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Budget

# SMITHSONIAN INSTITUTION

Budget Justifications for Fiscal Year 1983



Submitted to the Committees on Appropriations

Congress of the United States

January 1982



# SMITHSONIAN INSTITUTION

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Chesapeake Bay Center for Environmental Studies  
Fred Pieron Bureau  
National Art and Space Museum  
National Museum of Man  
Center for the Study of Man  
National Museum of Natural History  
National Zoological Park  
Office of Biological Conservation  
Office of Fellowships and Grants  
Radabaugh Biology Laboratory  
Smithsonian Astrophysical Observatory  
Smithsonian Tropical Research Institute

### Assistant Secretary\* for HISTORY & ART

Archives of American Art  
Cooper-Hewitt Museum  
Freer Gallery of Art  
Hirshhorn Museum and Sculpture Garden  
Joseph Henry Papers  
Museum of African Art  
Hirshhorn Museum of American Art  
National Museum of American History  
National Portrait Gallery  
Office of American and Folklore Studies

### Assistant Secretary\* for MUSEUM PROGRAMS

Conservation Analytical Laboratory  
National Museum Act  
Office of Exhibits Central  
Office of Horticulture  
Office of International Activities  
Office of Museum Programs  
Office of the Registrar  
Smithsonian Archives  
Smithsonian Institution Libraries  
Smithsonian Institution Traveling Exhibitions Service

### Assistant Secretary\* for PUBLIC SERVICE

Anacostia Neighborhood Museum  
Division of Performing Arts  
International Exchange Service  
Office of Elementary and Secondary Education  
Office of Smithsonian Symposia and Seminars  
Office of Telecommunications  
Smithsonian Exposition Books  
Smithsonian Institution Press  
Smithsonian Magazine  
Visitor Information and Associates Reception Center

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Office of Computer Services  
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Office of Protection Services  
Management Analysis Office  
Office of Personnel Administration  
Office of Printing and Photographic Services  
Office of Programming and Budget  
Office of Supply Services  
Travel Services Office

\*Secretary & Executive Committee



SMITHSONIAN INSTITUTION

FISCAL YEAR 1983 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 27 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 at 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 space-craft display facility at Suitland, Maryland; a conference center at Elkrige, Maryland; two natural preserves in Panama and on the Chesapeake Bay; an oceanographic research facility at Fort Pierce, Florida; astrophysical stations at Cambridge, Massachusetts, 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 143 exhibitions are seen annually by more than seven million visitors in over 650 institutions across the country. 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. Such programs are produced by the Division of Performing Arts, the National and Resident Associates Programs and the Folklife unit.

--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 1.8 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 1983 Budget Priorities

The Institution's FY 1983 budget request emphasizes continuation of past initiatives that will contribute to the education and enjoyment of millions of visitors to Smithsonian museums and those throughout the nation and the strengthening of the care and security of the National Collections and of the Smithsonian buildings.

Culminating several years of planning, monies are sought to allow the Institution to construct a cultural and art center within the land bounded by the Smithsonian Building, the Arts and Industries Building, the Freer Gallery of Art and Independence Avenue. This complex will be financed equally between government and private sponsors. It will provide, for the first time in our Nation's Capital, exhibition and education facilities appropriate for presentation of the artistic accomplishments of cultures encompassing two-thirds of the Earth's population and spanning the globe from Japan and Korea through Southeast Asia, the Middle East and all of Africa.

In recognition of the economic realities facing our nation, the Institution's exhibitions, education and acquisitions and administration programs are held at the FY 1982 level, as adjusted for inflation and the higher costs of current staff. No new positions are sought.

For FY 1983, additional resources are proposed to initiate a major effort toward improving the security of the collections on display and in storage throughout the Institution. There is provision also for an expanded effort in basic maintenance of the physical plant. For collections management, funds are sought to continue the multi-year program of equipping the Museum Support Center and to provide the requisite operating resources in preparation for occupancy of the building by the Smithsonian in January 1983.

There are significant requirements for improvements to the physical plant; the Institution's Five Year Prospectus - FY 1983-FY 1987 has identified needs totaling over \$56,000,000 for such improvements. The proposed request in the FY 1983 budget continues to place high priority on addressing restoration and renovation needs. The National Zoological Park also places primary emphasis in this budget on care of its buildings and grounds. Monies also are included for the Zoo to initiate planning for the Olmsted Walk Exhibits--a series of small exhibits that will extend from the Connecticut Avenue entrances throughout the Park.

The Five Year Prospectus - FY 1983-FY 1987, approved by the Board of Regents at the January 25, 1982 meeting, outlined the Smithsonian's operational and facilities plan for that period.

For FY 1983, the Institution is requesting the following appropriations:

I. Salaries and Expenses

<u>1981 Actual</u>	<u>1982 Base</u>	<u>1983 Estimate</u>
\$122,229,000	\$133,036,000	\$144,110,000

The requested increase of \$11.0 million consists of \$5.2 million for uncontrollable increases, \$1.1 million for salaries of 69 positions restored by the Congress in FY 1982 and \$4.7 million for program increases. Uncontrollable increases include projected higher costs in FY 1983 compared with FY 1982 of staff, utilities and rental payments and funds to help compensate for the effects of inflation in nonsalary areas. The amount of \$1.1 million, sought to support 69 positions approved by the Congress after they had been deleted in the March 1981 budget amendment, is needed since the four percent reduction in the FY 1982 Appropriation Act effectively eliminated the Institution's ability to fund these positions. The program increase of \$4.7 million will continue the phased equipment purchases and provide basic operating costs for the Museum Support Center; strengthen the safety and security of the National Collections by purchasing new and replacing old and obsolete security equipment throughout the Institution and by accelerating the conversion of volatile nitrate photographic negatives to archival-quality safety film; and provide adequate resources for the proper maintenance of Smithsonian facilities. The funding is allocated by activities as follows (organizational allocation appears on pages A-2 and A-3):

	<u>FY 1982 Base</u>	<u>Uncon- trollable Increases</u>	<u>Restored Position Increase</u>	<u>Program Increase</u>	<u>FY 1983 Estimate</u>
Science	\$45,494,000	\$1,410,000	\$393,000	--	\$47,297,000
History and Art	21,150,000	614,000	230,000	25,000	22,019,000
Public Service	2,723,000	82,000	--	--	2,805,000
Museum Programs	7,840,000	263,000	42,000	27,000	8,172,000
Special Programs	7,931,000	84,000	--	2,205,000	10,220,000
Administration	9,502,000	396,000	88,000	100,000	10,086,000
Facilities Services	<u>38,396,000</u>	<u>2,391,000</u>	<u>372,000</u>	<u>2,352,000</u>	<u>43,511,000</u>
Totals	\$133,036,000	\$5,240,000	\$1,125,000	\$4,709,000	\$144,110,000

## II. Special Foreign Currency Program

<u>1981 Appropriation</u>	<u>1982 Appropriation</u>	<u>1983 Estimate</u>
\$3,650,000	\$4,320,000	\$2,000,000

This appropriation 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 \$2,000,000 are sought for the grants program in FY 1983. The Special Foreign Currency 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 the funds is awarded to applicants whose projects also are selected by a panel of reviewers.

## III. Facilities Planning, Renovation, Restoration and Construction

<u>1981 Appropriation</u>	<u>1982 Appropriation</u>	<u>1983 Estimate</u>
\$15,829,000	\$9,744,000	\$46,500,000

Construction and Improvements National Zoological Park (\$1,550,000) - The FY 1983 appropriation request for Construction and Improvements at the National Zoological Park will be used to continue progress on the implementation of the approved Master Plan for the improvement of the animal and public facilities and to perform essential renovation, repair and improvement projects at the Rock Creek Park Zoo and at the Conservation and Research Center at Front Royal, Virginia. The Master Plan development scheduled for FY 1983 consists of planning and preliminary design of the Olmsted Walk exhibits projects. These consist of a series of small exhibits planned for the Connecticut Avenue pedestrian and vehicle entrances, as well as along the central walkway.

Restoration and Renovation of Buildings (\$8,450,000) - The FY 1983 appropriation request for Restoration and Renovation of Buildings 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; 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.

Construction Quadrangle Development (\$36,500,000) - Appropriated funds sought in FY 1983 combined with the Institution's nonappropriated Trust funds and other sources are designated for the construction of new facilities in the Quadrangle. The Quadrangle consists of an area of approximately 4.2 acres located between the Smithsonian Institution Building and Independence Avenue. Quadrangle development will include a cultural and art center that will house exhibition galleries and supporting museum facilities for the proper display of

the unique collections of the National Museum of African Art, as well as for the expansion of programs of the Freer Gallery of Art. The center will offer an opportunity for foreign nations to present their most important cultural accomplishments.

### 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 income-producing 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 bequest for the sole use of the Gallery.

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 \$110.1 million by FY 1983. Net income, however, is projected to decrease from \$23.7 million in FY 1981 to \$20.7 million in FY 1983 (of which over \$5 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 activities, such as the Associates program (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 million annual allocation for the Institution's Collections Acquisition, Scholarly Studies and Education Program, first approved by the Board of Regents in FY 1978. (This commitment is projected to increase to \$2.5 million in FY 1983 assuming funds are available.) Of the \$2 million, an amount of \$1 million is available annually for purchase of objects of outstanding importance to the collections. The Collections Acquisition Program in FY 1981 permitted the acquisition of major works of art such as the Paul Gauguin Sculpture "Cylinder Decorated with the Figure of Hina and Two Attendants" (\$228,000); Joan Miro's "Woman Before an Eclipse with Her Hair Disheveled by the Wind" (\$254,000); and the "R. K. Harris Archeological Collection" (\$110,000). Each of these important acquisitions was supplemented by an almost equal amount of outside contributions. An additional amount of \$500,000 is designated 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/or between bureaus and projects that have been awarded external funds, which require matching Trust funds. For example, in FY 1982 funds were provided to the National Air and Space Museum to initiate an oral history project with key Americans who played a dominant role in the development of modern astronomy and astrophysics in the post-World War II era. The research will assist in the preparation of major monographs interpreting this period and assist in the exhibit and education programs of the Museum. The remaining \$500,000 of the \$2 million available under this Program is allocated to conduct a wide range of education programs of benefit to the public such as the Family Science Education Project. This project is designed to improve scientific literacy by providing greater educational opportunities in existing informal settings such as museums, nature study centers and camps by promoting the home environment as a place where science learning can occur.

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 \$1.4 million are being applied to these programs in FY 1982 and a similar amount is projected for FY 1983. A further amount of \$1.5 million in unrestricted Trust funds is being reserved for the Quadrangle Development project in FY 1983, in addition to the approximately \$1.9 million that has been designated for initial planning to date and \$3.3 million held in reserve for construction. Also supported in part from unrestricted funds, as previously reported to the Congress, is the Museum Support Center construction, toward which \$2.5 million is committed and will be made available during FY 1982-FY 1983.

After the three major categories of operating expenses financed with unrestricted Trust funds are met, the remaining unrestricted income is designated for three purposes. Funds are transferred to the museums and galleries in recognition of their assistance in the planning and carrying out of museum shop, product development and concession programs. These funds, amounting to only a few hundred thousand dollars each year, are used for the general operations of the receiving bureaus. A second designation is for improvements to the physical plant or land acquisitions. Finally, funds permitting, the Institution makes an annual transfer of approximately \$2 million to its endowment for the purpose of providing income for future years. All projections are monitored closely throughout the year with adjustments to estimates dictated by actual results.



TAB A

SALARIES AND EXPENSES





SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

Summary of Increase FY 1983

Appropriation, FY 1982		\$128,470,000
Base Legislated Pay Requirement		<u>4,566,000</u>
Base, FY 1982		\$133,036,000
FY 1983 Request		<u>\$144,110,000</u>
Uncontrollable Increase	\$5,240,000	
Restored Position Funds	1,125,000	
Program Increase	<u>4,709,000</u>	
Total Requested Increase		\$ 11,074,000

SMITHSONIAN INSTITUTION  
"Salaries and Expenses"

Summary of the 1981 Appropriation and the 1982 and 1983 Estimates

(Dollars in thousands)

Page No.	Unit	1981 Actual			1982 Base			1983 Estimate			Analysis of Increase	
		Pos.	Amount	Pos.	Appropriation	Restoration	/1 Total	Pos.	Amount	Uncontrollable	Restored Position Funding	Program
	Science											
A-15	Assistant Secretary for Science	✓7	328	7	326	19	345	7	357	12	-	-
A-17	Nat'l Museum of Nat. His./Man	✓497	15,677	505	15,738	736	16,474	505	17,023	427	122	-
A-22	Astrophysical Observatory	77	5,370	78	5,563	219	5,782	78	6,058	243	33	-
A-28	Tropical Research Institute	83	2,773	85	2,733	170	2,903	85	3,023	98	22	-
A-32	Radiation Biology Laboratory	48	1,999	48	1,938	65	2,003	48	2,090	87	-	-
A-36	National Air and Space Museum	216	6,152	222	6,514	288	6,802	222	7,160	234	124	-
A-40	Chesapeake Bay Center	22	869	22	906	35	941	22	969	28	-	-
A-44	National Zoological Park	321	9,221	327	9,158	357	9,515	327	9,855	248	92	-
A-48	Center for the Study of Man	✓12	603	12	713	16	729	12	762	33	-	-
	Subtotal, Science	1,283	42,992	1,306	43,589	1,905	45,494	1,306	47,297	1,410	393	-
	History and Art											
A-51	Ass't Secretary for History & Art	✓9	351	9	346	17	363	9	369	6	-	-
A-54	Nat'l Museum of American History	✓274	8,072	278	7,977	344	8,321	278	8,604	205	78	-
A-59	Nat'l Museum of American Art	✓103	3,557	106	3,805	189	3,994	106	4,139	111	34	-
A-65	Nat'l Portrait Gallery	✓74	2,613	76	2,712	138	2,850	76	2,983	96	37	-
A-70	Hirshhorn Museum	✓79	2,431	80	2,421	142	2,563	80	2,658	84	11	-
A-74	Freer Gallery of Art	✓29	727	30	826	29	855	30	918	20	43	-
A-78	Archives of American Art	✓17	542	17	632	24	656	17	675	19	-	-
A-81	Cooper-Hewitt Museum	✓22	702	22	738	14	752	22	814	37	-	25
A-85	Nat'l Museum of African Art	✓24	621	25	768	28	796	25	859	36	27	-
	Subtotal, History and Art	631	19,616	643	20,225	925	21,150	643	22,019	614	230	25
	Public Service											
A-89	Ass't Secretary for Public Service	✓9	259	9	317	16	333	9	341	8	-	-
A-92	Anacostia Neighborhood Museum	19	529	19	726	23	749	19	773	24	-	-
A-95	International Exchange Service	✓4	346	4	230	3	233	4	245	12	-	-
A-97	Division of Performing Arts	✓10	387	10	444	18	462	10	478	16	-	-
A-101	Smithsonian Institution Press	✓29	847	29	913	33	946	29	968	22	-	-
	Subtotal, Public Service	71	2,368	71	2,630	93	2,723	71	2,805	82	-	-

SMITHSONIAN INSTITUTION  
"Salaries and Expenses"

Summary of the 1981 Appropriation and the 1982 and 1983 Estimates

(Dollars in thousands)

Page No.	Unit	1981 Actual			1982 Base			1983 Estimate			Analysis of Increase	
		Pos.	Amount	Pos.	Appropriation	Restoration	Total	Pos.	Amount	Uncontrolled	Restored	
<b>Museum Programs</b>												
A-104	Ass't Secretary for Museum Programs	21	747	21	714	32	746	21	765	19	-	-
A-108	Office of the Registrar	4	126	4	132	6	138	4	140	2	-	-
A-110	Conservation Analytical Laboratory	21	788	21	826	27	853	21	893	40	-	-
A-114	Smithsonian Institution Libraries	97	2,976	99	3,130	102	3,232	99	3,400	145	23	-
A-118	Office of Exhibits Central	46	1,312	47	1,350	55	1,405	47	1,457	33	19	-
A-121	Traveling Exhibition Service	6	192	6	250	9	259	6	271	12	-	-
A-125	Smithsonian Archives	13	430	13	407	19	426	13	464	11	-	27
A-128	National Museum Act	3	795	3	779	2	781	3	782	1	-	-
	Subtotal, Museum Programs	211	7,366	214	7,588	252	7,840	214	8,172	263	42	27
<b>Special Programs</b>												
A-130	American Studies & Folklife Programs	5	534	5	567	17	584	5	608	24	-	-
A-134	Int'l Environmental Science Program	2	468	2	601	8	609	2	643	34	-	-
A-138	Academic & Educational Programs	19	562	19	599	21	620	19	637	17	-	-
A-143	Collections Management/Inventory	-	587	-	760	16	776	-	785	9	-	-
A-148	Major Exhibition Program	-	739	-	840	-	840	-	840	-	-	-
A-153	Museum Support Center Equip. & Op.	8	2,767	8	4,496	6	4,502	8	6,707	-	-	2,205
	Subtotal, Special Programs	34	5,657	34	7,863	68	7,931	34	10,220	84	-	2,205
A-159	Administration	257	8,718	263	9,123	379	9,502	263	10,086	396	88	100
<b>Facilities Services</b>												
A-165	Office of Design and Construction	36	1,096	37	1,427	49	1,476	37	1,557	41	40	-
A-167	Office of Protection Services	555	11,603	571	11,610	477	12,087	571	14,242	247	206	1,702
A-172	Office of Plant Services	388	22,813	396	24,415	418	24,833	396	27,712	2,103	126	650
	Subtotal, Facilities Services	979	35,512	1,004	37,452	944	38,396	1,004	43,511	2,391	372	2,352
	GRAND TOTAL	3,466	122,229	3,535	128,470	4,566	133,036	3,535	144,110	5,240	1,125	4,709

/1 Includes FY 1982 costs of legislated pay raises.

/2 Includes \$15 thousand of \$200 thousand program supplemental for FDR Celebration. (\$185 thousand remains available through FY 1982.)

SMITHSONIAN INSTITUTION  
FY 1983 UNCONTROLLABLE INCREASES AND FUNDING FOR RESTORED POSITIONS

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, changes in utilities, postage and communications costs, and higher costs of supplies, equipment and services due to inflation. A total of \$5,240,000 is requested for these uncontrollable increases:

Necessary Pay and Related Benefits.....	\$1,700,000
Utility Rate Increases.....	636,000
Postage Rate Increase.....	251,000
Communications Rate Increase.....	763,000
Fuel Oil Rate Increase.....	50,000
Rental Increases.....	140,000
Inflation.....	1,700,000
Total	\$5,240,000

NECESSARY PAY AND RELATED BENEFITS - An amount of \$1,700,000 is required for personnel compensation and benefits for the projected higher costs in FY 1983 of FY 1982 staff. These increases are provided to employees as a result of within-grade and Merit Pay increases (\$1,342,000), legislated pay raises (\$281,000), and workers' compensation payments (\$77,000), and 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 \$22,000 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 \$1,342,000 is required in FY 1983 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. In any fiscal year, the cost of within-grade and Merit Pay increases is substantial. These 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 \$1,006,000. There are approximately 2,700 General Schedule employees of whom approximately 1,600 are scheduled to receive within-grade increases. The Wage portion amounts to \$223,000. 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 \$113,000. 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 conventional 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 1983 pay supplemental request.

(2) Annualization of Legislated Pay Raises - Funds in the amount of \$281,000 are required to annualize the General Schedule, Executive and Wage pay increases effected in FY 1982.

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 4, 1981 is estimated to be \$3,014,000. The full base supplemental requirement in FY 1982 amounts to \$3,000,000 and is included in the FY 1983 estimates. The balance of \$14,000 is requested in FY 1983 to provide full-year funding.

Salary scales for General Schedule employees previously at the pay ceiling were adjusted effective January 1, 1982 in accordance with P.L. 97-100. This adjustment to the pay ceiling results in a total annual cost increase estimated to be \$1,000,000. An amount of \$800,000 in additional costs must be absorbed in FY 1982 as a result of this pay increase; this amount is included in the FY 1983 estimates. The balance of \$200,000 is requested in FY 1983 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 \$833,000. The full base supplemental requirement in FY 1982 amounts to \$766,000 and is included in the FY 1983 estimates. The balance of \$67,000 is sought to provide full-year funding.

(3) Workers' Compensation - An amount of \$77,000 is required to meet the provisions of section 8147(b) of Title 5, U.S.C. as amended on April 21, 1976 by P.L. 94-273. This law provides for payments to be made to employees for injuries and to their families in cases where work accidents result in employees' deaths. Payments are administered by the United States Department of Labor's Employment Standards Administration, which bills agencies for costs incurred for their employees. The Smithsonian continues to pursue its Accident Safety Program administered by the Office of Protection Services which includes employee training in safe working environments and supports a safety staff whose duties include performing comprehensive safety surveys and identifying and eliminating potential accident hazards. A measure of the success of this Program can be seen in the fact that the number of substantial claims has declined over the past year. The FY 1983 bill for the Smithsonian covering actual expenses incurred for the period July 1, 1980 through June 30, 1981 totals \$568,000. With a base amount of \$491,000 available, additional funds totaling \$77,000 are required to meet these increased costs which result from higher charges for medical services.

The FY 1982 pay supplemental requirement totaling \$4,566,000 is distributed by organizational unit on the chart on pages A-2 and A-3. This amount is included in the base restoration column of the chart.

UTILITY, POSTAGE AND COMMUNICATIONS INCREASES - Currently, a base of \$12,867,000 is available to fund the costs of electricity, steam, gas, fuel oil, postage and communications. An additional amount \$1,700,000 is sought in FY 1983 to cover the projected increased cost of these items.

The following table depicts actual and anticipated use and cost of the major components of the utilities account between FY 1980 and FY 1983 and summarizes the projected base shortage in each component between the FY 1982 appropriation and the estimated costs for FY 1983.

ANALYSIS OF UTILITIES COSTS  
FY 1980 - FY 1983

Fiscal Year	ELECTRICITY			STEAM			GAS		
	Use	Unit	Cost	Use	Unit	Cost	Use	Unit	Cost
	Millions of KWH	Average per KWH	\$1,000s	Millions of lbs.	Average Per 1,000 lbs.	\$1,000s	Millions of Cu. Ft.	Average Per Cu. Ft.	\$1,000s
1980 Actual	83.9	.0487	4,088	227.6	11.23	2,557	.907	.3757	341
1981 Estimated									
Actual	81.9	.0569	4,664	237.8	13.52	3,217	.883	.4519	400
1982 Estimate	84.0	.0691	5,800	235.1	16.80	3,950	.920	.5978	550
1983 Estimate	84.1	.0726	6,111	235.5	17.83	4,200	.920	.6793	625
1983 Estimate			6,111			4,200			625
1982 Base			<u>5,800</u>			<u>4,050</u>			<u>450</u>
	Base Shortage, Electricity		\$311	Base Shortage, Steam		\$150	Base Shortage, Gas		\$175

The major component (\$311,000) of the proposed utility increase is for electricity. Electrical usage for FY 1983 is estimated to approximate actual usage in FY 1980, even though consumption estimates include new facilities at the National Zoological Park (including the Monkey Island Exhibit, the Beaver Valley and Great Ape Complexes and the Small Mammals Facility), the conversion of space previously used for storage at the National Museum of Natural History/Museum of Man to exhibition areas, and improved storage facilities at Suitland, Maryland. The projected higher cost of electricity in FY 1983 is related to expected annual rate increases as well as increases in the fossil fuel costs incurred by the utility companies which are passed on to consumers. For steam, consumption between FY 1981 and FY 1983 is projected at a relatively constant level although costs for steam have risen significantly each year. Historically, the higher steam rates have resulted both from higher costs incurred by the General Services Administration (GSA) for fuel oil, coal and natural gas which are necessary to generate steam, and from GSA's need to recover operating revenue losses resulting from declining sales due to increased conservation efforts by users. For gas, consumption in FY 1983 also is estimated to approximate actual usage in FY 1981. Increased costs anticipated for gas result from annual rate increases approved by the Public Service Commission and higher fuel costs.

Additionally, an increase of \$301,000 is needed to cover projected increased costs of fuel oil and water (\$50,000); and postage (\$251,000), the latter resulting from rate increases granted in March 1981 by the United States Postal Rate Commission for bulk and first-class mailings.

The estimates for FY 1982 and FY 1983 are based upon past usage data, historical weather patterns, current and planned use of buildings space, available rate information from utility companies, energy conservation goals and rate increases resulting from or considered likely as a result of the national or international energy situation.

The communications increase (\$763,000) is for telephone costs. The Smithsonian's practice of limiting communications costs by requiring central review and approval of all requests for service has proven effective as evidenced by an equipment growth rate of only 12 percent between 1976 and 1981. Recent rate increases, however, have caused these costs to rise dramatically. Currently, a total base of \$1,483,000 is available to fund local telephone costs (\$923,000) and to fund operation of the Federal Telecommunications Network Service (FTS) administered by the General Services Administration (\$560,000). In May 1981, the GSA advised the Smithsonian that a series of recent rate increases approved by the Federal Communications Commission would result in a 20 percent cost increase for operation of the FTS. In addition, local telephone service costs rose 45 percent as a result of rate increases granted in June 1981 to the C&P Telephone Company by the Public Service Commission. Further, based on past experience, rate increases of 18 percent are projected to occur in FY 1982 and FY 1983 for local telephone service costs.

RENTAL SPACE - This item consists of the proportionate Federal rental space 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. Under the terms of current rental leases, the Smithsonian is required to assume additional costs for operating expenses brought about by increases in maintenance and utility costs. An additional amount of \$140,000 is required to cover higher space rental costs at these locations which are estimated to total approximately \$1,365,000 in FY 1983.

It is anticipated that the collections of the Smithsonian Oceanographic Sorting Center will move to the Museum Support Center in Suitland, Maryland, about mid-1983. Space rental savings realized will be applied to the cost of equipping this new facility as explained in the Museum Support Center Equipment and Operations section of this budget.

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 efforts in support of a comprehensive energy management program which concentrates on promoting systems efficiency and conservation. Efforts to promote conservation include operation of a complex computerized 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 1981 and planned in FY 1982 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 such as the National Zoological Park's Great Ape Complex, which has a complete solar powered domestic hot water system.

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 fiscal years 1980-1983 despite the addition of new facilities. Between FY 1978 and FY 1981, the Institution has avoided an estimated \$2,000,000 in utilities costs as a result of the energy conservation measures outlined above.

INFLATION - Resources totaling \$1,700,000 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 seven percent of the total nonsalary object classes of expenses estimated for FY 1982, excluding utilities, rent and Museum Support Center equipment. As with other museums and research organizations, 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. When possible, items of expense are eliminated, methods changed or funds reallocated from other areas to help offset the effects of inflation. For example, the Smithsonian through participation in the government-wide excess property program has reduced annual expenditures for office equipment and other furnishings. Additionally, many routine supplies now are purchased in bulk quantities allowing for greater price discounts on supply items from manufacturers. However, such measures are limited or of a temporary benefit as prices continue to rise. The result of inflation, therefore, is equivalent to a significant cut each year to the base resources of all the Institution's approximately 60 organizational units.

Cost increases affecting the Smithsonian's main program areas 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 research. Scientific supplies and contracts for instrument repair and maintenance are becoming increasingly more costly. The following table lists some items that are purchased regularly and illustrates such increases.



Research and Scientific Supplies and Contracts

<u>Item</u>	<u>FY 1981</u>	<u>FY 1982</u>	<u>Percentage Increase</u>
Electron microscope maintenance/year	\$5,064.00	\$5,742.00	13 percent
Deionized water service	2,178.00	2,520.00	16 percent
Liquid nitrogen, 160 liters	58.30	66.00	13 percent
Kodak film for scanning electron microscope, 50 sheets	15.60	18.15	16 percent
Digital 125 Ph/ion meter	1,080.00	1,225.00	13 percent
Saw blades, each	90.75	115.00	27 percent
Methyl butanol (Physical Anthropology Lab), per gram	38.40	50.00	30 percent

Inflationary cost increases of research-related items used in the sciences, history and art are also evident including those for supplies, books, journals and publishing. The cost of ethyl alcohol in which specimens are stored has increased nine percent in FY 1981 over FY 1980 prices. Film used in the scanning electron microscope lab has increased 16 percent in FY 1982 compared to FY 1981 prices.

The history, art and scientific scholarly book and journal trade has been especially prone to a rapid rate of inflation. The rate is projected to reach 16 percent in FY 1983. The growth of the books and journals budget has not kept pace with the rise in prices as they are affected by inflation. Because of severe budget restraints, there is a heavy reliance on obtaining books and journals from other libraries. The Smithsonian Institution Libraries 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.

Publication costs essential to scientific research, as well as to exhibition and educational programs, have been rising steadily also. For example, the cost per printed page of the series publications has increased 13 percent in FY 1981 over FY 1980 costs. The actual cost for FY 1981 for this program in the National Museum of Natural History/Museum of Man was over \$300,000. These publications are disseminated to schools, libraries and other museums.

The increases in costs of materials and supplies caused by inflation places a severe strain on the base resources needed to maintain the Institution's exhibits program. As illustrated by the following table, the materials used to mount exhibitions are becoming increasingly costly.

Exhibition Materials

<u>Item</u>	<u>FY 1979</u>	<u>FY 1981</u>	<u>Percentage Increase</u>
Pine - per bd. ft.	\$ 2.50	\$ 3.80	52 percent
2x4s - 16 ft.	6.20	7.98	29 percent
Paint, white latex - 1 gal.	6.49	11.50	77 percent
Plexiglas - 4' x 8' - 1/8"	33.60	46.40	38 percent
Plywood - 4' x 8' sheet - 1/2"	16.77	20.50	22 percent
Drywall - 4' x 8' sheet - 1/2"	4.20	5.24	25 percent
300 W bulbs - case	70.80	191.76	171 percent
Plywood - 4' x 8' sheet - 3/4"	22.18	30.44	37 percent

Measures are taken to lessen the effects of inflation on exhibit preparation cost. For example, the construction of flexible cases reduces the cost and time required to build a customized case for each exhibit.

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 is another area of rapidly escalating cost. Because the collections possess intrinsic as well as scholarly value, special handling, which increases transporting fees, is a requirement. The size of the collection alone may cause numerous shipping problems and additional costs. Shipping fees have doubled in the last three years due to the rise in labor, fuel and maintenance expenses. The Institution expended \$373,000 in FY 1981 for shipping items. To help overcome these escalating costs, 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 acquisitions 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 storage cases, insect trays, shelving, and medical supplies for the animal collection. Chemicals used for conservation have increased an average of 38 percent over the last year. The cost of acid-free wrapping paper and folders routinely used to prevent the deterioration of paper has increased 18 percent. Similarly, the cost of stainless steel storage tanks that house in alcohol items such as small mammals, reptiles, brains and fishes has increased from \$274 per unit in FY 1980 to \$308 per unit in FY 1981, an increase of 12 percent. The cost of storage shelves to support these tanks has increased 13 percent. As new specimens become part of a collection and as loan items are returned, 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 increased 177 percent in FY 1981 over FY 1980 prices. Similar dramatic price increases are observed in the purchase of other materials used for archival purposes. The following table lists several of these.

Collections Management Supplies

Storage cases for specimens		
per unit - 1978:	\$189.60	
1981:	\$245.00	29 percent increase
Hexane, chemical used in Anthropology Conservation Lab		
4 liters - 1980:	\$18.25	
1981:	\$21.35	17 percent increase
Lightcast tape 3", lightweight flexible cast for animals		
1980:	\$42.65	
1981:	\$52.65	23 percent increase
Disposable scalpel #10 blade		
per box - 1980:	\$5.90	
1981:	\$7.12	21 percent increase
Disposable latex surgical gloves		
box of 100 - 1980:	\$7.50	
1981:	\$8.75	17 percent increase

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 1981, approximately \$305,000 was expended for food for the approximately 2,000 animals. Medicine purchased in FY 1981 for the animals has increased as much as 19 percent over FY 1980 prices. For a program whose mission is to improve the health and longevity of its collection with an emphasis on preventive medical programs, as well as emergency medicine, surgery, dentistry, geriatric medicine and neonatal medicine, it is vital that sufficient resources for medical supplies be available.

The Institution's facilities management and administrative functions also continue to feel inflationary effects. Computer maintenance services for the Office of Computer Services cost the Institution \$120,000 in FY 1981. Maintenance costs are estimated to be \$204,000 for FY 1982, an increase of 70 percent for the same items of equipment. The cost of computer programming training courses is increasing as well. Office machine repair costs are expected to increase 25 percent over FY 1981 prices. The cost of some required cleaning items has escalated as much as 39 percent. Hand soap that cost \$20.00 per case in FY 1979 cost \$26.00 per case in FY 1981, an increase of 30 percent. The cumulative impact of these and other inflationary price increases can alter budget planning significantly.

The request of a seven percent increase to nonsalary funds is a modest one. Yet, the additional resources of \$1,700,000 are vital to the integrity of virtually all programs of the Institution. These resources will assist in maintaining the Smithsonian's programs at a level approximating current effectiveness.

NECESSARY PAY  
FY 1983

(Dollars in thousands)

<u>Unit</u>	<u>Within Grades &amp; Merit Pay</u>	<u>Annualization of Raises</u>		<u>Workers' /1 Compensa- tion</u>	<u>Total</u>
		<u>GS</u>	<u>Wage</u>		
Assistant Secretary for Science.....	2	4	-	-	6
National Museum of Natural History/ Museum of Man.....	206	65	2	-	273
Smithsonian Astrophysical Observatory....	35	33	7	-	75
Smithsonian Tropical Research Institute..	33	6	4	-	43
Radiation Biology Laboratory.....	22	4	1	-	27
Chesapeake Bay Center.....	8	3	1	-	12
National Air and Space Museum.....	98	8	3	-	109
National Zoological Park.....	113	9	19	-	141
Center for the Study of Man.....	6	1	-	-	7
Assistant Secretary for History and Art..	3	2	-	-	5
National Museum of American History.....	96	15	2	-	113
National Museum of American Art.....	42	2	1	-	45
National Portrait Gallery.....	33	1	1	-	35
Hirshhorn Museum and Sculpture Garden....	26	4	1	-	31
Freer Gallery of Art.....	11	1	-	-	12
Archives of American Art.....	7	2	-	-	9
Cooper-Hewitt Museum.....	8	-	10	-	18
Museum of African Art.....	20	1	-	-	21
Assistant Secretary for Public Service...	5	2	-	-	7
Anacostia Neighborhood Museum.....	8	2	-	-	10
International Exchange Service.....	2	-	-	-	2
Division of Performing Arts.....	5	2	-	-	7
Smithsonian Institution Press.....	14	-	-	-	14
Assistant Secretary for Museum Programs..	10	2	-	-	12
Office of the Registrar.....	1	-	-	-	1
Conservation Analytical Laboratory.....	15	1	-	-	16
Smithsonian Institution Libraries.....	44	4	-	-	48
Office of Exhibits Central.....	21	2	-	-	23
Smithsonian Traveling Exhibition Service.	4	-	-	-	4
Smithsonian Archives.....	6	1	-	-	7
National Museum Act.....	1	-	-	-	1
American Studies and Folklife Programs...	2	3	-	-	5
International Environmental Science Prog.	3	-	-	-	3
Academic and Educational Programs.....	9	-	-	-	9
Collections Management/Inventory Program.	1	1	-	-	2
Administration.....	124	24	1	77	226
Office of Design and Construction.....	19	3	-	-	22
Office of Protection Services.....	174	4	-	-	178
Office of Plant Services.....	105	2	14	-	121
<b>Total</b>	<b>1,342</b>	<b>214</b>	<b>67</b>	<b>77</b>	<b>1,700</b>

/1 A consolidated bill for Workers' Compensation is paid each year by the Office of the Treasurer rather than being charged to bureaus and offices.

RESTORED POSITION FUNDING

In FY 1982, the Congress restored a total of 69 positions that were deleted in the March 1981 budget amendment. Associated funding also was restored but the four percent across-the-board reduction contained in the Interior and Related Agencies Appropriation Act of FY 1982, however, effectively eliminated the Institution's ability to fund these positions. In providing sufficient workyears specifically for the 69 positions, the Office of Management and Budget also allowed an additional amount of \$1,125,000 in FY 1983 to cover their costs. The "Analysis of Increase" table for each line item in this budget request indicates the dollar amount necessary to fill these positions. The specific positions and associated funds sought for FY 1983 are outlined in the following table:

<u>Unit</u>	<u>Position</u>	<u>Dollars Required (\$1,000s)</u>
National Museum of Natural History/ Museum of Man	1 Archeologist	25
	1 Entomologist	25
	1 Museum Technician	13
	2 Custodial Worker	23
	1 Clerk	12
	2 Clerk-Typist	24
	<u>8</u>	<u>122</u>
Smithsonian Astrophysical Observatory	1 Safety Specialist	33
Smithsonian Tropical Research Institute	2 Clerk	22
National Air and Space Museum	1 Supervisory Exhibit Specialist	22
	1 Spacearium Chief	22
	1 Meteorologist	22
	1 Curator	22
	1 Museum Specialist	18
	1 Photo Archivist	18
<u>6</u>	<u>124</u>	
National Zoological Park	1 Gardener	19
	1 Administrative Assistant	22
	2 Clerk-Typist	26
	2 Custodial Worker	25
	<u>6</u>	<u>92</u>
National Museum of American History	1 Conservator	25
	1 Electrician	20
	1 Exhibit Specialist	20
	1 Photo History Technician	13
	<u>4</u>	<u>78</u>
National Museum of American Art	1 Clerk-Typist	12
	2 Custodian	22
	<u>3</u>	<u>34</u>

<u>Unit</u>	<u>Position</u>	<u>Dollars Required (\$1,000s)</u>
National Portrait Gallery	1 Historian	25
	1 Custodian	<u>12</u>
	<u>2</u>	<u>37</u>
Hirshhorn Museum and Sculpture Garden	1 Custodian	11
Freer Gallery of Art	1 Oriental Art Restorer	43
National Museum of African Art	1 Research Curator	27
Smithsonian Institution Libraries	1 Secretary	12
	1 Library Technician	<u>11</u>
	<u>2</u>	<u>23</u>
Office of Exhibits Central	1 Forklift Operator	19
Administration	1 Budget Analyst	20
	1 Clerk Typist	11
	1 Secretary	15
	1 Computer Specialist	19
	1 Supply Clerk	11
	1 Cataloguer	<u>12</u>
	<u>6</u>	<u>88</u>
Office of Design and Construction	1 Architect/Engineer	40
Office of Protection Services	13 Guard	161
	2 Security Specialist	34
	1 Clerk-Typist	<u>11</u>
	<u>16</u>	<u>206</u>
Office of Plant Services	1 Plumber	21
	1 Supply Technician	20
	1 Painter	20
	1 Warehouseman	17
	1 Mail Clerk	11
	3 Custodial Laborer	<u>37</u>
	<u>8</u>	<u>126</u>
TOTAL	<u>69</u>	<u>1,125</u>

OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	7	328	-	28	-	11	-	140	2	187
FY 1982 Base	7	345	-	55	-	1	-	50	2	187
FY 1983 Estimate	7	357	-	85	-	-	-	100	2	199

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	7	0	7
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	256	5	261
12 Personnel Benefits.....	25	1	26
21 Travel & Trans. of Persons.....	17	2	19
23 Rent, Comm. & Utilities.....	6	1	7
25 Other Services.....	35	2	37
26 Supplies and Materials.....	6	1	7
Total	<u>345</u>	<u>12</u>	<u>357</u>

Analysis of Increase

Necessary Pay.....	6
Inflation.....	6
Program Funds.....	0

ABSTRACT - This Office is responsible for planning, coordinating and reviewing the progress of the 13 science bureaus and programs within the Institution. No program increase is requested for FY 1983. Necessary pay of \$6,000 is required for existing staff and an amount of \$6,000 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 Center for the Study of Man, the Office of Fellowships and Grants, the Office of

Biological Conservation (included in this line item), the Fort Pierce Bureau 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 and nongovernmental 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 1982 and in FY 1983). Support is continuing in FY 1982 and FY 1983 for the Charles Darwin Foundation which operates a biological research station in the Galapagos Islands (projected expenditures of \$30,000 in FY 1982 and in FY 1983). 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. Funds are designated to support the exchange of scholars between the Chinese Academy of Science and the Smithsonian, ranging in interest across the spectrum of natural and physical sciences (estimated expenditures of \$30,000 in FY 1983). Monies from the Institution's Collections Acquisition, Scholarly Studies and Education Program were provided to produce an illustrated flora of the endangered species in the United States (expenditures of \$9,000 in FY 1981).

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 \$27,000 in FY 1982 and \$10,000 in FY 1983). Individual gifts are utilized to supplement the Institution's contribution toward the operation and selected research investigations on Aldabra Island (estimated expenditures of \$12,000 in FY 1982 and in FY 1983). The FY 1983 estimated expenditures include grants 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 \$70,000 in FY 1983). The FY 1981 and FY 1982 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 \$187,000 in FY 1982 and \$199,000 in FY 1983).



NATIONAL MUSEUM OF NATURAL HISTORY/MUSEUM OF MAN

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	497	15,677	1	206	-	680	3	531	34	1,122
FY 1982 Base	505	16,474	-	27	-	210	3	519	36	1,222
FY 1983 Estimate	505	17,023	-	26	-	183	3	343	32	1,034

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	505	0	505
Number of Other Positions.....	80	0	80
11 Personnel Compensation.....	13,034	362	13,396
12 Personnel Benefits.....	1,198	33	1,231
21 Travel & Trans. of Persons.....	138		138
22 Transportation of Things.....	45	3	48
23 Rent, Comm. & Utilities.....	95	7	102
24 Printing and Reproduction.....	409	30	439
25 Other Services.....	878	64	942
26 Supplies and Materials.....	382	28	410
31 Equipment.....	295	22	317
Total	<u>16,474</u>	<u>549</u>	<u>17,023</u>

Analysis of Increase

Necessary Pay.....	273
Inflation.....	154
Restored Position Funds.....	122
Program Funds.....	0

ABSTRACT - The National Museum of Natural History/Museum of Man (NMNH/MOM) is a major center for research in the natural sciences and on the origins and development of man, and is the nation's largest repository of artifacts and specimens in the nation. A staff of 117 scientists conducts basic research on man, animals and plants, and the earth. The large collection of specimens from each of these disciplines, held in trust by the Museum for use by scholars, is an important national resource. The Museum's exhibit and education programs reach more than 5,000,000 visitors each year, including many school children. No program increase is requested for FY 1983. Necessary pay of \$273,000 is

required for existing staff and an amount of \$154,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$122,000 is requested to provide 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 60 million objects) 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 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.

The Museum's scientific research program produces new information on man, plants, animals, fossil organisms, rocks, minerals, sediments and materials from outer space. The Museum's 117 scientists publish well over 100 scientific papers each year, thereby fulfilling the Institution's mandate to increase knowledge.

Basic research at the Museum attempts to discover information about the natural world rather than to apply this knowledge. For example, many of the Museum's scientists discover and describe new species of plants and animals. Others try to understand the relationships between plants and animals and the world they occupy. Often the knowledge thus gained helps with practical management decisions. For example, recently Museum scientists learned that species of malaria-carrying mosquitoes in Southeast Asia were very specific in their environment and habits. They discovered that what was once thought to be a single group of mosquitoes really consisted of four different species, only one of which carried malaria. With the identification of the malaria-carrying mosquito and knowledge of its habits, a more effective mosquito control process was initiated. Basic research is vitally important for the future of the tropics where the environment is being changed rapidly and drastically by human activities. Scientists must discover what lives there, and under what conditions, before it is gone.

At the Museum, studies of the giant worms found at great depth in the Galapagos Rift may yield new information on food production. These worms have no mouth or digestive tract and live in an environment devoid of sunlight and free oxygen. They appear to feed on bacteria which live within their bodies and which in turn gain their energy by breaking down sulfur compounds emanating from vents in the ocean's floor.

Other research is underway in the Amazon Basin, on coral reefs in the Caribbean and in mangrove swamps along the Gulf Coast of the United States. Strong efforts are being made to attract funds from industrial, commercial and private sources to underwrite this research.

The Museum provides two main forms of service to the general public. The first is the exhibits program, which began to be rejuvenated in the early 1970s and now has produced eight major new exhibition halls. The three-year task of renovating the Dinosaur Hall was completed in 1981, and it was reopened in December 1981. A special feature of the Dinosaur Hall is a balcony on which are displayed four rock monoliths that illustrate the use of fossils in industry.

The Dinosaur Hall also features the bones of many dinosaurs, a reconstruction of a giant flying reptile with a wingspan of more than 40 feet, and a "time column" containing much information about reptiles and evolution. The Thomas M. Evans Special Exhibits Gallery opened in July 1981 with a special exhibit, "5000 Years of Korean Art." The gallery will display three major shows each year and will afford a new dimension of exhibits to the Museum's vast public.

The Museum's education program also provides service to the public. Thousands of school children tour the Museum each year and hear talks by docents about the exhibits. During the summer, docents conduct tours for the general public. In addition, many Museum scientists teach courses at local universities and serve on dissertation committees for graduate students. The Museum operates a new learning center of four classrooms and an assembly area for visiting students. The Naturalist Center nearby has collections of natural history and anthropological materials. These collections, an excellent library and volunteer assistants are available to amateur naturalists wishing to study their subjects in greater depth than by looking at exhibits and reading exhibit labels. The Museum's Oceanographic Sorting Center and Scientific Events Alert Network serve the general scientific community. The former prepares and distributes marine animal and plant materials to scientists working on marine pollution, ocean dumping, pollution monitoring, environmental prediction and systematic studies. The latter provides timely notice of short-lived natural scientific phenomena and events, such as volcanic activity, meteorite falls and marine mammal strandings.

Hundreds of scientists come each year to the Museum to study its collections. Many publications result from this work. About half of the Museum's budget and staff is devoted to the care of these collections.

The collections inventory should be completed in 1983. The immediate target of the inventory is to record all materials which are going to the Museum Support Center being built at Suitland, Maryland. The inventory records information on all valuable and all type or major reference specimens. Information on other specimens will be recorded by lot. The collections inventory will be useful in managing the move to Suitland and will be extremely helpful in routine collections management, thus speeding access to the collections and enabling curators to answer more questions. Inventory lists also will help curators to decide whether or not to accept specimens offered to the Museum by showing what is already on-hand. The appropriation request for the Collections Management/Inventory Program, an explanation of this Program and a comprehensive funding summary appear in the Special Programs section.

The Handbook of North American Indians is a special project of the Museum that will result in a 20-volume publication on the cultures, artifacts, territories and habits of native North American Indians. Four volumes have been published, and Northeast, California, Southwest I, Subarctic and Southwest II should be completed late in 1982. Each volume is illustrated and contains 60 to 80 separate articles submitted by scholars from throughout the world.

#### 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 and cafeteria; other receipts such as those realized from the sale of exhibit brochures and the "By-Word" communications system; tuition grants from local

universities; and allotments including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program which supported the acquisition of the Sims collection and several research and education projects. Expenditures through this Program and the Fluid Research Program, together totaling \$479,000 in FY 1981, have not been recorded for FY 1982 which explains the variance in totals shown between FY 1981, FY 1982 and FY 1983. 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. General fund allotments were provided for the "5000 Years of Korean Art" exhibition in FY 1981 (\$158,000); for continued work on the Handbook of North American Birds (estimated expenditures of \$15,000 in FY 1982 and 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 Stuart Fund and the Roebing Fund for acquisition of mineral specimens and gems (estimated expenditures of \$116,000 in FY 1982 and \$117,000 in FY 1983); the Hughes Fund for field research in old world archeology (estimated expenditures of \$14,000 in FY 1982 and \$7,000 in FY 1983); the Sprague Fund for experiments and field research into the physics and chemistry of the earth (estimated expenditures of \$40,000 in FY 1982 and \$44,000 in FY 1983); the Exxon Fund for ecological study of coral reefs (estimated expenditures of \$15,000 in FY 1982 and in FY 1983); and funds to support ethnological research among the Canela Indians of Brazil (estimated expenditures of \$31,000 in FY 1982 and \$32,000 in FY 1983). Other funds available through FY 1982 include: the Fossils and Industry Fund which consists of gifts from numerous corporate donors to sponsor the exhibition on the economic application of fossils (estimated expenditures of \$46,000 in FY 1982); the National Geographic Society grant for excavation of the Lamb Springs early man site in Colorado (estimated expenditures of \$78,000 in FY 1982); and the World Wildlife Fund grant to survey crocodile populations and establish crocodile farms in the Philippines (estimated expenditures of \$23,000 in FY 1982). 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 biosystematic research on the effects of arthropods, such as mosquitoes, which are of military medical significance overseas (estimated expenditures of \$255,000 in FY 1982 and \$81,000 in FY 1983); another project funded by the United States Army to create a computer data file on the medical importance, distribution, ecology and collection of mosquitoes (estimated expenditures of \$46,000 in FY 1982 and \$52,000 in FY 1983); 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 \$219,000 in FY 1982 and \$260,000 in FY 1983); funds from the National Historic Preservation Public Records Commission to arrange, describe and publish

the John P. Harrington papers (estimated expenditures of \$44,000 in FY 1982); funds from the National Science Foundation to the Oceanographic Sorting Center to increase knowledge of polar ecosystems by studying extant collections of flora and fauna (estimated expenditures of \$100,000 in FY 1982 and in FY 1983) and to process and distribute polar biological specimens and data (estimated expenditures of \$129,000 in FY 1982 and in FY 1983); funds from the National Oceanic and Atmospheric Administration for environmental assessment and systems analysis of Gouldsboro Bay, Maine (estimated expenditures of \$130,000 in FY 1982 and \$40,000 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 \$151,000 in FY 1982 and \$165,000 in FY 1983).

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	77	5,370	78	2,479	2	432	1	101	160	11,404
FY 1982 Base	78	5,782	78	2,724	2	349	-	141	172	12,635
FY 1983 Estimate	78	6,058	78	2,846	2	373	-	149	186	15,617

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	78	0	78
Number of Other Positions.....	15	0	15
11 Personnel Compensation.....	3,262	98	3,360
12 Personnel Benefits.....	292	10	302
21 Travel & Trans. of Persons.....	77		77
22 Transportation of Things.....	38	2	40
23 Rent, Comm. & Utilities.....	472	47	519
24 Printing and Reproduction.....	25	5	30
25 Other Services.....	1,141	79	1,220
26 Supplies and Materials.....	285	20	305
31 Equipment.....	190	15	205
Total	<u>5,782</u>	<u>276</u>	<u>6,058</u>

Analysis of Increase

Necessary Pay.....	75
Inflation.....	168
Restored Position Funds.....	33
Program Funds.....	0

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 eight interrelated scientific fields: atomic and molecular physics, high energy astrophysics, optical and infrared astronomy, planetary sciences, radio/geoastronomy, solar and stellar physics and theoretical astrophysics. Use of both ground-based and space-borne instruments for data gathering, the reduction and analysis of data and the computer formulation of mathematical models of astrophysical systems are essential to SAO's research

program. For these purposes SAO maintains a multipurpose observing facility in Arizona named the Whipple Observatory (formerly referred to as Mt. Hopkins), and a number of small observing stations around the world. SAO also operates a central computing facility at its headquarters in Cambridge, Massachusetts. No program increase is requested for FY 1983. Necessary pay of \$75,000 is required for existing staff and an amount of \$168,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$33,000 is requested to provide funding for the one 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 divisions, all efforts are integrated so that the results in one division often complement those in another. Those divisions are:

1. Atomic and Molecular Physics - The major objective of this division is to increase knowledge of the processes and parameters of atomic and molecular physics that are fundamental to all branches of astronomy. It is involved in laboratory astrophysics as well as theoretical studies of atomic and molecular physics.

2. High Energy Astrophysics - Its activities are concentrated in the acquisition and analysis of observations of X-ray sources obtained by X-ray instruments aboard satellites, rockets and the Space Shuttle, and in the development of new instrumentation for future space science missions.

3. Optical and Infrared Astronomy - This division concentrates on optical and infrared observations of stars, galaxies and nebulae. It also is responsible for maintaining and upgrading the optical telescope facilities at the Whipple Observatory and for developing new instrumentation to be used there.

4. Planetary Sciences - The research of this division is on the structure and composition of planetary atmospheres; on asteroids, meteorites, cosmic dust and comets; on lunar and other extraterrestrial materials; and on the evolution of the solar system.

5. Radio/Geoastrometry - Divisional activities include research in Very Long Baseline Interferometric (VLBI) observations of celestial radio sources; atomic clock development and experiments to test Einstein's theory of relativity; geophysical research concentrating on short wavelength features of the earth's geoid; and other research devoted to Space Shuttle applications.

6. Solar and Stellar Physics - Its research focuses on understanding the physical processes in the sun and the stars, on studies of solar activity, and on understanding the relationships between the solar processes and those of the earth.

7. Theoretical Astrophysics - This division does research on a diverse range of astrophysical phenomena, including the construction of model stellar atmospheres; investigation of massive and high density stars and cosmology; studies of galactic evolution; physics of interstellar matter; relativistic astrophysics; and gravity-wave physics.

In support of these investigations, scientific data are obtained from laboratory experiments in Cambridge, Massachusetts; from telescopic observations conducted primarily at the Whipple Observatory, which is the site of the Multiple Mirror Telescope (MMT); from SAO's laser network and other major observatories cooperating with SAO; and from space observations utilizing satellites, rockets and balloons, primarily funded by contracts and grants from the National Aeronautics and Space Administration (NASA). The reduction and analysis of these data are performed with SAO's large interactive computer 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 astronomy, perhaps more than any other field of science, the directions of research and advancement of knowledge most often result directly from the development of new instrumentation. The MMT, which has the second largest effective aperture in the United States, is rapidly approaching full use. (During the past year, its use for observing has increased to 80 percent from about 70 percent with the remaining 20 percent still being used for maintenance and improvements.) The combination of the unique design and the site on Mt. Hopkins has produced a telescope whose performance significantly has surpassed specifications. The University of Arizona and SAO computer programmers, engineers and technicians, have developed a new telescope coalignment system (TCS) to improve further the telescope's optical system. The new TCS can now adjust the six individual telescopes to a common focus four times per second, significantly improving the quality of the images.

Work continues on the small helium cooled infrared telescope being developed at SAO under NASA contract to go aboard Shuttle-borne Spacelab 2 now scheduled for November 1984. This instrument will map extended regions of low-level infrared emission from the Milky Way.

The High Energy Division concentrated this past year on the reduction and analysis of data from the X-ray telescope of the Einstein satellite. They discovered galaxies showing strong X-ray activity but without radio or optical activity; such galaxies had never been observed before. SAO and the Marshall Space Flight Center are working on the Advanced X-ray Astrophysics Facility which will be 100 times more sensitive than the Einstein satellite. This new instrument should stay in orbit at least ten years and will allow scientists to see X-ray sources ten times deeper in space. SAO continued to develop the Large Area Modular Array of Reflectors both as a Space Shuttle experiment and also, scaled-down, as a free flyer.

The Solar and Stellar Division increased its observations at the Whipple Observatory. These ground-based measurements complement the space-borne ones of NASA's International Ultraviolet Explorer satellite and those made with the Einstein satellite. The Division's rocket-borne ultraviolet light coronagraph first measured the temperature of the sun's corona from a distance of only 1.5 solar radii from its center. NASA has selected this instrument as an "Experiment of Opportunity" for a future Shuttle flight, which will let it record up to 40 hours (as opposed to only five minutes aboard a rocket). It thus should provide more accurate observations of temperatures and densities of where the solar wind is accelerated. The solar wind is thought to energize the Aurora Borealis and to interfere with radio communications. The ultimate goal of the experiment is to understand the behavior of the solar wind and thus to predict its influence on the earth's magnetosphere.



The Radio/Geoastrometry Division has completed a new system to reconstruct more quickly an image of an astronomical radio source generated by using the VLBI technique. Using SAO's new array processor, image reconstruction--which used to take two hours of computer time--can now be done in fourteen minutes.

In addition to reducing image reconstruction time, the VLBI group has implemented an automatic process for sampling VLBI observations as they are being taken. A VLBI observing run requires that several radio telescopes, separated by hundreds or sometimes thousands of miles, point simultaneously at an astronomical object for a period of a few days to a week. This new ability to periodically sample data ensures the integrity of the observations from each telescope and the success of the observing run.

### SAO RESEARCH HIGHLIGHTS AND OTHER DEVELOPMENTS

#### Accomplishments in FY 1981

- Completion of the first joint Smithsonian-Harvard Redshift Survey, the first stage of a program to map out the distribution and motion of galaxies in the universe using the 60-inch telescope at the Whipple Observatory. Initial results have shown vast areas nearly devoid of galaxies. These have been mapped for study.
- Discovery of stellar masers and the measurement of the proper motion of these sources using VLBI techniques.
- Participation in the Imaging Team observing Saturn during the Voyager missions. Also, atomic clocks developed at SAO were used as the precise timing standards in the deep space tracing of the Voyager spacecraft.
- Sponsorship for the sixth year of a Summer Science Intern Program in which high school students spent eight weeks on research projects with astronomers in Cambridge, Massachusetts and Mt. Hopkins, Arizona.
- Improvements to the MMT structure, including installation of wind baffles, a low-cost alternative to shielding the instrument from wind buffeting, and a triple-layered insulation of the chamber floor, resulting in a more uniform temperature distribution around the telescope.
- Completion with funds from the Restoration and Renovation Account of the Instrument Room Annex linking the 24-inch and 60-inch telescopes at the Whipple Observatory.
- Completion of the Einstein (HEAO2) satellite flight observation program. The satellite carried the first telescope capable of focusing images of X-ray sources.

#### Accomplishments in FY 1982

- Continued reduction and analysis of data returned from the Einstein (HEAO2) satellite, including studies of the shell of shock-heated material and mass ejected in supernovae explosions; mapping of the diffused hot gas seen in clusters.
- Participation in the American expedition to Antarctica to recover meteorites encased in blue ice patches on the south polar cap.

- Establishment of an image-processing system linked to the digital computer in Cambridge that will allow the display, processing, analysis and graphic reproduction of observational data taken by electronic imaging devices on both ground-based and satellite-borne telescopes.
- Release by the National Academy of Sciences of the Report of the Astronomy Survey Committee, "Astronomy and Astrophysics for the 1980s." Developed under the chairmanship of the SAO Director, the report develops priorities for astronomy in the 1980s.

Plans Anticipated for FY 1983

- Submission of a proposal to NASA for the operation of a worldwide laser satellite tracking network.
- Design and development of a large balloon-borne infrared telescope (three meters in diameter) and associated support electronics.
- Continued development of advanced solid-state devices for astronomical use, both on ground-based telescopes and for space flight.
- Preparation for flight of the Small Helium Cooled Infrared Telescope aboard the Space Shuttle.
- Establishment of an X-ray test and laboratory facility as the first step toward support of an advanced X-ray astronomy satellite and other X-ray instruments aboard Shuttle flights.
- Publication of "Astronomy from Space," a collection of essays on the results of science conducted from satellites during the first two decades of the Space Age.
- Continued analysis of Einstein satellite data, with particular emphasis on supernovae remnants and clusters of galaxies.
- Cooperation with the Mt. Wilson Observatory and the Carnegie Institution in a joint program to observe cyclic activity (star spots) on stellar bodies other than the sun.

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 computer equipment in future years. Expenditures for the Fellowships and Visiting Scholars Program totaled \$280,000 in FY 1981 with estimated expenditures of \$234,000 in FY 1982 and \$250,000 in FY 1983.

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 1982 and in FY 1983). 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 \$45,000 in FY 1981 with estimated expenditures of \$66,000 in FY 1982 and \$73,000 in FY 1983).

Federal Grants and Contracts - SAO receives substantial funding from Federal agency grants and contracts for work 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 other 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 a significant increase over FY 1982, anticipating that the Laser Tracking Network Mission contract from NASA will be awarded to SAO.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General	Special Purpose						
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	83	2,773	2	59	-	202	-	78	-	-
FY 1982 Base	85	2,903	2	69	-	62	-	108	-	-
FY 1983 Estimate	85	3,023	2	72	-	55	-	71	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	85	0	85
Number of Other Positions.....	8	0	8
11 Personnel Compensation.....	1,697	53	1,750
12 Personnel Benefits.....	404	12	416
21 Travel & Trans. of Persons.....	68		68
22 Transportation of Things.....	11	1	12
23 Rent, Comm. & Utilities.....	140	10	150
24 Printing and Reproduction.....	75	5	80
25 Other Services.....	158	14	172
26 Supplies and Materials.....	225	20	245
31 Equipment	125	5	130
Total	<u>2,903</u>	<u>120</u>	<u>3,023</u>

Analysis of Increase

Necessary Pay.....	43
Inflation.....	55
Restored Position Funds.....	22
Program Funds.....	0

ABSTRACT - The Smithsonian Tropical Research Institute (STRI) is the United States leading basic tropical biology research center, permanently located in the tropics in the Republic of Panama. STRI's goals are to conduct and to promote advanced and basic original research studies in the biology of tropical organisms and to increase and diffuse knowledge of their ecology, behavior and evolution. In addition to fundamental research, STRI has the responsibility of promoting and developing environmental awareness and conservation of tropical environments through an active public education program. No program increase is requested for FY 1983. Necessary pay of \$43,000 is required for existing staff

and an amount of \$55,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$22,000 is requested to provide funding for the two positions restored by the Congress in FY 1982.

PROGRAM - The tropics are a rich source of ideas of great importance to the future of science. There are more species of plants and animals in the humid tropics than anywhere else on Earth. Tropical areas abound with spectacular and revealing examples of adaptive specialization among animals of different species, between animals and plants and among both plants and animals and their physical environment. These relationships need to be understood more fully, and STRI's program of basic research is aimed at understanding complex tropical ecosystems. Knowledge of the complexity of relationships among tropical organisms may be the key to understanding ecosystems anywhere, their fragility and their stability. For example, studies of coral reef ecosystems concentrate on the animals that feed upon reef-forming organisms, or focus on the complex relationships between members of the reef community. Such studies require a long time to produce valid results and it is, therefore, important that permanent research facilities such as those at STRI be maintained.

