,514 60 2,495 41 1,596 19 849 - 134 60 2,495 10 304 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 11 384 - 3 304 304 304 304 304 304 304 304 304 3	Museum Shons and Mail Order	184	20,350	1	1	184	20,350	1	I	1	1	1	ı
Other Auxiliary Activities	es 77 13,736 77 13,736 40 2 2 825 491 98,105 2 40 2 2 825 491 98,105 2 40 2 2 825 12,315 2 2 825 12,315 2 2 825 12,315 2 2 825 12,315 2 2 825 12,315 2 2 825 12,315 2 2 825 12,315 2 2 825 12,315 2 2 825 11 3 697 5 82 8 1 849 13,225 9,624 210 8,575 10 304 11 386 11 386 11 386 11 386 11 386 11 386 11 386 2,121 154,354 304 5,264 14 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		78	4.571	1	1	78	4.571	1	I	ı	1	1	I
Total Auxiliary Activities 491 99,105 491 96,105	pense) 1, 544 69, 736 1, 294 50, 892 68 234 8 1	,	11	13,736	1	1	77	13, 736	1	I	·	1	1	ı
Bureau Activities let Funds Provided - 191,261 - 154,354 - 12,315 - 2,491 - 7,710 - 14, UNIDS APPLIED (Net/Act. Expense) 1,544 69,736 1,294 50,892 68 234 8 1,621 9 2,758 165 14, History and Art History and Art History and Art Facilities Service 0 2,495 41 1,596 19 849 - 50 - 7,710 - 14, Public Service 1,544 69,736 1,294 50,892 68 234 8 1,621 9 2,758 165 14, History and Art History and History and History History and History and History and History and History History and History and History History and History and History and History and History	pense) 40 2,825	Total Anvillary Activities	10	98 105	1	ı	167	98 105	1	1		1	· ·	1
The Fundament Founds -191,261 -154,354 -12,315 -2,491 -7,710 -14, -14, -154,354 -12,315 -2,491 -7,710 -14, -14, -14, -15,405	pense) 1,544 69,736 1,294 50,892 68 234 8 1 735 30,241 672 25,178 13 697 5 722 9,624 210 8,575 10 304 11 386 11,017 45,490 1,004 44,271 12 1,207 1 427 12,768 268 11,629 159 968 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,225 11,226 11,227 11,227 11,227 11,227 11,225 11,227 11,27 11,27 11,27 11,27 11,27 11,27 11,27 11,27	Bureau Activities	707	2,825	1	1	: 1		07	2,825	1	1	'	1
Formuse Trouted Net Act. Expense) Science (Net) Science (pense) 1,544 69,736 1,294 50,892 68 234 8 1 735 30,241 672 25,178 13 697 5 60 2,495 41 1,596 19 849 - 222 9,624 210 8,575 10 304 - 11 386 - 1,017 45,490 1,004 44,271 12 1,207 1 427 12,768 268 11,629 159 968 - 4,170 187,456 3,631 154,354 304 5,264 14 6 F. Year - 2,141 1,225 - 1,200 - 1,225 - 23,885 4,814 - 13 er's Fees.	Not Dinds Decedard	2 1	101 261	ŀ	15% 35%		-	1	107 6	1	7 710		17, 391
Scriptic (Net) (Ne	1,544 69,736 1,294 50,892 68 234 8 1 1 35 30,241 672 25,178 13 697 5 60 2,495 41 1,596 119 849 - 222 9,624 210 8,575 110 304 - 311 386 - 311,629 159 968 - 311,629 159 968 - 312,768 268 11,629 159 968 - 32,021 - 2,141 - 2,141 - 2,141 - 2,141 - 2,3,446 - 23,885 - 23,885 - 2,3446 - 2,23,885 - 2,23,885 - 2,23,885 - 2,23,885 - 2,34,814 - 13	FINDS ADDITED (Not / Act Execusion)		171,201		104,004		•		^!		2/1/		17,001
Hatory and Art (Net of Programs 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	1, 74		1 67.7	967 09	1 20%		89	237	α	1 621	0	7 758		17, 231
History and Art (1) 23 30,241	1,017 45,490 1,004 44,271 12 1,207 1 1 1 1 1 1 1 1 1	(Net)	1,044	30,730	1,274	20,032	90 -	407	0 4	1,021	, ,	2,170	-	14,231
Problem Service	222 9,624 210 8,575 10 304 - 154 11,590 119 649 - 154 16,716 142 12,213 112 621 - 3 11 386 - 111 384 - 111	History and Art	00/	30,241	7/0	1,500	5 5	760	า 	260		5,014		00
Special Programs 122 9,624 210 8,575 10 304 - 3,633 - 149 - 149 - 140 - 3,633 - 149 - 149 - 140 - 14	1,017 45,490 1,004 44,271 12 621 - 3 11 386 - 11 384 - 1 1,017 45,490 1,004 44,271 12 1,207 1 427 12,768 268 11,629 159 968 - 6 4,170 187,456 3,631 154,354 304 5,264 14 6 - 2,141 - 2,021 - 1,200 - 1,205 - 1,200 - 1,205 -	Public Service	00	2,495	41	1,090	61.	849	l	00	-	1 0		1
Special Programs 154 16,716 142 12,213 12 621 - 3,633 - 149 - Other Activities 11 386 - 11 384 - 2 -	154 16,716 142 12,213 12 621 - 3 1	Museum Programs	777	9,624	210	8,5/5	019	304	1		7	740		1 6
Other Activities 11 386 11 384 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1,017 45,490 1,004 44,271 12 1,207 1	Special Programs	154	16,716	145	12,213	12	621	1	•		149		001
Facilities Services	1,017		11	386	1	1	11	384	1	2	l 	•		t
Administration (Net)	427 12,768 268 11,629 159 968 - 4,170 187,456 3,631 154,354 304 5,264 14 6 - 2,141 - - - 2,021 - - - 1,225 - - - 1,200 - - 23,446 - - - 4,937 - 12 - 439 - - - 4,937 - 12 er's Rees.		1,017	45,490	1,004	44,271	12	1,207	-	10	1	2		1
Total Transfer to (From) Current FundsEndowment FundsEndowment FundsEndowment FundsPlant Funds	4,170 187,456 3,631 154,354 304 5,264 14 6 - 2,141 - - 2,021 - - (3 - 1,225 - - - 4,937 - 12 F Year - 23,446 - - - 4,937 - 12 - 439 - - - 4,937 - 12 er's Rees. - - - 4,814 - 13		4.27	12,768	268	•	159		1	101	1	70		1
Current FundsCurrent FundsEndowment FundsEndowment FundsEndowment FundsPlant Funds	f Year - 2,141 2,021 - 2,021 - 1,225 1,200 - 1	And the second second second second second	4,170	187,456	3,631	•	304	•	14	, 11	99	7,333	165	14,391
Current FundsEndowment FundsEndowment FundsPlant FundsPlant FundsPlant FundsPlant FundsPlant FundsPlant FundsPlant FundsPlant FundsPlant Funds	f Year - 2,141 2,021 - 2,021 - 1,225 - 1,225 1,200 - 1	TRANFERS to (From)												
Endowment FundsEndowment FundsPlant FundsPlant FundsPlant FundsPlant FundsI,225	f Year - 2,141 2,021 - 1,225 - 1,200 - 1,2	Current Funds	1	I	1	1	ı	3,953	ı	(3,953)		t		t
Plant Funds1,22521,44623,44623,44623,44623,4464,937 -12,972 -5,350 -18 SHANGE IN FUND BALANCE - End of Year23,8854,81413,2775,60718 *Includes Unrestricted Allotments and Auxiliary Activities.	f Year - 1,225 1,200 12, - 23,446 4,937 - 12, - 439 (123) - 12, - 23,885 4,814 - 13, er's Fees.	Endowment Funds	1	2,141	1	1	1	2,021	ı	1		120		1
UND BALANCE - Beginning of Year - 23,446 4,937 - 12,972 - 5,350 - SHANGE IN FUND BALANCE - 23,885 4,814 - 13,277 - 5,607 4,814 - 13,277 - 5,607	f Year - 23,446 4,937 - 12, - 439 (123) (123) 4,814 - 13, er's Fees.	Plant Funds	1	1,225	1	1	1	1,200	1	25	ı	ı	ı	t
SHANGE IN FUND BALANCE	er's Fees.		1	23,446	1			4,937		12,972	1	•		187
UND BALANCE - End of Year - 23,885 4,814 - 13,277 - 5,607 - 1 Net of Investment Manager's Fees. **Includes Unrestricted Allotments and Auxiliary Activities.**	er's Fees.		1	439	1	1	1	(123)	1	305	t	257	1	1
/I Net of Investment Manager's Fees. ** Includes Unrestricted Allotments and Auxiliary	/I Net of Investment Manager's Fees.	FUND BALANCE - End of Year	1	23,885	1	1	1	4,814	1	13,277	1	-	1	187
*Includes Unrestricted Allotments and Auxiliary	1 A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	/I Net of Investment Manager's Fees		111										
	*Includes Unrestricted Allotments and Auxiliary		and Al	axillary	ACLIVILI	• 8 2								

	ts s			194	07	90	1	ı	40	144	435	221	147	1	47	
	1 Gran		S		1,307	10,506					7	7	12,847		12,847	
	Federal Grants and Contracts	F/T	Emp1.	2	29	116	ı	1	1	1	8	9	163	1	163	
	Restricted Trust Funds		\$	96	2,027	158	1	109	29	70	16	50	2,555		2,555	
	Restricted Trust Fund	F/T	Emp1.	1	9	-	ı	1	1	2	1	1	10	ı	10	
	Funds	1	8	4	193 (1)*	396 (135)*	1	100 (73)*	83	2,342 (1,470)*	46 (34)*	116	3,280	(25) (1,713)	1,567	
Funds	Trust Spec.	ī	Emp1.	1	1	2	1	1	1	31	ı	1	33	(25)	8	
iting]	fcted al		\$	55	11	2,438	- (2,429)	78	ı	5	63	5	226	ı	226	
of Opera 1983	Unrestricted Trust Funds General Spec. Purpos	F/T	Emp1.	1	. 1	65 2	- (5)	2	1	1	-	1	89	1	89	
plication o Budget FY l	Federal Appropriation	i	\$	357	17,459	6,347	1	2,963	2,090	7,118	955	6,809	47,098	1	47,098	
d Applí Bud	Fed Approp	F/T	Emp1.	7	503	78	1	98	48	222	23	327	1,294	1	1,294	
Source and Application of Operating Funds Budget FY 1983	Total 1 Funds		S	706	20,997	19,845 (135)*	(5,429)	3,250 (73)*	2,242	9,679 (1,470)*	1,515 (34)*	10,201	900,99	(1,713)	64,293	
	To A11	F/T	Emp1.	10	538	262	1	88	67	256	32	333	1,568	(25)	1,543	
(Dollars in thousands)			SCIENCE	Ass't Secretary, Science	Nat'l Museum of Natural History/ Museum of Man	Astrophysical Observatory	(SAO Overhead Recovery)	Tropical Research Institute	Radiation Biology Laboratory	National Air & Space Museum	Chesapeake Bay Center	National Zoological Park	TOTAL SCIENCE	Less expenses of generating revenue	TOTAL SCIENCE (Net)	

*Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds Estimate FY 1984

	To	Total	Est	Estimate FY 1984 Federal Unres	1984 Unrestricted Trust Funds	icted	Trust	Funds	Restricted	lcted	Federal	Federal Grants
	A11	All Funds	Approp	Appropriation	General		pec.	Spec. Purpose	Trust Funds	Funds	and Contracts	tracts
	F/T		$_{ m F/T}$		F/T		$_{ m L}/_{ m J}$		F/T		F/T	
	Empl.	s	Emp1.	\$	Emp1.	\$	Empl.	s	Empl.	Ş	Emp1.	\$
Ass't Secretary, Science	6	775	7	390	ı	65	1	1	ı	116	2	204
Nat'l Museum of Natural History/	528	22,350	503	18.797	I	7	ı	193	ب	2,303	16	1.050
		22,388						429				
Astrophysical Observatory	280	(135)*	78	6,892	65 2	2,559	2	(135)*	-	176	134	12,332
(SAO Overhead Recovery)	1	(2,550)	1	-	7) –	- (2,550)	ı	_	_	1	١	ı
Tropical Research Institute	88	3,563	86	3,319	2	9/	I	102 (76)*	1	99	ı	1
Radiation Biology Laboratory	67	2,363	48	2,222	1	,	'	77	1	24		40
National Air & Space Museum	256	10,300 (1,584)*	222	7,678	1	5	31	2,512 (1,584)*	2	24	-	81
Chesapeake Bay Center	26	1,414 (29)*	23	1,017	1	67	•	41 (29)*	1	1	2	289
National Zoological Park	333	10,958	327	10,577	t	5	ı	92	1	67	9	235

14,231

165

2,758

6

3,446

33

234

89

50,892

1,294

71,561

1,569

14,231

165

2,758

6

1,621

 $\boldsymbol{\omega}$

234

89

50,892

1,294

69,736

1,544

TOTAL SCIENCE (Net)

(1,825)

(25)

Less expenses of generating

revenue

TOTAL SCIENCE

ı

ı

(25) (1,825)

ı

*Expenses covered all or in part from revenue of activity.

σ - ω (Dollars in thousands)		Source a	nd Appl Bu	and Application a	of Oper 1983	of Operating Fynds 1983	Ennds					
	T	Total	Fe	Federal	Unrest	Unrestricted Trust Funds	Trust	Funds	Rest	Restricted	Federal Grants	Grants
	A11	Funds	Appro	Appropriation	Gene	General** Spec.		Purpose	Trust	Funds	and Con	Contracts
HISTORY & ART	F/T Empl	\$	F/T Empl.	S	F/T Empl.	S	F/T Empl.	တ	F/T Empl.	S	F/T Emp1.	Ś
	7	30%	7	175	,	_		0			- 1	
ASS L Secretary, mistory water		100			1	171						
Joseph Henry Papers	2	195	2	194	1	1	1	1	1	-	1	ı
Nat'l Museum of American History	284	9,349 (9)*	278	8,603	1	77	1	266 (9)*	4	403	1	
Nat'l Museum of American Art	110	4,416 (8)*	106	4,122	-	25	1	%(8) (8)*	4	179	t	ı
Nat'l Portrait Gallery	79	3,314 (5)*	76	2,965	1	49	ı	47 (5)*	က	253	l	ı
Hirshhorn Museum	80	3,290	80	2,663	1	6	ı	99	1	552	l	1
Freer Gallery of Art	51	2,336	30	901	ı	6	1	3	21	1,423	l	1
Archives of American Art	28	1,305	17	675	1	9	ı	ı	11	624	l	1
Cooper-Hewitt Museum	48	2,600 (323)*	22	792	6	352	14	761 (323)*	3	610	l	85
National Museum of African Art	30	986 (24)*	25	848	-	25	-	30 (24)*	3	83	l	I
Anacostia Neighborhood Museum	20	806	19	773	1	30	ı	2	I	1	1	1
Division of Performing Arts	23	1,209 (639)*	10	478	13	639 (639)*	1	I	ı	92	I	I
TOTAL HISTORY AND ART	764	30,110	672	23,189	27	1,342	16	1,273	67	4,221	1	85
Less expenses of generating revenue	(24)	(1,208)	ı	ı	(13)	(639)	(11)	(569)	1	I	1	1
TOTAL HISTORY AND ART (Net)	740	28,902	672	23,189	14	703	5	704	64	4,221	I	85

part from revenue of activity. *Expenses covered all or in

**Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds Ferimate RV 1984

(Dollars in thousands)			Estin	Estimate FY	1984							
	To	Total	Fed	Federal	Unrestricted	cted	Trust	Funds	Restricted	cted	Federal Grants	Г
	A11	Funds	Approp	Appropriation	General**		Spec. F	Purpose	Trust	Funds	and Contracts	
	F/T		F/T		F/T	F/	T		F/T		F/T	Г
HISTORY & ART	Emp1.	S	Emp1.	\$	Empl.	3 \$	Emp1.	\$	Emp1.	s	Empl. \$	
Ass't Secretary, History & Art	9	322	4	198	2	124	1	ı	ı	ı		
Joseph Henry Papers	5	259	5	208	-	ı	ı	ı	1	51		
Nat'l Museum of American History	285	9,936 (268)*	278	9,200	1	77	5	498 (268)*	-	191	1	
Nat'l Museum of American Art	110	4,641 (8)*	106	4,395	1	25	I	96 *(8)	4	125		
Nat'l Portrait Gallery	79	3,506	76	3,180	ı	49	1	58 (6)*	3	219		
Hirshhorn Museum	80	3,427	80	3,035	-	6	ı	61	ı	322	-	
Freer Gallery of Art	51	2,537	30	1,081	1	6	ı	3	21	1,444	1	
Archives of American Art	28	1,342	17	729	ı	9	I	1	11	607	-	
Cooper-Hewitt Museum	47	2,643 (554)*	22	843	6	358	14	804	2	578	09 -	
National Museum of African Art	29	1,093	25	975	1	8	1	33 (27)*	3	77	-	
Anacostia Neighborhood Museum	20	855	19	820	1	32	ı	2	1	1		
Division of Performing Arts	23	1,017 (474)*	10	514	7) [1]	474)*	1	I	ı	29	1	
TOTAL HISTORY AND ART	763	31,578	672	25,178	26 1,171	171	20	1,555	45	3,614	09 -	
Less expenses of generating revenue	(28)	(1,337)	1	ı	(13) (474)	174)	(15)	(863)	ı	ı	1	
TOTAL HISTORY AND ART (Net)	735	30,241	672	25,178	13 (269	2	692	45	3,614	09 -	

part from revenue of activity. *Expenses covered all or in

^{**}Includes Unrestricted Allotments and Auxiliary Activities.

