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Budget

# SMITHSONIAN INSTITUTION

Budget Justifications for Fiscal Year 1979



Submitted to the Committees on Appropriations  
Congress of the United States

January 1978

Senate - 30, House - 30. Roy Kankel - OMB - 1

	SCIENCE	Abbrev.	Phone	Directors	Room	Aides	Room/Phone
1							
2	Assistant Secretary-Science		X6361	David Challinor	SI 114	Harold Michaelson	SI 142-X6383
3	Intl Environ Science Program	IESP	X6383	Harold Michaelson	SI 142	Rita Jordan	
4	Research Awards Program		X6383	Harold Michaelson	SI 142	Rita Jordan	
5	Ofc of International Programs	OIP	X5818	Kennedy Schmetz	L'Enfant 3300		
6	Natl Museum of Natural Hist.	NMNH	X5954	Porter Kier	NHB 417	Chuck Ossola	NHB 418-X5644
7	Sm. Tropical Research Inst.	STRI		Ira Rubinfoff	AIR MAIL		
8	Natl Zoological Park	NZP	X7221	Theodore Reed	NZP	Joe Reed/Ed Kohn	X7226/X7205
9	Radiation Biology Laboratory	RBL	443-2329	William Klein	Call Messenger	C. Walker/J. Fisher	443-2328/2306
10	Handbook of No. Amer. Indians		X5934	Porter Kier	NHB 417	Shetrill Berger	NHB 85-X6201
11	Res Inst on Immig & Ethnic St	RIIES	X6570	Roy Bryce-Laporte	L'Enfant 2300		
12	Natl Anthro Film Center (GSM)	NAFC	X6537	Richard Sorenson	L'Enfant 3210		
13	Natl Air and Space Museum	NASM	X5766	Michael Collins	NASM 3506	Jack Whitelaw	3507/X6244
14	Ches Bay Ctr for Env Studies	CBCEs		Kevin Sullivan	Mail	Don Wilhelm	261-4190
15	Sm. Astrophysical Observatory	SAO	495-7234	George Field	Mail	J. Gregory/R. Ayers	8-830-7102 628-4422 617-495-7102/3
16	HISTORY AND ART						
17	Assistant Secretary-H&A		X6268	Charles Blitzer	SI 302	Dean Anderson	SI 302/X6267
18	Academic Studies		X5071	Edward Davidson	SI 457		
19	Natl Portrait Gallery	NP	X5146	Marvin Sadik	FAPG 200	Douglas Evelyn	FAPG 200/X4063
20	Natl Collection of Fine Arts	NCFA	X5195	Joshua Taylor	FAPG 242		
21	Freer Gallery of Art		X5343	Thomas Lawton	Free	Willa Moore	X5428
22	Natl Museum of Hist & Tech	NMHT	X5785	Brooke Hindle	HTB 5112	Robert Tillotson	X6341
23	Hirshhorn Mus & Sculpt Garden	HMSG	X6512	Abram Lerner	HMSG 401	Nancy Kirkpatrick	405/X6512
24	Cooper-Hewitt Museum	C-H	860-6868	Lisa Taylor	Mail	John Dobkin	860-2011
25	Joseph Henry Papers		X6185	Nathan Reingold	SI 133		
26	Archives of American Art	AAA		William Woolfenden	Mail	(cc: R. Nicastro)	FAPG 331/X6174
27	American Studies		X5223/5981	Wilcomb Washburn	FAPG 309		
28	Folklife Unit		X6532	Ralph Kinzler	L'Enfant 2100		
29	Building Manager, FAPG		X5967	Robert Dean	FAPG 108		
30	PUBLIC SERVICE						
31	Assistant Secretary-Pub Svc		X6484	Julian Euell	SI 105	J. Dulaney/V. MacDonnell	SI 105/X6484
32	Ofc of Symposia & Seminars	OSS	X5587	Wilton Dillon	SI 507	Dolly Richardson	SI 457/X5071
33	Division of Performing Arts	DPA	X6515	James Morris	L'Enfant 2100		
34	Telecommunications		X6414	Nazaret Cherkezian	AGI 2472		
35	Anacostia Neighborhood Museum	ANM	X5656	John Kinard (Add. corresp)	MAIL		
36	Smithsonian Institution Press	SI Press	X5143	Edward Rivinus	AGI 2281		
37	Ofc of Elem & Sec Education	OESE	X5697	David Estabrook	AGI 1163	Audrey Archer (envel.)	X5656
38							
39							
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BANKERS TRUST COMPANY - SHEPHERD AVENUE

Dorothy Richardson 1 4/25/78  
Susan Hamilton 1 4/26/78  
Catherine Hill 2 4/27/78









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January 31, 1978

MEMORANDUM

TO: Dorothy Rosenberg  
FROM: Margaret <sup>/s/</sup>Hird  
SUBJECT: Distribution of Budget Document

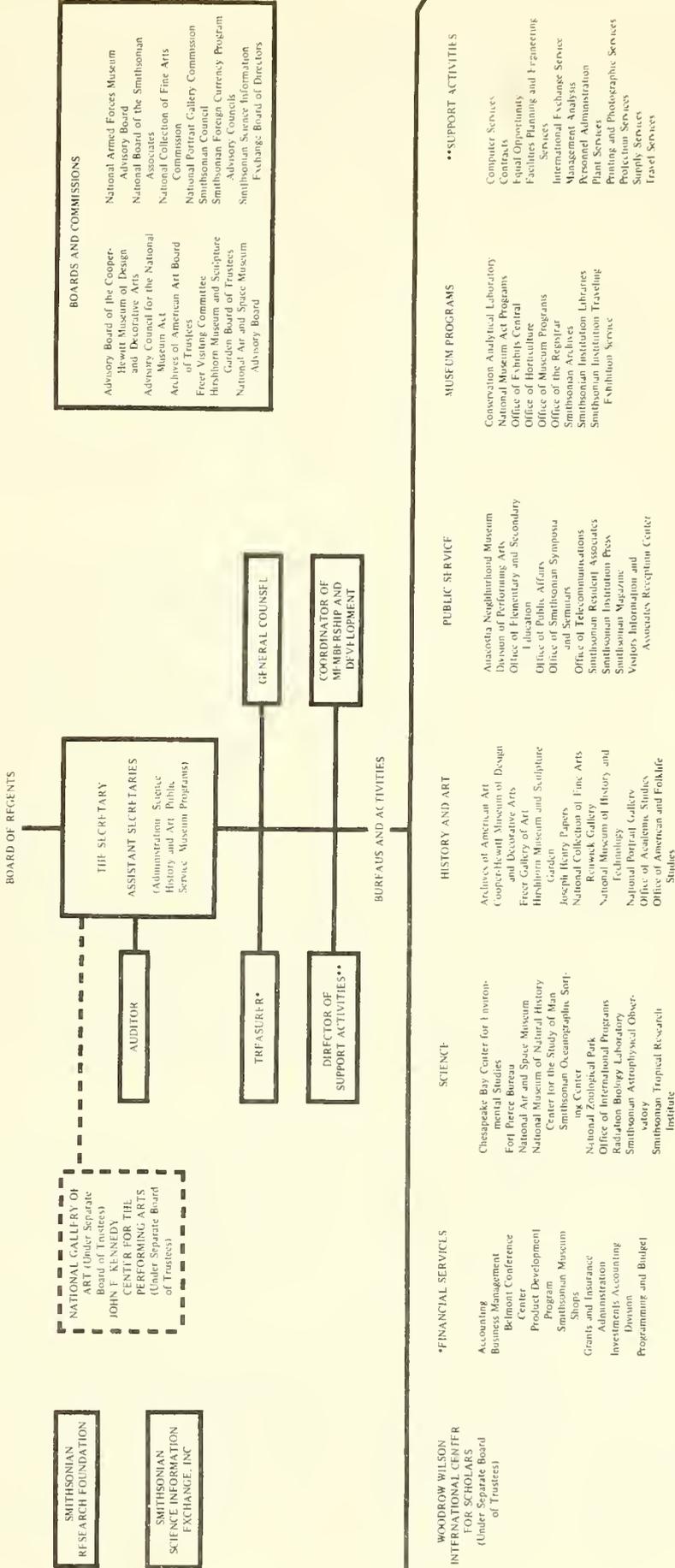
For the record I have sent copies of our FY 79 budget document to the following staff people associated with our Congressional Regents and/or authorizing committee members:

- Ray Nelson
- Larry Smith
- Helen Hudson
- Cynthia Mora
- Owen Malone
- Judy Eisenhower
- Mike Forgash
- Jan Schoonmaker.

cc: Mr. Yellin



# SMITHSONIAN INSTITUTION



March 21, 1977

*S. Dillon Ripley*  
S. Dillon Ripley  
Secretary



SMITHSONIAN INSTITUTION

FISCAL YEAR 1979 ESTIMATES OF APPROPRIATIONS

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SMITHSONIAN INSTITUTION

FISCAL YEAR 1979 ESTIMATES OF APPROPRIATIONS

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., it also operates major facilities and activities elsewhere in Washington, across the country, and overseas. It is one of the world's leading research centers and encompasses the world's largest museum complex, attracting approximately 23 million visits annually to its museums, galleries, and zoological park. Additional millions also view Smithsonian traveling exhibitions, which appear across the United States and abroad, and its annual Folklife Festival. As custodian of the National Collections, it possesses more than 70 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 consists of 10 exhibition buildings in Washington, D.C. and New York City in the fields of science, history, technology, and art; a zoological park and an animal conservation and research center near Front Royal, Virginia; the Anacostia Neighborhood Museum, which performs research and exhibit activities and conducts an exhibits production training program in a low-income area of the city in cooperation with the community; a preservation, storage, and air and spacecraft display facility at Silver Hill, Maryland; a conference center at Elkridge, Maryland; two natural preserves, in Panama and on the Chesapeake Bay; an oceanographic research facility in Fort Pierce, Florida; astrophysical stations in Cambridge, Massachusetts, Mt. Hopkins, Arizona, and elsewhere; and supporting administrative, laboratory, and storage areas.

Smithsonian Goals

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

--Original scientific research that provides the baseline data for policy planners in mission-oriented agencies. Much of this research is in the area of ecology and can be expected to lead to results that are directly applicable to National needs and goals.

--Original historical research which enhances knowledge of this nation's growth through studies of its technological development, art, and folklife and folklore traditions.

--Dissemination of this research to a wide audience through such means as the preparation of monographs, exhibit catalogues, and education pamphlets.

--Public-oriented programs including exhibits, performances, and educational services in Washington, D.C. and throughout the country by means of the Smithsonian's Traveling Exhibition Service, and the National Associates Program. Other educational activities include radio, television, motion picture programs, the magazine Smithsonian which is now received by nearly 1.6 million resident and national associates, and the Archives of American Art Journal.

--Management and care of the National Collections and a selective program for the acquisition of additional important objects and collections.

To carry out these programs, it is essential that administration and support functions, including facilities management, protection, and management services, be given proper emphasis. It is also vital that the Institution's building repairs, renovation, and construction plans move ahead in a manner that will contribute to the successful implementation of programs.

#### FY 1979 Budget Priorities

The priorities set forth in the FY 1979 budget request are the product of a thorough zero-base analysis to determine where resources -- both in the base and requested increases -- can be applied most effectively. In the development of this budget, each of the Institution's organizational units reviewed its programs rigorously, following overall policy guidance and direction from the Secretary. Individual zero-base budgets were evolved for review first by the appropriate Assistant Secretary, the Director of Support Activities, or the Treasurer, and then by these persons acting together as a group to define overall priorities. As a result of this process, in the Salaries and Expenses Appropriation, some \$1.6 million in existing base resources were reapplied to meet highest priority program needs before any budget increases were proposed. A further result of the zero-base analysis is that no new positions are requested for FY 1979 in total. Some 45 positions that were previously authorized but deemed to be of lesser importance are recommended for reprogramming to meet highest priority requirements. In the Construction Appropriation, all items were subjected to a total zero-base analysis as has been the case in past years. Consequently, the repair and renovation, and construction planning and capital improvement projects reflected in this budget are considered to be basic needs.

Specific priorities established for FY 1979 include augmentation of existing and new research activities, particularly the Research Awards Program, now administered directly under the Assistant Secretary for Science following all appropriate Federal personnel and procurement practices and original projects designed to engender unique information related to areas of national interest; emphasis on proper management of the National Collections through provision of adequate storage, cataloguing and conservation capabilities; direct funding for projects previously financed through grants from the National Endowment for the Arts and the Humanities; provision for adequate travel funds to support research, collections acquisitions and other integral programs, and strengthening of administration and support programs including protection, libraries, and buildings and facilities management. In the area of capital development, major emphasis in FY 1979 is placed on the Master Plan Development at the Zoo with the proposed construction of a great ape facility and the continuation of the program of essential repairs and improvements to the Institution's other buildings. Also, in FY 1979 the balance of planning funds is requested for the development of a Museum Support Center to ensure proper care of the Institution's collections, return a significant amount of Mall building space now used for collections storage to public use, and strengthen conservation programs and training.

It should be noted that comparative financial data, covering all sources and applications of operating funds by organization unit, is included in the budget document (Tab E), following the recommendation of several committees and review groups.

For FY 1979, the Institution is requesting the following appropriations:

	<u>FY 1978 Appropriation</u>	<u>FY 1978 Supplemental</u>	<u>Requested FY 1979 Increase</u>	<u>FY 1979 Estimates</u>
Salaries & Expenses	\$88,238,000	\$5,915,000	\$2,154,000	\$ 96,307,000
Science Information Exchange	1,777,000	85,000	356,000	2,218,000
Special Foreign Currency Program	4,000,000	--	-300,000	3,700,000
Construction & Improvements, National Zoological Park	2,500,000	--	1,400,000	3,900,000
Restoration and Renovation of Buildings	2,425,000	--	675,000	3,100,000
Construction: Museum Support Center Planning	<u>325,000</u>	<u>--</u>	<u>250,000</u>	<u>575,000</u>
Totals	\$99,265,000	\$6,000,000	\$4,535,000	\$109,800,000

Highlights of the budget request are as follows:

I. Salaries and Expenses

<u>1977 Appropriation</u>	<u>1978 Estimate</u>	<u>1979 Estimate</u>
\$85,236,000	\$94,153,000	\$96,307,000

This appropriation provides for the regular operating programs in the museums, galleries, zoological park, research laboratories, and other program units; for special programs of an Institution-wide nature (such as Academic and Educational Programs) and for support programs. This funding is allocated by Activities as follows: (Organizational allocations appear on pages A-2 and A-3).

	<u>1978 Base</u>	<u>Requested Increase</u>	<u>1979 Estimate</u>
Science	\$35,998,000	\$640,000	\$36,638,000
History and Art	15,120,000	526,000	15,646,000
Public Service	2,193,000	20,000	2,213,000
Museum Programs	7,295,000	122,000	7,417,000
Special Programs	1,428,000	414,000	1,842,000
Administration	6,292,000	221,000	6,513,000
Support Programs	<u>25,827,000</u>	<u>211,000</u>	<u>26,038,000</u>
Totals	\$94,153,000	\$2,154,000	\$96,307,000

The requested increases of \$2,154,000 consists of program increases of \$809,000 and uncontrollable increases in the amount of \$1,345,000. In addition, an amount of some \$1.6 million in base resources has been recommended for reapplication from lower to higher priority programs. Thus, a total of \$2,400,000 in program changes is proposed in this budget. As a result of the zero-base analysis, in several organizational units, both increases and decreases are recommended resulting in a net program change. These are summarized as follows by Activity:

A. Science: Net Program Change +\$81,000

1. Program Increase: +\$690,000

--To support original research projects, such as studies of whales and other marine mammals in an effort to prevent their extinction, nutrient and biomass fluctuations in Panama Bay which relate to the impact of building a sea level canal, the effects of the migration of "killer" bees on native insect competitors and the plants they pollinize, and the impact of materials entering estuaries from land runoff and their effects on fish, shellfish and other living organisms; to provide much needed supplies, equipment, services and facilities maintenance in support of scientific research; and to support experimental astrophysical research and laboratory activities and development of scientific instruments for use with ground-based and space-borne telescopes.

2. Reallocation to Higher Priority Needs: -\$609,000

--By maintaining current exhibits which have demonstrated their public appeal rather than replacing them as originally planned; and by phasing out or deemphasizing lower priority astrophysical research projects, mainly in the planetary sciences.

B. History and Art: Net Program Change +\$292,000

1. Program Increase: +\$649,000

--To provide direct funding for project grants previously received from the Arts and Humanities Endowments; to emphasize care and maintenance of the National Collections through attention to cataloguing, microfilming, storage and restoration; to offset higher exhibits-related costs in one museum; and to increase publications, library, and buildings maintenance support.

2. Reallocation to Higher Priority Needs: -\$357,000

--By maintaining the variety of popular new exhibits developed from FY 1975 to the present rather than replacing them or developing new ones; streamlining education programs; discontinuing the shuttle bus service between the History and Technology Building and the Fine Arts and Portrait Galleries Building no longer required because of Metro; and curtailing supply and equipment expenditures.

C. Public Service: Net Program Change -\$18,000

1. Program Increase: +\$37,000

--To permit additional performances emphasizing aspects of the National Collections; and to accelerate the urgent jazz oral history project.

2. Reallocation to Higher Priority Needs: -\$55,000

--By transferring responsibility for exchange of patent specifications to the Department of Commerce; and completing the transfer of program and research aspects of the annual Folklife Festival to the Office of American and Folklife Studies.

D. Museum Programs: Net Program Change \$-0-

1. Program Increase: +\$147,000

--To support library acquisitions, cataloguing and conservation, and provide supervisory and clerical support to the horticultural program.

2. Reallocation to Higher Priority Needs -\$147,000

--By consolidating library administration; effecting improved coordination of exhibits production schedules; and by adjusting specialized janitorial services.

E. Special Programs: Net Program Change +\$404,000

--To restore to an adequate funding level the vital Research Awards Program now administered by the Office of the Assistant Secretary for Science following all appropriate Federal personnel and procurement regulations; compensate for increased stipend amounts for pre- and postdoctoral scholars; provide additional research and technical expertise and publications capability for the Folklife Studies Program; and strengthen the clerical and publications capabilities in other education program areas.

F. Administration: Net Program Change +\$119,000

1. Program Increase: +\$165,000

--To strengthen the audit, facilities planning, supply, budget, management analysis and legal functions.

2. Reallocation to Higher Priority Needs: -\$46,000

--By savings associated mainly with funding meetings of the Smithsonian Council with unrestricted trust funds.

G. Support: Net Program Change -\$69,000

1. Program Increase: +\$337,000

--To upgrade the guard force commensurate with protective forces in the area; and to enhance preventive maintenance of roofs, alarm systems maintenance, and telephone switchboard, health services and stock control capabilities.

2. Reallocation to Higher Priority Needs: -\$406,000

--By anticipated savings in utilities consumption, through improved conservation measures; rescheduling extended summer hours of major museums to cover the peak visitation periods only; discontinuing the shuttle bus service no longer required because of Metro; and substituting a Smithsonian-owned phototype capability for the service currently provided by the Government Printing Office on a reimbursable basis.

H. Uncontrollable Increases: \$1,345,000

--Necessary Pay and Related Benefits - to meet the projected higher cost of current employees caused by legislated pay raises, within-grade step increases, and higher workers' compensation costs.

II. Science Information Exchange, Inc. (SSIE)

<u>1977 Appropriation</u>	<u>1978 Estimate</u>	<u>1979 Estimate</u>
\$1,972,000	\$1,862,000	\$2,218,000

The Science Information Exchange, Inc. acquires, possesses, stores, and provides information on research projects as a service to the research community and is the only single source of information on research in progress in all fields of science. For FY 1979, an increase of \$356,000 is proposed to enable the Exchange to meet the following objectives:

- (a) Process into its data base approximately 20,000 research project descriptions, which would not otherwise be processed in FY 1979, in order to maintain a comprehensive data base.
- (b) Develop and implement revised indexing techniques which will further minimize the cost of processing input but maintain the scientific quality necessary to assure meeting user needs.
- (c) Develop methods for the "tracking" of a research project from its conception up through and including the development of technical reports and publication in the scientific literature.

The question of the transition of SSIE to Federal status will be addressed by the President's Reorganization Project this year. In the interim, OMB has recommended that the Exchange continue to be operated as it has been in the past.

III. Special Foreign Currency Program

<u>1977 Appropriation</u>	<u>1978 Appropriation</u>	<u>1979 Estimate</u>
\$3,481,000	\$4,000,000	\$3,700,000

This appropriation will allow the Smithsonian to continue a program of grants to United States institutions for field research 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. With the termination of any further funding to the Smithsonian Research Foundation, Foreign Currency Program awards to Smithsonian employees are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended following all appropriate Federal personnel and procurement regulations. This Foreign Currency request proposes that the dollar limitation on grants to Smithsonian employees, placed into effect for FY 1978, be eliminated and that Smithsonian scholars be allowed to compete for these funds with scientists from other institutions.

IV. Facilities Planning, Renovation, Restoration and Construction

1977 Appropriation

\$9,530,000

1978 Appropriation

\$5,250,000

1979 Appropriation

\$7,575,000

- Construction and Improvements, National Zoological Park (\$3,900,000) -- The FY 1979 appropriation will be used to construct a great ape facility in accordance with Master Plan development (\$3,000,000) and for essential renovation, repair and improvement projects at the Rock Creek Park Zoo and at the Front Royal, Virginia, Conservation and Research Center.
  