The abundance of species living in the tropics creates an ideal living laboratory in which to study all the key biological processes that affect this planet. Only by understanding these fundamental processes can there be any hope of solving the problems of resource utilization and renewal that face the United States and the World. Problems, such as how tropical deforestation contributes to the increase in atmospheric carbon dioxide and to the apparent acceleration in global heating, threaten to become increasingly urgent as we approach the 21st century. Despite the biological richness of the tropics and the urgent need for research into tropical biology, there is little understanding about the tropics and there has been a relatively small volume of fundamental research, although human population is growing at a faster rate in this region than anywhere else. This growth is threatening the tropics before it has been studied adequately, and methods must be derived to protect this heritage of tropical diversity.

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. At STRI, staff scientists, students and visiting researchers study in depth the key questions of tropical biology and publish their results in prestigious and widely distributed journals.

STRI biologists study a wide variety of topics that are intended to produce important theoretical generalizations and to advance understanding and knowledge. While these are basic studies, not directed primarily towards solutions to practical problems associated with development and agriculture, there is an increasing tendency for the results to be applied by others to solving such problems. A long-term study of the reproductive biology of iguanas carried out at STRI's Barro Colorado Island Nature Monument is a case in point. Iguanas, the largest New World leaf-eating lizard, are a traditional source of food throughout Central America. From fundamental studies, STRI has been able to suggest techniques that could enhance the yield of iguana meat available to small farmers. Similarly, studies into the biology of agoutis (large rodents) have shown how these animals could be domesticated for meat production.

STRI's location in Panama provides unique opportunities for research because the Atlantic and Pacific Oceans are only an hour's drive apart, and this allows for easy two-ocean comparisons. Recent studies have shown that the islands in the Bay of Panama are the site of what is almost certainly the largest breeding colony of Brown Pelicans in the New World; more than 200,000 breed there. STRI biologists studying this colony have concluded that it may be the source of most of the pelicans that are found around the coasts of the United States, following the depletion of the United States pelican colonies as a result of the widespread former use of DDT as an agricultural pesticide. Such a large aggregation of fish-eating birds must have a profound effect on the offshore fisheries, particularly when they are feeding large numbers of young. The ongoing STRI study will help to assess this effect, as well as elucidate more fundamental aspects of the biology of pelicans. STRI's two-ocean marine studies have been enhanced greatly by the new Seawater System at the Pacific Marine Laboratory opened in 1980. This facility has attracted researchers from many countries and is made available to marine biologists from the University of Panama under an agreement signed in December 1980. It is likely to be a key center in any future studies for a sea-level canal, again being considered by the United States, Panama and Japan.

Comparative studies in other tropical areas are continuing; studies of squids and octopuses, carried out originally in Panama, have been extended to Guam, Palau and the Philippines. A new technique for studying sharks-- observation from a captive balloon anchored at 1,000 feet above sea level--is being attempted off the Australian Barrier Reef by STRI marine biologists. Studies also have been carried out in South America, Africa, India and the People's Republic of China. A vigorous policy of disseminating ideas through publications and international conferences is pursued by STRI. More than 150 scientific articles were produced in FY 1981, and Institute scientists and students participated in International Congresses of Botany, Ethology and Tropical Biology as invited speakers or delegates, as well as in numerous smaller conferences and symposia. The British Broadcasting Corporation filmed an important segment of its series "Life on Earth" at STRI with the scientific advice of the staff, and several popular films on natural history were produced at the Institute's facilities.

Although the Smithsonian Tropical Research Institute 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 it to provide scientific advice on many of the problems encountered by most developing tropical countries. STRI maintains formal cooperative agreements with a number of national institutions, particularly in Panama and Colombia. Recently, an agreement has been concluded 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 the contribution of STRI 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 Island Nature Monument. These research projects will provide opportunities to test some of the ideas derived from the basic research. Agricultural programs, which are provided enormous sums by international lending agencies, often fail for lack of sufficient locally based research. Successful agricultural programs must be in harmony with the local ecology; the methods of growing corn in Iowa may not be appropriate in Mexico or Panama. Studies by STRI will aid in providing the proper solution to this continuing dilemma.

An important aspect of STRI's program is its contribution to the education and training of students at both the pre- and post-doctoral levels. Last year the Institute directly supported the training of 76 students from the United States and elsewhere and provided logistic support and facilities for many more. During the same period more than 1,200 long- or short-term visitors, mainly from the United States, used STRI facilities. More than 80 university and research institutions were represented by these visitors. Applications to use STRI research facilities continue to increase despite cutbacks in research support throughout the world.

#### 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 maintenance. 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 are provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program. Expenditures under this Program totaled \$119,000 in FY 1981 and supported training in tropical biology, fellowships, field research and environmental and research education in the tropics. The Smithsonian Tropical Research Institute can expect to receive funds through this Program in FY 1982 and in FY 1983. Awards for those years have not been made yet, which explains the variance in the totals shown between FY 1981, FY 1982 and FY 1983.

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; to support research related to geophysical events; publication and distribution of research results; and to support studies relating to endangered tropical environments. Among them are 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 (estimated expenditures of \$16,000 in FY 1982 and \$12,000 in FY 1983), and the Atherton Seidell Endowment for publications of Spanish translations of key papers in tropical biology (estimated expenditures of \$15,000 in FY 1982). In FY 1982, continuing support from the EXXON Corporation will be used to support 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 \$25,000 in FY 1982 and in FY 1983). A grant from the Whitehall Foundation supports the study of physiological response of tropical forest environmental fluctuations (actual expenditures of \$34,000 in FY 1981 and \$9,000 estimated for FY 1982). STRI also has several other restricted funds each with anticipated expenditures of less than \$7,000 a year.

RADIATION BIOLOGY LABORATORY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	48	1,999	-	-	-	98	-	13	1	58
FY 1982 Base	48	2,003	-	-	-	68	-	34	1	45
FY 1983 Estimate	48	2,090	-	-	-	75	-	25	1	44

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	48	0	48
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	1,170	25	1,195
12 Personnel Benefits.....	115	2	117
21 Travel & Trans. of Persons.....	17		17
22 Transportation of Things.....	2		2
23 Rent, Comm. & Utilities.....	180		180
24 Printing and Reproduction.....	5		5
25 Other Services.....	70	5	75
26 Supplies and Materials.....	250	15	265
31 Equipment.....	194	40	234
Total	<u>2,003</u>	<u>87</u>	<u>2,090</u>

Analysis of Increase

Necessary Pay.....	27
Inflation.....	60
Program Funds.....	0

ABSTRACT - Light is a major factor in the environment for controlling the growth and development of plants. The Radiation Biology Laboratory (RBL) monitors the quality, duration and intensity of light in the natural environment, developing multi-year data banks of seasonal and annual trends. In addition, RBL has pursued the identification of the pigments in plants and animals responsible for the absorption of light. Using controlled environments that simulate the natural light conditions, the nature and extent of the influence of light on biological systems can be determined. There is a continuing increase in requests from scientists, research institutions and the general public for such data in regulatory biology, environmental biology, and radiocarbon dating. No



program increase is requested for FY 1983. Necessary pay of \$27,000 is required for existing staff and an amount of \$60,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The research of the Radiation Biology Laboratory consists of three principal areas: (1) regulatory biology, (2) environmental biology and (3) radiocarbon dating. Since its inception in 1929, RBL has pioneered research into the determination of the color quality and quantity of visible and near visible sunlight, coupled with measurement of its influence on growth. The present photobiology experimental program is of greater scope than in any other single laboratory in the world. The Laboratory has been credited with major contributions in the field of photobiology, several first achievements in action spectroscopy and the development of primary standards for the measurement of solar energy.

The production of stored chemical energy by photosynthesis is basic for all life on Earth. The use of this energy is controlled by signals from the environment. A primary objective of the Radiation Biology Laboratory 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 molecular mechanisms through which these signals operate.

This aim is accomplished by studying these environmental influences on plant growth and development in the laboratory under controlled conditions, using biochemical, biophysical and physiological techniques, 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 sunlight. Many factors--dust particles, ozone concentration and photochemical 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 in ultraviolet and the visible portion of sunlight. Utilizing these data, conditions can be simulated in environmental control chambers to assess the effects such changes may induce in plant growth. These data can be used to assess the 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 team efforts of many scientific disciplines. Disciplines represented at RBL include physiology, cytology, biochemistry, biophysics, physics, engineering, electron microscopy and morphology.

Major accomplishments in FY 1981 include the following:

1. Dated sediments from northern Maine lakes indicate continental ice retreat and organic deposition there 12,700 years ago, permitting early human occupation. These values agree with similar cultures in southwestern Maine which have been dated at 11,300 years and in Nova Scotia at 10,600 years ago.

2. Flowering in the long-day mustard plant Arabidopsis thaliana L. is promoted by far-red energy. The sensitivity of the plant for such promotion is regulated by an internal circadian rhythm. The ability to detect this far-red energy does not require either chlorophyll or photosynthesis since white plants, grown on a herbicide that prevents greening, are even more sensitive to far-red light than the green controls. Thus, the regulation of reproduction by sunlight probably operates through the photoreceptor pigment phytochrome, and this regulation is inhibited by the presence of chlorophyll phytochrome which may be

acting as a screening pigment. This is the first definitive evidence for the high energy control of flowering by sunlight that absolutely eliminates any contribution by photosynthesis.

3. The successful development of an underwater spectral radiometer and a spectral turbidometer has been completed. These two instruments now are being used to gather spectral quality data for light penetration at various depths in the Rhode River estuary of the Chesapeake Bay.

4. The amount of ultraviolet-B radiation (UV-B) measured in Rockville, Maryland has decreased slightly since 1970. This trend is small but statistically significant. The amount of ozone calculated from the UV-B measurements shows a decreasing trend also. The measured changes in ultraviolet do not appear to correlate with ozone changes as previously assumed. This implies that there are other atmospheric gases that are influencing UV-B transmission through it.

5. Blue-green algae occur in environments where growth is limited by the color and amount of light available. Pigment and ultrastructural studies on the blue-green algae Nostoc showed that this organism can vary its pigment composition and the size of its photosynthetic antennae. At the same light, energy cells under red light grow as effectively as under green or white light. However, the red light grown cells did so by making only about half as much green chlorophyll and with smaller antennae. These results suggest that an important adaptive strategy operates in these simple organisms enabling them to grow in unfavorable environments. It is probable that this mechanism also occurs in more complex plants, but that is more difficult to demonstrate. Such adaptations enable plants to harvest light with maximum efficiency in order to provide sufficient food with the limited light energy available in the environment.

#### 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 1981, 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 (\$49,000). Expenditures under that Program have been recorded for FY 1981 but not yet for FY 1982 and FY 1983. This explains the variance in totals for FY 1981, FY 1982 and FY 1983. Expenditures for the Fellowship and Visiting Scholars Program totaled \$47,000 in FY 1981 with estimated expenditures of \$58,000 in FY 1982 and \$65,000 in FY 1983.

Restricted Funds - These are provided through donations, bequests and foundation grants which are designated for specific subjects of investigation. These include: the Eppley Foundation grant used to support investigation of biological responses to solar radiation (projected expenditures of \$17,000 in FY 1982 and in FY 1983); the Rollins Endowment Fund used to support the study of the physical measurements of radiation (estimated expenditures of \$5,000 in FY 1982 and in FY 1983); and other contributions used to support research conducted jointly by the National Museum of Natural History/Museum of Man, the Chesapeake Bay Center for Environmental Studies and the Radiation Biology Laboratory for determining the relation of light penetration and productivity in the Chesapeake Bay (estimated expenditures of \$12,000 in FY 1982 and \$3,000 in FY 1983).

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. A contract received from the Department of Energy supports the research on membrane-associated pigments of algae involved in photosynthesis (estimated expenditures of \$40,000 in FY 1982 and in FY 1983). RBL anticipates the level of Federal grants and contracts to remain the same in future years.

NATIONAL AIR AND SPACE MUSEUM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	216	6,152	-	14	29	1,765	2	109	2	113
FY 1982 Base	222	6,802	-	8	28	1,927	2	92	5	627
FY 1983 Estimate	222	7,160	-	7	28	2,032	2	51	5	729

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	222	0	222
Number of Other Positions.....	5	0	5
11 Personnel Compensation.....	4,728	212	4,940
12 Personnel Benefits.....	464	21	485
21 Travel & Trans. of Persons.....	41		41
22 Transportation of Things.....	35	5	40
23 Rent, Comm. & Utilities.....	60	5	65
24 Printing and Reproduction.....	75	5	80
25 Other Services.....	525	40	565
26 Supplies and Materials.....	474	30	504
31 Equipment.....	400	40	440
Total	<u>6,802</u>	<u>358</u>	<u>7,160</u>

Analysis of Increase

Necessary Pay.....	109
Inflation.....	125
Restored Position Funds.....	124
Program Funds.....	0

ABSTRACT - The National Air and Space Museum (NASM) was created by Congress to memorialize the development of aviation and 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. No program increase is requested for FY 1983. Necessary pay of \$109,000 is required for existing staff and an amount of \$125,000 is sought to compensate for the effects

of inflation in nonsalary areas of expense. A further amount of \$124,000 is requested to provide funding for the six positions restored by the Congress in FY 1982.

PROGRAM - More than 50,000,000 visitors have been to NASM since it opened on July 1, 1976. NASM conducts programs in exhibitions, research, education and collections management. These programs have produced fruitful results and should add to the excitement of the Museum and the vitality of its programs. In response to public interest and attendance, NASM has initiated work on upgrading its exhibits and will introduce several new subjects in the forthcoming years. During FY 1981, the Museum opened "A Gallery of Jet Aviation" which traces the evolution of military and commercial technology and notes its commercial, social and economic effects on society.

In FY 1982, NASM will greatly enhance existing exhibits and prepare for future new galleries. The "Aerial Aircraft Carriers" exhibit that opened in November 1981, displays the vast variety of air vehicles which were designed to carry other air vehicles, ranging from a fanciful balloon/sailing ship fantasy of the 18th century to the contemporary Boeing 747/Space Shuttle combination.

An important exhibit, "American Blacks in Aviation," will be placed in the Pioneers of Flight gallery. This exhibit will portray the struggles and progress of Black people in the field of aviation, both military and civil. Similarly, an exhibit on Jacqueline Cochrane will celebrate her record-breaking aviation career. Ms. Cochrane was perhaps the most influential woman in American aviation since Amelia Earhart. The Museum also will honor the 100th anniversary of Franklin Delano Roosevelt's birth with an exhibit on his pioneering use of aircraft in politics and wartime.

In startling contrast to the large aircraft in the gallery of Air Transportation, the "Solar Challenger," the first aircraft to fly powered by the conversion of energy directly from the sun, will be exhibited next summer. The "Solar Challenger" is a direct engineering descendant of the Museum's popular "Gossamer Condor," the first truly successful human powered aircraft.

The "25th Anniversary of Space Flight" will be commemorated in a central exhibit in the Milestones of Flight gallery. The exhibit will show the enormous technological advances in this period and explain their sociological and cultural influence. Also in FY 1982, the Museum's Art Gallery will feature an exhibit of paintings of the Space Shuttle that were commissioned by NASA to document this spectacular achievement.

In FY 1983, a major new exhibit will be presented about the Sun, its energy and the stars. The exhibit will examine successively the Sun, the stars, constellations and galaxies as astronomical objects. Additionally, NASM will start a major new exhibit on the "Golden Age of Flight," to be opened in 1984, and the Art Gallery will feature an exhibit of the paintings of noted aviation artists Frank Wootton and Henry Farre.

The Museum's research unit, the Center for Earth and Planetary Studies, continued in FY 1981 to study comparative planetology. Based on interpretation of orbital photographs and other remotely-sensed data, the Center found correlations among features of the Earth, the Moon, Mercury, Venus and Mars, thus shedding light on the geologic history of planetary surface features and their origins. This research also resulted in establishing geomorphic similarities or differences in the history and evolution of planetary surfaces.

The Center compared the deserts of Earth and Mars and gained a better understanding of the desert-forming process here on earth. A significant new effort in FY 1983 will be the use of meteorological satellite data to monitor terrestrial variations in the desert environment. Collection of wind data and other meteorological parameters by automated means also will be facilitated by satellite relay.

The Center for Earth and Planetary Studies published Desert Landforms of Southwest Egypt in FY 1981, and Remote Sensing of Earth Resources and Environment: Deserts and Arid Lands is in preparation.

During FY 1982, planned publications resulting from NASM research include Prelude to the Space Age: The Rocket Societies 1924-40; Bringing Aerodynamics to America; Red Phoenix; The Rise of Soviet Air Power 1941-45; Combat Clothing: Army Air Forces Clothing in World War II; and Bleriot XI. In FY 1983, the scheduled NASM publication program includes U.S. Women in Aviation 1919-29; de Havilland DH-4; Nakajima Jini-S; Northrop N1M Flying Wing; Fokker D. VII; and Vengeance Weapon 2. In addition, a major four-volume history of aviation, is planned, which will extend over several years.

The Museum sponsors for the public an extensive series of aeronautics and astronomy lectures, aviation and space fiction films and commemorative seminar programs, including one on the 50th anniversary of Amelia Earhart's first trans-atlantic flight.

The Education Division serves both the general public and the education community. The latter audience is served in particular by the development and conduct of tours, publications, demonstrations, lectures, seminars, workshops and audiovisual and other educational materials. A special emphasis is given to providing materials and learning opportunities for minority, ethnic and disabled groups.

The Division also serves audiences that are not able to visit the Museum. Extension programs, such as the Regional Museum Resource Program, Air & Space magazine and Regional Museum Assistance Program, reach a large audience beyond the Mall by providing resource materials and information to existing educational networks, school systems, classroom teachers, other museums and education organizations and societies.

The Museum has created a third archival storage area for the extensive NASM collection of documents. Work continues on plane restoration and preservation. The de Havilland DH-4 has been completed, and work continues on the very complex and highly important Nakajima twin-engine fighter, the Northrop N1M flying wing, the Focke Wulf 190 fighter, the Ecker Flying Boat and the Benoist Korn biplane. The latter two aircraft belong to the pre-1914 collection which is in urgent need of restoration.

The ability to display to the public objects which cannot be shown on the Mall due to space considerations is met in five buildings at the Paul E. Garber Preservation, Restoration and Storage Facility located in Suitland, Maryland. This facility houses an additional 170 major restored artifacts.

#### 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, 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, the publication of books and the magazine Air & Space, guest lecturers 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 "Living Planet" and for support of other Institutional programs. The Lindbergh Chair of Aerospace History endowment continues to provide annual support for the distinguished Visiting Scholar Program at the Museum. A new film, tentatively titled "Flyer," will open in the Museum's Theater in 1982 and will present, in an entertaining format, aspects of flying which the average visitor does not have a chance to observe. In the Albert Einstein Planetarium, a new production entitled "PROBE" will relate the significant advances in planetary knowledge made possible by the recent solar system exploration by spacecraft. The increase in projected expenditures between FY 1982 and FY 1983 is related to increased normal operating expenses for the Theater and Spacearium. Necessary renovations are planned such as a new film handling room, design and modification of the Theater entrance, a computerized ticketing reservation system, the purchase of a new IMAX projection lens, other IMAX projector improvements and modification of the Theater lighting to include an emergency/safety lighting system. Also planned, is a new modern Spacearium box office.

Restricted Funds - Funds are provided through donations, bequests and grants by individuals, foundations, organizations or corporations for specific purposes. Examples include the Ramsey Endowment Fund which finances a research chair relating to naval flight history (estimated expenditures of \$29,000 in FY 1982 and \$31,000 in FY 1983) and the German Planetarium Fund used to purchase additional equipment and to provide maintenance for support of the Zeiss Planetarium machine, originally donated by the Federal Republic of Germany (estimated expenditures of \$42,000 in FY 1982).

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. For example, studies in planetary research are conducted by NASM's Center for Earth and Planetary Studies under grants from the NASA (estimated expenditures of \$127,000 in FY 1982 and \$129,000 in FY 1983). In addition, funds are anticipated from the Department of the Army to support environmental research in the Sinai Desert (estimated expenditures of \$500,000 in FY 1982 and \$600,000 in FY 1983).

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
	FTP*	Amount	General FTP*	Amount	Special Purpose FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	22	869	2	83	1	141	-	34	10	264
FY 1982 Base	22	941	1	55	1	25	-	2	10	449
FY 1983 Estimate	22	969	1	57	1	29	-	-	-	350

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	22	0	22
Number of Other Positions.....	6	0	6
11 Personnel Compensation.....	677	11	688
12 Personnel Benefits.....	61	1	62
21 Travel & Trans. of Persons.....	9	1	10
23 Rent, Comm. & Utilities.....	32	3	35
24 Printing and Reproduction.....	5	1	6
25 Other Services.....	47	5	52
26 Supplies and Materials.....	51	6	57
31 Equipment.....	59		59
Total	<u>941</u>	<u>28</u>	<u>969</u>

Analysis of Increase

Necessary Pay.....	12
Inflation.....	16
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. The staff does research on land/water interactions and conducts an environmental education program. In recognition of its research and facilities, the United States Department of Commerce is designating the Center as a National Estuarine Sanctuary under the Coastal Zone Management Act of 1972. 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 1983. Necessary pay of \$12,000 is required for existing staff and an amount of \$16,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.



PROGRAM - Environmental Research - The Center's Environmental Research concentrates on the Rhode River watershed and is organized into three components: upland ecology, watershed studies and estuarine ecology. Over the last decade considerable information has been generated, which now is being analyzed with new data processing equipment and software acquired with appropriated funds.

Upland Ecology - The Upland Ecology Program studies the effects on plants and animals of existing and past land use practices. Scientists monitor plant and animal populations on permanent sites established in typical local habitats. From these long-term studies scientists can evaluate environmental changes that might be caused by such human related phenomena as acid rain. Scientists have demonstrated from historical records the land use changes which have occurred at the Center for the last 300 years in order to understand the ecological effects of past agricultural practices.

A three-year study on how songbirds were affected by forest fragmentation was completed in FY 1981. It showed that long distance migratory species are more sensitive to habitat fragmentation than nonmigratory birds. Further work will be done in FY 1982 on selected migratory species in their wintering areas in Mexico. Outside sources of funding are being sought to support this phase of the project.

Other research is being done on the regulation of plant populations through seed and seedling predation, on competition between vines and other plants in abandoned fields and the monitoring of long-term changes in forest characteristics attributable to changes in meteorological conditions.

Watershed Studies - The Watershed Program monitors rainfall, land runoff and ground water flow to determine the effects of land use on water quality entering estuaries. By operating eight automated dams and gauging stations, scientists determine the effects of wetland vegetation types on water quality. The initial phase of this project will be completed in FY 1982, and grant funds are being requested to supplement it for three more years. The goal of this phase is to document the ecological significance of upstream wetlands and to learn how best to protect them.

The State of Maryland has been applying the results of the Center's watershed research to its management of water quality in the Patuxent River Basin. A compendium of all environmental monitoring work undertaken at the Center since 1970 will be completed in FY 1982 for use by state and Federal agencies to resolve water quality and land use issues.

Estuarine Ecology - The Center's Estuarine Program determines how water quality, community structure and productivity are regulated in the Rhode River. In coordination with the two other programs, scientists are examining how fluctuations in rainfall and land runoff affect the productivity of the estuary. A two-year study of bottom-dwelling animals indicated that high salinities caused by recent prolonged drought around the Chesapeake Bay resulted in a significant increase in bottom-dwelling clams, worms and crustaceans in the Rhode River. Surprisingly, very few species of invertebrates and fish that normally live in the saltier lower Chesapeake Bay have moved up to the Rhode River. A joint project of CBCES, the Radiation Biology Laboratory and the National Museum of Natural History/Museum of Man is to develop equipment to monitor light penetration into estuarine waters to determine how plankton respond to different levels of light. This study has shown that phytoplankton adapt readily to changes in light quality and intensity by changing the composition of species and shifting

pigment concentrations. On sunny days chlorophyll pigments are dominant whereas other pigments are on cloudy days. This ability to make rapid adjustments to changes in light quality and quantity allow the phytoplankton to maintain high levels of productivity.

The first three-year phase of a project to determine the ecological effects of ditching Chesapeake Bay wetlands for mosquito control was completed in FY 1981. The results showed that traditional ditching techniques, developed primarily in New Jersey, cannot be applied indiscriminately around the Chesapeake Bay without causing adverse changes in vegetation. The ecological data compiled is the most thorough study of vegetation in altered wetlands yet available and is being used by resource managers in other states where expanded ditching programs are being contemplated.

Educational Research and Public Information - Education and public information activities at the Center seek to improve outdoor environmental education. The program is studying out-of-school learning experiences of both children and adults and is developing related educational materials. To offset declining scientific literacy in the school systems, the education program provides material for teaching in existing informal settings such as museums, nature study centers and camps, as well as people's homes. The Center's education staff completed a project designed to help parents conduct science education activities for their own children outside the school setting. These teaching techniques, now being tested, will be published and wide-scale distribution of these materials is planned for FY 1983.

With the designation in FY 1982 of the Center as a National Estuarine Sanctuary, an estuarine education program will be initiated in FY 1982. A public education building may be constructed in FY 1983 with funds provided by the State of Maryland. No Federal operating costs will be associated with the building with the exception of utilities and basic maintenance expenses. Private sources of revenue are being sought to enable the Center to conduct a long-term effort in public education, focusing on informing the public of the richness, fragility and importance of estuarine ecosystems.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and are used to support the summer ecology program, the work/learn program for graduate and undergraduate students studying at the Center and the salary costs of a docent coordinator. Funds from the Institution's Collections Acquisition, Scholarly Studies and Education Program totaled \$102,000 in FY 1981 and were used to support research on the penetration of light in estuarine waters and to develop family education materials. Funds from this Program have been recorded for FY 1981 but not for FY 1982 which explains the variance between FY 1981, FY 1982 and FY 1983.

Restricted Funds - These are provided through donations and grants from individuals, foundations, organizations or corporations for specific purposes. Examples of these funds include a grant from the Knapp Foundation which was used for watershed monitoring (expenditures of \$33,000 in FY 1981).

Federal Grants and Contracts - These are granted from 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, a grant from the Chesapeake Research Consortium is being used for a project on "Nutrient Dynamics in the Rhode River Ecosystem" (estimated expenditures of \$249,000 in FY 1982) and another from the National Science Foundation used for "Science Activities for Informal Learning" (estimated expenditures of \$200,000 in FY 1982). Based upon prior years' experience, the Center anticipates receiving grants totaling \$350,000 in FY 1983.

NATIONAL ZOOLOGICAL PARK

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	321	9,221	-	21	-	118	1	28	5	249
FY 1982 Base	327	9,515	-	6	-	59	1	34	4	152
FY 1983 Estimate	327	9,855	-	5	-	63	1	30	4	153

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	327	0	327
Number of Other Positions.....	30	0	30
11 Personnel Compensation.....	7,147	213	7,360
12 Personnel Benefits.....	689	20	709
21 Travel & Trans. of Persons.....	29	2	31
22 Transportation of Things.....	15	1	16
23 Rent, Comm. & Utilities.....	100	6	106
24 Printing and Reproduction.....	12	1	13
25 Other Services.....	410	26	436
26 Supplies and Materials.....	963	61	1,024
31 Equipment.....	107	7	114
Acquisitions for collections...	33	2	35
42 Insur. Claims & Indem.....	10	1	11
Total	<u>9,515</u>	<u>340</u>	<u>9,855</u>

Analysis of Increase

Necessary Pay.....	141
Inflation.....	107
Restored Position Funds.....	92
Program Funds.....	0

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 168 acres in Washington's Rock Creek Valley and the 3,150-acre Conservation and Research Center at Front Royal, Virginia. No program increase is requested for FY 1983. Necessary pay of \$141,000 is required for existing staff and an amount of \$107,000 is sought

to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$92,000 is requested to provide funding for the six positions restored by the Congress in FY 1982.

PROGRAM - The National Zoological Park was established by the Congress in 1890 for the "advancement of science and the instruction and the recreation of the public." To this end, the Zoo maintains at Rock Creek a live collection of approximately 2,000 animals comprising 430 species. Species are selected for their exhibition and educational value, as well as for research on their conservation in the wild. Exhibits are grouped taxonomically to show variety of physiology, behavior and evolution and are designed to be as compatible as possible with the animals' natural habitats. Over 350 animals from approximately 46 species, are at the Zoo's Conservation and Research Center in Front Royal, Virginia. Their selection is based on the long-term breeding potential of animals whose present captive populations are small or unstable or whose natural habitat is endangered. The Zoo maintains public information, education and visitor service programs for families and school groups, as well as for disabled and senior citizens.

The National Zoo serves the scientific community through dissemination of research results, cooperation in animal breeding programs and sharing of knowledge and experience in education and animal management with other zoos and research centers. The results of research are published and thus are available to all.

Animal Exhibition - A zoological park by its very definition is a place for public exhibition of wild animals for the education and enjoyment of visitors. The animals are exhibited in secure enclosures designed to meet their physical needs and to be esthetically pleasing to the visitors. The Small Mammal Building scheduled to reopen after alterations in the fall of 1982, now will exhibit small mammals in more natural settings with modernized support systems. The design for the Monkey Island Exhibit will be completed in the fall of 1982, and will provide for outdoor exhibit of natural rockwork surrounded by a moat. The Zoo opened a new Great Ape House in the fall of 1981 that is a prototype for exhibiting orangutans and gorillas. This 20,000-square-foot structure has glass-fronted yards with viewing across open moats or through glass walls. Renovation of the Reptile Building and construction of its new nocturnal exhibit also was completed in the fall of 1981.

The National Zoological Park has approximately 3 million visitors each year from every state and many foreign countries. Interesting biological facts about each animal and its natural habitat, including its status in the wild, are shown in posters and labels. In addition to exhibits, the Zoo also maintains a park-like setting for the leisurely enjoyment and education of the public.

Animal Management - The primary long-range objective of the National Zoo is to care for, exhibit and study animals so as to minimize the number taken from the wild. The Zoo's staff seeks to improve the health and longevity of captive animals by improved facilities and expanded medical care. Constant monitoring and research on the animals assists in developing information on proper conditions for reproduction and dietary health. A new nutrition program concentrates on two areas: diets are analyzed for nutritional content, and often are compared with what species eat in the wild; and studies are being coordinated of the milk composition of several groups (bats and rodents) with observations of mother-infant nursing interactions. This research will enhance the Zoo's ability to hand-rear young animals rejected by their parents.

The animal health programs at the Zoo include quarantine procedures, preventive and emergency medicine, surgery, dentistry, geriatric and neonatal medicine with comprehensive medical records maintained for each animal. The Zoo has acquired new information on anesthesia of exotic animals and on the therapeutic effects of antibiotics.

The Conservation and Research Center plays an important role in the research and breeding programs for rare and endangered species. The facilities there 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.

Research - The National Zoological Park conducts research programs at Rock Creek, Front Royal and selected field sites abroad. The Zoo's collection provides a unique and valuable resource for behavioral studies involving multi-species comparisons. The Zoo is studying animal communication, through the structure, function, evolution and development of vocal and olfactory systems. Examples of animals being studied are cranes, elephant shrews, dik-diks and golden lion tamarins. The research staff is testing a theory on the evolution of mating systems, parental investment and kin selection in vertebrates. At Front Royal scientists are studying raccoons, opossums, skunks and small rodents to improve wildlife management on land being used to raise exotic species.

Public Education and Information - The Zoo maintains educational programs for visitors from pre-schoolers through families, which provide an in-depth look at specific areas of zoo life. The Zoo also has a free winter program, "Sunday Afternoons at the National Zoo."

Support Services - Support Services are responsible for security, maintenance and repair of the property and equipment. There are 60 facilities at Rock Creek, with over 18 miles of paths and roadways and 2.4 miles of perimeter fence, contained within its 168 acres.

#### 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 in animal communications, as well as other research and educational projects. Expenditures under the Collections Acquisition, Scholarly Studies and Education Program totaled \$39,000 in FY 1981 but have not been recorded for FY 1982 and FY 1983. This explains the variance in the totals shown between FY 1981, FY 1982 and FY 1983. Expenditures also are made for the support and maintenance of facilities at Front Royal (estimated expenditures of \$34,000 in FY 1982 and \$43,000 in FY 1983) and for the purchase of animals for the collection (estimated expenditures of \$25,000 in FY 1982 and \$20,000 in FY 1983).

Restricted Funds - These are provided through gifts and foundation grants. Expenditures are made to support research projects and educational programs as specified by the donation. An example of this support is a grant from Ringling Brothers Circus for the study of antibiotics in various zoo animals (estimated expenditures of \$18,000 in FY 1982 and \$19,000 in FY 1983).

Federal Grants and Contracts - These are provided by various government agencies and departments for research being conducted by Zoo staff. The Zoo currently is conducting research on the long-range population dynamics and behavior of the Toque Macaque monkey with a grant from the National Science Foundation (estimated expenditures of \$29,000 for FY 1982 and \$30,000 for FY 1983). An ongoing research project, funded by the National Institutes of Health, is being used to develop a Landset digital interpretation facility. The research being conducted will improve the level of knowledge of tropical ecological systems (estimated expenditures of \$20,000 for FY 1982 and \$21,000 for FY 1983). Another grant received from the National Institutes of Health is being used to promote conservation of the wild population of primates from various countries (estimated expenditures of \$97,000 in FY 1982 and \$102,000 in FY 1983).

CENTER FOR THE STUDY OF MAN

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	12	603	-	-	-	-	-	18	-	-
FY 1982 Base	12	729	-	1	-	-	1	41	-	71
FY 1983 Estimate	12	762	-	1	-	-	-	27	-	32

\*FTP = Full-time permanent positions.

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	12	0	12
Number of Other Positions.....	4	0	4
11 Personnel Compensation.....	268	7	275
12 Personnel Benefits.....	25		25
21 Travel & Trans. of Persons.....	54		54
22 Transportation of Things.....	7		7
23 Rent, Comm. & Utilities.....	5		5
24 Printing and Reproduction.....	49		49
25 Other Services.....	122	11	133
26 Supplies and Materials.....	51	8	59
31 Equipment.....	148	7	155
Total	<u>729</u>	<u>33</u>	<u>762</u>

Analysis of Increase

Necessary Pay.....	7
Inflation.....	26
Program Funds.....	0

ABSTRACT - The Center for the Study of Man (CSM) encompasses the National Human Studies Film Center (formerly referred to as the National Anthropological Film Center) and the Research Institute on Immigration and Ethnic Studies (RIIES). The CSM supports research and other services relating to immigration, ethnicity, anthropological film archiving, film-making, archival and publication activities. No program increase is requested for FY 1983. Necessary pay of \$7,000 is required for existing staff and an amount of \$26,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.



PROGRAM - The Center for the Study of Man coordinates research and development in a series of anthropological and man-related science programs. It consists of the National Human Studies Film Center (NHSFC) which has total resources of eight positions and \$549,000; the Research Institute on Immigration and Ethnic Studies, which has resources of three positions and \$153,000; and an administrative staff with resources of one position and \$27,000.

During FY 1981, the Smithsonian reviewed the goals and administration of the NHSFC and divided its activities into a filming unit and an archival unit. This division was undertaken in order to strengthen the Center's ability to obtain, safeguard and make available for research existing film, while retaining its ability to film threatened and vanishing cultures. This separation allows each unit to pursue its goals with clearer definition. In FY 1982, the filming unit has an allocation of three positions and \$159,000, while the archival unit has an allocation of five positions and \$390,000.

The NHSFC completed in FY 1981 three films on Tibetan society. A particularly valuable one was made of the rituals involved in the initiation of young Tibetan boys into the Buddhist monastic order. Filming continues of unique cultures in Nepal, Micronesia and other areas. The new archival unit of the Film Center will concentrate on inventorying existing films, planning for new acquisitions and ensuring proper annotation of films. Currently, the film collection consists of over one million feet of visual data which must be catalogued and indexed.

The Research Institute on Immigration and Ethnic Studies was founded in 1973 to assist and conduct research on immigration to the United States and its overseas territories and related studies. At a time when immigration to the United States is greater than ever, the work of the Research Institute is helpful in analyzing immigration patterns. Legal and social problems are particularly acute for the large number of illegal immigrants who continue to arrive in the United States. These people have a significant effect on social services, employment, law enforcement and in other areas; however, they lack a public voice and thus are not heard by the providers of services. Knowledge of the patterns of migration and the forces which impel people to immigrate can be helpful in controlling and discouraging illegal immigration.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Restricted Funds - These are provided through gifts and grants from individuals, foundations, organizations or corporations for specific purposes. The National Human Studies Film Center has received contributions in support of various visual data-gathering projects such as developing research film reports from film footage of the isolated culture of the Kayapo Indians in Brazil (estimated expenditures of \$3,000 in FY 1982); gathering and preparing film on child behavior and human development in vanishing cultures of third world countries (estimated expenditures of \$4,000 in FY 1982 and \$2,000 in FY 1983); and providing a special assistant for the Film Center's programs (estimated expenditures of \$26,000 in FY 1982 and \$22,000 in FY 1983).

Federal Grants and Contracts - These are provided by various Federal agencies and departments for special projects. During FY 1982, grant funds of \$71,000 from the Department of Health and Human Services were anticipated to support film laboratory costs, supplies and to employ a research film editor to assist in the preparation of a cross-cultural research report film on the

aspects of child behavior and human development. However, it now appears that this grant will not materialize. Based upon current fund raising efforts, the Film Center anticipates FY 1983 expenditures of \$32,000 in support of additional film projects.

As circumstances in third world countries and administrative conditions permit, contributions will be sought and applied in FY 1982 and FY 1983 to continue the gathering of visual film data and preparing, analyzing and sharing this important knowledge on human behavior in isolated cultures and vanishing ways of life.

ASSISTANT SECRETARY FOR HISTORY AND ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
			FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	9	351	1	86	1	17	-	1	-	13
FY 1982 Base	9	363	1	73	-	14	-	51	-	-
FY 1983 Estimate	9	369	1	77	-	-	-	51	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	9	0	9
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	311	5	316
12 Personnel Benefits.....	30		30
21 Travel & Trans. of Persons.....	7		7
24 Printing and Reproduction.....	3	1	4
25 Other Services.....	3		3
26 Supplies and Materials.....	4		4
31 Equipment.....	5		5
<b>Total</b>	<u>363</u>	<u>6</u>	<u>369</u>

Analysis of Increase

Necessary Pay.....	5
Inflation.....	1
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. Also included under this heading, is the Joseph Henry Papers project and the special project to commemorate the centennial of Franklin Delano Roosevelt's birth. No program increase is requested for FY 1983. Necessary pay of \$5,000 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 - With a base of four Federal positions and \$173,000, the Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, executing, coordinating and reviewing the activities of the Smithsonian

history and art bureaus. The Immediate 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 purchasing 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 and the Cooper-Hewitt Museum in New York City, the Freer Gallery of Art, Hirshhorn Museum and Sculpture Garden, National Museum of African Art, National Museum of American Art, National Museum of American History, National Portrait Gallery, American Studies and Folklife Programs and the Joseph Henry Papers project.

Joseph Henry Papers - The remainder of the resources identified in the base of this office, five positions and \$190,000, 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 the papers of Joseph Henry (1797-1878), the pioneer American physicist and the first Secretary of the Smithsonian Institution. Four volumes of the fifteen volume letterpress series and a special volume of Henry's lectures and essays have been published by the Smithsonian Institution Press. The fifth volume is scheduled for publication in FY 1983. Editorial work on volume six should be completed by FY 1983, while work on volume seven will begin. In addition, progress will be made on the supplementary microfilm edition.

Centennial of Franklin Delano Roosevelt's Birth - In FY 1981, the Institution was provided with a special, two-year supplemental appropriation (\$200,000) for the purpose of developing programs to commemorate the centennial of Franklin Delano Roosevelt's birth on January 30, 1982. Eight exhibitions focusing on Roosevelt's life, his presidency, his times, the world around him and aspects of the New Deal are opening over an 18 month period in six Smithsonian museums. Other programs including symposia, lectures, concerts, film series and architectural walking tours also have been planned. In addition, the Institution coordinated activities with the Library of Congress, the National Archives, the National Park Service, the United States Marine Corps Museum and the Corcoran Gallery of Art and published a booklet on FDR centennial events for visitors to the Nation's Capital.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are used to pay the salary, benefits, travel and support costs of the Assistant Secretary for History and Art; associate membership for the Smithsonian Institution in the American Council of Learned Societies (ACLS); and partial expenses of the ACLS annual dinner. In FY 1981 and FY 1982, funds were used to defray expenses associated with the National Museum of American Art and National Portrait Gallery directorship Search Committees. Special Purpose Funds were used to publish the "Finders Guide to Prints and Drawings" and to fund, in part, a position in the Archives of American Art. In FY 1981, \$7,000 was received from the Institution's Collections Acquisition, Scholarly Studies and Education Program to support a conference in commemoration of the Centennial Birth of Albert Einstein.

Restricted Funds - In FY 1981, the Joseph Henry Papers received small grants from the National Academy of Sciences and from the Peter C. Cornell Trust to defray the costs of editing the Joseph Henry Papers (estimated expenditures

of \$1,000 in FY 1982 and in FY 1983). Joseph Henry Papers also anticipates raising funds for a series of symposia in the history of science and technology in the United States (estimated expenditures of \$50,000 in FY 1982 and in FY 1983).

Federal Grants and Contracts - In FY 1981, a grant for \$13,000 was received from the National Science Foundation as partial support of a joint United States-Australian Conference on scientific colonialism. No additional funds from this source are anticipated for FY 1982 and FY 1983.

NATIONAL MUSEUM OF AMERICAN HISTORY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
			FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	274	8,072	2	96	3	647	4	231	-	-
FY 1982 Base	278	8,321	1	77	2	288	5	392	-	-
FY 1983 Estimate	278	8,604	1	75	1	297	4	173	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	278	0	278
Number of Other Positions.....	50	0	50
11 Personnel Compensation.....	6,750	175	6,925
12 Personnel Benefits.....	662	16	678
21 Travel & Trans. of Persons.....	45		45
22 Transportation of Things.....	45		45
23 Rent, Comm. & Utilities.....	75	15	90
24 Printing and Reproduction.....	60	7	67
25 Other Services.....	409	16	425
26 Supplies and Materials.....	135	45	180
31 Equipment.....	60	9	69
Acquisitions for collections...	80		80
Total	<u>8,321</u>	<u>283</u>	<u>8,604</u>

Analysis of Increase

Necessary Pay.....	113
Inflation.....	92
Restored Position Funds.....	78
Program Funds.....	0

ABSTRACT - The mission of the National Museum of American History formerly the National Museum of History and Technology, is to illuminate, through collections, exhibitions, research, publications and educational programs the entire history of the United States. 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 1983. Necessary pay of \$113,000 is required for existing staff and an amount of \$92,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$78,000 is requested to provide funding for the four positions restored by the Congress in FY 1982.

PROGRAM - Over five million visitors annually experience the nation's history through the exhibitions and programs presented by the National Museum of American History. Countless others unable to visit Washington, D.C., 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 meet thousands of public requests for information, loans and various services, the Museum is concentrating on two areas of prime importance: completing by FY 1983 an inventory of its holdings of over 16 million objects, and setting in progress the first systematic renovation of its exhibitions spaces since it opened in 1964. During FY 1981, the Museum made steady progress toward realizing the goals in both of these areas.

The collections inventory effort was reorganized to increase its speed and efficiency. Additional resources were applied to the computerization of data and continued special attention was given to collections in the Divisions of Numismatics, Philatelics and Photographic History, comprising the bulk of the Museum's holdings. During FY 1981, the inventory of items in eight divisions was completed (Musical Instruments, Extractive Industries, Mechanical and Civil Engineering, Physical Sciences, Transportation, Costumes, Textiles, and Electricity and Modern Physics) while substantial progress was made by other divisions. Currently, 53 percent of all items in the collection has been inventoried. As each collection is surveyed, important steps are taken toward improving or correcting the storage conditions and creating location aids for future retrieval of information on the collections. The completion of the Division of Conservation's new paper laboratory in FY 1981 greatly increased the Museum's capacity to treat works of art, photographs and documents on paper, and the renovation of one of the Museum's buildings located in Suitland, Maryland, began the process of improving the storage conditions of the facility. The goal of the inventory for FY 1982 is to complete the inventory of three major divisions housed in the Mall building (Graphic Arts, Military History and Naval History) and to begin the inventory of the collections located at Suitland. Continued progress is expected also in the inventory of the Numismatics, Philatelic and Photographic History collections. The appropriation request for the Collections Management/Inventory Program, an explanation of this Program and a comprehensive funding summary appear in the Special Programs section of this budget.

The Museum's emphasis in the area of exhibitions has been on reordering the spaces on the second floor dealing with American cultural and social history of the 18th and 19th centuries. The program has clarified the Museum's exhibition spaces by removal of barriers which impede visitor traffic and by the installation of orientation stations at each major entrance which allows the Museum to unfold to the interests of visitors. Large exhibit halls on the second floor were closed for remodeling associated with the George Washington and Franklin Delano Roosevelt exhibits, while on the first floor an area once hidden by an escalator has become a functioning turn-of-the-century ice cream parlor. In February 1982, the first national exhibition of the life and times of George Washington is scheduled to open on the 250th anniversary of his birth, mainly using funds appropriated in FY 1981 under the Major Exhibition Program. The Museum's goal with the George Washington exhibition itself and other installations to follow, is to help the visitor recapture a sense of life in the past through the integrated use of artifacts, authenticated installations and special educational presentations. The approach will be flexible enough to accommodate the diversity of interest of all visitors, as well as enable us to continue to augment the exhibitions periodically with special groupings of items which, for the most part, have been relegated to storage. These plans are reported on further in the Major Exhibition Program section of this budget.

Another major effort now in the developmental stages is an introductory slide, film and sound presentation centering around the Hart House which was built in Ipswich, Massachusetts in 1690 and inhabited by New England families until 1964. This reconstructed house has been on display in the Museum for some time. However, through the use of visual images representing residents of the house and period surroundings, the Hart House is planned to serve as a means to acquaint visitors with the nature and diversity of the Museum's collections and to serve as a central point from which they can begin exploring the exhibitions offered within the Museum.

Special funds were received from Congress to produce an exhibit (opened January 28, 1982) commemorating the 100th anniversary of Franklin Delano Roosevelt's birth. Entitled "FDR: The Intimate Presidency," the exhibit and accompanying catalogue will address the role of communications in the Presidency of this remarkable man including the use of the radio and the press conference in explaining executive programs and highlighting the messages conveyed through W.P.A. art. Over the next few years, emphasis will be placed on creating special exhibits areas to be used to improve orientation to the Museum, to highlight new acquisitions, to show objects normally kept in storage areas and to accommodate visiting exhibits. Planning has begun also for the better use of the Arts and Industries Building and its "1876" exhibition.

Among the most successful exhibitions which opened last year, supported with a grant from the National Cash Register Corporation, was "The Clockwork Universe," which displayed 120 rare Renaissance clocks and automata. The exhibition studied the making and uses of the objects as well as their importance as antecedents to contemporary machines and as models of the rational, ordered world of the Enlightenment which reformed the political and social philosophy of our Founding Fathers. This provocative exhibition achieved high scholarly and popular acclaim both in Germany (where it opened at the Bavarian National Museum) and in Washington, D.C. (where it opened in November 1980). A major book, the first detailed catalogue of this early generation of "machines," accompanied the exhibition.

Other small but noteworthy exhibitions included "Jefferson and Science," which revealed Jefferson's curiosity, imagination and world view through his scientific instruments and inventions; "Perfect in Her Place" which explored the historic roles of women in the American workforce and the factors restricting them to certain types of work; "The Changing American Farm" which documented the tremendous upsurge in agricultural productivity that accompanied mechanization; and "The American Red Cross" which celebrated the centennial of this unique organization. Finally, one other very special exhibition which has been documented on film was the public running of the 150-year-old locomotive John Bull, the world's oldest operative locomotive.

The musical performance program will concentrate on music from the age of George Washington and will include, in addition to the Smithsonian Chamber Players concerts, lectures, dancing and singing classes in the 18th century style, and a concert by area young people who will receive instruction on the Museum's 18th century instruments.

Major research efforts in FY 1981 have centered on topics of exhibitions in process, such as George Washington, Franklin Delano Roosevelt and life in 18th century America. Several other important studies, however, have resulted in scholarly publications by staff members: a history of the American flag; the John Bull locomotive; the origins and effects of mass production in the 19th century, an analysis of the thinking behind major technological innovations of



the early 19th century; and the importance of wood in the development of America's economic, social and cultural environment in the 18th and 19th centuries. During the year, the Museum became the editorial home of the prestigious journal of the Society for the History of Technology, Technology and Culture. In FY 1982, research will continue to emphasize the relationship of technology on culture and the development of American social history. Such topics as the social effects of the industrialization of textile mills in the 18th and 19th centuries, the sociology of clothing and its association with personal images, and the medical and cultural aspects of pain will be explored. In FY 1982, the Museum will begin an expanded popular publications program to develop a series of booklets and information sheets describing and explaining portions of the Museum's collections to aid in visitor information and orientation. Eventually, as funding becomes available, the program also will be expanded to encourage and support specialized research areas.

Outstanding among the Museum's acquisitions in FY 1981 were the Morgan Collection of historic type and typefaces and a portable thermometer and pocket-knife owned by Thomas Jefferson, purchased with Smithsonian Trust funds. A clock made by William Cranch Bond circa 1851 in Boston, which allowed the documentation of astronomical observations; a reverse applique quilt dated 1795, the earliest known American example of this method of quilting; and a rare six-keyed bassoon and an American-made violincello from the 18th century were purchased with appropriated funds. Important gifts included the Dudgeon steam wagon of 1866, the earliest extant self-propelled road vehicle; the Faber engine circa 1850, one of the half-dozen earliest surviving stationary steam engines of American manufacture; and the famous "Servais" violincello made by Antonio Stradivari in 1701.

#### 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, restaurant and bookstore and from allotments including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program. In FY 1981, funds from this Program (\$274,000) supported the Museum's Senior Outreach Project which provides an off-site Museum experience to senior citizens who are not able to come to the Museum, and the purchase of the Morgan type collection. In FY 1982, the Institution's Collections Acquisition, Scholarly Studies and Education Program will support 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 1981 but not yet for FY 1982 and FY 1983. The Museum can expect to receive funds made available through this Program in FY 1982 and FY 1983. In FY 1981, a Smithsonian Society grant was used to purchase Thomas Jefferson's portable thermometer and pocket-knife. Funds also are used to support the permanent position of the Director of the Museum; to support field research, publications, less expensive collections acquisitions; and special events for the opening of new exhibitions.

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. Generally, the restricted funds support a particular exhibition or project. In FY 1981, corporate donations supported the costs of producing several exhibitions: "Changing American Farm" (\$90,000), the running of the John Bull locomotive (\$17,000), and "Steuben: Secret Aid for the Americans" (\$7,000). 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 (estimated expenditures of \$67,000 in FY 1982 and \$64,000 in FY 1983).

Funds from the American Society of Anesthesiologists support the design and production costs of an exhibition on medical and social consequences of pain (estimated expenditures of \$222,000 in FY 1982 and \$26,000 in FY 1983). Donations from various sources support the "Friends of Musical Instruments" fund which provides performances, special education programs, lectures, restoration and acquisitions (estimated expenditures of \$12,000 in FY 1982 and in FY 1983).

NATIONAL MUSEUM OF AMERICAN ART

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	103	3,557	-	207	1	149	3	34	-	32
FY 1982 Base	106	3,994	-	34	1	125	6	481	-	35
FY 1983 Estimate	106	4,139	-	32	-	92	6	220	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	106	0	106
Number of Other Positions.....	37	0	37
11 Personnel Compensation.....	2,701	72	2,773
12 Personnel Benefits.....	265	7	272
21 Travel & Trans. of Persons.....	40	5	45
22 Transportation of Things.....	86	10	96
23 Rent, Comm. & Utilities.....	40	3	43
24 Printing and Reproduction.....	100	7	107
25 Other Services.....	225	12	237
26 Supplies and Materials.....	274	11	285
31 Equipment.....	48	3	51
Acquisitions for collections...	215	15	230
Total	<u>3,994</u>	<u>145</u>	<u>4,139</u>

Analysis of Increase

Necessary Pay.....	45
Inflation.....	66
Restored Position Funds.....	34
Program Funds.....	0

ABSTRACT - The National Museum of American Art (NMAA), the oldest national collection of art in this country, is devoted to the acquisition, study, interpretation and exhibition of American painting, sculpture and graphic art. Established in 1829, the collection 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 fact that since its installation in the monumental old Patent Office Building in 1968, the Museum's concern has focused primarily on American art. The Renwick Gallery, established under the purview

of NMAA in 1972 in a physically 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 1983. Necessary pay of \$45,000 is required for existing staff and an amount of \$66,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$34,000 is requested to provide funding for the three positions restored by the Congress in FY 1982.

PROGRAM - NMAA's collection 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 abroad and has encouraged the study of local art in many regions of the United States. Through the Renwick Gallery, located near the White House in the historic building designed by James Renwick, it has provided galleries for the exhibition of decorative arts and crafts, as well as for the presentation of exhibitions from abroad. Many young professionals from throughout the United States and from other countries have conducted research and learned methods of museum procedure and public education through NMAA's 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.

As a national center for the study and research of American art, NMAA maintains three major art indexes: the Inventory of American Paintings Executed Before 1914, which began as a Bicentennial project and now has over 210,000 items catalogued by computer; the Smithsonian Art Index, which currently lists over 200,000 items of art housed in the Institution's non-art museums; and the Index of Pre-1877 American Art Exhibition Catalogues, which comprises 100,000 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 120,000 slides and photographs which are on a computerized file and over 190,000 negatives and slides which are being entered on the computer data bank. The library, with 42,000 volumes, serves NMAA, the National Portrait Gallery, the Archives of American Art, other Smithsonian bureaus and local and visiting scholars and students. During FY 1981, the library answered over 3,500 reference questions received by mail, by telephone and in person.

Educational activities at NMAA include a number of innovative programs. In the past year, 30 teachers and over 300 high school students spent almost 6,000 hours at the Museum participating in its "Discover Graphics" workshop, and over 500 students and teachers enjoyed the benefits of the program through traveling print presses and materials which were sent to 33 schools in the Washington metropolitan area. For elementary teachers, 15 special workshop programs were organized, and in conjunction with NMAA's exhibition on the art of Appalachia (described below), nine papermaking workshops were conducted by Appalachian artists for 98 teachers and 43 students. The annual "Children's Day Art Festival," which focused on the theme of rhythm and color in American art, was held in the courtyard during June 1981, with 85 volunteers and 65 artists participating and 3,000 persons attending. "Family Day," attended by 4,000 persons in February 1981, took "East Meets West" as its subject and in conjunction with the exhibition "East and West/Painting Poems," successfully drew attendance from the Chinese community a few blocks from the Museum. NMAA's "Explore Gallery," where youngsters (and adults) are encouraged to discover the range of association between direct sensory experience and imagination, addresses the special

needs of young children. For adults, the offerings of film programs, lectures, craft demonstrations and musical events have been increased. As for the general public, almost 20,000 visitors during FY 1981 were conducted by 60 docents on special tours and related educational events through NMAA, Renwick Gallery and Barney Studio House. In the past year, cooperative educational programs were organized by NMAA with the Smithsonian's Division of Performing Arts and the National Museum of American History; next year cooperative programs are planned with the National Museum of African Art and the Zoo.

NMAA each year guides 12 to 15 pre- and post-doctoral fellows, resident at the Museum. These scholars, who are selected competitively, come from universities across the country. In the professional training programs, 15 undergraduate and graduate students participate annually in structured internships that combine learning and working experiences. Other scholars and graduate students, numbering in the hundreds, are given academic advice and vocational counsel by NMAA staff through office and telephone conferences and correspondence. Of the 64 former NMAA fellows and 189 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 the exhibition of works by American craftsmen, both in displays of works by individuals and in the presentation of new ideas, approaches and techniques of crafts media. When exhibitions of important national or regional interest are organized at the NMAA or the Renwick Gallery, they are offered to other museums for a fee covering only NMAA's expenses in touring them. Approximately 20 temporary exhibitions--not including rearrangements of the permanent collection galleries--open in the NMAA and the Renwick each year. With each major exhibition organized by NMAA staff, a permanent, substantial publication is produced.

In FY 1982, NMAA studied individual American artists, both living and deceased, in special exhibitions to reappraise their influence and critical standing today. Among these exhibitions were: "Cast and Recast: The Sculpture of Frederic Remington," "Perkins Harley: From the Index of American Design," "A Life in Art: Alma Thomas, 1891-1978," "Egypt: Day and Night, Keith Achepohl Watercolors," "Photographs by Berenice Abbott: The Twenties and Thirties" and "Joseph Cornell: Roots and Resolutions." In FY 1983, exhibitions will feature the following American artists whose works merit fresh attention: William H. Johnson (1901-1970); Joseph Goldyne (b. 1942); Elizabeth Nourse (1859-1938) co-sponsored with the Cincinnati Art Museum; Harry Siddons Mowbray (1858-1928); and Vera Simons (b. 1928).

An extraordinary popular exhibition at NMAA during 1981-82, which illustrated regional aspects of American art, was "More than Land or Sky: Art from Appalachia." NMAA's staff spent a year selecting 105 works of fine art (rather than craft or folk art) executed by 69 artists in the 13 states officially comprising the Appalachian Region. Many of the artists had studied at prestigious schools but had chosen to settle in, return to or remain in the region. Aided by a grant from the United States Appalachian Regional Commission, the exhibition and its catalogue assessed the ways in which the art

reflected local roots, traditions and a specific sense of place. An extensive program of events throughout the city was organized by NMAA's Education Department, including symposia at the Kennedy Center and the YWCA; poetry readings at the Folger Shakespeare Library; and at NMAA storytelling and puppeteers for children; and a series of eight films and six concerts--all on Appalachian themes. All events were free. After it closes at NMAA, the exhibition will tour to 12 locations in the Appalachian Region over the next two and one-half years.

FY 1982 will mark the beginning of an awards and exhibitions program which should have a major national influence for years to come. The program, titled "Awards in the Visual Arts," is sponsored by the Equitable Life Assurance Society, the Rockefeller Foundation and the National Endowment for the Arts. It awards annual fellowships of \$15,000 each to ten "emerging" artists chosen by a special jurying procedure from ten geographic regions of the United States delineated on the basis of census count of professional artists. The ten winning artists not only receive the monetary award but more importantly, a major combined exhibition of their work with catalogue, which will travel to several locations in the country. The selections, awards and exhibitions will be repeated each year, and the first exhibition will open at the NMAA in May 1982. NMAA was a consultant in the establishment of the program, and NMAA's Curator of 20th Century Art will select the works in the 1982 exhibition.

The Renwick Gallery, as part of its exhibitions program, continues to show the work of individual American craftsmen and to survey broad areas of craft trends. Exhibitions in FY 1982 were devoted to Elijah Pierce, an Ohio wood carver for 70 years who is recognized as one of the country's principal 20th century folk artists; and to "Good as Gold: Alternative Materials in American Jewelry," which, as a result of the current high prices of precious metals and changing concepts of personal adornment, explored new materials being used in jewelry today, such as glass, plastic, paper, aluminum, wood, niobium and titanium, in 180 works by 90 American artists. Two small exhibitions--"The Inedible Renwick Birthday Cakes" and "The Grand Renwick Souvenir Show"--will commemorate the tenth anniversary of the Renwick's opening; the objects for the two shows were selected by the Renwick director from 140 proposals submitted by craftsmen throughout the United States.

Unquestionably the most ambitious undertaking in the Renwick's history will come in FY 1982 and FY 1983 with the exhibition "Celebration: A World of Art and Ritual." Approximately 600 folk and traditional objects (most of them never displayed before and many quite fragile) will be drawn from all Smithsonian collections to illustrate how different world cultures mark the important events and cycles in the lives of their people. The exhibition will serve as the centerpiece for special live performances, presentations, demonstrations, film showings and other programs which enhance the meaning of the exhibition. The entire Renwick building will be occupied by the exhibition in two phases, the first to open March 17, 1982 and the second to open August 26, 1982. Since the expense of the exhibition and its concomitant activities is beyond NMAA's normal funding capability, a special budgetary allotment of \$250,000 was made in FY 1981 under the Smithsonian Major Exhibition Program. A further amount of \$200,000 was appropriated in FY 1982 under this Program to open the second phase of "Celebration" and to support seven folklife events at the Renwick, as well as educational programs on site and in area schools. An additional \$100,000 of Major Exhibition Program monies is proposed in FY 1983 to continue these special public programs through the close of the exhibition. (See Major Exhibition Program in the Special Programs section.)

Most of NMAA's FY 1981 Federal appropriation for works of art was spent in acquiring "Mrs. James Smith and Grandson," a superior and characteristically sensitive portrait executed in 1776 by Charles Willson Peale, one of America's

most important artists. The painting, which is described in Peale's diary and which descended in the family of the sitter, is the first oil by this major early American artist in NMAA's permanent collection. NMAA was the recipient of significant gifts during FY 1981. In memory of his mother, Martha Jackson, David K. Anderson of New York gave 119 contemporary works in a variety of media by such noted artists as Edward Hopper, Rockwell Kent, Louise Nevelson, Jim Dine and Sam Francis. In the settlement of the estate of Alma Thomas, NMAA received 13 paintings, bringing to 25 the total number of works in its collection by this nationally recognized Black artist. Artists, collectors and an anonymous donor enabled the Renwick Gallery to acquire 42 objects from its exhibition "American Porcelain: New Expressions in an Ancient Art," which was a juried exhibition of work in this medium from artists throughout the United States. The porcelain acquisitions will be shown at nine other museums when the exhibition tours the United States, and negotiations are in progress for a tour abroad. During FY 1981, a total of 706 works entered NMAA's permanent collection, 86 percent of them by gift or bequest.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from many different sources, including the Museum's share of sales in the restaurant and museum shop and allotments including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program. Expenditures under this Program have been recorded for FY 1981 (\$10,000) but not yet for FY 1982 and FY 1983. The Museum can expect to receive funds made available through this Program in FY 1982 and FY 1983.