	rants	acts		\$	ı		ı		1		1	!		ı	ı	
	Federal Grants	and Contracts	F/T	Empl.	ı		1		1		-	1		1	. 1	
	ted	spun		\$	1		1		1		1	ı		ı	ı	
	Restricted	Trust Funds	F/T	Emp1.	ı		1		1		1	1		1	ı	
				\$	1	160	*(09)		1		1	160		(09)	100	
spu	Unrestricted Trust Funds	Spec. Purpose	F/T	Emp1.	ı		1		1		1	1		1	ı	
ting Fu	tricted			\$	1		322		454	11,479	(11,479)*	12,256		(33)(11,479)	777	
f Opera 983	Unres	General**	F/T	Emp1.	1		9		12	-	33 (1	51 1		(33)(1	18	
plication of O _l Budget FY 1983	ral	lation		\$	220		350		65		896	1,603		1	1.603	
and Application of Operating Funds Budget FY 1983	Federal	Appropriation	F/T	Emp1.	5		5	,	2		29	41		•	41	
Source and	al	All Funds		\$	221	832	*(09)		519	12,447	(11,479)*	 14,019		(33) (11,539)	2,480	
	Total	A11 I	F/T	Emp1.	5		11		14		62 (92		(33)	59	
C (Dollars in thousands)				PUBLIC SERVICE	Ass't Secretary, Public Service		Office of Telecommunications	Visitor's Information and	Associates Reception Center		Smithsonian Institution Press	TOTAL PUBLIC SERVICE	Less expenses of generating	revenue	TOTAL PUBLIC SERVICE (Net)	

part from revenue of activity. *Expenses covered all or in

**Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds Estimate FY 1984

(Fortals in Chousanas)		Estimate Fi 1984	1984				
	Total	Federal	Unrestricted	Unrestricted Trust Funds	Restricted	Federal Grants	ts
	All Funds	Appropriation	n General**	Spec. Purpose	Trust Funds	and Contracts	S
	F/T	F/T	F/T	F/T	F/T	F/T	
PUBLIC SERVICE	Empl. \$	Empl. \$	Empl. \$	Emp1. \$	Emp1. \$	Empl. \$	
The County Diskill of County	730	230					
Ass't secretary, rubiic service	627		1			1	1
Office of Telecommunications	653 12 (61)*	5 176	7 366	111 - (61)*	1	1	
Visitor's Information and							
Associates Reception Center	14 632	2 150	12 482	1	1	1	_
Smithsonian Institution Press	13,007 64 (11,975)*	29 1,032	11,975 35 (11,975)*	-	t	1	
TOTAL PUBLIC SERVICE	95 14,531	41 1,596	54 12,824	- 1111	ı	1	
Less expenses of generating revenue	(35) (12,036)	1	(35)(11,975)	- (61)	1	1	
TOTAL PUBLIC SERVICE (Net)	60 2,495	41 1,596	19 849	- 50	1	1	

^{*}Expenses covered all or in part from revenue of activity.

^{**}Includes Unrestricted Allotments and Auxiliary Activities.

U VDollars in thousands)		Source and Application of Operating Funds Budget FY 1983	d Applie	plication o Budget FY l	of Opera 1983	ating Fu	spu					
	To	Total	Fed	Federal	Unre	Unrestricted	Trust	Funds	Restricted	ted	Federal Grants	Grants
	A11	All Funds	Approp	Appropriation	Gene	General**	1	Purpose	Trust F	Funds	and Cont	Contracts
	F/T		F/T		F/T		F/T		F/T		F/T	-
MUSEUM PROGRAMS	Emp1.	\$	Emp1.	\$	Emp1.	\$	Emp1.	\$	Emp1.	S	Empl.	\$
Ass't Secretary, Museum Programs	7	311	7	306	t	5	1	1	ı	ı	I	1
	1	895	6	308	1	1	l	47 (47)*	2	540	ı	1
International Activities	5	182	5	181	ı	-	1	I	I	1	1	ı
Office of the Registrar	2	87	2	87	I	I	1	1	1	ı	1	I
Conservation Analytical Laboratory	21	893	21	893	I	1	1	1	ı	1	ı	1
Smithsonian Libraries	107	3,943	66	3,664	8	220	ı	1	ı	59	1	ı
Office of Exhibits Central	45	1,386 (5)*	45	1,379	-	1	1	7 (5)*	1	ı	ı	I
Traveling Exhibition Service	26	1,790 (1,164)*	9	271	19	1,164 (1,164)*	1	1	1	355	ı	I
Smithsonian Archives	15	512	13	494	2	. 84	ı	1	-	_	ī	l
National Museum Act	3	782	3	782	l	ı	1	1	1	1	I	1
TOTAL MUSEUM PROGRAMS	242	10,781	210	8,335	29	1,438	ı	54	E	954		
Less expenses of generating revenue	(19)	(1,216)	I	1	(19)	(19) (1,164)	ı	(52)	1	ı	1	ı
TOTAL MUSEUM PROGRAMS (Net)	223	9,565	210	8,335	10	274	1	2	က	954	1	ı

part from revenue of activity. *Expenses covered all or in

^{**}Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds Estimate FY 1984

(Dollars in thousands)			Estin	Estimate FY 1	1984							
	Tc	Total	Fec	Federal	Unres	Unrestricted Trust Funds	Trust	Funds	Restricted	cted	Federal Grants	Grants
	A11	Funds	Approp	Appropriation	Gene	General**		Purpose	Trust	Funds	and Con	Contracts
	F/T		F/T		F/T		F/T		F/T		F/T	
MUSEUM PROGRAMS	Emp1.	\$	Emp1.	S	Emp1.	S	Emp1.	Ş	Emp1.	Ş	Emp1.	\$
Ass't Secretary, Museum Programs	7	339	7	334	ı	7	ı	1	ı	ı	ı	1
	=======================================	920	6	332	1		1	56 (55)*	2	532	ı	1
International Activities	ניה	193	5	192	I	1	ı	1	1	1	1	1
Office of the Registrar	2	93	2	93	l	1	1	ı	1	1	ı	I
Conservation Analytical Laboratory	21	951	21	951	ľ	ı	ı	I	l	ı	I	I
Smithsonian Libraries	107	3,887	66	3,633	∞	246	ı	1	ı	80	1	I
Office of Exhibits Central	45	1,471	45	1,467	1	1	1	4	1	ı	1	ı
Traveling Exhibition Service	27	1,670 (1,178)*	9	292	21	1,178 (1,178)*	ı	ı	I	200	I	1
Smithsonian Archives	15	547	13	495	2	52	I	1	I	1	I	I
National Museum Act	(C)	786	3	786	I	I	ı	,	I ;	1	I	I
TOTAL MUSEUM PROGRAMS	243	10,857	210	8,575	31	1,482	I	09	2	740	1	1
Less expenses of generating revenue	(21)	(1,233)	I	1	(21)	(21) (1,178)	ı	(55)	ı	ı	ı	1
TOTAL MUSEUM PROGRAMS (Net)	222	9,624	210	8,575	10	304	I	. 2	2	740	1	I

part from revenue of activity. *Expenses covered all or in

^{**}Includes Unrestricted Allotments and Auxiliary Activities.

U F(Dollars in thousands)		Source and Application . Budget FY	d App11		of Operating Funds 1983	ing Fu	spu					
	To	Total All Funds	Fec	Federal Appropriation	Unrestr	icted	Trust Funds	Funds	Restricted Trust Fund	Funds	Federal Grants	Grants
SPECTAL PROGRAMS	F/T Empl.	S	F/T Emp1	S	F/T Emp1.	S	1	\$	F/T Empl.	s	F/T Emp1.	S
American Studies & Folklife Programs	14	1,203	5	809	6	50	1	42 (13)*		3		100
ironmental	2	643	2	643		ı	1	ı	ı	I	ı	1
ACADEMIC AND EDUCATIONAL PROGRAMS												
Office of Fellowships & Grants	10	367	6	305	-	45	1		ı	16	1	1
Fellowships Awards	1	805	1	1	1	1	1	805	1	1	ı	ı
Regents' Fellowships	ı	120	l	I	1	1	1	120	ı	1	ı	ı
Symposia & Seminars	4	202	Э	85	-	93	ı	l	ı	24	ı	1
Elementary & Secondary Education	7	380	7	277	l	30	I	2	ı	7.1	l	1
Collections Mgmt./Inventory Program	1	785	1	785	1	1	1	ı	I	ı	i	ı
Collections Acquisition, Scholarly Studies and Education Program	1	2,200	I	ı	1	ı	I	2,200	l	!	ı	ı
Fluid Research Awards	1	200	1	1	ı	ı	ı	200	ı	1	-	ı
Smithson Society Awards	ı	175	l	1	I	1	ı	175	1	_	1	ı
Major Exhibition Program	1	840	1	840	1	ı	ı	ı	l	1	ı	ı
Museum Support Center Equip. & Op.	36	6,957	36	6,707	ı	1	ı	250	1	ı	1	1
John F. Kennedy Center - Grant	ı	1,000	1	1,000	1	1	ı	1	ı	1	ı	ı
TOTAL SPECIAL PROGRAMS	73	15,877	62	11,250	11	618	1	3,795	ı	114	ı	100
Less expenses of generating revenue	1	(13)	1	1	E	1	1	(13)	I	l	1	1
TOTAL SPECIAL PROGRAMS (Net)	73	15,864	62	11,250	11	618	ı	3,782	ı	114	. 1	100
	į											

*Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds Estimate FY 1984

	CC	,,			T	7.1			1			,		1			1			0	1		
	Federal Grants	Contracts	¢r.		100	-					1	ľ								100	,	100	
	Federa	and Cc	F/T Empl.		1	1		1	1	I	. 1	1	1	l	l	1	_	1	1	1	1	1	
	cted	Funds	¢.	1		7		20		-	70	54	l	l	1	-	-	I	1	149	1	149	
		3t	F/T Empl.		1	1		1	1	1	1	1	-	l	1	1	1	1	1	ı	ı	1	
	Funds	Purpose	er,	36	(6)	-		1	885	120	1	l	1	2,200	200	200	1	-	1	3,642	(6)	3,633	
	Trust		F/T Emol.		1	1		1	1	1	1	. 1	1	1	1	ı	1	1	1	1	1	1	
	Unrestricted	al	· co		403	1		42	I	I	95	31	1	1	1	ı	1	l	1	621	1	621	
1984	Unres	General	F/T Empl	-	10	-		1	1	ı	1	ı	1	1	I	l	l	1	ı	12	1	12	
	ral	I	v.		000	678		322	l	ı	93	302	827	ı	1	1	885	8,456	_	12,213	1	12,213	
Estimate FY	Federal	Appropriation	F/T Fmnl			2		6	l	1	3	7	1	1	1	1	I	116	1	142 1	1	142	
		ds	ď	,244	*(6)	678		385	885	120	258	387	827	2,200	200	200	885	8,456	-	16,725	(6)	16,716	
3	Total	All Funds		-		2			1	1	7	7	1	- 2		1	1				1		
		A1	F/T Fmn1			-7		10			7		'	'		'	,	116	•	154	·	154	
(Dollars in thousands)			спестат вросоваме	The state of the s	American Studies & Folklife Programs	Int'l Environmental Science Program	ACADEMIC AND EDUCATIONAL PROGRAMS	Office of Fellowships & Grants	Fellowships Awards	Regents' Fellowships	Symposia & Seminars	Elementary & Secondary Education	Collections Mgmt./Inventory Program	Collections Acquisition, Scholarly Studies and Education Program	Fluid Research Awards	Smithson Society Awards	Major Exhibition Program	Museum Support Center Equip. & Op.	John F. Kennedy Center - Grant	TOTAL SPECIAL PROGRAMS	Less expenses of generating revenue	TOTAL SPECIAL PROGRAMS (Net)	

*Expenses covered all or in hart from revenue of activity.

Source and Application of Operating Funds Budget FY 1983

U H (Dollars in thousands)

	T	Total	Federal	-	Unrestricted Trust Funds	ted True	t Funds	Restricted		Federal Grants	rants
	A11	All Funds	Appropriation	ion	General**	Spec	Purpose	Trust Funds	s	and Contracts	acts
MEMBERSHIP, DEVELOPMENT AND	F/T		F/T	F	F/T	F/T		F/T		F/T	
AUXILIARY ACTIVITIES	Emp1.	s	Empl. \$	闰	Emp1. \$*	Emp1.	ss.	Empl. \$		Emp1.	\$
		691					10				
Office of Membership & Development	13	(10)	1	1	13 681	-	(10)*	1	1	ı	ı
		43,079							-		
Smithsonian Magazine	98	(43,079)	ı	1	86 (43,079)	- (6	ī	1	-	1	ı
		9,262			9,262	5					
National Associates Program	25	(9,262)	ı	ı	25 (9,26	2) -	ı	1	1	ı	1
		2,488			2,472	2					
Resident Associates Program	07	(2,472)	1	ı	40 (2,472)	2)	2	1	14	ı	1
		276			276	2					
Business Management Office	2	(276)	1	1	5 (276)	- (9	1	1	1	ı	ı
		9,955		_	9,955	2					
Museum Shops	141	(9,955)	1	1	141 (9,955)	2) -	1	1	ı	ı	1
		8,719			8,719	6					
Mail Order	40	(8,719)	ı		40 (8,719)	- (6	1	1	ı	ı	i
		69			69	6					
Concessions	ı	(69)	1	1	(69) -	- (6	1	1	<u> </u>	ı	ı
		3,350			3,350				-		
Food Service	54	(3,350)	l	1	54 (3,350)	- ((1	1		ı	1
		456			456	2					
Parking	17	(456)	ı	1	17 (456)	- (9	1	1	1	ı	I
THE THEORY OF THE PRESENCE OF											
TOTAL MEMBERSALF, DEVELOFMENT AND AUXILIARY ACTIVITIES	421	78,345	1	1	421 78,319		12	ı	14	1	1
									•		
Less expenses of generating	(00)	11			11						
revenue	(408)	(408) (11,648)		1	(408)(77,638)	3) -	(10)	1	1	1	1
TOTAL MEMBERSHIP, DEVELOPMENT AND	•	; ;					,				
AUXILIARY ACTIVITIES (Net)	13	/69		1	13 681	_	2	1	14	1	1

^{*}Expenses covered all or in part from revenue of activity.