- Restoration and Renovation of Buildings (\$3,100,000) -- The appropriation sought for FY 1979 will be used for continued funding of phased projects including improvements for handicapped persons, correction of hazardous conditions, installation of fire detection and suppression systems, site development at the Mt. Hopkins, Arizona Observatory, History and Technology Building terrace repairs and installation of building equipment monitoring systems; construction of a dormitory on Barro Colorado Island at the Tropical Research Institute; construction of a maintenance building at the Chesapeake Bay Center for Environmental Studies; facade and roof repairs; and general repairs and improvements for building preservation and safety purposes.
  
- Construction: Museum Support Center Planning (\$575,000) -- Funds requested in FY 1979 will be used in association with FY 1978 funds for architectural and engineering planning for the construction of a Museum Support Center. The Center will provide additional space for the care, curation, documentation, conservation, preparation, and study of the National Collections and for increased activity in conservation research and training.



TAB A

SALARIES AND EXPENSES



SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

Summary of Increase FY 1979

Appropriation, FY 1978	\$88,238
Proposed Pay Supplemental	4,815
Proposed Program Supplemental (Utilities)	<u>1,100</u>
Base, FY 1978	\$94,153
FY 1979 Request	<u>96,307</u>
Requested Increase	\$2,154



(Dollars in thousands)

Page No.	Unit	1977 Actual			1978 Estimate			1979 Estimate			Analysis of Change		
		Pos.	Amount	Total	Pos.	Amount	Supple- mental	Total	Pos.	Amount	Pos.	Uncontrol- lable	Program
<b>Museum Programs</b>													
A-64	Ass't Secretary for Museum Programs	89	1,592	1,883	92	1,780	103	1,883	91	1,901	-1	43	-25
A-69	Office of the Registrar	4	91	102	4	96	6	102	4	105	-	3	-
A-70	Conservation-Analytical Laboratory	23	538	658	23	627	31	658	23	669	-	11	-
A-72	Smithsonian Institution Libraries	95	2,033	2,260	96	2,145	115	2,260	94	2,372	-2	37	75
A-75	Office of Exhibits Central	48	1,037	1,144	48	1,071	73	1,144	45	1,111	-3	17	-50
A-77	Traveling Exhibition Service	6	101	165	8	156	9	165	8	168	-	3	-
A-80	Smithsonian Archives	12	258	289	13	272	17	289	13	296	-	7	-
A-82	National Museum Act	3	788	794	3	790	4	794	3	795	-	1	-
	Subtotal, Museum Programs	280	6,438	7,295	287	6,937	358	7,295	281	7,417	-6	122	-
<b>Special Programs</b>													
A-85	American Rev. Bicentennial Program	2	419	-	-	-	-	-	-	-	-	-	-
A-87	American and Folklife Studies	4	129	239	4	228	11	239	4	293	-	2	52
A-89	International Environmental Science	2	373	381	2	370	11	381	2	384	-	3	-
A-93	Academic and Educational Programs	12	634	698	12	681	17	698	14	775	2	5	72
	Research Awards Program	-	390	110	-	110	-	110	-	390	-	-	280
	Subtotal, Special Programs	20	1,945	1,428	18	1,389	39	1,428	20	1,842	-2	10	404
A-95	Administration	232	5,494	6,292	235	5,915	377	6,292	238	6,513	3	102	119
<b>Support Activities</b>													
A-98	Printing and Photographic Services	39	901	976	39	931	45	976	39	954	-	15	-37
A-99	Office of Protection Services	527	7,508	8,727	547	8,206	521	8,727	550	8,974	3	147	100
A-102	Office of Plant Services	327	13,905	16,124	322	14,383	1,741	16,124	322	16,110	-	118	-152
	Subtotal, Support Activities	893	22,314	25,827	908	23,520	2,307	25,827	911	26,038	-3	280	-69
	TOTAL	3,372	85,086	94,153	3,428	88,238	5,915	94,153	3,428	96,307	-	1,345	809

SMITHSONIAN INSTITUTION  
FY 1979 UNCONTROLLABLE INCREASES

Additional funds are sought to finance costs that are beyond the control of the Institution. These increases result from law, prevailing practices of wage setting, and higher workers' compensation costs. A total of \$1,345,000 is requested for necessary pay and related benefits.

NECESSARY PAY AND RELATED BENEFITS - An amount of \$1,345,000 is required for personnel compensation and benefits for the projected higher costs in FY 1979 of FY 1978 staff. These increases accrue to employees as a result of within-grade step increases, legislated pay raises, and workers' compensation payments. Costs are calculated on a position-by-position analysis taking into consideration approved new hires in the current year and savings from turnover and filling of vacancies at lower grades where possible. Absorption of these costs from currently available funds seriously impairs approved program activity. First, for every \$16,000 that must be applied to these costs from funds already in salaries and benefits, one staff-year of approved employment is lost. Second, if other object class funds must be applied to these costs, otherwise productive employees are left without the supplies, tools, and equipment they need to perform their jobs well. These additional costs are attributable to the following externally imposed factors.

(1) Within-grade Step Increases - Necessary pay funding of \$1,024,000 is required in FY 1979 for within-grade step increases. For General Schedule employees, such increases are required by 5 U.S.C. 5335. Wage employees are covered by law and prevailing practice. Such increases must be granted if employees are performing at acceptable levels of competence. In any one fiscal year, the costs of within-grade increases are substantial. These increases include the part-year cost of new actions in the current year as well as the cost of annualizing step increases granted in the prior fiscal year.

The General Schedule portion of this request amounts to \$805,000. There are over 2,600 General Schedule employees with some 1,450 scheduled to receive new within-grade increases. The Wage portion amounts to \$219,000. There are over 900 Wage positions with some 400 scheduled to receive new within-grade increases.

(2) Annualization of Legislated Pay Raises - Funds in the amount of \$176,000 are requested to annualize the General Schedule and Wage pay increases effected in FY 1978.

In accordance with P.L. 91-656, General Schedule salary scales are adjusted each October to rates comparable to those paid for similar work in private industry. The total annual cost of the raise that went into effect October 9, 1977 is estimated to be \$3,729,000. A supplemental appropriation of \$3,636,000 is being sought in FY 1978. The balance of \$93,000 is requested in FY 1979 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 the Washington area, this has resulted in Wage employees receiving a pay raise in October of each year. Smithsonian Wage employees in Panama, Maryland, Virginia, Arizona, and New York receive similar wage hikes at other times. The Washington area personnel received a pay raise in excess of 8 percent in October, 1977. Raises in other geographic areas have been estimated on the same basis. The total annual cost of these raises is estimated to be \$1,262,000. A supplemental of \$1,179,000 is being sought in Fy 1978 while the balance of \$83,000 is requested in FY 1979 to provide full-year funding.

(3) Workers' Compensation (\$145,000) - Section 8147(b) of Title 5, United States Code, as amended on April 21, 1976 by Public Law 94-273, provides for payments to be made to employees for injuries and to their families in case of death. These payments are determined and made by the United States Department of Labor's Office of Worker's Compensation Program, which subsequently bills agencies the cost incurred for their employees. The FY 1979 bill for the Smithsonian Institution totals \$328,000 which covers payments made in 150 cases. With an amount of \$183,000 currently in the Institution's base for workers' compensation, an additional amount of \$145,000 is required to finance the bill.

The distribution of the requested FY 1978 pay and benefits supplemental appropriation totaling \$4,815,000 is distributed by organizational unit on pages A-2 and A-3. Necessary pay in the amount of \$1,345,000 is distributed by organizational unit and purpose below.

Necessary Pay  
FY 1979

(Dollars in thousands)

<u>Unit</u>	<u>Within Grades</u>	<u>Annualization of Raises</u>		<u>Workers' Comp.</u>	<u>Total</u>
		<u>GS</u>	<u>Wage</u>		
Assistant Secretary for Science.....	2	1	-	-	3
National Museum of Natural History.....	166	18	4	26	214
Smithsonian Astrophysical Observatory....	20	4	8	5	37
Smithsonian Tropical Research Institute...	20	4	3	4	31
Radiation Biology Laboratory.....	16	1	1	3	21
Office of International Programs.....	3	1	-	1	5
Chesapeake Bay Center.....	9	1	1	1	12
National Air and Space Museum.....	64	6	5	11	86
National Zoological Park.....	92	8	20	17	137
Center for the Study of Man.....	11	1	-	1	13
Assistant Secretary for History and Art...	3	2	-	1	6
Museum of History and Technology.....	78	5	4	9	96
National Collection of Fine Arts.....	32	2	1	3	38
National Portrait Gallery.....	23	2	1	3	29
Hirshhorn Museum and Sculpture Garden....	26	1	2	3	32
Freer Gallery of Art.....	10	1	1	1	13
Archives of American Art.....	6	1	-	1	8
Cooper-Hewitt Museum.....	6	-	5	1	12
Assistant Secretary for Public Service....	4	-	-	-	4
Anacostia Neighborhood Museum.....	6	1	-	1	8
International Exchange Service.....	2	-	1	-	3
Division of Performing Arts.....	4	1	-	1	6
Smithsonian Institution Press.....	13	2	-	2	17
Assistant Secretary for Museum Programs...	33	1	5	4	43
Office of the Registrar.....	3	-	-	-	3
Conservation-Analytical Laboratory.....	9	1	-	1	11
Smithsonian Institution Libraries.....	30	3	-	4	37
Office of Exhibits Central.....	14	1	-	2	17
Smithsonian Traveling Exhibition Service..	3	-	-	-	3
Smithsonian Archives.....	5	1	-	1	7
National Museum Act.....	1	-	-	-	1
American and Folklife Studies.....	1	-	-	1	2
Internat'l Environmental Science Program..	3	-	-	-	3
Academic and Educational Programs.....	5	-	-	-	5
Administration.....	84	8	-	10	102
Printing and Photographic Services.....	11	1	1	2	15
Office of Protection Services.....	121	11	1	14	147
Office of Plant Services.....	85	3	19	11	118
<b>TOTAL</b>	<b>1,024</b>	<b>93</b>	<b>83</b>	<b>145</b>	<b>1,345</b>

OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

1977 Actual.....\$296,000  
 1978 Estimate.....\$288,000  
 1979 Estimate.....\$291,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>7</u>	<u>0</u>	<u>7</u>
11 Personnel Compensation.....	166	3	169
12 Personnel Benefits.....	16		16
21 Travel & Trans. of Persons..	13	2	15
23 Rent, Comm. & Utilities.....	4		4
25 Other Services.....	79	-2	77
26 Supplies and Materials.....	<u>10</u>		<u>10</u>
TOTAL	<u>288</u>	<u>3</u>	<u>291</u>
<u>Analysis of Change</u>			
Necessary Pay.....		3	
Program Funds.....		0	

ABSTRACT - This office is responsible for overall planning, coordinating, and reviewing the progress of the 13 science bureaus and programs within the Institution. No program increase is sought for FY 1979. Necessary pay in the amount of \$3,000 is required for existing staff.

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, the Astrophysical Observatory, the Tropical Research Institute, the Radiation Biology Laboratory, the Office of International Programs, 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 Science Information Exchange, the Fort Pierce Bureau, the Research Awards Program, 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 science boards and commissions.

NATIONAL MUSEUM OF NATURAL HISTORY

1977 Actual.....\$11,411,000  
 1978 Estimate.....\$12,419,000  
 1979 Estimate.....\$12,883,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>498</u>	<u>0</u>	<u>498</u>
11 Personnel Compensation.....	10,252	188	10,440
12 Personnel Benefits.....	984	43	1,027
21 Travel & Trans. of Persons..	119	20	139
22 Transportation of Things....	30	2	32
23 Rent, Comm. & Utilities.....	8		8
24 Printing and Reproduction...	95		95
25 Other Services.....	601	106	707
26 Supplies and Materials.....	244	25	269
31 Equipment.....	<u>86</u>	<u>80</u>	<u>166</u>
TOTAL	<u>12,419</u>	<u>464</u>	<u>12,883</u>

Analysis of Change

Necessary Pay.....	214
Program Funds.....	<u>250</u>

ABSTRACT - The National Museum of Natural History (NMNH) serves as a major center for the natural sciences. It maintains large reference collections and conducts programs of identification and documentation, research, collections management, exhibits, and education -- including collaborative projects with universities and other institutions of learning. For FY 1979, an increase of \$250,000 is requested to meet the following research and research related requirements: (1) \$165,000 for supplies, equipment, and services in support of scientific research; (2) \$40,000 for support of the marine mammals program, which documents the occurrence, biology, and ecology of whales and other species in an effort to prevent their extinction; (3) \$25,000 for the amphipod crustacean program, which is concerned chiefly with identifying the species of these marine organisms and learning their environmental tolerances so that they may be of use in pollution monitoring; and (4) \$20,000 for the establishment of an Insect Sorting Center which will prepare field samples for distribution to specialists at the Smithsonian and elsewhere for use in their ecological studies. Necessary pay in the amount of \$214,000 is required for existing staff.

PROGRAM - This Museum 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 ultimate repository of all collections of objects of natural history, archeology, and ethnology made by agencies of the government when no longer needed by those agencies for investigations in progress. Additionally, the NMNH is the repository for numerous extremely valuable collections obtained from the scientific community, academic institutions, and many private individuals.

The scientists at the Museum conduct a broad program of basic research on man, plants, animals, fossil organisms, rocks, minerals, sediments, and materials from outer space. Their fundamental studies in biology are providing new information required for the solution of major problems of conservation, pollution, food production, improvement of medical knowledge, and for planning national and international

programs leading to predictive ecology and environmental management. The scientific and technical results which flow from this research are made available to others by an active and large publications program.

The Oceanographic Sorting Center prepares and distributes animal and plant materials to scientists from 200 agencies around the world who are concerned with marine pollution, ocean dumping, pollution monitoring, environmental prediction, and systematics studies. The Scientific Event Alert Network is responsible for providing timely notice of short-lived natural scientific phenomena and events, such as volcano activity, meteorite falls, and earthquakes, to scientists and other concerned professionals within and outside of the Smithsonian.

Some five million people visited the Museum in FY 1977, including many thousands of school children attracted by the exhibits. A major program of exhibit improvement was begun in FY 1974 with the creation of two new exhibits: "Ice Age Mammals and the Emergence of Man" and the very successful "Discovery Room," an area in which visitors may handle exhibits and specimens. In FY 1976, two additional major new exhibits were completed and opened to the public: the Museum's Bicentennial exhibit entitled "Our Changing Land" which depicts changes wrought by man and nature over the last 10 thousand years in the Washington, D.C. area, and an exhibit on South America entitled "A Continent and Its Culture" which deals with the culture and environment of South America. In addition, the popular "Insect Zoo" was opened as a new exhibit and a major effort to upgrade existing exhibitions was undertaken. In FY 1977, work was completed on the "Splendors of Nature" exhibit which displays many spectacular and beautiful natural objects as well as items made by primitive man.

As part of its education program, the Museum provides assistance for elementary and secondary school groups. In addition, many members of the scientific staff participate in joint educational programs with universities by teaching courses, training graduate students, and conducting science seminars. The Museum also provides leadership in the improvement of museum techniques and collections management, especially through the application of computer technology. With the completion in mid-1976 of the Museum's new West Court addition housing the Education Learning Center and the Naturalist Center, major new educational resources were made available to the public. The Learning Center has four classrooms and an assembly area for the use of visiting groups of students. The Naturalist Center features representative collections from many groups of organisms as well as rocks, minerals, and anthropological materials. The resources of the Center, including the collections, the library, and the volunteer assistants, are available to all amateur naturalists.

#### EXPLANATION OF PROGRAM CHANGES:

Research Support - The staff of the National Museum of Natural History includes 113 full-time scientists, many of whom are world-renowned experts. An additional amount of \$165,000 is needed to correct a very serious shortfall in the support of their work. Funds available for support of scientific research at the Museum have declined over the past several years in terms of real dollars largely as a result of inflation. Currently the average support funds provided each scientist amount to between \$1,500 and \$2,000 per year. This is substantially below the \$18,000 per year per scientist which is recognized as the Federal government standard 'Scientific Man-Year' level of support and also provided to researchers of other organizations for projects funded by the National Science Foundation and by the National Institutes of Health. The funds requested, although well short of the optimum level, will add an average of some \$1,500 per year for support for each scientist, bringing the level of support to \$3,500 per year. These funds will be used to purchase field equipment, supplies, computer time, and contractual services for such things as scientific illustration and specimen preparation.

Marine Mammals Program - Many species of marine mammals are in danger of extinction, and other species are being endangered by the activities of man. Through the marine mammals program scientists hope to learn a great deal more about the distribution, migration patterns, population sizes, and other biological dynamics of the various species of whales and other marine mammals which will be useful in establishing conservation measures and harvesting quotas. The additional \$40,000 requested for this program will be used to continue to strengthen the long tradition of active research on marine mammals begun at the Smithsonian almost 100 years ago. Primary research emphasis will be placed on basic aspects of the natural history of marine mammals, particularly the whales and dolphins of the east coast of the United States. Specimens and information will also be gathered about marine mammals along the Gulf and Pacific coasts.

Policymakers cannot know how to manage properly the remaining marine mammal resources without the kind of information which will be gathered in this program. The time is already late for the saving of some species of whales. There is no reason why, armed with accurate knowledge about these animals, the remaining species cannot be conserved for the present and then successfully cropped for years to come without any damage to the base stock. Without good biological knowledge of the threatened species there is great danger that cropping will reduce population levels to the point where recovery will be uncertain even if exploitation ceases.

The funds requested will be used for equipment, supplies and temporary seasonal assistants needed to support the extensive field work associated with this program.

Amphipod Pollution Monitoring Project - Recent research conducted at the NMNH and elsewhere has shown that amphipod crustaceans -- small bodied aquatic organisms similar to shrimp and crabs -- are of great value for pollution monitoring. The small body size and rapid rate of reproduction of the amphipods make them ideal organisms for monitoring environmental problems and for detecting rapidly changing conditions. Each of the 5,000 or so species of amphipods found in the world's oceans has environmental tolerances which can be discovered, and once known, can be used as yardsticks of the deleterious effects of polluting agents in an area.

The amphipod research program proposed here would include research, information gathering, and information dissemination on this important group of organisms. Emphasis will be on the identification of the tolerance limits of as many species as possible. The additional \$25,000 requested for the program will be used chiefly for contractual services needed to prepare and disseminate data, and for computer services needed to compile and organize data.

Smithsonian Insect Sorting Center - The proposed Smithsonian Insect Sorting Center will provide sorting, identification, and storage for insect collections made in conjunction with ecological studies by Smithsonian and other scientists. The Center will provide rapid sorting and preparing of specimens from samples submitted by ecologists, return of prepared specimens or information to the submitters, proper storage of remaining reference and specimen materials until needed, entry of identified specimens into the collections of the National Museum of Natural History or other appropriate permanent collections, proper handling of information about the materials collected through computer processing, and provision of information about the specimens which are available for study.

Ecological studies and surveys are increasingly using insects and their relatives as environmental monitors because of their diversity, abundance and narrowly adapted life styles. Unfortunately, most ecologists are generally unfamiliar with the species which they find in their samples, and thus their assessment of the insect population is often superficial. Like all other organisms, each species of insect is adapted to living under certain physical conditions, and superficial

knowledge about the species collected means that only partial information about the ecological conditions under which the species lived can be deduced. Moreover, the samples collected during most ecological studies are usually discarded or else are stored poorly. Establishment of the Smithsonian Insect Sorting Center would provide a start toward the objectives of careful preparation and sorting of all species collected in sampling and proper care for the samples until they can be studied. The \$20,000 requested will permit the establishment of a center which will be capable of handling up to 100,000 specimens per year, enough to cover approximately five substantial ecological projects annually. The funds will be used for contractual services to aid in the identification and sorting of field sample materials.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

1977 Actual.....\$3,837,000  
 1978 Estimate.....\$4,518,000  
 1979 Estimate.....\$4,555,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>73</u>	<u>0</u>	<u>73</u>
11 Personnel Compensation.....	2,499	-78	2,421
12 Personnel Benefits.....	226	-2	224
21 Travel & Trans. of Persons..	40	10	50
22 Transportation of Things....	33	-6	27
23 Rent, Comm. & Utilities.....	390	-118	272
24 Printing and Reproduction...	27		27
25 Other Services.....	894	120	1,014
26 Supplies and Materials.....	164	38	202
31 Equipment.....	144	73	217
41 Grants.....	<u>101</u>		<u>101</u>
TOTAL	<u>4,518</u>	<u>37</u>	<u>4,555</u>
<u>Analysis of Change</u>			
Necessary Pay.....		37	
Program Funds.....		0	

ABSTRACT - The Smithsonian Astrophysical Observatory (SAO), established in 1890, has as its primary goal to increase and diffuse knowledge about the earth and the universe as related to astrophysics. To accomplish this, SAO conducts a broad program of research in eight closely interrelated scientific areas: theoretical astrophysics, high-energy astrophysics, solar and stellar physics, geoastronomy, optical and infrared astronomy, radio astronomy, atomic and molecular physics, and planetary sciences. Essential to the conduct of these research programs are the gathering of data using both ground-based and space-borne instruments and the reduction and analysis of data as well as the formulation of mathematical models of astrophysical systems, all of which rely heavily on the use of computers. For these purposes, SAO maintains a multi-purpose observing facility at Mt. Hopkins in Arizona and a number of small observing stations around the world, participates in National Air and Space Administration (NASA) sponsored scientific space-borne experiments, and operates a relatively large computer at its headquarters in Cambridge, Massachusetts.

For FY 1979, the Smithsonian Astrophysical Observatory is not requesting a program increase. However, recognizing that additional research funds are needed to support properly those projects of high priority, SAO plans to reallocate 9 positions and \$325,000 of base resources to projects considered to be of highest priority. An amount of \$37,000 is required for necessary pay.