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 each fall and spring semesters; 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 costs of certain museum publications; purchase works of art; defray travel 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 bring many elementary and secondary school children into the Museum to participate in activities related to ongoing exhibitions. In FY 1981, an amount of \$154,000 was allotted to defray the final portion of the cost of acquisition of paintings from the Vincent Melzac Collection. This accounts for a major portion of the decrease in General fund expenditures between FY 1981 and FY 1982.

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. Generally, restricted funds provide support for a particular exhibition or collection. In FY 1981, an amount of \$90,000 was received from the

estate of Robert Tyler Davis, former Acting Director of NMAA, for the purchase of prints and drawings for the permanent collection (expenditures of \$30,000 in FY 1981 and estimated expenditures of \$15,000 in FY 1982 and in FY 1983). A grant from the Samuel H. Kress Foundation was received during FY 1981, and another grant is being sought in FY 1983 to support the conservation and restoration of the Juley collection of historic photographic negatives (estimated expenditures of \$108,000 in FY 1982 and \$140,000 in FY 1983).

An anonymous donation of \$10,000 was received during FY 1981 to purchase objects for the exhibition "American Porcelain" at the Renwick Gallery, and donations totaling \$12,000 were received during FY 1981 for the Joshua C. Taylor Research Fellowship Fund in memory of the former NMAA Director who died on April 26, 1981. Further donations to this memorial fund are anticipated during FY 1982 which will be used for stipends to research fellows. A grant received from the Cafritz Foundation will assist in the cost of publishing Sculpture and the Federal Triangle, a book which will be a valuable contribution to the history of American sculpture (estimated expenditures of \$18,000 in FY 1982). A gift of \$25,000 was received from the Charles E. Merrill Trust which will be used during FY 1982 for purchases for the Doris Magowan Miniature Gallery.

Funds provided by the Laura Barney Trust are used to maintain the Barney Studio House and support its programs (estimated expenditures of \$21,000 in FY 1982 and \$25,000 in FY 1983). In FY 1982, a gift of \$12,000 was received from the Jack and Jill of America Foundation to support the cost of public educational programs in conjunction with "Alma Thomas: A Life in Art," an exhibition of major works by one of Washington's most widely acclaimed Black artists.

Federal Grants and Contracts - A grant from the Appalachian Regional Commission is supporting the cost of the exhibition "More than Land or Sky: Art from Appalachia," which brings together art from all 13 states within the Appalachian region (estimated expenditures of \$35,000 in FY 1982).



NATIONAL PORTRAIT GALLERY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
	FTP*	Amount	General		Special Purpose		FTP*	Amount	FTP*	Amount
			FTP*	Amount	FTP*	Amount				
FY 1981 Actual	74	2,613	-	36	-	44	4	297	-	1
FY 1982 Base	76	2,850	-	18	-	29	3	189	-	-
FY 1983 Estimate	76	2,983	-	16	-	32	3	253	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	76	0	76
Number of Other Positions.....	21	0	21
11 Personnel Compensation.....	1,766	66	1,832
12 Personnel Benefits.....	172	6	178
21 Travel & Trans. of Persons.....	21		21
22 Transportation of Things.....	100	4	104
23 Rent, Comm. & Utilities.....	15	1	16
24 Printing and Reproduction.....	50	6	56
25 Other Services.....	179	14	193
26 Supplies and Materials.....	191	18	209
31 Equipment.....	41	3	44
Acquisitions for collections...	315	15	330
Total	<u>2,850</u>	<u>133</u>	<u>2,983</u>

Analysis of Increase

Necessary Pay.....	35
Inflation.....	61
Restored Position Funds.....	37
Program Funds.....	0

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 1983. Necessary pay of \$35,000 is required for existing staff and an amount of \$61,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$37,000 is requested to provide 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 by 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.

The Gallery's 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 responsibilities for thorough research and careful conservation of the objects acquired. Research results are published by curators and historians in articles, monographs and full-scale catalogues. The collections are continuously exhibited 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 1981, the Gallery purchased, through a combination of a credit against estate taxes and appropriated funds, the Frederick Hill Meserve Collection of 5,419 original Mathew Brady glass plate negatives together with the only print of Abraham Lincoln's last photographic portrait, taken by Alexander Gardner just four days before the President was assassinated. The Meserve Collection of Brady negatives unquestionably comprised the most significant material of this kind in private collections anywhere. Their acquisition by the Gallery insures that this historic resource will remain intact and, in time, they will become fully accessible to scholars and the interested public. The size and quality of the Meserve Collection also enormously enriches the Gallery's ability to represent and investigate a large and important cross-section of American personalities who lived during the crucial decades of the mid-19th century.

In addition to the Meserve materials, the Gallery purchased another 139 portraits and obtained 34 others by gift or transfer in FY 1981. Among the most noteworthy acquisitions obtained with Federal funds were: a circa-1768 oil portrait of the Massachusetts merchant Thomas Hancock by John Singleton Copley; an 1835 oil portrait of the influential New York City art patron Luman Reed by Asher B. Durand; an 1899 oil of the reform leader Carl Schurz by Daniel Huntington; a colorful, full-length 1981 casting of a 1965 sculpture of the New York Yankees and Mets manager Charles Dillon (Casey) Stengel by Rhoda Sherbell; and a circa-1833 oil portrait of the Indian agent Benjamin O'Fallon.

Important gifts in FY 1981 included: a portrait of Mrs. Thomas Hancock (the companion image, also by Copley, to that of Mr. Hancock which was purchased) from Charles H. Wood; a circa-1940 oil of the Zionist leader Henrietta Szold by Pinchas Litvinovsky from Hadassah; Mrs. R. Kirk Askew's gift of Pavel Tchelitchev's 1937 drawing of arts impresario Lincoln Kirstein; and Waldo Pierce's 1928 pen and ink portrait of Ernest Hemingway, presented by the artist's son, Jonathan.

At their first meeting in FY 1982, the Gallery's Commission authorized the purchase with appropriated funds of an imposing oil portrait of Samuel Clemens ("Mark Twain") painted by John White Alexander in about 1902; a circa-1910 oil

of the businessman and philanthropist Henry Clay Frick by Edmund C. Tarbell; an unusual 1951 self-portrait by the contemporary artist Stanton MacDonald-Wright; and a fine Rembrandt Peale portrait of the noted and beautiful actress Juliana Westray Wood, painted in 1810, as well as two exceedingly rare photographs of General George Armstrong Custer, among other objects. Important gifts accepted at the same meeting included a 1980 likeness of Richard Nixon painted by William F. Draper from Mr. Jack Drown; a Peter Hurd image of Alice Roosevelt Longworth from the subject's granddaughter, Joanna Sturm; and a 1927 Jacob Epstein bronze bust of the educator and philosopher, John Dewey.

The Gallery's exhibition program continues to evidence diversity of subject matter and approach. In FY 1981 and FY 1982, in the Gallery's tradition of studying the artists who create portraiture as well as the subjects immortalized by it, important exhibitions were devoted to "Benjamin West and His American Students" (organized by Dr. Dorinda Evans of Emory University), "Portraits by George Bellows," with a catalogue by Margaret Christman and "American Portraiture in the Grand Manner" (organized by the Los Angeles County Museum of Art). A bicentennial retrospective of the work of Thomas Sully (1783-1872) also is planned for FY 1983. In addition, "Charles Willson Peale and His World" was cosponsored by NPG with the Metropolitan Museum of Art and the Amon Carter Museum of American Art with the aid of a grant to the Metropolitan from Lawrence and Barbara Fleischman. This exhibition will open early in FY 1983 and will present a thorough survey of the multiple interests and achievements of America's extraordinary portraitist, museum-keeper, inventor, devotee of natural sciences and patriot, Charles Willson Peale (1741-1827). Future year plans in a similar vein include a major survey of the work of Henry Inman (1801-1846), which will be organized in collaboration with the Munson-Williams-Proctor Institute of Utica, New York. Work also continues on research for a long-awaited historical exhibition, tentatively scheduled for FY 1983, "The Black Presence in America: Constitution to Emancipation." This exhibition will be the sequel to a highly acclaimed NPG exhibition, "The Black Presence in the Era of the American Revolution," which was presented in 1973. From a very different area of American life, the Gallery presented in FY 1981 its largest temporary exhibition, "Champions of American Sport," with the aid of a grant from Philip Morris, Inc. and the Miller Brewing Company. The exhibition opened in Washington, D.C. after a White House reception honoring many of the outstanding athletes whose lives and careers were the basis of the exhibition. As with all major NPG exhibitions, "Champions" was accompanied by a fully illustrated catalogue of the same title. The exhibition was sent subsequently from Washington, D.C. to the Chicago Historical Society and then to the American Museum of Natural History in New York City.

Smaller exhibitions on the Gallery's schedule similarly have ranged across interesting varieties of subjects. "The Code Duello in America" and "We Never Sleep: The First Fifty Years of the Pinkertons" were both accompanied by booklet-length catalogues produced for NPG by the Smithsonian Institution Press, as will be "FDR: The Early Years" and "Webster: The God-Like Black Dan" in FY 1982. The colorful author Bret Harte and the German-American politician Carl Schurz both have been featured in special installations as well.

In February 1981, the Gallery will participate in the observation of the 250th anniversary of the birth of George Washington with a very special small exhibition "George Washington, An American Icon: The Eighteenth Century Graphic Portraits." This exhibition will present a study of the popular imagery of Washington and has been supported, in part, by the Barra Foundation. The exhibition, together with a complete, illustrated catalogue, will be available to museums across the country through the Smithsonian Institution Traveling

Exhibition Service (SITES) in FY 1982 and FY 1983. Also under the auspices of SITES, "Photographs from the Permanent Collection of the National Portrait Gallery" is continuing to be shown in museums across the country.

Several of the Gallery's publications projects are not related directly to its exhibition program. Work continues, for instance, on the biennial update of the valuable reference tool Illustrated Checklist of the Permanent Collection 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. Peale was also the subject of a one-day symposium at the Gallery in FY 1982 which was cosponsored by NPG and the Henry Francis duPont Winterthur Museum; the scholarly papers read on that occasion are being prepared for possible publication in an appropriate volume. Similarly, NPG and the University Press of Virginia plan to publish the "Report of the Tenth Annual American Print Conference" (held at NPG in FY 1979) with the assistance of the Barra Foundation. By FY 1983, NPG also expects to produce a definitive catalogue, The Portrait Engravings of C. B. J. F. de Saint-Memin. Other long-range publication prospects include titles in the field of 18th century American portrait prints, the evolution of American portrait photography and one or more studies based upon the riches of the Meserve Collection.

Public education, which begins with the careful preparation of labels for each portrait, continues through free guide service seven days a week and extends to an imaginative, innovative variety 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.

For example, the Department, with the assistance of the Women's Committee of the Smithsonian Associates, continues to enrich its highly popular Portraits in Motion series of free, public performances on biographical themes. Offerings in FY 1981 included such subjects as: the life of the feminist lawyer and one-time presidential candidate, Belva Ann Lockwood; the songs of Stephen Foster; labor organizer Mother Jones; leaders of the American Civil Rights struggle; H. L. Mencken; Edgar Allan Poe; and Dorothy Parker, to name only a few.

In FY 1982, The Catalogue of American Portraits, which is a large and growing information source of portraiture for scholars of American history, biography and art history, will continue for the third of its seven year survey. The catalogue has been supported in part by a grant from the Andrew W. Mellon Foundation, as well as the Ambrose Monell Foundation, Thomas Mellon Evans, and numerous other private benefactors in the states where surveys have been in progress. Field research in FY 1981 and FY 1982 examined dozens of collections in New York, Massachusetts, Connecticut, Rhode Island, Vermont, New Hampshire, Maine, Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota and Iowa. In FY 1981, the project yielded approximately 7,000 records to be integrated with the existing data base of over 70,000 records. Computer-generated indexes of collections already canvassed have been placed with over 85 individual institutions in Virginia, West Virginia, Delaware, Maryland, Pennsylvania, New York, New Jersey, Massachusetts, Connecticut and Rhode Island. Moreover, cumulative regional indexes also are deposited as the survey continues in such research facilities as the Virginia Museum of Fine Arts in Richmond and the Henry Francis duPont Winterthur Museum in Delaware.

## NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from several sources including: the National Portrait Gallery share of sales in the museum shop and restaurant; royalties from publication contracts; sales of photographic reproductions of portraits in the collection; staff honoraria; participation fees from museums to which NPG exhibitions are loaned; and allotments. Amounts provided from these and other smaller sources help defray the expenses of: occasional public lectures, symposia and similar events (some of which are coordinated with the opening of special exhibitions); associated costs of loan exhibition development and management; NPG Commission travel costs; research expenses of staff who are preparing special publications or lectures; and for upkeep and repair of restaurant equipment. Expenditures from the Institution's Collections Acquisition, Scholarly Studies and Education Program amounted to \$13,000 in FY 1981 of which \$4,000 was used to fund an experimental videotape of the Portrait in Motion program, "Why Not a Woman? Belva Ann Lockwood."

Restricted Funds - Funds for specific purposes are received as gifts and grants from individuals, foundations, organizations or corporations. Such funds are received in single lump sums or in phased payments over several years. Examples of the former include the FY 1979 grant of \$340,000 from the Andrew W. Mellon Foundation for support of the Catalogue of American Portraits' nationwide seven year survey program. In FY 1981, expenditures from this fund totaled \$67,000 and were matched by a number of smaller grants raised in the regions where work was underway (the latter totaling \$69,000). In the category of phased grants, NPG received \$150,000 from Philip Morris, Inc. and the Miller Brewing Company in three installments over the period FY 1980-FY 1982 as support for the exhibition "Champions of American Sport." The National Portrait Gallery also received a grant of \$3,000 from the Women's Committee of the Smithsonian Associates in FY 1981 for support of the Education Department's Portrait in Motion series of performances. The Gallery anticipates continuing fund raising success, at similar levels, in FY 1982 and FY 1983.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	79	2,431	-	26	-	677	-	494	-	-
FY 1982 Base	80	2,563	-	17	-	63	-	697	-	-
FY 1983 Estimate	80	2,658	-	16	-	63	-	100	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	80	0	80
Number of Other Positions.....	5	0	5
11 Personnel Compensation.....	1,787	38	1,825
12 Personnel Benefits.....	175	4	179
21 Travel & Trans. of Persons.....	18	2	20
22 Transportation of Things.....	89	9	98
23 Rent, Comm. & Utilities.....	16	2	18
24 Printing and Reproduction.....	120	12	132
25 Other Services.....	86	8	94
26 Supplies and Materials.....	88	12	100
31 Equipment.....	39	2	41
Acquisitions for collections...	136	4	140
41 Grants.....	9	2	11
Total	<u>2,563</u>	<u>95</u>	<u>2,658</u>

Analysis of Increase

Necessary Pay.....	31
Inflation.....	53
Restored Position Funds.....	11
Program Funds.....	0

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 exhibitions, drawing from its own and other collections. The Museum prepares catalogues and conducts educational activities including film programs, lectures, concerts, publications and tours. The Museum also has an active research program which produces publications in the field of modern art. Technical and support units include the offices of conservation,

registration, photography and a reference library. No program increase is requested for FY 1983. Necessary pay of \$31,000 is required for existing staff and an amount of \$53,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$11,000 is requested to provide funding for the one position restored by the Congress in FY 1982.

PROGRAM - In October 1981, the Hirshhorn Museum and Sculpture Garden celebrated its seventh birthday. As one of the few 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 Sculpture Garden was formally reopened to the public on September 14, 1981, after being closed for 16 months to carry out renovations which provide access for the physically disabled. The Sculpture Garden now has ramps leading from the Mall onto both its levels, which have been embellished with new trees, shrubs and flowers. A group of some one hundred sculptures has been installed throughout, and the public and press have responded with enthusiastic approval.

Mr. Joseph H. Hirshhorn, the Museum's founding donor, died on August 31, 1981, bequeathing to the Museum his personal collection of art. The full extent of the bequest is not yet known since it will require some months for the executors of the estate to complete an inventory.

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, most frequently based on the Museum's own collection. Major exhibitions shown in FY 1981 were: "Russian Avant Garde 1910-1930: New Perspectives," "Directions 1981," "Kenneth Snelson" and "R. B. Kitaj." Smaller exhibitions presented were: "Robert Natkin: A Lithographic Suite," "Larry Rivers: The Hirshhorn Museum and Sculpture Garden Collection," "Landscapes on Paper: Drawings and Watercolors from the Collection," "Lipchitz - From the Collection," "Barbara Hepworth" and "Geometric Abstraction." Augmenting the Museum's exhibition program, were lectures by artists Robert Natkin, Kenneth Snelson, Larry Rivers and R. B. Kitaj.

Major exhibitions scheduled for FY 1982 are: "De Stijl: 1917-1931: Visions of Utopia," "Metaphor: New Projects by Contemporary Sculptors," "Raphael Soyer Prints" and "Raphael Soyer: A Decade of Painting." The smaller exhibitions planned are: "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" and four exhibitions of works on paper.

Major exhibitions planned for FY 1983 are: "David Smith: A Restrospective," "Directions, 1983," "Friedel Dzubas" and "Selections from the Permanent Collection." Smaller exhibitions planned include "Joseph Stella" and six exhibitions, as yet untitled, of works on paper from the collection.

To increase visitor appreciation of specific exhibitions and of modern art in general, the Hirshhorn provides visitors with a variety of instructional materials, including explanatory wall labels and brochures. The latter range from a single page to illustrated mini-catalogues and are distributed free to the public. The Museum also conducts 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 during FY 1981 were

concerts by the 20th Century Consort and the Cantilena Chamber Players, as well as a Dance Collaboration Symposium. Another popular activity is "Hirshhorn Holiday," a presentation of mime, music and puppetry designed for children, which has become an annual event during the Christmas season.

In order to keep its collection contemporary, a museum of modern art must continue to acquire significant new works. During FY 1981, the Museum acquired 326 works of art of which ten were purchased, four with Federal funds. The latter included significant works by Helen Frankenthaler, Richard Estes, Rackshaw Downes and Robert Motherwell. Major purchases with nonappropriated Trust funds included Gregory Gillespie's "Myself Painting a Self-portrait" and a rare carved wood sculpture by Paul Gauguin, entitled, "Cylinder Decorated with Figure of Hina and Two Attendants." Among the 316 gifts received, was an exceptional collection from Raphael Soyer consisting of 193 prints, nearly his complete graphic works and a large drawing by Larry Rivers, "Chinese Information - Travel."

To make the Museum's collection as accessible as possible to the widest audience, extensive loans are made to museums in the United States and abroad. In FY 1981, the Hirshhorn Museum loaned 183 works of art to 66 institutions including Bellas Artes, Mexico City; Staatliche Kunsthalle, Berlin; Musee du Quebec, Canada; Seibu Museum of Art, Tokyo; the Philadelphia Museum of Art; the Walker Art Center, Minneapolis; the San Antonio Museum Association; the John and Mabel Ringling Museum, Sarasota, Florida; and the Lyndon Baines Johnson Library in Austin, Texas. Exhibitions based on the permanent collection are circulated in the United States by the Smithsonian Institution Traveling Exhibition Service (SITES). Specifically, the Larry Rivers exhibition will be sent to the Mint Museum in Charlotte, North Carolina in April 1982, and an exhibition of collages from the Museum's collection has been on tour with SITES since January 1981.

Members of the staff continue to lecture at the Museum and at other institutions; to write for publication; to work with graduate and undergraduate museum interns and Smithsonian Fellows; to respond to written inquiries and visits from scholars, students and artists; and to carry forward the tasks of research and documentation.

In FY 1981, the Museum continued its ongoing, comprehensive inventory of the permanent collections. One-third of the collections is inventoried every year in order to assure the best possible controls. The Museum, in its second cycle of such inventories, completed sculptures in FY 1981 and is working on paintings during FY 1982. Works on paper will be inventoried in FY 1983.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided from the Museum's share of sales in the museum shop; 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 1981, funds from this Program were used to supplement the acquisition of important works of art such as Bessie Potter Vonnah's bronze, "In Grecian Draperies" and to exchange with Michael Hall Fine Arts, Inc. the bronze sculpture, "The Peasant" for "The Great Peasant," a larger version, by Aimes-Jules Dalou. Although support from the Program is expected to continue in FY 1982 and in FY 1983, expenditures for FY 1982 have not been recorded yet for FY 1982 and FY 1983 which explains the variance in the totals between FY 1981, FY 1982 and FY 1983. Other funds provided are used to finance travel costs



associated with meetings of the Museum's Board of Trustees, to purchase less expensive works of art and to defray the costs of special events held in connection with the opening of new exhibitions.

Restricted - Funds provided here are generally from individual gifts, bequests and foundation grants which specify the use of the funds. These funds are used mainly to acquire or to supplement the acquisition of very costly and important major works for the permanent collection. In FY 1981, these funds supplemented payment for Paul Gauguin's sculpture, "Cylinder Decorated with Figure of Hina and Two Attendants," (a match for funds provided by the Institution's Collections Acquisition, Scholarly Studies and Education Program) and paid for Rodrigo Moynihan's "Cotton Wool Roll," Robert Birmelin's "Edge of the City with Beltway," Gregory Gillespie's "Myself Painting a Self-portrait" and Tim Scott's sculpture, "Utica #4."

FREER GALLERY OF ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
			FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	29	727	-	10	-	45	19	1,241	-	-
FY 1982 Base	30	855	-	8	-	3	20	1,263	-	-
FY 1983 Estimate	30	918	-	8	-	3	20	1,339	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	30	0	30
Number of Other Positions.....	8	0	8
11 Personnel Compensation.....	640	50	690
12 Personnel Benefits.....	66	5	71
24 Printing and Reproduction.....	57	1	58
25 Other Services.....	29	2	31
26 Supplies and Materials.....	43	3	46
31 Equipment.....	20	2	22
Total	<u>855</u>	<u>63</u>	<u>918</u>

Analysis of Increase

Necessary Pay.....	12
Inflation.....	8
Restored Position Funds.....	43
Program Funds.....	0

ABSTRACT - 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. No program increase is requested for FY 1983. Necessary pay of \$12,000 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 \$43,000 is requested to provide funding for the one position restored by the Congress in FY 1982.

PROGRAM - The Freer Gallery of Art houses one of the most distinguished collections of Oriental art in the world. The collections consists of approximately 12,000 works of art from China, Japan, Korea, India and the Near East and

spans 5,000 years. Included in the collections are Biblical manuscripts, paintings, sculptures and other objects in stone, wood, lacquer, jade, pottery, porcelain, bronze, gold and silver. "The Peacock Room" of paintings by James McNeill Whistler highlights an outstanding collection of American art that Charles Lang Freer considered a bridge between the East and West. 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 and its notable holdings of American paintings have made the Museum an increasingly important center for students, scholars and the general public. This interest has been manifested in the steady increase in visitors, in requests for museum tours, in the number of visiting scholars and dignitaries and in lengthy waiting lists for authentication appointments.

Important recent changes in the Gallery are the innovative exhibition techniques in various galleries, experimentation to improve general lighting, continuing effort to accommodate the disabled in all areas of the building and expansion of the research files on individual pieces in the collection. These files are made available to visiting scholars and students, as well as the general public.

Freer Gallery research facilities, comprising the collections, curatorial staff, library and conservation laboratories, form the nucleus of its specialized public service. During FY 1981, new exhibitions provided visible evidence of the results of curatorial and conservation research activities. Enthusiastic press reviews and the number of visitors to the Gallery are indications of the positive reception these exhibitions enjoyed, even though some galleries were closed for a number of months for renovation of the heating, ventilating and air conditioning systems, financed by the Institution's Restoration and Renovation of Buildings account.

The major exhibition of FY 1981 was "The Imperial Image: Paintings for the Mughal Court." Opening in September 1981, this exhibition contains paintings that were executed during the reigns of three great Indian Mughal rulers of the period 1542-1658. The splendor of the 60 miniature paintings and the manuscripts reflect the magnificence of the courts of these rulers. The painters were among the most outstanding masters of their age. The albums of paintings provide a rare insight into the personalities of the Mughal emperors who commissioned them and illuminate the social and political conditions of the period. Included in this exhibition was a particularly important recent acquisition of a page from the Hamza-nama, a valuable manuscript of tales of wild and fantastic adventures told to the young Mughal king, Akbar. A Smithsonian Regents Fellow prepared this special exhibition at the Freer Gallery and presented a free public lecture on one aspect of the exhibition.

"Ancient Chinese Jade" opened in FY 1981 with 130 jade objects on view, dating from the 3rd millennium B.C. through the 3rd century A.D. Of particular interest was a group of ritual discs newly attributed to the prehistoric era of the Neolithic or New Stone Age. Free gallery leaflets on ancient Chinese jade accompanied this exhibition. Also during FY 1981, a special selection of objects from the Chinese collection, including bronzes, jades, paintings and small sculptures, demonstrated the chronological and stylistic relationship of the various media. New gallery leaflets on Chinese bronze, painting and sculpture were made available to the public. A new exhibition of recently acquired 17th century Chinese paintings is planned for early spring of 1982. This important group of paintings, which fills a gap in the Freer's Chinese painting collection, will be on view for the first time at the Gallery.

The Freer's first photographic exhibition, entitled "Antoine Sevruguin: Photographer of the Qajar Iran," opened on the lower level of the Gallery in June of 1981. A rich visual record of the late Qajar period, circa 1885 to 1930, is offered by 24 photographs selected from the Freer's Islamic Archives. Antoine Sevruguin, an Iranian Christian, was a commercial photographer whose studio was located in Tehran.

A complementary exhibition on "Korean Art" paralleled the major exhibition "5000 Years of Korean Art," which opened in July of 1981 in the Special Exhibits Gallery in the National Museum of Natural History/Museum of Man. The Freer's exhibit included ceramics, paintings and metalwork.

"Autumn's Voices" opened in October of 1981, displaying 21 works of Japanese art including paintings, calligraphy, ceramics and two lacquered wooden drums dating from the early 13th to the early 19th centuries. The mid-16th to early 17th century drums and the 17th century calligraphy by Shokado represent significant recent acquisitions on exhibition for the first time. This exhibit showed the variety of interpretations of autumnal motifs in Japanese art. Other exhibits which opened at the beginning of FY 1981 are "Two Centuries of Japanese Ceramics, 1550-1750," which displayed approximately 40 examples of Japanese stoneware and porcelain from the Kyoto, Kyushu and Mino regions; "Japanese Fans" dating from the 16th to the 19th centuries, which illustrated the use of this art form in the Oriental society; and "Screens of the Rimpa School," which exhibited six screens that typified the elegant and decorative painting of the 17th and 18th century Rimpa School of Japan. In December of 1981, an exhibition of 30 Japanese prints opened featuring 18th and 19th century prints by Utamaro, Hiroshige and Hokusai. The Rimpa screens were followed by "Screens of Genres and Narratives," dating from the 17th to 19th centuries. In January of 1982 an exhibition of recent acquisitions opened in one of the Japanese galleries, and a large exhibition of Buddhist and Shinto art is planned for the fall of 1983.

In the spring of 1981, "Egypt Today"--a celebration honoring the cultural, intellectual and economic life of contemporary Egypt--opened in various cities across the United States. As part of its participation in the celebration, the Freer Gallery installed a special exhibition of "Egyptian Glass" in March 1981, and the exhibition was formally opened by Mrs. Anwar Sadat. Approximately 30 pieces of glass from the Freer collection were included. A lecture on "Ancient Glass: Its Marvels and Mysteries" marked the opening of the exhibit. In June 1981, a complementary exhibit of Egyptian and Syrian "Mamluk Art" from the Freer collection was displayed simultaneously with a larger exhibition, "Renaissance of Islam: Art of the Mamluks," in the National Museum of Natural History/Museum of Man. "Eastern Kufic Calligraphy" opened in May of 1981, exhibiting 12 pages from the Koran dating from the 10th to the 12th centuries in Iran. Among the 30 objects in "Turkish Art" which opened in the beginning of FY 1981 are manuscripts, ceramics, metalwork and jade primarily from the 16th century, the height of the Ottoman Empire. Recent acquisitions included in this exhibition are a late 16th early 17th century brocaded textile and a set of three late 15th century tiles from a revetment of a dated building in Bursa, Iran. A large exhibition of Near Eastern metalwork is planned for the fall of 1982 which will include two new acquisitions: a unique late 13th century candlestick with astrological symbols of the twelve months, and a 14th century metal bowl with gold inlay.

As part of the Freer's education program during FY 1981, the Gallery offered six Oriental art lectures covering a wide range of topics related to the holdings of the Museum. This popular lecture series will be continued in FY 1982. 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 continuation of the highly successful free exhibition leaflets introducing various aspects of the Gallery's collections; and the greatly expanded tour schedule of the docent program, newly developed in 1981.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds 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 the members who attend the Gallery's Visiting Committee meetings. In FY 1981, an amount of \$27,000 from the Institution's Collections Acquisition, Scholarly Studies and Education Program was used for research on a special exhibition on Mamluk art. A Smithsonian Society Award of \$12,000 in FY 1981 was used to purchase a late 16th century wooden hand drum for Oriental drama music.

Restricted Funds - Nearly all of the Restricted Trust funds used by the Gallery stem from the Freer Endowment and are restricted by the conditions that are stipulated therein. The funds are used to help finance expenses of the professional curatorial staff, the administrative staff, acquisitions for the collections and library, the maintenance of the Freer's courtyard and the operation of the Freer museum shop.

In FY 1981, the Freer received a grant of \$10,000 from the National Committee to Honor the Fourteenth Centennial of Islam, Inc., to catalogue and index the Islamic Archives, a collection of photographs and slides of the art and architecture of the Near East.

ARCHIVES OF AMERICAN ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
			FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	17	542	-	1	-	3	12	447	-	-
FY 1982 Base	17	656	-	7	-	-	12	554	-	-
FY 1983 Estimate	17	675	-	6	-	-	12	597	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	17	0	17
Number of Other Positions.....	2	0	2
11 Personnel Compensation.....	455	8	463
12 Personnel Benefits.....	45	1	46
21 Travel & Trans. of Persons.....	16		16
22 Transportation of Things.....	5		5
23 Rent, Comm. & Utilities.....	45	3	48
24 Printing and Reproduction.....	50	2	52
25 Other Services.....	10		10
26 Supplies and Materials.....	20	3	23
31 Equipment.....	10	2	12
Total	<u>656</u>	<u>19</u>	<u>675</u>

Analysis of Increase

Necessary Pay.....	9
Inflation.....	10
Program Funds.....	0

ABSTRACT - Since its beginning in 1954, the Archives of American Art has pursued its primary function of stimulating research and publication in American art history. It acquires artists' papers and the records of art galleries, museums and art societies, and makes these resources easily available through microfilm and a national network of regional research centers. The Bureau preserves the oral, in addition to the written word, through its Oral History Program. Interviews with key individuals involved in American art provide the researcher with valuable information to supplement more conventional records. No program increase is requested for FY 1983. Necessary pay of \$9,000 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 Archives of American Art was established in 1954 in the Detroit Institute of Arts. Its birth and subsequent growth have met the need for a centralized repository of documentation on the visual arts in America. Over the first 27 years, it has provided the means for stimulating scholarship in American art by assembling the papers of American artists, as well as the records of museums and galleries. This material, consisting of letters, sketch-books, notes, diaries, photographs and business records, is filled with historical data concerning people and events of significance to American culture. Now numbering almost eight million items, this material is microfilmed, making the Archive's complete holdings easily accessible to researchers. The microfilm is available for viewing in five regional centers located in Detroit, San Francisco, Boston, New York and Washington and may be borrowed through interlibrary loan.

The Archives incorporates in its collecting efforts an active Oral History Program. Its importance in documenting the visual arts has grown significantly as more and more interviews reveal unique information useful to American Art scholars. Over 1,500 tape-recorded interviews have been made with leading artists, art historians, museum directors and others whose knowledge of people and events associated with American art is a major source of information. These tapes and transcripts also can be consulted at the regional centers.

Several very successful grant-sponsored oral history projects enabled the Archives to add 98 new oral and audiovisual interviews to its holdings in FY 1981. Most notable among them are interviews with the painters Willem deKooning, Gene Davis, Raphael Soyer and Edward Ruscha; the sculptors Chaim Gross, Dimitri Hadzi and Herbert Ferber; the critic Patrick Ireland; and the museum director Ian White.

Sharing equal importance with acquisitions are the conservation and research programs. All collections which have been given to or deposited with the Archives are subject to conservation measures and are eventually stored in climate controlled areas. Archives' holdings now fill 3,520 square feet of climate-controlled storage space at the Washington, D.C. Center. In FY 1981, a mobile shelving system was installed in a small area of the storage facility in order to increase capacity. Plans call for installing this system in the entire storage area by FY 1983. In FY 1981, 268 new collections, consisting of over a half million items, were received in Washington. These were accessioned, processed, catalogued and subjected to conservation procedures. During that same period, 137 collections were filmed, producing 806 new master negative rolls. Reader copy distribution to regional centers amounted to over 2,100 rolls.

The Archives success in stimulating research and publication is measured in use and published works. In FY 1981, the Archives was visited by 2,600 researchers and answered 391 interlibrary loan requests for over 1,100 rolls of microfilm. Archives' holdings are used by museums and institutions in exhibitions to provide documentary information on artists and their work. A show at the Los Angeles County Museum of Art, "Los Angeles Art of the Sixties," and an exhibition at the Institute of Contemporary Arts in Boston, "Dream Vision: The Work of Arthur B. Davies" contained a number of documents from the Archives. The Wilhelm-Busch Museum of Hanover, West Germany borrowed drawings for a Lyonel Feininger exhibition, and galleries in Berlin and Hamburg borrowed several rare publications for an exhibition entitled "The American Scene, 1920 - 1940."

The results of earlier work conducted at the Archives by scholars and researchers appeared in an impressive number of books, exhibition catalogues and articles published in 1981. Books on Dorothea Lange, Georgia O'Keeffe, and Ad

Reinhardt, and major catalogues on the work of Berenice Abbott, Mary Cassatt, Arthur B. Davies, Guy Pene duBois, Lyonel Feininger, Walter Gay, Childe Hassam, David Smith, and Benjamin West drew heavily from Archives' material. Other catalogues on Futurism, on the Library of Congress Building, on sculptors' drawings and on American art of the 1920s and 1930s included acknowledgements to the Archives.

In FY 1981 the Archives, with the support of Scholarly Resources, Inc. published The Card Catalogue of the Manuscript Collections of the Archives of American Art. Added to several other published finding aids, this ten-volume publication consisting of over 40,000 cards, will offer researchers worldwide a comprehensive bank of information on the Archives' holdings. Plans for FY 1982 call for publishing the Archives' new oral history card catalogue, consisting of 2,000 catalogue cards, each including information on the participants and contents of the interview.

As a means of stimulating scholarly interest in and publication on American art the Archives participates in and sponsors symposias. Some are held in conjunction with a particular exhibition and focus on the artist represented and/or the exhibition's theme. Others are held independently with a specific topic in mind. In FY 1981, a symposium on Arthur B. Davies was held in Boston, Massachusetts. "Landscape Painting" was the theme for a symposium held in New York City and co-sponsored by the National Academy of Design and Columbia University. A panel, assembled in San Francisco for the symposium entitled "Coming of Age in California," had as participants Henry Hopkins, George Neubert, Pontus Hulpen, Richard Koshalek, Earl A. Powell III and Maurice Tuckman. In FY 1982, Archives' plans call for a symposium in New York on still-life painting, in Washington on holdings in the Archives' collections, and in Detroit on "American Art, 1876-1893." Also in FY 1981, several senior staff were invited to lecture on the Archives or related topics in such places as Providence, Rhode Island; Rochester, New York; Kansas City, Kansas; Chicago, Illinois; Grand Rapids, Michigan; and San Diego, California.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided in FY 1982 and FY 1983 to defray costs associated with special events and to help offset a portion of the Archives' Board of Trustees travel expenses. The FY 1981 expenses from special purpose funds are related to publication of "Arts in America: A Bibliography."

Restricted Funds - These are generated through fund raising activities, the solicitation of gifts, as well as foundation and corporate grants and a membership program. The major portion of this income is used to defray, in part, the Archives' general operating expenses including support of 12 full-time and five part-time positions, and to provide for its entire publication and oral history programs.

A number of the Archives' special projects have received foundation and corporate support. In FY 1981, the Archives received a \$17,000 grant from the Mark Rothko Foundation for an oral history project. The Adolph Foundation provided \$10,000 for a collection management project while the state collecting project in Texas continues to receive foundation support (estimated expenditures of \$83,000 in FY 1982 and \$91,000 in FY 1983). In FY 1982 the Archives will continue to seek foundation and corporate support.



COOPER-HEWITT MUSEUM

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
	FTP*	Amount	General		Special Purpose		FTP*	Amount	FTP*	Amount
			FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	22	702	10	364	11	788	2	287	-	25
FY 1982 Base	22	752	10	360	13	787	2	509	-	75
FY 1983 Estimate	22	814	10	382	13	811	2	582	-	85

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	22	0	22
Number of Other Positions.....	8	0	8
11 Personnel Compensation.....	474	17	491
12 Personnel Benefits.....	46	1	47
21 Travel & Trans. of Persons.....	4		4
22 Transportation of Things.....	10		10
23 Rent, Comm. & Utilities.....	15	1	16
24 Printing and Reproduction.....	18	3	21
25 Other Services.....	80	32	112
26 Supplies and Materials.....	85	6	91
31 Equipment.....	20	2	22
Total	<u>752</u>	<u>62</u>	<u>814</u>

Analysis of Increase

Necessary Pay.....	18
Inflation.....	19
Program Funds.....	25

ABSTRACT - The Cooper-Hewitt Museum opened to the public in October 1976 in the Carnegie Mansion in New York City. The Museum is one of the world's great repositories of design and decorative art materials with collections including textiles, drawings, prints, wallpapers, furniture, jewelry, glass, ceramics, silver, metalwork and other decorative objects. As a part of an Institution-wide effort to eliminate a potential hazard of nitrate film, \$25,000 is requested for a survey of Cooper-Hewitt's archives, portions of which are nitrate negatives, to detect deteriorated materials and to remove damaged items. This request is justified centrally in the Administration section of this budget. Necessary pay of \$18,000 is required for existing staff and an amount of \$19,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Cooper-Hewitt Museum, previously known as the Cooper Union Museum of the Arts of Decoration, was founded in 1896. Threatened with closure and discontinuance due to lack of space and funding at Cooper Union, it was transferred to the Smithsonian Institution in 1967. The Carnegie property, consisting of the mansion, townhouse and garden, was given to the Institution as a home for the Museum in 1972. Following the renovation of the mansion, the Museum opened to the public in October 1976.

One of the world's great repositories of design and decorative arts materials, the Cooper-Hewitt is the only museum in the United States devoted exclusively to the study of historical and contemporary design. The collections of the Museum span over 3,000 years and represent cultures and countries the world over. Supporting study of the collections is a major library containing approximately 35,000 volumes on design, ornament and architecture.

In October 1981, the Cooper-Hewitt celebrated the fifth anniversary of its rebirth as the Smithsonian Institution's national museum of design. In the years since the Museum reopened, it has presented over 75 exhibitions (not counting the 23 satellite showings in other museums that were part of the opening activities). The following exhibitions were presented during this past year: "Now I Lay Me Down to Eat: A Salute to the Unknown Art of Living," "Central Park," "Silver," "Matchsafes," "Pottery," "J. H. Belter and the Rococo Revival," "Innovative Furniture," "German Stage Design in the 19th Century," "The Moving Image: The Art of Animation" and "Gardens of Delight." In FY 1981 the Smithsonian Institution Traveling Exhibition Service continued to circulate nationwide "The Shopping Bag: Portable Graphic Art" and also is planning to circulate "Urban Open Spaces"--both exhibitions that were developed at the Cooper-Hewitt.

Exhibitions planned for FY 1982 include: "Suburbs," "In Small Stages: Puppets from the Cooper-Hewitt Collection," "City Dwellings and Country Houses: Robert Adam and His Style," "Architectural Fantasy and Reality," "Hawaii: the Royal Isles," "English Majolica," "Lace," "Fashion Prints," "Contemporary Japanese Ceramics," "Buttons," "American Picture Palaces," "The Carnegie Mansion Embellished," "Scandinavian Decorative Art," "Science Fiction" and "The 'Modern Style' in Paris: Photographs by Therese Bonney."

The Museum continued its special series of publications on various aspects of the collections. The series of collection handbooks was enlarged by four volumes: Silver, Matchsafes, Pottery and Wallpaper. Also, four more volumes in the series The Smithsonian Illustrated Library of Antiques prepared by the Cooper-Hewitt Museum, entitled Jewelry, Silver, Toys and Games and Pottery were completed. These brought the series to a total of 12 volumes and an additional three have been commissioned. More Than Meets The Eye: The History and Collection of Cooper-Hewitt Museum was published in hard and soft edition. Additional catalogues were published in conjunction with the following exhibitions: "Now I Lay Me Down to Eat: Notes and Footnotes in the Lost Art of Living" and "Urban Open Spaces." In connection with the latter exhibition, a series of "Central Park Postcards" was printed as well as two colorful paper constructions, "Horticultural Hall" and "Kiosque," reprinted from lithographs in the Museum's collection.

Brochures on the history of the "Carnegie Mansion" and the "Cooper-Hewitt Collections" were revised and reprinted. To aid the disabled, a "Guide to the Cooper-Hewitt Museum" was published in braille and in large type-face, the latter funded by the President's Committee on Employment for the Handicapped.

Several Museum publications received awards. The Art Libraries Society of New York awarded a citation of merit to the Museum for four catalogues: "Hair," "Tsuba," "Tiles" and "The Oceanliner." "Tsuba" received an additional award of merit from the Art Directors Club for excellence in design.

During FY 1981 and continuing in FY 1982, the Cooper-Hewitt offered a full complement of workshops, lectures, seminars, tours and special classes on decorative arts and design. In the past year, over 6,000 students participated in Cooper-Hewitt educational programs which are considered to be the most active and varied in New York City. They include adult enrichment classes, workshops for children, special "touch" and sign-interpreted programs for the disabled and 16-week courses available for college credit through Parsons/New School. A wide selection of courses is offered to meet the needs of both the lay public and professional designers. Guided tours of exhibitions also are offered. The Museum recently was selected to participate in the City's Cultural Voucher Program. Through funds from this Program and a grant from the Hearst Foundation, activities for school children, senior citizens and community groups will be expanded during the coming year.

In FY 1982, the Cooper-Hewitt together with the Parsons/New School will begin a master's degree program in European decorative arts, the first of its kind in the country. The master's program is the Cooper-Hewitt's response to the tremendous need for scholarship in the decorative arts and a corollary public demand for more exhibitions and publications on the subject.

In FY 1981, the Museum acquired 1,174 objects from 65 donors, and the collections were further enriched by three purchases from restricted acquisitions funds. Of particular importance was the gift of rare books on the work of Robert and James Adam by the James Smithson Society. The Museum borrowed 1,317 works from 210 public and private collections and loaned 198 works to 41 museums, galleries and institutions both in this country and abroad.

Following the appropriation of special inventory funds in FY 1979 for the planning and implementation of the inventory of the Smithsonian collections, the staff worked with the Smithsonian Registrar and the Office of Computer Services to plan inventory systems and procedures. The inventory is nearing completion; by the end of FY 1981, over 134,000 articles had been inventoried and recorded on computer, and it is anticipated that the inventory of the entire collection will be completed on schedule at the end of FY 1983. The appropriation request for the Collections Management/Inventory Program, an explanation of this Program and a comprehensive funding summary appear in the Special Programs section of this budget.

The Cooper-Hewitt now has two well-equipped conservation laboratories--one for textiles and one for paper. An additional laboratory to deal with conservation and repair of decorative arts objects is planned for the future. The New York State Council on the Arts recently has given a grant of \$40,000 for additional staff and materials to enable the Museum to serve as the Conservation Advisory Center for the State of New York.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from a variety of sources including museum shop sales, product development, membership and admission fees, donations, fund raising events and from Smithsonian Trust fund allotments. The annual allotment supports ten positions including those of the director, assistant director, administrative assistant, business

manager and members of the curatorial and registrarial staff. It also is used to defray expenses associated with the openings of new exhibitions and to support various educational programs of the Museum.

Restricted Funds - These funds are provided from gifts and foundation grants, bequests and donations from individuals, organizations or corporations for specific purposes. Generally, they provide support for a particular Cooper-Hewitt exhibition or program. Examples of exhibitions supported by these funds in FY 1982 and FY 1983 include "Hawaii" (United Airlines, \$10,000), "Puppets" (EXXON, \$10,000) and "Scandinavian Decorative Arts" (American Scandinavian Foundation, \$80,000). A grant of \$100,000 from the Mellon Foundation will support various exhibitions and related publications in FY 1982 and FY 1983. The Ford Foundation has contributed \$25,000 in minority scholarships for a master's degree program to be launched in FY 1982, and the Hearst Foundation has contributed \$20,000 in support of the Museum's Cultural Voucher Program for FY 1982 and FY 1983. Starting in FY 1982, the Helena Rubinstein Foundation will provide \$10,000 per year for student aid. Another grant of \$25,000 from the Hearst Foundation will be used in FY 1982 to support various educational programs.

As evidenced by the substantial increase of expenditures between FY 1981 and FY 1982, Cooper-Hewitt will continue its successful efforts to secure additional corporate, individual and foundation support for its exhibition and educational programs.

Federal Grants and Contracts - These funds are provided by various government agencies and departments for specific program support. The New York State Council on the Arts will be providing approximately \$50,000 in FY 1982 and in FY 1983 for support of the Museum's exhibition, education and publication programs.

NATIONAL MUSEUM OF AFRICAN ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	24	621	1	163	9	170	5	83	-	4
FY 1982 Base	25	796	1	43	1	31	5	123	-	-
FY 1983 Estimate	25	859	-	9	1	35	5	131	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	25	0	25
Number of Other Positions.....	4	0	4
11 Personnel Compensation.....	534	44	578
12 Personnel Benefits.....	52	4	56
21 Travel & Trans. of Persons.....	14	2	16
22 Transportation of Things.....	10	1	11
23 Rent, Comm. & Utilities.....	2		2
24 Printing and Reproduction.....	42	4	46
25 Other Services.....	52	3	55
26 Supplies and Materials.....	48	3	51
31 Equipment.....	12	2	14
Acquisitions for collections...	30		30
Total	<u>796</u>	<u>63</u>	<u>859</u>

Analysis of Increase

Necessary Pay.....	21
Inflation.....	15
Restored Position Funds.....	27
Program Funds.....	0

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 has only belatedly been recognized as one of the great art traditions of the world. No program increase

is requested for FY 1983. Necessary pay of \$21,000 is required for existing staff and an amount of \$15,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$27,000 is requested to provide funding for the one position restored by the Congress in FY 1982.

PROGRAM - The National Museum of African Art collects, preserves, studies and displays traditional African art. It also conducts extensive public education programs and works closely with education officials at all levels in the metropolitan Washington area and throughout the country.

The Museum, located on Capitol Hill, occupies a row of nine townhouses, including the first Washington residence of Frederick Douglass. The complex contains 12 public galleries in which approximately 500 objects are displayed; a storage area of the Museum's permanent collection of approximately 8,500 objects representing all the major regions of Africa; the Eliot Elisofon archives numbering some 100,000 slides, photographs and film sequences; a reference library of approximately 4,000 titles; an auditorium with seating capacity of 150; a graphics studio; education and administrative offices; and the Museum's sales shop, "Boutique Africa," specializing in contemporary African craft objects.

More than 1.5 million people have visited the Museum's galleries and attended its various extension programs since it opened in 1964, and some 19,000 groups have participated in the Museum's special orientation sessions on African culture and values, conducted by African and American members of the Museum's staff.

The Museum's continuing public education program consists of daily museum orientation sessions; regularly occurring African craft workshops for children and adults; arts and crafts demonstrations by artists-in-residence conducted in cooperation with the Cultural Exchange Program of the International Communication Agency; special series of lectures, symposia, films and performances, such as the year-long series on the African diaspora; African heritage programs in the public schools featuring staff members working directly with teachers and pupils to infuse an understanding of African values and culture into the curriculum; and extension programs and displays for universities, community organizations and conferences. The Museum's Department of Academic Studies conducts credit and noncredit courses each semester (33 of which have been conducted thus far) in cooperation with area universities. The library, photographic archives and slide collections also are made available to scholars and advanced students of African art and culture. Members of this Department, as well as curatorial staff members, provide consultation services to other museums and to universities wishing to develop programs in African art studies. Traveling exhibitions prepared by the Museum are circulated to small colleges or museums either directly or in cooperation with the Smithsonian Institution Traveling Exhibition Service.

During FY 1981, the Museum's exhibition schedule included "Costumes of the Edo of Nigeria," "Traditional Costumery and Jewelry of Egypt," "African Costumes and Jewelry: The Maasai," "The Art of Angola, Cameroon and Gabon" and "Selections from the Permanent Collection: the Art of Nigeria, Mali and Guinea." The first three exhibitions, presented simultaneously, illuminated the variety, esthetic quality and symbolic richness of body arts and decorative traditions from very diverse regions of Africa. Films, lectures and performances presented in conjunction with these exhibitions drew large audiences to the Museum and to other auditoriums where programs were held. Participants in this program series included Suad Raga in a program of traditional Egyptian dances and Tepelit Ole Saitoti from Kenya, who lectured on the Maasai. The latter

exhibitions utilized objects which are part of the Museum's permanent collection, assembled and exhibited according to regions and countries of origin. Special program events presented in conjunction with these exhibitions included Saturday morning children's storytelling sessions, wood carving demonstrations and lectures by the Zambian artist-in-residence and African and Afro-American dance and music performances. These activities were supplemented in the galleries by docent-conducted tours for school groups and the general public. During December and January, the Museum cooperated with the Corcoran Gallery of Art to present films, lectures and dance and music performances in conjunction with a major traveling exhibition cosponsored by the National Museum of African Art and the Corcoran, "Treasures of Ancient Nigeria."

In FY 1982, the Museum presented a series of exhibitions organized around specific themes. The objective was to present the finest objects in the Museum's permanent collection along with borrowed objects, in a manner which would illuminate aspects of African philosophy, religion, cosmology and moral tenets. The first of these exhibitions, "Out of the Ordinary: African Furniture and Household Objects," utilized objects from the Museum's permanent collection to demonstrate the relationship between sacred and mundane aspects of seemingly ordinary household objects in African cultures. "Life...Afterlife: African Funerary Sculpture," a major exhibition of more than 100 objects, filled two floors of the Museum with extraordinary objects loaned from other museums and private collections, as well as objects from the Museum's permanent collection. This exhibition investigated the manner in which art functions within the context of African funerals, giving voice to concepts of life, death and the continual cycle of human existence. It stressed that African funerals are celebrations of life, not death.

A series of six lectures by renowned African and American scholars will accompany the exhibition, as well as a panel discussion on "Continuities in Beliefs and Practices in the African Diaspora." Additionally, a Saturday afternoon film series and regularly scheduled docent-led gallery tours will give in-depth information on objects in the exhibition.

Other exhibitions in FY 1982 will focus on diverse aspects of African culture with carefully defined thematic interests. "The Stranger Among Us" deals with the ways in which Africans use art to comment on and disseminate information about persons from outside a local cultural milieu. Images depicting "outsiders"--colonialists, missionaries, government officials and others--will be shown, along with satirical depictions by Africans of Africans from outside of their own ethnic group. Examples of representations of the new technologies accompanying the "strangers"--such as automobiles, sewing machines and airplanes--also will be shown. "Animals in African Art," an exhibition concerned with the way in which Africans use images of animals to express and call attention to metaphors for wisdom, correct social relationships and the proper use of power, will be presented simultaneously with "The Stranger Among Us." The exhibitions will complement one another, one demonstrating the manner in which African peoples use art to deal with unknown quantities and foreigners; and the second to show how close observation of the natural world permits Africans to extrapolate and amplify ideas concerning human social behavior. The final exhibition in FY 1982, "African Emblems of Wealth and Power," will present a survey of the ways in which African peoples have utilized a broad variety of materials, forms and symbolic structures to denote the wealth and power of individuals and institutions. Programs accompanying and supporting the latter exhibitions will include lectures, panel discussions, film showings and docent-led exhibition tours. In addition, information packets prepared by the Museum's education

department and sent to metropolitan area schools encourage teachers of all education levels to bring their classes to the Museum and encourage students to come to the Museum on weekends. In October 1982, the Museum will sponsor a reception for members of the African Studies Association meeting in Washington. Museum staff members work closely with members of the African Studies Department of Howard University to coordinate program events and to make colleges and universities aware of the services and resources available at the Museum.

For FY 1983, the Museum plans to continue presenting major exhibitions focusing on specific thematic concepts, utilizing the wealth of objects in its permanent collection. Three major exhibitions are planned for this period: "African Musical Instruments," "African Toys" and "African Art in American Collections." The first exhibition, to be accompanied by a catalogue, will include sound and film sequences to illuminate all dimensions of African musical performance. "African Toys" will present the diverse and often complex forms of children's playthings in Africa. The last major exhibit, "African Art in American Collections," will be accompanied by the publication of a revised edition of the book of the same title and will assemble many of the objects in that publication, as well as other examples of extraordinarily fine African art. Two minor exhibitions planned for FY 1983 will feature traditional sculpture from particular regions of Africa and will focus on specific aspects of culture and philosophy in Africa.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds 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, for the opening of new exhibitions, the salary of the acting director and to defray travel costs associated with meetings of the Board of Trustees. The decrease in expenditures between FY 1981 and FY 1982 reflects the transfer of museum shop management and operations from the Museum to the Business Management Office.

Restricted Funds - Funds provided here are in the form of grants and gifts from individuals, foundations, organizations and corporations for specific purposes. Generally, they provide support for a particular project or exhibit. For example, in FY 1981, a grant received from the American Numismatic Association supported research and development of an exhibition on "Emblems of African Wealth" (\$11,000). Most of the restricted funds projected for FY 1982 and FY 1983 will be used to provide support for program enrichment including collections acquisitions, special exhibitions and programs to bring the Museum into closer contact with educational institutions in the Washington metropolitan area, including orientation sessions to acquaint educators with the Museum's resources and services and to keep them aware of current exhibitions and programs. In addition, dissemination of program information will encourage African embassies to participate in cooperative cultural events with the Museum.

Federal Grants and Contracts - The FY 1981 amount reflects the remaining expenditures from two Federal contracts obtained prior to the Museum's transfer to the Smithsonian. No additional contracts are anticipated for FY 1982 or FY 1983.



ASSISTANT SECRETARY FOR PUBLIC SERVICE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	9	259	15	633	-	68	-	-	-	-
FY 1982 Base	9	333	18	746	-	1	-	-	-	-
FY 1983 Estimate	9	341	20	870	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	9	0	9
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	275	6	281
12 Personnel Benefits.....	27	1	28
21 Travel & Trans. of Persons.....	2		2
24 Printing and Reproduction.....	6		6
25 Other Services.....	15		15
26 Supplies and Materials.....	1	1	2
31 Equipment.....	7		7
Total	<u>333</u>	<u>8</u>	<u>341</u>

Analysis of Increase

Necessary Pay.....	7
Inflation.....	1
Program Funds.....	0

ABSTRACT - The Office of the Assistant Secretary for Public Service guides and supports the public service units in the development of programs to advance the Institution's objectives in education, publication, information and performing arts and keeps the Secretary informed and advised concerning the public service programs and activities. The Office of Telecommunications and the Visitors Information and Associates Reception Center also are included under this heading. No program increase is requested for FY 1983. Necessary pay of \$7,000 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 - I. Immediate Office: With a base of five positions and \$215,000, the primary functions of the Office of Public Service are to stimulate, coordinate and supervise the activities of the Smithsonian's educational and public service components. These include the Anacostia Neighborhood Museum,

the Division of Performing Arts, the Office of Elementary and Secondary Education and the Office of Smithsonian Symposia and Seminars. Other activities for which this Office is responsible are the dissemination of Smithsonian research and interests through the publication programs of the Smithsonian Institution Press and Smithsonian Exposition Books, the Smithsonian magazine and the International Exchange Service; the development and coordination of a program using the services of volunteers to provide information to the public (in person, by phone and by mail) and the administration of a placement service of volunteer assistants throughout the Institution by the Visitors Information and Associates Reception Center; and the development and production of audiovisual materials by the Office of Telecommunications.

II. Office of Telecommunications: A base of two positions and \$54,000 provides support for the Office of Telecommunications. The primary functions of the Office are to develop plans for Smithsonian policy and objectives in telecommunications, which serves as one of the Institution's major means of public education and enlightenment and to develop and produce films, television and radio programs for distribution to public and commercial broadcasting outlets, as well as educational and civic organizations.

III. Visitors Information and Associates Reception Center: With a base of two positions and \$64,000, the Center is the Institution's public service bureau providing a wide variety of central information and assistance services to the public through three programs: the Seven Day Information Service, the Staff/Volunteer Service and the Public Inquiry Mail Service.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - I. Office of Telecommunications: These funds are provided by allotments and support six staff members in FY 1982 and a projected eight staff members in FY 1983 and expenses associated with development of educational and informational materials for television, film and radio. The materials are designed to disseminate the results of Smithsonian research and exhibition activities to a variety of audiences. In FY 1981, for example, film projects supported in part by these funds included the current production focusing on American Impressionist artists entitled "In Open Air." This half-hour film, produced in conjunction with SITES' American Impressionist exhibition, will premier at the spring 1982 exhibition opening. Public broadcasting of this film will enable it to be seen throughout Europe as well as in the United States. These funds also support the production of a new series of television featurettes which highlight the results of Smithsonian research and exhibition activities and "Radio Smithsonian," a weekly series about the Smithsonian that is distributed by satellite to nearly 60 subscribing stations across the country. Continuing support in FY 1981 has been provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program to support "Smithsonian Galaxy" (\$56,000), a series of short radio features produced and developed in connection with Smithsonian exhibits. This highly popular radio program now is heard on 210 stations in 45 states and reaches a national audience of approximately 16 million people. In addition, the Office has joined with the Division of Performing Arts to launch a new series of live concerts to be broadcast by satellite. Expenditures under the Collections Acquisition, Scholarly Studies and Education Program have been recorded for FY 1981 but not yet for FY 1982 and FY 1983. This explains the variance in totals shown between FY 1981, FY 1982 and FY 1983. The Office of Telecommunications can expect to receive and spend funds made available through the Program in FY 1982 and FY 1983.

II. Visitors Information and Associates Reception Center: Funds are provided by allotments and are used primarily to support 12 staff members in FY 1982 and FY 1983 and expenses associated with the Center's work as the Institution's central service organization charged with providing a wide variety of information and assistance services to the public and associate members of the Institution. These include an Information Volunteer Program, which is responsible for staffing information desks in the Mall museums; the Group Orientation Program, which prepares volunteers to present 30-minute slide lecture orientations to organized groups visiting the Institution; the Castle Docent Program, which trains volunteers to conduct regularly scheduled tours of the original Smithsonian Institution Building; an Independent Volunteer Placement Service, which interviews and assigns volunteers to assist professional staff in specific subject areas; and a Telephone Information Program, which responds to well over 300,000 telephone inquiries annually.

ANACOSTIA NEIGHBORHOOD MUSEUM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	19	529	1	26	-	20	-	2	-	-
FY 1982 Base	19	749	1	31	-	-	-	-	-	-
FY 1983 Estimate	19	773	1	32	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	19	0	19
Number of Other Positions.....	5	0	5
11 Personnel Compensation.....	492	9	501
12 Personnel Benefits.....	48	1	49
21 Travel & Trans. of Persons.....	3		3
22 Transportation of Things.....	1		1
23 Rent, Comm. & Utilities.....	25		25
24 Printing and Reproduction.....	11	3	14
25 Other Services.....	70	2	72
26 Supplies and Materials.....	71	2	73
31 Equipment.....	28	7	35
Total	<u>749</u>	<u>24</u>	<u>773</u>

Analysis of Increase

Necessary Pay.....	10
Inflation.....	14
Program Funds.....	0

ABSTRACT - The Anacostia Neighborhood Museum (ANM) was founded in the Anacostia section of Washington, D.C. in 1967 to provide the opportunity and the resources for a continuing museum experience for community groups and individuals. Carefully researched and produced exhibits, supported by educational and interpretative programs, have responded to the needs and interests of this and adjoining communities. Through its traveling exhibits and publications, ANM also has responded to a national need and today it is recognized as an increasingly important resource of Black history and culture. No program increase is requested for FY 1983. 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 Museum brings a culturally enriching experience to those who might otherwise never have the opportunity to share in such an experience. In the process, the Museum has gained an international reputation as a center for ethnic studies through its own exhibits, traveling exhibitions, research efforts, publications and education projects.

Currently, the Museum's focus is centered on its exhibitions and on accompanying publications that both support and extend the life of its exhibitions, drawing upon the resources expended in the areas of research, exhibits design and production. The current ANM exhibition, "Anna J. Cooper: A Voice from the South," has been well received by both local and national audiences. When it closes in FY 1982, the exhibition will be given to the Washington, D.C. school system which has requested its permanent loan since the exhibit depicts so well the struggle for quality education for young Blacks. As an adjunct to the Anna Cooper exhibition, Anacostia's research department produced the book Anna J. Cooper: A Voice from the South.

Also during FY 1981, the Museum's research and exhibition departments prepared materials developed under the auspices of the National Council for Negro Women and based on the ANM's recent exhibition, "Black Women: Achievements Against the Odds," for use by the Dallas (Texas) Independent School District. Published in Dallas, these materials were distributed at no cost to support an educational program and career development workshop for young minority women. These same materials were used to support publication of "Black Women: Achievements Against the Odds Calendar, 1981-83." Produced by the Institution, the calendar is available to a national audience and is used by the Smithsonian Institution Traveling Exhibition Service (SITES) to support its distribution of the ANM produced "Black Women" exhibition.