^{**}Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds Estimate FY 1984

(Dollars in thousands)			Estimate	FY	1984	0						
	Total	al	Federa	1.1	Unrestricted		Trust	Funds	Restricted	ted	Federal G	Grants
	All Funds	unds	Appropriation	tion	General**			Purpose	Trust Funds	spun	and Contracts	acts
MEMBERSHIP, DEVELOPMENT AND	F/T		F/T		F/T	E	F/T		F/T		F/T	
AUXILIARY ACTIVITIES	Emp1.	Ş	Emp1.	\$	Emp1.	\$*	Emp1.	s	Emp1.	s	Emp1.	\$
		395						11				
Office of Membership & Development	11	(11)	-	1	11	384	1	(11)*	ı	ı	1	1
		46,411			746	46,411						
Smithsonian Magazine	98	(46,411)	-	1	86 (46,	(46,411)	ı	1	1	ı	1	1
		10,422			10,	10,422						
National Associates Program	76 ((10,422)	-	1	26 (10,	(10,422)	1	1	1	ı	1	ı
		2,617			2,	2,615						
Resident Associates Program	40	(2,615)	-	-	40 (2,	(2,615)	1	2	1	ı	ı	ı
		300				300						
Business Management Office	5	(300)	ı	1	2	(300)	ı	ı	ı	ı	ı	ı
		10,450			10,	10,450						
Museum Shops	141 ((10,450)	1	_	141 (10,	(10,420)	ı	ı	1	ŧ	1	ı
		009,6				009,6						
Mail Order	43	(009,6)	1	-	43 (9,	(009,6)	1 .	_	1	1	ı	ı
		62				62						
Concessions	1	(62)	-	1	1	(62)	1	1	1	1	-	1
		4,034				4,034						
Food Service	61	(4,034)	1	1	61 (4,	(4,034)	1	1	1	1	-	1
	,	475				475						
Parking	17	(475)	1	'	17	(475)	-	_	-	'	1	'
TOTAL MEMBERSHIP, DEVELOPMENT AND												
AUXILIARY ACTIVITIES	430	84,766	ı	ı	430 84,	84,753	ı	13	ı	ı	ı	ı
Less expenses of generating				_								
	(419) (84,380	84,380)	1	ı	(419)(84,369)	(698)	ı	(11)	1	ı	ı	1
THE TRANSPORT OF THE PRESENCE												
AUXILIARY ACTIVITIES (Net)	11	386	ı	ı	11	384	1	2	ı	ı	ı	1

part from revenue of activity. *Expenses covered all or in

^{**}Includes Unrestricted Allotments and Auxillary Activities.

	Federal Grants	s 11.		ą.	!	1	!	ł	1	1	!!!	Į.	163 13,032
	u	1	1	ł	ŀ	ı	-1	-	1	-	124	124	7,983 16
	Restricted Trust Fund			1	ł	1	<u>I</u>	į	ı	ı	1 1 1	Į	62 7,
	- Ia	1	1	10	ł	(3)	3 (1)*	10	(1)*	6	86 1 1	86	6,264
spu	Spec P		-	ı	1	ı	ı	-	ı	1	111	1	14 (
ting Fu	ted		11	9	869	1	2	1,088	ı	1,088	6,523 (86)* (5,700)	737	5,104
of Opera 1983	Unrestric General**	F/T Empl.	9	I	5		ı	11	ı	11	162 (2)	160	305
on	Federal	s	1,537	14,217	24,878	894	1,110	42,636	ı	42,636	10,255	10,255	144,366
id App11 Bud	Fed	F/T Emp1.	37	571	326	41	29	1,004	1	1,004	268	268	3,551 1
Source an	Total	S	1,748	14,233	25,747	891	1,116	43,735	(1)*	43,734	17,000 (86)* (5,700)	11,214	176,749
	To	F/T Empl.	43	571	332	41	29	1,016	1	1,016	430	428	4,095
or (Dollars in thousands)		FACTLITIES SERVICES	Office of Design and Construction	Protection Services	Office of Plant Services	South Group Buildings Mgmt.	Office of Horticulture	TOTAL FACILITIES SERVICES	Less expenses of generating revenue	TOTAL FACILITIES SERVICES (Net)	ADMINISTRATION Less Overhead Recovery ***	ADMINISTRATION (Net)	GRAND TOTAL APPLIED

part from revenue of activity. *Expenses covered all or in

SCIENCE for balance of overhead recovery. ***See Astrophysical Observatory under

^{**}Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds Estimate FY 1984

	Federal Grants	Contracts		\$	1	l	I	I		I	l	1	1 1 1	1	14,391	
	Feder		F/T	Emp1.	I	I	I	I	ı	I	ı	1	1 1 1	1	165	
	sted	Funds		s	-	1		1	2	, 2	ı	2	70	70	7,333	
	Restricted	Trust 1	F/T	Emp1.	1	1	1	-	1	-	1		1 1 1	-	. 95	
	Funds	Purpose		s	ı	10	1	(2)	3 (1)*	11	(1)	10	101	101	6,114	
	Trust]		F/T	Emp1.	t		1	ı	1	1	ı	-	1 1 1	ı	14	
	Unrestricted Trust Funds	General**		s	266	9	933	ı	2	1,207	1	1,207	6,977 (109)* (5,900)	896	5,264	
1984	Unre	Gene	F/T	Emp1.	7	ı	5	ı	I	12	I	12	162 (3)	159	304	
Estimate FY	Federal	Appropriation		S	1,778	14,211	26,140	951	1,191	44,271	1	44,271	11,629	11,629	3,631 154,354	
Esti	Fe	Appro	F/T	Emp1.	37	571	326	41	29	1,004	1	1,004	268	268	3,631	
	Total	Funds		\$	2,044	14,227	27,073	676	1,198	45,491	(1)	45,490	18,777 (109)* (5,900)	12,768	187,456	
	TC	A11	F/T	Emp1.	77	571	332	41	29	1,017	1	1,017	430	427	4,170	
(Dollars in thousands)				FACILITIES SERVICES	Office of Design and Construction	Protection Services	Office of Plant Services	South Group Buildings Mgmt.	Office of Horticulture	TOTAL FACILITIES SERVICES	Less expenses of generating revenue	TOTAL FACILITIES SERVICES (Net)	ADMINISTRATION Less Overhead Recovery***	ADMINISTRATION (Net)	GRAND TOTAL APPLIED	

part from revenue of activity. *Expenses covered all or in

^{**}Includes Unrestricted Allotments and Auxiliary Activities.

SCIENCE for balance of overhead recovery. ***See Astrophysical Observatory under



TAB E

APPENDIX



SMITHSONIAN INSTITUTION "Salaries and Expenses"

Report of Appropriation by Objects of Expense (Dollars in thousands)

		1982 Actual	1983 Base	1984 Estimate	Increase 1984 over 1983
11	Personnel Compensation	80,132	89,157	93,087	3,930
12	Personnel Benefits	8,349	9,493	9,884	391
21	Travel & Transportation of Persons	722	1,005	1,058	53
22	Transportation of Things	353	1,307	1,375	68
23	Rent, Communications and Utilities	13,688	17,740	18,404	664
24	Printing and Reproduction	1,429	1,872	2,139	267
25	Other Services	14,012	10,675	10,531	-144
26	Supplies and Materials	6,597	7,210	7,467	257
31	Equipment,,,	4,379	8,115	8,802	687
	Acquisitions for Collections.	868	859	894	35
41	Grants	694	1,697	697	-1,000
42	Insurance Claims and Indemnities	8	16/1	16	
	TOTAL	131,231	149,146	154,354	5,208

This amount includes required supplemental funding of \$4,780 thousand for the cost of the FY 1983 legislated pay raises and Medical Hospital Insurance tax.

	Smithsonian	Arts and	Miseum of	National	Freer	Museum of	American Art		Hirshborn Miseum	
Fiscal	Institution	Industries	Natural	Air & Space	Callery	American /1	& Portrait /2	Renwick /3	& Sculpture /4	/5
Year	Building	Building	Hist./Man	Museum	of Art	History	Gallery	Gallery	Garden	Total
1961	1,024,526	2,912,371	2,047,973	987,858	130,746					7,103,474
1962	1,222,112	3,471,050	2,113,053	1,986,319	130,597					8,923,131
1963	1,630,280	3,534,182	2,288,397	2,673,618	183,359					10,309,836
1964	1,311,061	2,457,243	2,512,306	1,854,186	168,625	2,509,774				10,813,195
1965	1,065,635	2,028,175	3,051,472	1,705,683	210,972	5,091,776				13, 153, 713/6
1966	870,010	1,746,715	2,988,006	1,494,922	222,089	4,829,112				12, 150, 854
1961	1,020,312	1,638,873	3,409,957	1,484,422	212,920	5,546,102				13, 312, 586
1968	847,176	1,344,622	3,257,957	1,123,698	169,533	4,750,023	30,888			11,523,897/8
1969	275,259/7	1,493,141	2,916,749	1,225,959	179,374	4,174,071	166,177			10,430,730/9
1970	1	2,557,155	3,269,791	1,839,373	217,305	5,483,555	216,523			13, 583, 702
1971	681,255	1,985,732	3,456,755	1,337,445	190,425	5,955,128	194,468			13,801,208
1972	819,617	2,306,071	3,414,640	1,104,151	230,475	6,808,526	246,657	105,186		15,035,323
1973	807,294	2,285,603	3,306,105	1,223,917	204,858	6,905,339	254,005	165,846		15,152,967
1974	739,651	2,040,731	3,067,694	1,285,598	219,346	5,850,227	329,487	175,672		13,708,406
1975	967,164	1,973,356	3,668,587	1,416,432	215,061	7,111,054	368,948	165,433	1,620,540	17,506,575
1976	1,033,803	592,400/10	4,342,601	1,451,049/11	225,257	6,318,964	465,231	222,351	1,587,628	16, 239, 284
T.Q.	291,808	543,007	1,535,613	3,062,254/11	59,217	1,470,708	112,682	46,661	434,415	7,556,365
1977	755,146	1,223,703	4,925,741	9,886,350	214,675	4,307,020	399,364	155,792	1,342,892	23,210,683
1978	757,485	903,081	5,366,159	10,028,888	244,493	4,050,687	480,947	201,284	1,299,134	23, 332, 158
1979	877,835	940,843	5,594,748	10,151,359	286,269	4,367,183	434,481	188,788	1,211,439	24,052,945
1980	1,023,394	1,227,597	5,202,864	7,257,648	311,845	4,625,477	371,539	235,525	978,820	21,234,709
1981	956,190	1,188,507	4,998,736	7,538,954	305,411	5,162,452	384,228	243,900	924,805	21,703,183
1982	1,017,782	1,098,091	4,961,180	8,453,773	285,410	4,463,041	356,098	172,909	1,038,910	21,847,194

National Museum of American History opened January 1964.

National Museum of American Art opened May 1968 and National Portrait Gallery in October 1968.

Rerwick Gallery opened January 1972.

Hirshhorn Museum and Sculpture Garden opened October 1974.

Excluded from these totals are annual visitor counts for the National Zoological Park (over 3 million), the Anacostia Museum (over 35,000), the Cooper-Hewitt Museum in New York (over 150,000) and the National Museum of African Art (over 85,000). 12143317

July-August 1964, certain Smithsonian Institution buildings were open 4:30 to 10 p.m. for the first time.

Building closed for renovation October 1968.

Reflects the significant decrease in visitors in the first six months of FY 1968 due to unsettled local conditions. Fiscal year 1969 visitor totals represent the effect of local conditions in late 1968 on visitor attendance.

Building closed for installation of "1876" exhibition September 1975 through April 1976.

Old building closed November 1975. Foyer of new museum opened to visitors February 1976. New building completely opened July 1, 1976.

FINANCIAL REPORT

Christian C. Hohenlohe, Treasurer

SUMMARY: In fiscal year 1982, the overall financial resources provided to the Smithsonian permitted maintenance of its extensive programs in exhibits and research, in public education and outreach. During this time of financial uncertainty, the continued strong support from Congress, from donors, from granting agencies and from revenue-generating auxiliary activities made possible the progress and important accomplishments noted elsewhere in this report. The bar chart on the facing page summarizes the funds provided to the Smithsonian from a wide variety of sources, as well as the application of these moneys for an equally diverse range of programs. Evident from this chart is the growth of the operating budget in 1982 over prior years; as in the most recent years, however, this growth related less to program expansion than to the ever higher costs of salaries, supplies, utilities and collection purchases. While some enhancements were possible, notably for the new Museum Support Center and for the collection inventory process, the year was characterized by fiscal restraint, self-assessment, and cost-reduction efforts. Due to partial hiring freezes and budget constraints the full-time staff of the Smithsonian was kept to a level below that of last year.

While not unaffected by the government budget restrictions of this fiscal year, the Institution was nevertheless allowed a federal appropriation sufficient to sustain ongoing operations. After detailed and understanding review by the Congress, total federal appropriations of some \$145 million were passed, including \$131 million for operations; it is this appropriation which provides the Institution's base resources for research, education and exhibition programs, for study and care of the national collections, and for administrative and support services. Of signal importance to the Institution was a planning appropriation of \$1 million in support of the Quadrangle, the Center more fully described by the Secretary in his Statement; this commitment of federal funds to a project whose costs will be met from matched federal and nonfederal funds was most welcome. quently, on October 2, 1982, the remaining funds of \$36.5 million were voted and signed by the President for fiscal year 1983.) Also important to the Institution in fulfilling its public duties was the annual appropriation for the necessary, but less inspiring, task of repairing and maintaining the large and diverse physical plant. Significant funding was also received from federal agencies in the form of grants and contracts, primarily for scientific research.

In addition to the core support provided by the federal appropriations, the Institution is also dependent on nonappropriated trust funds to enrich its programs and expand their reach. Strong public acceptance of the Institution's services continued during the year, with tangible financial return from the Smithsonian Associates programs and other auxiliary activities, as well as generous gifts and grants from individuals, foundations and corporations. While net revenues from nonappropriated

sources, after deduction of the operating expenses and sales costs of auxiliary activities, were lower than in fiscal year 1981, ongoing program commitments were met, and, as budgeted, transfers were made of \$2 million to unrestricted endowment and \$1 million toward Quadrangle construction reserve. Together with the transfers of prior years as well as favorable investment return, the unrestricted endowment of the Institution now totals some \$37 million; continued addition to this fund remains a high priority of the Institution.

Significant progress was made during the year in securing financial support for the Quadrangle. As outlined more fully below, the total of gifts and commitments to this project from outside sources as well as the Institution's own resources now total almost three-quarters of the nonfederal funds of \$37.5 million needed for construction. Fund-raising efforts for this major project are actively underway.

Operating Funds - Sources and Application

Growth in the overall operating budget of the Institution continued, but at a slightly slower pace than experienced in previous years. Total gross operating funds, as shown in Table 1, increased by over \$17 million, or 7 percent, from \$236,296,000 in fiscal year 1981 to \$253,366,000 in fiscal year 1982. These funds were derived from three major sources: 52 percent from federal appropriations, 43 percent from nonappropriated sources, and 5 percent from federal agency grants and contracts.

After deducting expenses of the nonappropriated auxiliary and bureau activities, net operating income grew by only \$4.4 million, approximately 3 percent, and was derived 80 percent from federal appropriations, 12 percent from nonappropriated sources and 8 percent from federal agency grants and contracts. Application of these funds by all Smithsonian bureaux is outlined in Table 2, with further supporting detail in succeeding tables.

Federal Appropriation

The federal appropriation for the core operating programs of the Institution totaled \$131,170,000 in fiscal year 1982. The increase of \$8.7 million, or 7 percent, over fiscal year 1981 was approximately equivalent to increased costs resulting from inflation in such areas as pay, utilities, rent, and other objects of expense. The appropriation included specific increases for these inflationary costs as well as for such high priority programs as the inventory of collections and equipping of the Museum Support Center. These were, however, partially offset by an across-the-board reduction to all Smithsonian programs, part of a government-wide cutback aimed at reducing the Nation's overall budget deficit. In order to prevent major disruption to ongoing programs and public activities, a series of financial actions were taken.

Additional control on hiring, travel, and all non-essential

purchases and contracts was instituted; based on a comprehensive management review of all Smithsonian programs, certain activities were curtailed or deferred, including elimination of spring and summer evening visiting hours in all museums except the National Air and Space Museum and the National Zoological Park; and following regulations set forth by Congressional Committees, funds were reprogrammed among programs to meet priority needs. These actions enabled the Institution to complete the year with a minimum of disruption.

Federal Agency Grants and Contracts

Grants and contracts from federal agencies totaled \$13,217,000, approximately 7 percent less than received in the previous year.