PROGRAM - Since 1890, when it was founded by Samuel Pierpont Langley, the Smithsonian Astrophysical Observatory has pursued a broad program of astrophysical research, often in support of national goals. Beginning with its pioneer investigations concerning the relationships between solar energy and the terrestrial environment, which continue at the present time under the Langley-Abbot Program, the SAO has remained in the forefront of modern astrophysics with today's research directed to seek and reveal the basic processes in cosmic evolution. Critical to the understanding of the basic processes in cosmic evolution are the solutions of two broad, but strongly interrelated

scientific problems: (1) the evolution of matter, starting with the explosive beginnings of the universe some 20 billion years ago -- following the formation of galaxies and stars, some matter collapses into unusual objects, such as quasars, neutron stars, and black holes. The extreme physical conditions found in these objects test fundamental principles of physics, including Einstein's Theory of Relativity and modern theories of elementary particles; and (2) the problem of cosmic matter that has cooled to the point that molecules and solid particles form -- the condensation of materials accompanying the formation of a star like the sun results in the formation of planets and, ultimately, in the emergence of life.

SAO's research for an understanding of the basic processes of cosmic evolution -- through studies of the evolution of stars and galaxies and through studies of the earth, the solar system, and cooled matter in space -- is being conducted through studies in eight closely interrelated research fronts:

1. Theoretical Astrophysics--construction of model stellar atmospheres; investigation of massive and high-density stars; cosmology; studies of galactic evolution; and physics of instellar matter.
2. High-Energy Astrophysics--observations of high-energy sources emitting x-rays and/or gamma-rays.
3. Solar and Stellar Physics--observational and theoretical studies of solar and stellar processes; and studies of solar activity.
4. Geoastronomy--studies of the earth's kinematics; geodesy and geophysics; and celestial mechanics.
5. Optical and Infrared Astronomy--observations of infrared sources; stellar and planetary observations; and studies of stellar evolution.
6. Radio Astronomy--very long baseline interferometric observations of celestial radio sources, and laboratory studies of interstellar molecules.
7. Atomic and Molecular Physics--laboratory astrophysics, shock tube and ultraviolet vacuum spectroscopy; and atomic physics.
8. Planetary Sciences--studies of the structure and composition of planetary atmospheres; studies of asteroids, meteorites, cosmic dust, and comets, studies of lunar and other extra-terrestrial materials; and studies pertaining to the evolution of the solar system.

In support of these investigations, data are obtained from laboratory experiments, ground-based observations, and space-borne observations and experiments. Laboratory experiments are conducted at SAO's Cambridge facilities; ground-based observations are carried out primarily at SAO's Mt. Hopkins Observatory in Arizona and a network of small astrophysical observing stations, as well as at other major observatories located in the United States and other countries; and space-borne observations and experiments are made possible through NASA's space science programs which are planned and defined with the participation of SAO's scientific staff and those of other research institutions. Data acquired by all these methods provide the basis for the formulation of mathematical models of astrophysical systems and processes, all of which rely heavily on the use of SAO's computing facilities. Together, the investigations and mathematical modelling will lead to an understanding of the basic processes in cosmic evolution.

EXPLANATION OF PROGRAM CHANGES - SAO requires additional funds and positions to support properly experimental and laboratory activities; to assist development of x-ray, infrared, and visible light detectors which are the heart of scientific instruments; and to support the development of scientific instruments themselves. By phasing out

or reducing significantly a number of lower priority research projects, SAO will be able to meet these needs within existing resources. Planned actions would make available base resources totaling 9 positions and \$325,000.

#### Planned Program Improvements

Multiple Mirror Telescope (MMT) - With the MMT becoming operational in late FY 1978, SAO must reorganize existing base funds, heretofore allocated primarily to contractors for fabrication of the telescope and shelter, to the operation of the MMT Facility on a routine basis, as well as to initiate development of instruments for the MMT in a planned and dedicated way. To accomplish this, additional technical and management staff are required on a permanent, full-time basis. SAO intends to add to this program, 5 positions which will be supported with existing MMT program funds, as will the actual cost of instrument hardware fabrication.

High-Energy Astrophysics - As a fundamental part of its objective of maintaining nationally significant programs in high-energy astrophysics, it is essential that SAO increases its experimental research efforts in this area. Because x-ray astronomy is based on space-borne telescopes, intensified laboratory effort must be expended to facilitate the research on critical materials which are essential for the development of x-ray detectors as well as the development of detectors themselves. One position and \$124,000 will be added to this effort in order for SAO to continue its internationally recognized leadership role in future space-borne experiments in high-energy astrophysics.

Radio Astronomy - One position and \$97,000 will be added to this research area to give a major new emphasis to Very Long Baseline Interferometry (VLBI) to conduct observational studies of astronomical objects and relativistic dynamics of the solar system. The planned development of specialized wide-band receiving and recording equipment and highly stable frequency sources are essential to VLBI.

Optical and Infrared Astronomy - The Multiple Mirror Telescope, coupled with other rocket-borne and space-borne instruments, present a major thrust in optical and infrared astronomical research for SAO. Most critical to the development of instruments for use with ground-based and space-borne telescopes is the development of visible light and infrared detectors. The addition of \$60,000 for detector development will make it possible for SAO to realize its full scientific potential in optical and infrared astronomy.

Theoretical Astrophysics - To strengthen its theoretical research effort in relativistic astrophysics and cosmology, SAO intends to add 1 position and \$44,000 to this research area.

Solar and Stellar Physics - Excellent progress is being made under the Langley-Abbot Program. Specifically, historical links have been found between periods of solar variability and terrestrial climate change. However, because of the complexity of the effort involved, continuity of direction has become essential. To provide this continuity SAO intends to use Langley-Abbot funds for a permanent position rather than continue with a term appointment.

#### Planned Program Reductions

The level of effort in the following projects will either be phased out or significantly reduced. While these projects are scientifically sound, they are not considered to be critical to the accomplishment of SAO's major objectives.

Optical and Infrared Astronomy - Delete development of heterographic optical instruments (1 position and \$38,000).

High-Energy Astrophysics - Significantly reduce observational studies in gamma-ray astronomy (1 position and \$41,000).

Planetary Sciences -

--Significantly reduce the research effort associated with the analysis of lunar and meteoritic samples (3 positions and \$78,000).

--Significantly reduce the effort related to studies of meteors (1 position and \$40,000).

--Reduce the effort associated with laboratory measurements of microwave spectra (1 position and \$27,000).

Radio Astronomy -

--Delete theoretical studies of astrophysical masers (1 position and \$67,000).

--Delete spectral-line observations of interstellar clouds at moderate angular resolution (1 position and \$34,000).

SAO Research Highlights and Other Developments

Accomplishments in FY 1977.

--Langley-Abbot program of solar research finding historical links between periods of solar variability and terrestrial climate change.

--Laboratory studies resulting in the first positive evidence for the presence of boron in the sun.

--Publication of the fourth and final edition of the Smithsonian Standard Earth, a highly precise mathematical representation of the earth's size, shape, and gravitational potential based on the analysis of satellite orbital data obtained by laser tracking.

--Analysis of data from the Gravitational Redshift Experiment supporting the equivalence principle of Einstein's Theory of General Relativity to an accuracy of 200 parts per million

--Publication of the Fourth UHURU Catalog, listing 339 sources of x-ray emission, or nearly twice the number previously known. The sources observed by the UHURU satellite include objects both within and outside our galaxy. Among the most interesting x-ray sources are the so-called "super-clusters of galaxies," vast conglomerations of clusters of galaxies more than 150 million light years in diameter.

--Successful flight of the joint MIT-Smithsonian Scanning Modulation Collimator experiment aboard the HEAO-1 satellite launched August 12 by NASA. The instrument has measured highly precise positions for a number of known cosmic x-ray sources and has discovered new transient sources.

--Successful flight of a 102-cm balloon-borne far-infrared telescope yielding 7.7 hours of observations of planets, supernovae remnants, asteroids, and extended regions of stars and molecular clouds.

--Final stage of construction of the Smithsonian-University of Arizona Multiple Mirror Telescope, with completion of the mount system and housing at its site on the summit of Mt. Hopkins, Arizona.

Accomplishments Expected in FY 1978.

- Completion of the joint Smithsonian-University of Arizona Multiple Mirror Telescope, with installation of the Optical Support System, the six 1.5-m mirrors, and the active optics and control systems.
- Test operations of the entire MMT facility and gathering of the "first light" by the telescope.
- Flight of the HEAO-B satellite, the second in the series of High-Energy Astronomy Observatories designed to map the heavens in x-rays. The Smithsonian experiment is a high-resolution telescope that will allow detailed study of x-ray sources.
- Improvement of the Smithsonian's laser tracking systems for precise tracking orbital determination of satellite orbits as part of international programs of geodesy and geophysics.
- Continuing analysis of HEAO-1 x-ray data.
- Development of a small, helium-cooled telescope scheduled for flight aboard the Spacelab II to make the first complete map of extended regions of low-level infrared emission from the Milky Way. The experiment will also observe zodiacal emission in the solar system and make the first all-sky survey of the extended infrared emission from intergalactic matter, distant galaxies, and quasi-stellar objects.
- Full operation of a cooperative program of Very Long Baseline Interferometry observations of galactic sources with other American and foreign radio observatories.

Accomplishments Expected in FY 1979.

- Public opening and dedication of joint Smithsonian-University of Arizona Multiple Mirror Telescope Facility at Mt. Hopkins, Arizona.
- Operation of the HEAO-B high resolution x-ray telescope and analysis of data.
- Final preparations of the far-infrared telescope package planned for flight aboard the Skylab satellite in 1981.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

1977 Actual,.....\$1,477,000  
 1978 Estimate.....\$1,633,000  
 1979 Estimate.....\$1,749,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>65</u>	<u>2</u>	<u>67</u>
11 Personnel Compensation.....	1,041	83	1,124
12 Personnel Benefits.....	172	9	181
21 Travel & Trans. of Persons..	42	16	58
22 Transportation of Things....	9	4	13
23 Rent, Comm. & Utilities.....	97		97
24 Printing and Reproduction...	18		18
25 Other Services.....	65	-9	56
26 Supplies and Materials.....	163	3	166
31 Equipment.....	<u>26</u>	<u>10</u>	<u>36</u>
TOTAL	<u>1,633</u>	<u>116</u>	<u>1,749</u>
<u>Analysis of Change</u>			
Necessary Pay.....		31	
Program Funds.....		85	

ABSTRACT - The principal United States basic research effort in the tropics is conducted at the Smithsonian Tropical Research Institute (STRI) headquartered on the Isthmus of Panama. In addition to fundamental research, STRI has a responsibility to promote education and conservation in the tropics. STRI is custodian of the world famous biological reserve and field station at Barro Colorado Island under 20 U.S.C. 79 a-e. In the event that the Panama Canal Treaties are ratified, then under the terms of ancillary agreements and exchanges of notes, Barro Colorado Island will be declared a Nature Monument as defined in the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere of October 12, 1940; and further the Smithsonian Tropical Research Institute will be designated by both governments as custodian of the Barro Colorado Nature Monument and the Institute shall "have sole responsibility to act on behalf of our Governments in authorizing use of the Nature Monument for the purposes of scientific research..." It is apparent that the investigations conducted by the Smithsonian on Barro Colorado Island and at its other facilities throughout the Isthmus of Panama will not be affected by changes in the administration of the Panama Canal Zone by the new treaty.

In FY 1979, a net increase of 2 positions and \$85,000 is requested for the following research and research support requirements: 1 position and \$30,000 to employ a marine productivity ecologist to begin a long-term survey of the nutrient and biomass fluctuations in the Panama Bay; 1 position and \$30,000 for an ecologist to study the extant situation in the ecology of plant-insect pollination interactions before Panama receives the invasion of the Africanized Brazilian bees which are expected to reach the isthmus from Venezuela in 5 to 6 years; and \$25,000 to employ a marine facilities maintenance leader to supervise the sophisticated control systems of a new seawater system and wet laboratory currently under construction at the Naos Island Marine Laboratory on the Pacific side of the isthmus. The existing, vacant position of Barro Colorado Island manager will be relinquished so that the more essential marine facilities foreman can be hired as a permanent position. Necessary pay in the amount of \$31,000 is required for existing staff.

PROGRAM - More and more we are coming to understand that the tropics do not represent a constant and unchanging environment, but rather subtle physical and dramatic biological changes are continuously occurring. Documenting these changes and understanding how they affect the dynamics of tropical population are the core of the STRI scientific program. The problems of the adaptations of life to the tropics can best be approached by long-term studies which cannot be conveniently accomplished by scientists on summer leave from temperate zone universities. Increasingly, STRI permanent staff are being called upon to provide environmental advice and to evaluate impact statements and assessments prepared under requirements of the National Environmental Policy Act of 1969 or similar requirements of the World Bank and other international organizations. Some examples during the last year include: assisting with the environmental impact statement of the Fortuna Hydroelectric Project under construction by the Republic of Panama with a World Bank loan; examining the problem of aquatic weeds in the recently completed Bayano Dam; evaluating the proposed introduction of an exotic species of fish to control aquatic vegetation in Gatun Lake by the Panama Canal Company; serving on the U.S. National Academy of Sciences committee to reevaluate the 1970 Atlantic-Pacific Interoceanic Canal study commission survey of the potential environmental impact of a sea-level canal, interest in which has recently been reactivated; advising the Republic of Panama on the assessment of precautionary measures required for the transshipment of Alaskan oil to the East Coast refineries via the Panama Canal; and reviewing the assessment of the environmental impact of the operations of the Canal. STRI scientists also have been consulted on a variety of other proposed projects such as construction of national parks, the completion of the Interamerican Highway through the Darien Gap, various proposed legislative amendments and bills to finance further investigations in anticipation of a sea-level canal, and a major Agency for International Development proposal for watershed management in the Republic of Panama. STRI staff also have continued to provide advice to non-governmental groups such as the Charles Darwin Foundation, the Rare Animal Relief Effort, the Organization of Tropical Biology and the Wau Ecology Institute in Papua New Guinea.

The tropical forests and coral reefs with their infinitely complex interactions are among the last frontiers on this planet. They are rapidly disappearing due to man's activities. We must understand how these systems affect life on the rest of the planet and very quickly arrive at a position whereby we can recommend intelligently areas to be protected and reclamation procedures. Mankind is approaching a crisis situation, and biological systems which require hundreds of years to grow are not amenable to crash programs.

During FY 1978, the Institute's permanent scientific staff totals 19 persons. There also have been 25 long-term, pre- and postdoctoral students, principally from North American universities, associated with STRI, and over 45 students with privately funded fellowships for one to six month periods. Many of these fellowships provide training for students from developing nations. It is anticipated that an additional 1,200 visitors from all over the world have used STRI facilities for shorter periods. These visitors have come from 32 countries and 30 states in the U.S. In FY 1978, over 100 seminars will be held and over 90 scientific papers will be published by STRI staff, students and associates.

#### EXPLANATION OF PROGRAM CHANGES:

An increase of 3 positions and \$85,000 is sought for FY 1979. Two of the proposed positions are for ecologists; the third position is for a marine facilities maintenance leader to operate and maintain a new sophisticated seawater system and wet laboratory. Presently, STRI has a staff of 19 researchers. To maintain the close intellectual atmosphere of the Institute and its intimate association with the biotic world, present policy of long range plans envisage a permanent staff of 25 researchers. A research staff of this size is considered essential to STRI's objective of understanding the special problems peculiar to the tropics and transmitting this information to policy planners. The specific uses to which the 3 new positions will be put are as follows:

Productivity Ecologist - In the tropical oceans seasonality is considered a relatively rare and reasonably benign phenomenon. However, in Panama Bay on the Pacific coast of Panama cold water upwellings during the dry season (January-April) lower water temperatures from 26 degrees Celsius to 17 degrees Celsius and bring nutrients to the surface so that productivity in the Bay is greatly increased. Because of the increased food supply, the population size, reproduction, and growth rates of many species are elevated at this time. However, the extent of the upwelling and productivity increase varies greatly from year to year.

It is particularly important to understand these normal seasonal and annual fluctuations in the biota of Panama because of possible man-made changes which might occur in the near future. For example, proposals are currently before the Congress to fund a large scale study to determine the effects of building a sea-level canal. In addition, more and more oil tankers carrying Alaskan oil are using the Panama Canal, increasing the possibility of an oil spill.

We cannot hope to predict the environmental impact or to assess the responsibility for future perturbations without a thorough understanding of the naturally occurring cycles. The obvious way to solve this deficiency is to initiate a long-term study of the densities of plants and animals responsible for the increase in productivity. The addition of a productivity ecologist and \$30,000 to the STRI marine biological program is of immediate priority.

Plant-insect Ecologist - The complex interrelationships that have evolved between animals and plants in the tropics are one of the most exciting frontiers in the environmental sciences today. Several years ago, a strain of African honeybees was accidentally released in Brazil. These bred with local bees producing a very efficient but highly aggressive strain which has been migrating northward until at this moment they have reached northern Venezuela. These Africanized "killer" bees displace native bees from nest sites and are more efficient pollinators of some native plants. Some studies have been done but their impact is difficult to evaluate because pre-invasion studies were not made in these areas. It is expected that the bees will arrive in Panama in about five years. We, therefore, have a rare opportunity to begin a pre-invasion study in order to evaluate the effects of this aggressive colonizer on its native insect competitors and the plants which they pollinize. For example, while these bees are effective pollinators of most plants, if they are either mechanically or behaviorally incapable of pollinating others, then those plants may become extinct.

Comparable invasions of plants and animals have occurred naturally through geological times with major evolutionary and zoogeographic effects. Rarely has such an invasion telegraphed its arrival in advance. This invasion will eventually reach the United States with economic consequences. In Panama STRI is ideally situated to study the problem in advance. This opportunity should not be ignored. To seize it, a plant-insect ecologist and \$30,000 are requested.

Marine Facilities Maintenance Leader - The Naos Island Marine Laboratory consists of 5 office/laboratory buildings and a pier which holds a small, antiquated seawater system for living organisms. As many as 30 scientists (STRI personnel and visiting researchers) may use these facilities at one time. During the current year, an enlarged seawater system and wet laboratory capability is being constructed. The new system will contain filtration, settling aeration, and other physical and biotic controls. For example, it will include a waste water chlorinator so that organisms from the Atlantic Ocean can be studied without risking their accidental introduction to the Pacific Ocean. Presently, only two permanent members of the facilities staff -- a wildlife technician and a janitor -- are assigned to Naos. An additional amount of \$25,000 is requested to fund a mechanically skilled marine facilities maintenance leader who will supervise the operation and maintenance of the new sophisticated facility, one that will be critical to any proposed sea-level canal environmental study. The vacant position of Barro Colorado Island manager can be reapplied to meet the urgent need for a new maintenance leader.

RADIATION BIOLOGY LABORATORY

1977 Actual.....\$1,872,000  
 1978 Estimate.....\$1,734,000  
 1979 Estimate.....\$1,755,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	48	0	48
11 Personnel Compensation.....	953	19	972
12 Personnel Benefits.....	92	2	94
21 Travel & Trans. of Persons...	8	7	15
22 Transportation of Things....	5		5
23 Rent, Comm. & Utilities.....	247		247
24 Printing and Reproduction...	10		10
25 Other Services.....	40	15	55
26 Supplies and Materials.....	181	-7	174
31 Equipment.....	198	-15	183
TOTAL	<u>1,734</u>	<u>21</u>	<u>1,755</u>
<u>Analysis of Change</u>			
Necessary Pay.....		21	
Program Funds.....		0	

ABSTRACT - The Radiation Biology Laboratory (RBL) studies the influence of environmental factors -- light, temperature, humidity, and atmospheric content -- on biological systems in order to understand their growth and development. There is a continuing increase in concern about the environment and in requests for the Laboratory's data that is derived from current programs. No program increase is sought for FY 1979. Necessary pay in the amount of \$21,000 is required for existing staff.

PROGRAM - Light is the key controlling environmental factor for development and growth of biological systems. Storage of solar radiation as chemical energy in photosynthesis is basic for all life on earth. The use of this energy is regulated by subtle, changing signals of light quality, duration, and intensity. A primary objective of the Radiation Biology Laboratory is 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 spinoff value from these measurements is the collection of solar insolation data necessary for calculating the feasibility and requirements for solar collectors used to provide an alternate source of energy. Such programs of research by their very nature are 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.

The research of the Laboratory consists of three principal areas: (1) regulatory biology, (2) environmental biology, and (3) carbon-14 dating. Since its inception in 1928, the Laboratory has pioneered research into the influences on growth of the color quality of visible and near visible light such as ultraviolet. The present experimental program is of greater scope than that of 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.

Major accomplishments in FY 1977 include the following:

1. Exposure of the enzyme system which causes the production of phytoene (a precursor of Vitamin A) in the fungus *Neurospora* to blue light in the laboratory, creating a nine-fold increase in phytoene production.
2. Publication of a detailed 3,123 reference indexed bibliography of phytochrome research literature prior to 1975, completing work initiated in 1969.
3. Measurement of the pigment phytochrome in white light grown plants for the first time, enabling scientists to determine phytochrome's role in controlling plant growth and development.
4. Measurement by fluorescence of the energy transfer between photosynthetic accessory pigment aggregates (phycobilisomes), determining the transfer to be 95-98 percent efficient in red algae.
5. Exposure of greenhouse crops grown under controlled environment conditions to white light given in very short pulses (5 milliseconds), producing increases in photosynthetic carbon fixation. Longer pulses of about one minute duration result in minimum photosynthesis.
6. Preliminary analysis of UVB (ultraviolet radiation "B") data from RBL's monitoring program indicating that the amount of UVB energy received at the earth's surface is influenced strongly by meteorological conditions, and that ozone measurements can be used to predict the amount of UVB received at the earth's surface only on completely clear days.