Research and design for the traveling exhibition "Out of Africa: From West African Kingdoms to Colonization" was completed during FY 1981, and production of multiple copies of this exhibition for distribution by SITES and ANM will be available in FY 1982. The ANM will develop more traveling exhibitions for distribution locally, nationally and internationally. For example, the exhibition, "Science: Man's Greatest Adventure," depicting the achievements of some of America's great Black scientists, will be on view in Japan in FY 1983. SITES currently is circulating three ANM produced exhibitions and it is anticipated that this number will double by the end of FY 1983, with an additional increase planned for FY 1984. ANM's resources and research capabilities continue to provide support for interpretative programs at national historical sites around the country and for American and urban studies programs in area colleges and universities, as well as for other museums nationwide.

Scheduled to open in FY 1982 is ANM's exhibition, "Mary McLeod Bethune and Roosevelt's 'Black Cabinet'" which was initiated as a part of the Institution's observance of the centennial anniversary of the birth of Franklin Delano Roosevelt. The exhibition will tell the story of the role that Bethune and other major Black advisors played during FDR's New Deal Administration. The show will include artifacts and memorabilia lent by the Franklin D. Roosevelt Library and by Bethune-Cookman College and The Mary McLeod Bethune Foundation.

Other projected exhibitions for FY 1982-83 include an exhibition of works by two local artists and an exhibition of works by a nationally known sculptor, Ed Dwight. These exhibitions are expected to open prior to a new Harlem renaissance era exhibition entitled, "The Renaissance: When the Negro Was in Vogue," which is scheduled to open in late FY 1983. This exhibition will be the most ambitious ever at the Museum. ANM has acquired sheet music, broadsides 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. These important works will be exhibited in the "Renaissance" exhibition and then will be made available to scholars for research.

The education department is continuing to extend its services to schools and the community through teacher workshops and related activities and to continue the use of a double labeling system which includes special labels for the hearing impaired that use a unique syntax in structuring sentences and phrases. This labeling system will be used on all future exhibitions to meet more fully the needs of hearing impaired visitors.

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. 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 1981, funds also were provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program (\$19,000) to support the Museum's Educational Outreach Program. Expenditures under the Collections Acquisition, Scholarly Studies and Education Program have been recorded for FY 1981, but not yet for FY 1982 and FY 1983. The Museum can expect to be awarded funds made available through this Program in FY 1982 and FY 1983.

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.

INTERNATIONAL EXCHANGE SERVICE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	4	346	-	-	-	-	-	-	-	-
FY 1982 Base	4	233	-	-	-	-	-	-	-	-
FY 1983 Estimate	4	245	-	-	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	4	0	4
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	82	2	84
12 Personnel Benefits.....	8		8
22 Transportation of Things.....	9	8	17
25 Other Services.....	130		130
26 Supplies and Materials.....	2	1	3
31 Equipment.....	2	1	3
Total	<u>233</u>	<u>12</u>	<u>245</u>

Analysis of Increase

Necessary Pay.....	2
Inflation.....	10
Program Funds.....	0

ABSTRACT - Through the International Exchange Service, public and private institutions in the United States exchange publications with organizations in other countries. No program increase is requested for FY 1983. Necessary pay of \$2,000 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 - In 1849, the Smithsonian Institution established a system for the exchange of its literary, scientific and cultural publications with learned societies of other countries. This program was so successful that in 1851 it was expanded to accommodate the exchange of publications of other American organizations. The International Exchange Service's responsibilities were formalized when the Brussels Conventions of 1875 - 1886 were adopted by the United States in 1889. The Smithsonian Institution became the official exchange bureau in the

United States for the international exchange of literary, scientific and cultural publications. At the same time, the International Exchange Service assumed responsibility for the exchange of United States government publications as a service for the Library of Congress.

In FY 1977, the Exchange transferred the sending of the weekly issues of the United States Patent specifications to the Department of Commerce. In early FY 1978, the Smithsonian and the Government Printing Office (GPO) concluded an agreement under which the GPO assumed responsibility for the international exchange of other government documents on a reimbursable basis. This agreement has been renewed annually through FY 1982. Beginning in FY 1980, the actual costs have exceeded base funding of \$130,000 by significant amounts. At the end of FY 1981, it was necessary to inform the Public Printer that the Smithsonian Institution was unable to defray any costs over the base monies for the international exchange program. The permanent transfer of this responsibility requires an amendment to an existing statute. The necessary legislation was introduced in the 96th Congress but not acted upon. It is anticipated that legislation will be reintroduced in the second session of the 97th Congress. If enacted, this transfer is expected to result in a more efficient operation, as the Government Printing Office is better staffed and equipped to meet the particular needs of the Library of Congress. It also is expected that enactment of the legislation will be followed by a one-time permanent base transfer of funds from the Smithsonian to the Government Printing Office.

Based on the positive results of a survey of nearly 200 academic institutions to determine the need for the exchange of scientific and literary publications, the International Exchange Service plans to continue to provide these services.



DIVISION OF PERFORMING ARTS

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	10	387	22	4,561	-	114	-	130	-	8
FY 1982 Base	10	462	23	4,942	-	-	1	30	-	5
FY 1983 Estimate	10	478	23	5,809	-	-	-	10	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	10	0	10
Number of Other Positions.....	1	0	1
11 Personnel Compensation.....	281	7	288
12 Personnel Benefits.....	27		27
21 Travel & Trans. of Persons.....	9		9
23 Rent, Comm. & Utilities.....	2	1	3
24 Printing and Reproduction.....	9	1	10
25 Other Services.....	108	5	113
26 Supplies and Materials.....	20	2	22
31 Equipment.....	6		6
Total	<u>462</u>	<u>16</u>	<u>478</u>

Analysis of Increase

Necessary Pay.....	7
Inflation.....	9
Program Funds.....	0

ABSTRACT - The Division of Performing Arts (DPA) 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 focused on American esthetic traditions and the use of historic instruments in the collections of the National Museum of American History (NMAH). The programs of the Division of Performing Arts are made available to the public through publications, through the Smithsonian collection of recordings and by means of tours by resident performing ensembles. No program increase is requested for FY 1983. Necessary pay in the amount of \$7,000 is required for existing staff and an amount of \$9,000 is sought to compensate for the effects of inflation in non-salary areas of expense.

PROGRAM - DPA plans and produces live performances throughout the Smithsonian Institution. It produces recordings, catalogues, exhibits and conferences, conducts research and serves as the focal point within the Institution for diverse studies of the performing arts. The various segments within the Division--Jazz Program, Discovery Theater, Educational Programs, Museum Programs and Black American Culture Program--work together in performances and recordings which include jazz, country/western, blues, gospel, chamber music, spirituals and performances on historic instruments. Activities are organized in order to accumulate learning experiences through critical reaction, participant and audience contribution, and to provide educational benefit far beyond any single concert or writing. In the recent past, DPA has developed numerous highly acclaimed programs which contribute new knowledge about the history of our culture. In FY 1981, the Black American Culture Program organized a conference beginning on February 1, 1981, commemorating the 20th anniversary of the Greensboro, North Carolina sit-ins. This event brought together community leaders, song leaders and some of the actual participants of the sit-ins. The conference was supplemented by an exhibit of objects and photographs, concerts of songs which grew out of the movement, a catalogue and a recording. In the year since the recording was published, more than 30,000 copies have been distributed. In cooperation with the Smithsonian Institution Traveling Exhibition Service (SITES) and Howard University, DPA has organized a traveling exhibition featuring a photo-essay of the civil rights movement and a sound exhibit presenting the songs and recollections of the participants, all of which were developed during the conference in Washington, D.C. SITES arranged the booking and transportation of the display elements of the exhibitions while Howard University arranged local discussions and seminars which supplemented and personalized the exhibit. The touring show visited six cities in FY 1981, will tour six more in FY 1982, and two cities have been scheduled to date for FY 1983.

The Smithsonian Jazz Repertory Ensemble, comprised of various musicians from around the country, is the only group currently reconstructing music and performances of historic importance. The Ensemble performs in Washington, D.C., and has recorded music of Jelly Roll Morton, James P. Johnson, Fats Waller and Duke Ellington. In 1982, the group will tour eight American cities as well as continue to revive and perform music which previously had been lost to the public. Work continues also on a book of musical scores notated from recorded performances included in the recorded Smithsonian Collection of Classic Jazz. These scores will enable educators to teach jazz history through use of printed materials.

The collections of Smithsonian museums were brought vividly to life by the Smithsonian Chamber Players, performing on the priceless period instruments housed in the National Museum of American History. In FY 1981, the Chamber Players recorded George Frederick Handel's "Messiah" live at the National Presbyterian Church. This recording, which used original instruments and followed the original score, will be broadcast on public television this year. The Chamber Players traveled to seven cities including Rapid City, South Dakota and Charleston, South Carolina. More than 60,000 sets of the recording have been distributed and of equal importance, the sounds of original instruments have been documented for future generations of listeners and scholars. In addition, 12 programs of chamber music enlivened the 19th century environment and collections of the Renwick Gallery. The 20th Century Consort, resident ensemble at the Hirshhorn Museum and Sculpture Garden, was hailed as a valuable national musical resource by composers and critics for its performances of contemporary music. The Consort also has contributed to the collection of recordings, performing works by more than 12 of America's outstanding contemporary composers,

including three Pulitzer Prize winners; George Crumb, Mario Davidovsky and Joseph Schwantner. In April 1981, the world premier of Maurice Wright's contemporary instrumental work, "Holding Together," featuring a solo amplified piano was performed at the Hirshhorn Museum by the 20th Century Consort. The composer also lectured and answered questions regarding his work and its place in the contemporary arts.

In FY 1981, two National Holiday Celebrations again were presented to the largest public audience for any Smithsonian special event. These celebrations taught visitors the history and traditional ways which Americans have evolved to mark the Chanukah and Christmas season. The July 4th celebration emanated from John Adams' hope: "I am apt to believe that it will be celebrated by succeeding generations as the great anniversary festival." A third celebration, observing the advent of spring, focused on popular entertainment and variety acts--circus, carnival, vaudeville and minstrel shows. All of these celebrations served as interpretive vehicles for the collections and exhibits of the NMAH.

The American Musical Theater is widely acknowledged as our nation's major contribution to world theater. The development of this special and particular art form was traced with performances of classical vaudeville shows, featuring the work of such composers as Rudolf Freml and focusing on the theater of the 1920s. In 1981, Freml's operetta "Rose-Marie," with lyrics by Otto Harbach and Oscar Hammerstein which premiered in 1924, was presented live and recorded for future release. This year the work of Vincent Youmans, the composer of "Tea for Two" and "More than You Know," will be featured. The Theater also will highlight the careers of two other major historic performers in shows that will feature performances by the subjects themselves.

Research work which led to these performances and publications has been 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. A continuing and noteworthy educational publication of the Division highlights "Notes on the Arts."

More than 600,000 individuals each year attend Division performances, celebrations and recording sessions. In addition, visitors to the Smithsonian Institution often observe exhibitions made more exciting and communicative by the musical accompaniment of performances. DPA's Discovery Theater introduces children to the arts through theater performances. In 1981, eight different shows were presented including such art forms as dancing, clowning, mime and jazz intended to introduce and explain to children the meaning and forms of entertainment. Also in 1981, special performances brought together disabled children with renowned performers who were themselves disabled. In December, the Little Theater of the Deaf presented live performances to entertain both deaf and hearing children and to sensitize hearing people to the special problems of the deaf. The events were given in an effort to make all children aware that physical handicaps are no barrier to participation and enjoyment of the performing arts.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funds are derived primarily from the sales of publications and recordings, such as the recording of the "Smithsonian Collection of Classic Jazz," "Johann Sebastian Bach, Six Partitas for Solo Harpsichord," and the "Smithsonian Collection of Classic Country Music," and from ticket sales for performance events. These funds are used to support 22 staff positions in FY 1981 (23 projected in FY 1982 and in FY 1983) and the work of DPA in producing new recordings, publications and concerts, and for the distribution of educational materials. In FY 1981, funds also were provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program to support the annual "Spring Celebration" held in the Mall museums (\$45,000), the annual "July 4th Celebration" (\$25,000), and the "Roberta Martin Conference on Gospel Music" (\$19,000). Expenditures under the Collections Acquisition, Scholarly Studies and Education Program have been recorded for FY 1981 but not yet for FY 1982 and FY 1983. This explains the variance in totals shown between FY 1981, FY 1982 and FY 1983. DPA can expect to receive and spend funds made available through this Program in FY 1982 and in FY 1983.

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations and corporations for specific purposes. In FY 1981, funds were provided from the Presidential Inaugural Trust Fund (\$123,000) and were used to present a series of inaugural concerts. The amounts shown for FY 1982 and FY 1983 represent estimates of anticipated funds.

Federal Grants and Contracts - In the past, DPA has received funding from the National Endowment for the Arts for an oral history project, but such funds are no longer available. The FY 1981 expenditures reflect the remaining costs of this project. The amount for FY 1982 represents an estimate of anticipated funds.

SMITHSONIAN INSTITUTION PRESS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	29	847	8	2,091	-	-	-	55	-	-
FY 1982 Base	29	946	9	2,108	-	-	-	-	-	-
FY 1983 Estimate	29	968	9	991	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	29	0	29
Number of Other Positions.....	2	0	2
11 Personnel Compensation.....	758	13	771
12 Personnel Benefits.....	74	1	75
21 Travel & Trans. of Persons.....	1		1
22 Transportation of Things.....	2		2
23 Rent, Comm. & Utilities.....	7	1	8
24 Printing and Reproduction.....	70	4	74
25 Other Services.....	26	3	29
26 Supplies and Materials.....	6		6
31 Equipment.....	2		2
Total	<u>946</u>	<u>22</u>	<u>968</u>

Analysis of Increase

Necessary Pay.....	14
Inflation.....	8
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 Smithsonian 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 1983. Necessary pay of \$14,000 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 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, 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 the finished publications.

The Press also edits, designs and produces Smithsonian Year, the Institution's annual report to the Regents and to the Congress, as well as 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 1981 continued to receive recognition for quality production, design and editing. Books recognized for excelling in one or more of these areas include: Comparative Pathology in Zoo Animals, The Great Gray Owl, American Portrait Drawings, Benjamin West and His American Students and Directions. The four-volume reference work Arts in America was selected by the American Library Association as an outstanding reference book of 1980.

In FY 1981, examples of Press publications were: Walter J. Boyne and Donald S. Lopez, The Jet Age: Forty Years of Jet Aviation; John H. White, Jr., The John Bull: 150 Years a Locomotive; and Curtis M. Hunsley, Jr., Savages and Scientists: The Smithsonian Institution and the Development of American Anthropology, 1846 - 1910.

Publishing plans for FY 1983 will be determined primarily by the Press' client bureaus and offices and depend on the allocations of funds made available to these bureaus for publishing purposes. The Press anticipates that requests for publications will increase, partly as a result of the addition of new museums with active publishing programs in the past few years. The Press was responsible for 279 publications in FY 1981, of which 240 were general publications and 39 were scientific technical monographs in the Smithsonian Contributions series.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funds are derived from sales of Trust funded books, royalties and special publishing services. They are used to support nine staff members in FY 1982 and FY 1983, as well as contractual editing, production, design, promotion and distribution costs for scholarly and general trade publications which are published in connection with the Institution's research, collections, exhibitions and other programs.

The projected decline in expenditures between FY 1982 and FY 1983 mainly results from the fact that expenses associated with the marketing for the Smithsonian National Associates of two major books, The Smithsonian Book of Comic Book Comics and The National Museum of American History, were budgeted in FY 1982. No major books of this nature are planned in FY 1983.

In FY 1982, the Smithsonian popular book publishing program, Smithsonian Exposition Books, which is entirely supported by nonappropriated Trust funds, will become a division of the Smithsonian Institution Press. This reorganization is intended to centralize and strengthen the book publishing program of the Institution by coordinating and integrating functions such as business management, marketing, production and contracts which now are being performed independently.

Restricted Funds - These consist of grants from organizations and foundations which specify the use of the grant. Generally, these funds are used to supplement the publishing costs of specific scholarly works. For example, in FY 1981 a grant from Islam Centennial Fourteen was used for publication of Kalila wa Dimna by Esin Atil (FY 1981 expenditures of \$55,000). No significant funds are anticipated for FY 1982 and FY 1983.

OFFICE OF THE ASSISTANT SECRETARY FOR MUSEUM PROGRAMS  
AND  
OFFICE OF MUSEUM PROGRAMS

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	21	747	-	45	-	25	-	18	1	61
FY 1982 Base	21	746	-	12	-	35	-	-	-	-
FY 1983 Estimate	21	765	-	5	-	39	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	21	0	21
Number of Other Positions.....	5	0	5
11 Personnel Compensation.....	612	12	624
12 Personnel Benefits.....	61		61
21 Travel & Trans. of Persons.....	14		14
23 Rent, Comm. & Utilities.....	19	2	21
24 Printing and Reproduction.....	5	1	6
25 Other Services.....	23		23
26 Supplies and Materials.....	6	3	9
31 Equipment.....	6	1	7
Total	746	19	765

Analysis of Increase

Necessary Pay.....	12
Inflation.....	7
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, undertakes 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. Included under this heading are the Office of Museum Programs and the Office of



International Activities. (This year the Office of Horticulture and the South Group Buildings Management which are under the direct supervision of this Office are now 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 1983. Necessary pay of \$12,000 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.

PROGRAM - I. Immediate Office, Assistant Secretary for Museum Programs: With base resources of five positions and \$222,000, this Office administers, oversees, 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, Smithsonian Institution Traveling Exhibition Service, Office of Horticulture, Office of International Activities 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. The Office works closely with museum organizations and professionals, nationally and abroad. In this capacity, it supports enhancement of scholarly, exhibition and educational functions of museums; encourages the development and application of new techniques for museum administration and practices; and works to establish and improve museum training programs, particularly in conservation.

In connection with the Museum Support Center, the Office has worked closely with future occupants and with GSA in the development of plans for storage equipment and operational programs (details concerning this equipment and operational planning are provided under Museum Support Center Equipment and Operations in the Special Programs section); and is coordinating with the Conservation Analytical Laboratory the development of a conservation training program to be offered in future years in the Center (the status of this program is described also under Museum Support Center Equipment and Operations in the Special Programs section). The Office of the Assistant Secretary for Museum Programs administers the accelerated collections inventory program, described in the Special Programs section under the Collections Management/Inventory Program. In the areas of national and international museological activities, the Office participated actively in the development of an international symposium on archaeometry, in planning for an international meeting on museum conservation, in negotiations for several major international exhibitions and in the continuing coordination of cultural and scientific exchanges with the Chinese Academy of Sciences of the People's Republic of China. The Office received, advised and conferred with a large number of delegations from the United States and foreign museums throughout the year.

II. Office of Museum Programs: With base resources of 11 positions and \$346,000, this Office conducts specialized training programs for museum personnel, 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 produces informational audiovisual presentations on conservation and museum practices for distribution to museums and educational organizations; undertakes evaluation studies to develop data for the improvement of the quality and effectiveness of museum exhibitions and educational activities; and plans and conducts special conferences on museum matters. The Office also provides program supervision for the Museum Reference Center, which is the major library source for museological information in the United States.

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 1981, 474 museum professionals attended 30 workshops held at the Smithsonian and elsewhere (with no fee being charged to participants). In addition, this Office plans a workshop series for presentation in other cities. These workshops are co-sponsored and funded by local museums and museum organizations. Six workshops of this kind were conducted successfully in FY 1980 and FY 1981, and plans have been made to present another series in Texas in FY 1982 and FY 1983, dealing with museum evaluation and museum management.

In FY 1981, approximately 80 museum professionals and students from the United States and other countries were involved 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 with units that could provide the desired training activities for each. As the need for specialized knowledge of museum practices continues to grow, an increase in the number of interns coming to the Institution is expected in FY 1983. Plans for FY 1983 also include training programs for museology for university staff members engaged in teaching museum studies.

Under a contract with the Department of Labor, in FY 1981 the Native American Museum Training Program conducted workshops in Chicago, Anchorage and Santa Fe which were attended by 40 Native Americans. This program also arranged for 11 two-week internships for Native Americans, nine of which were held at the Smithsonian and one each at the Makah Cultural and Research Center, Neah Bay, Washington, and at the Native American Center for Living Arts, Niagara Falls, New York. Technical assistance projects were organized for six Native American institutions, and the services of an ethnographic conservator were provided to a number of tribal groups.

The Department of Labor contract terminated on September 30, 1981; consequently, the on-site training program for Native Americans will be reduced substantially in FY 1982 and FY 1983. However, utilizing existing resources and personnel, the Office of Museum Programs, in conjunction with Native American organizations, will continue to plan workshops to be funded partially by those organizations.

The Conservation Information Program produces videotapes and slide cassette programs illustrating and explaining museum practices and techniques, with emphasis on museum conservation and care of collections. These are made available to museums, museum-related organizations and academic institutions throughout the country for a fee to cover handling and replacement costs. In FY 1981, 486 slide programs and 431 videotapes were requested by and circulated to 63 such organizations. In FY 1982, three audiovisual programs will be produced and several more have been planned. In FY 1983, the Conservation Information Program will work cooperatively with the Conservation Training Program at the Museum Support Center to produce audiovisual aids for the training curriculum.

In FY 1981, the Evaluation Studies Program conducted several studies for bureaus of the Smithsonian to examine the effectiveness of exhibitions and education programs. In FY 1982, the nature of the changes in exhibitions and programs resulting from previous evaluation studies will be examined; in FY 1983, there will be extensive training of Smithsonian staff in evaluation procedures.

The Museum Reference Center, while a unit of the Smithsonian Institution Libraries, retained its close programmatic ties with the Office of Museum Programs and its activities. It supported all museum programs' functions and provided responses to more than 2,000 requests from throughout the United States and from many foreign countries.

III. Office of International Activities: With base resources of five positions and \$178,000, 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, with foreign governments, with international organizations and with private institutions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funds are derived from proceeds from sales of tapes and slides on conservation theory and practice, sold at cost to interested museums and related educational organizations, and from allotments. These 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 1981, funds were provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program to support partially the production of two new videotapes and one new slide cassette program (\$2,000).

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations and corporations for specific purposes. In FY 1981, funds were provided from the Amoco Foundation to cover expenses associated with the exhibition "Egyptian Antiquities."

Federal Grants and Contracts - These are provided by Federal agencies for specific purposes. In FY 1981, they were provided by a continuing grant from the Department of Labor to support training opportunities for Native American museum personnel through internships, workshops and inter-museum cooperative agreements (FY 1981 expenditures of \$61,000). This grant terminated in FY 1981 and no funds are anticipated for FY 1982 and FY 1983.

OFFICE OF THE REGISTRAR

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	4	126	-	-	-	-	-	-	-	-
FY 1982 Base	4	138	-	-	-	-	-	-	-	-
FY 1983 Estimate	4	140	-	-	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	4	0	4
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	113	1	114
12 Personnel Benefits.....	12		12
21 Travel & Trans. of Persons.....	3		3
25 Other Services.....	8		8
26 Supplies and Materials.....	2	1	3
Total	<u>138</u>	<u>2</u>	<u>140</u>

Analysis of Increase

Necessary Pay.....	1
Inflation.....	1
Program Funds.....	0

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ABSTRACT - The Office of the Registrar is responsible for Institutional development, oversight and coordination of collections management policies and information management techniques for all museum objects and specimens held by the Smithsonian. It is charged with the promotion of standardized systems for capturing data on objects in the National Collections and with assisting bureaus in the establishment of modernized information and collections handling systems. No program increase is requested for FY 1983. 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, this 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 as appropriate, with the goal of securing computerized inventory records for all Smithsonian collections. This effort is pursued in concert with a related computerization effort involving the Office of Computer Services, whose ultimate objective is the inclusion of registration, cataloguing, inventory and related data in compatible computerized files to permit exchange and consolidation of data for research and management purposes. 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 exchanged 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.

CONSERVATION ANALYTICAL LABORATORY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	21	788	-	-	-	2	-	-	-	-
FY 1982 Base	21	853	-	-	-	-	-	-	-	-
FY 1983 Estimate	21	893	-	-	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	21	0	21
Number of Other Positions.....	1	0	1
11 Personnel Compensation.....	560	15	575
12 Personnel Benefits.....	55	1	56
21 Travel & Trans. of Persons.....	25		25
22 Transportation of Things.....	1	1	2
23 Rent, Comm. & Utilities.....	15	2	17
24 Printing and Reproduction.....	20	2	22
25 Other Services.....	62	8	70
26 Supplies and Materials.....	45	6	51
31 Equipment.....	70	5	75
Total	<u>853</u>	<u>40</u>	<u>893</u>

Analysis of Increase

Necessary Pay.....	16
Inflation.....	24
Program Funds.....	0

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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 1983. Necessary pay of \$16,000 is required for existing staff and an amount of \$24,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Conservation Analytical Laboratory was established in 1963 to serve the museums of the Smithsonian Institution. Staffed by conservators, scientists and information officers, the 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 1981, CAL acted on 177 requests for conservation services from museums and other bureaus of the Institution. Among the many objects analyzed and treated were several belonging to George and Martha Washington: an ivory chess set, an enamel watch case, a tent case and a painted export porcelain bowl. Treatments are time-consuming; the tent case alone involved more than 200 hours of effort by CAL scientists and conservators. In addition, the conservation staff provided oral and written advice, expanded the available number of its analysis and treatment guideline sheets to 370, and distributed over 10,000 copies to conservators and to the public in answer to inquiries. The CAL staff prepared several papers for publication and presented lectures to specialized audiences through the National Associates Regional Program and to the conservation workshops administered by the Office of Museum Programs. CAL's library, part of the Smithsonian Institution Libraries system, has made a concerted drive to fill gaps in its reprint file--7,200 are now on hand.

Data processing furnishes vital support to CAL both for statistical compilation of analytical data and for access to conservation reports. Access through CAL's own terminal to the computerized index of "The Art and Archeology Technical Abstracts," held at the British Museum Research Laboratory, now makes this material easily retrievable. Additional abstracts, gathered and prepared by CAL staff from national or local sources, are indexed through an optical reader system. It is anticipated that this data, in time, can be computerized to supplement the international data already processed. Research and treatments reports prepared by CAL staff are edited carefully so that they may be of greatest use to other Smithsonian Institution staff who may wish to consult the data they contain. The editor of these reports also prepares key words and abstracts for entry into the Smithsonian computer. Presently, the existing program system has reached saturation. For the last several months, CAL has been working with the Office of Computer Services and the International Lockheed Dialogue File, a commercial data base, to implement a system which can handle the volume of data and serve its users in the most effective manner. It is expected that conversion to a new system will take place in FY 1982. In developing key word lists, wherever possible, CAL strives 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, however, relate to providing art historians, archeologists and anthropologists,

with detailed investigations on the property and nature of materials and the manner in which these materials were combined or formed. The technical knowledge gained in this fashion can provide important new understandings. 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, ceramic, fibers, alloys, or corrosion products using advanced instrumentation serve to determine appropriate conservation procedures. Based upon such examination, advice is given to curatorial units for precise conservation procedures appropriate for specific objects. "Archaeometry," the measurement of specific characteristics of groups of objects and interpretation of the findings, is concerned with more complex aspects which may involve a variety of scientific disciplines. It provides curators, archeologists and historians with basic research data concerning date, attribution and the technologies of earlier production methods. It is expected that both fields of research will be strengthened greatly with the move to the Museum Support Center of most of CAL's conservation activities. In addition to its own very extensive instrumentation, CAL will continue to cooperate with 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 CAL maintains close contacts.

The small but effective archaeometry staff of CAL has been working in a variety of fields; for example, radiocarbon dating a sample of iron, which may have evidenced smelting on Baffin Island, Canada, during the period of the voyages of English navigator Martin Frobisher in the 16th century. Another staff member is doing mineralogical and chemical analyses of Banest Period (3500 B.C.) ceramics from Tal-y-malyan, Iran, in order to provide treatment to preserve the physical integrity of the ceramics. A major aspect of CAL's archaeometric studies involves cooperation with the National Bureau of Standards and the 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 personnel consultations, CAL offers a series of 80 videotaped orientation lectures each fall and winter for all interested Smithsonian Institution staff. In addition, it participates in Office of Museum Programs workshops, and staff members take an active part in the meetings of the Washington Conservation Guild. CAL also funds a fellowship in materials science in cooperation with the Office of Fellowships and Grants. In addition to working in CAL laboratories, Fellows work in such laboratories as those at the National Bureau of Standards, or 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 bring special talents to bear on scientific problems associated with archaeometric research. Two such fellowships were awarded in FY 1981. One Fellow worked on the effect of an alkaline rinse as a preservative on aging and new fabrics, and the other investigated the system of ceramic production in the prehistoric Little Colorado region of Arizona.



CAL will be involved closely with the Smithsonian Training Program in Conservation which will be initiated in FY 1983 at the Museum Support Center and which will utilize CAL's human and material resources. The curriculum offered at the Support Center will be conducted in association with an area university.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds were provided by an allotment and were used to provide additional research support.

SMITHSONIAN INSTITUTION LIBRARIES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
	FTP*	Amount	General		Special Purpose		FTP*	Amount	FTP*	Amount
			FTP*	Amount	FTP*	Amount				
FY 1981 Actual	97	2,976	8	207	-	-	-	10	-	-
FY 1982 Base	99	3,232	8	212	-	-	-	39	-	-
FY 1983 Estimate	99	3,400	8	249	-	-	-	5	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	99	0	99
Number of Other Positions.....	4	0	4
11 Personnel Compensation.....	2,064	65	2,129
12 Personnel Benefits.....	190	6	196
21 Travel & Trans. of Persons.....	17		17
22 Transportation of Things.....	2		2
23 Rent, Comm. & Utilities.....	45		45
24 Printing and Reproduction.....	150	7	157
25 Other Services.....	254		254
26 Supplies and Materials.....	330	60	390
31 Equipment.....	180	30	210
Total	<u>3,232</u>	<u>168</u>	<u>3,400</u>

Analysis of Increase

Necessary Pay.....	48
Inflation.....	97
Restored Position Funds.....	23
Program Funds.....	0

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 direct public service through its own exhibits, publications, research, internships and seminars. No program increase is requested for FY 1983. Necessary pay of \$48,000 is required for existing staff and an amount of \$97,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$23,000 is requested to provide funding for two positions restored by the Congress in FY 1982.

PROGRAM - The Smithsonian Institution Libraries, a system of 36 branch libraries and collections, 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, loans and information services. The Smithsonian Libraries are envisioned in the original Congressional charter of the Institution. 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 now contributes its cataloguing to a national data base shared by 2,000 libraries. Intensive planning is taking place toward adapting presently 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 services. Funds to implement such a system are expected to be requested in future years budget requests.

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 policies, 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 the SIL may be described in terms of automated collections management, automated reference services, library facilities planning, collections management and outreach.

Automated Collections Management - 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. In FY 1981, this SIL electronic data no longer was printed onto traditional catalogue cards but was made available on computer output microfiche, eliminating maintenance of 367 SIL card catalogues. This catalogue conforms to the new national cataloguing standards (referred to as AACR2). With funds appropriated in FY 1982, SIL plans to begin to add pre-1974 bibliographic records to the national data base. In addition, SIL is the purchasing agent for all books, journals and related materials in the Smithsonian.

The SIL is now in the process of intensive planning for automation to manage all aspects of the Libraries' collections management. This system will control all SIL materials on order, being processed, on the shelves and in circulation. Automation is seen as the only way to control the rising tide of information (paper and electronic) without increasing staff. Data conversion in preparation for this system is beginning in FY 1982.

Automated Reference Service - 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 a substantial part of the SIL budget over the next few years.

The use of telefacsimile transmission of scholarly articles among SIL branches speeds research and reduces duplication of collections. 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.

Library Facilities Planning - Library facilities planning has two aspects: the provision of assistance to branch libraries in their own space planning and the planning of space for the central library. SIL currently is participating in the planning of new branch libraries at the Museum Support Center and the Smithsonian Tropical Research Institute, as well as renovation of the east corridor of the Natural History/Museum of Man Building for central library operations.

Collections Management - This function includes selection and deacquisition, conservation, space planning and collections management policies for this large library system. A Collection Development Policy Committee is continuously reviewing current practices in book and journal selection. The SIL maintains one of the finest book conservation programs in the United States 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 its holdings, including a mass deacidification project.

Outreach - The Smithsonian Institution Libraries, as the largest such system serving a museum research complex, increasingly has been aware of its national and international responsibilities, especially in the area of exhibitions and seminars. Thus, in FY 1982, a management seminar related to museum libraries will be held. A translation program administered by SIL from Special Foreign Currency Program funds has made available to scholars about 900 otherwise inaccessible scientific monographs. In FY 1981, exhibits were scheduled on Bern Dibner's work, Heralds of Science, on old books versus rare books and on the Phipps' donation to SIL. In FY 1982, exhibits are tentatively planned on the harp seal, on hermeticism (tying in with an international conference on the subject) and on two other topics still to be determined. 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 to support eight positions in FY 1982 and in FY 1983. They also are used for travel, supplies, book binding, training and for the purchase of rare books of scholarly value. The Smithsonian Institution Libraries traditionally has charged a portion of its expenses to Trust funds, reflecting the fact that it provides services to programs and offices which are funded from gifts, grants, contracts and other nonappropriated sources of funds.

Restricted Funds - These are provided through gifts and grants from individuals, foundations, endowments, organizations and corporations for specific use by SIL. For example, in FY 1981 and FY 1982, grants totaling approximately \$30,000 from the Atherton Seidell Endowment will be used for three pilot projects designed to assist in making the SIL collections more accessible. These projects include telefacsimile transmission (automated reference service), the addition of serials to the national data base and the indexing and conserving of trade literature.

OFFICE OF EXHIBITS CENTRAL

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	46	1,312	-	-	-	14	-	-	-	-
FY 1982 Base	47	1,405	-	-	-	8	-	-	-	-
FY 1983 Estimate	47	1,457	-	-	-	2	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	47	0	47
Number of Other Positions.....	2	0	2
11 Personnel Compensation.....	1,160	38	1,198
12 Personnel Benefits.....	114	4	118
21 Travel & Trans. of Persons.....	3		3
25 Other Services.....	15		15
26 Supplies and Materials.....	92	9	101
31 Equipment.....	21	1	22
Total	<u>1,405</u>	<u>52</u>	<u>1,457</u>

Analysis of Increase

Necessary Pay.....	23
Inflation.....	10
Restored Position Funds.....	19
Program Funds.....	0

ABSTRACT - The Office of Exhibits Central (OEC) prepares exhibits and exhibit related products for museums, bureaus, programs and other offices that do not have, or have limited, internal exhibit producing capabilities. The OEC also provides specialized or supplementary assistance to all other bureaus and offices. No program increase is requested for FY 1983. Necessary pay of \$23,000 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. A further amount of \$19,000 is requested to provide funding for the one position restored by the Congress in FY 1982.

PROGRAM - The OEC designs, edits, produces, installs and maintains exhibits; makes films and models; and provides other specialized services to the bureaus of the Institution in support of exhibition and exhibits related activities.

These services expand the capabilities and resources of units without full-time or specialized exhibits staffs and supplement the capabilities of those units that have their own staffs. 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 service is provided by OEC depending on the specific needs of the requesting Smithsonian unit. Highly specialized OEC capabilities include editorial services, motion picture production, audiovisual presentation, lighting, freeze-dry taxidermy, and the services of the models, plastics and restoration units which specialize in museum uses of fluid thermosetting and reinforced plastics. In coordination with the Office of Museum Programs, the OEC also 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. The Office also assists agencies, such as the National Park Service Foundation and the Office of the Architect of the Capitol, which seek advice from OEC on the creation of models or exhibits that they produce for informational or educational purposes.

In FY 1981, OEC received over 275 separate project requests from 34 Smithsonian bureaus and offices. About 80 percent of these projects were completed during the year with the balance continuing actively in FY 1982. An example of a major OEC project was the development of a life size model of the late Cretaceous period flying reptile, Quetzalcoatlus northropi, which had a wingspread of 40 feet. This project which involved two years of study, planning and fabrication culminated in the suspension of the model in the refurbished Dinosaur Hall of the National Museum of Natural History/Museum of Man. Particular assistance also was provided to the Smithsonian Institution Traveling Exhibition Service (SITES), for which OEC worked on more than 40 separate projects. These services included design, editing and production of complete exhibits. Examples of exhibits currently being worked on by OEC for SITES that will be completed in the first half of calendar 1982 are "American Impressionism" which is scheduled to be seen in six European cities; "Quick Silver Galleons;" and "F.D.R." to commemorate the 100th anniversary of Franklin Delano Roosevelt's birth.

During the past year, the OEC's Motion Picture Unit produced a short film for the new Dinosaur Hall in the National Museum of Natural History/Museum of Man; produced documentary footage for the Smithsonian's Folklife Program; and has scheduled two films for production for the National Museum of American History's exhibition "Franklin Delano Roosevelt" which opens in 1982. In addition, two major films, "Maine Coast" and "Caribbean Coral Reef" are in process and are being produced in cooperation with the Marine Systems Laboratory of the National Museum of Natural History/Museum of Man. During FY 1982, OEC in cooperation with the Freer Gallery of Art, will produce a film to be called "Mirror of Kings" which is based on the exhibition "Renaissance of Islam: Art of the Mamluks." The film will be made in several languages for distribution abroad.

Also scheduled during FY 1982 are workshops, a series of brochures, editing labels and other exhibit related text materials, and the production of graphics, models and accessories for several museums and program offices. OEC services for the Folklife Festival are in the planning stages, as are other activities for a variety of Smithsonian programs.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by tuition fees received from local universities, reimbursements and from the sale of film prints. They are used to fund temporary clerical assistance for the motion picture unit, 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)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	6	192	20	1,166	-	55	1	244	-	26
FY 1982 Base	6	259	20	1,163	-	-	1	322	-	-
FY 1983 Estimate	6	271	22	1,245	-	-	-	27	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base <u>FY 1982</u>	Proposed <u>Adjustments</u>	Est. <u>FY 1983</u>
Number of Permanent Positions.....	6	0	6
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	161	4	165
12 Personnel Benefits.....	16		16
21 Travel & Trans. of Persons.....	7		7
22 Transportation of Things.....	50	8	58
25 Other Services.....	10		10
31 Equipment.....	15		15
Total	<u>259</u>	<u>12</u>	<u>271</u>

Analysis of Increase

Necessary Pay.....	4
Inflation.....	8
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 1983. Necessary pay of \$4,000 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 - 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 exhibition-sponsoring 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 1981, an average of 140 exhibitions was on tour at any given time. News of these exhibitions reached over 7,000 institutions on SITES mailing list through the annual catalogue, the quarterly newsletter and special mailings prepared by SITES. During FY 1981, 23 new exhibitions joined SITES program, of which 19 contained original objects, and four were panel exhibitions. Also, in FY 1981, there was a total of 583 bookings of SITES exhibitions, attended by an estimated seven million persons in 48 states, in addition to Mexico, Canada, Australia, Puerto Rico and Panama. Schedulings of SITES exhibitions in FY 1982 are expected to exceed 650. During FY 1982, it is expected that the number of exhibitions on tour will average 143.

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 the Institution's museums in order to provide this information in a complete and coordinated manner.

The FY 1982 Federal base of six positions and \$259,000 represents approximately 17 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 Traveling Exhibition Service, which is to assure that fees paid for exhibitions remain within the budgetary reach of 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 1982: "America's Space Truck: The Space Shuttle;" "An American Icon: The 18th Century Image of George Washington;" "Franklin Delano Roosevelt;" "Good As Gold: Alternative Materials in American Jewelry;" "Inua Revealed: Art and Culture of The Bering Sea Eskimo;" "Our Beautiful Earth;" "Perfect In Her Place" (possibly two copies); "Urban Open Spaces;" "The Vanishing Race And Other Illusions: A New Look at the Work of Edward Curtis;" and "We'll Never Turn Back, II."

FY 1983: "American Porcelain;" "The Artist and The Space Shuttle;" "Balloonng;" "Black Women" (paper panel show); "Jugtown Pottery;" "Matchsafes;" "Raphael Soyer Prints from the Hirshhorn Museum and Sculpture Garden;" and "The Seasonal Trade: Holiday Gift Cards."

### Based on Other Sources:

FY 1982: "American Impressionism;" "Bedouin and Village Arts and Crafts of Saudi Arabia;" "Contemporary Dutch Art;" "Contemporary German Textiles;" "English Naive Paintings;" "Ethiopia: The Christian Art of An African Nation;" "Galapagos: Born of the Sea;" "Irish Silver;" "John Sloan in Santa Fe;" "Kings, Heroes and Nomads;" "Korean Drawings Now;" "The Lithographs of James A. McNeill Whistler;" "Medieval Bulgarian Jewelry;" "Natural History of Sexuality;" "Odyssey: Mirror of the Mediterranean;" "Of Time and Place: American Figurative Art From The Corcoran Gallery;" "Sculptural Bookworks;" "Spanish Art Tomorrow;" "Transformed Houses;" "Treasures of Quicksilver Galleons;" "Upland Game Birds;" and "Venini Glass."

FY 1983: "Ban Chiang;" "The Center Space: Pueblo Indian Architecture;" "English Biscuit Tins;" "Fuertes Retrospective;" "Jamaican Art;" "Kentucky Quilts;" "L'Amour de Maman;" "Native Harvests: Plants in American Indian Life;" "Nineteenth Century French Art From the Corcoran Gallery;" and "Pre-Raphaelite Paintings."

The following bookings were scheduled for FY 1981:

Alabama	7	Mississippi	11
Alaska	1	Montana	3
Arizona	9	Nebraska	4
Arkansas	5	Nevada	1
California	24	New Hampshire	1
Colorado	14	New Jersey	15
Connecticut	10	New Mexico	6
Delaware	5	New York	45
District of Columbia	17	North Carolina	13
Florida	26	Ohio	29
Georgia	11	Oklahoma	6
Idaho	1	Oregon	6
Illinois	25	Pennsylvania	22
Iowa	13	Rhode Island	1
Indiana	17	South Carolina	6
Kansas	9	South Dakota	2
Kentucky	11	Tennessee	10
Louisiana	12	Texas	47
Maine	2	Utah	3
Maryland	20	Vermont	2
Massachusetts	13	Virginia	5
Michigan	15	Washington	16
Minnesota	17	West Virginia	12
Missouri	16	Wisconsin	15
		Wyoming	2

Total: 315 cities served in 48 states and in the District of Columbia with 583 exhibitions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds 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 20 positions in FY 1982 (22 projected in FY 1983) and virtually all exhibition development costs including publications, materials, outside specialists and contractual services. In FY 1981, 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 (\$52,000). Expenditures under this Program have not been recorded yet for FY 1982. This explains the variance in totals shown between FY 1981, FY 1982 and FY 1983. SITES can expect to receive funds made available through this Program in FY 1982 and FY 1983.

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations or corporations for specific purposes. Generally, these grants provide support for specific exhibitions. For example, in FY 1981 continuing support from United Technologies was used for the "Renaissance of Islam" exhibition (\$197,000), and additional support from the Glenmede Foundation was used for the support of the "Ban Chiang" exhibition (\$27,000). In FY 1982, additional funds are being sought to help support the "Ban Chiang" exhibition (\$226,000). No significant funds are anticipated presently for FY 1983.

Federal Grants and Contracts - These are provided by various Federal agencies for the development and touring of specific exhibitions. In FY 1981, continuing support from the United States Geological Survey was used for exhibition preparation and catalogues to accompany the exhibition "West Comes East" (\$26,000).

SMITHSONIAN ARCHIVES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	13	430	2	43	-	1	-	-	-	-
FY 1982 Base	13	426	2	50	-	-	-	-	-	-
FY 1983 Estimate	13	464	5	124	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	13	0	13
Number of Other Positions.....	3	0	3
11 Personnel Compensation.....	348	7	355
12 Personnel Benefits.....	34		34
21 Travel & Trans. of Persons.....	4		4
22 Transportation of Things.....	1		1
24 Printing and Reproduction.....	2	1	3
25 Other Services.....	10	28	38
26 Supplies and Materials.....	15	1	16
31 Equipment.....	12	1	13
Total	<u>426</u>	<u>38</u>	<u>464</u>

Analysis of Increase

Necessary Pay.....	7
Inflation.....	4
Program Funds.....	27

ABSTRACT - The Smithsonian Archives provides archival and records management services to support the research, collections management, educational and administrative functions of the Institution. For FY 1983, as part of an Institution-wide effort to eliminate a potential hazard of nitrate film, \$27,000 is requested for conversion of Smithsonian Archives' nitrate negatives to archival-quality safety film. This request is justified centrally in the Administration section of this budget. Necessary pay of \$7,000 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 1,100,000 documents in FY 1981 bringing total archival holdings to 16,250,000 documents. Currently, about 26 percent of the approximately 62,000,000 documents that comprise the archival resources of the Institution are in the Archives. An additional 42 percent dispersed throughout the Institution is accessible through the Archives' central information systems. The balance, 32 percent, remains to be brought under archival control. Substantial progress was made in several major bureaus during FY 1981. Large transfers were received from the National Museum of Natural History/Museum of Man, the National Museum of American History, the Chesapeake Bay Center for Environmental Studies, the Woodrow Wilson International Center for Scholars and the Office of Design and Construction. Over 1,000,000 documents were accessioned, and some 350,000 were processed for research use.

In FY 1981, the Archives' staff responded to 956 reference requests, 343 of which were from Smithsonian administrators and 613 from Smithsonian and outside scholars. In addition, 226 retrievals were made from the (former) United States National Museum accession records. During FY 1981, progress continued on micro-filming of these records with 130,789 images processed.

In FY 1981, the Archives established an archives and records management program for the Chesapeake Bay Center for Environmental Studies and the Woodrow Wilson International Center for Scholars, and began programs in the National Air and Space Museum and the Smithsonian Institution Traveling Exhibition Service.

During FY 1982, archives and records management programs will be established for the Hirshhorn Museum and Sculpture Garden and the National Portrait Gallery. Records surveys will be conducted at the National Zoological Park, the Anacostia Neighborhood Museum and the Freer Gallery of Art. Also in FY 1982, the Archives plans to devote special attention to the problems of appraisal, storage and access to special media, especially computerized administrative and scientific data banks, photographs and motion pictures; improving the procedure for solicitation of staff papers in the National Museum of Natural History/Museum of Man and the National Museum of American History; reducing the processing backlog by 400,000 documents; and microfilming some 200,000 images.

In FY 1983, the Archives will make a major effort to establish archives and records management programs for the Smithsonian Astrophysical Observatory, the National Museum of African Art, the Director of Facilities Services, the Office of Design and Construction, the Office of Plant Services and the Office of Museum Programs. The Archives also will expand its microfilming program to a production capacity of 320,000 images per year and will improve and expand its computerized information system.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and are used to cover the salaries of two archivists and various support costs (\$50,000 in FY 1982 and \$54,000 in FY 1983). Additional resources in FY 1983 (\$70,000 and three positions) are projected to be used to conduct a survey of photograph collections maintained by the Smithsonian and to publish a related finders guide.

NATIONAL MUSEUM ACT

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
	FTP*	Amount	General		Special Purpose		FTP*	Amount	FTP*	Amount
		FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	3	795	-	-	-	-	-	-	-	-
FY 1982 Base	3	781	-	-	-	-	-	-	-	-
FY 1983 Estimate	3	782	-	-	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	3	0	3
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	60	1	61
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	781	1	782

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 \$782,000 level for fiscal year 1983, and for such sums as may be necessary in the two succeeding fiscal years. No program increase is requested for FY 1983. 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 thought, planning, careful structure and sound administration are recommended for support by the Advisory Council.

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, are now 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 1981, 183 applications for support were received and reviewed, and 58 grants, totaling \$716,000 were made. Thirty-three of these, for a total of \$396,000 were related to museum conservation training and research activities. For FY 1982, the Advisory Council canceled the travel-study and the fellowships in museum practices programs in order to apply resources more effectively to other training activities and research efforts. Following the first grant application submission deadline for FY 1982, 83 applications requesting support for professional training were received and after the review by the Advisory Council, 35 grants, totaling \$392,000 were awarded. Of these, 16 were designated for conservation studies, 11 for museum internship programs and eight for graduate/professional museum education and training. Among these were 24 conservation related projects which were funded for a total of \$243,000. An additional 42 applications, submitted under the professional assistance, seminars, and special studies and research programs, will be reviewed in March 1982.

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 NMA also consults regularly with those who administer Federal programs which assist museums and it participates in the deliberations and activities of the "Working Group on Museum Policy" of the Federal Council on the Arts and Humanities.

AMERICAN STUDIES AND FOLKLIFE PROGRAMS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	5	534	11	540	-	51	-	17	-	185
FY 1982 Base	5	584	11	505	-	23	-	2	-	110
FY 1983 Estimate	5	608	11	505	-	32	-	53	-	50

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	5	0	5
Number of Other Positions.....	24	0	24
11 Personnel Compensation.....	280	5	285
12 Personnel Benefits.....	28		28
21 Travel & Trans. of Persons.....	11		11
22 Transportation of Things.....	5		5
23 Rent, Comm. & Utilities.....	9	1	10
24 Printing and Reproduction.....	48	5	53
25 Other Services.....	145	3	148
26 Supplies and Materials.....	41	7	48
31 Equipment.....	17	3	20
Total	584	24	608

Analysis of Increase

Necessary Pay.....	5
Inflation.....	19
Program Funds.....	0

ABSTRACT - The Offices of American Studies and Folklife Programs conduct research on the material aspects of American civilization and the traditional folk cultures of the United States. Among their activities is the production of the Festival of American Folklife, which has become the largest annual cultural event in the Nation's Capital. No program increase is requested for FY 1983. Necessary pay of \$5,000 is required for existing staff and an amount of \$19,000 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 focused 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 analytic studies; produces the Festival of American Folklife, which has become the largest annual cultural event in the Nation's Capital; is collaborating on the production of the Renwick exhibition, "Celebration: A World of Art and Ritual," 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 document and analyze folklife traditions. These publications have grown out of research and presentation programs in 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 received gratefully, 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 accepted for publication a book on family traditions collected during the six years of research associated with the Festival of American Folklife, and nongovernmental sources are currently funding three 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 fiscal years 1981 and 1983, six monographs with accompanying films will be published and several new projects begun. This series, entitled The Smithsonian Folklife Studies Series, will be a significant resource for scholars and students in the social sciences.

The Festival of American Folklife - During the past 15 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 craftworkers and performing artists. Encouraged by public support, the 15th annual Festival was returned to a two-week format and held during the summer in FY 1981. This seasonal change resulted in two Festivals in FY 1981--the 14th Festival in October of 1980 and the 15th Festival in June and July of 1981. These two Festivals presented the traditions of more than 500 folk artists from 25 states to an estimated million visitors.

The 16th Festival in FY 1982 will highlight folklife traditions of the State of Oklahoma. It also will include a presentation of the folk culture of Eskimo groups from Alaska which will be mounted in conjunction with the opening of the exhibition, "Inua Revealed: Art and Culture of the Bering Sea Eskimo," to be held in the Evans Gallery of the National Museum of Natural History/Museum of Man. In recognition of the 100th anniversary of Korean-American diplomatic relations, a program examining Korean-American traditions is planned. Plans for the 17th Festival in FY 1983 include folklife from the western region of the United States. The Office of Folklife Programs will collaborate with folklorists residing in ten western states to develop appropriate presentations.

The "Celebration" Exhibition - As a result of an 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 15-month-long exhibition of folk and traditional art at the Renwick. The exhibition will fill all seven of the Renwick galleries with 600 objects drawn from the collections of nine Smithsonian museums.

To enrich this unique exhibition, which is described at greater length in the Major Exhibition Program portion of this budget, the Office of Folklife Programs has planned several activities within the context of the exhibition during its public showing from March of 1982 through June of 1983. These activities include a lecture series, ethnographic film series and traditional events to be mounted on a monthly basis in the Renwick's Grand Salon. In addition, publications associated with the exhibition will 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.

Live Folklife Presentations - Besides the monthly celebratory events planned for the Renwick "Celebration" exhibition in fiscal years 1982 and 1983, the Office of Folklife Programs develops and produces several museum folklife presentations each year. Two such living presentations were organized in FY 1981: traditional craft demonstrations were presented during the opening week of the exhibition at the Renwick Gallery entitled, "Webfoots and Bunchgrasses: Folk Art of the Oregon Country;" and a traditional western saddlemaker from Nevada was brought to Washington, D.C. for the closing week of the exhibition "Buckaroos in Paradise: Cowboy Life in Northern Nevada," which was held at the National Museum of American History. In addition, as part of the Smithsonian's presentation of free public programming during the week of the Presidential Inaugural in FY 1981, the Office of Folklife Programs organized day and evening concerts with Appalachian and Cajun string band music at the National Air and Space Museum. In FY 1982, this Office is planning to recreate a concert and square dance which took place in the Roosevelt White House as part of a Smithsonian observance of the centennial anniversary of the birth of Franklin Delano Roosevelt. Also in FY 1982, a traditional pottery exhibition is planned for the terrace of the National Museum of American History during the Festival of American Folklife. This exhibition--to be organized jointly by this Office and the Museum--will be a pilot for a series of traditional and occupational craft programs that are being planned for the terrace of the Museum for future summers.

Cooperative Projects - The Office of Folklife Programs has been involved in several collaborative endeavors with governmental agencies interested in traditional culture. In FY 1981, the exhibition "Buckaroos in Paradise," which was referred to above, grew out of a four-year collaborative research effort in Nevada involving the Smithsonian, the Library of Congress Folklife Center and

the National Endowment for the Arts' Folk Arts Program. As part of the 15th annual Festival of American Folklife, this Office worked with the Folk Arts Program of the National Endowment for the Arts to present a program highlighting the talents of folk artists who have received support and encouragement from the Endowment. Plans currently are being made to repeat this program in FY 1982 at the 16th annual Festival.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided from allotments, including those from the Institution's Collections Acquisition, Scholarly Studies and Education Program. Funds also are provided from tuition reimbursements from universities for students participating in various training programs and from concessions sales relating to the Folklife Festival. In FY 1981, funds from the Collections Acquisition, Scholarly Studies and Education Program provided support for the World Puppetry Festival (\$2,000), and for a study to develop a body of translations of oral poetic epics from the Haya people of northwestern Tanzania (\$8,000). Expenditures under that Program have been recorded for FY 1981 but not yet for FY 1982 and FY 1983. In FY 1982, funds will provide partial support for the "Celebration" exhibition at the Renwick Gallery (\$125,000); and will pay the salary, benefits and other costs of 11 employees of the Folklife Program (\$375,000) of which \$250,000 is attributable to the annual festival.

Restricted Funds - Funds are provided in the form of individual gifts and grants from private foundations or corporations and are used to enrich specific Folklife programs. In FY 1981, a grant was received to support the Smithsonian's free public programming presentation during the week of the 1981 Presidential Inaugural events (\$15,000). For FY 1982, funds have been raised from the State of Oklahoma to highlight folklife traditions of Oklahoma in the 16th Festival to be held in the summer of 1982 (\$254,000). (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 grant.) The Folklife Program projects gift and grant expenditures in FY 1983 for support of the annual Festival and the "Celebration" exhibition (\$50,000).

Federal Grants and Contracts - Funds have been provided from various Federal agencies for support of exhibitions and performances at the annual Festival of American Folklife. For example, the Department of Agriculture provided funds for a program on community activities at the annual Festival (expenditures of \$52,000 in FY 1981); the Department of Energy sponsored a program on the energy efficient characteristics of traditional building techniques at the 1981 Festival (expenditures of \$133,000 in FY 1981). Additional funds are anticipated in FY 1982 and in FY 1983 to support programs of the Festival of American Folklife.

INTERNATIONAL ENVIRONMENTAL SCIENCE PROGRAM

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	2	468	-	-	-	-	-	-	-	-
FY 1982 Base	2	609	-	-	-	-	-	-	-	-
FY 1983 Estimate	2	643	-	-	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	2	0	2
Number of Other Positions.....	11	0	11
11 Personnel Compensation.....	136	3	139
12 Personnel Benefits.....	14		14
21 Travel & Trans. of Persons.....	88	5	93
22 Transportation of Things.....	3		3
23 Rent, Comm. & Utilities.....	1		1
24 Printing and Reproduction.....	8		8
25 Other Services.....	199	10	209
26 Supplies and Materials.....	55	6	61
31 Equipment.....	105	10	115
Total	<u>609</u>	<u>34</u>	<u>643</u>

Analysis of Increase

Necessary Pay.....	3
Inflation.....	31
Program Funds.....	0

ABSTRACT - The International Environmental Science Program (IESP) coordinates the unique capabilities of the Institution's science bureaus as they monitor and study ecosystems over long periods of time. The goal is to evaluate questions of biological diversity in the areas being studied in order to understand and eventually predict the consequences of human activities. The Program is a multi-bureau, interdisciplinary effort that focuses on sites at two permanent Smithsonian research facilities, the Tropical Research Institute (STRI) in Panama and the Chesapeake Bay Center for Environmental Studies (CBCES) in Maryland and at several nonpermanent sites in the tropics and subtropics. No

program increase is requested for FY 1983. Necessary pay of \$3,000 is required for existing staff and an amount of \$31,000 is sought to compensate for the effects of inflation in nonsalary areas of expense.

PROGRAM - The Smithsonian's long tradition in international research and its unparalleled collections in natural history well serve its program in environmental studies. The Institution can sustain long-term scientific studies. Hence, it is equipped ideally to undertake large interdisciplinary research programs to monitor the changing environment. The IESP uses teams of scientists to record natural variations in specific unstressed environments. In the last decade, increased attention has been given to establishing sites for long-term ecological monitoring, such as those which the Smithsonian has maintained at CBCES, STRI and nonpermanent sites in the subtropics and tropics. The National Academy of Sciences and the Council on Environmental Quality have emphasized the need for additional monitoring programs in the tropic and temperate zones. In November 1981, a major conference sponsored by the Department of State, entitled "Strategy Conference on Biological Diversity," further reinforced this need, by emphasizing that biotic impoverishment is a critical strategic and scientific concern to the United States. The conference reported the rapid rate of tropical deforestation, loss of suitable soil and the need to inventory and monitor certain ecosystems. 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. All participants agreed to place priority on inventory and monitoring programs. The monitoring programs of the International Environmental Science Program are fulfilling these needs and helping in the development of new monitoring systems elsewhere.

Scientists from the Smithsonian and other institutions measure such stresses on the ecosystem as rainfall, runoff and nutrient cycling, as well as those induced by humans. The goal is to sustain maximum biological diversity, while maintaining productive usage by man.

At the Program's sites on Barro Colorado Island (BCI) in Panama, scientists have discovered that the amount of rainfall over central Panama is declining. If this trend continues, it could affect the refilling of Gatun Lake after the dry season. In 1983, Panamanian long-term rainfall records will be compared with those of other Central American countries. Variations in solar radiation, temperature, soil moisture and wind speed are being monitored in the tropical forest. In the coming year, nutrient cycling in the forest will be added. Other phenomena monitored are: dates of flowering, quantities of fruit produced and insect and mammal populations. A recent study on the effect of defoliating caterpillars (a species similar to the gypsy moth in North America) has revealed that large scale eruptions of caterpillars occur periodically in tropical forests just as in temperate forests. This fact was obscured by the large number of tree species in tropical forests and the lack of long-term studies, but now that it is known, man should be able to manage tropical forests more wisely. IESP funds similar research on tropical marine systems at Galeta on Panama's Atlantic coast. Indicators of environmental change caused by human activities are monitored there. During the past year, scientists have noted large quantities of clay and silt in fresh water draining from the rapidly developing watershed into the reefs. In FY 1983, scientists will identify the source of these sediments and propose methods to control their discharge.

At CBCES, the Program has studied man's influence on the land and adjacent estuary. Rooted aquatic plants have been dying in the Upper Chesapeake Bay for the last decade or more. Research sponsored by IESP has shown experimentally that a concentration of 12 parts per billion of the herbicide atrazine in water

caused a 50 percent mortality of a specific species of bay grass in 47 days and significantly reduced growth and reproduction of survivors. Thus, these studies show that very small concentrations of herbicides in the Rhode River estuary can affect the health of some aquatic vegetation. The presence of chemical pollutants often entirely prevents recolonization of susceptible plants and animals.

Also at the CBCES, monitoring of the nutrient content of water emptying from the Muddy Creek watershed has determined that highly fertilized row crops (corn and soybeans) are the major sources of nitrate, total nitrogen and total phosphorus in the estuary. High concentrations of these nutrients cause algal blooms in the spring and summer which produce anoxia (deficiency of oxygen) which in turn kills fish in the headwaters. From this research, scientists will develop suggestions on ways to reduce the runoff of nutrient enriched water into the estuary.

With support from foreign governments, conditions at nonpermanent sites have been monitored in several tropical countries that are undergoing rapid change. Sites were originally established and inventoried in Venezuela, Brazil, Nepal, Papua New Guinea, and the Galapagos Islands. As work was completed at one site, resources were shifted to other locations. In FY 1982 utilizing reassigned funds from programs that had ended in the Galapagos and Papua New Guinea, a new site was established in the Sinai of Egypt.

In spite of the archeological, biological and ecological importance of the Sinai, only scant environmental information exists because of its remoteness and political sensitivity. Conditions are ready now to collect basic environmental data prior to large-scale development by the Egyptian government. Smithsonian scientists and those from the Suez Canal University, will collect data on the terrain, fauna, flora and human settlements of the region.

Smithsonian scientists have surveyed potential sites in Western Sichuan Province of China for a long-term study of the panda. Negotiations with the Chinese government have proceeded more slowly than expected. The Smithsonian was asked to scale back its own ecological efforts in deference to work already done by the Chinese. In FY 1982, the Smithsonian will send panda experts to China to study their reproductive physiology, and to train Chinese in new zoological techniques. A team approach, similar to that used in studying tigers in Nepal, is expected to be implemented in mid-FY 1983, following the completion of the Chinese survey.