This support not only contributed substantially to research and educational projects being conducted by Smithsonian personnel, but also benefitted the granting agencies by providing access to specific expertise and resources maintained at the Institution. As illustrated in Table 3, the majority of these funds, over \$9 million, were provided by the National Aeronautics and Space Administration to continue work at the Smithsonian Astrophysical Observatory in satellite tracking, maser design and construction, and studies of the upper atmosphere and stellar magnetic fields. Support from the Defense Department, the National Science Foundation and other government agencies provided

an additional \$4 million, primarily to Science activities, for a broad spectrum of projects, including dating Antarctic ice sheets, enhancement of a volcano data file, a tumor registry program, coral reef research, sorting and study of polar marine specimens, a medical entomology project, and the annual Smithsonian Folklife Festival.

Nonappropriated Trust Funds

In fiscal year 1982, nonappropriated trust fund revenues to the Institution from gifts and grants, endowment fund and current investments, and revenue producing activities totaled \$108,979,000, an increase of \$9,333,000, or 9 percent, over fiscal year 1981. After deduction of expenses incurred by the bureau and auxiliary activities, however, net income declined by \$3,339,000 to a total of \$20,383,000. As displayed in Table 2, these revenues provided support for programs of virtually every bureau of the Institution.

Restricted fund income to the Institution totaled \$6,821,000 for the year, of which \$3,154,000 was derived from gifts and grants; \$2,886,000 from restricted purpose endowment investment income and interest paid on fund balances of restricted purpose funds; and \$781,000 from other sources, including primarily fund raising activities of the Archives of American Art and Cooper-Hewitt Museum and the sales desk at the Freer Gallery of Art. Available only for specified purposes, restricted funds provided substantial support for a wide variety of research, exhibition, publication and educational activities, and served as the major funding source

for the Freer Gallery of Art and the Smithsonian Marine Station at Link Port (formerly the Fort Pierce Bureau). A particularly significant contribution was received by the Office of Museum Programs in fiscal year 1982 in the form of a three-year grant of \$1.1 million from the Kellogg Foundation. This grant will be used to fund a series of fellowships, colloquia, workshops and videotapes designed to strengthen the education role of America's museums.

Revenues to <u>Unrestricted Special Purpose</u> funds during the year totaled \$4.7 million. Bureau activities, such as the National Air and Space Museum Theater and the membership programs of the Cooper-Hewitt Museum generated revenues of \$2,925,000, while gifts, interest earned on the investment of bureau fund balances, zoo parking revenues and other miscellaneous income accounted for an additional \$1,786,000. Also included in this fund category are allocations for the Collections Acquisition, Scholarly Studies, and Educational Outreach programs, for pre- and post-doctoral fellowship awards, and for revenue-sharing to bureaux housing centrally managed shop and concession activities. As specified by the Bylaws of the Regents, transfers were made to endowment of otherwise unrestricted bequests received during the year.

Unrestricted General Purpose fund revenue is derived primarily from investment income and net revenues of the auxiliary activities. After deduction of auxiliary activity expenses, net general unrestricted funds provided some \$11 million for general Institutional purposes, a decrease of approximately \$3.5 million, or 24 percent, from the previous year (see Table 6).

Several factors have contributed to this reduction in income, including lower postal subsidies to nonprofit organizations, lower museum visitation, limiting of summer evening hours to the National Zoological Park and the National Air & Space Museum, and higher expenses, particularly as related to the recording program of the Division of Performing Arts. Unanticipated costs of promotion and record production combined with an unfortunately high rate of bad debts and inventory adjustments resulted in a net loss to this activity of more than \$2.5 million. Of net revenues generated by the auxiliary activities, some \$8.1 million was from the Associates programs, with the Smithsonian magazine responsible for the majority of this income, continuing its success of previous years. Sizable surpluses totaling over \$1.5 million were also generated by the Museum Shops, the Mail Order Division and the Smithsonian Press, which in fiscal year 1982 was reorganized to include the publishing activities of the Smithsonian Exposition Books. Income generated by concessions, parking, and food service activities provided an additional \$1.5 million, which was somewhat below last year's results, due primarily to lower visitation and the costs of converting two concessionairemanaged food facilities (at the National Air and Space Museum and the Hirshhorn Museum and Sculpture Garden) to self-operation.

Notwithstanding the decline in unrestricted general purpose revenues, continued support was provided a wide range of administrative and programmatic activities, including major operating support for the Cooper-Hewitt Museum, the Office of Telecommunications, Folklife Programs, and the Visitor Information and Reception Center. Special allotments were also made for fund-raising efforts related to the Quadrangle construction,

for the cooperative education programs initiated in fiscal year 1981 to strengthen affirmative action efforts, for equipment and publication costs, as well as for events related to the Franklin Delano Roosevelt Centennial and the bicentennial celebration of the Battle of Yorktown. Transfers to special purpose funds, which totaled \$3,328,000, provided support, as mentioned earlier, for a variety of acquisition, education, research and outreach projects. These allocations allowed the purchase of significant works including a major collection of West African textiles, a portrait of Thomas Jefferson painted by Gilbert Stuart, and two 17th century Chinese scroll paintings by Shih-t'ao. The funds permitted extension of the Institution's outreach through special lectures and concerts, radio features on Smithsonian activities, and programs for the elderly and institutionalized, and also furthered research in such diverse areas as the ecological impact of the Africanized honeybees in Central America, the behavioral ecology of reef sharks, and the development of an oral history on the origins of modern astronomy and astrophysics. An additional amount of \$1 million was transferred to plant funds for Quadrangle development, and \$2,021,000 to unrestricted endowment principal to ensure income for future needs.

Special Foreign Currency Program

Foreign currencies accumulated from sales of surplus agricultural commodities under Public Law 83-480, determined by the Treasury Department

to be in excess of the normal needs of the United States, are made available to the Smithsonian through the Special Foreign Currency program. An appropriation of excess foreign currencies equivalent to \$4,320,000 was received under this program in fiscal year 1982. Some \$3.4 million was used to continue a program of grants to United States institutions for field research and advanced professional training in the countries of Burma, India and Pakistan. Fields of study focused on areas of traditional Smithsonian competence, including archaeology and related disciplines, systematic and environmental biology, astrophysics and earth sciences, and museum programs. The balance of funds appropriated, \$960,000, was provided for the international effort to preserve the monumental site of Moenjodaro in Pakistan. This appropriation represented the first increment of a total of \$4 million equivalent in nonconvertible Pakistani currency expected to be sought by the Institution as the United States' contribution toward the project. Obligations during the fiscal year by research discipline and country are provided in Table 8.

Construction

Funding provided for construction and renovation projects at the Institution totaled \$12,962,000 in fiscal year 1982, as shown in Table 9. Of this amount, \$9,744,000 was from federal appropriations, and \$3,218,000 was from nonappropriated trust funds.

An appropriation of \$7,680,000 was provided for major repairs. renovation and building improvements to Smithsonian facilities with a further \$1,104,000 designated specifically for buildings and exhibits of the National Zoological Park. Projects supported by these appropriations included maintenance of building exteriors, particularly of the Arts and Industries building and the Renwick Gallery; renovations to protect the safety, security and health of the public, staff, and collections; elimination of architectural barriers to assure accessibility for disabled persons; energy conservation efforts; and programmatic modifications to outlying research and animal preservation facilities. An additional \$960,000 was provided for Quadrangle development planning, marking the first federal appropriation for this project for which planning has been underway since 1978 with support from unrestricted trust funds. Quadrangle represents a special partnership of federal and nonfederal funding; of the anticipated total construction cost of \$75 million, onehalf will be provided from federal appropriations and one-half from nonappropriated sources. As of the end of the fiscal year, gifts for the Quadrangle, transfers from unrestricted trust funds, and earned interest totaled some \$9,656,000; together with additional commitments from outside sources, anticipated revenues from the sale of real estate, and planned unrestricted trust fund transfers in the future, over \$27.6 million of the \$37.5 million has been raised. In recognition of the success of fund-raising efforts and of the Institution's commitment to the project, a construction appropriation of \$36.5 million was passed in October 1982, and construction will commence early in 1983.

Other nonappropriated fund receipts included a gift for renovation of the south entrance to the Smithsonian Institution building, a settlement for damages to the American Art and Portrait Gallery building which occurred during Metro subway construction, a bequest of real estate which was subsequently transferred to the endowment funds, and interest paid on unexpended fund balances. Funds also were transferred for mortgage payments on property occupied by the National Museum of African Art.

Endowment and Similar Funds

The market value of Smithsonian Endowment Funds was \$90,231,000 on September 30, 1982, as compared to \$79,025,000 on September 30, 1981.

The majority of these funds, \$88,858,000, is invested in the Pooled Consolidated Endowment fund under outside investment management; \$1 million is on permanent deposit with the United States Treasury; and the remaining \$373,000 is held in miscellaneous securities and donated real estate. Approximately 59 percent of the endowments, as shown in Table 10, are restricted, with income available only for purposes specified by the donor. The remaining 41 percent, or \$37,160,000, are unrestricted, with income available for general Institutional purposes; certain of these unrestricted funds, however, such as the Lindbergh Chair of Aerospace History, have been designated internally for specific purposes, as noted in Table 13 which lists all Smithsonian endowments.

Investment management of the Pooled Consolidated Endowment fund is conducted by three professional advisory firms under the oversight of the Investment Policy Committee and the Treasurer, and subject to guidelines established by the Board of Regents. As of the end of fiscal year 1982, the firms (with their respective portion of the fund) were Fiduciary Trust Company of New York (50 percent), Batterymarch Financial Management Corp. (31 percent), and Torray Clark & Company (19 percent). The total rate of return for the fund during fiscal year 1982, as calculated by an outside investment measurement service, was +15.7 percent (including interest and dividend income as well as market value appreciation), as compared to +12.1 percent for the Dow Jones Industrial Average and +9.9 percent for the Standard & Poor's 500 average (both calculated on the same basis). Table 11 displays the market values of the major components of the fund for prior years, and the activity during the past year is shown on Table 12.

The Smithsonian utilizes the Total Return Income policy which defines total investment return as yield (interest and dividends) plus appreciation, including both realized and unrealized capital gains. A portion of this return is made available for expenditure each year, and the remainder is retained as principal. This total return income payout is determined in advance each year by the Board of Regents based on studies of anticipated interest and dividend yields, the Institution's programmatic needs, inflationary factors, and the five-year running average of market values, adjusted for capital additions or withdrawals. The income payout rate for fiscal year 1982 to restricted purpose endowments in the

Pooled Consolidated Endowment fund constituted an 8 percent increase over the prior year, while the payout to unrestricted endowments was reduced from the earlier level, permitting a proportionately greater reinvestment for unrestricted endowment. After the income payout of \$3,275,000 during the year, a total of \$2,064,000 of excess interest and dividend yield was reinvested into endowment principal.

A full listing of all endowment funds is shown on Table 13. Detail of the securities held in the Pooled Consolidated Endowment Fund as of September 30, 1982, may be obtained upon request from the Treasurer of the Institution.

Related Organizations

The Science Information Exchange, Inc., (SSIE) which has served as a national source for information on research in progress since its founding in 1949, ceased operation on October 31, 1981; a certificate of dissolution was granted in June 1982. Under a contract with the Department of Commerce, the Institution has continued during the past year to provide the Exchange with administrative and fiscal services necessary to closing out the operation, transferring the assets to the Department of Commerce, and paying the outstanding net liabilities. All operations are expected to be closed out by June 1983.

Reading is Fundamental, Inc. (RIF), associated with the Institution since 1968, is an independent, separately incorporated entity dedicated to the improvement of reading abilities in children. Primary support is derived from private contributions and a federal contract with the Department of Education to operate the federal Inexpensive Book Distribution Program.

The Woodrow Wilson International Center for Scholars, the National Gallery of Art, and the John F. Kennedy Center for the Performing Arts were established by Congress within the Institution but are administered by separate boards of trustees. Independent financial reports are prepared by each of these organizations. Office space and fiscal and other administrative and support services are provided the Woodrow Wilson International Center for Scholars on a reimbursement basis.

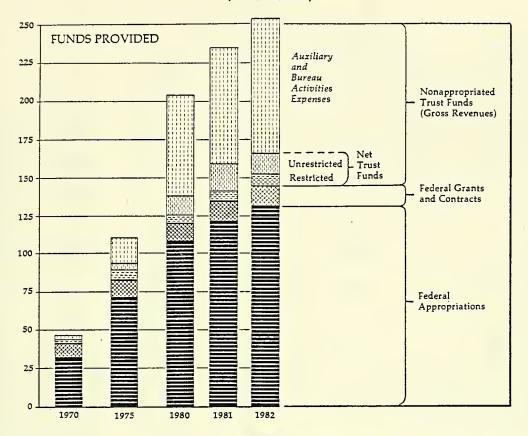
The Friends of the National Zoo (FONZ) is an independent, nonprofit corporation working closely with the National Zoological Park. It operates, under contract, a number of beneficial concessions for the National Zoo; FONZ provided concession and rental fees to the Zoo amounting to approximately \$268,000 during calendar year 1981 (FONZ's fiscal year). In addition, FONZ contributed other important financial and volunteer support to Zoo programs. Financial affairs of this organization are described separately elsewhere in Smithsonian Year 1982.

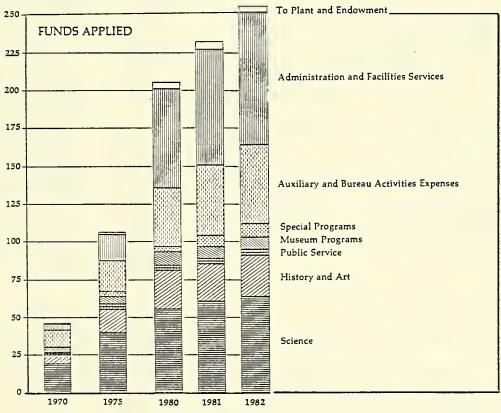
The nonappropriated trust funds of the Institution are audited annually by an independent public accounting firm; in order to provide a comprehensive audit of all Smithsonian funds, this independent verification has been extended in fiscal year 1982 to cover appropriated funds as well, and the report of Coopers & Lybrand is contained in the following pages. Additional reviews are conducted annually on a number of Smithsonian activities by the internal audit staff. Additionally, the Defense Contract Audit Agency conducts an annual audit of grants and contracts received from federal agencies, as well as their allocated administrative costs.

The Audit and Review Committee of the Regents met during the year pursuant to their responsibility, under the bylaws of the Institution, for reviewing the Smithsonian's accounting systems and internal financial controls; for facilitating communication between the Board of Regents and auditors from the internal audit staff, the independent accounting firm, and the General Accounting Office; and for reviewing operations of the Institution for compliance with approved programs and policies.

SMITHSONIAN INSTITUTION OPERATING FUNDS

Fiscal Years 1970, 1975, and 1980–1982 (In \$1,000,000's)





·	FY 1980	FY 1981	FY 1982
INSTITUTIONAL OPERATING FUN	DS		
UNDS PROVIDED:			
Gederal Appropriations - Salaries & Expenses	\$107,764	\$122,478	\$131,170
ederal Agency Grants & Contracts	12,947	14,172	13,217
Onappropriated Trust Funds:	F 770	4 770	6 021
For Restricted Purposes	5,339	6,378	6,821
Auxiliary & Bureau Activities Revenues - Gross	75,150	88,381	97,350
Less Related Expenses	(65,933)	(75,924)	(88,596)
Auxiliary & Bureau Activities Net Revenue	9,217	12,457	8,754
Investment, Gift, and Other Income	3,825	4,887	4,808
Total Net Unrest. & Special Purpose Revenue	13,042	17,344	13,562
Tabal Nana-manistal Turas Fuels Curas	94 714	00 (46	100 070
Total Nonappropriated Trust Funds* -Gross	84,314 18,381	99,646 23,722	108,979
-1466	10,301	23,722	20,383
otal Operating Funds Provided - Gross	205,025	236,296	253,366
- Net	\$139,092	\$160,372	\$164,770
UNDS APPLIED:			
Science	\$ 57,907	\$ 62,703	\$ 64,837
Less SAO Overhead Recovery	(2,196)	(2,470)	(2,487)
History & Art	26,224	25,614	26,762
Aublic Service	3,129	3,421	3,782
fuseum Programs	8,974	8,084	8,539 9,533
Special Programsssociates and Business Management	3,204 345	7,284 312	543
Administration - Federal**	8,048	8,782	9,719
-Nonappropriated Trust Funds	4,937	5,740	5,733
Less Smithsonian Overhead Recovery	(4,379)	(5,014)	(5,338)
Facilities Services	30,630	36,501	39,327
			160.050
Total Operating Funds Applied	136,823	150,957	160,950
Transfers (Nonappropriated Trust Funds) Unrestricted Funds -To Plant	1,342	2,550	1,064
-To Endowments	2,031	2,550	2,259
Restricted Funds - To Endowments	757	108	318
Total Operating Funds Applied & Transferred Out	\$140,953	\$156,165	\$164,591**
HANGES IN NONAPPROPRIATED TRUST FUND BALANCES:			
Restricted Purpose (Incl. Fed. Agency Gr. & Contracts)	\$ (225)	\$ 1,276	\$ (45)
hrestricted - General Purpose	36	42	5
- Special Purpose	$\frac{(1,672)}{\$(1,861)}$	2,704 \$ 4,022	\$ 364
otal	\$ (1,801)	3 4,022	3 304
YEAR-END BALANCES - NONAPPROPRIATED TRUST FUNDS:			
Restricted Purpose	\$ 4,675	\$ 5,951	\$ 5,906
mrestricted - General Purpose	5,001	5,043	5,048
- Special Purpose	9,895	12,599	13,003
Total	\$ 19,571	\$ 23,593	\$ 23,957
OTHER PERENT ARRONDIATIONS			
OTHER FEDERAL APPROPRIATIONS			
pecial Foreign Currency Program	\$ 4,200	\$ 3,550	\$ 4,320
Special Foreign Currency Program	\$ 4,200 32,100	\$ 3,550 15,829	\$ 4,320 9,744

^{*}Figures do not include gifts and other income directly to Plant and Endowment Funds:
FY 1980 - \$1,211,000; FY 1981 - \$2,696,000; FY 1982 - \$2,197,000.