OFFICE OF INTERNATIONAL PROGRAMS

1977 Actual.....\$201,000  
 1978 Estimate.....\$266,000  
 1979 Estimate.....\$227,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	11	-1	10
11 Personnel Compensation.....	207	-38	169
12 Personnel Benefits.....	19	-1	18
21 Travel & Trans. of Persons..	4	1	5
25 Rent, Comm. & Utilities.....	4		4
24 Printing and Reproduction...	1		1
25 Other Services.....	27	-1	26
26 Supplies and Materials.....	3		3
31 Equipment.....	1		1
TOTAL	266	-39	227
<u>Analysis of Change</u>			
Necessary Pay.....		5	
Program Funds.....		-44	

ABSTRACT - The Office of International Programs fosters and coordinates the international dimensions of Smithsonian programs and oversees the Smithsonian Foreign Currency Program and the International Liaison Section. A program decrease of 1 position and \$44,000 is proposed for FY 1979. An amount of \$5,000 is required for necessary pay.

PROGRAM - The functions of administering the Smithsonian Foreign Currency Program and the International Liaison Section are performed in the Office of International Programs.

The Smithsonian Special Foreign Currency Program supports museum programs, scientific, and cultural research, and related educational activities of United States institutions in a number of countries where the United States owns local currencies in "excess" of its needs as determined by the Treasury Department. Institutions in 31 states and the District of Columbia have benefitted from the Program. In FY 1977, \$3,786,000 equivalent in excess foreign currencies were obligated for the support of 71 projects and 58 fellowships in six countries. An estimated \$4,269,000 equivalent will be obligated in FY 1978 for work in excess currency countries. These totals each include awards of \$1,000,000 equivalent in Egyptian pounds completing the United States contribution to the international campaign for the preservation of the monuments on the Nile River Island of Philae.

A Special Foreign Currency Program appropriation of \$3,700,000 equivalent in excess foreign currencies is requested for FY 1979.

The International Liaison Section facilitates the overseas activities of all the Institution's bureaus. Responsibilities include coordination of activities with the Department of State and foreign governments, including passport and visa services for Smithsonian staff and permits for research and for the import and export of research equipment and specimens.

EXPLANATION OF PROGRAM CHANGE - With the completion of the transfer of the International Environmental Program from the Office of International Programs to the Office of the Assistant Secretary for Science, the position of administrative officer and \$39,000 can be relinquished. In addition, the office will not require the assistance of temporary employees used in prior years resulting in a further savings of \$5,000.

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

1977 Actual.....\$613,000  
 1978 Estimate.....\$626,000  
 1979 Estimate.....\$668,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>21</u>	<u>1</u>	<u>22</u>
11 Personnel Compensation.....	446	33	479
12 Personnel Benefits.....	43	3	46
21 Travel & Trans. of Persons..	5	3	8
23 Rent, Comm. & Utilities.....	23		23
24 Printing and Reproduction...	4		4
25 Other Services.....	24		24
26 Supplies and Materials.....	49		49
31 Equipment.....	<u>32</u>	<u>3</u>	<u>35</u>
TOTAL	<u>626</u>	<u>42</u>	<u>668</u>
<u>Analysis of Change</u>			
Necessary Pay.....		12	
Program Funds.....		30	

ABSTRACT - The Chesapeake Bay Center for Environmental Studies is a 2,600-acre natural area for research on land/water relationships and for use in creating public awareness and understanding of ecological systems as they might be affected by human disturbance. The Center's programs fall under two general headings, environmental research and education, and public information. For FY 1979, an increase of 1 position and \$30,000 is requested for expansion of environmental research. Necessary pay in the amount of \$12,000 is required for existing staff.

PROGRAM - Environmental Research: The Center's environmental research program has as its general goal the development of a quantitative understanding of the functioning of a watershed estuary ecosystem and the assessment of the effects of environmental change on natural and human communities in this system. The program has three principal elements -- upland ecology, watershed studies, and estuarine ecology.

Upland Ecology--This program seeks to determine the effects of existing and past changes in land use on the ecology of terrestrial communities. Specific objectives of this program are to compare ecosystem properties of a full range of land use types including the effects of land use practices which have occurred since the time of first settlement. Historical background information for these studies will be completed during FY 1978. A long-term study of succeeding stages of natural growth following the return of land from use in agriculture to its natural state will begin in FY 1978 with preliminary planning and initial data acquisition; use of the land for farming will cease in FY 1979 at which time intensive interdisciplinary research of the natural growth process will begin. A related project will be to determine successional characteristics of semi-mature woodlands subject to intensive animal grazing. Preliminary work on this project will be completed in early FY 1978 and the actual experiment initiated later that year.

Upland Ecology Projects in FY 1978

--Complete and publish analysis of land use changes in the Rhode River watershed from the Civil War to present.

--Conduct preliminary vegetation survey for land units to be studied.

--Complete and publish a study of small mammal competition in island habitats.

--Complete initial planning and prepare planning document for long-term study of successional characteristics of the natural growth of agricultural lands returned to a natural state subject to differing historical land use practices.

--Clear and plant two old field sites in preparation for subsequent abandonment.

--Construct enclosures and conduct vegetational survey in preparation for the study of the effects of deer grazing in semi-mature forests; conduct a census of the deer population.

--Complete the instrumentation and planting of experimental plots for the study of competition among vines and woody plants in early successional stages.

--Complete and publish current research on the ecology of ant communities in settings subject to varying degrees of human disturbances.

--Publish results of current research on the insect assemblages of lawn habitats in various climatic zones.

Watershed Studies--The goal of this research is to determine, quantitatively, the relationship between land use and land runoff in an estuarine watershed system of the eastern coastal plain. The specific objective of this program is to monitor and analyze the runoff, rainfall, and ground water flow in a watershed and to assess the effects of land use on these parameters. In order to carry out this program, a system of automated gauging stations and collectors has been assembled to permit continued monitoring of the total runoff from the Rhode River watershed and to measure rainfall and ground water flow. A series of small drainage areas representing watersheds in a single land use are being similarly instrumented to be used for comparative studies. The instrumentation phase of this project was 90 percent completed by the end of FY 1977. A long-term monitoring program to assess the effects of changing land use on runoff and ground water will be initiated in FY 1978.

#### Watershed Studies Projects in FY 1978

--Complete installation of weirs and gauging stations for the entire Rhode River watershed and three tidal creeks.

--Survey farm operators to determine rates of fertilizer and pesticide applications and numbers of livestock in the agricultural areas of the Rhode River watershed.

--Publish the proceedings of a workshop on watershed research in the eastern United States.

--Publish results of FY 1976 and 1977 research conducted on the Rhode River watershed and estuary.

Estuarine Ecology--The goal of this program is to determine the effects of land runoff on estuarine water quality, wetlands productivity, and human uses of estuarine and coastal areas. The objectives of this program are to describe the ecological pathways and processes affecting important estuarine communities; to assess the role of various communities within an estuary in supporting fish and shellfish species; and to characterize human uses of estuarine and coastal areas relative to environmental change. By early FY 1978, three permanent tidal monitoring stations will be installed and operating to measure direct land runoff into tidal areas of the Rhode River estuary. A program

for continual monitoring of estuarine water quality factors is now in the planning stage and intensive monitoring is expected to begin in FY 1979. Preliminary estimates were completed in FY 1977 to assess the extent to which headwater streams and tidal marshes support the spawning of various fish species. This project will be repeated in FY 1978 to cover the early spring migrations. With additional resources it could be initiated on a year-round basis.

#### Estuarine Ecology Projects in FY 1978

- Initiate monthly monitoring for major water quality parameters in the Rhode and adjacent West River.
- Complete 3 tidal gauging stations.
- Conduct a survey of the spring spawning run of white and yellow perch in streams tributary to the Rhode River.
- Begin systematic sampling of bacteria and plankton occurrence in the Rhode River.
- Initiate preliminary analyses of phytoplankton nutrient cycling.
- Complete and publish a background paper delineating the role of human ecology in assessing human use characteristics of estuaries.
- Publish results of current work on the concentration and environmental effects of herbicides distributed in the Chesapeake Bay through land runoff.

Education/Public Information: Education and public information activities at the Center strive to improve the quality and effectiveness of outdoor education and achieve maximum use of the Center's research findings by affected agencies and the general public. The objectives of this program include the determination of the effects of outdoor settings on the learning experience for both adults and young people; the development of educational materials which illustrate general principles of estuarine ecology; the development of semi-technical reports which illustrate the significance of the Center's research findings for environmental planning and management issues; and the initiation of educational programs which can be self-administered and are aimed at out-of-school learning settings.

#### Education/Public Information Projects in FY 1978

- Complete and publish a guide to non-point sources of pollution for use by management agencies and the general public.
- Complete and publish current research on the effects of certain outdoor settings on the learning abilities of school-aged children.
- Complete first draft of educational materials illustrating general properties of estuaries.
- Begin development of family-oriented self-administered education materials with completion of a draft document on the ecology of lawns.

EXPLANATION OF PROGRAM CHANGES - The Center proposes to initiate research on the fate of materials entering estuaries from land runoff and their effects on fish, shellfish, and zooplankton populations. The Center's current research program has documented land activities which affect the constituents of runoff, and an extensive program of watershed monitoring is providing basic information on the flow of these materials into the estuary. There is a need now to determine the impact of such materials on basic estuarine processes, particularly in headwater marsh communities which provide food and cover, and serve as nursery areas for the early life stages of estuarine fish populations. Currently, the Center has no staff engaged in this kind of research. An additional position and an amount of \$30,000 are requested to hire an aquatic ecologist to conduct this work and provide the necessary research supplies and equipment.

NATIONAL AIR AND SPACE MUSEUM

1977 Actual.....\$6,091,000  
 1978 Estimate.....\$6,030,000  
 1979 Estimate.....\$5,876,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	230	-1	229
11 Personnel Compensation.....	3,760	70	3,830
12 Personnel Benefits.....	361	7	368
21 Travel & Trans. of Persons..	18		18
22 Transportation of Things....	32		32
23 Rent, Comm. & Utilities.....	35		35
24 Printing and Reproduction...	100		100
25 Other Services.....	991	-221	770
26 Supplies and Materials.....	318	-5	313
31 Equipment.....	415	-5	410
TOTAL	6,030	-154	5,876
<u>Analysis of Change</u>			
Necessary Pay.....		86	
Program Funds.....		-240	

ABSTRACT - The National Air and Space Museum (NASM) was created by Congress to memorialize the development of aviation and space flight; collect, preserve, and display aeronautical and space flight artifacts of historical significance; and serve as a repository for documentary and artistic materials related to air and space. A program decrease of 1 position and \$240,000 is recommended in FY 1979, reflecting savings mainly in the exhibits production program following the continued extraordinarily favorable public reaction to existing displays. An amount of \$86,000 is required for necessary pay.

PROGRAM - The National Air and Space Museum was opened to the public on July 1, 1976. The 23 exhibit galleries displaying one of the finest and most comprehensive collections of historical aircraft and spacecraft and the two performance centers -- 70xmm film theater and 70-foot domed spacearium -- have been enthusiastically received by the general public, the communications media, and aviation and space enthusiasts. Approximately 10 million people visited NASM in its first year of operation. This visitation rate has continued in the current year, making NASM the most popular museum in the world. With the success of the exhibits program having been established, base resources of the Museum will be redirected to other endeavors. For example, the education program, one of the major legislated responsibilities of the Museum, is being developed currently and will become full-fledged in FY 1979. The basic objectives of the program are to: (1) motivate people to learn more about the history of air and space; (2) help young people learn about careers associated with air and space fields; (3) increase appreciation and understanding of the technology and the professional expertise that have furthered air and space accomplishments, and the unique role the United States has played in these accomplishments; and (4) interpret the value and meaning of air and space accomplishments in the present and future lives of citizens. Specifically, these objectives will be accomplished through lectures and education meetings, the publication of a monthly newsletter for educators, a program for bringing young students from the inner-city to the Museum, film strips and cassettes which are being created presently for wide distribution, and an oral history program.

Also, because of the popularity of the exhibits and the attendant large number of visitors, it will be necessary in FY 1979 to carry out special maintenance and refurbishment in the exhibit galleries. Base resources will be redirected to upgrade and replace audio-visual parts, projectors, lighting, movie prints, slides, transparencies, and mutascope cards, as well as replace carpeting, seating, exhibit labels, and perform general painting and silk-screening. Also in FY 1979, the "Flight Testing" exhibit will be removed and replaced by an exhibit entitled "Early Flight."

In the collections management program, restoration will continue on the Albatros D-5, a German WWI fighter, and the Langley Aerodrome, which was one of the first major attempts to fly a power-driven aircraft. Restoration will also begin on the Curtiss XP-55, the Bleriot XI, and the Curtiss Pusher, in conformance with revised exhibit plans. The Lockheed P-38 will be placed in the preservation program. At the same time, stands for handling and storing large artifacts will be manufactured with the goal of improving artifacts warehousing to the point where another building at Silver Hill can be opened to the public.

The professional staff will continue with the research and publication program started in FY 1977. The results of this program reflect the Museum's contribution to the literature on the history of air and space technology. Publications in FY 1979 resulting from staff research will cover such topics as flight testing and flight research, the origins of American swept and delta wing planforms, and the socioeconomic history of American aviation.

EXPLANATION OF PROGRAM CHANGES - The proposed decrease reflects the shift in programmatic emphasis of the Museum from exhibitions planning, design, and construction to the further development of other programs or the creation of new ones. In considering these proposed reductions which total \$240,000, it should be borne in mind that the Museum has been opened to the public for less than two years and is still in the formative stages in terms of application of resources. The continued popularity of exhibits has made it possible to revise the work schedule and leave intact parts of galleries that were originally scheduled to be changed. Since it is far less costly to maintain and refurbish existing exhibits than to create and fabricate new ones, an estimated savings of \$230,000 is anticipated. Also, 1 janitor position is being abolished with associated savings of \$10,000.

NATIONAL ZOOLOGICAL PARK

1977 Actual.....\$7,067,000  
 1978 Estimate.....\$7,630,000  
 1979 Estimate.....\$7,767,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	325	-1	324
11 Personnel Compensation.....	5,754	125	5,879
12 Personnel Benefits.....	552	12	564
21 Travel & Trans. of Persons..	22	5	27
22 Transportation of Things....	9		9
23 Rent, Comm. & Utilities.....	96		96
24 Printing and Reproduction...	24		24
25 Other Services.....	153	-5	148
26 Supplies and Materials.....	767		767
31 Equipment.....	222		222
Acquisitions for Collections	29		29
42 Insur. Claims & Indem.....	2		2
TOTAL	7,630	137	7,767
<u>Analysis of Change</u>			
Necessary Pay.....		137	
Program Funds.....		0	

ABSTRACT - The National Zoological Park, established by Congress in 1890 for the "advancement of science and the instruction and recreation of the people," exhibits a large and varied animal collection. It serves the information and educational needs of the public and conducts research, conservation and animal health programs on 150 acres in Washington's Rock Creek Valley and some 3,150 acres near Front Royal, Virginia. A decrease of 1 janitorial position is recommended in FY 1979. An amount of \$137,000 is required for necessary pay.

PROGRAM - In 1890, Congress established the National Zoological Park for the "advancement of science and the instruction and recreation of the people." To accomplish these purposes, the Zoo exhibits a great and varied collection -- over 2,000 animals representing more than 500 species. It maintains information, education, and visitor service programs for the public from all over the United States, with emphasis on each of the different populations using the Zoo, from school groups and the handicapped, to senior citizens and families in general. In addition, the Zoo staff conducts zoological and biomedical research for the increased understanding, preservation, and well-being of valued exotic animals in captivity.

Animal Management -- Caring for its animals is the National Zoo's primary responsibility. The Zoo is approximately at the half-way mark in the long sought rebuilding of its animal enclosures. Animal management and research results are shared with many other American zoos in a national effort to preserve irreplaceable exotic species, many threatened with extinction in the wild. Innovations in teaching and exhibitry are aimed at reaching a wide public.

New facilities recently opened, such as the Lion/Tiger Complex and new Bear Exhibits, provide greatly improved homes and enlarged space for the animals. At the same time, such facilities permit better visitor viewing. They are representative of the overall success of planned facilities improvement.



A "Zoo Express Bus" BRINGS SCHOOL CHILDREN FOR A SERIES OF VISITS COMPLEMENTING CLASSROOM WORK.

Approximately two-thirds of all new animals added to the Zoo's population in the past year were born at the National Zoo. Another 15 percent were born in cooperating zoos to a parent owned by the National Zoo. These births included the first second-generation orangutan born in captivity and the only known birth of a ring-tailed mongoose in the United States. For the first time in a Western hemisphere zoo, litters of the rare and endangered maned wolf were born and reared by their mothers. Sustained reproduction and healthy offspring are important indicators of improved animal health of the Zoo's animals. For its efforts, the National Zoo recently has been awarded conservation awards for successes ranging from the kiwi bird to the lesser panda and pygmy hippopotamus. These successes mark the beginning toward a better understanding and conservation of exotic wildlife.

Shared breeding with other zoos increased in the last year. More than 160 animals belonging to the National Zoological Park were on loan for breeding and educational purposes. At the Front Royal Conservation and Research Center, nine different animal programs are conducted in collaboration with other zoos. The Center has a full breeding herd of onagers, contributed by loan from the Los Angeles, San Diego, Dallas, Baltimore, and National Zoos. Its muntjac herd is jointly owned with the Lincoln Park Zoo.

On matters of such common interest as the breeding of exotic animals and understanding diseases affecting them, the National Zoo sponsored symposia at which national authorities discussed ways to improve captive animal programs.

Visitors -- More effective exhibitions, such as underwater viewing of the polar bears and natural appearing areas, invite visitors to improved understanding of zoo animals. The significance of animals, and their relationship to man, nature, and other species, are explored in improved signage, audio-visual aids and publications.

New efforts include a Trailmark System, the Zoo Book (awarded first prize, Design Excellence in Public Service Materials), and the award winning new film, Tiger about the endangered Bengal Tiger.

In the new Education Building, animal art and wildlife films welcome visitors. A new Zoolab is open where families can discover new facets about animals. A "Zoo Express Bus" brings school children for a series of visits to complement classroom work in an innovative integrated curriculum.

These visitor activities demonstrate that the Zoo is beginning to discover ways to achieve new sustained understanding by millions of visitors, and that the great potential for education offered by the Zoo is being tapped.

Research -- The National Zoo conducts diverse activities to gain understanding of the zoology of rare and endangered animals. More than 75 research projects were conducted by the Zoo staff in FY 1977. Health studies were developed to improve the clinical care of exotic animals, including the development of an historical file of slides, reports, and analyses of all pathological findings. Other examples of research conducted include the development of a framework for understanding how the physical structure of sound relates to motivation and to information communicated by vocalizations of mammals and birds, and a study of the maternal care and juvenile behavior of harbor seals, which led to techniques for their care and management. Studies in Panama sought to understand the sources of natural selection acting upon vocal communication in congeneric wrens. A Zoo research associate in Java undertook a project to see if the number of Javan tigers at the Meru Betiri Reserve warranted a management plan for their future protection. Studies in Venezuela determined the carrying capacity of the habitat for howler monkeys; that patterns of coexistence and competition among cebids and callitrichids are functions of habitat and feeding strategies; and that fox pairs forage together but do not hunt cooperatively.

These and many other research efforts yielded basic scientific data and critical information about the complex web of interactions between exotic animals and their natural habitats, in addition to contributing to improved captive animal management.

In FY 1979, no new programs will be initiated. Instead, all efforts will be directed toward consolidating recent gains, effectively operating and maintaining the more than two-fold increase in building space, and proceeding with construction under the Zoo Master Plan.

EXPLANATION OF PROGRAM CHANGE - Responsible care of the animals, the visitor's enjoyment, and the productivity of Zoo research are made possible by the maintenance staffs, technicians, educational specialists, police officers and clerical help. Increased support productivity through effective use of temporary, part-time and seasonal staff has enabled the Zoo to relinquish 1 janitorial position in FY 1979. The cooperative effort with Webster School for the Handicapped, which resulted in the Zoo being selected as 1977 Employer of the Year, also helped to contribute to support production.

CENTER FOR THE STUDY OF MAN

1977 Actual.....\$399,000  
 1978 Estimate.....\$854,000  
 1979 Estimate.....\$867,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	15	0	15
11 Personnel Compensation.....	441	42	483
12 Personnel Benefits.....	41	5	46
21 Travel & Trans. of Persons..	61	3	64
22 Transportation of Things....	5		5
23 Rent, Comm. & Utilities....	13		13
24 Printing and Reproduction...	16	7	23
25 Other Services.....	130	-16	114
26 Supplies and Materials.....	50	1	51
31 Equipment.....	97	-29	68
TOTAL	854	13	867

Analysis of Change

Necessary Pay.....	13
Program Funds.....	0

ABSTRACT - The Center for the Study of Man's (CSM) anthropological and human science programs include: expansion of knowledge of North American Indian cultures through the American Indian Program whose current emphasis is the continued development of the Handbook of North American Indians; development of an anthropological film study center; conduct of an immigration and ethnic studies program; and coordination of international anthropological efforts on current social problems. No program increase is sought for FY 1979. Necessary pay in the amount of \$13,000 is required for existing staff.

PROGRAM - The Center for the Study of Man coordinates research and development of a series of anthropological and human science projects. The American Indian Program's major focus is the continuing research and preparation of the 20-volume encyclopedic Handbook of North American Indians. The first volume completed -- California -- will be published in April, 1978, with Northeast appearing during that summer. Simultaneously, Southwest and Subarctic will be edited by the staff, prepared for publication, and typeset with publication scheduled for 1979.