Intensive research and monitoring continues in Brazil, Nepal and Venezuela. In Venezuela, long-term studies of several primate populations were completed in FY 1981 that led to a greater understanding of the gene pool in a contained ecosystem. In FY 1983, radio tracking studies on small mammals will be started to compare with similar populations in the temperate zone. Emphasis will be placed on those animals that affect agricultural systems. In Brazil, fundamental studies continue on the systematics and ecology of key plant and animal groups important to the monitoring of rapid change in the Amazon region. Archeological studies tracing man's activities in the region will complement the biological studies. In Nepal, three and one-half years research on the ecology of the Axis deer was completed in late FY 1981. Monitoring of tigers continues and records now are complete for three generations of a single family, the longest recorded monitoring of this species in the wild. As a result of this program, the Government of Nepal twice has expanded the size of Royal Chitwan National Park and will consider a third extension in FY 1985. The Park, by then, will be the largest in the subcontinent and among the best scientifically documented. In FY 1983, research will continue on the hog deer, a key indicator species for



this national park, and on the highly endangered gharial (a fish-eating crocodile). In FY 1983, the Government of Nepal is expected to establish an international wildlife foundation to continue the research activities begun by the Smithsonian and to assist in the funding of the research camp established by the Smithsonian in the Park.

Publications resulting from this Program in FY 1981 and FY 1982, include a major monograph on howler monkeys in Venezuela, an extensive overview article on three major panda reserves in China, a monograph on the Axis deer in Nepal, the bibliography on the fauna and flora of the Sinai region and a series of scholarly articles on selected indigenous fauna of the Amazon region. Significant accomplishments from the Program's permanent sites include: the completion and publication of studies on Mangrove root communities; completion and publication of a survey of human harvest of edible marine organisms along the Atlantic coast; and completion of a detailed map of the physical structure of the Galeta Reef in Panama. Eight articles during the past three years have been published in scientific journals concerning the herbicides atrazine and alachlor. These articles cover the use of these chemicals in agricultural practices and the subsequent events leading to the end effects on the ecosystem. Also there have been several publications in the last two years which help to explain the decline of white and yellow perch in the Chesapeake Bay.

ACADEMIC AND EDUCATIONAL PROGRAMS

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	19	562	2	129	-	691	-	36	-	-
FY 1982 Base	19	620	2	135	-	820	-	89	-	-
FY 1983 Estimate	19	637	2	140	-	870	-	84	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	19	0	19
Number of Other Positions.....	2	0	2
11 Personnel Compensation.....	463	7	470
12 Personnel Benefits.....	43	2	45
21 Travel & Trans. of Persons.....	15	1	16
23 Rent, Comm. & Utilities.....	6		6
24 Printing and Reproduction.....	63	3	66
25 Other Services.....	17		17
26 Supplies and Materials.....	9	2	11
31 Equipment.....	4	2	6
Total	<u>620</u>	<u>17</u>	<u>637</u>

Analysis of Increase

Necessary Pay.....	9
Inflation.....	8
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 activities at the elementary and secondary levels. No program increase is requested for FY 1983. Necessary pay of \$9,000 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 - Office of Fellowships and Grants: The Office of Fellowships and Grants manages Smithsonian fellowships and 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 duplicated at any university and essential to many scholars' research efforts. University education rests on the study of manuscript or printed material and reproductions of artifacts. At the Smithsonian, historical and anthropological objects, original works of art, natural history specimens, living animals and plants and ecological systems are directly available 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 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 several bureaus; they provide access to the full range of Smithsonian resources. From time to time, 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 manages all fellowships.

This Office also coordinates Smithsonian internships--publicizing opportunities to students and organizations, developing a central registry and along with other Smithsonian offices and bureaus assisting in the activities of the Smithsonian's internship council. In FY 1981, 45 students were awarded internship stipends. Of these, 12 minority students were supported with nonappropriated Trust funds as part of the Smithsonian Institution's efforts to increase minority and female participation in its academic and educational programs. The interns were placed in seven different bureaus, working on various projects including a history of American physical anthropology, educational programs for a forthcoming exhibition on "Celebration" at the Renwick Gallery and a film for high school students on Museum careers. In FY 1982, the Institution will continue these special efforts through internships and faculty fellowship appointments.

Office of Smithsonian 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 growing education outreach effort, the Office addresses contemporary issues for the increased understanding of the implications of new knowledge.

In November 1981, the seventh international symposium "How Humans Adapt: A Biocultural Odyssey" was held in Washington, D.C. Scholars from the United States, Europe and Asia contributed essays on how people currently and historically try to cope with disease, malnutrition, population pressure and depletion

of natural resources. These scholars also drew conclusions on the long-term consequences on governmental policies relating to these issues. In FY 1981, the Office also played a key role in organizing aspects of the national and international observance of the 200th anniversary of the Battle of Yorktown, culminating in a Smithsonian exhibition and related symposium. Planning continues for the eighth international symposium "Closed and Open Societies: Orwell's Metaphor of 1984." This symposium will highlight the liberal arts education tradition in America. Projections of symposium themes extend through the year 1992 and include the major remaining observances of the Bicentennial epoch: the Treaty of Paris, which formally ended the war of independence from Britain in 1783 and the ratification of the United States Constitution in 1787.

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 the local and national school communities. Program activities include: planning and conducting teacher workshops and seminars; preparing audiovisual materials and publications for elementary and secondary schools; conducting a summer intern program for high school students; and coordinating the Smithsonian's activities for disabled visitors.

To encourage cooperation and exchange of information among the Smithsonian education offices and between those offices and local schools, OESE continues to offer a number of programs. Two publications--"Let's Go" (a monthly newsletter) and "Learning Opportunities For Schools" (an annual brochure)--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 1,200 schools in the Washington, D.C. area. During FY 1981, a teacher workshop and seminar program attracted more than 3,000 teachers to 85 programs, including nine summer courses enabling the development of curriculum units based on Smithsonian resources. Summer programs for teachers include an orientation series entitled "A Mixed Bag," which introduces participants to a range of Smithsonian resources; several one-week seminars on museum teaching methods; and two three-week courses featuring programs on "Developing Writing Skills Using Museums," and "Discovering the 19th Century Through Smithsonian Collections."

To share these same teaching concepts with a national audience, "Art To Zoo," a classroom newspaper, continues to be distributed to over 15,000 schools and 60,000 teachers throughout the United States. "Art To Zoo" has recently been expanded to include a "Pull-Out Page" for use by students; it is estimated that the circulation will reach approximately 75,000 teachers in FY 1983. Also, a slide loan package, entitled "The Museum Idea" was circulated free of charge to 175 classroom teachers and museum education departments (reaching approximately 5,250 students) in FY 1981; and during the summer of 1981, OESE sponsored, in cooperation with the University of Virginia, two graduate level courses for a national audience of school librarians, teachers and curriculum specialists.

Both courses--which are designed to encourage the use of community resources in classroom teaching--will be offered again in FY 1983.

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 visitors. Sign language classes were offered to approximately 75 Smithsonian educators, guards and other employees to teach them how to communicate with hearing impaired visitors.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided from allotments which are primarily designated for the Institution's fellowship program (estimated expenditures of \$710,000 in FY 1982 and \$750,000 in FY 1983). 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 work regularly with visiting fellows and are active each year in selecting them. In FY 1981, 82 awards were made to fellows from 41 schools. Since 1965, 936 awards have been made to fellows from 201 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 third year, the Regents' Fellowship Program, supported with nonappropriated Trust funds, continues to bring distinguished visiting scholars to the Institution (estimated expenditures of \$110,000 in FY 1982 and \$120,000 in FY 1983). Allotments are provided for salary and support costs of the Director of the Office of Symposia and Seminars, 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 learning service program gives high school students an opportunity to work closely with Smithsonian staff, receiving exposure to future career possibilities, as well as individualized training in a variety of museum-related areas.

In FY 1981, funds have been provided through the Institution's Collections Acquisition, Scholarly Studies and Education Program to the Office of Elementary and Secondary Education to support programs for the disabled and to support children's activity programs (\$37,000) and to the Office of Symposia and Seminars to support the Smithsonian's seventh international symposium, "How Humans Adapt: A Biocultural Odyssey," held in November 1981 (\$21,000). Expenditures under this Program have been recorded for FY 1981 but not yet for FY 1982 and FY 1983.

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, the Office of Elementary and Secondary Education received a grant from the Morris and Gwendolyn Cafritz Foundation to assist various Smithsonian education offices in developing effective outreach programs in conjunction with the District of Columbia Public Schools (estimated expenditures of \$16,000 in FY 1982 and \$25,000 in FY 1983).

An endowment from the Walter Rathbone Bacon Scholarship received by the Office of Fellowships and Grants supports fellowships in zoological research (estimated expenditures of \$24,000 in FY 1982 and in FY 1983). The Office of Symposia and Seminars used gifts and grants in FY 1982 for partial support of the seventh international symposium (\$49,000) and in FY 1983 projects additional gifts and grants for support of the eighth international symposium planned for the fall of 1984 (\$35,000).

COLLECTIONS MANAGEMENT/INVENTORY PROGRAM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
	FTP*	Amount	General		Special Purpose		FTP*	Amount	FTP*	Amount
			FTP*	Amount	FTP*	Amount				
FY 1981 Actual	-	587	-	-	-	-	-	-	-	-
FY 1982 Base	-	776	-	-	-	-	-	-	-	-
FY 1983 Estimate	-	785	-	-	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	0	0	0
Number of Other Positions.....	50	0	50
11 Personnel Compensation.....	529	2	531
12 Personnel Benefits.....	43		43
21 Travel & Trans. of Persons.....	5		5
23 Rent, Comm. & Utilities.....	37		37
24 Printing and Reproduction.....	1		1
25 Other Services.....	159	7	166
26 Supplies and Materials.....	2		2
Total	<u>776</u>	<u>9</u>	<u>785</u>

Analysis of Increase

Necessary Pay.....	2
Inflation.....	7
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. These funds were applied to major inventory projects in the three museums where the need for additional effort was of the greatest urgency: (1) the National Museum of Natural History/Museum of Man (NMNH/MOM); (2) 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 (3) the Cooper-Hewitt Museum, whose collections had not been inventoried fully prior to the Museum's transfer to the Smithsonian. A portion of these funds also was used to provide additional data processing capability to cope with the vast amount of inventory information being gathered, and to gather data and computerize the "Smithsonian Art Index" of the National Museum of American Art (NMAA). Survey work for this last project was completed in FY 1981; the Index will be maintained in the future with base funds. An appropriation of \$760,000 made in FY 1982 for the inventory effort will be used to further expand inventory projects at the NMNH/MOM, NMAH and at the Cooper-Hewitt Museum and to maintain the required level of data processing. No program increase is sought for FY 1983, but the same level of support as provided in FY 1982 is essential. Funding of \$2,000 is required for necessary pay for special inventory staff and an amount of \$7,000 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 upon the nature and size of its collections and conditions under which collections are stored. Efforts have continued to improve the efficiency of the inventory process.

Even with the effective inventory systems that are now in place and with the intensity of the effort today, the sheer volume of the numbers of objects in the Smithsonian's collections and their diversity requires that existing resource levels continue to be applied to the inventory, particularly in the Institution's two largest museums (NMNH/MOM which holds approximately 60 million items and the NMAH which holds approximately 16 million items) to permit them to meet the established 1983 completion date; to sustain the momentum which has been achieved with personnel now trained for the task; and to assure complete inventory control over those collections which will be transferred to the MSC starting in 1983 and continuing for several years thereafter. In addition, the process of reconciliation of inventory and catalogue records must continue into the future. A collections inventory of this magnitude has never been undertaken before in the museum world, and the special inventory appropriation is crucial to its success.

Inventory programs initiated at the NMNH/MOM, NMAH and the Cooper-Hewitt Museum in FY 1979 are actively continuing in FY 1982. In each of these museums, inventory standards and methods, including data gathering and recording systems and collection condition reports, have been developed, and teams of temporary and part-time employees have been hired to assist regular staff with the inventory process. By the end of FY 1981, the NMNH/MOM had created and computerized more than 2,500,000 inventory and catalogue records. The NMAH had inventoried and created inventory records for 8,500,000 objects and the Cooper-Hewitt did the same for 134,000 objects. Allocations were made in FY 1980 and FY 1981 to support the "Smithsonian Art Index" project at the National Museum of American Art. This project provided for the accumulation of information on the art held by the non-art bureaus and units of the Smithsonian including the National Air and Space Museum, the National Museum of American History, the National Museum of Natural History/Museum of Man, the National Zoological Park and in the Smithsonian Institution Building. Compilation of this information was completed in FY 1981 and the resulting data computerized. The "Smithsonian Art Index" now



contains more than 9,500 records representing 207,000 objects. The Index will be updated as required in the future with base funds of the National Museum of American Art.

For FY 1982, the special inventory appropriation has been allocated for the most part to the NMNH/MOM, NMAH and the Cooper-Hewitt Museum, with smaller allocations made to the Office of Computer Services and the Office of the Registrar. The collections management inventory program is proposed to support continuation of the same projects in FY 1983.

At NMNH/MOM, a total of \$940,000 is designated in FY 1982 for collections inventory work, of which \$559,000 is from the Museum's base (funds permitting) and \$381,000 is from the Collections Management/Inventory Program funds. For FY 1983, the Museum proposes to use approximately the same amounts from each of these sources. NMNH/MOM is continuing to give first priority to item-by-item inventory (called an 'item level' inventory by the Museum) of valuable specimens (i.e., those having high intrinsic monetary values) and type specimens (i.e., those which set standards for the species). Inventory of material to be moved to the Museum Support Center also is a high priority. As of the end of FY 1981, inventory of valuable specimens was 76 percent complete, and type specimens was 51 percent complete. Specimens not included in these groups will be inventoried initially in batches of systematically related items; this is called a 'collection level' inventory by the Museum. Most of the Museum's collections, representing approximately 52 million objects and specimens, are in this category.

The largest inventory project in NMNH/MOM is the inventory of the Ethnology/Archeology collection of the Department of Anthropology which is made up of highly valuable specimens and is to be moved to the MSC. Itemization of that collection had been emphasized early and was almost completed by 1980. This inventory, involving approximately 403,000 specimen records, will be completed in FY 1982. Checking of these records against the catalogue records is continuing. Following plans established over the last three years, other collections being inventoried because of their high value or unusual importance include human skeletons, meteorites, representative types of living and fossil plants and animals, valuable insects and mollusks and valuable fossils, primates, and other valuable mammal skeletons and skins; and historical photographs, sound recordings, art work, and maps and manuscripts of the National Anthropological Archives. Collections being inventoried prior to the move to the MSC include algae, plant specimens awaiting identification and curation, the diatom and wood collections, portions of the collections of insects and other invertebrate animals, rocks and ores, stratigraphic suites of fossils, eggs and nests, bird skins, tanks of fish, and other selected groups of fishes, large reptiles and amphibians, large mammal skeletons and collections of the Smithsonian Oceanographic Sorting Center. The remaining base-line inventory effort will take place in the Department of Paleobiology, which has the largest amount of work still to be done, and in the seven other departments of the Museum. The National Museum of Natural History/Museum of Man expects to complete its base-line inventory consisting of item level and collection level data by June 1983, using a combination of special inventory funds and NMNH/MOM base funds. Approximately 65 percent of the inventory records that will be created in the base-line inventory were completed at the end of 1981.

At the National Museum of American History, a total of \$626,000 is designated in FY 1982 for collections inventory work, of which \$368,000 is from the Museum's base (funds permitting) and an estimated \$258,000 from the Collections Management/Inventory Program funds. For FY 1983 the Museum proposes

to use similar amounts from the same sources for its collections inventory work. The NMAH collection consists of approximately 16 million objects of which some 14.1 million consist of stamps in the National Philatelic Collection; about 861,000 are coins and medals of the National Numismatic Collection; approximately 590,000 are objects held in 11 divisions of the Museum; and about 370,000 represent items of photographic equipment and plates. By the end of FY 1981, a total of 8.5 million objects had been surveyed and itemized and data on 7.6 million of these had been keyed for entry into the computer. Almost eight million of the total already itemized are stamps (many of them revenue stamps in sheets). The Museum is continuing to explore ways to facilitate the inventory of this huge and difficult Collection as well as that of the National Numismatic Collection. At the close of last year, also, NMAH completed surveys and itemized the collections of the following divisions stored in the Mall building: Physical Sciences, Mechanical and Civil Engineering, Transportation, Musical Instruments, Textiles, Costume and the Electricity section of the Division of Electricity and Modern Physics. Inventory work has been underway in ten of the remaining 11 divisions (Ceramics and Glass, Community Life, Domestic Life, Graphic Arts, Political History, Extractive Industries, Mechanisms, Medical Sciences, Military History and Naval History). The inventory of the Division of Mathematics will start later in FY 1982.

In FY 1982, NMAH plans to complete the survey itemizing the collections of the Military History, Naval History, Graphic Arts and the Modern Physics sections of the Electricity and Modern Physics Division. The Museum also plans to finish the inventory of objects in the large inter-divisional exhibitions, "1876" and "A Nation of Nations." Plans for developing methods to conduct an efficient inventory of collections stored at Suitland, Maryland will continue in FY 1982, with emphasis on creating safe conditions for both staff and objects, establishing proper staging areas and implementing an overall collections management plan. Inventory work at Suitland is affected by the renovation schedule for buildings in which collections are stored at that site. (See Restoration and Renovation of Buildings Appropriation request.) The Museum plans to add an archivist to its staff who will assist with the survey of the large Warshaw Collection of Business Americana which consists largely of prints, broadsides and other documents. In FY 1982, the Museum plans to finish work on the backlog of editing and processing inventory data that has carried over from previous years of the inventory effort.

In FY 1983, NMAH plans to complete the survey and itemization of the remaining general collections and to continue concentration on the National Numismatics Collection, the National Philatelic Collection, the Photographic History Collection, the Warshaw Collection and on objects stored at Suitland.

The Cooper-Hewitt Museum anticipates using an amount of \$118,000 in FY 1982 for inventory work, consisting of base funds (if available) of \$50,000 and allocations of \$68,000 from the Collections Management/Inventory program funds. For FY 1983, similar amounts will be used for this purpose. By December 1981, more than 134,000 objects had been inventoried (76 percent completion rate), of which more than 131,000 had been entered into the computer. All of the wallpaper, ceramics, glass, furniture and woodwork and other three-dimensional decorative arts collections have been completed. In FY 1982 and continuing into FY 1983, work will continue on the textiles and prints collections. The inventory of the entire collection will be completed in FY 1983. Information contained in the Museum's accession books is being entered into the computer for reconciliation purposes and additional important data on the decorative arts collections now being compiled will be added to the computer record.

Most of the balance of the Collections Management/Inventory Program appropriation, \$52,000 in FY 1982, is designated for the Office of Computer Services to enable it to maintain its capability to handle the great quantities of data being generated by the inventory projects. Funds of \$1,000 have been provided in FY 1982 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 the Collections Management/Inventory Program funds added selectively to the resources of those museums faced with the largest and most complex inventory tasks, steady progress has been made to date, not only in terms of the quantity of work done, but also in terms of the effectiveness of the systems devised to accomplish it. In addition, the development of computer programming for the collection of pertinent and basic inventory data will serve to simplify and expedite future inventory cycles. The systematic inventory effort has been of enormous practical and intellectual value to the Institution; the experience in the innovative methods and techniques being used also will be of great benefit to collections management programs and responsibilities of other museums.

The following table summarizes the allocation of the Collections Management/Inventory Program funds in FY 1982, the proposed allocations for FY 1983, and the bureau funds that are being applied to this work.

SMITHSONIAN INSTITUTION  
COLLECTIONS MANAGEMENT/INVENTORY PROGRAM

(Dollars in thousands)	<u>Natural History</u>	<u>American History</u>	<u>Cooper- Hewitt</u>	<u>Other</u>	<u>Total</u>
FY 1982 Base Resources	559	368	50	-	977
FY 1982 Estimated Portion of \$760,000 /1	<u>381</u>	<u>258</u>	<u>68</u>	<u>53</u> /2	<u>760</u>
TOTAL FY 1982	<u>940</u>	<u>626</u>	<u>118</u>	<u>53</u>	<u>1,737</u>
FY 1983 Base Resources	559	368	50	-	977
FY 1983 Estimated Portion of \$785,000 /3	<u>393</u>	<u>266</u>	<u>70</u>	<u>56</u> /4	<u>785</u>
TOTAL FY 1983	<u>952</u>	<u>634</u>	<u>120</u>	<u>56</u>	<u>1,762</u>

/1 FY 1982 appropriation.

/2 In FY 1982, this amount has been allocated as follows: Office of Computer Services, \$52,000; Office of the Registrar, \$1,000.

/3 Proposed FY 1983 base including costs of FY 1982 pay raises (\$16,000) and funds sought for necessary pay and inflation (\$9,000).

/4 For FY 1983, this amount is planned to be allocated as follows: Office of Computer Services, \$55,000; Office of the Registrar, \$1,000.

MAJOR EXHIBITION PROGRAM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	-	739	-	-	-	-	-	-	-	-
FY 1982 Base	-	840	-	-	-	-	-	-	-	-
FY 1983 Estimate	-	840	-	-	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	0	0	0
Number of Other Positions.....	5	0	5
11 Personnel Compensation.....	82	13	95
12 Personnel Benefits.....	8	1	9
21 Travel & Trans. of Persons.....	4	17	21
22 Transportation of Things.....	25	10	35
23 Rent, Comm. & Utilities.....		8	8
24 Printing and Reproduction.....	25	18	43
25 Other Services.....	476	-94	382
26 Supplies and Materials.....	205	17	222
31 Equipment.....	15	10	25
Total	<u>840</u>	<u>0</u>	<u>840</u>

Analysis of Increase

Necessary Pay.....	0
Inflation.....	0
Program Funds.....	0

ABSTRACT - The Major Exhibition Program provides centralized support for important exhibitions too costly to be funded within individual bureaus' base resources. For FY 1983, a total of \$840,000 is sought for three such exhibitions: (1) initial funding of \$75,000 to begin preparation of a major display of archeological artifacts documenting the ancient history of the Holy Land, to open in FY 1984 in the Evans Hall of the National Museum of Natural History/Museum of Man and then travel to other museums in this country; (2) a sum of \$665,000 to continue the necessary program of updating and improving the permanent public spaces of the National Museum of American History with the

second major exhibition for that Museum to be funded under this line item, "Life in America," a depiction of the 17th and 18th centuries. In future years, this exhibition will be extended chronologically through the 19th century and into the 20th; and (3) an amount of \$100,000 to finance live presentations of diverse cultural celebrations within the major year-long exhibition of the Smithsonian's folklife collections at the Renwick Gallery, as planned and installed with funding from this Program in fiscal years 1981 and 1982.

PROGRAM - As explained previously in the Smithsonian's budget justifications for fiscal years 1981 and 1982, the Institution's history and art museums, especially the National Museum of American History, have a critical need for a long-term program which selectively can augment their available base funding in order to produce large new exhibitions. This is important not only in replacing outmoded exhibitions which no longer provide a public service with new displays of more timely interest, but also in providing an immediately accessible vehicle for disseminating important research findings of the professional staff, and a positive way to focus their individual research efforts to maximum public benefit. Additionally, as centrally administered by the Assistant Secretary for History and Art, the 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 was initially supported by the Congress with appropriations of \$750,000 in FY 1981 and \$840,000 in FY 1982. With these funds, two major exhibitions will be opened in FY 1982--"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 opens at the National Museum of American History on the 250th anniversary of his birth. There also has been significant progress made in planning the next major exhibition at the National Museum of American History, a chronological portrayal of American history in three primary settings--family, workplace and community--beginning with the 17th century. For FY 1983, funding for the following three major exhibitions is requested:

The Holy Land - The ancient peoples 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 ethical 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, tentatively titled "What Mean These Stones," will focus on the flow of cultural and technological developments in this area during the last 100,000 years, from the Paleolithic Period through the Crusades. Characteristics of the 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 a noted Smithsonian cultural anthropologist, 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, the exhibition will open in May of 1984 in the Evans Hall of the National Museum of Natural History/Museum of Man and subsequently will travel 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. Cultic vessels and utensils, together with figurines of Canaanite and Philistine deities, symbols of different faiths, and burial chests or ossuaries will illustrate diverse religious practices. Sculpture 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.

Although the major portion of the expenses of assembling and mounting this show at the Smithsonian will fall within FY 1984, certain preliminary costs totaling some \$75,000 are needed in FY 1983. Included are travel costs related to object selection, photography and the negotiation of loan agreements (\$10,000); design costs for the installation of the exhibition at the Smithsonian (\$20,000) and for the traveling version of the show (\$20,000); and a portion of the costs of preparing the catalogue to accompany the exhibition (\$25,000). A preliminary estimate of the remaining expenses in FY 1984 for crating, shipping, insurance, fabrication, installation and printing totals approximately \$300,000. It is anticipated that the costs of managing the subsequent United States tour of this exhibition will be met by normal participation fees paid by the host museums.

American History - As referred to above, the upgrading and clarification of the exhibit spaces in the National Museum of American History continues to be a major focus of this Program. In FY 1981, work toward this end was concentrated primarily on the Museum's second floor. The most outdated exhibition in the building, dating from the 1960s, "The Hall of Everyday Life in the American Past," was dismantled; a seldom-used and space-obstructing escalator was removed; and the installation of the George Washington exhibit in the resulting space was begun. During FY 1982, that exhibition will be completed and opened, the grand public concourse displays on the two main floors of the Museum will be reorganized to orient visitors to the building's 46 discrete exhibit spaces, and work will begin on the next two major efforts.

The first of these, entitled "16 Elm Street," is an introduction to American history based on the Museum's largest artifact, the 17th century "Hart House," which was disassembled and moved to the Museum in 1963. Using slides, films, multi-track narration and objects, the exhibition will be based on the actual lives and experiences of the inhabitants of this house, working back through the centuries in reverse chronology. Major private funding for the production of this important display is being sought. The project is scheduled to open late in 1983.

Directly related to this Trust funded exhibition, which will serve as a central introduction and orientation to the Museum, its exhibits and the notion of history itself, is the second large new exhibit for which funding is requested here. As the "Hart House" will take visitors backwards in time through American social history, "Life in America" will bring them forward again to the present in discrete stages. The first such stage, the 17th and 18th centuries, is the major subject of the FY 1983 funding request.

Using existing period rooms and simulated urban and rural settings, the exhibition will address social relationships, economic transactions, the encroachment of industrialization on an agricultural society, and political changes and trends during 17th-and 18th-century America. Attention will be given to serving various levels of curiosity and expertise on the part of visitors through study galleries concentrating on particular subjects or collections, as well as carefully researched approaches to labeling and presentation of interpretive materials and information. Leading museum professionals and historians in the country will be invited to test and evaluate approaches and to assist in the substantial research and design tasks necessary before final production. A total of \$165,000 is committed to this endeavor in FY 1982. In FY 1983, approximately \$450,000 more will be required to produce the 17th-and 18th-century parts of the exhibition, covering 18,000 square feet, and to commence preliminary work on the 19th-century portion which will follow. The remaining items in the FY 1983 request of \$665,000 for the National Museum of American History are amounts of \$65,000 to dismantle existing installations for subsequent development; \$75,000 to complete the task of improving visitor orientation displays in the grand concourses; and \$75,000 to begin work on the first major exhibition for the Museum's first floor, a comprehensive review of the history of industrialization in America.

Given the long-term nature, the complexity and interrelatedness of this program of exhibit redevelopment at the Museum, covering widely varying subject matters, display spaces, exhibit techniques and historical periods, a graphic master plan displaying these sequential changes is in preparation as an aid to explain each step as it is now foreseen.

Celebration - The folklife exhibition "Celebration: A World of Art and Ritual," an integrated display of folk and traditional objects drawn from nine Smithsonian museums, is the largest exhibition ever organized for the Renwick Gallery. Opening in two stages--the first floor in March 1982 and the second floor in August 1982---it will remain on view until June of 1983. The objects to be shown, over 90 percent of which have never been displayed before, have been chosen to depict the ways in which different societies have celebrated the important cycles and traditional milestones in the lives of their people. The exhibition, under the general direction of guest curator and eminent anthropologist Victor Turner, represents a major innovative attempt to integrate the fields of human science and art history, showing the interrelationship of symbolic and esthetic values imparted to an object by the culture from which it

sprang and within which it was used. Significantly, five separate publications, all privately financed, have grown out of this unique undertaking. They include an illustrated catalogue, a complete checklist with lengthy descriptive data on each of the more than 600 objects in the show, a collection of scholarly essays on the universal phenomenon of human celebration, a guide to local celebrations within the Washington, D.C. metropolitan area and an illustrated calendar featuring color photographs of some of the most stunning objects in the exhibition. Each of these will be available during the life of the show and will constitute a permanent record of the extremely fruitful research this exhibition has occasioned.

An integral part of this major exhibition, making it much more than just a static display of widely varying cultural artifacts, is the presentation each month of a live celebration at the Renwick Gallery, much in the fashion of the presentations at the Smithsonian's Festival of American Folklife. These events will lend additional context and immediacy to the exhibition itself, and will allow the public the opportunity to witness at first hand the ways in which objects similar to those on display are actually used in celebratory ritual. For the nine monthly celebrations within FY 1983 (October 1983 through the closing of the exhibition in June 1983), \$100,000 is required for participants' travel and lodging expenses, sound and lighting costs, and the printing of explanatory program notes.

For FY 1984, tentative plans for the Major Exhibition Program include production of the Holy Land archeological exhibition, further support of exhibit upgrading at the National Museum of American History and preliminary funding for a major exhibition planned for the Hirshhorn Museum and Sculpture Garden during its 10th anniversary year in FY 1985.



MUSEUM SUPPORT CENTER EQUIPMENT AND OPERATIONS

(Dollars in thousands)

Fiscal Year	NONAPPROPRIATED SOURCES OF FUNDING									
	FEDERAL FUNDS		UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1981 Actual	8	2,767	-	-	-	-	-	-	-	-
FY 1982 Base	8	4,502	-	-	-	500	-	-	-	-
FY 1983 Estimate	8	6,707	-	-	-	250	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	8	0	8
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	170		170
12 Personnel Benefits.....	17		17
22 Transportation of Things.....		700	700
23 Rent, Comm. & Utilities.....		800	800
25 Other Services.....		142	142
26 Supplies and Materials.....		543	543
31 Equipment.....	4,315	20	4,335
Total	4,502	2,205	6,707

Analysis of Increase

Necessary Pay.....	0
Inflation.....	0
Program Funds.....	2,205

ABSTRACT - The Museum Support Center (MSC), currently under construction, is expected to be ready for beneficial occupancy by the Smithsonian in January 1983. In preparation for the movement of the collections to be stored at the MSC, a planned purchase program of collections storage and laboratory equipment and furnishings was begun in FY 1981. For FY 1983, a total amount of \$6,707,000 is sought to continue equipment purchases and to provide basic operating and support capabilities.

Equipment funds of \$2,711,000 were appropriated in FY 1981 and \$4,315,000 were appropriated in FY 1982. The amount of \$4,220,000 sought for FY 1983 will be used to purchase: the third increment of collections storage equipment (\$3,157,000) and part of the laboratory and other furnishings and equipment of

the National Museum of Natural History/Museum of Man (\$894,000), the National Museum of American History (\$105,000), the Smithsonian Institution Libraries (\$10,000), the Office of Printing and Photographic Services (\$24,000) and the Office of Horticulture (\$30,000).

In anticipation of an expanded conservation effort and a new conservation training program, and of the establishment of a branch library at the MSC, resources first were appropriated in FY 1981. Base funding for FY 1982 is eight positions and \$187,000. For FY 1983, additional resources of \$2,300,000 are sought for basic operating and support expenses consisting of supplies, materials and contractual services associated with security, buildings and grounds maintenance, fumigants and conservation (\$400,000); utilities (\$800,000); and expenses related to the move of collections and some equipment from the National Museum of Natural History/Museum of Man and the National Museum of American History (\$1,100,000).

PROGRAM - Construction of the MSC began in January 1981. Progress has been excellent, and it is expected that construction work will be finished on or before the scheduled completion date of January 9, 1983. Plans and specifications for the building were prepared by the architectural/engineering firm of Metcalf/KCF; the construction contractor is the George Hyman Co. Both the planning and construction stages of this project have been managed by the General Services Administration (GSA). The planning and construction budget totals \$29,000,000, consisting of \$26,500,000 of appropriated monies and \$2,500,000 of the Institution's nonappropriated Trust funds.

When the structure is completed, it will provide 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.

In anticipation of the availability of the building for occupancy early in 1983, basic operating and support costs have been identified and work is in progress toward specifying staffing levels for security and building operations and maintenance. Staffing needs are discussed below under "Total Estimated Requirements, Staffing Needs and Funding Plan." With base funding of seven positions and \$163,000, the Conservation Analytical Laboratory (CAL) will expand its conservation capability through the use of 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 two 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 1982 on 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 FY 1983. The Smithsonian Institution Libraries (SIL) will operate a branch library at the Center to serve the departments of the National Museum of Natural History/Museum of Man (NMNH/MOM) and the National Museum of American History (NMAH) that are assigned space there as well as CAL's research, treatment and training functions. An amount of \$24,000 is included in SIL's base to provide support for a librarian who has been doing preliminary work in preparation for the establishment of the MSC branch library.

The Institution also has been overseeing the planning and contracting for (by GSA) the collections storage equipment required by NMNH/MOM and NMAH. The storage systems being selected for purchase and installation provide 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. In addition, purchases of furnishings and equipment are in progress for CAL, NMNH/MOM, NMAH, SIL and Photographic Services. The security system to be operated by the Office of Protection Services is proceeding on schedule. Planning for the systematic transfer of collections to be moved first also is being carried out.

An explanation of operating requirements, a description of the equipment and the associated cost estimates follow.

EXPLANATION OF PROGRAM INCREASE - The FY 1983 request for the Museum Support Center is divided into two categories: operating and support requirements and one-time costs for equipment.

A. OPERATING AND SUPPORT REQUIREMENTS: With Smithsonian occupancy of the MSC scheduled to take place in January 1983 or shortly thereafter, additional resources of \$2,300,000 are requested in FY 1983 for: (1) support costs of custodial, maintenance, security and program operations (\$400,000); (2) utilities (\$800,000); and (3) moving expenses \$1,100,000.

1. Support Costs - A total of \$400,000 is sought to meet the needs of several Smithsonian units having responsibilities for various aspects of MSC operations. The following describes the purposes for which funds are requested by organization unit.

(a) The Office of Protection Services requires \$65,000 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.

(b) The National Museum of Natural History/Museum of Man, which will be responsible for direction of program activities at the MSC and for the physical movement and registration of collections to be relocated there, will require an amount of \$80,000 for supplies and services, including computer services and contract conservation services for the Anthropological Conservation Laboratory, a division of the Museum. The NMNH/MOM also will be responsible for building management functions at the MSC, and a further \$35,000 is sought for custodial services and supplies.

(c) The National Museum of American History will initiate relocation of certain of its collections to the MSC during FY 1983. A large number of fragile and delicate objects in these collections will require treatment in the NMAH Conservation Laboratory prior to being placed in the storage area. An amount of \$38,000 is requested for contract conservation services and supplies to provide support for the initial heavy volume of conservation work.

(d) The Conservation Analytical Laboratory will be responsible for fumigation of collections entering the MSC. The bulk of the materials brought into the MSC will be fumigated to assure that vermin, which could damage the collections, will not enter the building with the moved items. CAL also must acquire instructional materials to be used in the conservation training program

to be conducted there and will need computer services and supplies for maintenance of its conservation reporting and information systems. An amount of \$175,000 is requested for fumigants, training materials, conservation supplies and necessary contract services.

(e) The Office of Horticulture requests \$7,000 for maintenance of grounds-keeping equipment and for contract services for grounds maintenance and snow removal operations.

2. Utilities - A total of \$800,000 is required for the MSC to fund the estimated cost of electricity for lighting, ventilating and air conditioning (\$410,000) and to fund fuel for heating (\$390,000). Electricity will be used for ventilating and air conditioning the building in addition to providing power for lights, chillers, pumps, and scientific and office equipment. In arriving at the estimated costs for both electricity and fuel, the number of heating or cooling degree days in the Washington, D.C. area, the capacity of the equipment in the MSC and the projected levels of utility unit costs were taken into consideration. As with other Smithsonian buildings, a computerized power management system which minimizes costly peak demand rates will be installed in the Center.

3. Moving Expenses - An amount of \$1,100,000 is requested for expenses associated with the move of collections and some equipment from NMNH/MOM and NMAH. It is expected that this move will require a period of from five to seven years. The magnitude of this transfer of collections appears to be unprecedented in the museum community both in terms of numbers of items to be moved, the distance to be moved, and the variety of materials and the differing conditions of the objects. The Institution currently is soliciting advice from moving specialists and museological sources regarding the most effective and safest methods for moving the collections. Several moving techniques will be required, each adapted to the nature of the collections being handled. The first collections scheduled to be relocated to the Center will be specimens preserved in liquids from the Smithsonian Oceanographic Sorting Center which currently occupies leased space in the Navy Yard. Funds requested will be used for contract moving services where appropriate, packing materials, reusable shipping containers and for purchase of a tractor and trailers which can be adapted to accommodate the containers.

## B. EQUIPMENT

1. Collections Storage Equipment - An amount of \$3,157,000 is required in FY 1983 to continue acquisition of collections storage equipment for collections of NMNH/MOM and NMAH. 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.

Work on preparing detailed performance specifications for the collections storage equipment began in September 1980; funds in the amount of \$2,051,000 were appropriated in FY 1981 for the completion of the specifications and acquisition of the first increment of the equipment. In September 1981, an effort by GSA to obtain acceptable bids for this first increment was unsuccessful, due largely to the complexity of the specifications and a short bidding period. The plans and specifications have been modified for clarity, and new bids for the equipment to be used for the storage of "wet" collections (i.e., collections stored in alcohol or formaldehyde solutions) will be solicited by GSA in March 1982. Simultaneously, plans for storage equipment for other types

of collections are being refined to permit solicitation of bids in August 1982 for procurement of the first installment of that equipment. Funds of \$3,225,000 were appropriated in FY 1982 for this purpose. This schedule will allow some equipment to be in place by late 1983, at which time the MSC building will be acclimatized sufficiently to receive collections safely. The amount of \$3,157,000 requested in FY 1983 will permit an uninterrupted continuation of the production and acquisition of the storage equipment and its timely scheduled installation at the Center. Of this, \$2,507,000 will serve storage needs of the NMNH/MOM and \$650,000 the needs of NMAH.

2. Other Equipment and Furnishings - An amount of \$1,063,000 is requested in FY 1983 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 and is continuing this activity with the \$1,090,000 appropriated in FY 1982. The following describes the use of these funds and the needs of the affected organizational units for FY 1983.

(a) The National Museum of Natural History/Museum of Man, with funds of \$500,000 appropriated in FY 1982, is purchasing laboratory and other equipment it will require when the building opens. Priority is being placed on such items as fume and exhaust hoods, large laboratory sinks, chain hoists, distilled water apparatus and anthropology conservation laboratory equipment. Some of the furnishings and other laboratory equipment needed by the scientific departments that will move into the building initially also will be purchased, as will basic building maintenance and custodial equipment. An amount of \$894,000 is requested for FY 1983 to continue these purchases for which schedules have been developed to conform with the planned relocation of collections. The Smithsonian Oceanographic Sorting Center and the Department of Anthropology are the major units whose needs must be met first. It is expected that in FY 1984 an amount of approximately \$1,300,000 will be required to complete the NMNH/MOM equipment program at the MSC.

(b) The National Museum of American History also has begun in FY 1982 to purchase, with appropriated funds in the amount of \$200,000, the laboratory cabinets, heated sinks, analytical balances, fume hoods and other equipment needed for its laboratory and work areas. An amount of \$105,000 to continue this program is requested for FY 1983. Approximately \$25,000, is expected to be sought in FY 1984 to complete the program.

(c) The Smithsonian Institution Libraries will provide bibliographic services and support to the bureaus and units assigned space in the MSC. With an appropriation of \$32,000 received in FY 1982, SIL will purchase a computer terminal (that will be linked with its main system), shelving and other library furnishings. For FY 1983, the sum of \$10,000 is requested to provide for other furnishings such as cabinets and files. An amount of \$7,000 is expected to be requested in FY 1984 to complete these purchases.

(d) The Office of Printing and Photographic Services, with funds of \$23,000 appropriated in FY 1982, will purchase a portion of the equipment needed to open its MSC photographic studio and darkroom. This equipment includes a film processing machine, an enlarger, a contact printer, spotlights and camera equipment. The amount of \$24,000 is requested in FY 1983 to complete photographic equipment purchases for the studio and darkroom.

(e) The Office of Horticulture will maintain the 26 acres of ground surrounding the Museum Support Center and also has responsibility for snow and ice removal. In FY 1983, an amount of \$30,000 is requested to permit acquisition of necessary mowing and snow removal equipment.

3. Total Estimated Requirements, Staffing Needs and Funding Plan - The FY 1981-FY 1985 costs of equipping the building, covering the first phase of storage and other items total approximately \$16,756,000 including estimated inflation. Of this amount, \$11,618,000 is for storage racks and related equipment; \$5,138,000 is for laboratory, office, library, photographic services, protection services and grounds-keeping equipment. The Institution has applied and expects to continue to apply funds from several sources over the next four fiscal years to help meet the necessary costs: amounts of \$650,000 in rent savings to be available when the Oceanographic Sorting Center moves to the new building; \$2,000,000 for equipment provided within the base of the NMNH/MOM; and \$750,000 in unrestricted Trust funds of the Institution. The balance is being requested from the Congress phased over a five-year period which began in FY 1981. The second phase of the equipping process would begin in FY 1986, and proceed as the collections dictate in future years.

The Institution is in the process of examining the means by which the MSC will be staffed. The major portion of staffing requirements is in the security, equipment maintenance, and building and grounds maintenance functions. In addition, there is a need for personnel for programmatic functions including basic direction of the Center; development of registrarial services and collections management policy; emergency conservation of the collections prior to relocation; and the continued development of both conservation services and the conservation training program. Presently, there are several alternatives under consideration to meet these staffing requirements. These include:

- (1) reprogramming existing positions;
- (2) contracting directly for the security and maintenance functions;
- (3) transferring existing security and maintenance staff to the Center and filling transferred positions with contractual personnel;
- (4) contracting for certain services (in addition to security and maintenance) now being performed by existing staff and transferring freed-up positions to the Center; and
- (5) requesting additional staffing and support costs in FY 1984.

These alternatives are not mutually exclusive; some combination of them can be expected to be adopted. Staffing/contractual services are expected to cost between approximately \$2 and \$3 million per year between FY 1983 and FY 1987. To the extent that reprogramming, with Committee approval, of equipment funds is necessary, the plan for equipment purchases would be extended.

ADMINISTRATION

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	257	8,718	159	5,513	1	96	-	193	-	86
FY 1982 Base	263	9,502	160	5,919	1	152	-	79	-	-
FY 1983 Estimate	263	10,086	161	6,547	-	130	-	110	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1982</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1983</u>
Number of Permanent Positions.....	263	0	263
Number of Other Positions.....	25	0	25
11 Personnel Compensation.....	6,851	216	7,067
12 Personnel Benefits.....	1,164	98	1,262
21 Travel & Trans. of Persons.....	56		56
22 Transportation of Things.....	7		7
23 Rent, Comm. & Utilities.....	170	14	184
24 Printing and Reproduction.....	131	8	139
25 Other Services.....	641	154	795
26 Supplies and Materials.....	352	68	420
31 Equipment.....	130	26	156
Total	<u>9,502</u>	<u>584</u>	<u>10,086</u>

Analysis of Increase

Necessary Pay.....	149
Workers' Compensation.....	77
Inflation.....	170
Restored Position Funds.....	88
Program Funds.....	100

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, the Director of Facilities Services (responsible for the Offices of Design and Construction, Plant Services and Protection Services) and specialized administrative and technical offices, which include the Offices of Audits, Computer Services, Equal Opportunity, Management Analysis, Personnel Administration, Printing and Photographic Services, Programming and Budget, Supply Services, Contracts, Travel Services and the Office of the Treasurer.

In total, 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. These organizational units provide essential support and services to all programs and activities of the Institution. Some offices are funded entirely with nonappropriated Trust funds reflecting the nature of their work. For FY 1983, an increase of \$100,000 is requested for the conversion of nitrate photographic negatives to archival-quality safety film at the Office of Printing and Photographic Services. Increases of \$27,000 for the Smithsonian Archives and \$25,000 for the Cooper-Hewitt Museum sought for related purposes are also justified in this section. Necessary pay of \$149,000 and Workers' Compensation of \$77,000 are required for existing staff and an amount of \$170,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$88,000 is requested to provide 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 overall management and administration of the Institution, including policy determination, program planning, legislation, financial management and the direction and review of performance of Smithsonian activities. The Office of the Assistant Secretary for Administration, including the Director of Facilities Services, is responsible for administrative and technical services.

The Office of the General Counsel provides legal counseling to the Smithsonian Board of Regents, the Secretary and administration staff, and to all program and support offices on the administration of Smithsonian programs; coordinates and directs the conduct of Smithsonian involvement in litigation or other adversary proceedings; adjudicates administrative claims; and generally monitors all aspects of the Institution's operations for legal implications. The Office's caseload entails matters of administrative law, Constitutional law, the law of trusts, labor relations, civil rights, torts, contracts, real and personal property, taxes, estates, gifts and intellectual property rights, as well as matters dealing with the laws of the states and of municipalities in which the Institution operates.

The Office of the Treasurer has the direct responsibility for the financial management of the Institution. This includes the direction of financial planning, accounting, payroll, financial reporting, administration of grants and insurance, management of certain auxiliary activities such as the museum shops, handling of bank relations and oversight of investments. Components of the Office of the Treasurer include Accounting and Financial Services, Grants and Risk Management and Business Management Offices.

The Office of the Coordinator of Public Information is composed of the Offices of Public Affairs, Congressional Liaison 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, for monitoring legislation of general interest to the Institution, and for coordinating special events associated with exhibit openings, lectures and other presentations. The Office of Public Affairs also provides a calendar of events and feature stories on Smithsonian research in the sciences, the arts and history to newspapers across the country. Approximately 1,500 newspapers publish the Smithsonian News Service articles.

The Office of Audits, which reports to the Under Secretary, is responsible for performing all internal and external auditing functions of the Institution.



The internal function includes responsibility for auditing on a recurring basis Federal programs as well as nonappropriated Trust funded activities of the Institution. The Office reports the results of audit findings and makes recommendations to aid Smithsonian management 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 funded by the Smithsonian. These audits are performed upon request of the Contracting Officer and as required by law.

The Office of Computer Services is responsible for analyzing needs and for programming and maintaining automated administrative, collections management and research support systems. Working with Institution curators, historians, scientists and management personnel, the Office assists them in applying computer techniques to the storage, assembly, analysis and reporting of a wide variety of data required for museum and laboratory operations and for administrative and business needs. The Office provides support for museum inventories, the establishment of registration and other systems for the auxiliary activities and the development of the new security system.

The Office of Equal Opportunity plans, conducts and monitors a positive action program to provide equality in all Smithsonian employment practices and program activities. Major efforts include an affirmative action program, employee counseling, upward mobility, a women's program, a cooperative education program and special efforts for minorities, women, the Spanish speaking and disabled persons, all aimed at ensuring equality of opportunity, as directed by Smithsonian management.

The Management Analysis Office provides management staff assistance and advisory services in support of Smithsonian 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 is responsible for providing personnel services, advice and assistance to managers and to employees of the Institution. These services include recruitment, staffing, position classification and wage administration, employee training and development, performance appraisal, labor management relations, retirement counseling, employee benefits services, workers' compensation, equal opportunity, personnel policy evaluation and program development.

The Office of Printing and Photographic Services is the Institution's central office for technical advice, guidance and production of all matters concerning photographic and printing activities in support of the curatorial, scientific, technical and administrative programs. It also furnishes photographs, slides and transparencies with recorded lectures to the general public, schools, research foundations and other museums and government agencies.

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 the Institution's accountability is maintained.

The Office of Supply Services is responsible for the policy, planning and coordination of the Institution's procurement, contracting, property management and supply program. The Office procures supplies, materials, contractual services and equipment for research, curatorial, conservation, exhibits preparation, administrative and other Smithsonian activities. The Office also maintains all property records and performs and oversees periodic equipment inventories to ensure proper accountability, utilization and security.

The Contracts Office assists in obtaining Federal grants and contracts for work which the Institution is qualified to perform, negotiates certain specialized contracts and manages components of the Trust personnel benefits program.

The Travel Services Office plans itineraries and makes arrangements for travel in support of Institution research, curation and administration activities to ensure that travel is accomplished in the most efficient and economical manner possible with particular attention to saving funds by the use of contract and discount fares.

During the past year, there has been considerable progress in several administrative areas, including financial services, contracting and supply, equal employment opportunity and conversion to archival-quality safety film.

After approximately two years of study, a contract was signed for the development and implementation of a new personnel and payroll computer software system which, when operational in early 1983, will integrate data from several areas of administration to provide a consolidated data base for a wide variety of personnel-related information needs as well as for budget and financial purposes. During the past year, four new Accounting Service units have been established in various Smithsonian facilities for a total of six throughout the Institution. These units, linked by a computer terminal to the central Accounting Office, review and process procurement and accounting documents and also provide guidance and assistance to bureaus' administrative personnel on financial procedures. In the Office of Supply Services, the installation of word processing equipment has been completed to handle all purchasing and contract transactions, and a plan to ensure efficient and economical procurement of equipment and other items has been established.

Performance appraisal and Merit Pay systems have been designed, approved by the Office of Personnel Management and implemented by the October 1981 deadline called for in the Civil Service Reform Act of 1978. The first three groups of cooperative education students under the Affirmative Action Program completed their work periods at the Institution, and new upward mobility positions under an expanded program are being announced to create new career ladders for current employees. These and other programs will continue as well as the special efforts in making the Smithsonian more accessible to the disabled.

Approximately 25,000 nitrate negatives have been converted to safety film under a program to eliminate the danger of housing nitrate-based film in photographic collections. In addition, construction on a new cold storage vault for the preservation of photographic collections is to be completed by early 1982. This facility will extend the archival life of color film by ten times and also will insure the almost indefinite life of black and white materials.

EXPLANATION OF PROGRAM INCREASE - For FY 1983, a total increase of \$152,000 is sought for the conversion of nitrate photographic negatives to archival-quality safety film. These historically valuable films provide

researchers with important documentation of objects, collections, research and events pertinent to the Institution, but they are deteriorating rapidly and pose a significant potential fire hazard.

Surveys have determined that there are 200,000 nitrate negatives contained in Smithsonian holdings, with the major collections in the files of the Office of Printing and Photographic Services (OPPS), National Museum of American Art, National Museum of American History, Cooper-Hewitt Museum and the Smithsonian Archives. Using funds appropriated in FY 1980 and FY 1981, a correction program has been instituted to convert these negatives. With available base resources in OPPS, approximately 35,000 negatives will have been converted to safety film by the spring of 1982. Only items deemed to be of continuing research and reference significance are converted. Once converted, nitrate materials are disposed of under proper safety procedures.

The requested additional \$152,000 for FY 1983 (about \$70,000 is now in the OPPS' base) will permit the Institution to accelerate work on this important project. Of the total increase, \$100,000 will be spent by OPPS to continue the conversion of its files (about 18,000 nitrate negatives), and portions of the Juley Collection (a National Museum of American Art collection of some 30,000 nitrate negatives of art and artists) and Pullman and Chaney Collections (some 38,500 nitrate negatives of railroad transportation in the National Museum of American History). Of the amount requested, \$80,000 will be used to purchase photographic services, and \$20,000 will be used to buy archival-quality jackets and other photographic supplies.

An amount of \$27,000 is requested for the Smithsonian Archives which has about 20,000 nitrate negatives documenting field trips and collections made by Smithsonian naturalists in the first part of this century. These funds would enable the Archives to contract to begin conversion of many of the more important and endangered images.

The balance of \$25,000 will allow the Cooper-Hewitt Museum to survey its archives (some 14,000 items, some of which are nitrate materials) for signs of deterioration and to remove damaged film. In those instances where negatives must be copied, work will be accomplished under contract. In some instances, new photography will be necessary to assure photographic documentation of the Museum's collections. A new temperature and humidity control system will be purchased for the storage area, and acid-free envelopes and storage cabinets will be purchased to house the archives for continued safekeeping.

All work will be accomplished with collaboration among the several units involved to assure economical procurement of supplies and services and that archival standards are maintained.

#### 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 \$5,014,000 in FY 1981 and estimated recovery of

\$5,200,000 in FY 1982 and \$5,400,000 in FY 1983. (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. In FY 1981, funds provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program to the Office of Equal Opportunity (OEO) were applied toward the Institution's Cooperative Education Program (\$38,000). Expenditures for the Collections Acquisition, Scholarly Studies and Education Program have been recorded for FY 1981 but not yet for FY 1982 and FY 1983. OEO also receives a general allotment for the continuation of the Cooperative Education Program (expenditures of \$92,000 in FY 1981 and estimated expenditures of \$100,000 in FY 1982 and in FY 1983). Beginning in FY 1982, OEO received another general allotment for a new internship program (estimated expenditures of \$25,000 in FY 1982 and in FY 1983). Funds also have been provided for the development and implementation of a new personnel and payroll computer software system which, when operational in early 1983, will provide a consolidated data base for a wide variety of personnel information including budgetary and other financial data (estimated expenditures of \$50,000 in FY 1982 and \$100,000 in FY 1983). Special purpose funds include anticipated expenditures to support 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 educational 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. In FY 1981, funds were provided from the Inaugural Committee as a reimbursement for expenses associated with Presidential inaugural activities held in January 1981.

Federal Grants and Contracts - In FY 1981, expenditures of \$86,000 were incurred by the Office of Computer Services for outside users of the Institution's computer system. Reimbursements in the same amount were received from outside users.

OFFICE OF DESIGN AND CONSTRUCTION

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	36	1,096	7	196	-	-	-	-	-	-
FY 1982 Base	37	1,476	7	219	-	-	-	-	-	-
FY 1983 Estimate	37	1,557	7	240	-	-	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base <u>FY 1982</u>	Proposed <u>Adjustments</u>	Est. <u>FY 1983</u>
Number of Permanent Positions.....	37	0	37
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	1,158	57	1,215
12 Personnel Benefits.....	114	5	119
21 Travel & Trans. of Persons.....	13		13
22 Transportation of Things.....	2		2
23 Rent, Comm. & Utilities.....	31	3	34
24 Printing and Reproduction.....	30	3	33
25 Other Services.....	53	5	58
26 Supplies and Materials.....	48	5	53
31 Equipment.....	27	3	30
Total	<u>1,476</u>	<u>81</u>	<u>1,557</u>

Analysis of Increase

Necessary Pay.....	22
Inflation.....	19
Restored Position Funds.....	40
Program Funds.....	0

ABSTRACT - The Office of Design and Construction (ODC) provides professional architectural and engineering services to the Institution in support of the maintenance, repair and improvement of its physical plant. These services include short- and long-range planning, cost estimating, engineering and design services, contract administration and supervision, construction management and supervision, interior design and space utilization planning, and technical consulting support. No program increase is requested for FY 1983. Necessary pay of \$22,000 is required for existing staff and an amount of \$19,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$40,000 is requested to provide funding for the one 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 Cooper-Hewitt Museum in New York, the Whipple Observatory in Arizona and the Tropical Research Institute in Panama. This work is performed by a staff of professional architects; electrical, mechanical and structural engineers; and construction managers. Other staff members include architectural and engineering draftsmen, specification writers and administrative support. The services provided by the Office include developing future year physical plant projects, budget estimates and facilities master plans; preparing detailed designs and specifications of current year projects; supervising and reviewing architectural and engineering design contracts; conducting architectural and engineering studies and investigations of buildings operating problems and functional deficiencies; supervising construction contracts awarded by the Institution's Contracting Officer; reviewing designs prepared by the museums' exhibit staffs to ensure their compliance with safety, health, accessibility and other technical standards; and maintaining a central library for cataloguing, filing and identifying all plans, drawings and specifications related to Smithsonian buildings and properties.

During the past several years, ODC has experienced a steady growth in workload which reflects the Institution's priority to assure adequate maintenance of an aging and complex physical plant, to upgrade fire detection and suppression systems, to eliminate architectural barriers and to correct unsafe conditions. The Institution's energy conservation program will depend increasingly on ODC for assistance with projects designed specifically for the purpose of reducing energy consumption. Major renovations of heating, ventilating and air conditioning systems in Smithsonian buildings are needed in order to assure energy efficiency and to accommodate environmental conditions necessary for the preservation of the collections. Continued support from ODC is required for the development of the outlying Smithsonian facilities, as well as for building alterations necessary to meet changing program emphasis. ODC's workload is directly related to the Institution's Restoration and Renovation of Buildings (R&R) appropriation. The R&R appropriation has increased steadily from amounts of \$2,100,000 in FY 1979 to \$7,680,000 in FY 1982; the R&R budget request for FY 1983 is \$8,450,000.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by an allotment and are used primarily to cover the salary and benefits costs of seven employees in FY 1982 (approximately \$211,000) and in FY 1983 (approximately \$231,000) in recognition that the Office provides services to Trust funded as well as Federally funded projects.

OFFICE OF PROTECTION SERVICES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	555	11,603	-	8	-	-74	-	-	-	-
FY 1982 Base	571	12,087	-	6	-	15	-	-	-	-
FY 1983 Estimate	571	14,242	-	6	-	15	-	-	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	571	0	571
Number of Other Positions.....	70	0	70
11 Personnel Compensation.....	9,839	350	10,189
12 Personnel Benefits.....	964	34	998
21 Travel & Trans. of Persons.....	20	4	24
23 Rent, Comm. & Utilities.....	22	4	26
24 Printing and Reproduction.....	2		2
25 Other Services.....	975	760	1,735
26 Supplies and Materials.....	120	21	141
31 Equipment.....	140	982	1,122
42 Insur. Claims & Indem.....	5		5
Total	<u>12,087</u>	<u>2,155</u>	<u>14,242</u>

Analysis of Increase

Necessary Pay.....	178
Inflation.....	69
Restored Position Funds.....	206
Program Funds.....	1,702

ABSTRACT - The Office of Protection Services (OPS) is responsible for security, fire protection, safety and health programs of the Smithsonian. For FY 1983, an increase of \$1,702,000 is requested for security equipment and devices to replace obsolete and worn elements of the security and fire protection system and to purchase new equipment which will satisfy the most immediate protection needs of the Institution. Necessary pay of \$178,000 is required for existing staff and an amount of \$69,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$206,000 is requested to provide funding for the 16 positions restored by the Congress in FY 1982.

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 more than 27 million people each year. The Office provides technical assistance and advisory services to all Smithsonian bureaus, and 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, K-9 officers and plainclothesmen are assigned in the galleries, around the grounds and at entrances and exits during the day and night. They 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. During FY 1981, the operation of checkrooms and elevators, previously staffed by guards, was contracted for allowing ten permanent and nine temporary workyears for protection of museum galleries.

Security officers are responsible for areas designated as "posts." 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).

Additional protection is provided by an extensive radio, telephone and alarms network. An average of over 215 alarms is received daily and each alarm demands immediate response. The communications network enables security officers to respond quickly to all emergencies and to coordinate their activities. During 1981, the number of felonious incidents and misdemeanors committed reached 368. The number of cases requiring investigation by the Security Services Division numbered 118.

The security force is supported by a professional and administrative staff which includes training specialists, safety specialists, fire engineers and inspectors, alarm systems specialists, and investigators. This staff provides in-depth reviews and formulates long-range plans for improved security and safety.

Fire and safety programs include training in preventive techniques, quarterly fire inspections of each facility 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 for compliance with safety regulations. Fire safety presentations are made to approximately 80 percent of Smithsonian staff each year. The safety staff works



to eliminate hazards of accidents and occupational illness. Locations in which asbestos has been discovered are monitored carefully and several projects have been initiated at several museums to remove or contain asbestos. A coordinated effort to eliminate the dangers of cellulose nitrate film in the Institution's collections has begun, and to date about 25,000 cellulose nitrate negatives have been transferred to safety film and some 100,000 more have been moved to safe storage vaults under the control of the Library of Congress until they can be converted and safely disposed of. (See explanation of program increase in the Administration section of this budget.)

Providing health services for the welfare, assistance and emergency medical needs of visitors and staff is an important function of the Office. A survey of the occupational health needs of the Smithsonian was completed in FY 1981, and OPS now is working to improve the medical services available by implementing many of the survey's recommendations. In FY 1981, health services were offered on a regular basis to employees at many of the outlying facilities for which no medical services previously were available. The Health Services Division, composed of a staff doctor and eight nurses, treated 21,505 patients in FY 1981, an average of approximately 59 per day. Among the nonemergency 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 INCREASE - The Office of Protection Services has conducted a careful study of the security conditions at all museums and facilities of the Institution. The results indicate that there are areas where security coverage is not adequate and opportunity exists for theft, break-in or vandalism. Taking into account workyear limitations, the Institution is seeking funds for security devices and equipment. While devices alone cannot provide for complete security, they can increase the effectiveness of existing staff and extend the effective range of guards who are available to respond to them. In FY 1983, an amount of \$1,702,000 is sought to repair, replace and acquire new security equipment for the areas where the most serious gaps exist in the protection of visitors, staff and collections.

Much of the security equipment in operation at the Smithsonian has been acquired over a long period of time to correct specific problems or to meet needs as they arose. As a result, the security given to the National Collections is uneven and in some instances inadequate. Several museums have systems which are obsolete or only function intermittently with frequent repairs 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. Two museums which will require particular attention are the National Museums of Natural History/Museum of Man and American History. These Museums contain artifacts and objects of immense and escalating intrinsic value and others of priceless, cultural, esthetic or scholarly worth. Both of these buildings were constructed in times when the dangers to the collections, visitors and staff were not as great as today.