**Includes unobligated funds returned to Treasury: FY 1980 - \$267,000; FY 1981 - \$64,000;

FY 1982 - \$124,000.
***Includes \$185,000 available for FDR Centennial carried forward from FY 1981.

TABLE 2

Source and Application of Operating Funds Year Ended September 30, 1982 (Excludes Special Foreign Currency Funds, Plant Funds and Endowments) (In \$1,000's)

Funds			Nonfederal Funds					
Funds Federal funds funds General dativariates Special and contracts FUND BALANCES - 10/1/81. S 185** S 23,593 S 5,043 S - S 12,599 S 5,546 S 405 FUNDS PROVIDED Federal Appropriations 131,170 - - - - - - - - Investment Income - 6,526 2,921 - 719 2,886 - Grants and Contracts - 13,217 - - - - 13,217 Grants and Contracts - 5,234 16 1,757 305 3,154 - Sales and Revenue 95,593 92,668 2,925 - - Other - 131,170 122,196 3,022 94,425 4,711 6,821 13,217 Total Provided 131,170 122,196 3,022 94,425 4,711 6,821 13,217 Total Available S 131,355 S 145,789 S 8,065 S 94,425 S 17,310 S 12,367 S 13,622 FUNDS APPLIED Science: S 33 412 90 S S S S S S S Astrophysical Observatory 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery - (2,487) (2,487) - - - - Tropical Research Inst 2,923 305 78 146 81 - - Total Available 1,961 199 - 87 77 85 Natl Air & Space Museum 6,386 2,173 8 1,993 64 108 Chesapeake Bay Center 911 599 58 119 72 350 Natl Science 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary S 33 115 96 - 20 - (1) Natl Mus Am History 8,261 719 97 - 244 378 - Total Science 44,652 19,234 342 - 3,586 2,458 12,848 Fisher and Art: Assistant Secretary S 35 115 96 - 20 - (1) Natl Mus Am History 8,261 719 97 - 244 378 - Total Science 44,652 19,234 342 - 3,586 2,458 12,848 Fierer Gallery of Art 835 1,594 9 - 203 1,382 - Freer Gallery of Art 835 1,594 9 - 201 1,382 - Freer Gallery of Art 835 1,594 9 - 201 1,382 - Freer Gallery of Art 835 1,594 9 - 201 1,382 -				Unx				ricted
Funds Federal funds funds General dativariates Special and contracts FUND BALANCES - 10/1/81. S 185** S 23,593 S 5,043 S - S 12,599 S 5,546 S 405 FUNDS PROVIDED Federal Appropriations 131,170 - - - - - - - - Investment Income - 6,526 2,921 - 719 2,886 - Grants and Contracts - 13,217 - - - - 13,217 Grants and Contracts - 5,234 16 1,757 305 3,154 - Sales and Revenue 95,593 92,668 2,925 - - Other - 131,170 122,196 3,022 94,425 4,711 6,821 13,217 Total Provided 131,170 122,196 3,022 94,425 4,711 6,821 13,217 Total Available S 131,355 S 145,789 S 8,065 S 94,425 S 17,310 S 12,367 S 13,622 FUNDS APPLIED Science: S 33 412 90 S S S S S S S Astrophysical Observatory 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery - (2,487) (2,487) - - - - Tropical Research Inst 2,923 305 78 146 81 - - Total Available 1,961 199 - 87 77 85 Natl Air & Space Museum 6,386 2,173 8 1,993 64 108 Chesapeake Bay Center 911 599 58 119 72 350 Natl Science 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary S 33 115 96 - 20 - (1) Natl Mus Am History 8,261 719 97 - 244 378 - Total Science 44,652 19,234 342 - 3,586 2,458 12,848 Fisher and Art: Assistant Secretary S 35 115 96 - 20 - (1) Natl Mus Am History 8,261 719 97 - 244 378 - Total Science 44,652 19,234 342 - 3,586 2,458 12,848 Fierer Gallery of Art 835 1,594 9 - 203 1,382 - Freer Gallery of Art 835 1,594 9 - 201 1,382 - Freer Gallery of Art 835 1,594 9 - 201 1,382 - Freer Gallery of Art 835 1,594 9 - 201 1,382 -			Total		Auxiliary			Grants
Funds funds funds General ities purpose General contracts FUND BALANCES - 10/1/81. \$ 185**\$ 23,593 \$5,043 \$ - \$12,599 \$ 5,546 \$ 405 FUNDS PROVIDED Federal Appropriations. 131,170 Investment Income. 6,526 2,921 - 719 2,886 - 6 Grants and Contracts. 13,217 - 719 2,886 - 713,217 Gifts. 5,534 18 1,757 305 3,154 - 72 Gifts. 7,535 - 92,668 2,925 - 72 Total Provided. 131,170 122,196 3,022 94,425 4,711 6,821 13,217 Total Provided. 131,170 122,196 3,022 94,425 4,711 6,821 13,217 Total Available. 5131,355 5145,789 \$8,065 \$94,425 \$17,310 \$12,367 \$13,622 FUNDS APPLIED Sciênce: Assistant Secretary. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) - 502 1,810 1,269 Astrophysical Observatory. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) - 77 Tropical Research Inst. 2,923 305 78 - 146 81 - 77 Radiation Biology Lab. 1,961 199 - 87 146 81 - 77 Radiation Biology Lab. 1,961 199 - 87 199 7 27 Center for Study of Man. 618 68 1 - 67 - 7 Total Science. 44,652 19,234 342 - 3,586 2,458 12,848 #istory and Art: Assistant Secretary. 533 115 96 20 - 7 (1) Natl. Mus. Am. History. 8,261 719 97 244 378 - 7 Total Science. 44,652 19,234 342 - 3,586 2,458 12,848 #istory and Art: Assistant Secretary. 2,799 800 23 - 549 228 - 7 Funds Archives of American Art. 3,850 526 36 284 142 64 Natl. Mus. American Art. 3,850 526 36 284 142 64 Natl. Mus. American Art. 3,850 526 36 284 142 64 Natl. Nus. American Art. 3,850 526 36 284 142 64 Natl. Nus. American Art. 3,850 526 36 284 142 64 Natl. Nus. American Art. 3,850 526 36 284 142 64 Natl. Nus. American Art. 3,850 526 36 56 284 142 64 Natl. Nus. American Art. 3,850 526 36 56 284 142 64 Natl. Nus. American Art. 3,850 526 36 56 284 142 64 Natl. Mus. American Art. 3,850 526 36 56 284 142 64 Natl. Mus. American Art. 3,850 526 36 56 284 142 64 Natl. Mus. American Art. 3,850 526 36 56 284 142 64 Natl. Mus. Of African Art. 760 206 76 - 21 109 - 207 Natl. Mus. Of African Art. 760 206 76 - 21 109 - 207 Natl. Mus. Of African Art. 76		Federal	nonfedera	Z		Special		and
FUNDS PROVIDED Federal Appropriations 131,170 Investment Income	Funds		•			•	General	contracts
FUNDS PROVIDED Federal Appropriations 131,170 Investment Income			<u> </u>					
Federal Appropriations.	FUND BALANCES - 10/1/81	\$ 185*	* \$ 23,593	\$5,043	<u>\$ -</u>	\$12,599	\$ 5,546	\$ 405
Investment Income		171 170						
Grants and Contracts.		131,170	6 526	2 021	-	710	2 004	•
Gifts		-		2,921	-	/19	2,000	17 217
Sales and Revenue		_	-	18	1 757	705	3 154	13,217
Total Provided			•		•		5,154	_
Total Provided		_	•		52,000	•	781	_
Total Available						702	761	<u>-</u>
FUNDS APPLIED Sciènce: Assistant Secretary\$ 333 \$ 412 \$ 90 \$ - \$ 5 \$ 129 \$ 188 Natl. Mus. of Nat. History. 16,555 3,640 59 - 502 1,810 1,269 Astrophysical Observatory. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) (2,487)	Total Provided	131,170	122,196	3,022	94,425	4,711	6,821	13,217
Sciènce: Assistant Secretary\$ 333 \$ 412 \$ 90 \$ - \$ 5 \$ 129 \$ 188 Natl. Mus. of Nat. History. 16,555 3,640 59 - 502 1,810 1,269 Astrophysical Observatory. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) (2,487) Tropical Research Inst 2,923 305 78 - 146 81 - Radiation Biology Lab 1,961 199 87 27 85 Natl. Air & Space Museum 6,386 2,173 8 - 1,993 64 108 Chesapeake Bay Center 911 599 58 - 119 72 350 Natl. Zoological Park 9,271 429 18 - 77 37 297 Center for Study of Man 618 68 1 67 Total Science 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary 533 115 96 - 20 - (1) Natl. Mus. Am. History. 8,261 719 97 - 244 378 - Natl. Mus. American Art 3,850 526 36 - 284 142 64 Natl. Portrait Gallery 2,799 800 23 - 549 228 - Hirshhorn Museum 2,563 223 12 - 113 98 - Freer Gallery of Art 835 1,594 9 - 203 1,382 - Archives of American Art 835 1,594 9 - 203 1,382 - Archives of American Art 626 626 3 - 18 605 - Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -	Total Available	\$131,355	\$145,789	\$8,065	\$94,425	\$17,310	\$12,367	\$13,622
Assistant Secretary\$ 333 \$ 412 \$ 90 \$ - \$ 5 \$ 129 \$ 188 Natl. Mus. of Nat. History. 16,555 3,640 59 - 502 1,810 1,269 Astrophysical Observatory. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) (2,487)	FUNDS APPLIED							
Assistant Secretary\$ 333 \$ 412 \$ 90 \$ - \$ 5 \$ 129 \$ 188 Natl. Mus. of Nat. History. 16,555 3,640 59 - 502 1,810 1,269 Astrophysical Observatory. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) (2,487)	Saidnaa							
Natl. Mus. of Nat. History. 16,555 3,640 59 - 502 1,810 1,269 Astrophysical Observatory. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) (2,487) Tropical Research Inst. 2,923 305 78 - 146 81 - Radiation Biology Lab. 1,961 199 - 87 27 85 Natl. Air & Space Museum. 6,386 2,173 8 - 1199 72 350 Natl. Zoological Park. 9,271 429 18 - 77 37 297 Center for Study of Man. 618 68 1 67 Total Science. 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary. 533 115 96 - 20 - (1) Natl. Mus. Am. History. 8,261 719 97 - 244 378 - Natl. Mus. American Art. 3,850 526 36 - 284 142 64 Natl. Portrait Gallery. 2,799 800 23 - 549 228 - Hirshhorn Museum. 2,563 223 12 - 113 98 - Freer Gallery of Art. 835 1,594 9 - 203 1,382 - Archives of American Art. 626 626 3 - 18 605 - Cooper-Hewitt Museum. 733 1,543 365 - 787 337 54 Natl. Mus. of African Art. 760 206 76 - 21 109 -		¢ 333	\$ 412	\$ 90	\$ -	¢ =	¢ 120	¢ 100
Astrophysical Observatory. 5,694 13,896 2,517 - 657 171 10,551 Less Overhead Recovery (2,487) (2,487) Tropical Research Inst. 2,923 305 78 - 146 81 - Radiation Biology Lab. 1,961 199 87 27 85 Natl. Air § Space Museum. 6,386 2,173 8 - 1,993 64 108 Chesapeake Bay Center. 911 599 58 - 119 72 350 Natl. Zoological Park. 9,271 429 18 - 77 37 297 Center for Study of Man. 618 68 1 67 - Total Science. 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary. 533 115 96 - 20 - (1) Natl. Mus. Am. History. 8,261 719 97 - 244 378 - Natl. Mus. American Art. 3,850 526 36 - 284 142 64 Natl. Portrait Gallery. 2,799 800 23 - 549 228 - Hirshhorn Museum. 2,563 223 12 - 113 98 - Freer Gallery of Art. 835 1,594 9 - 203 1,382 - Archives of American Art. 626 626 3 - 18 605 - Cooper-Hewitt Museum. 733 1,543 365 - 787 337 54 Natl. Mus. of African Art. 760 206 76 - 21 109 -	Natl Mus of Nat History			•	Ψ -	• –	·	
Less Overhead Recovery (2,487) (2,487)		-			_		•	
Tropical Research Inst.		•			_	037	1/1	10,551
Radiation Biology Lab. 1,961 199 87 27 85 Natl. Air & Space Museum. 6,386 2,173 8 - 1,993 64 108 Chesapeake Bay Center. 911 599 58 - 119 72 350 Natl. Zoological Park. 9,271 429 18 - 77 37 297 Center for Study of Man. 618 68 1 67 - Total Science. 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary. 533 115 96 - 20 - (1) Natl. Mus. Am. History. 8,261 719 97 - 244 378 - Natl. Mus. American Art. 3,850 526 36 - 284 142 64 Natl. Portrait Gallery. 2,799 800 23 - 549 228 - Hirshhorn Museum. 2,563 223 12 - 113 98 - Freer Gallery of Art. 835 1,594 9 - 203 1,382 - Freer Gallery of Art. 835 1,594 9 - 203 1,382 - Cooper-Hewitt Museum. 733 1,543 365 - 787 337 54 Natl. Mus. of African Art. 760 206 76 - 21 109 -						146	81	_
Natl. Air & Space Museum 6,386 2,173 8 - 1,993 64 108 Chesapeake Bay Center 911 599 58 - 119 72 350 Natl. Zoological Park 9,271 429 18 - 77 37 297 Center for Study of Man 618 68 1 67 - Total Science 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary 533 115 96 - 20 - (1) Natl. Mus. Am. History 8,261 719 97 - 244 378 - Natl. Mus. American Art 3,850 526 36 - 284 142 64 Natl. Portrait Gallery 2,799 800 23 - 549 228 - Hirshhorn Museum 2,563 223 12 - 113 98 - Freer Gallery of Art 835 1,594 9 - 203 1,382 - Freer Gallery of Art 835 1,594 9 - 203 1,382 - Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -	• -	•			_			85
Chesapeake Bay Center. 911 599 58 - 119 72 350 Natl. Zoological Park. 9,271 429 18 - 77 37 297 Center for Study of Man. 618 68 1 - 67 - Total Science. 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary. 533 115 96 - 20 - (1) Natl. Mus. Am. History. 8,261 719 97 - 244 378 - Natl. Mus. American Art. 3,850 526 36 - 284 142 64 Natl. Portrait Gallery. 2,799 800 23 - 549 228 - Hirshhorn Museum. 2,563 223 12 - 113 98 - Freer Gallery of Art. 835 1,594 9 - 203 1,382 - Archives of American Art. 626 626 3 - 18 605 - Cooper-Hewitt Museum. 733 1,543 365 - 787 337 54 Natl. Mus. of African Art. 760 206 76 - 21 109 -		-			٠ ـ			
Natl. Zoological Park 9,271 429 18 - 77 37 297 Center for Study of Man 618 68 1 - 67 - Total Science 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary 533 115 96 - 20 - (1) Natl. Mus. Am. History 8,261 719 97 - 244 378 - Natl. Mus. American Art 3,850 526 36 - 284 142 64 Natl. Portrait Gallery 2,799 800 23 - 549 228 - Hirshhorn Museum 2,563 223 12 - 113 98 - Freer Gallery of Art 835 1,594 9 - 203 1,382 - Archives of American Art 626 626 3 - 18 605 - Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -			•		_	•		
Center for Study of Man. 618 68 1 - 67 - Total Science. 44,652 19,234 342 - 3,586 2,458 12,848 History and Art: Assistant Secretary. 533 115 96 - 20 - (1) Natl. Mus. Am. History. 8,261 719 97 - 244 378 - Natl. Mus. American Art. 3,850 526 36 - 284 142 64 Natl. Portrait Gallery. 2,799 800 23 - 549 228 - Hirshhorn Museum. 2,563 223 12 - 113 98 - Freer Gallery of Art. 835 1,594 9 - 203 1,382 - Archives of American Art. 626 626 3 - 18 605 - Cooper-Hewitt Museum. 733 1,543 365 - 787 337 54 Natl. Mus. of African Art. 760 206 76 - 21 109 -					_		_	
Total Science		•			-	- ' -		-
History and Art: Assistant Secretary								
Assistant Secretary	Total Science	44,652	19,234	342	-	3,586	2,458	12,848
Natl. Mus. Am. History 8,261 719 97 - 244 378 - Natl. Mus. American Art 3,850 526 36 - 284 142 64 Natl. Portrait Gallery 2,799 800 23 - 549 228 - Hirshhorn Museum 2,563 223 12 - 113 98 - Freer Gallery of Art 835 1,594 9 - 203 1,582 - Archives of American Art 626 626 3 - 18 605 - Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -	History and Art:							
Natl. Mus. American Art 3,850 526 36 - 284 142 64 Natl. Portrait Gallery 2,799 800 23 - 549 228 - Hirshhorn Museum 2,563 223 12 - 113 98 - Freer Gallery of Art 835 1,594 9 - 203 1,382 - Archives of American Art 626 626 3 - 18 605 - Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -		533	115	96	-	20	-	(1)
Natl. Portrait Gallery	Natl. Mus. Am. History	8,261	719	97	-	244	378	`-
Hirshhorn Museum	Natl. Mus. American Art	3,850	526	36	-	284	142	64
Freer Gallery of Art 835 1,594 9 - 203 1,382 - Archives of American Art 626 626 3 - 18 605 - Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -	Natl. Portrait Gallery	2,799	800	23	-	549	228	-
Archives of American Art 626 626 3 - 18 605 - Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -	Hirshhorn Museum	2,563	223	12	-	113	98	-
Cooper-Hewitt Museum 733 1,543 365 - 787 337 54 Natl. Mus. of African Art 760 206 76 - 21 109 -	Freer Gallery of Art	835	1,594	9	-	203	1,382	-
Natl. Mus. of African Art 760 206 76 - 21 109 -			626	3	-	18	•	-
	Cooper-Hewitt Museum		•		-	787	337	54
Total History and Art 20,960 6,352 717 - 2,239 3,279 117	Natl. Mus. of African Art	760	206	76		21	109	
	Total History and Art	20,960	6,352	717		2,239	3,279	117