The American Indian Program also disseminates scholarly educational materials to interested individuals, scholars, and Indian communities. Recognizing a real urgency to fill gaps in our knowledge of North American Indian cultures, the program promotes communication among Indians themselves, scholars and appropriate government agencies. Scholars are particularly anxious to interview older tribal members to investigate the links between the past and present in the tribal communities. Cooperative links have also been established with the American Indian Policy Review Commission and with the Bureau of the Census on Indian population statistics.

The National Anthropological Film Center (NAFC) was established to take fuller advantage of the scholarly potential of film as a tool of inquiry into the vanishing and changing ways of life and cultures of the world. Its purpose is to facilitate the study, documentation, collection, and preservation of visual data records of the

varieties of patterns of human behavior and response which have evolved in the world.

Special attention is being given to the remaining small, isolated cultural groups of the world which have evolved independently over thousands of years, particularly those which represent rapidly vanishing, unique expressions of human organization and behavior. The Center will preserve visual records as a permanent scholarly resource and will also provide cultural information to peoples who have little written history, thereby helping to meet their need for information related to their own heritage. To make this possible, a research film library is being developed. This library will contain prints for review, study, and scholarly assembly, leaving original films undamaged for later reproduction.

Pilot projects have demonstrated the importance of visual records in understanding the range of human possibility. For example, analysis of ethnographic research film shot by the NAFC in the Western Caroline Islands of Micronesia has revealed that a social structure which appears authoritarian when viewed from a casual Western perspective is actually consensual when studied using the techniques of research film analysis. The patterning of affect and human response provided to their growing young by these Micronesian people has revealed some of the underlying dynamics of a non-Western system of human organization.

The Research Institute on Immigration and Ethnic Studies (RIIES) is concerned with the peopling of America as a continuing process. The overall broad missions of RIIES are to participate in, stimulate, facilitate, and disseminate research on immigration to the United States since the passage of the new immigration law in 1965, as well as to provide consultation on these various phases. The Research Institute is primarily interested in understanding the new immigration as a part of the larger historical process of the peopling of the United States. Multi-disciplinary approaches are being applied to gain a more complete understanding of the new immigrants, their experiences, challenges, and impacts on the future of this society and the international community.

By the end of FY 1978, the Research Institute will have published a new book titled The New Immigration: Implications for the United States and the International Community; and four monographs in its publication series, titled Recent Immigration to the United States: The Literature of the Social Sciences; Caribbean Immigration to the United States; Exploratory Fieldwork on Latino and Indo-Chinese Refugees; and Pacific Migration to the United States.

The Urgent Anthropology Program identifies, publicizes, and finances through small awards needed research in areas where people are undergoing rapid cultural change. Its objective is to salvage and preserve information about ways of life before time and events change them irrevocably. The program contributes to the preservation of our national heritage as well as the advancement of scientific and humanistic knowledge.

The Cross-Cultural Research Program coordinates the efforts of numerous anthropologists and other humanistic scientists in developing new comparative information on contemporary world problems.

OFFICE OF THE ASSISTANT SECRETARY FOR HISTORY AND ART

1977 Actual.....\$210,000  
 1978 Estimate.....\$248,000  
 1979 Estimate.....\$277,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>8</u>	<u>1</u>	<u>9</u>
11 Personnel Compensation.....	209	26	235
12 Personnel Benefits.....	20	2	22
21 Travel & Trans. of Persons..	4	3	7
24 Printing and Reproduction...		1	1
25 Other Services.....	3	1	4
26 Supplies and Materials.....	6	-1	5
31 Equipment.....	<u>6</u>	<u>-3</u>	<u>3</u>
TOTAL	<u>248</u>	<u>29</u>	<u>277</u>
<u>Analysis of Change</u>			
Necessary Pay.....		6	
Program Funds.....		23	

ABSTRACT - The Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing, and reviewing the progress of the Smithsonian history and art programs. Also included under this heading is the Joseph Henry Papers project. To replace funds previously engendered through matching grants from the National Endowment for the Humanities (NEH), a program increase of 1 position and \$28,000 is sought for FY 1979 for the Joseph Henry Papers project. This need is offset by a program decrease of \$5,000 in the Office of the Assistant Secretary. Necessary pay in the amount of \$6,000 is required for existing staff.

PROGRAM - I. Immediate Office: With a base of 4 positions and \$136,000, the Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing, coordinating, and reviewing the progress of the Smithsonian history and art bureaus and offices. The bureaus and offices reporting directly to the Assistant Secretary for History and Art are the Archives of American Art, Cooper-Hewitt Museum of Decorative Arts and Design, Freer Gallery of Art, Hirshhorn Museum and Sculpture Garden, National Collection of Fine Arts, National Museum of History and Technology, National Portrait Gallery, Office of Academic Studies, Office of American Studies and its Folklife Unit, and the Joseph Henry Papers.

II. Joseph Henry Papers: The remainder of the resources identified in the base for this office, 4 positions and \$112,000, supports the Joseph Henry Papers project. The Editor of the Joseph Henry Papers and his staff have been gathering and preparing for publication the manuscripts of Joseph Henry (1797-1878), the pioneer American physicist and first Secretary of the Smithsonian Institution. Two volumes of the multi-volume letterpress series have been published by the Smithsonian Institution Press, and a third volume will be published in FY 1978. A fourth volume should appear in FY 1979, while editorial work on the fifth volume will begin in FY 1979. In addition, a special volume of Henry's public lectures will be edited and there will be further work on a supplementary microfilm publication. The project has been endorsed by the National Historical Publications and Records Commission which, along with the National Academy of Sciences, provides additional support for the project, totaling 1 position and approximately \$15,000.

EXPLANATION OF PROGRAM CHANGES - One position and \$28,000 are sought for the Joseph Henry Papers to replace funds which would have been available from the National Endowment for the Humanities in the form of a multi-year grant and those further matching contributions this grant would have engendered. NEH has supported the Henry project since October 1973 in the belief that the project is a significant contribution to the effort to document the broad cultural and social role of science and scientists in 19th century American life. Presently, the NEH's support represents 15 percent of the personnel costs of the project and 75 percent of the monies available for travel, supplies, reproduction of documents, and computer costs. Without replacement of these funds the search for additional documents would have to be terminated and work on the microfilm publication greatly cut back. The editorial process would also be slowed considerably; the additional time necessary to complete this project without the increase is estimated at 25 percent.

Partially offsetting the funds required to replace this grant is a proposed program decrease of \$5,000 in the Immediate Office of the Assistant Secretary. A thorough examination of the base in the context of zero base budgeting indicated that this sum could be reprogrammed from other objects to higher priority needs elsewhere in the Institution's budget without seriously impeding the oversight responsibilities of the office.

NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY

1977 Actual.....\$5,944,000  
 1978 Estimate.....\$6,526,000  
 1979 Estimate.....\$6,452,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	275	0	275
11 Personnel Compensation.....	5,137	84	5,221
12 Personnel Benefits.....	493	8	501
21 Travel & Trans. of Persons..	32	3	35
22 Transportation of Things....	40	-15	25
23 Rent, Comm. & Utilities....	35		35
24 Printing and Reproduction...	51	22	73
25 Other Services.....	367	-111	256
26 Supplies and Materials.....	192	-20	172
31 Equipment.....	79	-25	54
Acquisitions for Collections	100	-20	80
TOTAL	6,526	-74	6,452
<u>Analysis of Change</u>			
Necessary Pay.....		96	
Program Funds.....		-170	

ABSTRACT - The National Museum of History and Technology (NMHT) maintains collections documenting the historical and technological achievements of the American people. It has active research, publication, exhibition, education, acquisition, conservation, and collection management programs, and is visited by several million persons each year. The FY 1979 budget proposes a net decrease of \$170,000 reflecting a temporary change in program emphases; the number of new exhibits will decrease, and current collections management programs will receive greater attention. An amount of \$96,000 is required for necessary pay.

PROGRAM - The NMHT is responsible for programs of research and publication, collections acquisition, collections management, exhibits and performances, education and public orientation, conservation, and buildings and facilities management. As the repository of the National Collections documenting American civilization, the Museum has responsibility for approximately 15,000,000 objects related to all facets of the American experience. Each of these objects deserves the highest level of professional care and preservation, and must be accessioned, carefully stored, inventoried, conserved, and exhibited using the best techniques and professional abilities available.

As part of a growing awareness of the need for a strengthened collections management program, upon which almost all other activities of the Museum depend, NMHT completed in FY 1977 a high security central processing facility, which handles all objects sent to or from the Museum. Thousands of loan specimens required by the Museum's major program in exhibits passed through this new facility in FY 1977. Record-keeping improvements have been made as well. Accession and registration information has been converted systematically into a central computer file, which will cover ultimately the Museum's entire collection. This program must achieve a greatly accelerated pace to accommodate the vast amount of records accumulated over more than 100 years of collecting activity. To improve collection storage capability, new storage equipment and shelving were installed and additional space at the Institution's storage

facility at Suitland was secured. A storage expert has been assigned to Suitland with responsibility for managing this space as assisted by Museum professional and paraprofessional staff. Further supporting this effort, museum specialists and technicians formed a storage committee to study space and conservation problems on a museum-wide basis. In response to their recommendations, the Museum purchased standardized equipment to store literally thousands of artifacts which had previously been stored in a less than satisfactory manner. The Museum plans to continue this program until all specimens are protectively stored in the manner they deserve.

During this same period, research and publication activities continued with some 34 books, exhibit catalogues, and serials produced. An active docent program involving tours for thousands of school children and adults proceeded apace. By far the most active program of the NMHT since the pre-Bicentennial year of 1975 has been its exhibitions program, which had grown to a point where the staff time and resources it consumed were no longer in balance with the other programs of the Museum.

To illustrate, during FY 1977 and the first half of FY 1978 new exhibitions have included: "Person to Person," celebrating the 100th anniversary of the telephone and its effect on the American way of life; "Perfect Likenesses," featuring drawings and paintings of American Indians; "Silver Jubilee" of Queen Elizabeth II of England, displaying artifacts illustrating historical relationships between England and America; the "Cowing Balloon Frame House," portraying development of a crucial new building technique during the mid-19th century; a photographic history display, "Photographing the Frontier"; "Ride On," an exhibit of noteworthy bicycles and description of bicycle history in America; a temporary display of two famous racing autos, "Hawk No. 2" driven by Mario Andretti, winner of the Indianapolis 500 in 1969, and the record-setting "Turbocar" driven by Parnelli Jones in the 1967 Indianapolis 500 race; "Christmas 1977," featuring live trees decorated with ornaments from many countries and eras, complete with seasonal music presentations; "Atom Smashers," a major exhibit describing the historical development of particle accelerators and detectors; the "Pochoir" exhibit, a display of a special French stencilling technique; and "Rehabilitation Discovery Corner," an assemblage of devices used by the handicapped which can be handled by visitors under the guidance of a docent. Exhibits already planned for the remainder of FY 1978 include the "Hall of American Maritime Enterprise," celebrating America's maritime history; "Malaspina Expedition," a graphic display of a Spanish scientific exploration voyage to America's northwest coast in the late 1700's displaying artifacts from the Nootka, Tlingit, and Chumash Indians; "Loose the Mighty Power: The Steam Engine in American Imagery"; "Afro-American Tradition in Decorative Arts"; "Aspects of Art and Science"; and an exhibition of an important collection of currency, to open late FY 1978 or early FY 1979. Beginning in FY 1979 this rapid pace will be slowed permitting more attention to the underlying and vitally important collections management program upon which all future programs of the Museum will depend.

Of course, during FY 1977 and FY 1978 the Museum has continued to acquire many important new specimens to enrich its collections and fill existing gaps. Noteworthy purchases included a 16th-century automaton powered by clockwork which can walk, move its hands, eyes, mouth, and head and is a direct predecessor to automata which followed, including the Jacquard loom, the computer, and all types of automatic machinery; a plate from the French porcelain dessert service which President James Monroe ordered from Paris in 1817; a rare, large redware punch bowl dated 1769, an excellent representative of the 18th century American potter's finer-quality tableware; and a large collection of over 1,100 American hand tools primarily for woodworking. The Museum also received a number of very important donations during FY 1977 and FY 1978 including a worldwide collection of 180,867 stamps, a rare Amati violin (ca. 1670) and bow (ca. 1780-1790), boxing gloves and robe worn by Mohammed Ali during the Ali-George Foreman fight in Zaire, 60 volumes containing 30,000 covers from all United States post offices in service during the Bicentennial year 1976, the robe worn by Judge John Sirica during the Watergate hearings, and one of only 5 surviving Liberty Head nickels struck in 1913.

EXPLANATION OF PROGRAM CHANGES - The Museum plans to alter its program emphases in FY 1979 resulting in a net decrease of \$170,000.

Savings in the amount of \$276,000 will result mainly from the production of fewer and less costly new exhibits in FY 1979. Exhibition activity will be concentrated instead on the maintenance of present halls, including the "1876 Centennial" exhibition in the Arts and Industries Building.

Greater attention will be devoted to the collections management program. This program will receive, in addition to its base of 12 positions and \$232,000, a further 5 new technician positions and \$106,000 to expedite cataloguing, accessioning, and storage improvements. The 5 positions, which will be secured by reprogramming existing staff vacancies, will require \$51,000. Part-time typists to prepare computer-ready information for the registrar's master file will require another \$18,000. A further \$15,000 will be applied to additional computer time and a final \$22,000 to contracts for microfilming and microfiching appropriate library materials, thereby making space available for the collections and providing more convenient access to documents by scholars.

NATIONAL COLLECTION OF FINE ARTS

1977 Actual.....\$2,539,000  
 1978 Estimate.....\$2,821,000  
 1979 Estimate.....\$3,003,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>106</u>	<u>0</u>	<u>106</u>
11 Personnel Compensation.....	1,903	61	1,964
12 Personnel Benefits.....	182	5	187
21 Travel & Trans. of Persons..	22	6	28
22 Transportation of Things....	95	35	130
23 Rent, Comm. & Utilities.....	14		14
24 Printing and Reproduction...	90		90
25 Other Services.....	189	20	209
26 Supplies and Materials.....	101	34	135
31 Equipment.....	14	21	35
Acquisitions for Collections	200		200
41 Grants.....	<u>11</u>		<u>11</u>
TOTAL	<u>2,821</u>	<u>182</u>	<u>3,003</u>
 <u>Analysis of Change</u>			
Necessary Pay.....		38	
Program Funds.....		144	

ABSTRACT - The National Collection of Fine Arts (NCFA), the oldest national collection of art, is devoted to the acquisition, study (including both research and public education), and exhibition of American painting, sculpture, and graphic arts; the Renwick Gallery, a physically separate museum, displays American crafts and design. In FY 1979 additional funds of \$144,000 are requested to meet the following needs: (1) Exhibitions -- \$57,000 to sustain an active exhibitions program; (2) Registrarial costs -- \$38,000 to meet appropriate record-keeping and storage requirements for the collection and to transport, insure, and handle works of art borrowed for temporary exhibitions; (3) Photographic storage and research -- \$35,000 for essential photographic and archival activities; and (4) Library support -- \$14,000 to satisfy equipment needs and support book purchases for this library of American art. Necessary pay in the amount of \$38,000 is sought for the existing staff.

PROGRAM - The NCFA over the past several years has become a major national center for the study and presentation of American art. Its collection of over 21,000 works represents all aspects of some 200 years of American art and serves as the basis for an active program 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 artists of both the past and the present. The museum has maintained close contact with centers abroad and has encouraged the study of local art in many regions of the United States. Through the Renwick Gallery, opened in 1972 in a separate building, it has promoted the study of American craft and design, both in Washington and elsewhere, and provided galleries for the exhibition of American art and crafts, as well as for the presentation of nationally sponsored exhibitions from abroad. Many young professionals from the United States and other countries have conducted research and learned methods of museum procedure and of public education through the NCFA's fellowship and intern programs.

In FY 1978, the NCFA and the Renwick will present 23 exhibitions covering a broad range of aspects of American art. To commemorate the tenth anniversary of its 1968 opening in the Old Patent Office Building, the NCFA assembled the exhibition "Past and Present: A Century and a Half of a National Art Collection", which traced the Collection's early beginnings in 1828, its development as part of the National Institute and then the Smithsonian, its 30 years as the National Gallery of Art in a special hall of the Natural History Museum, and its emergence in 1937 as the National Collection of Fine Arts. The rich and varied history of the Collection itself was illuminated as well as the importance of the individual benefactors to the museum over the past 40 years. Many works acquired originally for their anthropological interest, such as George Catlin's paintings of Indians, are now important as works of art. Others, previously neglected, received attention through fresh display in a new setting.

Other exhibitions examined new techniques and approaches to art. "New Ways with Paper" presented experimental efforts of contemporary artists in this largely traditional medium. Two exhibitions at the Renwick were organized with the support of guest curators from other disciplines within the Institution: the senior ethnologist at the Museum of Natural History assisted with "Kiowa Tipis: Murals in the Round," and the curator of musical instruments at the Museum of History and Technology aided with "Contemporary Musical Instruments." For the latter exhibition, a national competition was held, and selections were made on the basis of aesthetic merit and musical quality. Both exhibitions presented in a new context objects which are not normally thought of as art.

It has been a tradition of the NCFA to devote exhibitions to artists neglected or out of fashion but deserving reexamination and attention. Retrospectives of the work of Arthur Wesley Dow, Charles Bird King, Attilio Salemmé, Elihu Vedder, and Hugo Robus will be shown in FY 1978 and 1979 to fulfill this important mission. Lengthy scholarly publications were produced for the Dow, King, and Vedder shows, and shorter but equally authoritative works were published on Salemmé and Robus. A number of exhibitions will travel elsewhere after closing at the NCFA. "The Decorative Designs of Frank Lloyd Wright" and "Musical Instruments" go to locations in New York and Chicago; "Vedder" is being shared with the Brooklyn Museum.

Another area of art which has been given insufficient critical attention nationally is the work of contemporary Alaskan artists. Our first major exhibition of their work speaks to another NCFA goal: to study the regional background and development of American art. The NCFA's other major effort in examining regional aspects of art was its 1977 exhibition "Painting and Sculpture in California: The Modern Era," organized jointly with and shown also at the San Francisco Museum of Art. The exhibition traced the development of art in California from the turn of the century to the present day.

Two major art indexes are now being maintained by the NCFA: the Inventory of American Paintings Executed before 1914, which began as a Bicentennial project and now has over 180,000 items catalogued by computer, and the Smithsonian Art Index, which at present lists over 80,000 items of art from the Institution's non-art museums. The NCFA annually sponsors about 10 postgraduate fellows and 15 student interns in training programs, weekly seminars, and individual research projects. Another 750 persons are given academic, vocational, and scholarly counsel by telephone, correspondence, or office conferences.

The NCFA's educational activities include a number of innovative programs. In the past year, over 400 secondary school students participated in the "Discover Graphics" workshop at the museum, and another 3,500 participated in workshops held in 22 schools. Some 2,800 persons attended the June 4, 1977, "Kaleidoscope Day," which was organized especially for families with children and emphasized ways of



EXAMPLES OF ADVANCED NITRATE DETERIORATION IN NEGATIVES  
OF NCFA'S JULEY COLLECTION.

making and viewing sculpture. During FY 1977, over 14,000 visitors were conducted through the NCFA and Renwick by 74 active docents, and 25 workshops were conducted for local teachers at all educational levels.

#### EXPLANATION OF PROGRAM CHANGES:

Exhibits Costs (\$57,000) - The museum's exhibitions are the heart of its program. With the exception of the Bicentennial year, there has been no additional money appropriated for exhibitions for several years, with the result that the capability to maintain an active program has shrunk significantly because of escalating costs.

In FY 1977, NCFA was able to mount 25 temporary exhibitions, dismantle 19 others and reinstall 6 permanent galleries. This exhibits activity was made possible only by the most careful planning which, nonetheless, required a temporary curtailment of hiring museum-wide. To maintain a comparable schedule in FY 1979 an increase of \$57,000 is needed. These funds, which represent an approximate 10 percent increase to NCFA's total exhibit budget, will be applied as follows: \$11,000 for part-time exhibits technicians to help with fabrication and installation work and eliminate costly overtime pay to current staff; an additional \$6,000 in staff travel to select and research materials for exhibition, make cooperative arrangements with other museums, and assure proper packing and safe transit of delicate or extremely valuable pieces; and \$40,000 for wood, plexiglass, paint, ink, other materials necessary in exhibit making, for the occasional services of outside contractors in work beyond the capabilities of NCFA staff, and for lighting fixtures, tools and other equipment needed for routine replacement and updating of facilities.

Registrarial Costs (\$38,000) - Closely supporting the exhibition program, the registrar's office with a base of approximately \$340,000 is responsible for accessioning all art works, for storage of the collection, for loan and insurance negotiations, and for shipping arrangements for all incoming and outgoing works of art. Its largest expenditure is for crating, transporting, and insuring works borrowed for temporary exhibitions, a function essential to the exhibition program. These costs have risen substantially in recent years, and an increase of \$35,000 is requested to cover them. An additional \$3,000 is needed for storage equipment and computer time to keep abreast of new objects received into the collection each year.

Storage and Photo Research Equipment (\$35,000) - The National Collection of Fine Arts' office of slides and photography is a newly organized department which consolidated various activities to provide more responsive and useful operations dealing with slides and photographs. With base resources of 5 positions and \$116,000 the office is responsible for: (1) the slide and photograph library, (2) the Peter Juley and Son Collection of 127,000 photographic negatives of American artists and their works dating from 1896, (3) photographic services (including the photo laboratory and two photographers), and (4) photographic rights, reproductions, and sales. The slide and photograph library is the only major source in the Washington metropolitan area of slides of American art which may be borrowed by researchers, students, civic groups, and the general public; it is also vital to the functioning of the NCFA curatorial and exhibitions department.