OPS has a base of only \$100,000 for equipment which is used to purchase such basic items as magnetic contacts, vibrator and break-glass sensors, wire and cable, monitor panels and fire sensors and controls. Additional minor amounts are available occasionally in museum budgets for particular exhibits.

1. Proprietary Alarm System (\$280,000) - 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 this 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 and control of 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. This system is comprised of a central computer that links fire detection and security sensors located throughout a building with a central control room. 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. OPS currently has a base of \$160,000 for the proprietary system and an additional amount of \$280,000 would expedite the conversion. These resources will be used for the purchase of security devices and fire protection sensors that are associated with the system. The current estimate for the total phased conversion is approximately \$3,300,000. (Funding for the proprietary security system to be used for making building alterations and for purchasing permanently installed equipment also is included in the Restoration and Renovation of Buildings Account.)

2. Storage Security (\$340,000) - Only about 10 percent of the Smithsonian collections are on exhibit; the remaining 90 percent are in collections storage areas. These range from well protected vaults for the highest value items to minimally protected storage rooms, attics and buildings (at Suitland, Maryland and North Capitol Street). Improved security is needed for the stored collections as evidenced by the fact that during the past year several important objects were stolen from collections storage areas. The Institution has over 70 million objects and specimens in approximately one million square feet of storage space. The requested amount will be used for purchase and installation of cypher locks, contact alarms, card reader systems, sheargates and electric locks.

3. Perimeter Security (\$290,000) - Although most Smithsonian facilities have adequate security around windows and doors, certain ones lack devices to detect break-ins. To correct this situation balanced magnetic contacts are needed for over 100 perimeter doors, and break-glass or other newer vibrator sensors are required for windows to replace foil strips, the reliability of which is affected by changes in temperature and humidity. The proposed increase will be used to purchase required materials and to provide for installation.

4. Exhibit Cases (\$200,000) - Many of the exhibit cases now in public galleries were designed principally for esthetics and with insufficient consideration for security. More than 600 exhibit cases have been identified which should be equipped with adequate security devices. The requested \$200,000 will be used to purchase and install security screws, detection devices, locks, covers, new shatter-resistant viewing panels and tamper-resistant hardware.

5. Closed-Circuit Television (CCTV) Surveillance (\$110,000) - The use of closed-circuit television in galleries and nonpublic areas can serve to reduce the number of guards needed to be deployed. The proposed \$110,000 will be used for the purchase of 53 additional CCTVs which can be monitored electronically by guards located in control rooms.

6. Replacement of Outmoded Security Equipment (\$234,000) - Security equipment consists of radio devices, security and fire sensors, CCTV cameras and monitors, alarm devices, contacts and ultrasonic devices. Many of these items have an average life of five years and deteriorate with wear and use. An additional amount of \$234,000 is sought to institute a regular replacement program for obsolete and deteriorated equipment.

7. General Interior Security (\$162,000) - Motion detection devices which are activated by movement in a protected area are needed for nonpublic areas and galleries that are closed during or after normal visitor hours. The problem is particularly acute in areas where public and nonpublic space are adjacent, and where access to nonpublic space can be gained easily since patrolling guards are present only for a minimal amount of time. Apart from providing continuous surveillance, these devices also improve security by reducing the number of nonpublic areas that guards have to cover on a regular basis. The proposed amount of \$162,000 will be used to purchase 81 devices to be installed throughout the Institution.

8. Miscellaneous (\$86,000) - Currently \$337,000 is spent for maintenance contracts for security equipment. There has been a 14 percent inflation rate for these services. An additional \$50,000 would allow the Institution to recover from several years of escalating maintenance costs. Funds also would be used to provide for other security needs that do not fit into the above categories such as additional contractual guard services for the Ancon and Naos buildings at the Smithsonian Tropical Research Institute in the Republic of Panama. Also in Panama, guard presence would be extended to parking lots where several automobiles have been broken into recently.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds 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.

OFFICE OF PLANT SERVICES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NONAPPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	
FY 1981 Actual	388	22,813	5	810	1	26	-	23	-	-
FY 1982 Base	396	24,833	5	850	1	2	-	4	-	-
FY 1983 Estimate	396	27,712	5	945	1	-	-	4	-	-

\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1982	Proposed Adjustments	Est. FY 1983
Number of Permanent Positions.....	396	0	396
Number of Other Positions.....	37	0	37
11 Personnel Compensation.....	8,449	226	8,675
12 Personnel Benefits.....	883	21	904
21 Travel & Trans. of Persons.....	14		14
23 Rent, Comm. & Utilities.....	14,148	1,842	15,990
24 Printing and Reproduction.....	7		7
25 Other Services.....	497	364	861
26 Supplies and Materials.....	715	423	1,138
31 Equipment.....	120	3	123
Total	<u>24,833</u>	<u>2,879</u>	<u>27,712</u>

Analysis of Increase

Necessary Pay.....	121
Utilities and Rent.....	1,840
Inflation.....	142
Restored Position Funds.....	126
Program Funds.....	650

ABSTRACT - The Office of Plant Services (OPlantS) operates, maintains and repairs 11 museums and art gallery buildings and a number of other work and collections storage areas located in the Washington, D.C. Metropolitan Area. 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. This year the Office of Horticulture and South Group Buildings Management which are under the supervision of the Assistant Secretary for Museum Programs are included in this section since their functions relate more closely to those of Plant Services.

For FY 1983, an increase of \$650,000 is sought to provide an adequate base for contractual services and for emergency repair funds. Necessary pay in the amount of \$121,000 is required for existing staff and an amount of \$142,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$126,000 is requested to provide funding for the eight positions restored by the Congress in FY 1982. An amount of \$1,840,000 for utilities, postage, telephone and rent costs is being requested in the Uncontrollable section.

PROGRAM - I. Office of Plant Services - With base resources of 326 positions and \$8,791,000, 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. 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 controls and 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 will be reduced by 35 percent and in FY 1983 by an additional 25 percent. This reduction will enable OPlantS to meet more effectively its 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 are purchased in bulk to obtain the most favorable price. 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 communication 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, Cooper-Hewitt Museum and the Chesapeake Bay Center for Environmental Studies. In FY 1980 and FY 1981, 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 1981, the Computerized Preventive Maintenance System issued more than 57,600 scheduled maintenance orders, and almost 55,900 or 97 percent of them were completed.

The Computerized Facilities Monitoring System, which analyzes the operation of various mechanical equipment in major Smithsonian museums, was completed in FY 1980 and is working effectively. The System uses sensors on over 4,000 pieces of equipment and automatically alerts a central computerized control center to equipment malfunctions.

OPlants also continues to play a major role in contributing to overall Smithsonian energy conservation efforts, discussed more fully in the Uncontrollable section.

II. Office of Horticulture - With base resources of 29 positions and \$1,085,000, the Office of Horticulture uses the disciplines of horticulture as an educational, scientific, research and exhibition program for the Smithsonian Institution. The Office performs a number of functions which include providing interior and exterior landscaping services from design through installation and maintenance; research and development of historically styled gardens and interior planting; maintenance of Smithsonian grounds and 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 pest control and snow and ice removal from sidewalks and parking lots in 15 locations on and off the Mall.

III. South Group Buildings Management - With base resources of 41 positions and \$865,000, South Group Buildings Management is responsible for cleaning, minor 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 1983, a total increase of \$650,000 is sought to provide adequate base funds for contractual services and basic supplies used extensively by the Office of Plant Services in maintaining Smithsonian buildings and in making emergency repairs to mechanical and electrical systems. Experience during past years has shown that large sums have been reprogrammed from research, exhibitions and collections management programs of museums and research organizations in order to defray base shortages. Such reprogrammings are damaging to these programs. Furthermore, the uncertainty of fund availability makes it difficult for OPlants to schedule work and often results in higher costs.

The FY 1982 Congressional budget request contained an increase of \$350,000 to provide adequate base funds for the contractual services used extensively by the Office of Plant Services in maintaining Smithsonian buildings and for defraying the cost of emergency repairs. However, the four percent reduction required by the FY 1982 Appropriation to OPlants' line item (which included base funds for operations of \$9,381,000 and the utilities and rental base of \$14,095,000) was absorbed totally in the operating account. No reduction was possible in the available utilities and rental funds since they are relatively uncontrollable and barely adequate to meet costs. Therefore, while Congress did approve an increase of \$350,000 in FY 1982, the four percent reduction, which totaled \$940,000, actually reduced available operating funds for FY 1982 by

\$590,000. Moreover, an additional amount of approximately \$300,000 was reprogrammed in FY 1981 to cover base shortages, and it is anticipated that a similar reprogramming again will be necessary in FY 1982.

The severe base shortage for this unit has been worsened by the sharp inflationary increases in the cost of services and supplies since FY 1979. The cost of the elevator maintenance contract increased from \$223,000 in FY 1979 to \$266,000 in FY 1982; the trash removal contract increased from \$26,000 in FY 1979 to \$41,000 in FY 1982; the uniform cleaning contract increased from \$33,000 in FY 1979 to \$50,000 in FY 1982; and OPlants' power management and equipment monitoring computer maintenance contract increased from \$13,000 in FY 1979 to \$17,000 in FY 1982. These sample contracts represent an average 27 percent increase in costs for FY 1982 over FY 1979. Other annual service contracts have experienced similar increases which are expected to continue in FY 1983. Reductions in the scope of the contracts are impossible without severely endangering the safety and health of visitors and staff, the condition of the collections and the operation of Smithsonian buildings.

Similar sharp cost increases have been experienced over this same period for basic supplies and materials. For example, the cost of gasoline has risen from \$35,000 in FY 1979 to an estimated \$65,000 in FY 1982, even though the Institution's total usage in gallons has risen only four percent; a carton of plastic bags used for trash collection has risen from \$13.40 in FY 1979 to \$20.60 in FY 1982; number 12 electrical wire has risen from \$14.68 a coil in FY 1979 to \$33.25 in FY 1982; floor stripper rose from \$321.20 a drum in FY 1979 to \$363.00 in FY 1982; and locksets increased from \$49.00 a unit in FY 1979 to \$64.00 in FY 1982. Similar increases in the range of 25 percent on the average have been experienced over the past several years in almost all mechanical, custodial and craft supplies used in the day-to-day operation, maintenance and repair of the physical plant.

The addition of \$650,000 will allow the Office of Plant Services to meet its operations and maintenance obligations and to purchase supplies and services without the need for diverting significant resources from other planned programs.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and are used primarily to cover the cost of five employees (\$103,000 in FY 1982 and \$116,000 in FY 1983) and to provide for the payment of the Trust fund share (approximately 40 percent) of the Smithsonian's annual Federal Telecommunications Network System and for the Trust fund share of rental costs for administrative units located in L'Enfant Plaza (\$683,000 in FY 1982 and \$763,000 in FY 1983). Special purpose funds are provided primarily from user reimbursements for services rendered to Trust funded units (Office of Plant Services) and from proceeds from sales to museum shops (Office of Horticulture). These are used to purchase supplies, services, equipment and plant materials for museum landscape projects. In FY 1981, funds also were provided from the Institution's Collections Acquisition, Scholarly Studies and Education Program for the acquisition of audiovisual equipment to be used in the operation of the Audiovisual Unit (\$9,000). No other funds are anticipated from this source in FY 1982 and FY 1983.

Restricted Funds - These consist of gifts and grants from individuals, foundations, organizations and corporations for specific purposes. In FY 1981, for example, individual contributions totaling \$23,000 were used for the continued support of the horticultural exhibition "Horticultural Extravaganza" which opened in 1980. No significant funds are anticipated in FY 1982 or FY 1983.





TAB B

MUSEUM PROGRAMS AND RELATED RESEARCH  
(SPECIAL FOREIGN CURRENCY PROGRAM)



SMITHSONIAN INSTITUTION  
MUSEUM PROGRAMS AND RELATED RESEARCH  
(SPECIAL FOREIGN CURRENCY PROGRAM)

1981 Appropriation.....\$3,650,000  
 1982 Appropriation.....\$4,320,000 Equivalent in Excess  
 1983 Estimate.....\$2,000,000 Foreign Currencies

For FY 1983, the Smithsonian requests an appropriation of \$2,000,000 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. Of the total requested, \$1,700,000 will be available for one-year funding of continuing projects; and \$300,000 will support new projects.

Obligations of Funds by Program Area  
 (dollar equivalents)

	<u>FY 1981</u> <u>Actual</u>	<u>FY 1982</u> <u>Estimate</u>	<u>FY 1983</u> <u>Estimate</u>
Archeology and Related Disciplines	\$2,624,000/1	\$3,115,000/2	\$1,565,000
Systematic and Environmental Biology	402,000	555,000	285,000
Astrophysics and Earth Sciences	174,000	240,000	95,000
Museum Programs	216,000	251,000	130,000
Grant Administration	287,000/3	40,000/3	25,000/3
Science Information Program (Translations)	<u>-0-</u>	<u>300,000 /4</u>	<u>-0-</u>
Total	\$3,703,000	\$4,501,000	\$2,100,000

/1 Includes obligation for AIIS forward-funded reserve: FY 1981, \$750,000.

/2 Includes obligation for U.S. contribution for Moenjodaro: FY 1982, \$960,000.

/3 Includes transfers to the State Department for "Foreign Affairs Administration Support."

/4 Includes estimates for the Science Information Program for translations.

PROGRAM OF GRANTS FOR RESEARCH

The Smithsonian Foreign Currency Program supports "the increase and diffusion of knowledge" by making 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. An appropriation of \$2,000,000 equivalent in excess foreign currencies is sought for these grants.

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. It 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.

The Program strengthens 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 worldwide 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 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 1981, grants supported the following projects of special interest:

--comparison of prehistoric and modern pollen samples in Pakistan is providing data for understanding the environment of pre-Harappan and Harappan periods, existing over 5,000 years ago;

--continuing limnological analysis of Lake Ohrid, Yugoslavia is providing data for a management plan for the ancient lake which is being polluted with urban and industrial waste; and

--examination of broad populations of Punjabi youths for dental malocclusion is contributing important anthropometric data for the understanding of this dental problem which, like many chronic ailments, increases drastically with modern development.

In astrophysics and earth sciences, contributions were made to the study of the earth and its management. For example, the data from geological investigation of Quaternary deposits on factors controlling prehistoric occupation of the Nubian Desert are being used to predict and manage future land use and conservation.

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 1981, grants supported the following projects:

--study of the widespread migration of professional and highly skilled Gujaratis and Punjabis from India is determining the effects on the society from where the migrants originated;

--linguistic evidence is being used in an innovative study in India to answer questions concerning the prehistory of the subcontinent by examining relations between linguistic change and prehistoric events; and

--a major exhibition, "The Renaissance of Islam: Art of the Mamluks," was developed to tour the United States, exposing the medieval artifacts from a little known period of a major world culture.

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 1981, for example, United States scholars received support for participation in exchanges on the subjects of Himalayan geology, Mamluk art, sanskrit and Tamil studies, tropical ecology, global time synchronization and natural history exhibition techniques.

### 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 stabilizing funding before that time through multi-year grants and through a substantial forward-funded reserve for the American Institute of Indian Studies. To date, an amount of \$1.250 million has been appropriated for the reserve; requests for additional sums are planned in future years.

### Benefits to United States Institutions

Since the inception of the Program in FY 1966, Smithsonian grants have been made to 221 United States institutions in 40 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 1981.

Collections of original biological specimens and the archeological and ethnographic materials are acquired in the course of field research. They 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 benefits of the Program have extended to a far larger number of institutions than the 221 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 425 AIIS fellows over the 14-year period from FY 1968 through FY 1981. The fellows were drawn from 58 United States institutions in 22 states. Program grants also have supported more than 70 ARCE projects over the 16-year period from FY 1966 through FY 1981, and since FY 1977, 50 ARCE fellows have received Smithsonian support. Nine ASOR excavations in Israel and Tunisia provided research opportunities for more than 260 senior United States 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-United States Subcommittee on Education and Culture, has sent 47 scholars from United States 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 specific area of sciences 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 other grantee, receives personal compensation to duplicate or supplement his salary. Program awards cover only field research costs in the excess currency country and travel to that country.

The awards to Smithsonian employees are executed as normal Federal allocations 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.

#### INTERNATIONAL EFFORT TO SALVAGE MOENJODARO

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. Tender documents are being prepared for water pumps and structures and for planting the area with salt-resistant plants to consolidate the soil and provide suitable protection from wind-driven sands. To date, UNESCO has raised approximately \$1.3 million, mainly from governmental contributions of member states. These funds 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 Smithsonian is confident that this project, long in the planning stage, is now well launched. Accordingly, the Institution plans to transfer to UNESCO in FY 1982 the amount of \$960,000 equivalent in non-convertible Pakistani currency as an initial contribution from the United States toward this important project. Although the Smithsonian is not seeking funds for this project in FY 1983, requests for further installments toward a total Smithsonian contribution of \$4 million may be forthcoming.

Obligations of Funds by Country  
(dollar equivalent)

	<u>FY 1981</u> <u>Actual</u>	<u>FY 1982</u> <u>Estimate</u>	<u>FY 1983</u> <u>Estimate</u>
Burma	\$ 21,000	\$ 15,000	\$ 5,000
Egypt	769,000	-0-	-0-
Guinea	-0-	-0-	-0-
India	2,829,000/ <u>1</u> / <u>2</u>	3,135,000/ <u>1</u> / <u>3</u>	1,845,000/ <u>1</u>
Pakistan	<u>84,000</u>	<u>1,351,000</u> / <u>3</u> / <u>4</u>	<u>250,000</u>
TOTAL	\$3,703,000	\$4,501,000	\$2,100,000

/1 Includes transfers to the State Department for "Foreign Affairs Administrative Support."

/2 Includes obligation for AIIS forward-funded reserve: FY 1981, \$750,000.

/3 Includes estimates for Science Information Program for translations.

/4 Includes obligation for U.S. contribution for Moenjodaro: FY 1982, \$960,000.

Status of Smithsonian SFCP Funds  
(dollar equivalent)

	<u>FY 1981</u> <u>Actual</u>	<u>FY 1982</u> <u>Estimate</u>	<u>FY 1983</u> <u>Estimate</u>
Unobligated Balance, Start of Year	\$ 23,000	\$ 141,000	\$ 60,000
Appropriation	3,650,000	4,320,000	2,000,000
Recovery of Prior Years' Obligations	171,000	100,000	100,000
Unobligated Balance, End of Year	<u>-141,000</u>	<u>-60,000</u>	<u>-60,000</u>
TOTAL OBLIGATIONS	\$3,703,000	\$4,501,000	\$2,100,000



TAB C

FACILITIES PLANNING, RENOVATION,  
RESTORATION, AND CONSTRUCTION



FACILITIES PLANNING, RENOVATION, RESTORATION AND CONSTRUCTION

Summary

<u>Account</u>	<u>FY 1981 Appropriation</u>	<u>FY 1982 Appropriation</u>	<u>FY 1983 Estimate</u>
Construction and Improvements, National Zoological Park	\$ 3,290,000	\$1,104,000	\$ 1,550,000
Restoration and Renovation of Buildings	7,539,000	7,680,000	8,450,000
Construction: Museum Support Center	5,000,000	--	--
Quadrangle Development	<u>    --</u>	<u>    960,000</u>	<u>    36,500,000</u>
Totals	\$15,829,000	\$9,744,000	\$46,500,000

The FY 1983 appropriation request for construction and improvements at the National Zoological Park will be used to continue progress on the approved Master Plan for the improvement of animal and public facilities 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 Master Plan development scheduled for FY 1983 consists of planning and the preliminary design of the Olmsted Walk Exhibits. These consist of a series of small exhibits at the Connecticut Avenue pedestrian and vehicle entrances extending along the central walkway.

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.

Finally, appropriated funds sought in FY 1983 combined with the Institution's nonappropriated Trust funds and other sources are designated for the construction of new facilities in the Quadrangle. The Quadrangle consists of an area of approximately 4.2 acres and is located between the Smithsonian Institution Building and Independence Avenue. Quadrangle development will include a cultural and art center that will house exhibition galleries and supporting museum facilities for the proper display of the unique collections of the National Museum of African Art, as well as for the expansion of programs of the Freer Gallery of Art. The center will offer an opportunity for foreign nations to present their most important cultural accomplishments.

Justification for these programs and projects appears in the following section.

CONSTRUCTION AND IMPROVEMENTS  
NATIONAL ZOOLOGICAL PARK

1981 Appropriation.....	\$3,290,000
1982 Appropriation.....	\$1,104,000
1983 Estimate.....	\$1,550,000

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. 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.

The requested FY 1983 appropriation will be used as follows:

Entranceway and Olmsted Walk Exhibits (design)	\$ 350,000
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Renovations, Repairs and Improvements:

National Zoological Park - Rock Creek	1,000,000
Conservation and Research Center - Front Royal	<u>200,000</u>
Total	\$1,550,000

Status of Construction Program: The Master Plan - The National Zoological Park (NZP) 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 the 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 renovation and improvement 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 estimated at \$118,000,000, to 30 projects and a current estimate of \$73,050,000. The 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 \$36,650,000 appropriated to date has been spent on 25 new exhibits and support facilities either completed or under construction. Funds appropriated in FY 1981 are being used to construct a Monkey Island

Exhibit which will show the animals in spacious indoor and outdoor enclosures that will closely approximate their natural habitat. The facility is expected to open to the public in the spring of 1983. The Monkey Island Exhibit is the final major facility in the Central Area Complex which also includes new or renovated facilities for Great Apes, reptiles, small mammals and monkeys. An amount of \$36,400,000 will be required to complete the remaining projects, as scheduled, within the Master Plan. Accomplishments and planned projects are shown on page C-5.

With the decision to defer the construction of the Aquatic Habitats Exhibit until FY 1986, the Zoo plans, in the next three years, to complete one of the remaining four exhibits and research projects at Rock Creek and to move ahead with development of breeding facilities at the Front Royal Conservation and Research Center.

Entranceway and Olmsted Walk Exhibits (design) (\$350,000) - An amount of \$350,000 is requested for the planning and preliminary design of the Olmsted Walk Exhibits projects. These consist of a series of small exhibits planned for the Connecticut Avenue pedestrian and vehicle entrances, as well as along the central walkway. The exhibits will be designed to complement the major exhibit areas. For example, a series of small, freestanding cages for birds and hardy small mammals will be shown opposite the Great Ape exhibits, and small cats and leopards will be located adjacent to the lion/tiger exhibit. There is provision also for moving the existing walk in certain places to allow for expansion of exterior yards for animals, such as Bongos and Dorcas gazelles. Construction funds estimated at \$4,000,000 for the project are expected to be sought in FY 1985. The two-year interval between design and construction will allow sufficient time to complete the plans and receive the approval of the National Capital Planning Commission and the Commission of Fine Arts.

Renovation, Repairs and Improvements: Rock Creek (\$1,000,000) - An amount of \$1,000,000 is requested 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 repair 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 1983 for several projects including the following which are of high priority:

- repairs to Monkey House cage doors and windows. The Monkey House was renovated in FY 1972. The steel in the doors and window frames, which is now beginning to deteriorate due to moisture and strong detergents, will be replaced with noncorrosive materials;
- repairs to Seal, Sea Lion and Polar Bear filter systems. Modifications are needed to improve the water filtration systems in certain exhibits. Additionally, all of the sand filters will be repainted, and equipment, which will grind up leaves and debris before they reach the pumps, will be installed;
- renovation of the Hospital and Research Building's heating, ventilating and air conditioning (HVAC) systems. Construction of this facility was completed in 1969, and to date no major renovation of the heating, ventilating and air conditioning systems has taken place. At this time, it

is anticipated that the HVAC systems for all five climate control rooms will be replaced. It also is planned to replace two package boilers, which supply heat and hot water to the building. Other anticipated renovation includes the installation of new air handler units and the addition of a new humidification system for the building. Once completed these modifications will result in a savings of an estimated 30 percent in total energy consumption for the facility; and

--Bird House improvements. A number of the wooden members of the skylight in the indoor flight room are beginning to deteriorate due to moisture problems. New noncorrosive materials will be used to replace all the wooden members. Other planned work will include installation of additional drains in the basement animal holding areas and replacement of the package boiler for the building.

Renovation, Repairs and Improvements: Front Royal (\$200,000) - An amount of \$200,000 is requested to continue the program of renovations and repair of existing facilities at the Conservation and Research Center, Front Royal, Virginia. This level of support will allow upgrading of electrical, plumbing and heating components in an additional seven of the Center's buildings. Other projects anticipated for FY 1983 include repairs to floors which have been damaged by termites and repairs to the roofs on a number of other facilities.

(Dollars in thousands)

NATIONAL ZOOLOGICAL PARK  
Construction Program  
1974-1987

Estimates include cost  
escalation to March 1983.

Activity	1974-81	1982	1983	1984	1985	1986	1987	Repro- grammings	TOTAL
<u>I. Master Plan</u>									
Lion-Tiger Facility	3,000 /1								3,000
Elephant/Bird House	3,130							+26	3,156
Education-Administration Building	2,500							-157	2,343
General Services Facility	7,000							+834	7,834
Parking Facility							750 /2		750
Lower Rock Creek Valley	3,000							-1	2,999
Beaver Valley Area	6,410							-431	5,979
Central Area	10,390							-264	10,126
Waterfowl Pond and Small Cats	520							-15	505
Aquatic Habitats	500								17,500
Health & Research Hill (incl. Holt House Renovations)					1,000	16,000			
Master Graphics	200				400		3,900	+1	4,300
Entranceway & Olmsted Walk Exhibits			350		4,000				201
Subtotals	36,650		350		5,400	16,000	4,650	-7	63,043 /3
<u>II. Renovations, Repairs &amp; Improvements</u>									
Rock Creek	3,680	500	1,000	1,000	1,000	1,000	1,000 /4	+7	9,187
Conservation & Research Center	5,230 /5	604	200	2,750	2,100	1,175	700 /4		12,759
GRAND TOTALS	45,560	1,104	1,550	3,750	8,500	18,175	6,350	-	84,989

/1 Excludes \$275,000 for planning appropriated in FY 1973.

/2 Citizen participation through parking revenues will contribute an additional \$2,000,000 or more to the estimated construction cost of \$10 million by FY 1988.

/3 The current total estimated cost for the Master Plan is \$73 million. This includes the construction of the parking facility (see footnote 2).

/4 In subsequent years, major repairs and maintenance are expected to require \$1,000,000 at Rock Creek and \$600,000 at the Conservation and Research Center annually.

/5 Excludes \$125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings Account.

RESTORATION AND RENOVATION OF BUILDINGS

1981 Appropriation.....	\$7,539,000
1982 Appropriation.....	\$7,680,000
1983 Estimate.....	\$8,450,000

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, and aircraft and spacecraft display facility 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 \$56.3 million between FY 1983 and FY 1987 (in 1983 dollars). The FY 1983 request of \$8,450,000 represents an increase of \$770,000 over the FY 1982 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 historical character of the Smithsonian facilities.

The justification for this year's budget request follows:

1. General repairs and improvements	\$ 300,000
2. Facade, roof and terrace repairs	3,300,000
3. Fire detection and suppression systems	1,205,000
4. Access for the disabled, safety and security and correction of hazardous conditions	665,000
5. Utility systems repairs and improvements	2,380,000
6. Other projects	<u>600,000</u>
Total	\$8,450,000

GENERAL REPAIRS AND IMPROVEMENTS (\$300,000): 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 specifically anticipated. Examples of projects include unforeseeable 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 1983, an amount of \$300,000 is requested, of which \$200,000 is designated for emergency repairs and \$100,000 will be used to repair a pier which supports the seawater system and other research programs at the Smithsonian Tropical Research Institute in Panama.

FACADE, ROOF AND TERRACE REPAIRS (\$3,300,000): 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 weathertight 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 about every five years. Several Smithsonian buildings require large-scale renovations, and work is underway to assure that these major deficiencies are corrected so that in the future, a routine maintenance and repair program will be adequate for the protection of the exteriors of these buildings.

Examples of projects in this category that either were accomplished recently or are nearing completion include recaulking and repointing the facade, and the application of a new roof membrane at the American Art/Portrait Gallery Building; replacing windows and cleaning and sealing the facade of the Hirshhorn Building; recaulking the American History Building facade; roof repairs to

several buildings at the Suitland, Maryland facility; and repairs to the east wing roof and a portion of the west wing gutters of the Smithsonian Institution Building. Planning and design are underway for stone repairs at the American Art/Portrait Gallery Building; for plaza resurfacing at the Hirshhorn Building; and for window repair at the Natural History Building. Construction continues on the terrace repairs at the American History Building.

Good progress now is being made in the renovation of the facade of the 120-year-old Renwick Gallery Building. 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 were then 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 for 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 because of the non-breathable material that had been applied, and this had resulted in an even greater acceleration of the sandstone 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 and 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, is expected to be completed in the spring of 1983.

To date, an amount of \$2.65 million of the \$5.85 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 of the sandstone detail 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 and the

\$750,000 appropriated in FY 1982 will be used to begin the next major construction phase, consisting of precasting the replacement building parts, preparation of the facade and placement of the new facade. A further amount of \$1 million is requested for FY 1983 to continue this work. Additional funds of \$2.2 million are expected to be sought through FY 1985 to complete the facade repair.

An amount of \$2 million is requested for FY 1983 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; 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 and detailed drawings and specifications for the remaining work. The preliminary design effort now is complete with the architect/engineer preparing the construction bidding documents on a phased basis. The FY 1981 and FY 1982 appropriations of \$1 million and \$930,000, respectively, are being used to continue construction related to the roof replacement on a quadrant by quadrant basis. Work includes the removal and replacement of existing roofing, flashing and underlayments; 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 extensive repairs 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 sheetmetal. An amount of \$2 million is requested for FY 1983 to continue the renovation. The total project cost is estimated to be \$15.4 million: the balance of \$10 million is expected to be sought in future years.

In November 1981, an engineering consultant completed an evaluation of roof, facade and terrace moisture problems being encountered at the Air and Space Building. The study found that a combination of design and workmanship defects will necessitate repairs to the roof, exterior stone walls and parapet; redesign and replacement of plaza materials; correction of leakage through the skylight system; and correction of leakage of the window walls primarily at the base. These repairs are estimated to cost a total of \$4 million. The Institution has requested GSA to review the consultant's findings and to follow through on any legal remedies available to the Government.

For FY 1983, an amount of \$200,000 is sought to begin roof and facade repairs. Although there is minimal current roof leakage, the high moisture content of the roof membranes indicates a premature failing in three to five years, owing to defective workmanship. The total cost of roof replacement, including the installation of increased insulation for energy efficiency, will be approximately \$900,000. At the same time, warm, moist interior air is condensing on the cold, uninsulated stone in the parapet area, and exterior stone joints leak because of a combined design and workmanship defect. The total cost of this remedial work is estimated to be an additional \$1 million.

An amount of \$50,000 is requested for the engineering investigation and design of roof repairs for the American History Building. The roof is nearly 20 years old and with the exception of repairs recently to several areas of the main and lower roofs, no major repairs have been accomplished to date. Leakage resulting from prolonged periods of rain has been observed and poor drainage is a major problem. The cost estimate for the repairs and the replacement is approximately \$1.5 million which is expected to be sought in future years.

An amount of \$50,000 is requested to begin repairs to the decorative marble trim and deteriorating brickwork of the Cooper-Hewitt Miller House in New York City. The mortar is disappearing due to age and acid rain. The planned repairs will stop further deterioration and prevent the trim and brickwork from becoming a pedestrian hazard. Additional funds will be required in subsequent years to complete the work.

FIRE DETECTION AND SUPPRESSION SYSTEMS (\$1,205,000): 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, and fire retardant materials are used wherever possible.

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 by FY 1986. 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 FY 1982. An amount of \$350,000 is requested for FY 1983 to complete the east wing sprinkler piping, 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 \$2.45 million will be required in future years to complete the fire protection master plan work in the Natural History Building.

The fire protection master plan for the American History Building was completed during FY 1980. This plan outlines phased improvements similar to those underway or planned for the Natural History Building, including upgrading or adding sprinkler and detection systems; providing for emergency power; installing a new fire alarm system; and undertaking architectural modifications to improve the efficiency of fire zones and exit capability. With funds of \$565,000 appropriated between FY 1980 and FY 1982, the fire protection study was completed; the fire door separations were designed for the first floor; and the design and installation of a new ten-inch water main from the street to the building was completed. For FY 1983, an amount of \$350,000 is requested to provide for the design and installation of electrical trunk lines for smoke detection systems and sprinkler enunciation alarms.

An amount of \$75,000 is requested in FY 1983 to continue to install sprinklers and smoke detectors in unprotected areas of the Arts and Industries Building. With the \$75,000 appropriated in FY 1982, sprinkler and smoke detection systems will be installed in selected priority areas of the Building. It is anticipated that an additional amount of approximately \$300,000, expected to be sought in future years, will be required to meet the balance of the fire needs of this building.

Funding of \$100,000 is requested in FY 1983 to carry out needed fire protection measures on Barro Colorado Island at the Smithsonian Tropical Research Institute, such as the installation of fire detection and suppression systems, alarm systems and fire-rated partitions. It is expected that an additional \$100,000 will be sought to complete the fire protection system in future years.

An additional amount of \$330,000 is requested in FY 1983 for four fire protection projects. For the American Art/Portrait Gallery Building, \$65,000 is sought to install wet pipe sprinkler systems in storage areas; for the Smithsonian Institution Building, \$145,000 is sought for the design and installation of smoke detector systems; for the Freer Gallery Building, \$100,000 is sought to install sprinkler systems in basement areas and smoke detectors throughout the building, and to construct a storage area for combustible materials; and for the Chesapeake Bay Center, \$20,000 is sought to install smoke detector systems in the Calf Barn, now being used as a scientific laboratory, and in the combination dormitory/visitors center building.

ACCESS FOR THE DISABLED, SAFETY AND SECURITY AND CORRECTION OF HAZARDOUS CONDITIONS (\$665,000): 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 modifications to the north and south entrances of the Natural History Building to improve access and to increase emergency exit capability; safety improvements to one of the National Museum of American History's storage buildings at the Suitland facility; rest room modifications in the Natural History Building; the installation of a wheelchair lift at the Mall entrance of the Smithsonian Institution Building; the construction of ramps at the National Museum of African Art to permit access to all buildings, and the installation of an elevator in this Museum's Frederick Douglass House so disabled persons can reach exhibits on all levels of this historic building. The construction of a system of ramps in the Hirshhorn Sculpture Garden was completed and the original unstable surface was replaced with brick pathways to ease movement for mobility impaired persons. The Garden reopened to the public in September 1981.

The safety and security of collections, visitors and staff also demand facilities modifications. A major focus of attention will continue to be 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 buildings. Three methods of correcting the problem, used singularly or in combination, have been identified: (1) complete removal of existing asbestos materials in accordance with guidelines of the Environmental Protection Agency (EPA) and replacement with substitute materials that provide the required thermal insulation, acoustic dampening or fire protection properties; (2) encapsulation with a spray-on fire retardant material that is approved by EPA; and

(3) containment with drywall or another suitable material by constructing an airtight inner shell that seals the asbestos between existing construction and the new shell. Funds of \$500,000 appropriated for this purpose in FY 1981 (\$250,000) and in FY 1982 (\$250,000) were applied toward the containment or removal of asbestos in the attics, mechanical equipment rooms and skylight areas of the American Art/Portrait Gallery Building and in the carpentry shop in the Natural History Building. A further amount of \$350,000 is requested to continue the asbestos abatement program at the American Art/Portrait Gallery Building in FY 1983. Since additional areas have been determined to have asbestos present, the total cost estimate of this project over a ten-year period has increased from \$2.5 million to \$4 million.

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. The current estimate for the total phased conversion is approximately \$3.3 million. Funds were appropriated in FY 1982 (\$300,000) to begin the procurement of computers and display equipment and to begin the building alterations required to accommodate these items. An amount of \$300,000 is requested in FY 1983 to continue equipment procurement and building alterations. (Funding for the proprietary security system also is included in the Salaries and Expenses account under the Office of Protection Services. The Restoration and Renovation of Buildings account is being used to fund building modifications and permanently installed equipment.)

The final item in this category is an amount of \$15,000 sought in FY 1983 to install a dust collection system in the American History Building's object processing facility. The dust collection system is needed to protect the employees and to improve fire safety.

UTILITY SYSTEMS REPAIRS AND IMPROVEMENTS (\$2,380,000): 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 better understood. 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 are being 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 includes 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 1983, an amount of \$2.38 million is sought to continue work on HVAC renovation projects begun in FY 1981 and in FY 1982 and to initiate several new projects.

The first major phase of the renovation of the HVAC system at the Freer Gallery Building was initiated with funds of \$300,000 appropriated in FY 1981. The \$380,000 appropriated in FY 1982 is being used to continue this project, which also includes renovation of the building's steam station and some electrical rewiring. For FY 1983, an amount of \$500,000 is requested to complete the HVAC renovation.

Throughout the Natural History Building, there is a poor balance of temperature and humidity conditions, and the ventilation and exhaust systems are inadequate. A HVAC and energy conservation study is in progress to identify solutions to problems. In April 1982, the study recommendations will be available and the Institution will place the projects in priority order. Funds of \$375,000 appropriated in FY 1982 will be used to contract for the design of a new HVAC system. For FY 1983, an amount of \$350,000 is requested to begin the construction. In addition to funding the study, a part of the FY 1981 appropriation of \$227,000 was used to install a separate HVAC system in the building auditorium.

At the American History Building, a comprehensive HVAC study also is in progress using funds of \$100,000 appropriated in FY 1981. Additional monies appropriated in this category in FY 1981 (\$230,000) and FY 1982 (\$430,000) are being used to begin replacing deteriorated air handling units, adding related reheat coils, steam humidifiers, new controls and other improvements. For



FY 1983, an amount of \$375,000 is requested to continue the HVAC renovation. Requirements anticipated for FY 1983 and beyond include a pump replacement; continued replacement of air handlers; improvements to environmental controls and zoning; repair or replacement of cooling towers; installation of improved air filtration and humidification systems; replacement of refrigeration compressors; and other projects designed to improve operating efficiency and to reduce maintenance costs. An additional amount of approximately \$1.2 million will be required through FY 1987 to continue work on this project. In addition, an amount of \$100,000 is requested for FY 1983 to replace the main cafeteria sewage ejector.

Currently, temperature and humidity conditions in the Arts and Industries Building cannot be controlled properly. The heating and cooling systems are not effective during transition seasons, and the entire system is a high energy user. Funds of \$100,000 appropriated in FY 1981 were used to contract for engineering services to develop a master plan and to design the upgrading of the building's HVAC system. Improvements are to include the installation of an energy conserving system, providing capability for increasing amounts of outside air to interior areas to help regulate building temperatures; the addition of necessary reheat coils to control temperatures; the modification of controls on air handling units; and the addition of new steam humidifiers. The FY 1982 appropriation of \$200,000 is being used to begin the program of improvements. An additional \$200,000 is requested for FY 1983 to continue the modifications to the HVAC systems. The total construction cost currently is estimated at \$4 million.

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 of \$225,000 appropriated in FY 1982. An amount of \$700,000 is requested for FY 1983 to continue the HVAC construction. An additional amount of \$800,000 will be required in future years to complete this first phase of construction.

An additional \$155,000 is requested in FY 1983 for three HVAC projects: \$50,000 to upgrade components of the Cooper-Hewitt Museum's HVAC system; \$75,000 to upgrade the water and sewage systems to eliminate health hazards by installing a small water treatment facility on Barro Colorado Island at the Smithsonian Tropical Research Institute; and \$30,000 to replace heating and cooling coils at the Hirshhorn Museum Building.

OTHER PROJECTS (\$600,000): 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 major accomplishments in this category include the construction of a new maintenance building at the Chesapeake Bay Center for Environmental Studies; the installation of a seawater system that meets special research needs at the Smithsonian Tropical Research Institute; construction of a support annex that now connects two existing telescope buildings at the Whipple Observatory on Mt. Hopkins; and also at the Observatory, construction of a dining/commons building.

--Mt. Hopkins, Arizona, Whipple Observatory Site Development (\$300,000)

The Observatory's highest priority facilities objective is completing the required safety improvements for the single-lane 20 and one-half mile access road built in 1967. An amount of \$1.471 million has been appropriated to date for the project. With these funds, approximately 85 percent of the road improvements has been accomplished, including grading, insloping, realigning of severe curves and drainage improvements. An amount of \$300,000 is requested for FY 1983 to complete the road safety improvements. The requested funds will be used to finish the insloping, widen curves, improve drainage, install guardrails and headwalls on the mountain road, and to provide dust abatement paving in the immediate vicinity of the Observatory's telescope facilities.

--Suitland Storage Facility - National Museum of American History (\$300,000)

For FY 1983, an amount of \$300,000 is requested to encapsulate asbestos, add new insulation and install fire protection and HVAC systems for the National Museum of American History's storage Building 16 at the Suitland Facility. This building will contain selected articles from the collection which require museum quality environmental conditions. Approximately \$100,000 will be used for the asbestos containment; the remainder will be used to replace insulation, to install environmental control systems and to make related physical alterations. These improvements are an essential element of the Museum's Collections Management/Inventory Program and will provide the special temperature and humidity requirements necessary to avoid further deterioration of the artifacts.

RESTORATION AND RENOVATION OF BUILDINGS  
PLANNED PROGRAM  
FY 1982 - FY 1987

(Dollars in thousands)

	<u>FISCAL YEARS</u>					<u>Total FY 1983-87</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	
<u>GENERAL REPAIRS AND IMPROVEMENTS</u>	685	300	1,070	1,295	1,360	5,305
<u>FACADE, ROOF AND TERRACE REPAIRS</u>						
American Art/Portrait Gallery (AA/PG)	175					--
-repoint facade	10			150	150	450
Arts and Industries Building (A&I)	930	2,000	2,500	2,500	2,500	12,000
-roof and exterior renovation	50				400	400
Hirshhorn Museum - resurface plaza						
Museum of American History (MAH)	150					--
-recaulk facade						
-remove ramp and canopy/waterproof			390			390
-roof replacement		50	750	750		1,550
Museum of Natural History/Museum of Man (MNH/MOM)	50					--
-repair/reglaze windows						
National Air and Space Museum (NASM)		200	500	500	1,000	3,200
-roof, facade and terrace repairs	750	1,000	1,000	1,200	1,000	3,200
Renwick Gallery - facade renovation	120	50	500	475	510	1,585
All other projects in this category						
Subtotal, Facade, roof and terrace repairs	2,235	3,300	5,640	5,575	4,160	22,775
<u>FIRE DETECTION AND SUPPRESSION SYSTEMS</u>						
A&I - sprinklers and smoke detection	75	75	75	75	75	375
MAH - fire protection master plan	250	350	350	400	400	1,900
MNH/MOM - fire protection master plan	300	350	350	400	400	1,900
NASM - extend smoke detection system				100	100	300
Smithsonian Institution Building - smoke detection		145	150	150		445
All other projects in this category	95	285	280	105	80	830
Subtotal, Fire detection and suppression systems	720	1,205	1,205	1,230	1,055	5,750

RESTORATION AND RENOVATION OF BUILDINGS  
PLANNED PROGRAM  
FY 1982 - FY 1987

G-18

(Dollars in thousands)

	<u>FISCAL YEARS</u>						<u>Total FY 1983-87</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	
<u>ACCESS FOR THE DISABLED, SAFETY AND SECURITY AND</u>							
<u>CORRECTION OF HAZARDOUS CONDITIONS</u>							
Access for the disabled - various buildings	280		120	260	155	555	1,090
Suitland Facility							
-safety improvements for collections storage buildings	150						--
Asbestos removal/containment	250	350	500	500	544	500	2,394
Mall security lighting	200		200	200	200	200	800
Proprietary security system	300	300	300	300	300	300	1,500
All other projects in this category	<u>15</u>	<u>15</u>	<u>80</u>	<u>80</u>	<u>100</u>	<u>100</u>	<u>375</u>
Subtotal, Access, safety and security	1,180	665	1,200	1,340	1,299	1,655	6,159
<u>UTILITY SYSTEMS REPAIRS AND IMPROVEMENTS</u>							
AGI - HVAC renovation/energy conservation /1	200	200	200	200	200		800
AA/PG - HVAC renovation	225	700	800				1,500
Freer Gallery of Art - HVAC renovation	380	500					500
Hirshhorn							
-energy study and improvements	100	30	130	130	200	200	690
MAH - HVAC renovation/energy conservation	430	375	300	300	300	300	1,575
MNIH/MOM - HVAC renovation/energy conservation/ electrical and plumbing renovation	375	350	550	550	650	750	2,850
NASM - energy conservation study and improvements; HVAC repairs	180		190	350	200	200	940
Smithsonian Institution Building - electrical renovation	110		150	150	150		450
All other projects in this category	<u>310</u>	<u>225</u>	<u>570</u>	<u>480</u>	<u>470</u>	<u>290</u>	<u>2,035</u>
Subtotal, Utility systems repairs and improvements	2,310	2,380	2,890	2,160	2,170	1,740	11,340

/1 Heating, ventilating and air conditioning (HVAC)

RESTORATION AND RENOVATION OF BUILDINGS  
 PLANNED PROGRAM  
 FY 1982 - FY 1987

	<u>FISCAL YEARS</u>					<u>Total FY 1983-87</u>
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	
(Dollars in thousands)						
<u>OTHER PROJECTS</u>						
Chesapeake Bay Center - Calf Barn modification MAH					200	200
-conversion to archaeometry				250		250
-improve Suitland Buildings 16, 17, 19		300	250	250	250	1,300
Whipple Observatory						
-road safety improvements	500	300				300
-Other - additional dorm, night sleeper, ridge residence				200	100	400
-Butler Building (Dormitory) Renovation					30	280
-pave roads around telescope buildings					200	600
SI Libraries modifications (MNH)			300			300
Smithsonian Tropical Research Institute						
-master planning, upgrading and additions	<u>50</u>			<u>450</u>	<u>400</u>	<u>1,350</u>
Subtotal, Other projects	550	600	550	1,150	1,180	4,980
 GRAND TOTALS - Restoration and Renovation of Buildings	7,680	8,450	12,555	12,750	11,224	56,309

# PHYSICAL PLANT CONDITION BY FACILITY

## Introduction

This report is an overview of Smithsonian facilities identifying individual building conditions and a summary of repairs and improvements for the period FY 1983 through FY 1987 that are appropriate for funding within the Restoration and Renovation of Buildings account. The total cost estimate for these facility requirements from FY 1983 through FY 1987 is \$56.3 million. Restoration and Renovation 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 Exhibits Laboratory of the Anacostia Neighborhood Museum is located at Fort Stanton Park on National Park Service property and was constructed in 1976. The 11,000 square foot metal building houses administrative, exhibit, shop, storage and research activities. The Museum also leases a building in Anacostia for exhibition, education and additional administrative purposes. The Exhibits Laboratory is in good condition; however, some changes are required to provide access for the disabled and improved fire protection. Also, certain building equipment will be converted to operate on natural gas as an energy conservation measure.

It is anticipated that funds for the installation of a second floor elevator and access to rest rooms for the disabled will be requested in FY 1984 and FY 1985, and total anticipated costs for the period FY 1983 through FY 1987 are estimated at \$180,000.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs		20	20	20	20
Sprinklers			25		
Install Elevator			40		
Disabled Access - Restroom		10			
Conversion to Natural Gas		25			
		<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
TOTALS	-	55	85	20	20

### ARTS AND INDUSTRIES BUILDING

The Arts and Industries Building, a Category II Landmark, 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 required to ensure watertightness and energy efficiency. Remaining work includes roof replacement, replacement of gutters and downspouts, repairs and replacement of window components and pointing and caulking. Interior painting

and repairs also are required as a result of damage caused by water intrusion. Improvements to the building's heating, ventilating and air conditioning system are required to establish better control over temperature and humidity variations. Planned improvements include the installation of an energy conserving system to help regulate temperatures; the addition of reheat coils; the modification of controls on air handling units; the addition of new steam humidifiers; the replacement of the cooling tower; and the relocation of unsightly roof-mounted mechanical equipment. Other needed projects in the utility systems category 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 \$14.57 million through FY 1987 with additional funds anticipated beyond this period to complete the renovation.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Interior Painting & Repairs		75		100	
Interior Building Study		50			
Install New Ceiling, 1st fl., S.W. Corridor			30		
General Repairs		50	50	250	250
OPS - Industrial Hygiene Lab & Office		40			
Roof & Facade Renovation	2,000	2,500	2,500	2,500	2,500
Smoke Detection/Sprinklers	75	75	75	75	75
HVAC Renovation/Energy	200	200	200	200	
Tunnel Renovation			150	150	
Plumbing Repairs		50			
Replace Cooling Tower		100			
Replace Transformers			50		
TOTALS	2,275	3,140	3,055	3,275	2,825

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

The Chesapeake Bay Center was established by the Smithsonian in 1965 on the Rhode River, a subestuary of the Chesapeake Bay located near Edgewater, Maryland. The Center is located on approximately 1,800 acres acquired by the Smithsonian since 1963. Current facilities include a renovated dairy barn with a new 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 extensions to 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 \$870,000 will be required during the planning period FY 1983 through FY 1987 to perform necessary 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)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Road Repairs		50	100	100	100
General Repairs		30	30	30	30
Roof Repairs		10			
Smoke Detection Installation	20				
Visitor Center - Disabled Access - Restroom			25		
Administration Building - Disabled Access				25	
Sewage System Improvements		30	30	30	30
Calf Barn Modifications				200	
TOTALS	20	120	185	385	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 1901, 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 generally good condition.

The Miller House is in poor condition with a deteriorating facade and limitations on usage for fire, safety and interior environmental reasons. A major project, yet to be estimated or planned, is required to restore the Miller House to good condition.

Due to age and historical status, an amount of about \$100,000 per year will be required to maintain properly the Cooper-Hewitt Museum.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs		20	20	20	20
Miller House Facade	50	50			
Electrical/Plumbing Repairs	50	50	80	80	50
TOTALS	100	120	100	100	70

#### 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 Category I Landmark, was renovated from 1965 to 1968. It currently 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 generally serviceable condition with exterior repairs and mechanical system replacement 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 is presently in poor condition and not unlike similar local stone used at the United States Capitol Building. 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 \$2.41 million will be sought in this planning period for these and other building requirements.

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs		50	50	50	50
Facade Repairs			150	150	150
Exterior Painting		25			
Sprinkler Installation	65				
Disabled Access			20		100
HVAC Renovation	700	800			
Electrical/Plumbing Repairs			50		
TOTALS	765	875	270	200	300

#### FREER GALLERY OF ART

The Freer Gallery of Art, constructed between 1916 and 1921 and opened to the public in 1923, provides 68,000 square feet of exhibition, staff and collections storage space. The building, a Category II Landmark, is generally 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 is also 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 is planned for FY 1983. Other minor repairs and improvements are programmed through the five-year planning period. These requirements are estimated to cost approximately \$1.25 million, including necessary skylight repairs.

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Modifications to Attic & Restrooms		60			
General Repairs			50	30	30
Basement/Sub-Basement Sprinklers	100	50			
Disabled Access - Entrance					300
Disabled Access - Restroom					25
HVAC Renovation	500				
Electrical/Plumbing Repairs			50		50
TOTALS	600	110	100	30	405

## 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. The building is in good condition. Recently, a major project was completed to make the Sculpture Garden fully accessible 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. Efforts to accomplish local repairs have had limited success, and it is expected that the entire plaza will have to be replaced. A comprehensive energy conservation survey for the building is underway. Inasmuch as the building was designed before the current museum environmental criteria were adopted, adjustments and alterations to the building's HVAC system can be expected.

These projects and other minor improvements are expected to cost about \$1.36 million during this planning period.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs				50	50
Interior Building Study		20			
Tunnel Paving for Storage			70		
Plaza Resurfacing					400
Energy Conservation Improvements		100	100	200	200
HVAC Coil Replacement	30	30	30		
Plumbing Repairs		20			
Other HVAC Repairs				30	30
	<u>30</u>	<u>170</u>	<u>200</u>	<u>280</u>	<u>680</u>
TOTALS	30	170	200	280	680

## 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. These properties were acquired by the Smithsonian in 1979. They are estimated to average about 100 years in age, and are generally of poor quality construction and unsuitable for a museum, both from protection and collections preservation standpoints, as well as the general convenience and safety of the public and the staff. Upon acquisition, the Smithsonian installed an elevator in the Douglass House, added security systems and provided access for disabled persons. 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 roof repairs, plumbing, heating and cooling system repairs and electrical repairs. For this five-year period, these are estimated to cost \$200,000. No other major improvements are planned, pending the planned relocation of the Museum to the Quadrangle.

(Dollars in thousands)

Fiscal Year

<u>Work Description</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs	<u>      </u>	<u>  50</u>	<u>  50</u>	<u>  50</u>	<u>  50</u>
TOTALS	-	50	50	50	50

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 generally good condition, the building requires continuation of the phased upgrading of its fire protection services, heating, ventilating and air conditioning systems and weather-proofing of the facade and terrace.

Phase III of the Fire Protection Master Plan is programmed for FY 1983. Phase I of HVAC improvements, resulting from an energy conservation study developed in FY 1982, will start in FY 1983. Other improvements for collections protection and overall energy conservation, which will be implemented in the following fiscal years, include preservation of the building envelope, completion of terrace repairs and replacement of the roof.

These and other requirements are estimated to cost \$7.44 million between FY 1983 and FY 1987.

(Dollars in thousands)

Fiscal Year

<u>Work Description</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Registrar Alterations		50			
General Repairs			100	100	100
Terrace Ramp & Canopy Renovation		390			
Bus Ramp Repair			300		
Roof Replacement	50	750	750		
Prevention of Basement Flooding				400	
Entrance Fountain Renovation		150			
Fire Protection	350	350	400	400	400
Dust Collection System	15				
Security Improvements - 4th Floor		60			
Disabled Access		50	50	50	50
Upgrade Public Address System				100	100
HVAC Renovation/Energy Conservation	375	300	300	300	300
Replace Cafeteria Sewage Ejector	100				
Conservation Lab Conversion			250		
TOTALS	890	2,100	2,150	1,350	950

NATIONAL MUSEUM OF NATURAL HISTORY/MUSEUM OF MAN

The National Museum of Natural History/Museum of Man, a Category III Landmark building, 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 steadily over the next five years. 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 the projects which will begin on a phased basis 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 deteriorated equipment and to remove equipment that no longer is used. Projects needed to protect the building envelope, some which also would improve energy efficiency, include repointing and recaulking, replacement of window locks and gaskets, and reglazing and repair of windows. Modifications of space for exhibition purposes are planned, as well as modifications to improve accessibility for the disabled in staff and public areas. These and other building requirements are estimated to cost approximately \$6.27 million between FY 1983 and FY 1987.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Mineral Sciences Security Upgrading			30		
Hall 16 - Demolition		45			
Hall 30 - Demolition			120		
Construct Checkroom		30			
Floor Tile Replacement		25			
Hall 16 - Skylight Renovation		40			
Hall 9 - Demolition			40		
General Repairs				150	150
Caulk & Point Facade		85			
Sidewalk Improvements		80			
Fire Protection Installation	350	350	400	400	400
Disabled Access - Restroom		60			
Install Safety Railings & Nets			80		
Disabled Access - Hall 16			125		
Disabled Access - Other				80	80
HVAC Renovation/Energy Conservation	350	400	400	500	600
Electrical & Plumbing Repairs		50	50	50	50
Window Mods. for Energy Conservation		100	100	100	100
S.I. Library Modifications		300			
TOTALS	700	1,565	1,345	1,280	1,380

#### NATIONAL AIR AND SPACE MUSEUM

The National Air and Space Museum, opened to the public in 1976, provides approximately 500,000 square feet of exhibition, staff and support space, including a parking garage. Water intrusion and weathering problems involved with the roof, facade and terrace will require repair.

The required 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. Implementation of

energy conservation measures primarily associated with the mechanical systems is projected in the current five-year plan, as well as additional fire safety programs.

These and other requirements are estimated to cost \$4.69 million through FY 1987.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs				100	
Painting of Structural Truss			125		
Planning for Emergency Relocation of Computer		10			
Facade, Roof & Terrace Repairs	200	500	500	1,000	1,000
Extend Smoke Detection Systems			100	100	100
Kitchen Sprinkler Installation		20			
Energy Conservation Improvements		100	200	200	200
Install Removable Water Eliminators		40			
Return Air Plenum Installation		50			
Reheat Coil Replacement			150		
TOTALS	200	720	1,075	1,400	1,300

#### 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 and later transferred to the Smithsonian in 1965 for restoration to its original purpose as an art museum.

The brick portion of the facade is in good condition, but the stone facade and windows have deteriorated seriously. A phased program for stone and window replacement is underway with \$975,000 obligated for Phase I. Phase II, the procurement of precast architectural concrete units, is targeted for award in late FY 1982 or early FY 1983. Scheduled replacement of mechanical equipment, installation of emergency generators, new security systems and general maintenance projects are planned through FY 1987.

These requirements are estimated to cost \$3.46 million in this planning period.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs				30	
Facade Renovation	1,000	1,000	1,200		
Window Replacement & Security Improvements		50	50		
Roof Repairs			50		
Security Lighting		20			
Electrical, Plumbing Repairs/Replacement					30
Energy Conservation Improvements				30	
TOTALS	1,000	1,070	1,300	60	30

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 at Mt. Hopkins, near Tucson, Arizona. Summit facilities include a Multiple Mirror Telescope, other telescopic observation and support structures, dormitory/dining facilities and water storage facilities. Support and administrative activities currently are located in leased space separated from the Observatory by a 20-1/2 mile long mountain road. Major projects are underway to improve roadway safety and access, as well as to reduce future road maintenance. Although existing structures are serviceable, some changes are required to improve efficiency and to minimize transportation time losses between base facilities and summit operations.

During the planning period FY 1983 through FY 1987, it is anticipated that approximately \$2 million will be required for road safety improvements, road paving, modifications to a dormitory building and renovation of the standby power system to provide more reliable service in support of observation activities.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Repairs		50	50	50	50
Fire Protection		30			
Standby Power System		200			
Road Safety Improvements	300				
Roadway Paving				200	400
Butler Building (Dormitory) Renovation				30	250
Additional Dorm, and Ridge Residence			200	100	100
TOTALS	300	280	250	380	800

## SMITHSONIAN INSTITUTION BUILDING

The Smithsonian Institution Building was constructed from 1847 to 1855. It is a Category I Landmark building and provides 55,000 square feet of exhibition and staff space. The building is in generally good condition, but requires installation of fire protection systems.

The major requirement for FY 1983 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 to improve the efficiency of space in the basement.

These requirements are estimated to cost \$1.51 million during this planning period.

(Dollars in thousands)

Fiscal Year

<u>Work Description</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Basement Improvements		20	50	50	50
South Tower Safety Improvements		30			
Main Entrance Improvements			20		
Window Repairs/Security		50	50	50	50
Window Energy Conservation			25		
Smoke Detection/Sprinklers	145	150	150		
Electrical Wiring Renovation		150	150	150	
Utility Systems Improvements		20			100
Replace Transformers			50		
TOTALS	145	420	495	250	200

## SMITHSONIAN TROPICAL RESEARCH INSTITUTE

During the years 1940 to 1946 existing marine and terrestrial organism 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 marine and terrestrial environmental research. The adequacy of existing buildings, piers and utilities varies with each facility and a study to determine future needs for these collective facilities is underway. Many of the buildings and their operating systems are deteriorated and inadequate.

In addition to a master plan for improvements, there are obvious requirements which need to be met within the next five-year planning period. These include Naos pier repairs, BCI fire protection improvements, continuation of water and sewage system installations at Galeta and major upgrading of certain buildings and facilities. The cost of these requirements for the five-year planning period is approximately \$2 million.

(Dollars in thousand)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
General Maintenance & Repairs		30	30	30	30
Naos - Pier Repairs	100				
BCI - Fire Protection	100	100			
BCI - Upgrade Water & Sewer Systems	75	75			
Galeta - Upgrade Sewer System				150	
Galeta - Upgrade Electrical Systems			20		
Design & Construction - BCI Dorm, Tivoli Labs, Naos Improvements, Galeta Lab			450	400	500
TOTALS	275	205	500	580	530

SUITLAND, MARYLAND FACILITY

Property and facilities have been acquired at Suitland, Maryland, to 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. Twenty-five metal buildings and several other structures located on 21 acres serve these purposes. The floor area of these buildings is approximately 312,000 square feet. They were originally designed for temporary storage of materials and equipment that are not affected critically by environmental conditions. However, renovation of certain buildings is required to ensure that proper environmental conditions exist for collections storage and exhibit purposes. In addition, 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 at Suitland. An amount of \$1.94 million is estimated for this purpose between FY 1983 and FY 1987.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Perimeter Security Fence Repairs					50
Shipping & Receiving Facility		50			
Storage Area Coverings			60		
Bldgs 21 & 24 Balcony Construction					100
Painting & Roof Repairs				60	
Smoke Detection/Sprinklers		80	80	80	80
Improvements to Bldgs 16, 17, 19	300	250	250	250	250
TOTALS	300	380	390	390	480



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, and emergency repairs.

These requirements are estimated to cost approximately \$5.57 million through FY 1987.