TABLE 2 - Continued

Source and Application of Operating Funds - continued
Year Ended September 30, 1982
(Excludes Special Foreign Currency Funds, Plant Funds and Endowments) (In \$1,000's)

		Nonfederal Funds Unrestricted Restricted					
		m · 1				Rest	
	n 1 1	Total		Auxiliary	a		Grants
Funds	Federal funds	nonfederal funds	General	activ- ities	Special Purpose	General	and contracts
Public Service:							
Assistant Secretary	218	1	1	-	.	-	-
Reception Center	45	463	459	-	4	-	-
Telecommunications	62	654	278 24	-	157 17	219	-
Anacostia Museum Intl. Exchange Service	671 215	44	24	_	-	3	_
Performing Arts	449	8,359	-	8,265	75	19	_
Smithsonian Press	886	6,640	_	6,640	-	-	_
Total Public Service	2,546	16,161	762	14,905	253	241	
Museum Programs:			•				
Assistant Secretary	748	121	17	-	62	23	19
Registrar	132	-	-	-	-	-	-
Conserv. Analytical Lab Libraries	822 3,212	246	229	-	- 1	16	-
Exhibits	1,407	(1)	-	-	(1)	-	_
Traveling Exhib. Service	279	1,565	_	1,167	48	238	112
Archives	453	42	42	-	-	_	-
National Museum Act	735						
Total Museum Programs	7,788	1,973	288	1,167	110	277	131
Special Programs:							
Am. Studies & Folklife Pgm.	619	908	513	_	39	32	324
Intl. Environ. Science Pgm.	526	-	-	_	-	-	-
Academic & Educational Pgm.	531	992	167	-	693	117	15
Collections Mgt./Inventory	733	-	-	-	-	-	-
Major Exhibition Program	718	-	-	-	-	-	-
Museum Support Center	4,510	1			1		
Total Special Programs	7,637	1,901	680		733	149	339
Associate Programs	-	49,226	499	48,668	24	35	-
Business Management	-	21,579	-	21,579	-	-	-
Administration	9,595	5,828	5,513	94	91	130	_
Less Overhead Recovery			(5,338)	-	-	-	-
Facilities Services	38,053	1,275	1,218	-	55	2	-
Transfers Out/(In):							
Treasury	124	-	-	-	-	-	-
Outreach	-	-	2,000	-	(2,000)	-	-
Net Auxiliary Activities	-	-	(7,632)	7,632	-	-	-
Other Designated Purposes.	-	-	947	380	(1,086)	(241)	-
Plant	-	1,064	1,000	-	64	-	-
Endowment		2,577	2,021		238	318	
Total Transfers	124	3,641	(1,664)	8,012	(2,784)	77	
Total Funds Applied	\$131,355	\$121,832	\$3,017	\$94,425	\$ 4,307	\$6,648	\$13,435
FUND BALANCES 9/30/82	\$ -	\$ 23,957	\$5,048	\$ -	\$13,003	\$5,719	\$ 187

^{*}Unobligated funds returned to Treasury.

**Funds available for FDR Centennial through FY 1982.

TABLE 3 Grants and Contracts - Expenditures (In \$1,000's)

Federal Agencies	FY 1980	FY 1981	FY 1982
Department of Commerce Department of Defense Department of Energy Department of Health and Human Services Department of Interior National Aeronautics and Space	\$ 89	\$ 210	\$ 174
	1,078	703	1,001
	340	407	448
	280	283	325
	197	244	268
Administration*	9,832	10,663	9,303
	651	784	1,079
	415	574	837
	\$12,882	\$13,868	\$13,435

^{*}Includes \$554 (FY 1980), \$813 (FY 1981) and \$264 (FY 1982) in subcontracts from other organizations receiving prime contract funding from NASA.
**Includes \$112 (FY 1980), \$208 (FY 1981) and \$230 (FY 1982) in NSF subcontracts

from the Chesapeake Research Consortium.

Restricted Operating Trust Funds* Fiscal Years 1980 - 1982 (In \$1,000's)

Fund balance end of year	\$4,574	\$ 876 (25) 57 111 13 610 487 326 160 604 935 98 350 175 346 596	
Net increase (decrease)	\$ (290) \$ 972	\$ (505) (45) (8) (8) 21 (69) 72 29 (15) (73) 324 125 (173) 338 37 21 338	
Transfers in (out)	\$ (773) \$ (111)	\$ (9) 8 8 8 8 (95) 	
Deduc- tions	\$4,856	\$1,810 171 81 64 72 260 378 142 228 1,382 605 337 238 1,382 605 605 337 238	
Total revenue	\$5,339	\$1,314 118 73 85 85 427 407 127 127 155 422 1,507 432 374 259 374 259 376 376 376 376 376 376 376 376	
Misc.	\$733	\$ 4 10 	
Gifts	\$2,257	\$ 337 51 49 24 24 197 330 51 124 355 50 314 180 235 331 526 331 526	
Invest- ment	\$2,34 <u>9</u> \$2,591	\$ 973 57 24 61 61 77 77 69 30 67 972 28 66 24 19	
Item	FY 1980 - Total FY 1981 - Total	Natl. Mus. of Natural History Astrophysical Observatory Tropical Research Institute National Air & Space Museum Chesapeake Bay Center Other Science Natl. Mus. of American History. Natl. Mus. of American Art Hirshhorn Museum Freer Gallery of Art Archives of American Art Cooper-Hewitt Museum Traveling Exhibition Service Office of Museum Programs All Other	

*Does not include Federal Agency Grants and Contracts.

		Rev	enne			Dodnotions	1.008		Panel
	T	7	Gifts	F - 1 - E	ę		Bureau	. Net	balance
Item	Invest- ment	act- ivities	and other revenue	Total revenue	Transfers in (out)	Program expense	Activity expense	increase (decrease)	end of year
FY 1980	\$430	\$2,049	\$ 771	\$3,250	\$4,252	\$7,361	\$1,813	\$(1,672)	\$ 9,895
FY 1981	\$589	\$3,333	\$1,105	\$5,027	\$4,766	\$4,844	\$2,245	\$2,704	\$12,599
FY 1982:									
Natl. Mus. of Natural History.	\$ 42	\$	\$ 32	\$ 78	475	\$ 501	1	\$ 51	\$ 387
Astrophysical Observatory	9	118	73	197	523	514	143	63	597
Tropical Research Institute	ı	ı	3	3	134	141	5	6)	81
Natl. Air & Space Museum	336	2,003	31	2,370	(179)	633	1,360	198	3,036
Chesapeake Bay Center	2	35	11	48	80	92	27	6	34
Natl. Zoological Park	186	1	206	. 392	8	77	1	323	1,618
Other Science	39	1	8	42	137	92	1	87	233
	23	13	80	116	132	235	6	4	277
Natl. Mus. of American Art	14	9	6	117	140	279	2	(27)	170
Natl. Portrait Gallery	7	6	30	46	511	547	2	8	70
Hirshhorn Museum	18	1	44	62	39	113	1	(12)	137
Cooper-Hewitt Museum	1	290	78	899	2	273	514	(114)	(81)
Natl. Mus. of African Art	1	13	3	16	146	٦	20	141	143
Liability Reserves	•	1	1	ı	1	1	ŧ	ı	3,330
Unallocated Coll. Acq., Schol.									
Studies, and Outreach	1	1	1	1	(197)	1	1	(197)	73
Fellowships	ı	1	•	1	822	899	1	154	627
Museum Support Center Equip	•	•	1	1	1	7	•		749
All Other	46	134	376	226	8	741	97	$(2\overline{74})$	1,522
									۱I.
Total FY 1982	\$719	\$2,925	\$1,067	\$4.711	\$2,784	\$4,908	\$2,183	\$ 404	\$13,003

TABLE 6

Unrestricted Trust Funds - General and Auxiliary Activities
Fiscal Years 1980 - 1982
(In \$1,000's)

Item	FY 1980	FY 1981	FY 1982
	11 1300	11 1901	11 1002
FUNDS PROVIDED			
General Income:			
Investments		\$ 3,123	\$ 2,921
Gifts		15	18
Miscellaneous	140	55	83
Total General Income	2,624	3,193	3,022
Auxiliary Activities Income (Net):			
Associates	6,113	8,691	8,126
Business Management	ĺ		•
-Museum Shops		631	856
-Concessions, Parking and Food Services	•	1,978	1,513
-Other	(191)	(251)	(322)
Performing Arts		(186)	(2,544)
Smithsonian Press* Traveling Exhibitions		767 (226)	670 (298)
Photo Services		(35)	11
Thoto delvices	(113)	(33)	
Total Auxiliary Activities	8,981	11,369	8,012
Total Funds Provided (Net)	11,605	14,562	11,034
EXPENDITURES AND TRANSFERS			
Administrative and Program Expense	10,535	12,141	12,505
Less Administrative Recovery	6,575	7,484	7,825
Net Expense	3,960	4,657	4,680
Logo Trong Cours			
Less Transfers:			
To Special Purpose for Program Purposes	4,307	4,816	3,328
To Plant Funds		2,526	1,000
To Endowment Funds	,	2,521	2,021
NET ADDITION TO FUND BALANCE	36	42	5
ENDING FUND BALANCE	\$ 5,001	\$ 5,043	\$ 5,048

^{*}Includes Smithsonian Exposition Books which was combined with the Smithsonian Press in FY 1982.

TABLE 7

Auxiliary Activities
Fiscal Years 1980 - 1982
(In \$1,000's)

Activity	Sales and other revenue	Gifts	Less cost of, sales	Gross revenue	Ex- penses	Net revenue**** (loss)
FY 1980	\$72,203	\$ 898	\$41,569	\$31,532	\$22,551	\$ 8,981
FY 1981	\$83,719	\$1,329	\$45,866	\$39,182	\$27,813	\$11,369
FY 1982:						
Associates	\$55,037	\$1,757	\$38,293	\$18,501	\$10,375	\$ 8,126
Business Management: -Museum Shops*Concessions/Parking/	18,330	-	11,449	6,881	6,025	856
Food Services	4,933 363	-	1,076	3,857 363	2,344 685	1,513 (322)
Performing Arts	5,721	_	2,618	3,103	5,647	(2,544)
Smithsonian Press***	7,310	-	2,321	4,989	4,319	670
Traveling Exhibitions Photo Services (Admin-	869	-	398	471	769	(298)
istration)	105		11	94	83	11
Total FY 1982	\$92,668	\$1,757	\$56,166	\$38,259	\$30,247	\$ 8,012

^{*}Includes Museum Shops and Mail Order

^{**}Includes Business Management Office and Belmont

^{***}Includes Smithsonian Exposition Books which was combined with the Smithsonian Press in FY 1982.

^{****}Before revenue-sharing transfers to participating Smithsonian bureaux of \$381,000 (FY 1980); \$390,000 (FY 1981); and \$380,000 (FY 1982).

TABLE 8

Special Foreign Currency Program
Fiscal Year 1982 - Obligations
(In \$1,000's)

Country	Archaeology	System- atic and environ- mental biology	Astro- physics and earth sciences	Museum programs	Grant adminis- tration	Total
Burma	\$ 15	\$ 2	\$ -	\$ -	\$ -	\$ 17
India	2,772	70	64	236	66	3,208
Pakistan	968	374				1,342
Total	<u>\$3,755</u>	<u>\$446</u>	\$64	\$236	\$66	\$4,567

TABLE 9

Construction and Plant Funds Fiscal Years 1980 - 1982
(In \$1,000's)

Sources	FY 1980	FY 1981	FY 1982
FUNDS PROVIDED			
Federal Appropriations: National Zoological Park	\$ 6,250 5,250 20,600* 	\$ 3,290 7,539 5,000 —————————————————————————————————	\$ 1,104 7,680 - 960 9,744
Nonappropriated Trust Funds: Income - Gift and Other			
Special Exhibits Gallery	104 - 1,051	307 175 - 2,115	1 31 183 1,650
Smithsonian Institution Bldg. South Entrance Bequest of Real Estate Horticulture Greenhouse	-	11	64 225
Total Income	1,155	2,608	2,154
Transfers from Current Funds: Chesapeake Bay Center Tropical Research Institute Museum Support Center National Museum of African Art	39 - - 22	300 26 750 24	- - - 24
Quadrangle East Garden	1,040 241	1,340 110	1,040
Total Transfers	1,342	2,550	1,064
Total Funds Provided	\$34,597	\$20,987	\$12,962

^{*}Obligation authority of \$19 million deferred until FY 1981 on instructions from Office of Management and Budget.