The unique Juley Collection, received in 1975, consists of many old and fragile negatives, some on glass plates and many on nitrate stock which is unstable and potentially explosive (these must be stored outside Washington at a military base in a special low-temperature facility). The office's primary task is to index this vast and irreplaceable collection as soon as possible so that copies and prints may be made from the decomposing negatives, which are then destroyed. The accompanying photograph depicts the continuing deterioration of these negatives as they wait to be indexed. To date, 29,000 negatives have been indexed. An additional \$13,000

are needed for temporary staff to allow the indexing to be completed by the end of FY 1979. A further \$22,000 are requested to purchase related photographic supplies and proper storage equipment for this collection and the office's other photographic holdings. Of the total \$35,000 requested, \$15,000 represent a one-time requirement; the remaining \$20,000 would represent a continuing need in future years for the proper use and conservation of this important visual archive.

Library Support (\$14,000) - Operational expenses of the Fine Arts and Portrait Gallery Library totaling \$155,000 are shared jointly by the National Collection of Fine Arts and the National Portrait Gallery. The library serves the interested public, the curatorial departments of both museums, 21 related service and support departments (such as education, conservation, publications), and some 25 interns and postgraduate fellows. In FY 1977 the library answered 2,247 reference questions (up 28 percent from the preceding year), circulated 7,940 volumes to museum staff, and catalogued 2,611 new books for its collection, which now numbers 35,598 volumes. Additional funds are needed to fill important gaps in the collection, particularly microfilm and microfiche of selected 19th century journals essential to research in American art (\$3,000); for purchasing acid-free folders and envelopes necessary for a long overdue program of replacing non-acid-free paper used in the past (\$7,000); and for temporary assistance to eliminate a backlog of unfiled reference material (\$4,000).

NATIONAL PORTRAIT GALLERY

1977 Actual.....\$1,921,000  
 1978 Estimate.....\$2,112,000  
 1979 Estimate.....\$2,222,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>75</u>	<u>3</u>	<u>78</u>
11 Personnel Compensation.....	1,344	81	1,425
12 Personnel Benefits.....	129	8	137
21 Travel & Trans. of Persons..	18	3	21
22 Transportation of Things....	38		38
23 Rent, Comm. & Utilities.....	15		15
24 Printing and Reproduction...	50	17	67
25 Other Services.....	112	-3	109
26 Supplies and Materials.....	62	4	66
31 Equipment.....	44		44
Acquisitions for Collections	<u>300</u>		<u>300</u>
TOTAL	<u>2,112</u>	<u>110</u>	<u>2,222</u>
<u>Analysis of Change</u>			
Necessary Pay.....		29	
Program Funds.....		81	

ABSTRACT - The National Portrait Gallery (NPG) was established by Act of Congress in 1962 (20 U.S.C. 75b) 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. For FY 1979, a net increase of \$81,000 is requested for: (1) the Charles Willson Peale Papers Project -- \$58,000 for 3 positions and associated support costs to continue to edit the papers of this distinguished family of portrait artists, a project begun in 1974 and previously funded by matching grants from the National Endowment for the Humanities; (2) Paper Conservation -- \$30,000 to help preserve the Gallery's paper holdings; and (3) Publications -- \$16,000 to meet requirements for exhibition catalogues and other printed manuals. These requested increases are offset by savings (\$23,000) resulting from the proposed elimination of the shuttle bus no longer needed due to the completion of the Metro subway system. Necessary pay in the amount of \$29,000 is required for existing staff.

PROGRAM - The National Portrait Gallery is the only national museum that depicts the history of the United States primarily in terms of the men and women who made that history. Their portraits are crucial documents of historical evidence and bear strong witness to the roles these persons have played in the American experience.

The Gallery's activities include: (1) the expansion and care of its collections; (2) public education through display of these collections and specially organized temporary exhibitions; (3) the preparation and national distribution of scholarly and popular publications; and (4) the compilation of a definitive catalogue of American portraits, a unique information resource in the areas of American history and biography, art, and iconography.

During FY 1977, 279 portraits were added to the permanent collection, 50 by gift. Notable among the 229 purchased with Federal funds were daguerreotypes of

Thomas J. "Stonewall" Jackson and Jefferson Davis; a platinum print photograph of Thomas Eakins, probably by Mrs. Eakins; and a pastel of Joseph Priestley by James Sharples. The most important gift added to the collection this year was an oil self-portrait of John Singleton Copley. Other gifts included a terra-cotta bust of Senator George W. Norris by Jo Davidson and a daguerreotype of President Zachary Taylor with his son-in-law and aide, William Bliss.

In FY 1977, the Gallery organized 10 exhibitions and reinstalled its "Hall of Presidents." Opening at the same time as the "Hall of Presidents" was a special loan exhibition of presidential inaugural medals entitled, "The President's Medal, 1789-1977," which subsequently travelled to the Lyndon Baines Johnson Memorial Library. A room devoted to silhouettes by Auguste Edouart opened this past November and represents the second of three rooms dealing with three different kinds of early 19th century American portraiture. Other exhibitions focused on such subjects as Henry Clay, Aaron Burr's trial, Harriet Beecher Stowe, Civil War artists, the women's suffrage movement, and prominent Americans in World War I.

A full-scale catalogue was prepared for the exhibition, "The President's Medal," and a book reproducing and discussing the only remaining volume of Edouart silhouettes (consisting of 348 silhouettes on indefinite loan to the National Portrait Gallery) was published for the Gallery by the University Press of Virginia.

Major exhibitions, publications, and lectures are also scheduled for FY 1978 and 1979. To mark the gift by TIME magazine of approximately 850 original portraits painted for its covers over the past two decades, an exhibition of 100 likenesses will open in April, 1978. Major exhibitions scheduled for FY 1979 are "Facing the Light," a selection of great daguerreotypes of prominent Americans made between 1840 and 1860 and in April, 1979, "Return to Albion: Americans in England, 1760-1940." Each of these shows will be accompanied by a major publication.

A series of "self-portrait" lectures featuring discussions of their lives by noted living Americans began in January, 1978. Other lectures will be held in connection with the exhibition "Facing the Light," and a symposium involving three or four eminent historians and biographers is projected during the commemoration of the Gallery's 10th anniversary in its permanent quarters in the fall of 1978. In connection with this anniversary, the Gallery plans to publish a book devoted to presidential portraits, an illustrated checklist of its permanent collection, and a handbook containing essays about 50 of its most significant portraits.

Data processing efforts constitute a significant area of attention at the Gallery. The TIME magazine cover portraits will be catalogued in 1978, and the Gallery's registration records will be computerized. A seven-year nationwide inventory of important American portraits, supported by the Andrew W. Mellon Foundation, will begin in the spring of 1978. Data on these portraits will be gathered by surveyors throughout the country and processed for storage in a computerized data bank which will be an invaluable aid for scholars.

#### EXPLANATION OF PROGRAM CHANGES:

Charles Willson Peale Papers Project - With the encouragement of the National Historic Publications and Records Commission and the financial support of the National Endowment for the Humanities, the Gallery commenced in 1974 a project to edit the papers of Charles Willson Peale and his family. While other editorial endeavors have dealt primarily with papers of political figures, the Peale Papers project will make more widely available to researchers the rich archives of letters, notebooks, and other materials left by this family of artists. Not only was Charles Willson Peale the most important American portraitist of the Revolutionary War period, but several of his children, particularly Rembrandt Peale, were major portraitists

of the next generation and were actively involved in the cultural life of the nation. The organization of all papers for publication in a microform edition has been completed and selected papers are now being prepared for publication in a series of eight letterpress volumes. To carry on this work, the Gallery proposes an increase of 3 positions (an assistant editor, a research historian, and a research assistant) and \$58,000 to replace resources previously made available through grants from the National Endowment for the Humanities and matching contributions these grants have engendered.

Paper Conservation - The Gallery's collections contain over 1,500 prints, drawings and other items executed on paper, now being added at the rate of approximately 200 per year. Furthermore, photographs now being actively collected by the Gallery (168 were added in 1977 alone) occasionally require attention. To help preserve and exhibit these items, on-site paper conservation skills are needed. An increase of \$30,000 is requested for part-time staff, materials, and contractual services for projects too highly specialized or time-consuming for staff members.

Publications - The Gallery's publications requirements for educational materials, Gallery brochures, exhibition catalogues, and publications concerning the permanent collection cannot be met through its current budget of \$40,000. An additional \$16,000 is required to enable our publications program to keep pace with the demands of the Gallery's expanding activities and collections and to meet inflated printing costs.

Eliminate Bus Shuttle - Now that the downtown portion of the Metro subway system has been completed, it is no longer necessary to maintain the shuttle bus service between the Museum of History and Technology and the Gallery. Savings in costs of part-time staff and maintenance for this daily service amount to \$23,000.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

1977 Actual.....\$1,892,000  
 1978 Estimate.....\$2,048,000  
 1979 Estimate.....\$2,060,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	83	-3	80
11 Personnel Compensation.....	1,330	-1	1,329
12 Personnel Benefits.....	128	-2	126
21 Travel & Trans. of Persons..	10	2	12
22 Transportation of Things....	35		35
23 Rent, Comm. & Utilities.....	14		14
24 Printing and Reproduction..	40		40
25 Other Services.....	159	-12	147
26 Supplies and Materials.....	78		78
31 Equipment.....	55		55
Acquisitions for Collections	193	25	218
41 Grants.....	6		6
TOTAL	2,048	12	2,060
<u>Analysis of Change</u>			
Necessary Pay.....		32	
Program Funds.....		-20	

ABSTRACT - Established by Act of Congress (P.L. 89-788, November 7, 1966), the Hirshhorn Museum and Sculpture Garden (HMSG) maintains an active program of exhibitions from its own and other collections, educational activities including films and lectures, research and publication in the field of modern art, and necessary technical and support activities including conservation and registration. For FY 1979, a net decrease of 3 positions and \$20,000 is proposed consisting of an increase of \$25,000 to purchase works of art for the collections, offset by a reduction of 3 positions and \$45,000 made possible primarily through reorganization within the education program. An amount of \$32,000 is also required for necessary pay.

PROGRAM - The Hirshhorn Museum and Sculpture Garden is one of the few major museums of contemporary art in the country. An important aspect of its program is the presentation of varied exhibitions. In FY 1977, these included: "Hans Hofmann"; "Alfred Leslie"; "E.E. Cummings: The Poet as Artist"; "Peter Plagens: Works on Paper"; "14 Canadians: A Critic's Choice"; "New Acquisitions 1974-1977"; "Thomas Eakins in the Hirshhorn Collection"; "The Photography of Leland Rice"; "Summer Sculpture, 1977: Jules Olitski"; and "Arthur B. Carles in the Hirshhorn Collection." Exhibitions already opened or planned for FY 1978 include: "Kenneth Noland: A Retrospective"; "Probing the Earth: Contemporary Land Projects"; "The Animal in Art: Selections from the Hirshhorn Museum Collection"; "Gregory Gillespie"; "Europe in the Seventies: Aspects of Recent Art"; "Els Quatre Gats: Art in Barcelona Around 1900"; "George Grosz Drawings and Watercolors from the Hirshhorn Museum Collection"; "Summer Sculpture, 1978"; "The Noble Buyer: John Quinn, Patron of the Avant-Garde"; and "Philip Evergood in the Hirshhorn Museum Collection." Exhibitions planned for FY 1979 include: "Saul Steinberg"; "Louis M. Eilshemius in the Hirshhorn Museum Collection"; "Ben Nicholson Retrospective"; "Richard Estes: The Urban Landscape"; "Calder's Universe"; "David Hockney: Travels with Pen, Pencil and Ink"; and "Summer Sculpture, 1979."

Two exhibitions prepared by Hirshhorn staff and first shown at the Museum are now touring: "Artists, Authors and Others: Drawings by David Levine"; and "The Photography of Leland Rice" with additional exhibitions, "Probing the Earth: Contemporary Land Projects"; and "Gregory Gillespie" scheduled to be toured. In addition, one exhibition, selected from the collection but not shown at the Museum, "Modern Sculptors and Their Drawings: Selected Works from the Hirshhorn Museum and Sculpture Garden," is touring three museums in South Carolina.

To maintain an active exhibition program as well as the Museum's standing as a major resource in the field of modern art, new works of art must be added to the collection. During the past year, the Museum purchased with its appropriated funds 27 works of art including paintings, sculptures, collages, and drawings. Artists represented ranged from such major masters of abstract art as Hans Hofmann and David Smith to contemporary realists Richard Estes and Alfred Leslie.

All major exhibitions and many smaller exhibitions are accompanied by an exhibition catalogue or checklist resulting from research done by Hirshhorn staff members. Examples of major catalogues compiled in FY 1978 are Thomas Eakins, Gregory Gillespie, and Probing the Earth.

The Museum is also a major lender to other domestic and foreign institutions. In FY 1977, loans were made to 49 museums and university galleries including the Indianapolis Museum of Art, Houston Contemporary Arts Museum, San Francisco Museum of Modern Art, and the Museum of Contemporary Art in Chicago. Overseas loans were made to museums in Japan, France, Great Britain, and Germany, among other countries.

During the 3 years since the Hirshhorn opened to the public, education programs including museum training and internships for undergraduate and graduate students and Smithsonian Fellows have been developed. The HMSG has hosted 15 undergraduate and 19 graduate interns as well as 8 Fellows, all of whom were assigned to various departments throughout the Museum. Equally important has been the establishment of a docent program in which volunteers, trained by the department of education, interpret the Museum's exhibits for the general public in daily and special tours. In FY 1977, the permanent collection and special loan exhibitions were the subject of these tours. To date, over 1,300 tours have been conducted, participated in by some 29,000 visitors. The auditorium program, which presented 133 films and lectures along with symposia and concerts also has become a feature of the Museum. In FY 1977, audiences numbering more than 9,000 people were attracted by the unusual contemporary offerings.

EXPLANATION OF PROGRAM CHANGES - An increase of \$25,000 over the base amount of \$193,000 for collections acquisition is sought for FY 1979. The Hirshhorn Museum, one of the major museums of contemporary art in the country, serves as an important source of documentation and reference in the field of modern art, both American and worldwide. As a contemporary museum, it is essential that HMSG continue an active acquisition program. Although gifts are received, they tend to be of older works of art and do not offer the control needed to assure the balanced growth of the contemporary collections. Consequently, the Museum's purchases place primary emphasis on work created after 1966, the year of the original Joseph H. Hirshhorn gift which provides the core of the collections, some 6,000 works of art. Since 1966, 263 other works have been added to the collections, 61 of which were purchased with funds provided through Federal appropriations.

The requested increase is offset by a proposed reduction of 3 positions and \$45,000, primarily in the education department. With the museum now well established and the education program developed, basic materials have been produced and certain operations can be consolidated. Two job functions will be combined, 1 clerical position dropped and 1 position converted to part-time. Among other sources of savings, the program bulletins for auditorium events will be issued seasonally rather than monthly.

FREER GALLERY OF ART

1977 Actual.....\$492,000  
 1978 Estimate.....\$585,000  
 1979 Estimate.....\$590,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	30	0	30
11 Personnel Compensation.....	477	12	489
12 Personnel Benefits.....	45	1	46
24 Printing and Reproduction...	3		3
25 Other Services.....	16		16
26 Supplies and Materials.....	26	-2	24
31 Equipment.....	18	-6	12
TOTAL	585	5	590
<u>Analysis of Change</u>			
Necessary Pay.....		13	
Program Funds.....		-8	

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. A reduction of \$8,000 is recommended for FY 1979 related to the completion of the Gallery's technical laboratory in the current year. An amount of \$13,000 is requested for necessary pay for existing staff.

PROGRAM - The Freer Gallery of Art houses one of the world's most distinguished collections of Oriental art. Included in the collection are over 12,000 works of art from China, Japan, Korea, India, and the Near East. The collections cover paintings, sculptures, and other objects in stone, wood, lacquer, jade, pottery, porcelain, bronze, gold, silver, and Biblical manuscripts. There is also an outstanding collection of American paintings, especially the works of James McNeill Whistler. Items not currently on exhibition, as well as the research library of 40,000 volumes, are available to students and scholars.

All Smithsonian museums share a special responsibility toward the visitors whom they serve. In the case of the Freer Gallery, the unique Oriental collections, together with notable American holdings, have made the museum a center for students, scholars, and the general public. With the growing awareness of the importance of achieving closer cultural understanding between the United States and the nations of the Near and the Far East, demand for the services provided by the Gallery and its staff has continued to increase.

Freer Gallery research facilities, comprising the collections, curatorial staff, library, and conservation laboratories, form the nucleus of its specialized public service. During FY 1977 new exhibits provided the most visible evidence of the results of curatorial and conservation research activities. During FY 1978 and 1979, there will be a continued emphasis on exhibits.

Exhibitions held during FY 1977 were designed to highlight relatively unexplored areas of the collections. A select showing of Japanese objects was included in "Shinto Arts: Nature, Gods, and Man in Japan." Long considered too esoteric a subject for

Western audiences, the carved and painted images of tutelary deities proved to have great appeal for Gallery visitors. Most of the Freer's major American paintings were included in a large exhibition entitled, "A Connoisseur's Vision: Selections from Charles Lang Freer's American Art Collection." Many of the American paintings included in the exhibition were newly cleaned and a number of the original frames were refurbished prior to being shown. The emphasis upon those American artists who were patronized by Charles Lang Freer reflects a growing scholarly interest in this comparatively unstudied period of American cultural history. Oriental calligraphy has never enjoyed the same prestige in the West that it has traditionally received in the Far East, but the success of the Gallery's "Oriental Calligraphy" show was clear indication of increasing Western awareness of the importance of calligraphy for an understanding of Far Eastern cultures. Rubbings of ancient Chinese calligraphic monuments that were specially mounted and shown for the first time were noteworthy highlights of the exhibition.

Early FY 1978 was highlighted by two exhibitions. "The Four Seasons in Japanese Art," which occupied four separate galleries, presented a selection of handscrolls, hanging scrolls, screens, and larger artifacts. All the objects included in the exhibition illustrated the theme of birds, flowers, and animals of the four seasons. Original planning for the exhibition was begun by the late Director, Dr. Harold P. Stern, and the opening date was scheduled to coincide with a loan exhibition entitled, "Birds, Bees, Blossoms, and Bugs," which he had organized for the Asia Society in New York City. A slightly smaller exhibition entitled "Chinese Album Leaves and Fan Paintings" provides unusual insights into Chinese painting of relatively small scale. In spite of their size, however, the fan paintings and album leaves provide exciting glimpses into traditional Chinese representations of landscapes, figures, birds, and flowers.

In April, 1978, a major exhibit entitled, "Chinese, Japanese, and Korean Ceramics" will be presented. Groups of similar or related wares will enable visitors to compare and to contrast examples of the most famous pieces in the collection. A number of Near Eastern drawings will be included in a smaller more intimate showing during the summer of 1978.

Preparatory conservation and research work will proceed on a display of Japanese lacquer ware designed to coincide with a symposium to be held in three American cities, including Washington, D.C. in FY 1979. The Freer exhibition will stress technical aspects of lacquer ware, with particular emphasis upon the continuity of the technique from antiquity to the present.

In the past few years, Oriental art objects rapidly appreciated in value. Accompanying this rise in monetary value, an increasing number of forgeries, repaired objects, and pastiches have appeared on the market; therefore, it is important that the Gallery examine objects being considered for acquisition as thoroughly as possible. The careful technical examination of objects also serves to assist scholarly study, to reveal the method of manufacture, and to elucidate the history of the technology that produced the object. Several pieces of scientific equipment acquired by the Gallery during FY 1977 will significantly assist the technical laboratory in its examination efforts.

As a public service, the Freer attempts to provide a timely response to every request for information from the general public and scholars. In addition, the Gallery has always served as a major educational resource for scholars and universities in the greater Washington area and throughout the United States and abroad.

EXPLANATION OF PROGRAM CHANGE - Since FY 1976 approximately \$8,000 of the Gallery's Federal budget has been directed annually toward the purchase of improved equipment for the technical laboratory. Modernization of the laboratory was completed this year. All the new equipment is now in place and in operation, and the activities of the technical laboratory are proceeding in an efficient manner. Consequently, during FY 1979, no additional funds will be required for technical laboratory equipment, and that portion of the Freer's Federal budget has been reduced by \$8,000.

ARCHIVES OF AMERICAN ART

1977 Actual.....\$349,000  
 1978 Estimate..... \$426,000  
 1979 Estimate.....\$480,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>17</u>	<u>0</u>	<u>17</u>
11 Personnel Compensation.....	331	15	346
12 Personnel Benefits.....	32	2	34
21 Travel & Trans. of Persons..	8	1	9
22 Transportation of Things....	5	1	6
23 Rent, Comm. & Utilities.....	32		32
24 Printing and Reproduction...	8	24	32
25 Other Services.....	2		2
26 Supplies and Materials.....	4	4	8
31 Equipment.....	<u>4</u>	<u>7</u>	<u>11</u>
TOTAL	<u>426</u>	<u>54</u>	<u>480</u>
<u>Analysis of Change</u>			
Necessary Pay.....		8	
Program Funds.....		46	

ABSTRACT - The Archives of American Art (AAA) collects, preserves, and makes available through microfilm and five regional centers the documentary resources required for research and publication in American art history. As the nation's largest repository for such materials, it serves research needs of individuals, colleges and universities, museums, and other cultural institutions. An increase of \$46,000 is sought for FY 1979 to distribute the Archives of American Art Journal to researchers and educational institutions involved in research programs (\$19,000), and to increase the productivity of the existing archival staff by employing part-time clerks to accomplish the more routine tasks and to provide equipment, supplies, printing and reproduction and other support costs associated with the continued development of the card catalogue (\$27,000). Necessary pay in the amount of \$8,000 is required for existing staff.