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Emergency Repairs	200	100	100	100	100
Bronze Door Restoration & Maintenance		25	25	25	25
Sidewalk Repairs		50	25	25	25
Interior & Exterior Signage			50		
Mall Security Lighting		200	200	200	200
Asbestos Abatement	350	500	500	544	500
Proprietary Security System	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
TOTALS	850	1,175	1,200	1,194	1,150
<u>GRAND TOTALS FOR ALL RESTORATION &amp; RENOVIATION</u>	<u>8,450</u>	<u>12,555</u>	<u>12,750</u>	<u>11,224</u>	<u>11,330</u>

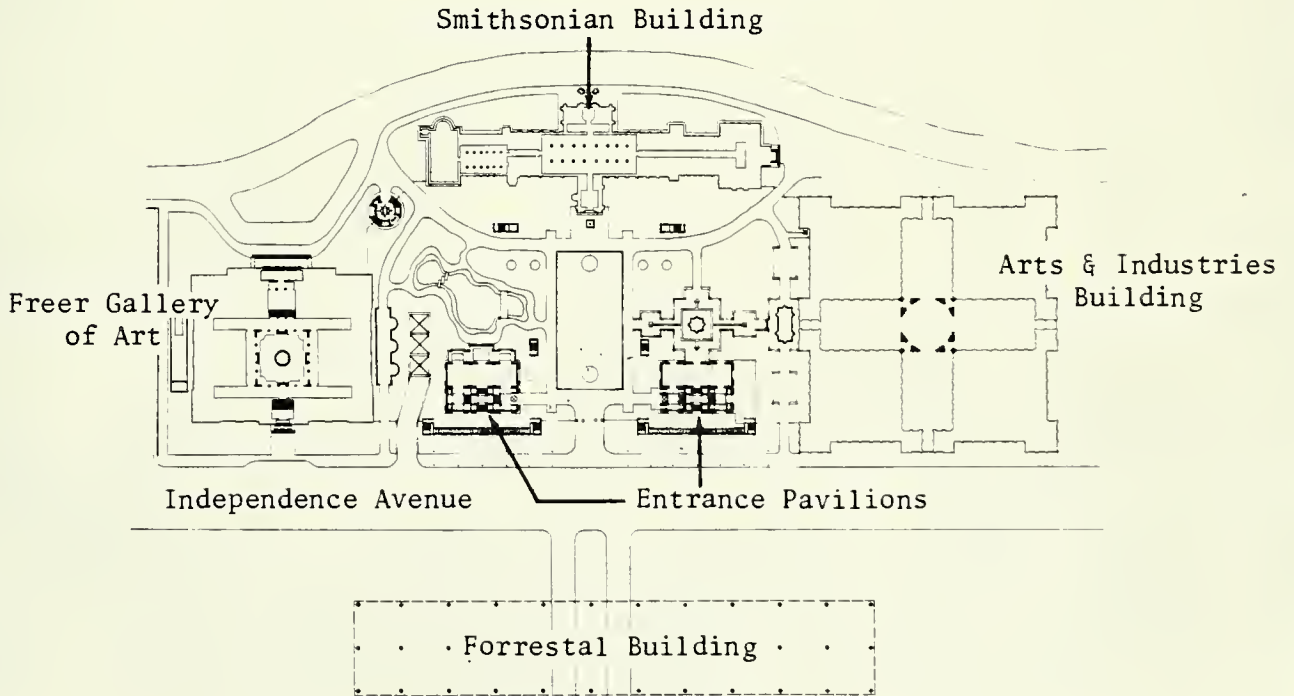


CONSTRUCTION: QUADRANGLE DEVELOPMENT

1982 Appropriation.....\$ 960,000  
1983 Estimate.....\$36,500,000

Public Law 96-36 that authorized planning for development of the Quadrangle was signed by the President on July 20, 1979. In FY 1982, \$960,000 was appropriated to complete planning and design for a Center for African, Near and Far Eastern Culture and Art within 4.2 acres of land bounded by the Smithsonian Building, the Arts and Industries Building, the Freer Gallery of Art, and Independence Avenue. This complex, estimated to cost approximately \$75 million, is planned to be financed equally between government and private sponsors. An amount of \$36.5 million is requested for FY 1983 to allow the Institution to construct a building in the Quadrangle beginning in late calendar year 1982.

This proposed cultural and art center will provide, for the first time in our Nation's Capital, exhibition and education facilities appropriate for presentation of the artistic accomplishments of cultures encompassing two-thirds of the Earth's population and spanning the globe from Japan and Korea through Southeast Asia, the Middle East and all of Africa.



QUADRANGLE SITE PLAN

Quadrangle development is planned to include exhibition galleries and supporting museum facilities for the proper display of the unique collections of the National Museum of African Art, as well as for expansion of the programs of the Freer Gallery of Art whose collections of Near and Far Eastern art are widely recognized as among the world's finest. In addition, quarters are planned for the National and Resident Associate Programs, the Visitor Information and Reception Program, the Smithsonian Institution Traveling Exhibition Service, and expanded public education facilities, as well as a much needed International Center for special exhibitions and symposia. The joining of all these activities and programs in one area will enable the Institution to apply, in a coordinated fashion, its major resources for the benefit of the millions of visitors who travel to Washington each year. It will provide, as well, an opportunity for foreign nations to present their most important cultural accomplishments to this huge audience. In this context, the Institution is working with appropriate security authorities to ensure that this building, 96% of which is underground, will meet the security needs associated with visits of heads of state and other national and international dignitaries.



The Quadrangle site will be occupied by two small entrance pavilions bordering Independence Avenue which will serve as introductory galleries and form an enclosure for an Oriental garden element on the west, a Middle Eastern garden element on the east, and a Victorian parterre in the center on axis with 10th Street. Such eclectic landscape combinations are particularly evocative of the mood of 19th century landscape design, so appropriate to the Smithsonian Institution Building and the adjacent Arts and Industries Building.

The two entrance pavilions (shown on these pages, in elevation looking north from Independence Avenue) will allow access to three building levels below grade providing exhibition galleries, libraries, classrooms, and space for the care and study of collections. The galleries will permit the Institution to present a variety of exhibitions drawn from the resources of its own museums, other United States collections, or borrowed from abroad. The International Center will enable the Institution to organize international symposia and exhibitions and will enhance the public's ability to interpret distant cultures whose extraordinary richness and importance are often unappreciated.



The architectural design for the Quadrangle was originally conceived by the internationally known Japanese architect, Junzo Yoshimura. Since then, the Boston firm of Shepley, Bulfinch, Richardson and Abbott and its principal architect, Jean Paul Carlhian, has developed site and building plans which have been approved by the National Capital Planning Commission and the Commission of Fine Arts. All requirements of the National Environmental Policy Act and the National Historic Preservation Act have been successfully completed. No further design reviews or approvals are required until approximately 65% of working design drawings are complete. It is expected that working drawings will be completed this summer and that a solicitation for construction bids could be initiated in October 1982.

<u>Summary Building Space Allocation</u>	<u>Gross Square Feet</u>
Permanent and Temporary Exhibition Galleries and Necessary Offices and Other Facilities .....	175,395
Public Education and Visitor Services .....	49,554
International Center .....	25,508
Mechanical and Other Building Components .....	<u>101,543</u>
TOTAL	350,000

#### Construction Funding

One-half of the Quadrangle project is planned to be funded with federal appropriations and half from nonappropriated sources. At this time, the Smithsonian has in hand or pledged about \$18.9 million of nonappropriated funds and is optimistic about acquiring the balance required of approximately \$18.6 million.

#### Operating Costs

Quadrangle annual program and building operating cost estimates, as well as one-time costs such as fire protection and security equipment, collection storage equipment, laboratory equipment, exhibition gallery lighting systems and moving costs, are being prepared and will be available prior to Congressional hearings on the Institution's FY 1983 budget request. Every effort is being made to identify program cost items that could be funded from nonappropriated sources and those that might lend themselves in the future to funding by contributions and gifts.

TAB D

SOURCES 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 1981.

Schedule 1 summarizes the sources and application of all funds of the Institution--Federal appropriations, grants and contracts from Federal 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 1982 and FY 1983 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 nonappropriated Trust funds are subject to change due to the unpredictability of donations to the Institution, fluctuations in visitor attendance and uncertain economic factors affecting restaurant and shop revenues, Associates memberships and other auxiliary activities.

For FY 1983, overall gross operating funds of the Institution from all sources are projected to equal \$272.5 million, while net operating income, after deduction of expenses related to auxiliary and bureau activities, is projected at approximately \$183.1 million. The Federal appropriation request for Salaries and Expenses (\$144.1 million) would amount to approximately 53 percent of the total gross operating revenues or approximately 79 percent of net operating revenues. Grants and contracts received from Federal agencies are expected to total approximately \$18.3 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, concessions fees and book and record sales). Gross revenues of nonappropriated Trust funds are expected to continue to grow as in previous years and reach \$110.1 million by FY 1983. Net income, however, is projected to decrease from \$23.7 million in FY 1981 to \$20.7 million in FY 1983 (of which over \$5 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 million per year program initiated in FY 1978 (\$2.5 million beginning in 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 1982, an amount of \$1.4 million will be applied to these programs and a similar amount is projected for FY 1983. Continuing in FY 1982

and extending through FY 1985, additional amounts of unrestricted Trust funds are being set aside for Quadrangle development. Also to be supported in part from unrestricted funds, as previously reported to the Congress, is the Museum Support Center construction, toward which \$2.5 million is committed and will be made available during FY 1982-FY 1983.

Finally, assuming that actual financial results for FY 1983 are as now projected, 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 1980	FY 1981	Budget FY 1982	Projected FY 1983
<u>Institutional Operating Funds</u>				
<u>FUNDS PROVIDED</u>				
Federal Appropriations - Salaries & Expenses	\$107,764	\$ 122,478	\$ 128,470	\$ 144,110
Federal Agency Grants & Contracts	12,947	14,172	15,613	18,293
Nonappropriated Trust Funds:				
For Restricted Purposes	5,339	6,378	5,947	5,630
For Unrestricted & Special Purposes:				
Auxiliary & Bur. Acts. Revenues--Gross	75,150	88,381	92,419	100,004
--Less Related Expenses	(65,933)	(75,924)	(83,578)	(89,366)
Auxiliary & Bur. Acts. Net Revenue	9,217	12,457	8,841	10,638
Investment, Gift, and Other Income	3,825	4,887	4,430	4,471
Total Net Unrest. & Spec. Purp. Revenue	13,042	17,344	13,271	15,109
Total Unappropriated Trust Funds*--Gross	84,314	99,646	102,796	110,105
--Net	18,381	23,722	19,218	20,739
Total Operating Funds Provided--Gross	205,025	236,296	246,879	272,508
--Net	<u>\$139,092</u>	<u>\$ 160,372</u>	<u>\$ 163,301</u>	<u>\$183,142</u>
<u>FUNDS APPLIED</u>				
Science	\$ 57,712	\$ 62,703	\$ 64,831	\$ 71,267
--Less SAO Overhead Recovery	(2,196)	(2,470)	(2,693)	(2,840)
History & Art	26,224	25,614	26,029	26,912
Public Service	3,129	3,421	3,443	3,717
Museum Programs	8,885	8,084	8,224	8,584
Special Programs	3,488	7,284	12,392	15,069
Associates and Business Management	345	312	393	369
Administration--Federal**	8,048	8,782	9,123	10,086
--Nonappropriated Trust Funds	4,937	5,740	6,036	6,662
--Less Smithsonian Overhead Recovery	(4,379)	(5,014)	(5,200)	(5,400)
Facilities Services	30,630	36,501	38,547	44,720
Total Operating Funds Applied	136,823	150,957	161,125	179,146
Transfers (Nonappropriated Trust Funds)				
Unrestricted Funds--To Plant	1,342	2,550	1,025	1,525
--to Endowments	2,031	2,550	2,021	2,021
Restricted Funds--To Endowments	757	108	100	100
Total Operating Funds Applied & Trans. Out	<u>\$140,953</u>	<u>\$ 156,165</u>	<u>\$ 164,271</u>	<u>\$ 182,792</u>
<u>CHANGES IN NONAPPROPRIATED TRUST FUND BALANCES</u>				
Restricted Purpose (Incl. Fed. Agency Grants & Contracts)	\$ (225)	\$ 1,276	\$ (733)	\$ 245
Unrestricted--General Purpose	36	42	--	--
--Special Purpose	(1,672)	2,704	(237)	105
Federal Appropriation***	--	185	(185)	--
Total	<u>\$ (1,861)</u>	<u>\$ 4,207</u>	<u>\$ (1,155)</u>	<u>\$ 350</u>
<u>YEAR-END FUND BALANCES</u>				
Restricted Purpose	\$ 4,675	\$ 5,951	\$ 5,218	\$ 5,463
Unrestricted--General Purpose	5,001	5,043	5,043	5,043
--Special Purpose	9,895	12,599	12,362	12,467
Federal Appropriation ***	--	185	--	--
Total	<u>\$ 19,571</u>	<u>\$ 23,778</u>	<u>\$ 22,623</u>	<u>\$ 22,973</u>
<u>OTHER FEDERAL APPROPRIATIONS</u>				
Foreign Currency Program	\$ 4,200	\$ 3,650	\$ 4,320	\$ 2,000
Construction	32,100	15,829	9,744	46,500
Total Federal Appropriations (Incl. S&E above)	<u>\$144,064</u>	<u>\$ 141,957</u>	<u>\$ 142,534</u>	<u>\$ 192,610</u>

\* Figures do not include gifts and other income directly to Plant and Endowment Funds: FY 1980 - \$1,211,000; FY 1981 - \$2,696,000.

\*\* Includes unobligated funds returned to Treasury: FY 1980 - \$267,000; FY 1981 - \$64,000.

\*\*\* FDR Centennial appropriation, available through FY 1982, not included in FY 1982 expenditures above.

Source and Application of Operating Funds

Budget FY 1982

(Dollars in thousands)

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds		Restricted Trust Funds		Federal Grants and Contracts	
	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.
<b>FUNDS PROVIDED</b>										
Federal Appropriation	-	128,470	-	128,470	-	-	-	-	-	-
Investment / I	-	5,990	-	-	-	-	-	2,600	-	-
Gifts, Grants and Contracts	-	18,223	-	-	-	-	50	2,500	-	15,613
Auxiliary Activities Revenues	-	-	-	-	-	-	-	-	-	-
Associates - Magazine	-	44,157	-	-	-	-	44,157	-	-	-
- Other	-	10,746	-	-	-	-	10,746	-	-	-
Museum Shops and Mail Order	-	16,869	-	-	-	-	16,869	-	-	-
Concessions, Parking & Food Svcs	-	4,610	-	-	-	-	4,610	-	-	-
Other Auxiliary Activities	-	13,243	-	-	-	-	13,243	-	-	-
Total Auxiliary Activities	-	89,625	-	-	-	-	89,625	-	-	-
Bureau Activities	-	2,794	-	-	-	-	-	2,794	-	-
Miscellaneous	-	1,777	-	-	-	-	50	880	-	-
Total Income	-	246,879	-	128,470	-	-	92,565	5,947	-	15,613
Less Expenses: Auxiliary Activities										
Associates - Magazine	80	39,157	-	-	-	-	39,157	-	-	-
- Other	63	10,429	-	-	-	-	10,429	-	-	-
Museum Shops and Mail Order	171	16,418	-	-	-	-	16,418	-	-	-
Concessions, Parking & Food Svcs	59	2,597	-	-	-	-	2,597	-	-	-
Other Auxiliary Activities	77	12,869	-	-	-	-	12,869	-	-	-
Total Auxiliary Activities	450	81,470	-	-	-	-	81,470	-	-	-
Bureau Activities	31	2,108	-	-	-	31	-	2,108	-	-
Net Funds Provided	-	163,301	-	128,470	-	-	11,095	5,947	-	15,613
<b>FUNDS APPLIED (Net/Act. Expense)</b>										
Science (Net)	1,636	62,138	1,306	43,589	81	252	252	1,193	12	1,716
History and Art	719	26,029	643	20,225	13	637	637	798	53	4,259
Public Service	91	3,443	71	2,630	19	777	777	1	1	30
Museum Programs	225	8,224	214	7,588	10	274	274	1	1	361
Special Programs	47	12,392	34	7,863	13	640	640	3,688	-	91
Other Activities	10	393	-	-	10	324	324	29	-	40
Facilities Services	1,017	38,547	1,004	37,452	12	1,075	1,075	16	-	4
Administration (Net)	421	9,959	263	9,123	157	605	605	152	-	79
Total	4,166	161,125	3,535	128,470	315	4,584	4,584	5,878	67	6,580
TRANSFERS to (From)										
--Current Funds	-	-	-	-	-	-	3,490	(3,490)	-	-
--Endowment Funds	-	2,121	-	-	-	2,021	2,021	-	-	100
--Plant Funds	-	1,025	-	-	-	1,000	1,000	25	-	-
FUND BALANCE - Beginning of Year	-	23,778	-	185	-	5,043	5,043	12,599	-	5,546
CHANGE IN FUND BALANCE	-	(1,155)	-	(185)**	-	(237)	(237)	(237)	-	(733)
FUND BALANCE - End of Year	-	22,623	-	-	-	5,043	5,043	12,362	-	4,813

/I Net of Investment Manager's Fees.

\*Includes unrestricted allotments and auxiliary activities.

\*\*FDR Centennial appropriation not included in FY 1982 expenditures above.

Source and Application of Operating Funds

Estimate FY 1983

(Dollars in thousands)

	Total		Federal		Unrestricted		Trust Funds		Restricted		Federal Grants	
	Funds		Appropriation		General *		Spec. Purpose		Trust Funds		and Contracts	
	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.
<b>FUNDS PROVIDED</b>												
Federal Appropriation	-	144,110	-	144,110	-	-	-	-	-	-	-	-
Investment /1	-	6,000	-	-	-	2,825	-	575	-	2,600	-	-
Gifts, Grants and Contracts	-	20,603	-	-	-	50	-	60	-	2,200	-	18,293
Auxiliary Activities Revenues	-	-	-	-	-	-	-	-	-	-	-	-
Associates - Magazine	-	50,504	-	-	-	50,504	-	-	-	-	-	-
- Other	-	11,395	-	-	-	11,395	-	-	-	-	-	-
Museum Shops and Mail Order	-	17,815	-	-	-	17,815	-	-	-	-	-	-
Concessions, Parking & Food Svcs	-	4,865	-	-	-	4,865	-	-	-	-	-	-
Other Auxiliary Activities	-	12,545	-	-	-	12,545	-	-	-	-	-	-
Total Auxiliary Activities	-	97,124	-	-	-	97,124	-	-	-	-	-	-
Bureau Activities	-	2,880	-	-	-	-	2,880	-	-	-	-	-
Miscellaneous	-	1,791	-	-	-	50	911	-	-	830	-	-
Total Income	-	272,508	-	144,110	-	100,049	4,426	-	-	5,630	-	18,293
Less Expenses: Auxiliary Activities												
Associates - Magazine	81	43,539	-	-	-	43,539	-	-	-	-	-	-
- Other	63	11,050	-	-	-	11,050	-	-	-	-	-	-
Museum Shops and Mail Order	171	17,395	-	-	-	17,395	-	-	-	-	-	-
Concessions, Parking & Food Svcs	59	2,805	-	-	-	2,805	-	-	-	-	-	-
Other Auxiliary Activities	73	12,280	-	-	-	12,280	-	-	-	-	-	-
Total Auxiliary Activities	447	87,069	-	-	-	87,069	-	-	-	-	-	-
Bureau Activities	31	2,297	-	-	-	-	2,297	31	-	-	-	-
Net Funds Provided	-	183,142	-	144,110	-	12,980	2,129	-	-	5,630	-	18,293
<b>FUNDS APPLIED (Net/Act. Expense)</b>												
Science (Net)	1,635	68,427	1,306	47,297	81	259	1,167	7	11	1,546	230	18,158
History and Art	715	26,912	643	22,019	12	621	741	8	52	3,446	-	85
Public Service	92	3,717	71	2,805	21	902	-	-	-	10	-	-
Museum Programs	227	8,584	214	8,172	13	378	2	-	-	32	-	-
Special Programs	47	15,069	34	10,220	13	645	4,017	-	-	137	-	50
Other Activities	10	369	-	-	10	337	32	-	-	-	-	-
Facilities Services	1,017	44,720	1,004	43,511	12	1,191	14	1	-	4	-	-
Administration (Net)	421	11,348	263	10,086	158	1,022	130	-	-	110	-	-
Total	4,164	179,146	3,535	144,110	320	5,355	6,103	16	63	5,285	230	18,293
<b>TRANSFERS to (From)</b>												
--Current Funds	-	-	-	-	-	4,104	(4,104)	-	-	-	-	-
--Endowment Funds	-	2,121	-	-	-	2,021	-	-	-	100	-	-
--Plant Funds	-	1,525	-	-	-	1,500	25	-	-	-	-	-
FUND BALANCE - Beginning of Year	-	22,623	-	-	-	5,043	12,362	-	-	4,813	-	405
CHANGE IN FUND BALANCE	-	350	-	-	-	-	105	-	-	245	-	-
FUND BALANCE - End of Year	-	22,973	-	-	-	5,043	12,467	-	-	5,058	-	405

/1 Net of Investment Manager's Fees.

⊕ \*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds  
Budget FY 1982

(Dollars in thousands)

SCIENCE	Total		Federal		Unrestricted Trust Funds				Restricted Trust Funds		Federal Grants and Contracts	
	All Funds		Appropriation		General		Spec. Purpose		Trust Funds		and Contracts	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
Ass't Secretary, Science	9	619	7	326	-	55	-	1	-	50	2	187
Nat'l Museum of Natural History/ Museum of Man	544	17,716 (1)*	505	15,738	-	27	-	210 (1)*	3	519	36	1,222
Astrophysical Observatory	330	21,412 (113)*	78	5,563	78	2,724	2	349 (113)*	-	141	172	12,635
(SAO Overhead Recovery)	-	(2,693)	-	-	-	(2,693)	-	-	-	-	-	-
Tropical Research Institute	87	2,972 (48)*	85	2,733	2	69	-	62 (48)*	-	108	-	-
Radiation Biology Laboratory	49	2,085	48	1,938	-	-	-	68	-	34	1	45
National Air & Space Museum	257	9,168 (1,326)*	222	6,514	-	8	28	1,927 (1,326)*	2	92	5	627
Chesapeake Bay Center	34	1,437 (20)*	22	906	1	55	1	25 (20)*	-	2	10	449
National Zoological Park	332	9,409	327	9,158	-	6	-	59	1	34	4	152
Center for the Study of Man	13	826	12	713	-	1	-	-	1	41	-	71
Fort Pierce Bureau	5	695	-	-	-	-	-	-	5	695	-	-
TOTAL SCIENCE	1,660	63,646	1,306	43,589	81	252	31	2,701	12	1,716	230	15,388
Less expenses of generating revenue	(24)	(1,508)	-	-	-	-	(24)	(1,508)	-	-	-	-
TOTAL SCIENCE (Net)	1,636	62,138	1,306	43,589	81	252	7	1,193	12	1,716	230	15,388

\*Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds  
Estimate FY 1983

(Dollars in thousands)

SCIENCE	All Funds		Federal Appropriation		Unrestricted Trust Funds		Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T	EmpL.	F/T	EmpL.	F/T	EmpL.	F/T	EmpL.	F/T	EmpL.	F/T	EmpL.
	\$		\$		\$		\$		\$		\$	
Ass't Secretary, Science	9	741	7	357	-	85	-	-	-	100	2	199
Nat'l Museum of Natural History/ Museum of Man	540	18,609 (1)*	505	17,023	-	26	-	183 (1)*	3	343	32	1,034
Astrophysical Observatory	344	25,043 (121)*	78	6,058	78	2,846	2	373 (121)*	-	149	186	15,617
(SAO Overhead Recovery)	-	(2,840)	-	-	-	(2,840)	-	-	-	-	-	-
Tropical Research Institute	87	3,221 (55)*	85	3,023	2	72	-	55 (55)*	-	71	-	-
Radiation Biology Laboratory	49	2,234	48	2,090	-	-	-	75	-	25	1	44
National Air & Space Museum	257	9,979 (1,448)*	222	7,160	-	7	28	2,032 (1,448)*	2	51	5	729
Chesapeake Bay Center	24	1,405 (18)*	22	969	1	57	1	29 (18)*	-	-	-	350
National Zoological Park	332	10,106	327	9,855	-	5	-	63	1	30	4	153
Center for the Study of Man	12	822	12	762	-	1	-	-	-	27	-	32
Fort Pierce Bureau	5	750	-	-	-	-	-	-	5	750	-	-
TOTAL SCIENCE	1,659	70,070	1,306	47,297	81	259	31	2,810	11	1,546	230	18,158
Less expenses of generating revenue	(24)	(1,643)	-	-	-	-	(24)	(1,643)	-	-	-	-
TOTAL SCIENCE (Net)	1,635	68,427	1,306	47,297	81	259	7	1,167	11	1,546	230	18,158

\*Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds  
Budget FY 1982

HISTORY & ART	Total		Federal		Unrestricted Trust Funds		Restricted Trust Funds		Federal Grants and Contracts			
	All Funds		Appropriation		General		Spec. Purpose		Trust Funds		Federal Grants and Contracts	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
Ass't Secretary, History & Art	5	253	4	166	1	73	-	14	-	-	-	-
--Joseph Henry Papers	5	231	5	180	-	-	-	-	-	-	-	-
Nat'l Museum of American History	286	8,734 (22)*	278	7,977	1	77	2	288 (22)*	5	392	-	-
Nat'l Museum of American Art	113	4,480 (8)*	106	3,805	-	34	1	125 (8)*	6	481	-	35
Nat'l Portrait Gallery	79	2,948 (6)*	76	2,712	-	18	-	29 (6)*	3	189	-	-
Hirshhorn Museum	80	3,198	80	2,421	-	17	-	63	-	697	-	-
Freer Gallery of Art	50	2,100	30	826	-	8	-	3	20	1,263	-	-
Archives of American Art	29	1,193	17	632	-	7	-	-	12	554	-	-
Cooper-Hewitt Museum	47	2,469 (480)*	22	738	10	360	13	787 (480)*	2	509	-	75
National Museum of African Art	32	965 (26)*	25	768	1	43	1	31 (26)*	5	123	-	-
TOTAL HISTORY AND ART	726	26,571	643	20,225	13	637	17	1,340	53	4,259	-	110
Less expenses of generating revenue	(7)	(542)	-	-	-	-	(7)	(542)	-	-	-	-
TOTAL HISTORY AND ART (Net)	719	26,029	643	20,225	13	637	10	798	53	4,259	-	110

\*Expenses covered all or in part from revenue of activity.



Source and Application of Operating Funds  
Estimate FY 1983

(Dollars in thousands)

	Total		Federal		Unrestricted Trust Funds		Restricted Trust Funds		Federal Grants and Contracts	
	All Funds		Appropriation		General		Spec. Purpose		Trust Funds	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
HISTORY & ART										
Ass't Secretary, History & Art	5	252	4	175	1	77	-	-	-	-
--Joseph Henry Papers	5	245	5	194	-	-	-	-	-	51
Nat'l Museum of American History	284	9,149 (24)*	278	8,604	1	75	1	297 (24)*	4	173
Nat'l Museum of American Art	112	4,483 (8)*	106	4,139	-	32	-	92 (8)*	6	220
Nat'l Portrait Gallery	79	3,284 (6)*	76	2,983	-	16	-	32 (6)*	3	253
Hirshhorn Museum	80	2,837	80	2,658	-	16	-	63	-	100
Freer Gallery of Art	50	2,268	30	918	-	8	-	3	20	1,339
Archives of American Art	29	1,278	17	675	-	6	-	-	12	597
Cooper-Hewitt Museum	47	2,674 (524)*	22	814	10	382	13	811 (524)*	2	582
National Museum of African Art	31	1,034 (30)*	25	859	-	9	1	35 (30)*	5	131
TOTAL HISTORY AND ART	722	27,504	643	22,019	12	621	15	1,333	52	3,446
Less expenses of generating revenue	(7)	(592)	-	-	-	-	(7)	(592)	-	-
TOTAL HISTORY AND ART (Net)	715	26,912	643	22,019	12	621	8	741	52	3,446

\*Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds  
Budget FY 1982

(Dollars in thousands)

	Total		Federal		Unrestricted Trust Funds				Restricted Trust Funds		Federal Grants and Contracts	
	All Funds		Appropriation		General**		Spec. Purpose		Trust Funds		Federal Grants and Contracts	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
<u>PUBLIC SERVICE</u>												
Ass't Secretary, Public Service	5	203	5	203	-	-	-	-	-	-	-	-
--Office of Telecommunications	8	336	2	51	6	285	-	-	-	-	-	-
--Visitor's Information and Associates Reception Center	14	525	2	63	12	461	-	1	-	-	-	-
Anacostia Neighborhood Museum	20	757	19	726	1	31	-	-	-	-	-	-
International Exchange Service	4	230	4	230	-	-	-	-	-	-	-	-
Division of Performing Arts	34	5,421 (4,942)*	10	444	23	4,942 (4,942)*	-	-	1	30	-	5
Smithsonian Institution Press	38	3,021 (2,108)*	29	913	9	2,108 (2,108)*	-	-	-	-	-	-
Smithsonian Exposition Books	15	4,062 (4,062)*	-	-	15	4,062 (4,062)*	-	-	-	-	-	-
TOTAL PUBLIC SERVICE	138	14,555	71	2,630	66	11,889	-	1	1	30	-	5
Less expenses of generating revenue	(47)	(11,112)	-	-	(47)	(11,112)	-	-	-	-	-	-
TOTAL PUBLIC SERVICE (Net)	91	3,443	71	2,630	19	777	-	1	1	30	-	5

\*Expenses covered all or in part from revenue of activity.

\*\*Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds  
Estimate FY 1983

(Dollars in thousands)

	Total		Federal		Unrestricted Trust Funds				Restricted Trust Funds		Federal Grants and Contracts	
	All Funds		Appropriation		General**		Spec. Purpose		F/T		F/T	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
<u>PUBLIC SERVICE</u>												
Ass't Secretary, Public Service	5	220	5	220	-	-	-	-	-	-	-	-
--Office of Telecommunications	10	441	2	56	8	385	-	-	-	-	-	-
--Visitors Information and Associates Reception Center	14	550	2	65	12	485	-	-	-	-	-	-
Anacostia Neighborhood Museum	20	805	19	773	1	32	-	-	-	-	-	-
International Exchange Service	4	245	4	245	-	-	-	-	-	-	-	-
Division of Performing Arts	33	6,297 (5,809)*	10	478	23	5,809 (5,809)*	-	-	-	-	10	-
Smithsonian Institution Press	38	1,959 (991)*	29	968	9	991 (991)*	-	-	-	-	-	-
Smithsonian Exposition Books	16	4,110 (4,110)*	-	-	16	4,110 (4,110)*	-	-	-	-	-	-
TOTAL PUBLIC SERVICE	140	14,627	71	2,805	69	11,812	-	-	-	-	10	-
Less expenses of generating revenue	(48)	(10,910)	-	-	(48)	(10,910)	-	-	-	-	-	-
TOTAL PUBLIC SERVICE (Net)	92	3,717	71	2,805	21	902	-	-	-	-	10	-

\*Expenses covered all or in part from revenue of activity.

\*\*Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds  
Budget FY 1982

(Dollars in thousands)

MUSEUM PROGRAMS	Total		Federal		Unrestricted Trust Funds		Restricted Trust Funds		Federal Grants and Contracts			
	ALL Funds		Appropriation		General**		Spec. Purpose		Trust Funds		and Contracts	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
Ass't Secretary, Museum Programs	5	220	5	209	-	11	-	-	-	-	-	-
--Office of Museum Programs	11	369 (35)*	11	334	-	-	-	35 (35)*	-	-	-	-
--International Activities	5	172	5	171	-	1	-	-	-	-	-	-
Office of the Registrar	4	132	4	132	-	-	-	-	-	-	-	-
Conservation Analytical Laboratory	21	826	21	826	-	-	-	-	-	-	-	-
Smithsonian Libraries	107	3,381	99	3,130	8	212	-	-	-	39	-	-
Office of Exhibits Central	47	1,358 (7)*	47	1,350	-	-	-	8 (7)*	-	-	-	-
Traveling Exhibition Service	27	1,735 (1,163)*	6	250	20	1,163 (1,163)*	-	-	1	322	-	-
Smithsonian Archives	15	457	13	407	2	50	-	-	-	-	-	-
National Museum Act	3	779	3	779	-	-	-	-	-	-	-	-
TOTAL MUSEUM PROGRAMS	245	9,429	214	7,588	30	1,437	-	43	1	361	-	-
Less expenses of generating revenue	(20)	(1,205)	-	-	(20)	(1,163)	-	(42)	-	-	-	-
TOTAL MUSEUM PROGRAMS (Net)	225	8,224	214	7,588	10	274	-	1	1	361	-	-

\*Expenses covered all or in part from revenue of activity.

\*\*Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds  
Estimate FY 1983

(Dollars in thousands)

	Total		Federal		Unrestricted Trust Funds				Restricted Trust Funds		Federal Grants and Contracts	
	All Funds		Appropriation		General**		Spec. Purpose		Trust Funds		Federal Grants and Contracts	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
MUSEUM PROGRAMS												
Ass't Secretary, Museum Programs	5	233	5	229	-	4	-	-	-	-	-	-
--Office of Museum Programs	11	394 (39)*	11	355	-	-	-	39 (39)*	-	-	-	-
--International Activities	5	182	5	181	-	1	-	-	-	-	-	-
Office of Registrar	4	140	4	140	-	-	-	-	-	-	-	-
Conservation Analytical Laboratory	21	893	21	893	-	-	-	-	-	-	-	-
Smithsonian Libraries	107	3,654	99	3,400	8	249	-	-	-	5	-	-
Office of Exhibits Central	47	1,459	47	1,457	-	-	-	2	-	-	-	-
Traveling Exhibition Service	28	1,543 (1,245)*	6	271	22	1,245 (1,245)*	-	-	-	27	-	-
Smithsonian Archives	18	588	13	464	5	124	-	-	-	-	-	-
National Museum Act	3	782	3	782	-	-	-	-	-	-	-	-
TOTAL MUSEUM PROGRAMS	249	9,868	214	8,172	35	1,623	-	41	-	32	-	-
Less expenses of generating revenue	(22)	(1,284)	-	-	(22)	(1,245)	-	(39)	-	-	-	-
TOTAL MUSEUM PROGRAMS (Net)	227	8,584	214	8,172	13	378	-	2	-	32	-	-

\*Expenses covered all or in part from revenue of activity.

\*\*Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds  
Budget FY 1982

(Dollars in thousands)

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General		Restricted Trust Funds Spec. Purpose		Federal Grants and Contracts				
	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.			
	\$		\$		\$		\$		\$				
<u>SPECIAL PROGRAMS</u>													
American Studies & Folklife Programs	16	1,207 (5)*	5	567	11	505	-	23 (5)*	-	2	-	110	
Int'l Environmental Science Program	2	601	2	601	-	-	-	-	-	-	-	-	
<u>ACADEMIC AND EDUCATIONAL PROGRAMS</u>													
--Office of Fellowships & Grants	10	310	9	259	1	27	-	-	-	24	-	-	
--Fellowships Awards	-	710	-	-	-	-	-	710	-	-	-	-	
--Regents' Fellowships	-	110	-	-	-	-	-	110	-	-	-	-	
--Symposia & Seminars	4	212	3	78	1	85	-	-	-	49	-	-	
--Elementary & Secondary Education	7	301	7	262	-	23	-	-	-	16	-	-	
Collections Mgmt./Inventory Program	-	760	-	760	-	-	-	-	-	-	-	-	
Collections Acquisition, Scholarly Studies and Education Program	-	2,000	-	-	-	-	-	2,000	-	-	-	-	
Fluid Research Awards	-	200	-	-	-	-	-	200	-	-	-	-	
Smithson Society Awards	-	150	-	-	-	-	-	150	-	-	-	-	
Major Exhibition Program	-	840	-	840	-	-	-	-	-	-	-	-	
Museum Support Center Equip. & Op.	8	4,996	8	4,496	-	-	-	500	-	-	-	-	
TOTAL SPECIAL PROGRAMS	47	12,397 (5)	34	7,863	13	640	-	3,693 (5)	-	91	-	110	
Less expenses of generating revenue	-	(5)	-	-	-	-	-	-	-	-	-	-	
TOTAL SPECIAL PROGRAMS (Net)	47	12,392	34	7,863	13	640	-	3,688	-	91	-	110	

\*Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds  
Estimate FY 1983

(Dollars in thousands)

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General		Restricted Trust Funds Spec. Purpose		Federal Grants and Contracts					
	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.				
	\$		\$		\$		\$		\$					
SPECIAL PROGRAMS														
American Studies & Folklife Programs	16	1,248 (10)*	5	608	11	505	-	32 (10)*	-	53	-	-	50	
Int'l Environmental Science Program	2	643	2	643	-	-	-	-	-	-	-	-	-	
ACADEMIC AND EDUCATIONAL PROGRAMS														
--Office of Fellowships & Grants	10	328	9	275	1	29	-	-	-	24	-	-	-	
--Fellowships Awards	-	750	-	-	-	-	-	750	-	-	-	-	-	
--Regents' Fellowships	-	120	-	-	-	-	-	120	-	-	-	-	-	
--Symposia & Seminars	4	206	3	85	1	86	-	-	-	35	-	-	-	
--Elementary & Secondary Education	7	327	7	277	-	25	-	-	-	25	-	-	-	
Collections Mgmt./Inventory Program	-	785	-	785	-	-	-	-	-	-	-	-	-	
Collections Acquisition, Scholarly Studies and Education Program	-	2,500	-	-	-	-	-	2,500	-	-	-	-	-	
Fluid Research Awards	-	200	-	-	-	-	-	200	-	-	-	-	-	
Smithson Society Awards	-	175	-	-	-	-	-	175	-	-	-	-	-	
Major Exhibition Program	-	840	-	840	-	-	-	-	-	-	-	-	-	
Museum Support Center Equip. & Op.	8	6,957	8	6,707	-	-	-	250	-	-	-	-	-	
TOTAL SPECIAL PROGRAMS	47	15,079	34	10,220	13	645	-	4,027	-	137	-	-	50	
Less expenses of generating revenue	-	(10)	-	-	-	-	-	(10)	-	-	-	-	-	
TOTAL SPECIAL PROGRAMS (Net)	47	15,069	34	10,220	13	645	-	4,017	-	137	-	-	50	

\*Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds  
Budget FY 1982

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds - General**		Spec. Purpose Trust Funds		Restricted Trust Funds		Federal Grants and Contracts	
	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.
	\$		\$		\$*		\$		\$		\$	
MEMBERSHIP, DEVELOPMENT AND AUXILIARY ACTIVITIES												
Office of Membership & Development	10				10		324					
Smithsonian Magazine	80				80		39,157					
National Associates Program	23				23		8,111					
Resident Associates Program	40				40		2,318		2		40	
Business Management Office	5				5		(245)					
Museum Shops	126				126		8,894					
Mail Order	40				40		7,279					
Concessions	-				-		(105)					
Parking	15				15		438					
Food Service	44				44		2,054					
Belmont Conference Center	7				7		480					
TOTAL MEMBERSHIP, DEVELOPMENT AND AUXILIARY ACTIVITIES	390				390		69,405		39		40	
Less expenses of generating revenue	(380)				(380)		(69,081)		(10)			
TOTAL MEMBERSHIP, DEVELOPMENT AND AUXILIARY ACTIVITIES (Net)	10				10		324		29		40	

\*Expenses covered all or in part from revenue of activity.  
\*\*Includes Unrestricted Allotments and Auxiliary Activities.



Source and Application of Operating Funds  
Estimate FY 1983

(Dollars in thousands)

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General**		Spec. Purpose Trust Funds		Restricted Trust Funds		Federal Grants and Contracts	
	F/T	Emp.	F/T	Emp.	F/T	Emp.	F/T	Emp.	F/T	Emp.	F/T	Emp.
	\$		\$		\$		\$		\$		\$	
MEMBERSHIP, DEVELOPMENT AND AUXILIARY ACTIVITIES												
Office of Membership & Development	10	379 (12)	-	-	10	337	-	-	42 (12)*	-	-	-
Smithsonian Magazine	81	43,539 (43,539)	-	-	81	43,539 (43,539)	-	-	-	-	-	-
National Associates Program	23	8,608 (8,608)	-	-	23	8,608 (8,608)	-	-	-	-	-	-
Resident Associates Program	40	2,444 (2,442)	-	-	40	2,442 (2,442)	-	-	2	-	-	-
Business Management Office	5	280 (280)	-	-	5	280 (280)	-	-	-	-	-	-
Museum Shops	126	9,495 (9,495)	-	-	126	9,495 (9,495)	-	-	-	-	-	-
Mail Order	40	7,620 (7,620)	-	-	40	7,620 (7,620)	-	-	-	-	-	-
Concessions	-	100 (100)	-	-	-	100 (100)	-	-	-	-	-	-
Food Service	44	2,205 (2,205)	-	-	44	2,205 (2,205)	-	-	-	-	-	-
Parking	15	500 (500)	-	-	15	500 (500)	-	-	-	-	-	-
Belmont Conference Center	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL MEMBERSHIP, DEVELOPMENT AND AUXILIARY ACTIVITIES	384	75,170	-	-	384	75,126	-	-	44	-	-	-
Less expenses of generating revenue	(374)	(74,801)	-	-	(374)	(74,789)	-	-	(12)	-	-	-
TOTAL MEMBERSHIP, DEVELOPMENT AND AUXILIARY ACTIVITIES (Net)	10	369	-	-	10	337	-	-	32	-	-	-

\*Expenses covered all or in part from revenue of activity.

\*\*Includes Unrestricted Allotments and Auxiliary Activities.

Source and Application of Operating Funds  
Budget FY 1982

(Dollars in thousands)

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General**		Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.	F/T	Empl.
	\$		\$		\$		\$		\$		\$	
<u>FACILITIES SERVICES</u>												
Office of Design & Construction	44	1,646	37	1,427	7	219	-	-	-	-	-	-
Protection Services	571	11,631	571	11,610	-	6	-	15	-	-	-	-
Office of Plant Services	332	23,354	326	22,533	5	821	1	-	-	-	-	-
--South Group Building Mgmt.	41	833	41	834	-	-	-	(1)	-	-	-	-
--Office of Horticulture	29	1,084	29	1,048	-	29	-	(1)*	3	-	-	4
TOTAL FACILITIES SERVICES	1,017	38,548	1,004	37,452	12	1,075	1	17	-	-	-	4
Less expenses of generating revenue	-	(1)	-	-	-	-	-	(1)	-	-	-	-
TOTAL FACILITIES SERVICES (Net)	1,017	38,547	1,004	37,452	12	1,075	1	16	-	-	-	4
<u>ADMINISTRATION</u>												
Less Overhead Recovery ***	424	15,273	263	9,123	160	5,919	1	152	-	-	-	79
	(3)	(114)*	(3)	(114)*	(3)	(114)*	-	-	-	-	-	-
	-	(5,200)	-	-	-	(5,200)	-	-	-	-	-	-
ADMINISTRATION (Net)	421	9,959	263	9,123	157	605	1	152	-	-	-	79
GRAND TOTAL APPLIED	4,166	161,125	3,535	128,470	315	4,584	19	5,878	67	6,580	230	15,613

\*Expenses covered all or in part from revenue of activity.

\*\*Includes Unrestricted Allotments and Auxiliary Activities.

\*\*\*See Astrophysical Observatory under SCIENCE for balance of overhead recovery.

Source and Application of Operating Funds  
Estimate FY 1983

(Dollars in thousands)

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General		Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$	F/T Empl.	\$
<u>FACILITIES SERVICES</u>												
Office of Design and Construction	44	1,797	37	1,557	7	240	-	-	-	-	-	-
Protection Services	571	14,263	571	14,242	-	6	-	15	-	-	-	-
Office of Plant Services	332	26,634	326	25,718	5	916	1	-	-	-	-	-
--South Group Building Mgmt.	41	882	41	884	-	-	-	(2)	-	-	-	-
--Office of Horticulture	29	1,145 (1)*	29	1,110	-	29	-	(1)*	-	4	-	-
TOTAL FACILITIES SERVICES	1,017	44,721	1,004	43,511	12	1,191	1	15	-	4	-	-
Less expenses of generating revenue	-	(1)	-	-	-	-	-	(1)	-	-	-	-
TOTAL FACILITIES SERVICES (Net)	1,017	44,720	1,004	43,511	12	1,191	1	14	-	4	-	-
<u>ADMINISTRATION</u>												
Less Overhead Recovery***	424 (3)	16,873 (125)* (5,400)	-	-	161 (3)	6,547 (125)* (5,400)	-	-	-	-	-	-
ADMINISTRATION (Net)	421	11,348	263	10,086	158	1,022	-	130	-	110	-	-
GRAND TOTAL APPLIED	4,164	179,146	3,535	144,110	320	5,355	16	6,103	63	5,285	230	18,293

\*Expenses covered all or in part from revenue of activity.

\*\*Includes Unrestricted Allotments and Auxiliary Activities.

\*\*\*See Astrophysical Observatory under SCIENCE for balance of overhead recovery.



TAB E

APPENDIX



SMITHSONIAN INSTITUTION  
"Salaries and Expenses"

Report of Appropriation by Objects of Expense  
(Dollars in thousands)

	<u>1981</u> <u>Actual</u>	<u>1982</u> <u>Base</u>	<u>1983</u> <u>Estimate</u>	<u>Increase</u> <u>1983 over 1982</u>
11 Personnel Compensation.....	78,045	82,580	85,100	2,520
12 Personnel Benefits.....	7,589	8,736	9,055	319
21 Travel & Transportation of Persons.....	684	938	979	41
22 Transportation of Things.....	373	606	1,369	763
23 Rent, Communications and Utilities.....	13,559	15,835	18,617	2,782
24 Printing and Reproduction.....	1,244	1,749	1,895	146
25 Other Services.....	9,437	8,363	10,093	1,730
26 Supplies and Materials.....	6,791	5,714	7,182	1,468
31 Equipment.....	2,893	6,996	8,262	1,266
Acquisitions for Collections.	757	809	845	36
32 Land and Structures.....	85			
41 Grants.....	760	695	697	2
42 Insurance Claims and Indemnities.....	<u>13</u>	<u>15</u>	<u>16</u>	<u>1</u>
TOTAL.....	122,230	133,036 <sup>/1</sup>	144,110	11,074

/1 This amount includes required supplemental funding of \$4,566 thousand for the cost of the FY 1982 legislated pay raises.

SMITHSONIAN VISITORS  
(By Fiscal Year)

Fiscal Year	Smithsonian Institution Building	Arts and Industries Building	Museum of Natural Hist./Man	National Air & Space Museum	Freer Gallery of Art	Museum of American History	American Art & Portrait Gallery	Renwick Gallery	Hirshhorn Museum & Sculpture 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
1967	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	681,255	2,557,155	3,269,791	1,839,373	217,305	5,483,555	216,523			13,583,702
1971	819,617	1,985,732	3,456,755	1,337,445	190,425	5,955,128	194,468			13,801,208
1972	807,294	2,306,071	3,414,640	1,104,151	230,475	6,808,526	246,657	105,186		15,035,323
1973	739,651	2,285,603	3,306,105	1,223,917	204,858	6,905,339	254,005	165,846		15,152,967
1974	967,164	2,040,731	3,067,694	1,285,598	219,346	5,850,227	329,487	175,672		13,708,406
1975	1,033,803	1,973,356	3,668,587	1,416,432	215,061	7,111,054	368,948	1,620,540		17,506,575
1976	291,808	592,400/10	4,342,601	1,451,049/11	225,257	6,318,964	465,231	1,587,628		16,239,284
T.Q.	755,146	543,007	1,535,613	3,062,254/11	59,217	1,470,708	112,682	46,661	434,415	7,556,365
1977	757,485	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	877,835	903,081	5,366,159	10,028,888	244,493	4,050,687	480,947	201,284	1,299,134	23,332,158
1979	1,023,394	940,843	5,594,748	10,151,359	286,269	4,367,183	434,481	188,788	1,211,439	24,052,945
1980	956,190	1,227,597	5,202,864	7,257,648	311,845	4,625,477	371,539	235,525	978,820	21,234,709
1981		1,188,507	4,998,736	7,538,954	305,411	5,162,452	384,228	243,900	924,805	21,703,183

/1 National Museum of American History opened January 1964.

/2 National Museum of American Art opened May 1968 and National Portrait Gallery in October 1968.

/3 Renwick Gallery opened January 1972.

/4 Hirshhorn Museum and Sculpture Garden opened October 1974.

/5 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 100,000).

/6 July-August 1964, certain Smithsonian Institution buildings were open 4:30 to 10 p.m. for the first time.

/7 Building closed for renovation October 1968.

/8 Reflects the significant decrease in visitors in the first six months of FY 1968 due to unsettled local conditions.

/9 Fiscal year 1969 visitor totals represent the effect of local conditions in late 1968 on visitor attendance.

/10 Building closed for installation of "1876" exhibition September 1975 through April 1976.

/11 Old building closed November 1975. Foyer of new museum opened to visitors February 1976. New building completely opened July 1, 1976.



SMITHSONIAN INSTITUTION

1981

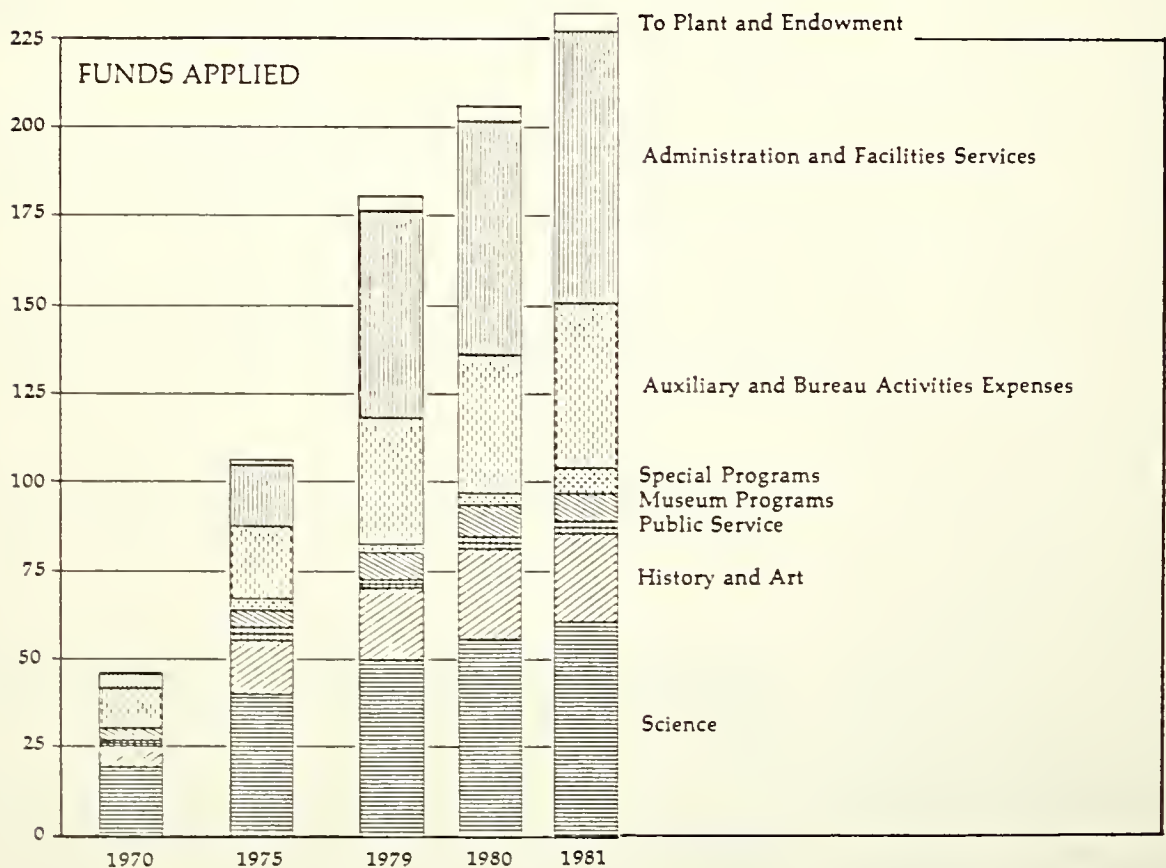
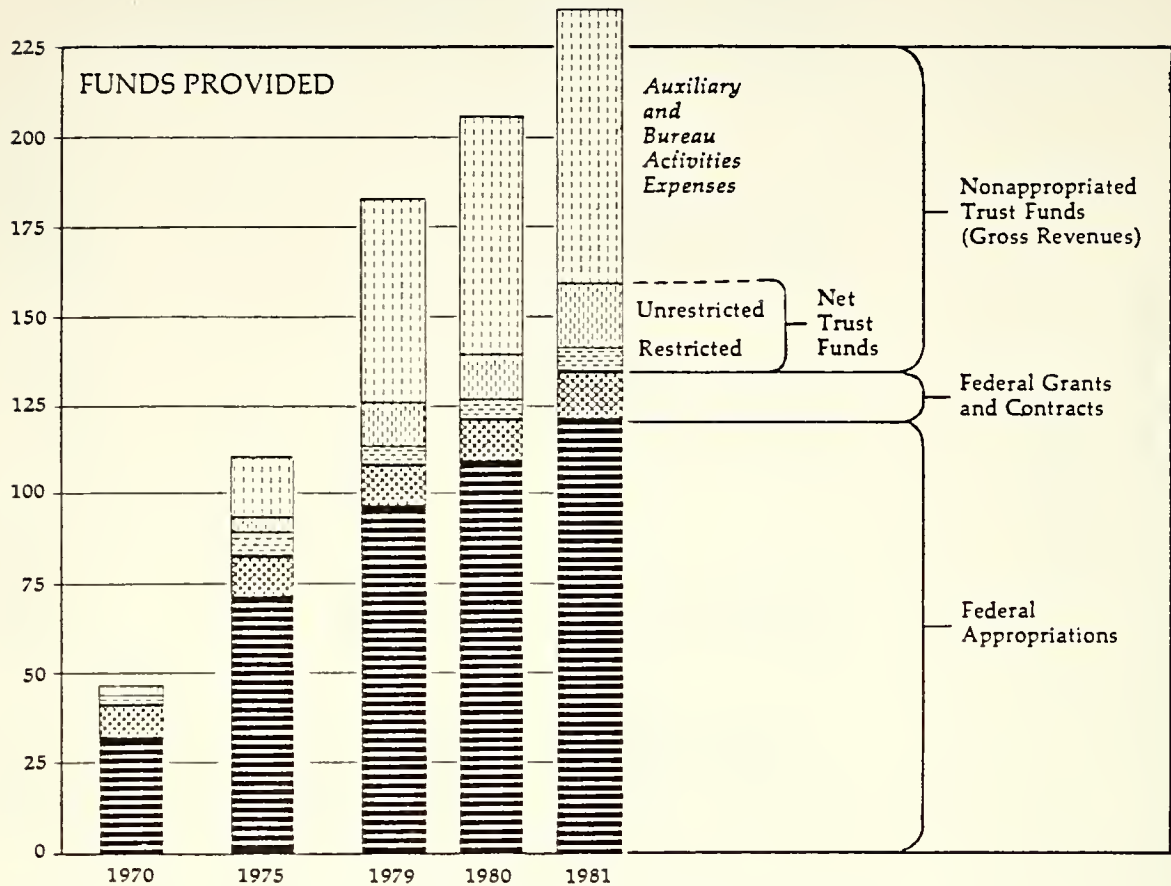
FINANCIAL REPORT

Christian C. Hohenlohe, Treasurer

# SMITHSONIAN INSTITUTION OPERATING FUNDS

Fiscal Years 1970, 1975, and 1979-1981

(In \$1,000,000's)



## FINANCIAL REPORT

CHRISTIAN C. HOHENLOHE, TREASURER

**SUMMARY:** During this past fiscal year, the Smithsonian continued its wide range of activities in exhibits, research, publication, and public education. The diversity of the Institution's programs is reflected in the diversity of funding sources which support these endeavors. While the majority of the operating budget is provided annually from federal appropriations, indispensable support is also obtained from gifts and grants, from investment income, and from earned revenues of auxiliary activities. This combination of support from Congress, foundations, federal agencies, individuals, and the general public, has enabled the Institution to perform significant accomplishments during the year, as reported elsewhere in this volume.

The bar chart on the facing page outlines the overall source and application of the Institution's operating budget for fiscal year 1981 and prior periods. While the growth pattern of past years is evident again in fiscal year 1981, these increased revenues were more a function of inflation than expansion of programs and were therefore devoted in large measure to offsetting the higher costs of personnel, supplies, utilities, maintenance, and acquisitions. Due to a hiring freeze during most of the year on civil service personnel as well as self-imposed limitations on other hires, the full-time staff of the Institution grew only one percent, primarily in the areas of facilities protection and maintenance and the auxiliary activities.

In the current climate of budgetary restraint, the Institution was treated by Congress with supportive understanding. The total federal appropriation of \$142 million, of which \$122 million was for

operating purposes, provided base resources for research and education, for conservation and study of the national collections, for renovation and maintenance of Smithsonian facilities, and for administrative and support services, as well as assisting the Institution in meeting unavoidable cost increases due to inflation. The appropriation also provided further significant funding for constructing and equipping the Museum Support Center in Suitland, Maryland, which will provide essential storage and conservation facilities for the national collections, and program funding for selected exhibition and collection management projects.

While federal appropriations provide the core support for the Institution's programs, and are expected to do so in the future, non-appropriated trust funds from various sources are also vital to the research and outreach efforts. In recognition of this need as well as of the value of services provided, strong public financial support continued last year through the Smithsonian Associates programs, other educational auxiliary activities, gifts from individuals, and grants from foundations and corporations. Net revenues from these nonappropriated sources, after deduction of operating expenses and the sales cost of auxiliary activities, were higher than the prior year. Thus in addition to meeting ongoing program commitments—such as the Regents' Collections Acquisition, Scholarly Studies, and Educational Outreach programs, pre- and post-doctoral fellowships, and operating allotments to certain bureaux—the Institution followed the practice of prior years in transferring some \$2.5 million of unrestricted trust funds into endowment. Funds were also made available for the Museum Support Center to augment the federal contribution to this endeavor.

There was further progress during the year in raising nonappropriated funds for the Quadrangle, the future site of two museums of the cultures of Asia and Africa. With a \$1 million gift from the Government of Korea during the year, as well as gifts from individuals, foundations, and corporations and unrestricted moneys designated to the project, total nonappropriated funds received for the project in fiscal year 1981 were \$3,455,000. The partnership of federal appropriations with direct public support, evident in other Smithsonian programs, will be an essential part of the financial plan for this venture.

TABLE 1. Financial Summary  
(In \$1,000's)

	FY 1979	FY 1980	FY 1981
INSTITUTIONAL OPERATING FUNDS			
FUNDS PROVIDED:			
Federal Appropriations—Salaries & Expenses .....	\$ 98,202	\$107,764	\$122,478
Federal Agency Grants & Contracts .....	11,412	12,947	14,172
Nonappropriated Trust Funds:			
For Restricted Purposes .....	4,577	5,339	6,378
For Unrestricted & Special Purposes:			
Auxiliary & Bureau Activities Revenues—Gross .....	67,360	75,150	88,381
Less Related Expenses .....	(57,557)	(65,933)	(75,924)
Auxiliary & Bureau Activities Net Revenue .....	9,803	9,217	12,457
Investment, Gift, and Other Income .....	3,394	3,825	4,887
Total Net Unrest. & Special Purpose Revenue .....	13,197	13,042	17,344
Total Nonappropriated Trust Funds*—Gross .....	75,331	84,314	99,646
—Net .....	17,774	18,381	23,722
Total Operating Funds Provided—Gross .....	184,945	205,025	236,296
—Net .....	<u>\$127,388</u>	<u>\$139,092</u>	<u>\$160,372</u>
FUNDS APPLIED:			
Science .....	\$ 53,002	\$ 57,907	\$ 62,703
Less SAO Overhead Recovery .....	(1,850)	(2,196)	(2,470)
History & Art .....	20,245	26,224	25,614
Public Service .....	2,927	3,129	3,421
Museum Programs .....	8,003	8,974	8,084
Special Programs .....	2,692	3,204	7,284
Associates and Business Management .....	304	345	312
Administration—Federal** .....	7,071	8,048	8,782
—Nonappropriated Trust Funds .....	4,134	4,937	5,740
Less Smithsonian Overhead Recovery .....	(4,038)	(4,379)	(5,014)
Facilities Services .....	27,790	30,630	36,501
Total Operating Funds Applied .....	120,280	136,823	150,957
Transfers (Nonappropriated Trust Funds)			
Unrestricted Funds—To Plant .....	1,857	1,342	2,550
—To Endowments .....	2,671	2,031	2,550
Restricted Funds—To Endowments .....	413	757	108
Total Operating Funds Applied & Transferred Out .....	<u>\$125,221</u>	<u>\$140,953</u>	<u>\$156,165***</u>
CHANGES IN NONAPPROPRIATED TRUST FUND BALANCES:			
Restricted Purpose (Incl. Fed. Agency Gr. & Contracts) ...	\$ 171	\$ (225)	\$ 1,276
Unrestricted—General Purpose .....	33	36	42
—Special Purpose .....	1,963	(1,672)	2,704
Total .....	<u>\$ 2,167</u>	<u>\$ (1,861)</u>	<u>\$ 4,022</u>
YEAR-END BALANCES—NONAPPROPRIATED TRUST FUNDS:			
Restricted Purpose .....	\$ 4,900	\$ 4,675	\$ 5,951
Unrestricted—General Purpose .....	4,965	5,001	5,043
—Special Purpose .....	11,567	9,895	12,599
Total .....	<u>\$ 21,432</u>	<u>\$ 19,571</u>	<u>\$ 23,593</u>
OTHER FEDERAL APPROPRIATIONS			
Smithsonian Science Information Exchange .....	\$ 2,063	\$ —	\$ —
Special Foreign Currency Program .....	3,700	4,200	3,650
Construction .....	6,575	32,100	15,829
Total Federal Appropriations (Incl. S&E above) .....	<u>\$110,540</u>	<u>\$144,064</u>	<u>\$141,957</u>

\*Figures do not include gifts and other income directly to Plant and Endowment Funds: FY 1979—\$96,000; FY 1980—\$1,211,000; FY 1981—\$2,696,000.