TABLE 10

Endowment and Similar Funds

September 30, 1982

	Book Value	Market Value
ASSETS		
Pooled Consolidated Endowment Funds:		
Cash and Equivalents Bonds Convertible Bonds Stocks	13,341,192 814,000 59,806,844	\$ 8,919,165 14,451,431 900,000 64,587,546
Total Pooled Funds	82,881,201	88,858,142
Nonpooled Endowment Funds:		
Notes Receivable	1,366,788	100,020 1,000,000 39,700 8,100 225,000 1,372,820 \$90,230,962
FUND BALANCES		
Unrestricted Purpose: True Endowment	32,742,990	\$ 3,781,557 33,378,487 37,160,044
Restricted Purpose: True Endowment	12,161,740	40,129,316 12,941,602 53,070,918
Total Endowment and Similar Fund Balances	\$84,247,989	\$90,230,962

TABLE 11

Market Values of Pooled Consolidated Endowment Funds
(In \$1,000's)

Fund 9/30/78	9/30/79	9/30/80	9/30/81	9/30/82
Unrestricted\$18,114	\$22,614	\$28,384	\$30,399	\$35,974
Freer	18,303	20,771	20,472	22,596
Other Restricted 22,109	24,639	28,175	27,101	30,288
Total	\$65,556	\$77,330	\$77,972	\$88,858

TABLE 12

Changes in Pooled Consolidated Endowment Funds
for Fiscal Year 1982

(In \$1,000's)

Fund	Market value 9/30/81	Gifts and trans- fers	Interest and divi- dends*	Income paid out	Sub- · total	Market value appre- ciation	Market value 9/30/82
Unrestricted	\$30,399	\$2,172	\$2,083	\$1,158	\$33,496	\$2,478	\$35,974
Freer	20,472	-	1,394	907	20,959	1,637	22,596
Other Restricted	27,101	355	1,862	1,210	28,108	2,180	30,288
Total	\$77,972	\$2,527	\$5,339	\$3,275	\$82,563	\$6,295	\$88,858

^{*}Income earned less managers' fees of \$367,138.

TABLE 13

Endowment Funds

September 30, 1982

	Princip	al	_Income	2
	Book	Market	Net	Unexpended
	value	value	income	balance
	10			
	•			
UNRESTRICTED PURPOSE - TRUE:				
Avery Fund*	\$ 97,414	\$ 125,194	\$ 4,583	\$ -0-
Higbee, Harry Memorial	27,592	35,435	1,192	-0-
Hodgkins Fund*	194,654	87,394	9,900	-0-
Morrow, Dwight W	163,348	333,971	7,334	-0-
Mussinan, Alfred	53,367	63,744	2,145	-0-
Olmsted, Helen A	1,736	2,224	75	-0-
Poore, Lucy T. and George W.*	371,458	491,324	17,234	-0-
Porter, Henry Kirke, Memorial	604,525	804,886	27,081	-0-
Sanford, George H.*	2,980	3,599	150	-0-
Smithson, James*	541,380	541,380	32,483	-0-
Walcott, Charles D. and Mary Vaux,	·	•	·	
Research (Designated)*	964,960	1,292,406	51,899	79,394
Subtotal	3,023,414	3,781,557	154,076	79,394
UNRESTRICTED PURPOSE - QUASI:				
Forrest, Robert Lee	2,685,284	2,425,593	81,611	-0-
General Endowment*	27,264,305	28,172,242	885,490	-0-
Goddard, Robert H	21,246	19,210	647	-0-
Habel, Dr. S.*	500	500	30	-0-
Hart, Gustavus E	1,274	1,437	49	-0-
Henry, Caroline	3,159	3,545	119	-0-
Henry, Joseph and Harriet A	127,408	141,805	4,771	-0-
Heys, Maude C	256,292	236,023	7,941	-0-
Hinton, Carrie Susan	66,298	68,960	2,320	-0-
Lambert, Paula C	118,616	126,670	4,262	-0-
Medinus, Grace L	2,533	2,348	79	-0-
Rhees, William Jones*	1,822	1,964	82	- 0-
Safford, Clara Louise	116,070	110,245	3,709	-0-
Smithsonian Bequest Fund*	514,021	521,367	7,914	-0-
Taggart, Ganson	1,030	1,343	45	-0-
Abbott, William L. (Designated)	307,133	341,253	13,693	-0-
Barstow, Frederic D. (Designated)	2,573	2,852	114	3,760
Lindbergh Chair of Aerospace History	2,570	2,002	114	3,700
(Designated)	1,234,468	1,181,912	47,423	55,574
Lindbergh, Charles A. (Designated)	8,249	9,049	988	5,727
Lyon, Marcus Ward, Jr. (Designated)	10,709	10,169	408	1,323
Subtotal	32,742,990	33,378,487	1,061,695	66,384
Total Unrestricted Purpose	\$35,766,404	\$37,160,044	\$1,215,771	\$145,778
10 tal onlos ellocod l'alposoni in in in	#55,750,404	#37,100,044	Ψ1,213,771	9143,770

TABLE 13 - Continued

Endowment Funds

September 30, 1982

	Princi	pal	Income		
Funds	Book	Market	Net	Unexpended	
	value	value	income	balance	
DESCRIPTION DUPPOSE TRUE	p.17				
RESTRICTED PURPOSE - TRUE:	\$ 83,720	\$ 111,774	\$ 4,485	\$ 3,793	
Arthur, James		99,914	4,009	13,626	
Baird, Spencer Fullerton		80,098	3,214	21,620	
Barney, Alice Pike, Memorial	· ·	82,853	3,324	42,573	
Beauregard, Catherine, Memorial	•	111,930	4,491	25,312	
Brown, Roland W		76,818	3,082	14,868	
Canfield, Frederick A	-	123,150	4,941	-0-	
Casey, Thomas Lincoln	•	35,885	1,440	2,478	
Chamberlain, Frances Lea	-	78,646	3,156	14,399	
Cooper Fund for Paleobiology	•	35,485	1,321	2,103	
Division of Mammals Curators Fund		4,813	192	3,536	
Drake Foundation	•	429,245	17,120	58,375	
Dykes, Charles, Bequest	•	123,186	4,943	30,213	
Eickemeyer, Florence Brevoort		30,345	1,218	14,622	
Freer, Charles L		22,596,477	906,749	666,002	
Grimm, Sergei N		70,620	2,834	3,803	
Guggenheim, Daniel and Florence		288,405	11,572	27,777	
Hamilton, James*	·	3,710	199	666	
Henderson, Edward P., Meteorite Fund		994	40	311	
Hewitt, Eleanor G., Repair Fund		18,132	728	-0-	
Hewitt, Sarah Cooper	-	107,029	4,294	-0-	
Hillyer, Virgil		18,818	755	7,626	
Hitchcock, Albert S		4,478	180	561	
Hodgkins Fund*		100,000	6,000	21,371	
Hrdlicka, Ales and Marie		139,154	5,583	12,674	
Hughes, Bruce		53,520	2,147	21,986	
Johnson, Seward, Trust Fund for	. 40,072	33,320	٠, ١٦٠	21,500	
Oceanography	8,427,739	9,398,209	377,095	97,103	
Kellogg, Remington, Memorial		57,964	2,326	6,813	
Kramar, Nada		7,316	294	1,991	
Lindsey, Jessie H.*		11,545	804	5,311	
Maxwell, Mary E	•	54,834	2,200	14,763	
Milliken, H. Oothout, Memorial		533	21	-0-	
Mineral Endowment		246,269	9,881	(175)	
Mitchell, William A		33,689	1,352	2,013	
Natural History and Conservation	•	49,969	1,874	-0-	
Nelson, Edward William		62,097	2,492	-0-	
Petrocelli, Joseph, Memorial		20,800	835	18,737	
Reid, Addison T.*		61,890	2,702	-0-	
Roebling Fund		335,443	13,459	(549)	
MOODITHE LAME LAME LAME LAME LAME LAME LAME LAM	480,772	222,473	22,634	25,224	

Endowment Funds

September 30, 1982

	Princip	eal	Incom	e
Funds	Book	Market	Net	Unexpended
	value	value	income	balance
Shryock Endowment for Docents	1,637	1,605	64	158
Sims, George W.*	35,513	34,914	197	288
Sprague Fund	3,299,159	3,413,619	135,344	(2,329)
Springer, Frank	37,806	50,056	2,008	29,502
Stern, Harold P., Memorial	345,307	359,038	14,361	22,365
Stevenson, John A., Mycological Library. Walcott, Charles D. and Mary Vaux,	12,403	13,676	549	952
Research	309,242	357,074	14,127	24,023
Walcott Research Fund, Botanical	000,212		,	- . ,
Publications	120,197	155,794	6,251	14,024
Williston, Samuel Wendell, Diptera Rsch.	3,787	4,003	80	597
Zerbee, Frances Brinckle	1,984	2,632	106	3,477
Subtotal	36,319,845	40,129,316	1,609,073	1,274,583
RESTRICTED PURPOSE - QUASI:				
Armstrong, Edwin James	7,306	7,438	279	15
Au Panier Fleuri	51,126	46,317	1,858	- 0-
Bacon, Virginia Purdy	229,001	232,468	9,328	28,791
Becker, George F	394,028	402,359	16,144	(3,289)
Desautels, Paul E	25,714	28,717	1,125	- 0-
Gaver, Gordon	3,061	3,272	131	1,580
Hachenberg, George P. and Caroline	10,526	12,230	491	557
Hanson, Martin Gustav and Caroline R	22,908	25,437	1,021	6,059
Hunterdon Endowment	7,499,981	8,187,287	332,990	220,018
Intl. Council for Bird Preservation	211,131	209,528	6,666	7,062
Johnson, E. R. Fenimore	19,938	18,834	756	10,989
Loeb, Morris	225,533	252,278	10,122	19,169
Long, Annette E. and Edith C	1,144	1,558	63	153
Myer, Catherine Walden	52,065	57,819	2,320	8,123
Noyes, Frank B	2,529	2,914	117	1,625
Noyes, Pauline Riggs	24,073	21,825	876	1,915
Pell, Cornelia Livingston	19,145	21,345	856	820
Ramsey, Adm. and Mrs. Dewitt Clinton*	738,020	711,790	29,168	10,522
Rathbun, Richard, Memorial	27,456	30,583	1,227	20,753
Roebling Solar Research	62,652	65,755	2,638	9,382
Ruef, Bertha M	77,744	73,395	2,945	11,988
Schultz, Leonard P	19,979	22,123	888	12,242
Seidell, Atherton	1,564,818	1,589,646	63,783	204,516
Smithsonian Agency Account	513,685	519,192	19,928	-0-
Strong, Julia D	25,806	28,739	1,153	3,089
Witherspoon, Thomas A., Memorial		368,753	14,796	-0-
Subtotal	12,161,740	12,941,602	521,669	576,079
Total Restricted Purpose · · · · · · · · · · · · · · · · · · ·	\$48,481,585	\$53,070,918	\$2,130,742	\$1,850,662
TOTAL ENDOWMENT FUNDS	\$84.247,989	\$90,230,962	\$3,346,513**	* \$1,996,440

^{*}Invested all or in part in U.S. Treasury or other nonpooled investments.

**Total Return Income payout; does not include \$238,436 of interest income for investment of unexpended income balances.



To the Board of Regents Smithsonian Institution

We have examined the statement of financial condition of the Smithsonian Institution as of September 30, 1982 and the related statement of financial activity for the year then ended. Our examination was made in accordance with generally accepted auditing standards and with generally accepted governmental auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We previously examined and separately reported upon the statements of the trust funds and the statements of the federal appropriations of the Smithsonian Institution for the year ended September 30, 1981, combined totals of which are included in the accompanying financial statements for comparative purposes only.

In our opinion, the financial statements for the year ended September 30, 1982, referred to above, present fairly the financial position of the Smithsonian Institution as of September 30, 1982, and the results of operations and changes in fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Coopers+ Lybrand

1800 M Street, N. W. Washington, D. C. 20036 December 14, 1982

SMITHSONIAN INSTITUTION STATEMENT OF FINANCIAL CONDITION

September 30, 1982

with comparative totals for September 30, 1981 (thousands of dollars)

	Trust funds	Federal funds	Totals, all funds	Totals, 1981
ASSETS:				
Cash on hand and in banks (Note 3)	\$ 2,632	\$ 46	\$ 2,678	\$ 900
Fund balance with U. S. Treasury (Note 4) Investments (Notes 5 and 6) Receivables (Note 7) Advance payments (Note 8) Merchandise inventory (Note 1)	407 109,551 21,751 631 9,902	38,080 - 51 6,441 -	38,487 109,551 21,802 7,072 9,902	32,473 103,234 20,321 22,460 7,462
Materials and supplies inventory (Note 1) Amount to be provided for accrued	1,518	1,135	2,653	2,224
annual leave Prepaid and deferred expense (Note 1) Property and equipment (Notes 1 and 9)	8,771 18,430 \$173,593	6,163 179,617 \$231,533	6,163 8,771 198,047 \$405,126	5,847 6,329 177,633 \$378,883
LIABILITIES:				
Accounts payable and accrued expenses, including interfund payable of \$9,427 (Note 7) Deposits held in custody for other organizations (Note 2) Accrued annual leave (Note 1) Deferred revenue (Note 1)	\$ 17,944 2,265 831 20,061	\$ 7,795 35 6,163	\$ 25,739 2,300 6,994 20,061	\$ 21,137 1,993 6,627 16,713
Total liabilities	41,101	13,993	55,094	46,470
UNDELIVERED ORDERS		30,929	30,929	39,458
FUND BALANCES (Note 1):				
Current: Unrestricted general purpose Special purpose Restricted Endowment and similar funds (Note 6) Plant funds (Note 9)	5,048 13,003 5,906 84,248 24,287	: : :	5,048 13,003 5,906 84,248 24,287	5,043 12,599 5,951 75,458 21,312
Total trust fund balances	132,492		132,492	120,363
Operating funds Construction funds Capital funds	- - -	202 5,657 180,752	202 5,657 180,752	379 9,007 163,206
Total federal fund balances		186,611	186,611	172,592
Total all fund balances	132,492	<u> 186,611</u>	319,103	292,955
Total liabilities, undelivered orders and fund balances	<u>\$173,593</u>	<u>\$231,533</u>	<u>\$405,126</u>	<u>\$378,883</u>

The accompanying notes are an integral part of the financial statements.

STATEMENT OF FINANCIAL ACTIVITY SMITHSONIAN INSTITUTION

year ended September 30, 1982

with comparative totals for the year ended September 30, 1981 (thousands of dollars)

		TRUST	FUNDS			FEDERAL FUNDS	FUNDS			
	Total trust funds	Current	Endowment and similar funds	Plant	Total federal funds	Operating funds	Construction	Capital	Totals, all funds	Totals, 1981
Revenue and other additions:										
Appropriations Auxiliary activities revenue Federal grants and contracts	\$ - 95,593 13,217	\$ - 95,593 13,217	1 1 1 69	1 1 1 45	\$145,234 _ _	\$135,490 _ _	4 9,744	l 1 l	\$145,234 95,593 13,217	\$141,957 87,052 14,172
Investment income (net of \$30',000 for management and custodian fees) Net general of securities Gifts, bequests and foundation grants Additions to plant (Note 9) Rentals, fees, commissions and other	9,635 3,884 6,205 1,871 2,372	8,586 4 5,234 2,194	3,880 3,880 144	1,049 - 927 1,871	- - 31,025 122	122	1 1 1 1 1	31,025	9,635 3,884 6,205 32,896 2,494	8,156 8,053 6,477 24,921 2,649
Total revenue and other additions Expenditures and other deductions:	132,777	124,828	3,924	4,025	176,381	135,612	htt. 6	31,025	309,158	293,437
Docourab and advant town ownered trues	22 521	22 621			87 Ollo	010 64			111 1161	of the filter
nesearch ann euncalionaí expenditures Administrative expenditures Facilities services expenditures	8,810 1,275	8,810 1.275		1 1	9,661 38,063	9,661 38,063	1		18,471	17,116 36,510
Auxiliary activities expenditures	85, 153	85,153	1	- 000	100	6	100	•	85,153	72,709
Expenditures for acquisition of plant (Note 9) Property use and retirements (Note 9)	, do	1 1	1 1	1,805	13,094	1 1	13,094	13,479	14,959 13,479	8,513 15,097
Retirement of indebtedness Interest on indebtedness	ა დ	l i	l 1	၀ ဆ	1 1	t i	<i>†</i> . 1	۱ ۱	ა დ	ტ წ
Endowment reimbursement (Note 6)	1	1		2			1	'	1	976
Total expenditures and other deductions	120,648	118,759		1,889	162,237	135,664	13,094	13,479	282,885	255,394
Excess of revenue and other additions over (under) expenditures and other deductions (Note 11)	12,129	690,9	3,924	2,136	14,144	(52)	(3,350)	17,546	26,273	38,043
Transfers to government agencies		1		1				'	1	(5,355)
Transfers among funds - additions (deductions):										
Mandatory principal and interest on notes Normandatory for designated purposes, net	ı	(54)	1	ħΖ	1	1	1	1	1	•
(Note 12)		(5,681)	4,866	815	-	•	1	•	•	•
Total transfers among funds		(5,705)	4,866	839	•		-	-		•
Net increase (decrease) for the year	12,129	364	8,790	2,975	14,144	(55)	(3,350)	17,546	26,273	32,688
Returned to U. S. Treasury	1	ı	1	1	(125)	(125)	ı	1	(125)	(149)
Fund balances at beginning of year	120,363	23,593	75,458	21,312	172,592	379	6,007	163,206	292,955	260,331
Fund balances at end of year	\$132,492	\$ 23,957	\$84,248	\$24,287	\$186,611	\$ 202	\$ 5,657	\$180,752	\$319,103	\$292,955

The accompanying notes are an integral part of the financial statements.