PROGRAM - Established in Detroit in 1954, the Archives of American Art was created to stimulate and encourage research in all areas of American art history. Through its five regional centers, the Archives seeks out primary source material needed for the study of American art. This material comprises letters, sketches, diaries, business records, photographs, and rare publications. Artists' papers are sought, as well as those of art critics, major collectors, art historians, galleries, and museums. This material is processed, catalogued and microfilmed, making it widely and easily available to scholars, students, and other researchers, either through the regional centers or by interlibrary loan. The Archives oral history program is conducted primarily with grant support; the current number of taped interviews is in excess of 1,600.

In FY 1977, the Archives acquired through gifts and loans a large number of new collections. Those acquisitions of particular importance included the papers of Lilian S. Saarinen, John Storrs, William Milliken, Joseph Cornell, Fairfield Porter, Allyn Cox, Alfred Frankenstein, and Rico Lebrun. Regional centers were visited by almost 2,400 researchers, and the Archives received 428 interlibrary loan requests

calling for over 1,100 rolls of microfilm. Fifty oral history interviews were conducted by area directors and the oral historian, and through grant projects. Among these were interviews with Otto Whitman, Louise Nevelson, Andrew Ritchie, and Joseph Hirshhorn.

Today, the holdings of the Archives number some 3,350 collections, or more than 5 million papers and photographs, and more than 3,975 rolls of microfilm, or nearly 4 million photographic frames. When a new collection of papers comes in, it first must be examined, fumigated if necessary, and materials which might cause decomposition removed. The papers are then prepared for safe and permanent storage and preliminary descriptions on catalogue cards made. Finally, the papers are studied and arranged so that the material can be easily used by researchers. Upon completion, the permanent catalogue cards are made, and the papers microfilmed and boxed for storage and retrieval. In FY 1977, the collections management staff processed 42 collections and committed 112 collections to microfilm. A total of some 11,000 new catalogue cards were produced.

In an effort to achieve greater public awareness of the Archives and its holdings, the exhibition program has been expanded. During FY 1977, exhibitions of Archives material were held at the Museum of Fine Arts in Boston, Smith College, the Oakland Museum, and the Los Angeles County Museum of Art. One traveling exhibit entitled "Artists and their Studios" was shown in Detroit, Portland, Minneapolis, and Denver while another traveling exhibit entitled "Artists in Michigan" was viewed in Milwaukee, Minneapolis, Duluth and Detroit.

In FY 1978, the Archives expects to acquire many new collections of papers including those of the Arts Club of Chicago, Lloyd Goodrich, and Alfred Barr. Artists like Alfred Leslie, Kenneth Noland, and Richard Hunt are planned oral history interviewees. One event of major importance is an exhibition entitled "... Second Greatest Show on Earth: The Making of a Museum" at the Museum of Fine Arts, Boston. Publications to be completed include Artists in Michigan, 1900-1976, AAA: Checklist of the Collection: 1977, and Archives Technician Manual. The Archives anticipates raising a trust income of approximately \$270,000 in FY 1978, supporting a staff of 15.

EXPLANATION OF PROGRAM CHANGES - The Archives reaches art history students, scholars, and other researchers primarily through its Journal; a quarterly publication of recognized, scholarly importance. However, publication costs require a high subscription rate, placing the Journal beyond the reach of the average student and researcher -- individuals who most benefit by it. Published since 1963 (first issued in 1960 as a newsletter), the Journal has proven its value as an educational medium. It also serves as the chief means of informing the national community of art historians on research material available at the Archives. In an effort to give the Journal wider circulation and make it more easily accessible to its potential public, the Archives proposes to support the Journal through Federal funds and to distribute it at no cost to colleges, museums, and interested individuals. Wider distribution would be achieved through announcements in scholarly publications and regional office contacts with researchers and educational institutions involved in research programs. An amount of \$19,000 is requested to implement this plan.

The addition of a new archives technician to the processing staff in FY 1978 has made it possible for the Archives to make further inroads into the backlog of unprocessed collections, and to revise its procedures and provide adequate processing and preservation techniques to all new collections, despite the increase in their number. These procedures, however, generate a great deal of incidental clerical work, particularly typing, which the archives technicians must now perform because of the lack of adequate clerical support. This results in less time being spent with the collections by the professional staff.

The Archives has also been revising its early card catalogue as well as adding an increased volume of catalogue cards to the records. During the formative years, various systems and formats for recording data about the collections were used, and it is necessary now, in order to have accessible and useable data, to make all the records uniform and to organize them in a standard system. As the new catalogue cards are produced, additional supplies and equipment are needed to duplicate the master set and maintain the records in each of the regional offices.

Additional resources (\$27,000) are requested to eliminate the clerical work of archival technicians and support the continued development of the card catalogue. These funds will be used to employ part-time clerk-typists to accomplish the more routine clerical tasks and to fund the purchase of equipment, supplies, printing and reproduction services, and other support requirements associated with the continued development of the card catalogue.

COOPER-HEWITT MUSEUM OF DECORATIVE ARTS AND DESIGN

1977 Actual.....\$415,000  
 1978 Estimate.....\$354,000  
 1979 Estimate.....\$562,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>19</u>	<u>1</u>	<u>20</u>
11 Personnel Compensation.....	296	25	321
12 Personnel Benefits.....	28	3	31
21 Travel & Trans. of Persons..	2	2	4
22 Transportation of Things....	2		2
23 Rent, Comm. & Utilities....	11		11
24 Printing and Reproduction...	1	10	11
25 Other Services.....	2	40	42
26 Supplies and Materials.....	9	73	82
31 Equipment.....	<u>3</u>	<u>55</u>	<u>58</u>
TOTAL	<u>354</u>	<u>208</u>	<u>562</u>

Analysis of Change

Necessary Pay.....	12
Program Funds.....	196

ABSTRACT - The Cooper-Hewitt Museum of Decorative Arts and Design opened to the public in October, 1976 in the Carnegie Mansion, New York City. The Museum is considered one of the world's great repositories of design and decorative arts material, with collections including textiles, drawings, prints, wallpapers, furniture, jewelry, glass, ceramics, silver, and metalwork. For FY 1979, an increase of 1 position and \$196,000 is requested consisting of: (1) \$65,000 for equipment and supplies to begin designing and providing secure storage for the decorative arts collections -- essential for both the preservation of and access to the collections; (2) 1 position and \$31,000 to enable the Museum to hire one electrician to maintain the electrical equipment and systems, and purchase necessary equipment for building maintenance, and (3) \$100,000 to replace funds previously received through grants from both the National Endowment for the Arts and the National Endowment for the Humanities. Necessary pay in the amount of \$12,000 is required for existing staff.

PROGRAM - The Cooper-Hewitt Museum was previously known as the Cooper Union Museum for the Arts of Decoration, which was founded in 1896. Threatened with closing and discontinuance because of lack of space and funds, it was transferred to the Smithsonian Institution in 1968 and the collections moved to the Carnegie Mansion in 1970. It is the only museum in the United States which is devoted exclusively to the study of historical and contemporary design. The collections of the Museum currently span over 3,000 years and represent cultures and countries around the world. There are more than 120,000 objects in the collections. A library of approximately 30,000 volumes relating to design, ornament, and architecture, a picture library of approximately 1.5 million photographs and clippings, and a series of archives devoted to color, material, and industrial design form one of the finest decorative arts and design research facilities in the United States.

The Museum had a quarter of a million visitors during the first year following its opening which The New York Times heralded as a "miracle" and stated further: "The new museum is a successful combination of a unique esthetic resource with a

landmark structure...that adds an extra cultural and environmental dimension to New York." The primary attraction throughout the year was a series of lively, public exhibitions including "MAN TransFORMS," which focused on contemporary design problems and themes; "The Royal Pavilion at Brighton," which included designs, furniture, and decorative and architectural elements from the Museum, the Royal Pavilion, and Buckingham Palace; "Andrea Palladio," with models and photographs of the villas and public buildings of the great Italian architect; and "200 Years of American Architectural Drawing." A major exhibition from the Museum's permanent collections, "More than Meets the Eye," opened in October, 1977 with more than 500 objects on view. This exhibition, as well as the four which preceded it, received outstanding reviews from the national and international press.

A second in a series of "immovable objects" exhibitions took place in December, 1977. This exhibition, "The Subway," was sponsored by the Urban Mass Transit Authority and the National Endowment for the Arts and opened in the subway mezzanine at 42nd Street and Sixth Avenue in New York City. The accompanying catalogue, in the form of a tabloid newspaper, compares and contrasts major subway systems around the world. According to Architecture View, "Everything about the show is good: the idea and execution, the succinct and lively presentation...the impact of the messages about transportation and urban design -- but above all, the place, and the proximity of the real thing." It is expected that this exhibition will travel to other subway systems within the United States.

A full complement of classes, lectures, seminars, workshops, and tours was organized in FY 1977, with more than 2,900 people of all ages participating during the first year. These programs have been expanded during FY 1978, and participation is expected to reach 3,500.

In addition to exhibitions, publications, and the education programs, the Museum must continue to make substantial efforts toward reorganizing the collections, constructing proper storage facilities in the new quarters, and providing for the security and conservation of an immense variety of objects. The Museum has now installed its drawings and prints collection of more than 30,000 items in a well-equipped study area where all items are protected from detrimental sunlight and where climate control prevents deterioration. All drawings and prints are stored in acid- and dust-free boxes and in special cabinets, and all are readily accessible to scholars, students, and visitors. The Museum's textile collection of approximately 20,000 items will be installed during FY 1978 in quarters which will afford climate control for the first time and where the staff will be able to handle delicate fabrics and large bolts of material with relative ease.

#### EXPLANATION OF PROGRAM CHANGES:

Maintenance of the Collections - An increase of \$65,000 is sought to purchase suitable and secure storage cabinets and, where none exist, to design and construct the needed cabinets, shelves and racks for the decorative arts collections. These collections, the largest group in the Museum, include glass, porcelain, wallpaper, metalwork and furniture. In FY 1979 the Museum proposes to complete proper storage for the glass, metalwork, and wallpaper collections.

Maintenance of Property - For this purpose, an increase of \$31,000 is sought to hire 1 electrician and to purchase necessary maintenance equipment and tools. At present there is no trained electrician on the staff who can monitor and repair the Mansion's electrical systems; of critical importance are both the heating and air-conditioning systems. In addition, the Museum proposes to continue phased purchasing of small equipment such as saws and drills, required for minor, regular maintenance of both the interior and the exterior of the building.

Replacement Funds for Endowment Grants - An increase of \$100,000 is requested as an alternative to seeking grant funds from the National Endowment for the Arts and the National Endowment for the Humanities to support the Museum's exhibit program. The Cooper-Hewitt Museum has received funding from the Endowments since FY 1973, both for preparing the collections and the Carnegie Mansion for opening and for Museum programs. During this period, there were ten grants totaling more than \$345,000. The program activities of the Cooper-Hewitt -- its exhibitions, publications, and educational activities -- have been supported primarily from grants and private sources. The Museum's success in competing for Endowment grants over the past years is evidence of the quality of its program, and its inability to seek continuing support will result in curtailment of those parts of the program that most directly serve the public. Although the Museum's already successful efforts to raise funds from outside sources will be continued and intensified, funds are sought to fill the gap that results from the prohibition on applying to the Endowments. The \$100,000 requested will be applied to research for and design and production of exhibitions as well as preparation of catalogues, when needed, to accompany the exhibitions which the Museum offers to the public. In FY 1979, these are "Twentieth-century Ornament," selections from the collection of "Ludwig II of Bavaria," "Wallpapers," and "Fantastic Illustration and Design in Britain: 1850-1930."

OFFICE OF THE ASSISTANT SECRETARY FOR PUBLIC SERVICE

1977 Actual.....\$200,000  
 1978 Estimate.....\$244,000  
 1979 Estimate.....\$232,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>10</u>	<u>-1</u>	<u>9</u>
11 Personnel Compensation.....	217	-11	206
12 Personnel Benefits.....	20	-1	19
21 Travel & Trans. of Persons..	3		3
26 Supplies and Materials.....	2		2
31 Equipment.....	<u>2</u>		<u>2</u>
TOTAL	<u>244</u>	<u>-12</u>	<u>232</u>
<u>Analysis of Change</u>			
Necessary Pay.....		4	
Program Funds.....		<u>-16</u>	

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, information and performing arts. Also included under this heading is the Office of Telecommunications, formerly a part of the Office of Public Affairs. A reduction of 1 position, a communications media specialist, and \$16,000 is recommended for FY 1979. An amount of \$4,000 is required for necessary pay.

PROGRAM - I. Immediate Office: With a base of 8 positions and \$205,000, the primary functions of the Office of Public Service are to stimulate, coordinate, and supervise the steadily increasing 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. Also included are the dissemination of Smithsonian research and interests through publications programs of the Smithsonian Press, the Smithsonian magazine, and the Publishing Task Force; the organization and conduct of adult and children's educational presentations by the Smithsonian Resident Associates; 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 Reception Center; and the development and production of audio-visual materials.

II. Office of Telecommunications: The remaining resources identified for this office, 2 positions and \$39,000, provide support for the Office of Telecommunications. The primary objective of this office is to develop and produce educational and informational audio-visual materials for distribution to educational institutions as well as to public and commercial radio and television outlets.

EXPLANATION OF PROGRAM CHANGE - A decrease of 1 position, a communications media specialist, and \$16,000 is recommended for the Immediate Office of the Assistant Secretary. Proposed duties of this position have been assumed by existing staff in the Office of Telecommunications.

ANACOSTIA NEIGHBORHOOD MUSEUM

1977 Actual.....\$527,000  
 1978 Estimate.....\$618,000  
 1979 Estimate.....\$626,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>19</u>	<u>0</u>	<u>19</u>
11 Personnel Compensation.....	401	7	408
12 Personnel Benefits.....	38	1	39
21 Travel & Trans. of Persons..	3		3
22 Transportation of Things....	1		1
23 Rent, Comm. & Utilities.....	23		23
24 Printing and Reproduction...	20		20
25 Other Services.....	46		46
26 Supplies and Materials.....	83		83
31 Equipment.....	<u>3</u>		<u>3</u>
TOTAL	<u>618</u>	<u>8</u>	<u>626</u>
<u>Analysis of Change</u>			
Necessary Pay.....		8	
Program Funds.....		0	

ABSTRACT - One of the basic premises on which the Anacostia Neighborhood Museum (ANM) was established was to provide the opportunity and the resources for a continuing museum experience for community groups and individuals who might not otherwise realize such an opportunity. Through a carefully researched educational program of exhibits and activities especially relevant to the community and its needs, Anacostia has become recognized as a center of black history and culture. Since its opening in September, 1967, it has been visited by more than 600,000 people. No program increase is requested for FY 1979. Necessary pay in the amount of \$8,000 is required for existing staff.

PROGRAM - On September 15, 1977, the Anacostia Neighborhood Museum celebrated its tenth anniversary. During these ten years it has brought the museum experience to members of Washington's community who otherwise might not have contact with it. In the process, the Museum has gained a national reputation as a center for ethnic studies through its intern programs, permanent and traveling exhibitions, research efforts, and its pioneering educational projects. In the current year, the Museum will produce its most ambitious exhibit to date, dealing with the early West African Kingdoms and the history of the slave trade.

The ANM conducts a research program in the areas of urban studies, minority and ethnic studies, and Anacostia history. Its findings then are used in exhibit design and production and in the development of exhibition catalogues and educational materials. Two of the research department's most prominent activities are outgrowths of research conducted for "The Anacostia Story," the Museum's major Bicentennial exhibition. The first of these is the oral history archives, which consists of some 80 tapes and video-tapes of interviews with Anacostia residents, recording their irreplaceable accounts of Anacostia's past. The second is the support that the department provides for the Anacostia Historical Society. Composed of some 450 Anacostia residents, the Society sponsors lectures and other events, helping to maintain a lively community interest in the history of Anacostia.

The Museum's education department uses ethnically-based materials to develop a wide range of innovative programs, activities, and projects. Working closely with area school personnel, the department conducts teacher workshops and seminars. In cooperation with Trinity College and the Advisory and Learning Exchange, the department recently sponsored its first course for credit for area school teachers. The department has also developed such teaching aids as the "Kwanza Kit," a learning activity package about the African harvest festival, and "A Walk Through 'Old' Anacostia," a guide with a foldout map of Anacostia's historic sites. Additionally, the department has continued to develop educational brochures and booklets that supplement school curricula. Examples of these are the "Minority Women Speak" speaker's bureau directory, and the educational materials for elementary and secondary students relating to the "Frederick Douglass Years" exhibition. In the past year, the ANM initiated a "Minority Women Speak" lecture series which was attended by more than 3,000 individuals. The lecture series stemmed from the Bicentennial exhibit, "Black Women: Achievements Against the Odds."

The Museum's exhibits design and production laboratory opened in late 1975. The lab works closely with the Museum's historian and education staff in the development, design, and production of exhibits for the Museum and national distribution through the Smithsonian Institution Traveling Exhibition Service.

FY 1979 funds will be used to support research, design, and production of two major exhibits. "From Slavery to the Sorbonne and Beyond: The Life and Writings of Anna J. Cooper," adapted from the manuscript prepared by Dr. Leona Gabel (Professor Emeritus of History, Smith College), will tell the story of Anna J. Cooper, a black woman born in slavery who went on to play a pivotal role in the story of higher education for blacks in the city of Washington (and who received a degree from the Sorbonne at the age of 65). For many years, and into the early years of the 20th century, the Dunbar High School, of which Anna J. Cooper was principal, was the only high school for blacks in the nation. Consequently, it attracted a remarkable group of students from all over the country such as Mary Church Terrell, Dr. Robert Weaver (the first black presidential cabinet member), and William H. Hastie, the first black Federal judge.

The Museum's second major show for FY 1979-1980 will be "A House is a Home," which will be a study of traditional 19th century homes of black slaves, tenant farmers, watermen, and homesteaders, in five counties of southern Maryland. The show will employ artifacts, documents, and other memorabilia, as well as oral histories recorded by Museum personnel. The ANM proposes to develop an exhibition and accompanying catalogue that will help to preserve this bit of fast-disappearing Americana: the life-styles and folk customs of 19th century rural black people.

INTERNATIONAL EXCHANGE SERVICE

1977 Actual.....\$172,000  
 1978 Estimate.....\$232,000  
 1979 Estimate.....\$213,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	8	-3	5
11 Personnel Compensation.....	125	-36	89
12 Personnel Benefits.....	12	-4	8
22 Transportation of Things....	85	21	106
26 Supplies and Materials.....	7		7
31 Equipment.....	3		3
TOTAL	<u>232</u>	<u>-19</u>	<u>213</u>
<u>Analysis of Change</u>			
Necessary Pay.....		3	
Program Funds.....		-22	

ABSTRACT - Through the International Exchange Service (IES), public and private institutions in the United States exchange publications with organizations in other countries. A program decrease of 3 positions and \$22,000 is proposed in FY 1979 representing savings resulting from the transfer to the Department of Commerce of responsibility for the exchange of patent specifications and assumption by the Government Printing Office (on a reimbursable basis) of physical responsibility for the international exchange of government documents. An amount of \$3,000 is requested for necessary pay.

PROGRAM - In 1849, the Smithsonian Institution established a system for the exchange of its publications with learned societies of other countries. This program was so successful that later it was extended to include the publications of other American organizations. The Exchange's responsibilities were formalized when the Brussels Convention of 1866 was adopted by the United States, and the Smithsonian Institution became the official exchange bureau in the United States for the international exchange of literary, scientific, and cultural publications. In addition, the Resolution to Provide for the Exchange of Certain Public Documents (14 Stat. 573, as amended) provides that the exchange of official United States publications shall be made through the Smithsonian Institution.

In FY 1977 the Exchange transferred the sending of the weekly issues of the U.S. Patent Specifications to the U.S. Department of Commerce. Early in FY 1978, the Smithsonian and the Government Printing Office (GPO) concluded an agreement under which the GPO assumed physical responsibility for the international exchange of government documents, for which it will be reimbursed an amount not to exceed \$125,000. The permanent transfer of this responsibility requires amending an existing statute, and the Library of Congress will submit the appropriate legislation during the current year for proposed enactment by the end of FY 1979. This transfer is expected to result in a more efficient operation.

The Smithsonian surveyed nearly 200 academic institutions to determine the need for and utility of exchange services for scientific and literary publications. The response was extremely positive and consequently IES will continue to provide these services.

EXPLANATION OF PROGRAM CHANGES - The transfer of responsibility for the exchange of patent specifications to the Department of Commerce will permit a reduction of \$22,000. In addition, a reduction of 3 positions will result from the arrangement with GPO to assume physical responsibility for the international exchange of government documents. Since the Smithsonian will reimburse GPO for this service, no cost savings are anticipated.