\*\*Includes unobligated funds returned to Treasury: FY 1979—\$47,000; FY 1980—\$267,000; FY 1981—\$64,000.

\*\*\*Excludes \$185,000 available for FDR Centennial through FY 1982.

## *Operating Funds—Sources and Application*

Once again, the overall operating budget of the Institution has shown substantial growth over the past year, as displayed in Table 1 as well as the bar chart. Total gross operating funds grew from \$205,025,000 in fiscal year 1980 to \$236,296,000 in fiscal year 1981, an increase of \$31,271,000 or 15 percent. Of the total available operating funds, 52 percent were derived from federal appropriations, 6 percent from federal agency grants and contracts, and 42 percent from nonappropriated sources, approximately the same ratios as in recent years.

The growth in net operating funds, after deduction of the expenses of the nonappropriated auxiliary and bureau activities, was also 15 percent, or \$21,280,000 over the prior year. Those net operating funds, which support a wide range of Smithsonian programs, were obtained 76 percent from federal appropriations, 9 percent from federal agency grants and contracts, and 15 percent from nonappropriated sources. Application of these funds by all Smithsonian bureaux is outlined in Table 2, with further supporting detail in other tables.

### *FEDERAL APPROPRIATION*

The Institution received a federal appropriation for operating purposes in fiscal year 1981 of \$122,478,000, an increase of \$14.7 million, or 14 percent, over fiscal year 1980. The apparent growth represented by this increase was in large part attributable to inflation in the areas of pay, utilities, rent, and other objects of expense, which, following the pattern of recent years, continued to absorb the major portion, over \$9.6 million, of increased funding. Beyond these inflationary increases, however, \$5.1 million was allowed for a number of program needs throughout the Institution. While almost half of the programmatic increase was for the purchase of equipment for the Museum Support Center, to be phased over a period of several years, significant support also was received for the development of major new exhibitions in the History and Art museums; for expenses of the Tropical Research Institute resulting from implementation of the Panama Canal Treaty; for protection, administrative, and maintenance requirements; and for a variety of other

**TABLE 2. Source and Application of Operating Funds**  
**Year Ended September 30, 1981**  
(Excludes Special Foreign Currency Funds, Plant Funds, and Endowments)  
(In \$1,000's)

Funds	Nonfederal Funds						
	Federal funds	Total non-federal funds	Unrestricted			Restricted	
			General	Auxiliary activities	Special purpose	General	Grants and contracts
FUND BALANCES 10/1/80 ...	\$ —	\$ 19,571	\$ 5,001	\$ —	\$ 9,895	\$ 4,574	\$ 101
<b>FUNDS PROVIDED</b>							
Federal Appropriations .....	122,478	—	—	—	—	—	—
Investment Income .....	—	6,303	3,123	—	589	2,591	—
Grants and Contracts .....	—	14,172	—	—	—	—	14,172
Gifts .....	—	4,421	15	1,329	99	2,978	—
Sales and Revenue .....	—	87,052	—	83,719	3,333	—	—
Other .....	—	1,870	55	—	1,006	809	—
Total Provided .....	122,478	113,818	3,193	85,048	5,027	6,378	14,172
Total Available .....	\$122,478	\$133,389	\$ 8,194	\$85,048	\$14,922	\$10,952	\$14,273
<b>FUNDS APPLIED</b>							
<i>Science:</i>							
Assistant Secretary .....	\$ 328	\$ 366	\$ 28	\$ —	\$ 11	\$ 140	\$ 187
Natl. Mus. of Nat. History ....	15,677	2,539	206	—	680	531	1,122
Astrophysical Observatory ....	5,370	14,416	2,479	—	432	101	11,404
Less Overhead Recovery .....	—	(2,470)	(2,470)	—	—	—	—
Tropical Research Inst. ....	2,773	339	59	—	202	78	—
Radiation Biology Lab. ....	1,999	169	—	—	98	13	58
Natl. Air & Space Museum ....	6,152	2,001	14	—	1,765	109	113
Chesapeake Bay Center .....	869	522	83	—	141	34	264
Natl. Zoological Park .....	9,221	416	21	—	118	28	249
Center for Study of Man .....	603	18	—	—	—	18	—
Fort Pierce Bureau .....	—	389	—	—	—	389	—
Total Science .....	42,992	18,705	420	—	3,447	1,441	13,397
<i>History and Art:</i>							
Assistant Secretary .....	351	117	86	—	17	1	13
Natl. Mus. Am. History .....	8,072	974	96	—	647	231	—
Natl. Mus. American Art .....	3,557	422	207	—	149	34	32
Natl. Portrait Gallery .....	2,613	378	36	—	44	297	1
Hirshhorn Museum .....	2,431	1,197	26	—	677	494	—
Freer Gallery of Art .....	727	1,296	10	—	45	1,241	—
Archives of American Art .....	542	451	1	—	3	447	—
Cooper-Hewitt Museum .....	702	1,464	364	—	788	287	25
Natl. Mus. of African Art .....	621	420	163	—	170	83	4
Total History and Art ..	19,616	6,719	989	—	2,540	3,115	75
<i>Public Service:</i>							
Assistant Secretary .....	184	1	1	—	—	—	—
Reception Center .....	20	395	395	—	—	—	—
Telecommunications .....	55	305	237	—	68	—	—
Anacostia Museum .....	529	48	26	—	20	2	—
Intl. Exchange Service .....	346	—	—	—	—	—	—
Performing Arts .....	387	4,813	—	4,561	114	130	8
Smithsonian Press .....	847	2,146	—	2,091	—	55	—
Exposition Books .....	—	4,725	—	4,725	—	—	—
Total Public Service ....	2,368	12,433	659	11,377	202	187	8

TABLE 2. *Source and Application of Operating Funds—continued*  
*Year Ended September 30, 1981*

(Excludes Special Foreign Currency Funds, Plant Funds, and Endowments)  
(In \$1,000's)

Funds	Nonfederal Funds						
	Fed- eral funds	Total non- federal funds	Unrestricted		Restricted		Grants and con- tracts
			Gen- eral	Aux- iliary activ- ities	Spe- cial pur- pose	Gen- eral	
<i>Museum Programs:</i>							
Assistant Secretary .....	747	149	45	—	25	18	61
Registrar .....	126	—	—	—	—	—	—
Conserv. Analytical Lab. ....	788	2	—	—	2	—	—
Libraries .....	2,976	217	207	—	—	10	—
Exhibits .....	1,312	14	—	—	14	—	—
Traveling Exhib. Service .....	192	1,491	—	1,166	55	244	26
Archives .....	430	44	43	—	1	—	—
National Museum Act .....	795	—	—	—	—	—	—
Total Museum Programs .....	7,366	1,917	295	1,166	97	272	87
<i>Special Programs:</i>							
Am. Studies & Folklife Pgm. ...	534	793	540	—	51	17	185
Intl. Environmental Pgm. ....	468	—	—	—	—	—	—
Academic & Educational Pgm. .	562	856	129	—	691	36	—
Collections Mgt./Inventory ....	587	—	—	—	—	—	—
Major Exhibition Program .....	739	—	—	—	—	—	—
Museum Support Center .....	2,767	—	—	—	—	—	—
Total Special Programs .....	5,657	1,649	669	—	742	53	185
Associate Programs .....	—	44,533	260	44,219	13	11	30
Business Management .....	—	16,769	—	16,769	—	—	—
Administration .....	8,718	5,888	5,365	148	96	193	86
Less Overhead Recovery ....	—	(5,014)	(5,014)	—	—	—	—
Facilities Services .....	35,512	989	1,014	—	(48)	23	—
<i>Transfers Out/(In):</i>							
Treasury .....	64*	—	—	—	—	—	—
Coll. Acq., Schol. St., Outrch. .	—	—	2,000	—	(2,000)	—	—
Liability Reserves .....	—	—	230	—	(230)	—	—
Net Auxiliary Activities .....	—	—	(10,979)	10,979	—	—	—
Other Designated Purposes ....	—	—	2,196	390	(2,589)	3	—
Plant .....	—	2,550	2,526	—	24	—	—
Endowment .....	—	2,658	2,521	—	29	108	—
Total Transfers .....	64	5,208	(1,506)	11,369	(4,766)	111	—
Total Funds Applied ....	\$122,293	\$109,796	\$ 3,151	\$85,048	\$ 2,323	\$ 5,406	\$13,868
FUND BALANCES 9/30/81 ....	\$ 185**	\$ 23,593	\$ 5,043	\$ —	\$12,599	\$ 5,546	\$ 405

\*Unobligated funds returned to Treasury.

\*\*Funds available for FDR Centennial through FY 1982.



needs primarily related to the conservation and management of the collections.

In order to meet a reduced federal personnel ceiling imposed by the Office of Management and Budget, the Institution maintained a hiring freeze throughout most of the year. Dollar savings of \$1.4 million resulted from this employment freeze as well as other spending limitations imposed by the Office of Management and Budget.

#### FEDERAL AGENCY GRANTS AND CONTRACTS

Support from federal agencies, in the form of grants and contracts, primarily for the Institution's research programs, totaled \$14.2 million for fiscal year 1981, an increase of 9 percent over fiscal year 1980. As may be seen in Table 3, the major source of grant and contract support was the National Aeronautics and Space Administration, primarily for research programs of the Smithsonian Astrophysical Observatory (SAO). Significant programs at SAO were experiments in high energy astrophysics, hydrogen maser construction, and satellite tracking. Other important research programs receiving support were the medical entomology project at the National Museum of Natural History, supported by the Department of the Army; research into conservation of wild primates conducted by the National Zoological Park with funds from the United States Fish and Wildlife Service; and the National Science Foundation support to the Chesapeake Bay Center for Environmental Studies (via the Chesapeake Research Consortium) for ecological studies on a major tributary of the Chesapeake Bay.

#### NONAPPROPRIATED TRUST FUNDS

The Institution's nonappropriated trust fund revenues totaled \$99,646,000 in fiscal year 1981, while net revenues available for support of Institutional programs, after exclusion of expenses necessary to generate auxiliary and bureau activity revenues, totaled \$23,722,000. Displayed in Tables 2, 4, and 5 are the bureaux of the Institution utilizing these funds.

*Restricted* fund revenues, which may only be used for specific purposes, were \$6,378,000 for the year, made up of \$2,978,000 from gifts and grants, \$2,591,000 from investment income, and \$809,000 from other sources, primarily fund-raising activities at the Archives of American Art and sales desk activities at the Freer Gallery of

TABLE 3. Grants and Contracts—Expenditures  
(In \$1,000's)

<i>Federal Agencies</i>	<i>FY 1979</i>	<i>FY 1980</i>	<i>FY 1981</i>
Department of Defense .....	\$ 1,079	\$ 1,078	\$ 703
Department of Energy .....	304	340	407
Department of Health and Human Services	288	280	283
Department of Interior .....	65	197	244
National Aeronautics and Space Administration* .....	8,919	9,832	10,663
National Endowments for the Arts and Humanities .....	105	118	57
National Science Foundation** .....	385	651	784
Other .....	345	386	727
Total .....	<u>\$11,490</u>	<u>\$12,882</u>	<u>\$13,868</u>

\*Includes \$583 (FY 1979), \$554 (FY 1980), and \$813 (FY 1981) in subcontracts from other organizations receiving prime contract funding from NASA.

\*\*Includes \$112 (FY 1980), and \$208 (FY 1981) in NSF subcontracts from the Chesapeake Research Consortium.

Art. Endowment income, as detailed more fully below, provides funding to the Fort Pierce Bureau for research in oceanography, major operating support to the Freer Gallery of Art, as well as a number of other specific research projects at the Institution. Significant gifts were received during the year for exhibitions of the National Museum of American History, the National Museum of Natural History, the National Portrait Gallery, the Smithsonian Institution Traveling Exhibition Service, and the Cooper-Hewitt Museum. Major collection acquisition support was received by the Hirshhorn Museum and Sculpture Garden and the National Museum of American Art, which also obtained a large grant for collections conservation.

*Unrestricted Special Purpose* funds are comprised of bureau activity revenues, such as the membership and educational programs at the National Museum of African Art and the Cooper-Hewitt Museum, sales shops at the Cooper-Hewitt Museum and the National Air and Space Museum (NASM), and the theaters at NASM; investment income earned on bureau fund balances; shared revenues for those bureaux housing centrally run concession and museum shop activities; and continuing allocations of funds for fellowship awards (\$948,000), the Regents' Collections Acquisition, Scholarly Studies,

TABLE 4. *Restricted Operating Trust Funds\**  
*Fiscal Years 1979-1981*  
(In \$1,000's)

<i>Item</i>	<i>Invest- ment</i>	<i>Gifts</i>	<i>Misc.</i>	<i>Total rev- enue</i>	<i>Deduc- tions</i>	<i>Trans- fers in (out)</i>	<i>Net in- crease (de- crease)</i>	<i>Fund bal- ance end of year</i>
FY 1979—Total .....	<u>\$2,075</u>	<u>\$1,775</u>	<u>\$ 727</u>	<u>\$4,577</u>	<u>\$3,983</u>	<u>\$ (345)</u>	<u>\$ 249</u>	<u>\$4,864</u>
FY 1980—Total .....	<u>\$2,349</u>	<u>\$2,257</u>	<u>\$ 733</u>	<u>\$5,339</u>	<u>\$4,856</u>	<u>\$ (773)</u>	<u>\$ (290)</u>	<u>\$4,574</u>
FY 1981:								
National Museum of								
Natural History .....	\$ 189	\$ 440	\$ (4)	\$ 625	\$ 531	\$ 13	\$ 107	\$ 576
Astrophysical								
Observatory .....	13	130	(30)	113	101	(3)	9	20
Tropical Research								
Institute .....	20	57	10	87	78	—	9	65
National Air and								
Space Museum .....	60	4	—	64	109	(12)	(57)	90
Chesapeake Bay Center ....	11	—	—	11	34	—	(23)	82
Fort Pierce Bureau .....	761	—	—	761	389	—	372	813
Other Science .....	220	149	84	453	199	(79)	175	530
National Museum of								
American History .....	59	294	4	357	231	—	126	458
National Museum of								
American Art .....	63	254	3	320	34	—	286	341
National Portrait Gallery ..	42	82	(3)	121	297	—	(176)	233
Hirshhorn Museum .....	39	235	—	274	494	—	(220)	280
Freer Gallery of Art .....	910	32	476	1,418	1,241	—	177	810
Archives of								
American Art .....	28	210	212	450	447	—	3	271
Cooper-Hewitt Museum ...	36	253	55	344	287	—	57	313
National Museum of								
African Art .....	2	11	1	14	83	—	(69)	4
Traveling Exhibition								
Service .....	25	224	—	249	244	—	5	154
All Other .....	<u>113</u>	<u>603</u>	<u>1</u>	<u>717</u>	<u>496</u>	<u>(30)</u>	<u>191</u>	<u>506</u>
Total FY 1981 .....	<u>\$2,591</u>	<u>\$2,978</u>	<u>\$ 809</u>	<u>\$6,378</u>	<u>\$5,295</u>	<u>\$ (111)</u>	<u>\$ 972</u>	<u>\$5,546</u>

\*Does not include Federal Agency Grants and Contracts.

TABLE 5. *Unrestricted Special Purpose Funds*  
*Fiscal Year 1981—Obligations*  
(In \$1,000's)

Item	Revenue				Deductions			Net increase (decrease)	Fund balance end of year
	Investment	Bureau activities	Gifts and other revenue	Total revenue	Transfers in (out)	Program expense	Bureau activity expense		
FY 1979 .....	<u>\$254</u>	<u>\$2,039</u>	<u>\$ 661</u>	<u>\$2,954</u>	<u>\$3,707</u>	<u>\$3,262</u>	<u>\$1,436</u>	<u>\$ 1,963</u>	<u>\$11,567</u>
FY 1980 .....	<u>\$430</u>	<u>\$2,049</u>	<u>\$ 771</u>	<u>\$3,250</u>	<u>\$4,252</u>	<u>\$7,361</u>	<u>\$1,813</u>	<u>\$ (1,672)</u>	<u>\$ 9,895</u>
FY 1981:									
National Museum of Natural History .....	\$ 46	\$ —	\$ 65	\$ 111	\$ 637	\$ 680	\$ —	\$ 68	\$ 334
Astrophysical Observatory ..	6	112	104	222	414	320	112	204	534
Tropical Research Institute .....	—	66	—	66	158	140	62	22	90
National Air and Space Museum Chesapeake Bay Center .....	268	2,183	77	2,528	(365)	498	1,267	398	2,838
National Zoological Park ..	132	—	230	362	52	118	—	296	1,295
Other Science ...	24	—	27	51	109	109	—	51	148
National Museum of American History .....	24	32	25	81	394	596	51	(172)	273
National Museum of American Art .....	15	6	132	153	82	146	3	86	197
National Portrait Gallery Hirshhorn Museum .....	4	8	30	42	35	36	8	33	62
Freer Gallery of Art .....	16	—	8	24	679	677	—	26	149
Cooper-Hewitt Museum .....	—	—	—	—	49	45	—	4	32
National Museum of African Art	8	661	116	785	12	304	484	9	33
Liability Reserves Unallocated Coll. Acq., Schol. St. and Outreach .	—	130	7	137	(15)	(5)	175	(48)	2
Fellowships .....	—	—	—	—	230	—	—	230	3,330
Museum Support Center Equip. .	—	—	—	—	(232)	—	—	(232)	270
Other .....	—	—	—	—	696	630	—	66	473
	—	—	—	—	750	—	—	750	750
Total FY 1981	<u>\$589</u>	<u>\$3,333</u>	<u>\$1,105</u>	<u>\$5,027</u>	<u>\$4,766</u>	<u>\$4,844</u>	<u>\$2,245</u>	<u>\$ 2,704</u>	<u>\$12,599</u>

and Educational Outreach programs (\$2 million per year), as well as funds provided for other designated purposes.

*Unrestricted General Purpose* funds revenue, which is available for general Institutional purposes, is derived primarily from investment income and auxiliary activity net revenues. As displayed in Table 6, net general unrestricted funds, after deduction of auxiliary activity expenses, totaled \$14,562,000 in fiscal year 1981, a somewhat better result than the prior year. This improved performance was due to the higher interest rates during the year, which benefited the short-term investments of the Institution, and to the auxiliary activities. These activities are listed in Table 7, and as may be seen therein, the Smithsonian Associates programs, including the *Smithsonian* magazine, generate the majority of the revenues on both a gross and net basis. The magazine continued to enjoy widespread acceptance, increasing once again the number of subscribing National Associates; the Contributing Associates program, providing unrestricted gift support to the Institution, also showed modest growth.

Important educational products and public services are provided as well by the other auxiliary activities, such as the Smithsonian Institution Press, Smithsonian Institution Traveling Exhibition Service, and the Smithsonian Exposition Books. On an overall basis, these other activities provided a financial return to the Institution at approximately the same rate as in fiscal year 1980.

The growth in unrestricted funds allowed continued support for a number of administrative and programmatic activities as well as some contributions towards new endeavors and facilities development. Activities receiving major operating support include the Visitor Information and Associates' Reception Center, the Folklife Program, the Cooper-Hewitt Museum, and the Office of Telecommunications, while smaller amounts for specific programs were allotted to numerous other units. Special emphasis was placed on affirmative action efforts with funding allotted for the establishment of a cooperative education program. In addition to the operating support provided the Office of Telecommunications, an amount of \$500,000 was set aside in fiscal year 1981 for future exploration of potential television production by the Institution. Special funding was also provided for the major exhibition, *5,000 Years of Korean Art*, in

TABLE 6. *Unrestricted Trust Funds—General and Auxiliary Activities*  
*Fiscal Years 1979–1981*  
(In \$1,000's)

<i>Item</i>	<i>FY 1979</i>	<i>FY 1980</i>	<i>FY 1981</i>
<b>FUNDS PROVIDED</b>			
<b>General Income:</b>			
Investments .....	\$ 2,276	\$ 2,470	\$ 3,123
Gifts .....	163	14	15
Miscellaneous .....	40	140	55
Total General Income .....	<u>2,479</u>	<u>2,624</u>	<u>3,193</u>
<b>Auxiliary Activities Income (Net):</b>			
Associates .....	6,429	6,113	8,691
Business Management			
—Museum Shops .....	287	1,022	631
—Concessions and Parking .....	1,641	1,938	1,978
—Other .....	(245)	(191)	(251)
Performing Arts .....	177	(75)	(186)
Smithsonian Press .....	292	252	231
Exposition Books .....	1,036	305	536
Traveling Exhibitions .....	(142)	(268)	(226)
Photo Services .....	(275)	(115)	(35)
Total Auxiliary Activities .....	<u>9,200</u>	<u>8,981</u>	<u>11,369</u>
Total Funds Provided (Net) .....	<u>11,679</u>	<u>11,605</u>	<u>14,562</u>
<b>EXPENDITURES AND TRANSFERS</b>			
Administrative and Program Expense .....	9,231	10,535	12,141
Less Administrative Recovery .....	5,888	6,575	7,484
Net Expense .....	<u>3,343</u>	<u>3,960</u>	<u>4,657</u>
<b>Less Transfers:</b>			
To Special Purpose			
for Program Purposes .....	3,879	4,307	4,816
To Plant Funds .....	1,853	1,281	2,526
To Endowment Funds .....	2,571	2,021	2,521
NET ADDITION TO FUND BALANCE ..	<u>33</u>	<u>36</u>	<u>42</u>
ENDING FUND BALANCE .....	<u>\$ 4,965</u>	<u>\$ 5,001</u>	<u>\$ 5,043</u>

TABLE 7. *Auxiliary Activities Fiscal Years 1979-1981*  
(In \$1,000's)

Activity	Sales and other revenue	Gifts	Less cost of sales	Gross revenue	Ex- penses	Net revenue*** (loss)
FY 1979 .....	\$64,846	\$ 475	\$31,884	\$33,437	\$24,237	\$ 9,200
FY 1980 .....	\$72,203	\$ 898	\$41,569	\$31,532	\$22,551	\$ 8,981
FY 1981:						
Associates .....	\$51,581	\$1,329	\$34,551	\$18,359	\$ 9,668	\$ 8,691
Business Management:						
—Museum Shops* .....	16,074	—	8,335	7,739	7,108	631
—Concessions/Parking .	2,682	—	35	2,647	669	1,978
—Other** .....	371	—	—	371	622	(251)
Performing Arts .....	4,375	—	1,113	3,262	3,448	(186)
Smithsonian Press .....	2,322	—	688	1,634	1,403	231
Exposition Books .....	5,261	—	1,101	4,160	3,624	536
Traveling Exhibitions ....	940	—	—	940	1,166	(226)
Photo Services						
(Administration) .....	113	—	43	70	105	(35)
Total FY 1981 .....	\$83,719	\$1,329	\$45,866	\$39,182	\$27,813	\$11,369

\*Includes Museum Shops and Mail Order.

\*\*Includes Business Management Office and Belmont.

\*\*\*Before revenue-sharing transfers to participating Smithsonian bureaux of \$397,000 (FY 1979); \$381,000 (FY 1980); and \$390,000 (FY 1981).

the new Thomas Mellon Evans Special Exhibits Gallery in the National Museum of Natural History. Transfers to special purpose funds included continuing allotments for the Collections Acquisition, Scholarly Studies, and Educational Outreach programs (\$2 million), the Fluid Research program of small grants to Smithsonian scientists (\$200,000), and the Smithsonian Fellowship program, which provides stipend support to pre- and post-doctoral fellows (\$948,000), as well as a one-time transfer of \$750,000 for conservation equipment at the Museum Support Center.

Some \$2.5 million was added to the Institution's unrestricted endowment funds to ensure a stable source of current revenues for future years. As described below, transfers were also made to plant

funds to support facilities development, notably \$750,000 towards construction of the Museum Support Center and \$1.3 million towards Quadrangle development.

### *Special Foreign Currency Program*

A separate appropriation was received for the Special Foreign Currency Program of \$3,650,000 equivalent in excess foreign currencies. These currencies, accumulated from sales of surplus agricultural commodities under Public Law 83-480, have been determined by the Treasury Department to be in excess of the normal needs of the United States. Some \$2.9 million of this appropriation was used to provide grants to United States institutions for field research and advanced professional training in the countries of Burma, Egypt, India, and Pakistan, in fields of traditional Smithsonian interest and competence. The remaining \$750,000 was added to a reserve of Indian rupees, established in fiscal year 1980 to support future programs of the American Institute of Indian Studies after the supply of excess rupees is depleted. Obligation of these funds by research discipline and country is provided in Table 8.

### *Construction*

Funds appropriated for construction and renovation projects at the Institution totaled \$15,829,000 in fiscal year 1981, as shown in Table 9. With the support and encouragement of the Congress, the Institution continued to accelerate its efforts to meet the essential renovation needs of a large and complex physical plant. An appropriation of \$7,539,000 under the Restoration and Renovation of Buildings account represented a 44 percent increase over the previous year. The funding permitted progress in facade, roof, and terrace repairs; systems and structural modifications to further energy efficiency; renovations to comply with legislative requirements on occupational health and safety as well as the needs of disabled persons; and modification and improvement of existing facilities for



TABLE 8. *Special Foreign Currency Program*  
*Fiscal Year 1981—Obligations*  
(In \$1,000's)

Country	Archaeology	Systematic and environmental biology	Astrophysics and earth sciences	Museum programs	Grant administration	Total
Burma .....	\$ 20	\$ —	\$ —	\$ —	\$ 1	\$ 21
Egypt .....	286	50	150	41	242	769
India .....	2,318*	268	24	175	44	2,829
Pakistan .....	—	84	—	—	—	84
Total ....	<u>\$2,624</u>	<u>\$ 402</u>	<u>\$ 174</u>	<u>\$ 216</u>	<u>\$ 287</u>	<u>\$3,703</u>

\*Includes the obligation of \$750,000 for a forward-funded reserve for the American Institute of Indian Studies.

TABLE 9. *Construction and Plant Funds Fiscal Years 1979–1981*  
(In \$1,000's)

Sources	FY 1979	FY 1980	FY 1981
<b>FUNDS PROVIDED</b>			
<b>Federal Appropriations:</b>			
National Zoological Park .....	\$ 3,900	\$ 6,250	\$ 3,290
Museum Support Center .....	575	20,600*	5,000
Restoration & Renovation of Buildings ..	2,100	5,250	7,539
Total Federal Appropriations .....	<u>6,575</u>	<u>32,100</u>	<u>15,829</u>
<b>Nonappropriated Trust Funds:</b>			
<b>Income—Gift and Other</b>			
Cooper-Hewitt Museum .....	—	104	175
Horticulture Greenhouse .....	—	—	11
Special Exhibits Gallery .....	—	—	307
Quadrangle .....	5	1,051	2,115
Total Income .....	<u>5</u>	<u>1,155</u>	<u>2,608</u>
<b>Transfers from Current Funds:</b>			
Chesapeake Bay Center .....	411	39	300
National Museum of African Art .....	4	22	24
Museum Support Center .....	—	—	750
East Garden .....	10	241	110
Quadrangle .....	1,385	1,040	1,340
Tropical Research Institute .....	47	—	26
Total Transfers .....	<u>1,857</u>	<u>1,342</u>	<u>2,550</u>
Total Funds Provided .....	<u>\$ 8,437</u>	<u>\$34,597</u>	<u>\$20,987</u>

\*Obligation authority of \$19 million deferred until FY 1981 on instructions from Office of Management and Budget.

program or safety needs. An amount of \$3,290,000 was received for renovation and construction of Zoo facilities, including construction of the Monkey Island Exhibit, which is the final project in the development of the Central Area of Rock Creek Park; construction of a small mammal breeding facility and design of hardy bird yards at the Front Royal Conservation and Research Center; and the necessary restoration and renovation work at both Rock Creek and Front Royal. And finally, an additional \$5 million was provided for construction of the Museum Support Center. Construction bids received by the Institution for this project exceeded the Institution's original estimate by some \$7 million. This appropriation, together with the \$20.6 million appropriated in fiscal year 1980 and \$2.5 million committed from the Institution's nonappropriated trust funds, provides sufficient funding to complete the project as planned.

During the year, nonappropriated trust funds totaling \$2,550,000 were transferred from operating accounts to construction and land acquisition, and a further \$2,608,000 was received from gifts and investment income. The majority of these funds—\$3,455,000—was for Quadrangle development, and a further \$775,000 of pledges was received toward the project. Major gifts were also received for construction of the Special Exhibits Gallery in the National Museum of Natural History as well as for renovation work at the Cooper-Hewitt Museum. An amount of \$750,000 was allocated to Museum Support Center construction for which, as noted above, the Institution has committed an amount of \$2.5 million in nonappropriated trust funds. Transfers also were made for major land acquisition at the Chesapeake Bay Center, mortgage payments on property occupied by the National Museum of African Art, construction of a greenhouse at the Tropical Research Institute in Panama, and additional costs associated with development of the garden area to the east of the Arts and Industries Building.

### *Endowment and Similar Funds*

As of September 30, 1981, the market value of the Smithsonian Endowment Funds was \$79,025,000, as compared to \$78,390,000 on September 30, 1980. Of this total, \$77,972,000 is invested in the

TABLE 10. *Endowment and Similar Funds September 30, 1981*

	<i>Book value</i>	<i>Market value</i>
<b>ASSETS</b>		
Pooled Consolidated Endowment Funds:		
Cash and Equivalents .....	\$ 715,006	\$ 715,006
Bonds .....	16,029,705	14,849,789
Convertible Bonds .....	461,550	560,000
Stocks .....	57,204,501	61,847,366
Total Pooled Funds .....	<u>74,410,762</u>	<u>77,972,161</u>
Nonpooled Endowment Funds:		
Notes Receivable .....	35,794	35,794
Loan to U.S. Treasury in Perpetuity .....	1,000,000	1,000,000
Bonds .....	9,769	8,600
Common Stocks .....	1,999	8,100
Total Nonpooled Funds .....	<u>1,047,562</u>	<u>1,052,494</u>
Total Endowment and Similar Fund Balances ..	<u>\$75,458,324</u>	<u>\$79,024,655</u>
<b>FUND BALANCES</b>		
Unrestricted Purpose: True Endowment .....	\$ 2,808,369	\$ 3,480,402
Quasi Endowment .....	28,054,405	27,813,668
Total Unrestricted Purpose .....	<u>30,862,774</u>	<u>31,294,070</u>
Restricted Purpose: True Endowment .....	33,513,631	36,216,512
Quasi Endowment .....	11,081,919	11,514,073
Total Restricted Purpose .....	<u>44,595,550</u>	<u>47,730,585</u>
Total Endowment and Similar Fund Balances ..	<u>\$75,458,324</u>	<u>\$79,024,655</u>

Pooled Consolidated Endowment Fund under outside investment management; \$1 million is on permanent deposit with the United States Treasury; and the remaining \$53,000 is held in miscellaneous securities. As shown in Table 10, restricted endowment funds, the income of which may be used only for purposes specified by the donor, comprise 60 percent of the total, or \$47,731,000. The remaining 40 percent, or \$31,294,000, are unrestricted endowment funds with the income available for general Institutional purposes. Certain of these unrestricted funds, such as the Lindbergh Chair of Aerospace History Endowment at the National Air and Space Museum, have been designated internally for specific purposes, as noted in Table 13, which lists all endowments of the Institution.

TABLE 11. *Market Values of Pooled Consolidated Endowment Funds*  
(In \$1,000's)

<i>Fund</i>	9/30/77	9/30/78	9/30/79	9/30/80	9/30/81
Unrestricted .....	\$12,525	\$18,114	\$22,614	\$28,384	\$30,399
Freer .....	15,410	16,807	18,303	20,771	20,472
Other Restricted ...	18,944	22,109	24,639	28,175	27,101
Total .....	<u>\$46,879</u>	<u>\$57,030</u>	<u>\$65,556</u>	<u>\$77,330</u>	<u>\$77,972</u>

The investment of the Pooled Consolidated Endowment Fund is managed by three outside professional investment advisory firms under the oversight of the Investment Policy Committee and the Treasurer and subject to policy guidelines established by the Board of Regents. At the conclusion of fiscal year 1981, 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). During fiscal year 1981, the total rate of return for these funds, as calculated by an independent investment measurement service, was +2.8 percent (including interest and dividend yield as well as market value depreciation), as compared to -3.4 percent for the Dow Jones Industrial Average and -2.7 percent for the Standard & Poor's 500 Average (both calculated on the same basis). Market values of the major components of this fund for prior years are shown in Table 11, and activity during the past year, in 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 In-

TABLE 12. *Changes in Pooled Consolidated Endowment Funds  
for Fiscal Year 1981*  
(In \$1,000's)

<i>Fund</i>	<i>Market value 9/30/80</i>	<i>Gifts and trans- fers</i>	<i>Inter- est and divi- dends*</i>	<i>Income paid out</i>	<i>Sub- total</i>	<i>Market value in- crease (de- crease)</i>	<i>Market value 9/30/81</i>
Unrestricted . . . . .	\$28,384	\$ 2,529	\$ 1,611	\$ 1,157	\$31,367	\$ (968)	\$30,399
Freer . . . . .	20,771	—	1,164	839	21,096	(624)	20,472
Other Restricted . . . . .	28,175	(760)	1,568	1,132	27,851	(750)	27,101
<b>Total . . . . .</b>	<b>\$77,330</b>	<b>\$ 1,769</b>	<b>\$ 4,343</b>	<b>\$ 3,128</b>	<b>\$80,314</b>	<b>\$ (2,342)</b>	<b>\$77,972</b>

\*Income earned less managers' fees of \$363,000.

stitution'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 1981 to endowments in the Pooled Consolidated Endowment Fund constituted a 10 percent increase over the previous year, and a further increase of 8 percent for restricted endowments has been approved for fiscal year 1982. Even after the income payout of \$3,128,000 in fiscal year 1981, \$1,215,000 of excess interest and dividend yield was available for reinvestment into endowment principal.

Included in Table 12 as additions to the endowment funds were approximately \$2.5 million transferred from unrestricted funds, as mentioned above, and gifts of \$116,000. These additions were partially offset by a withdrawal of \$976,000 from the Johnson Fund, which, together with the Hunterdon Fund, was formerly described as Endowment Number 3. This withdrawal, representing prior year income that had accumulated in principal, was made to reimburse the Harbor Branch Foundation for support of the Johnson Sea-Link submersible program, and similar funding from the Johnson Fund will be provided in the future.

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, 1981, may be obtained upon request from the Treasurer of the Institution.

TABLE 13. Endowment Funds September 30, 1981

Fund	Principal		Income	
	Book value	Market value	Net income	Unex- pended balance
<b>UNRESTRICTED PURPOSE—TRUE:</b>				
Avery Fund* .....	\$ 89,352	\$ 113,989	\$ 4,940	\$ —0—
Higbee, Harry, Memorial* .....	25,024	31,864	1,423	—0—
Hodgkins Fund* .....	72,318	78,587	10,183	—0—
Morrow, Dwight W. ....	263,547	312,004	8,037	—0—
Mussinan, Alfred .....	48,746	57,320	2,350	—0—
Olmsted, Helen A. ....	1,574	2,001	82	—0—
Poore, Lucy T. and George W.* .....	337,774	444,498	18,734	—0—
Porter, Henry Kirke, Memorial .....	546,178	723,771	29,680	—0—
Sanford, George H.* .....	2,798	3,348	158	—0—
Smithson, James* .....	541,380	541,380	32,483	—0—
Walcott, Charles D. and Mary Vaux, Research (Designated)* .....	879,678	1,171,640	48,023	48,979
Subtotal .....	<u>2,808,369</u>	<u>3,480,402</u>	<u>156,093</u>	<u>48,979</u>
<b>UNRESTRICTED PURPOSE—QUASI:</b>				
Forrest, Robert Lee .....	2,509,445	2,181,148	89,442	—0—
General Endowment* .....	23,379,368	23,553,292	880,174	—0—
Goddard, Robert H. ....	19,853	17,273	708	—0—
Habel, Dr. S.* .....	500	500	30	—0—
Hart, Gustavus E. ....	1,170	1,292	53	—0—
Henry, Caroline .....	2,902	3,188	131	—0—
Henry, Joseph and Harriet A. ....	117,129	127,514	5,229	—0—
Heys, Maude C. ....	239,183	212,238	8,703	—0—
Hinton, Carrie Susan .....	61,299	62,010	2,543	—0—
Lambert, Paula C. ....	109,434	113,905	4,671	—0—
Medinus, Grace L. ....	2,362	2,111	87	—0—
Rhees, William Jones* .....	1,722	1,826	86	—0—
Safford, Clara Louise .....	108,079	99,134	4,065	—0—
Smithsonian Bequest Fund .....	40,501	37,096	601	—0—
Taggart, Ganson .....	933	1,208	49	—0—
Abbott, William L. (Designated) .....	284,473	309,165	12,678	1,424
Barstow, Frederic D. (Designated) .....	2,384	2,584	106	3,285
Lindbergh Chair of Aerospace History (Designated) .....	1,155,986	1,070,774	43,909	51,538
Lindbergh, Charles A. (Designated) .....	7,648	8,198	961	4,115
Lyon, Marcus Ward, Jr. (Designated) .....	10,034	9,212	378	776
Subtotal .....	<u>28,054,405</u>	<u>27,813,668</u>	<u>1,054,604</u>	<u>61,138</u>
Total Unrestricted Purpose .....	<u>\$30,862,774</u>	<u>\$31,294,070</u>	<u>\$ 1,210,697</u>	<u>\$ 110,117</u>
<b>RESTRICTED PURPOSE—TRUE:</b>				
Arthur, James .....	\$ 76,298	\$ 101,264	\$ 4,153	\$ 8,854
Baird, Spencer Fullerton .....	69,700	90,519	3,712	8,166
Barney, Alice Pike, Memorial .....	54,711	72,566	2,976	17,413
Batchelor, Emma E. ....	77,648	75,062	3,078	34,158
Beauregard, Catherine, Memorial .....	93,439	101,405	4,158	18,082
Brown, Roland W. ....	62,364	69,595	2,854	16,477
Canfield, Frederick A. ....	74,528	111,570	4,575	214
Casey, Thomas Lincoln .....	29,922	32,510	1,333	1,847
Chamberlain, Frances Lea .....	53,717	71,251	2,922	11,954
Cooper Fund for Paleobiology .....	27,688	27,662	1,101	959
Division of Mammals Curators Fund .....	4,103	4,267	175	3,171
Drake Foundation .....	383,447	384,778	15,686	45,832
Dykes, Charles, Bequest .....	102,757	111,603	4,576	21,819
Eickemeyer, Florence Brevoort .....	20,733	27,492	1,127	11,661
Freer, Charles L. ....	18,908,174	20,471,689	839,484	572,009
Grimm, Sergei N. ....	73,364	63,979	656	669
Guggenheim, Daniel and Florence .....	280,426	261,285	10,714	11,460
Hamilton, James* .....	3,277	3,596	195	399
Henderson, Edward P., Meteorite Fund .....	753	900	37	261
Hewitt, Eleanor G., Repair Fund .....	16,524	16,427	674	726
Hewitt, Sarah Cooper .....	97,777	96,965	3,976	4,253
Hitchcock, Albert S. ....	3,017	4,057	166	851
Hodgkins Fund* .....	100,000	100,000	6,000	13,073

TABLE 13. Endowment Funds September 30, 1981—continued

Fund	Principal		Income	
	Book value	Market value	Net income	Unexpended balance
Hrdlicka, Ales and Marie .....	112,961	126,069	5,170	7,492
Hughes, Bruce .....	36,518	48,487	1,988	17,237
Johnson, Seward, Trust Fund for Oceanography .....	7,803,670	8,514,478	375,889	619,376
Kellogg, Remington, Memorial .....	58,276	52,513	2,141	6,459
Kramar, Nada .....	6,375	6,628	272	1,471
Lindsey, Jessie H.* .....	11,380	10,272	799	4,209
Maxwell, Mary E. ....	37,421	49,679	2,037	10,982
Milliken, H. Oothout, Memorial .....	488	483	20	20
Mineral Endowment .....	220,977	223,111	9,149	124
Mitchell, William A. ....	30,050	30,521	1,252	2,705
Natural History and Conservation .....	39,872	39,722	1,539	—0—
Nelson, Edward William .....	44,982	56,258	2,307	2,477
Petrocelli, Joseph, Memorial .....	14,150	18,844	773	15,628
Reid, Addison T.* .....	53,452	57,105	2,551	12,182
Roebing Fund .....	230,223	303,901	12,462	266
Rollins, Miriam and William .....	431,978	506,336	20,520	21,191
Shryock Endowment for Docents .....	1,516	1,440	59	94
Sims, George W. ....	5,186	4,452	91	91
Sprague Fund .....	3,007,384	3,027,731	122,707	2,317
Springer, Frank .....	34,482	45,349	1,860	25,423
Stern, Harold P., Memorial .....	317,303	321,329	13,170	19,038
Stevenson, John A., Mycological Library .....	11,495	12,390	508	320
Walcott, Charles D. and Mary Vaux, Research .....	277,444	315,443	12,762	15,615
Walcott Research Fund, Botanical Publications .....	109,852	141,144	5,788	7,657
Zerbee, Frances Brinckle .....	1,809	2,385	98	2,945
Subtotal .....	<u>33,513,631</u>	<u>36,216,512</u>	<u>1,510,240</u>	<u>1,599,627</u>
RESTRICTED PURPOSE—QUASI:				
Armstrong, Edwin James .....	6,260	6,159	253	253
Au Panier Fleuri .....	48,050	41,962	1,721	1,831
Bacon, Virginia Purdy .....	213,564	210,609	8,636	31,556
Becker, George F. ....	367,310	364,524	14,948	—0—
Desautels, Paul E. ....	22,725	24,938	999	—0—
Gaver, Gordon .....	2,844	2,964	121	1,608
Hachenberg, George P. and Caroline .....	9,714	11,080	454	950
Hanson, Martin Gustav and Caroline R. ....	21,219	23,045	945	4,338
Hillyer, Virgil .....	15,690	17,049	699	5,972
Hunterdon Endowment .....	6,956,321	7,417,421	308,383	191,781
Johnson, E. R. Fenimore .....	18,687	17,063	700	9,219
Loeb, Morris .....	208,781	228,556	9,372	19,717
Long, Annette E. and Edith C. ....	1,040	1,412	58	328
Myer, Catherine Walden .....	48,226	52,382	2,148	4,932
Noyes, Frank B. ....	2,336	2,640	108	1,314
Noyes, Pauline Riggs .....	22,623	19,773	811	853
Pell, Cornelia Livingston .....	17,728	19,338	793	625
Ramsey, Adm. and Mrs. Dewitt Clinton* ....	693,040	648,079	26,762	5,145
Rathbun, Richard, Memorial .....	25,425	27,707	1,136	17,724
Roebing Solar Research .....	58,285	59,572	2,443	5,740
Ruef, Bertha M. ....	72,870	66,494	2,727	7,733
Schultz, Leonard P. ....	18,510	20,043	821	9,172
Seidell, Atherton .....	1,459,261	1,440,168	59,057	160,147
Smithsonian Agency Account .....	439,627	430,981	17,059	—0—
Strong, Julia D. ....	23,898	26,036	1,068	1,623
Witherspoon, Thomas A., Memorial .....	307,885	334,078	13,700	6,666
Subtotal .....	<u>11,081,919</u>	<u>11,514,073</u>	<u>475,922</u>	<u>489,227</u>
Total Restricted Purpose .....	<u>\$44,595,550</u>	<u>\$47,730,585</u>	<u>\$ 1,986,162</u>	<u>\$ 2,088,854</u>
TOTAL ENDOWMENT FUNDS .....	<u>\$75,458,324</u>	<u>\$79,024,655</u>	<u>\$ 3,196,859</u>	<u>\$ 2,198,971</u>

\*Invested all or in part in U.S. Treasury or other nonpooled investments.

\*\*Total Return Income payout; does not include \$218,000 of interest income for investment of unexpended income balances.

## *Related Organizations*

The Smithsonian Science Information Exchange, Inc. (SSIE) has served as a national source for information on research in progress since its founding in 1949. Incorporated by the Smithsonian in 1971 as a nonprofit entity, SSIE received funding through an annual contract from the Smithsonian, equal to the appropriation provided the Smithsonian for this purpose. Since fiscal year 1980, appropriations for the exchange have been made to the Department of Commerce in anticipation of the integration of the functions of SSIE into the National Technical Information Service. During this period, the Smithsonian has continued to provide the exchange with administrative and fiscal services on a contract basis. As a result of federal hiring freezes and budgetary reductions, plans for integration have been indefinitely postponed. In view of the substantial financial uncertainty faced by SSIE and its effect on the future ability of the exchange to operate in an effective manner, the SSIE Board of Directors resolved that SSIE would cease operations no later than October 30, 1981. The database and other physical assets of the exchange are scheduled to be transferred to the Commerce Department, and plans are proceeding to dissolve the corporation.

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. Administrative services are provided by the Institution on a contract basis.

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 \$202,000 during calendar year 1980 (FONZ's fiscal year). In addition, FONZ contributed other important financial and volunteer support to Zoo programs. Financial affairs of this organization are disclosed separately elsewhere in *Smithsonian Year 1981*.

### *Accounting and Auditing*

The nonappropriated trust funds of the Institution are audited annually by an independent public accounting firm; 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.

COOPERS & LYBRAND

CERTIFIED PUBLIC ACCOUNTANTS

To the Board of Regents  
Smithsonian Institution

We have examined the balance sheet of the Trust Funds of Smithsonian Institution as of September 30, 1981 and the related statement of financial activity for the year then ended. Our examination was made in accordance with generally accepted 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 reported upon the statements of the Trust Funds of Smithsonian Institution for the year ended September 30, 1980, totals of which are included in the accompanying financial statements for comparative purposes only.

The statements of the Trust Funds of Smithsonian Institution do not include the accounts of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts or other departments, bureaus and programs administered by the Smithsonian Institution under federal appropriations as detailed in Note 2 to the financial statements.

In our opinion, the financial statements for the year ended September 30, 1981, referred to above, present fairly the financial position of the Trust Funds of Smithsonian Institution as of September 30, 1981, 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 2, 1981

SMITHSONIAN INSTITUTION—TRUST FUNDS  
Balance Sheet

September 30, 1981  
(with comparative totals for September 30, 1980)

	Current funds	Endowment and similar funds	Plant funds	Total, all funds	Totals, 1980
<b>ASSETS:</b>					
Cash .....	\$ 1,092,016	\$ 36,625	\$ —	\$ 1,128,641	\$ 81,122
Investments (Notes 3 and 5) .....	28,526,435	74,707,523	—	103,233,958	85,693,264
Receivables (Note 4) .....	12,618,660	35,794	—	12,654,454	11,089,622
Interfund receivables .....	—	678,382	7,592,147	8,270,529	4,272,661
Merchandise inventory (Note 1) .....	7,464,010	—	—	7,464,010	6,244,380
Prepaid and deferred expense (Note 1) .....	7,534,919	—	—	7,534,919	7,294,999
Property and equipment (Notes 1 and 6) .....	1,420,486	—	14,024,283	15,444,769	14,012,745
	<u>\$58,656,526</u>	<u>\$75,458,324</u>	<u>\$21,616,430</u>	<u>\$155,731,280</u>	<u>\$128,688,793</u>
<b>LIABILITIES:</b>					
Accounts payable and accrued expenses .....	\$ 8,121,769	\$ —	\$ 304,763	\$ 8,426,532	\$ 5,968,872
Deposits held in custody for other organizations (Note 2) .....	1,958,329	—	—	1,958,329	1,218,910
Interfund payables .....	8,270,529	—	—	8,270,529	4,272,661
Deferred revenue (Note 1) .....	16,712,953	—	—	16,712,953	17,063,378
Total liabilities .....	<u>35,063,580</u>	<u>—</u>	<u>304,763</u>	<u>35,368,343</u>	<u>28,523,821</u>
<b>FUND BALANCES (Note 1):</b>					
<b>Current:</b>					
Unrestricted general purpose .....	5,042,459	—	—	5,042,459	5,000,736
Special purpose .....	12,599,061	—	—	12,599,061	9,895,106
Restricted .....	5,951,426	—	—	5,951,426	4,675,330
Endowment and similar funds (Note 5) .....	—	75,458,324	—	75,458,324	64,422,312
Plant funds (Note 6) .....	—	—	21,311,667	21,311,667	16,171,488
Total fund balances .....	<u>23,592,946</u>	<u>75,458,324</u>	<u>21,311,667</u>	<u>120,362,937</u>	<u>100,164,972</u>
	<u>\$58,656,526</u>	<u>\$75,458,324</u>	<u>\$21,616,430</u>	<u>\$155,731,280</u>	<u>\$128,688,793</u>

The accompanying notes are an integral part of the financial statements.

SMITHSONIAN INSTITUTION—TRUST FUNDS

Statement of Financial Activity

Year ended September 30, 1981

(with comparative totals for the year ended September 30, 1980)

Current funds

Unrestricted

	Total current funds	Total unrestricted funds	General purpose	Auxiliary activities	Special purpose	Restricted	Endowment and similar funds	Plant funds	Totals, all funds	Totals, 1980
<b>REVENUE AND OTHER ADDITIONS:</b>										
Auxiliary activities revenue	\$ 87,052,047	\$ 87,052,047	\$ —	\$ 83,719,087	\$ 3,332,960	\$ —	\$ —	\$ —	\$ 87,052,047	\$ 74,251,010
Federal grants and contracts	14,171,827	—	—	—	—	14,171,827	—	—	14,171,827	12,946,943
Investment income (net of \$362,585 for management and custodian fees)	7,517,027	4,165,614	3,536,117	—	629,497	3,351,413	—	638,992	8,156,019	6,407,402
Net gain on sale of securities	—	—	—	—	—	—	8,052,520	—	8,052,520	1,999,209
Gifts, bequests and foundation grants	4,420,917	1,442,526	15,148	1,328,593	98,785	2,978,391	87,497	1,969,038	6,477,452	4,379,096
Additions to plant fund	—	—	—	—	—	—	—	1,486,583	1,486,583	665,896
Rentals, fees, commissions and other	2,540,536	1,731,527	725,081	—	1,006,446	809,009	—	—	2,540,536	2,225,672
Total revenue and other additions	115,702,354	94,391,714	4,276,346	85,047,680	5,067,688	21,310,640	8,140,017	4,094,613	127,936,984	102,875,228
<b>EXPENDITURES AND OTHER DEDUCTIONS:</b>										
Research and educational expenditures	23,512,377	7,712,912	3,046,286	—	4,666,626	15,799,465	—	—	23,512,377	24,472,580
Administrative expenditures	9,095,394	5,731,672	2,281,093	2,966,312	484,267	3,363,722	—	—	9,095,394	8,077,438
Auxiliary activities expenditures	72,650,533	72,650,533	—	70,712,531	1,938,002	—	—	—	72,650,533	63,079,852
Expenditures for acquisition of plant	—	—	—	—	—	—	—	1,480,557	1,480,557	623,691
Retirement of indebtedness	—	—	—	—	—	—	—	6,026	6,026	42,205
Interest on indebtedness	—	—	—	—	—	—	—	17,943	17,943	19,166
Endowment reimbursement (Note 5)	—	—	—	—	—	—	976,189	—	976,189	—
Total expenditures and other deductions	105,258,304	86,095,117	5,327,379	73,678,843	7,088,895	19,163,187	976,189	1,504,526	107,739,019	96,314,932
Excess of revenue and other additions over (under) expenditures and other deductions	10,444,050	8,296,597	(1,051,033)	11,368,837	(2,021,207)	2,147,453	7,163,828	2,590,087	20,197,965	6,560,296
<b>TRANSFERS AMONG FUNDS—</b>										
<b>ADDITIONS (DEDUCTIONS):</b>										
Mandatory principal and interest on notes	(23,970)	(23,970)	—	—	(23,970)	—	—	23,970	—	—
Portion of investment yield appropriated (Note 5)	(1,214,397)	(454,289)	(413,664)	—	(40,625)	(760,108)	1,214,397	—	—	—
Purchase of property and equipment for plant fund	(242,598)	(242,598)	(242,598)	—	—	—	—	242,598	—	—
Future plant acquisitions	(2,243,524)	(2,243,524)	(2,243,524)	—	—	—	—	2,243,524	—	—
Income added to endowment principal	(107,988)	(107,988)	—	—	—	(107,988)	107,988	—	—	—
Appropriated as quasi endowment	(2,549,799)	(2,549,799)	(2,521,053)	—	(28,746)	—	2,549,799	—	—	—
For designated purposes	(40,000)	(36,739)	(4,465,160)	(390,082)	4,818,503	(3,261)	—	40,000	—	—
Net increase in auxiliary activities	—	—	10,978,755	(10,978,755)	—	—	—	—	—	—
Total transfers among funds	(6,422,276)	(5,550,919)	1,092,756	(11,368,837)	4,725,162	(871,357)	3,872,184	2,550,092	—	—
Net increase for the year	4,021,774	2,745,678	41,723	—	2,703,955	1,276,096	11,036,012	5,140,179	20,197,965	6,560,296
Fund balances at beginning of year	19,571,172	14,895,842	5,000,736	—	9,895,106	4,675,330	64,422,312	16,171,488	100,164,972	93,604,676
Fund balances at end of year	\$ 23,592,946	\$ 17,641,520	\$ 5,042,459	\$ —	\$ 12,599,061	\$ 5,951,426	\$ 75,458,324	\$ 21,311,667	\$ 120,362,937	\$ 100,164,972

The accompanying notes are an integral part of the financial statements.

SMITHSONIAN INSTITUTION—TRUST FUNDS  
Notes to Financial Statements

1. *Summary of significant accounting policies*

*Basis of presentation.* The financial statements of Smithsonian Institution—Trust Funds (Institution) have been prepared on the accrual basis.

*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 accounting and reporting purposes into funds established according to their 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:

Current funds, which include unrestricted and restricted resources, represent the portion of expendable funds that is available for support of Institution operations. Separate subfund groups of current unrestricted funds have been reflected in the financial statements for auxiliary activities (representing primarily the revenue and expenditures of the Smithsonian Associates Program, including the *Smithsonian Magazine*, and museum shop sales) and for special purposes (representing internally segregated funds for certain designated purposes). Amounts restricted by the donor for specific purposes are also segregated from other current funds.

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 will 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.

Plant funds represent resources restricted for future plant acquisitions and funds expended for plant.

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.

*Inventories.* Inventories are carried at the lower of average cost, computed on a first-in, first-out method, or net realizable value.

*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.* In accordance with the practice generally followed by museums, works of art and living or other specimens are not reflected in the accompanying financial statements.

*Property and equipment.* Capital improvements and equipment purchased with Trust Funds and utilized in income-producing activities are capitalized in the current unrestricted fund 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) are recorded in the plant fund 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. In accordance with the practice of many museums, depreciation on buildings is not recorded.

Land, buildings, fixtures and equipment which were acquired with federal funds are not reflected in the accompanying financial statements.

*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.

*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.

## 2. *Related activities*

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.

Federal appropriations, which are not reflected in the accompanying financial statements, provide major support for the operations and administration of the educational and research programs of the Institution's many museums, art

galleries and other bureaus, as well as for the maintenance and construction of related buildings and facilities. In addition, land, buildings and other assets acquired with federal funds are not reflected in the accompanying financial statements.

The following federal appropriations were received by the Institution for the fiscal year ended September 30, 1981:

Operating funds .....	\$122,478,000
Special foreign currency program .....	3,650,000
Construction funds .....	15,829,000
	<u>\$141,957,000</u>

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 \$408,000 for the year ended September 30, 1981. The following summarizes the approximate expenditures of these organizations for the fiscal year ended September 30, 1981 as reflected in their individual financial statements and which are not included in the accompanying financial statements of the Institution:

Smithsonian Science Information Exchange .....	\$3,400,000
Reading Is Fundamental, Inc. ....	\$8,900,000
Woodrow Wilson International Center for Scholars—Trust Funds .....	\$3,200,000

The Institution is continuing to work with the U.S. Department of Commerce to effect a transfer of the Smithsonian Science Information Exchange (Exchange) operations to the U.S. Department of Commerce. The Exchange has ceased operations as of October 31, 1981 and is awaiting final approval of fiscal year 1982 appropriations to sustain them in perfecting an orderly liquidation.

### 3. Investments

Investments are recorded at cost, if purchased, or fair market value at date of acquisition, if acquired by gift. At September 30, 1981, investments are composed of the following:

	<i>Carrying value</i>	<i>Market value</i>
<b>Current funds:</b>		
Certificates of deposit .....	\$ 12,307,814	\$ 12,307,814
Commercial paper .....	2,931,913	2,900,000
Overnight money market account .....	1,785,000	1,785,000
U.S. government and quasi-government obligations .....	11,276,081	10,679,338
Common stock .....	169,280	117,835
Preferred stock .....	56,347	41,034
	<u>28,526,435</u>	<u>27,831,021</u>

Endowment and similar funds:

Loan to U.S. Treasury .....	1,000,000	1,000,000
U.S. government and quasi-government obligations .....	8,487,773	7,984,259
Corporate bonds .....	7,959,718	7,434,129
Common stock .....	55,986,140	60,745,716
Preferred stock .....	1,273,892	1,109,750
	<u>74,707,523</u>	<u>78,273,854</u>
	<u>\$103,233,958</u>	<u>\$106,104,875</u>

Substantially all of 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 \$134.12, 289,797 units were owned by endowment and 291,564 units were owned by quasi-endowment at September 30, 1981.

The following tabulation summarizes changes in relationships between cost and market values of the pooled investments:

	<u>Market</u>	<u>Cost</u>	<u>Net change</u>	<u>Market value per unit</u>
End of year .....	\$77,972,161	\$74,410,762	\$ 3,561,399	\$134.12
Beginning of year .....	\$77,329,906	\$63,371,084	13,958,822	136.08
Decrease in unrealized net gain for year .....			(10,397,423)	—
Realized net gains for year .....			8,052,520	—
Total net change for year .....			<u>\$ (2,344,903)</u>	<u>\$ (1.96)</u>

4. *Receivables*

Receivables at September 30, 1981 included the following:

*Current funds*

Accounts receivable, auxiliary activities; net of allowance for doubtful accounts of \$539,769 in 1981 .....	\$ 9,624,382
Unbilled costs and fees from grants and contracts .....	626,972
Interest and dividends receivable .....	1,707,940
Other .....	659,366
	<u>12,618,660</u>

*Endowment and similar funds*

Notes receivable .....	35,794
Total, all funds .....	<u>\$12,654,454</u>

5. *Endowment and similar funds*

Endowment and similar funds at September 30, 1981 are summarized as follows:



Endowment funds, income available for:	
Restricted purposes .....	\$33,513,631
Unrestricted purposes .....	2,808,369
	<u>36,322,000</u>
Quasi-endowment funds, principal and income available for:	
Restricted purposes .....	11,081,919
Unrestricted purposes .....	28,054,405
	<u>39,136,324</u>
Total endowment and similar funds .....	<u>\$75,458,324</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) 4½% of the five-year average of the market value of each fund (adjusted for gifts and transfers during this period), (2) current dividend 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 1981 was \$5.50 per unit of fund participation. The total return applied for 1981 was \$3,128,478.

Endowment reimbursement represents payment of income, which had accumulated in principal of the endowment funds, in accordance with a settlement related to a lawsuit.

#### 6. *Property and equipment*

At September 30, 1981, property and equipment which has been capitalized (see Note 1) is comprised of the following:

<i>Current funds</i>	
Capital improvements .....	\$ 1,712,318
Equipment .....	1,059,153
Leasehold improvements .....	179,962
Less accumulated depreciation and amortization .....	<u>1,530,947</u>
	1,420,486
<i>Plant funds</i>	
Land and buildings .....	<u>14,024,283</u>
Total, all funds .....	<u>\$15,444,769</u>

Depreciation and amortization expense reflected in expenditures of the current funds for 1981 was \$397,399.

The balance of the plant fund at September 30, 1981 includes \$7,463,658 of unexpended plant funds.

#### *7. Pension plan*

The Institution has a retirement plan in which substantially all employees of the Trust Funds are eligible to participate. Under the 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, 1981 was \$2,436,155. It is the policy of the Institution to fund plan costs accrued currently. There are no unfunded prior service costs under the plan.

#### *8. 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 is presently considering a request for technical advice pertaining to whether income derived from several of the Institution's activities is subject to tax as unrelated business income. If the Institution's position is upheld, no tax would be imposed on this income.

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 yet sought such dual status.

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.

## CONSULTANT SERVICES

Public Law 96-304, Section 307, requires each Federal agency to include in its annual budget justification the estimated amount of funds requested for consulting services; the appropriation accounts in which these funds are located; and a brief listing of the major programs that require consulting services.

The Smithsonian Institution has obligational authority for consultant services under 5 U.S.C. 3109 of up to \$100,000 for the Salaries and Expenses Appropriation; \$10,000 for the Renovation and Restoration of Buildings Appropriation; and \$50,000 for the Construction Appropriations. (A language change is proposed which would increase this authority in the Construction Appropriations to \$100,000 in order to accommodate design and development needs for the Quadrangle.) These services cover consultants hired under temporary personnel appointments. In FY 1983, the Institution expects to obligate an amount of \$50,000 for consultant services in the Salaries and Expenses Appropriation under the authority of 5 U.S.C. 3109. A further amount of \$30,000 is expected to be obligated in FY 1983, also in the Salaries and Expenses Appropriation, for consultant services obtained through a contract.

Specifically, under the authority of 5 U.S.C. 3109, the Smithsonian Astrophysical Observatory proposes to continue in FY 1983 the personnel appointments of two individuals who possess highly technical knowledge and experience not available on the regular staff in such areas of space astronomy as tethered satellites. These individuals make significant contributions to the total research effort of the Smithsonian Astrophysical Observatory.

The contractual service proposed in FY 1983 is with a firm which will assist the Office of Protection Services in evaluating security requirements in museums and in aiding with the development of the proprietary alarm system.





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