1. Summary of significant accounting policies

Basis of presentation

These financial statements do not include the accounts of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts or the Woodrow Wilson International Center for Scholars, which were established by Congress within the Smithsonian Institution (Institution) but are administered under separate boards of trustees. (See Note 2.)

The accounts of the federal funds have been prepared on the obligation basis of accounting, which basis is in accordance with accounting principles prescribed by the Comptroller General of the United States as set forth in the Policy and Procedures Manual for Guidance of Federal Agencies. The obligation basis of accounting differs in some respects from generally accepted accounting principles. Under this basis of accounting, commitments, such as purchase orders and contracts, are recognized as expenditures, and the related obligations are reported on the balance sheet even though goods and services have not been received. Such commitments aggregate \$30,929,000 at September 30, 1982.

The trust funds reflect the receipt and expenditure of funds obtained from private sources, from federal grants and contracts and from certain business activities related to the operations of the Institution. The federal funds reflect the receipt and expenditures of funds obtained from Congressional appropriations.

Fund accounting

To ensure observance of limitations and restrictions placed on the use of resources available to the Institution, the accounts of the Institution are maintained in accordance with the

principles of fund accounting. This is the procedure by which resources for various purposes are classified for funds control, accounting and reporting purposes into funds established according to their appropriation, nature and purposes. Separate accounts are maintained for each fund; however, in the accompanying financial statements, funds that have similar characteristics have been combined into fund groups. Accordingly, all financial transactions have been recorded and reported by fund group.

The assets, liabilities and fund balances of the Institution are reported in self-balancing fund groups as follows:

Trust current funds, which include unrestricted resources, represent the portion of expendable funds that is available for support of Institution operations. Amounts restricted by the donor for specific purposes are segregated from other current funds.

Trust endowment and similar funds include funds that are subject to restrictions of gift instruments requiring in perpetuity that the principal be invested and the income only be used. Also classified as endowment and similar funds are gifts which allow the expenditure of principal but only under certain specified conditions and quasi-endowment funds. Quasi-endowment funds are funds established by the governing board for the same purposes as endowment funds; however, any portion of such funds may be expended. Restricted quasi-endowment funds represent gifts for restricted purposes where there is no stipulation that the principal be maintained in perpetuity or for a period of time, but the governing board has elected to invest the principal and expend only the income for the purpose stipulated by the donor.

Trust plant funds represent resources restricted for future plant acquisitions and funds expended for plant.

Federal operating funds represent the portion of expendable funds that is available for support of Institution operations. Separate subfund groups are maintained for each appropriation - Salaries and Expenses appropriations, Special Foreign Currency appropriations, and Barro Colorado Island Trust Fund.

The balance of this fund represents amounts available for support of specific Institution operations including the Special Foreign Currency Program, Franklin Delano Roosevelt Appropriations, and Barro Colorado Island Trust Fund.

Federal construction funds represent the portion of expendable funds that is available for building and facility construction, restoration, renovation and repair. Separate subfund groups are maintained for each appropriation - Construction and Improvements, National Zoological Park, Restoration and Renovation of Buildings and Museum Support Center.

Federal capital funds represent the amount of the investment of the United States Government in the net assets of the Institution acquired with federal funds and nonexpendable property transfers from Government agencies.

Investments

All gains and losses arising from the sale, collection or other disposition of investments are accounted for in the fund in which the related assets are recorded. Income from investments is accounted for in a similar manner, except for income derived from investments of endowment and similar funds, which is accounted for in the fund to which it is restricted or, if unrestricted, as revenue in unrestricted current funds.

Merchandise inventory

Inventories are carried at the lower of cost or market. Cost is determined using the first-in,

first-out (FIFO) method, or retail cost method (for those inventories held for resale).

Materials and supplies inventory

Inventories of materials and supplies are carried at the lower of cost or market. Cost is determined using the first-in, first-out (FIFO) method.

Deferred revenue and expense

Revenue from subscriptions to Smithsonian Magazine is recorded as income over the period of the related subscription, which is one year. Costs related to obtaining subscriptions to Smithsonian Magazine are charged against income over the period of the subscription.

The Institution recognizes revenue and charges expenses of other auxiliary activities during the period in which the activity is conducted.

Works of art, living or other specimens

The Institution acquires its collections, which include works of art, library books, photographic archives, objects and specimens, through purchase or by donation of the items themselves. In accordance with policies generally followed by museums, no value is assigned to the collections on the statement of financial condition. Purchases for the collections are expensed currently.

Property and equipment

Capital improvements and equipment purchased with trust funds and utilized in income-producing activities are capitalized at cost and are depreciated on a straight-line basis over their estimated useful lives of three to ten years. All other capital improvements and equipment purchased with trust funds are expensed currently.

Real estate (land and buildings) purchased with trust funds is recorded at cost, to the extent that restricted or unrestricted funds were expended therefor, or appraised value at date of gift, except for gifts of certain islands in the Chesapeake Bay and the Carnegie Mansion, which have been recorded at nominal values. Depreciation on buildings purchased with trust funds is not recorded.

Buildings and other structures, additions to buildings and fixed equipment purchased with federal funds are recorded at cost and depreciated on a straight-line basis over a period of 30 years.

Certain lands occupied by the Smithsonian Institution's buildings were appropriated and reserved by the Congress for that purpose and are not reflected in the accompanying financial statements. Property and nonexpendable equipment acquired through transfer from Government agencies are capitalized at the transfer price or at estimated amounts taking into consideration their usefulness, condition and market value. Nonexpendable equipment purchased with federal funds is recorded at cost depreciated on a straight-line basis over a period of 10 years.

Government contracts

The Institution has a number of contracts with the U. S. Government, which primarily provide for cost reimbursement to the Institution. Contract revenue is recognized when billable or received in the trust funds.

Contributed services

A substantial number of unpaid volunteers have made significant contributions of their time in the furtherance of the Institution's programs. The value of this contributed time is not reflected in these statements since it is not susceptible to objective measurement or valuation.

Annual leave unfunded

The Institution's civil service employees earn annual leave in accordance with federal law and regulations. However, only the cost of leave taken as salaries is funded and recorded as an expense. The cost of unused annual leave at yearend is reflected in the accompanying financial statements as an asset and accrued liability in the federal funds.

2. Related activities

The Institution provides fiscal and administrative services to several separately incorporated organizations in which certain officials of the Institution serve on the governing boards. The amounts paid to the Institution by these organizations for the aforementioned services, together with rent for Institution facilities occupied, etc. totaled approximately \$323,000 for the year ended September 30, 1982. The following summarizes the approximate expenditures of these organizations for the fiscal year ended September 30, 1982 as reflected in their individual financial statements and which are not included in the accompanying financial statements of the Institution:

	(\$000s)
Smithsonian Science Information Exchange	\$1,900 \$7,500
Reading Is Fundamental, Inc. Woodrow Wilson International Center for Scholars - trust	\$7,500
<pre>funds Woodrow Wilson International Center for Scholars - federal</pre>	\$3,000
appropriations	\$1,897

The Smithsonian Science Information Exchange ceased operations as of October 31, 1981. The U.S. Department of Commerce provided a grant to close down operations and to perfect an orderly liquidation, which is continuing with final close-out projected in fiscal year 1983.

3. Cash on hand - federal funds

This represents deposits in transit and the amount of imprest fund cash advanced by the U.S. Treasury to imprest fund cashiers for small purchasing purposes.

4. Fund balance with U. S. Treasury

The account represents fund balances on the books of the U. S. Treasury available for disbursement.

5. Investments

Investments are recorded at cost, if purchased, or fair market value at date of acquisition, if acquired by gift. At September 30, 1982, investments are composed of the following:

	Carrying value (\$000s)	Market value (\$000s)
Current funds: Certificates of deposit Commercial paper U. S. Government and quasi-	\$ 11,977 1,974	\$ 11,977 1,974
Government obligations Common stock Preferred stock	12,330 145 56 26,482	12,515 138 48 26,652
Endowment and similar funds: Money market account Loan to U. S. Treasury U. S. Government and quasi-	8,066 1,000	8,066 1,000
Government obligations Corporate bonds Common stock Preferred stock	10,711 3,484 59,256 552	11,641 3,750 64,130 465
	83,069 <u>\$109,551</u>	89,052 \$115,704

Substantially all the investments of the endowment and similar funds are pooled on a market value basis (consolidated fund) with each individual fund subscribing to or disposing of units on the basis of the value per unit at market value at the beginning of the month within which the transaction takes place. Of the total units, each having a market value of \$148.04, 290,802 units were owned by endowment, and 309,427 units were owned by quasi-endowment at September 30, 1982.

The following tabulation summarizes changes in relationships between cost and market values of the pooled investments:

1111 00 0 01	Market	(\$000s) Cost	Net change	Market value per unit
				P
End of year Beginning of	\$88,858	\$82,881	\$5,977	\$148.04
year Increase in	\$77,972	\$74,411	3,561	134.12
unrealized net gain				
for the year Realized net			2,416	
gain for the year			3,880	
Total realized and unre- alized net gain for the				
year			<u>\$6,296</u>	<u>\$ 13.92</u>

6. Endowment and similar funds

Endowment and similar funds at September 30, 1982 are summarized as follows:

are summarized as rollows.	(\$000s)
Endowment funds, income available for:	
Restricted purposes Unrestricted purposes	\$36,320 3,023
	39,343
Quasi-endowment funds, principal and income available for:	
Restricted purposes Unrestricted purposes	12,162 32,743
	44,905
Total endowment and similar funds	<u>\$84,248</u>

The Institution utilizes the "total return" approach to investment management of endowment funds and quasi-endowment funds. Under this approach, the total investment return is considered to include realized and unrealized gains and losses in addition to interest and dividends. An amount equal to the difference between interest and dividends earned during the year and the amount computed under the total return formula is transferred to or from the current funds.

In applying this approach, it is the Institution's policy to provide, as being available for current expenditures, an amount taking into consideration such factors as, but not limited to: (1) 4-1/2% of the five-year average of the market value of each fund (adjusted for gifts and transfers during this period), (2) current dividends and interest yield, (3) support needs for bureaus and scientists and (4) inflationary factors as measured by the Consumer Price Index; however, where the market value of the assets of any endowment fund is less than 110% of the historic dollar value (value of gifts at date of donation), the amount provided is limited to only interest and dividends received. The total return factor for 1982 was \$5.94 per

unit to the Restricted and Designated Purpose Endowment Funds and \$5.00 per unit to the Unrestricted General Purpose Endowment Funds; new units were purchased for the Unrestricted Endowment Funds with the \$.94, the difference in the total return factor. The total return applied for 1982 was \$2,230,000 to the Restricted and Designated Purpose Endowment Funds and \$1,046,000 to the Unrestricted General Purpose Endowment Funds.

Endowment reimbursement represents payment of income, which had accumulated in principal of the endowment funds, in accordance with a settlement related to a lawsuit.

7. Receivables

Receivables at September 30, 1982 included the following:

March Sunda	(\$000s)
Trust funds	
Accounts receivable, auxiliary	
activities; net of allowance	
for doubtful accounts of	
\$962,000 in 1982	\$ 9,148
Interfund receivables due from	
current funds:	812
Endowment and similar funds Plant funds	8,615
Interest and dividends receivable	•
Unbilled costs and fees from	2,181
	892
grants and contracts Other	
other	103
	21,751
Federal funds	·
Service fees and charges	51
Total, all funds	\$21,802

8. Advance payments

Advance payments represent advances made to Government agencies, educational institutions, firms and

individuals for services to be rendered or property or materials to be furnished.

As of September 30, 1982, the Institution has advances outstanding to the U. S. Government of approximately \$4,084,000, principally for construction services to be received in the future. The Institution at that date also had advances outstanding to educational institutions amounting to approximately \$2,150,000, principally under the Special Foreign Currency Program.

9. Property and equipment

At September 30, 1982, property and equipment which has been capitalized (see Note 1) is comprised of the following:

Current funds	(\$000s)	
Capital improvements Equipment Leasehold improvements Less accumulated depreci-	\$ 1,949 2,146 247	
ation and amortization	2,026	
Endowment and similar funds	2,316	
Land and buildings	225	
Plant funds		
Land and buildings	15,889	
Total, trust funds		\$ 18,430
Capital funds		
Property Equipment Less accumulated depreciation	236,621 26,991 83,995	
		179,617
		<u>\$198,047</u>

Depreciation and amortization expense reflected in expenditures of the current funds for 1982 was \$495,000. Depreciation expense reflected in expenditures of the capital funds of 1982 was \$9,619,000.

The balance of the plant fund at September 30, 1982 includes \$8,568,000 of unexpended plant funds.

10. Pension plan

The Institution has separate retirement plans for trust and federal employees. Under the trust fund's plan, both the Institution and employees contribute stipulated percentages of salary which are used to purchase individual annuities, the rights to which are immediately vested with the employees. The cost of the plan for the year ended September 30, 1982 was \$2,771,000. It is the policy of the Institution to fund plan costs accrued currently. There are no unfunded prior service costs under the plan.

The federal employees of the Institution are covered by the Civil Service Retirement Program. Under this program, the Institution withholds from the gross pay of each federal employee and remits to the Civil Service Retirement and Disability Fund (Fund) the amounts specified by such program. The Institution contributes 7% of basic annual salary to the Fund. The cost of the plan for the year ended September 30, 1982 was approximately \$5,200,000.

11. Excess of expenditures and other deductions

The net excess of expenditures and other deductions over revenue and other additions disclosed for federal operating and construction funds in the Statement of Activity for the year ended September 30, 1982 arise because certain multiyear appropriations, having been recorded as income in prior years and carried forward as fund balance, were expended during the year.

12. Nonmandatory transfers for designated purposes

The following transfers among trust funds were made for the year ended September 30, 1982 in thousands of dollars:

		Current		Endowment and	Plant
	Unre	stricted	Restricted	similar funds	funds
Portion of investment yield appropriated (Note 5)	\$	(925)	\$(1, 139)	\$2,064	\$ -
Purchase of property and equipment for plant fund		(83)	-	-	83
Future plant acquisitions		(917)	-	-	917
Income added to endowment principal		-	(118)	118	-
Appropriated as quasi- endowment	(;	2,259)	(200)	2,684	(225)
Other designated purposes		(281)	241		40
Total	<u>\$(</u>	4 <u>,465</u>)	<u>\$(1,216</u>)	<u>\$4,866</u>	<u>\$ 815</u>

13. Income taxes

The Institution is exempt from income taxation under the provisions of Section 501(c)(3) of the Internal Revenue Code. Organizations described in that section are taxable only on their unrelated business income. The Internal Revenue Service has issued a Technical Advice Memorandum to the Institution indicating that income derived from sales of certain items in the Museum Shops may constitute unrelated business taxable income. The application of this memorandum is under discussion with the Internal Revenue Service.

It is the opinion of the Institution that it is also exempt from taxation as an instrumentality of the United States as defined in Section 501(c)(1) of the Code. Organizations described in that section are exempt from all income taxation. The Institution has not as yet formally sought such dual status but intends to do so in the near future.

Management believes that any income taxes required as a result of settlement of these matters would not have a material effect upon the financial position of the Institution.