DIVISION OF PERFORMING ARTS

1977 Actual.....\$320,000  
 1978 Estimate.....\$367,000  
 1979 Estimate.....\$393,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>9</u>	<u>0</u>	<u>9</u>
11 Personnel Compensation.....	222	5	227
12 Personnel Benefits.....	20	1	21
21 Travel & Trans. of Persons..	8	3	11
23 Rent, Comm. & Utilities.....	13		13
24 Printing and Reproduction...		2	2
25 Other Services.....	89	15	104
26 Supplies and Materials.....	13		13
31 Equipment.....	<u>2</u>		<u>2</u>
TOTAL	<u>367</u>	<u>26</u>	<u>393</u>
<u>Analysis of Change</u>			
Necessary Pay.....		6	
Program Funds.....		20	

ABSTRACT - The Division of Performing Arts (DPA) has primary responsibility for the production and presentation of live performance events of the Smithsonian Institution, with emphasis on programs that relate and enhance the museum collections, and that reflect national aesthetic expressions. For FY 1979, a net program increase of \$20,000 is requested. The proposed increases of \$32,000 will permit the acceleration of the Jazz Oral History Program (\$12,000) and expansion of performance programs specifically related to museum collections (\$20,000). This increase is offset by an amount of \$12,000, reflecting the transfer of folklife festival research and programming functions to the American and Folklife Studies Program. Necessary pay in the amount of \$6,000 is required for existing staff.

PROGRAM - DPA is the primary planning, producing, and supervising organization for all performances in the Smithsonian Institution. Associated functions include production of a record series and development of catalogues from the Smithsonian performances and collections. The central administration and direction of these activities and some program development is financed with Federal funds. Most of the Division's activities are produced with funds from other sources.

During FY 1978, the Division will continue its presentation of a concert series featuring diverse forms of American and international expression. Notable among the performances in the 1977-1978 concert series have been "Dance of West Java," a dance troupe presenting its American premiere performance at the National Museum of Natural History, and a folk presentation by Pete Seeger. Other scheduled performances include a concert by jazz immortal, Count Basie, and a dance presentation by a troupe from Sri Lanka. Moreover, in conjunction with the National Museum of History and Technology (NMHT), DPA presented several celebrations in the past year which directly used the Museum's collections. A spring festival, a July 4th celebration, an October folklife presentation, and a Christmas celebration were staged in and around the NMHT. Various craft demonstrations were developed with museum collections and music and choral presentations were performed throughout the Museum and its grounds. These festivals and celebrations are intended to stimulate

interest in the National Collections and to demonstrate, in an entertaining manner, aspects of American life past and present.

DPA also conducts a number of education-oriented projects for children and young adults. For example, the Division's Puppet Theatre concluded its successful 1977 series of presentations that included "Peter and the Wolf" and "The Sorcerer's Apprentice." The performances, for which special arrangements were made to allow District of Columbia school children to attend, were highlighted by displays and demonstrations of puppets from the museum collections. Plans are now underway to develop a children's theatre which will broaden the puppet theatre concept by featuring various types of performances. Another educational effort in which DPA is engaged is the development of a catalogue of black cultural expressions, such as storytelling, foodways, hymns and gospel music. The catalogue is designed for use in the curriculum of educational institutions at the secondary and collegiate levels.

DPA is continuing its extremely successful recording series with a broad range of material. New releases planned for 1978 include Music for Harpsichord, Orchestration Album, Ellington '39, and Anything Goes.

As in past years, DPA will participate in the presentation of the annual Folklife Festival. Although many of the festival's research and programmatic functions were transferred to the Folklife Unit in FY 1976, DPA will continue to provide technical expertise in the actual staging of events.

#### EXPLANATION OF PROGRAM CHANGES:

Jazz Oral History - Since FY 1975, DPA has conducted a program to record the oral history of jazz in collaboration with the National Endowment for the Arts. The program centers around interviews with individuals associated with the early history of jazz. These interviews serve as the only source of history on the development of this truly American musical form. An additional amount of \$12,000 is requested to permit the urgent acceleration of the interview process before this irreplaceable information is lost for all time.

Museum-Related Performances - The performing arts presentations sponsored by DPA are programmed to highlight and stimulate interest in the Smithsonian's varied collections, as well as entertain audiences and expand interest in cultural expression. For example, the dance performances of the Javanese and Sri Lankan troupes, accompanied by a film and lecture, were presented in the National Museum of Natural History which possesses significant cultural holdings from those nations. An additional amount of \$20,000 is requested to enable DPA to increase the number of these special museum presentations developed in collaboration with the museum curators and other Smithsonian staff. The funds will be applied to performer's fees and other performance related costs.

These proposed increases are offset by a reduction of \$12,000 in DPA's base funds. This decrease is related to the transfer of responsibility for research and programming activities associated with the annual Folklife Festival to the Folklife Unit of the Office of American and Folklife Studies.

SMITHSONIAN INSTITUTION PRESS

1977 Actual.....\$650,000  
 1978 Estimate.....\$732,000  
 1979 Estimate.....\$749,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>28</u>	<u>0</u>	<u>28</u>
11 Personnel Compensation.....	613	14	627
12 Personnel Benefits.....	59	3	62
21 Travel & Trans. of Persons..	1		1
23 Rent, Comm. & Utilities.....	3		3
24 Printing and Reproduction...	47	-5	42
25 Other Services.....	6	5	11
26 Supplies and Materials.....	2		2
31 Equipment.....	<u>1</u>		<u>1</u>
TOTAL	<u>732</u>	<u>17</u>	<u>749</u>
<u>Analysis of Change</u>			
Necessary Pay.....		17	
Program Funds.....		<u>0</u>	

ABSTRACT - The Smithsonian Institution Press is responsible for the editing, design, production, and distribution of printed materials produced by historians, scientists, and curators. Such materials include research monographs, nine technical and scientific series, exhibit catalogues for Smithsonian art galleries and museums, education pamphlets, information leaflets, and the Smithsonian Institution's annual report. No program increase is sought for FY 1979. An additional \$5,000 required for editorial and design contracting occasioned by increased publication requests from museums and galleries are offset by an anticipated saving in the publication cost of the Institution's annual report. Necessary pay in the amount of \$17,000 is required for existing staff.

PROGRAM - The publication activity of the Press is a fundamental extension of the Smithsonian's basic research laboratories. The Press-published scientific, technological, and historical series monographs make available to major libraries, museums, scientific institutions, and interested members of the public throughout the U.S. and abroad the unique results of research and study conducted by curators and staff experts in the Smithsonian's major museums. The first publications of a new series, Smithsonian Contributions to Marine Science, were published in FY 1977, together with the initial monographs of a revitalized existing series, Smithsonian Studies in Air and Space, which will assume greatly increased proportions now that the new National Air and Space Museum is opened. The Press edits and designs the exhibit catalogues, education pamphlets, and information leaflets which serve the millions of visitors to the Smithsonian, as well as Smithsonian extension programs such as those conducted by the Smithsonian Institution Traveling Exhibition Service, the Division of Performing Arts, the Office of Elementary and Secondary Education, and the Anacostia Neighborhood Museum. These publications provide knowledge of the Smithsonian and its collections to communities and school systems across the nation.

After review of manuscripts for adequacy of preparation, the Press staff provides all phases of editing, designs the form which the publications will take, and shepherds

the manuscripts through the composition, printing, and binding stages -- through the Government Printing Office in the case of Federally funded publications and with commercial printing establishments for those financed by other sources. The distribution section of the Press is responsible for receiving, warehousing, and shipping the finished publications to selected mailing lists, or to commercial distributors and Smithsonian mailing lists in the case of books which may be sold. The Press also edits, designs, and produces Smithsonian Year, the Institution's annual report to the Regents and to 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.

Press publications in FY 1977 included 9 trade books, 19 art and exhibition catalogues and checklists, 22 booklets, and other miscellaneous printed materials. In the scientific and technical series, 33 monographs were published. Many of these publications received favorable critical review and the Press staff again received awards for editing and design.

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

1977 Actual..... \$1,592,000  
 1978 Estimate..... \$1,883,000  
 1979 Estimate..... \$1,901,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	92	-1	91
11 Personnel Compensation.....	1,436	22	1,458
12 Personnel Benefits.....	137	2	139
21 Travel & Trans. of Persons..	11	6	17
22 Transportation of Things....	1		1
23 Rent, Comm. & Utilities.....	24		24
24 Printing & Reproduction.....	7		7
25 Other Services.....	115	-7	108
26 Supplies and Materials.....	114	-3	111
31 Equipment.....	38	-2	36
TOTAL	<u>1,883</u>	<u>18</u>	<u>1,901</u>
<u>Analysis of Change</u>			
Necessary Pay.....		43	
Program Funds.....		-25	

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, assists and advises the Secretary on these and related matters, and undertakes special studies for the improvement of museum operations and methodologies. The office furnishes advice and technical assistance to other museums, undertakes studies on the effectiveness of museum exhibits and programs, conducts training workshops for museum personnel, and disseminates technical information on museum practices. The office oversees directly the operations of the South Group Buildings Manager who is responsible for the maintenance of the Arts and Industries and Smithsonian Institution Buildings, as well as the operations of the Office of Horticulture which is responsible for the maintenance of the Institution's grounds and the development of horticultural exhibitions and research programs. The Assistant Secretary serves as the Building Director for the Arts and Industries Building.

For FY 1979, a net decrease of 1 position and \$25,000 is proposed. Two positions (clerk typist and gardener supervisor) and \$26,000 are requested for the Office of Horticulture and 1 position is requested for the Office of Museum Programs for the Coordinator, Native American Museum Training Program. These increases are offset by a decrease of 4 janitorial positions and \$51,000 in the South Group Buildings Manager function. An amount of \$43,000 is required for necessary pay.

PROGRAM - I. Immediate Office, Assistant Secretary for Museum Programs: With an FY 1978 base of 6 positions and \$217,000, the Office administers, oversees, reviews, and supports the Office of Museum Programs, the Office of the Registrar, Conservation-Analytical Laboratory, Office of Exhibits Central, Smithsonian Libraries, Smithsonian Archives, National Museum Act, Smithsonian Institution Traveling Exhibition Service, Office of Horticulture, and South Group Buildings Manager.

In cooperation with other units of the Institution, the office coordinates projects related to the development and improvement of facilities and operational methods of Smithsonian museums, and works closely with museum professionals and organizations, nationally and abroad, to enhance the scholarly and educational functions of museums, to encourage the development of new techniques in museum administration and practice, to establish improved training programs for museum professionals, and to study the application of modern technologies to museum needs in such areas as conservation, storage, and energy uses.

In FY 1977, the office provided direction and coordination for the preparation of the Institution's "Collections Management and Policy Study" which was completed and distributed in September. In 1978 and 1979, the office will implement the recommendations contained in that study by establishing and overseeing the efforts of task forces dealing with specific collections management issues. The office has directed the coordination of the preliminary planning effort for the Museum Support Center including the analysis of the Institution's need for suitable collections storage space and for required research and conservation laboratory facilities. The office will continue to provide direction to the development of the Museum Support Center as the project moves through its architectural/engineering design phases.

II. Office of Museum Programs: Three closely related programs, each designed to improve the quality and effectiveness of museum operations through training, dissemination of technical information and evaluation of exhibits and educational activities, are conducted by the Office of Museum Programs. This office, which reports directly to the Assistant Secretary, has FY 1978 base resources of 12 positions and \$300,000.

The museum training program offers courses in the form of seminars and workshops taught primarily by Smithsonian staff to individuals gainfully employed by museums. Each course is devoted to a specific topic. Subjects taught cover all aspects of museum work, including, for example, collections management principles, conservation methods, design and production of exhibits, museum lighting techniques, development of educational activities, cooperative programs with schools, museum budgeting, accounting and management methods, and preparation of museum publications. In FY 1977, 370 participants attended the 28 workshops offered. All sessions were filled to capacity, most of them oversubscribed. In FY 1978, 32 workshops are planned for an estimated 470 participants. Approximately the same schedule is projected for FY 1979. The museum training program is also developing a series of specialized seminars for Smithsonian staff members to cover recent advances in museum technologies. In addition, special internship programs are developed to meet the needs of museum professionals from other museums in the United States and abroad. Although no financial support is furnished to the interns, each program is specially planned to place the intern with Smithsonian units most capable of supplying the training desired. Finally, a significant program, started in FY 1977, offers museum training to the Native American Community. It stresses proper methods of care of ethnographic collections held on reservations and is being developed with the cooperation and under the guidance of the National Museum of Natural History.

The conservation information program produces audio-visual programs illustrating and explaining museum practices and techniques, with emphasis on museum conservation, which are made available on a loan basis to museums, museum-related organizations and schools throughout the country. Currently, 9 slide/cassette programs and 82 videotape programs are in circulation. During FY 1977, more than 300 organizations made use of 302 slide/cassette and 600 videotape programs for viewing. In addition, six major museums or conservation training centers in five foreign countries have purchased full sets of the conservation videotapes for use in their own conservation training activities.

The psychological studies program evaluates the effectiveness of museum exhibits and presentations and measures visitor reactions to them. To assure production of significant and relevant data, the program requires development of measurement and evaluation techniques designed specially for use in the museum environment. Studies cover such areas as exhibition techniques, methods of labelling, museum traffic flow, audio-visual devices which supplement exhibits, directional and informational signage, and similar visitor orientation devices. During FY 1977, a museum evaluation conference, attended by museum professionals, educators, and evaluators, was organized by the Office of Museum Programs for exchanging information with other museums and institutions making use of these techniques, planning future applications for them, and devising channels through which findings might be made useful to smaller organizations. In 1978 and 1979, the program will be expanded to include evaluation of educational activities within the Smithsonian and other museums.

To support these training and information activities, the museum reference center of the Office of Museum Programs has compiled a collection of books, periodicals, reports, and manuscripts on museological subjects for use by students as well as museum professionals and staff.

III. South Group Buildings Manager: With an FY 1978 base of 46 positions and \$694,000, the Office of the South Group Buildings Manager is responsible for the cleaning, maintenance, and servicing of staff offices, work areas, and the public exhibition areas of the Smithsonian Institution and the Arts and Industries Buildings. This involves the cleaning of all office, exhibition, laboratory, and public facility areas; provision of building services for building occupants; coordination of work performed by outside contractors; preparation of areas for special events, including lectures, temporary exhibitions, meetings, and seminars; and arrangements for transportation of objects, materials, and equipment. Services must be provided on a seven day per week basis.

IV. The Office of Horticulture: With an FY 1978 base of 28 positions and \$672,000, the Office of Horticulture is responsible for developing the grounds of the museums and properties of the Smithsonian Institution as botanical and horticultural exhibit areas and for coordinating a comprehensive program of horticultural research and educational activities for the Institution.

This office also maintains the grounds of the Smithsonian properties and reviews and approves all improvement and renovation projects occurring on these grounds. It serves as a liaison with governmental agencies (National Park Service, District Tree Service, Commission of Fine Arts, National Capital Planning Commission, etc.) on grounds beautification planning and provides consulting and design services in horticultural and landscaping matters for Smithsonian facilities located outside the Washington area. Basic and applied horticultural research programs are conducted in cooperation with other institutional units and other horticultural and botanical organizations and involve chemical pinching, tissue culture, light intensities required for interior plants, testing of annuals, and propagation and dissemination of endangered plant species.

The office conducts an upward mobility educational program for gardeners employed by the Institution, assists interns in horticultural and related disciplines, offers short courses in gardening for the public, conducts tours of horticultural exhibit areas on Smithsonian grounds, distributes literature, and answers public inquiries relating to horticulture.

In FY 1977 the Office of Horticulture coordinated plant material and floral arrangements for 220 special events and 12 Smithsonian exhibits, renovated the Silver Hill Complex landscape, landscaped the Delta Solar Sculpture donated to the National Air and Space Museum by the Venezuelan government, designed and started

landscape plantings for the Joseph Henry Statue on the Mall and continued design developments for the proposed garden for the handicapped and the Smithsonian Building's East Garden.

In 1978 and 1979, the Office of Horticulture will continue to improve and refine existing horticulture installations both inside and outside Smithsonian buildings, upgrade the level of its grounds management activities, and develop horticulture exhibits. Examples of the latter activity appear in the Christmas Exhibit in the National Museum of History and Technology consisting of 12 traditional Christmas trees and in the rare orchids in bloom on display in the "Splendors of Nature" exhibition in the National Museum of Natural History. During this two-year period, the garden for the handicapped and the Smithsonian Building East Garden will be completed and a parterre will be developed at the South Entrance of the History and Technology Building.

EXPLANATION OF PROGRAM CHANGES - In FY 1977, a special component of the museum training program was established to provide professional learning opportunities in the field of museology for the Indian, Eskimo and Aleut populations of the United States and to assist the indigenous peoples of America in their efforts to preserve their cultural heritage. There are presently more than 100 tribes, urban coalitions, and Native corporations with cultural facilities to serve their members or constituents. Many of these possess irreplaceable collections of objects associated with their traditions and cultures; others are anxious to assemble and conserve similar materials before they are lost through lack of care or are otherwise dissipated. Unfortunately, the majority of these groups lack or do not have access to people trained in the fundamentals of museum management. This program provides the means for developing technical competence and professional skills needed for the acquisition and care of collections, design and production of exhibits, and museum educational and interpretive programs. The program will enable Native American groups to make better use of resources and facilities previously provided by both Federal and private agencies. During FY 1978, the coordinator of this program made on-site inspections of more than 30 of these cultural and museum facilities to analyze their needs and to a limited degree, to furnish on-the-spot technical assistance. Data gathered during these inspections is currently being used to prepare course content for specific workshops and internship programs designed to meet intermediate and long-term museum training needs. Initial response to the program has been encouraging: seven tribal cultural centers have provided travel funds to permit nine employees to attend Smithsonian museum training workshops and two tribal museums have, at their own expense, sent museum employees to the Smithsonian for internship training. Federal agencies associated with current Native American cultural aspirations, such as the Indian Arts and Crafts Board of the Department of the Interior and the Economic Development Administration of the Department of Commerce, have expressed satisfaction that the program has been instituted. The Division of Indian and Native American Programs of the Department of Labor has cooperated by furnishing travel funds to the Native American Training Coordinator for the initial survey work.

An additional position is requested to convert the Native American Training Coordinator from term to full-time permanent status and thereby enable this successful program to be a continuing Smithsonian activity.

Office of Horticulture - Development of expanded horticultural displays on Smithsonian grounds and the enhanced use of plants and flowers as integral components of museum exhibits makes it essential to reinforce and realign the work force that produces and maintains horticultural materials. An additional gardener-supervisor (\$16,000) is needed to serve as assistant foreman to provide expert and effective supervision of staff and volunteers involved in this work. Further, increased production and horticultural research activity have created a critical need for essential record-keeping for propagation of plant strains, design plans, production schedules, plant orderings and similar work. An additional clerical position (\$10,000) will be used to accomplish this important record-keeping.

South Group Buildings Manager - A decrease of 4 janitorial positions and \$51,000 can be achieved by placing performance of "high" or specialized cleaning on an "as needed" basis rather than by regular schedule and by requiring advance scheduling for special events held in South Group Buildings. All basic services will continue to be provided and emergency requests for laborer assistance will receive highest priority. Shipping and receiving services will be maintained at the current level.

OFFICE OF THE REGISTRAR

1977 Actual.....\$ 91,000  
 1978 Estimate.....\$102,000  
 1979 Estimate.....\$105,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	4	0	4
11 Personnel Compensation.....	81	3	84
12 Personnel Benefits.....	8		8
21 Travel & Trans. of Persons..	2	1	3
23 Rent, Comm. & Utilities.....	4		4
24 Printing and Reproduction...	1		1
25 Other Services.....	3	-1	2
26 Supplies and Materials.....	3		3
TOTAL	102	3	105
<u>Analysis of Change</u>			
Necessary Pay.....		3	
Program Funds.....		0	

ABSTRACT - The Office of the Registrar is responsible for the Institution-wide development, oversight and coordination of information management for all museum objects and specimens held by the Smithsonian. The Registrar's Office is charged with development of standardized information systems for effective integration of the National Collections and with assisting the bureaus in the establishment of modernized museum information systems. No program increase is sought for FY 1979. Necessary pay in the amount of \$3,000 is required for existing staff.

PROGRAM - From the 1880's until 1976, the Office of the Registrar provided centralized registration services for the Natural History and History and Technology collections. 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 ending in 1976. At that time the emphasis was shifted from record keeping to systems improvement and the mission of the Registrar's Office was expanded to provide support for all bureaus in the Institution.

The Office of the Registrar presently consists of a small core staff whose attention is focused primarily on the information management aspects of collections management at the Institutional level. The office is pursuing such projects as a feasibility study of data processing standards for the storage and retrieval of information pertaining to collected objects and specimens, a critical review of networking needs, an analysis of nomenclature standardization for subject thesauri and a statistical study of collection growth. The office has also become a central point for projects related to the Institution's continuing study of collections policy and management.

CONSERVATION-ANALYTICAL LABORATORY

1977 Actual.....\$538,000  
 1978 Estimate.....\$658,000  
 1979 Estimate.....\$669,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	23	0	23
11 Personnel Compensation.....	406	54	460
12 Personnel Benefits.....	39	6	45
21 Travel & Trans. of Persons..	12	3	15
23 Rent, Comm. & Utilities.....	13		13
24 Printing and Reproduction...	3	-3	
25 Other Services.....	90	-16	74
26 Supplies and Materials.....	45	-4	41
31 Equipment.....	50	-29	21
TOTAL	658	11	669
<u>Analysis of Change</u>			
Necessary Pay.....		11	
Program Funds.....		0	

ABSTRACT - The Conservation-Analytical Laboratory (CAL) is responsible primarily for advising and assisting museums in preserving the National Collections. It offers advice about the suitability of buildings' environmental conditions for objects displayed or stored; examines, advises on or treats objects for their protection and preservation; analyzes objects for basic research data required by curators, scientists, and historians; and conducts training programs in association with the Office of Museum Programs. No program increase is sought for FY 1979. Necessary pay in the amount of \$11,000 is required for existing staff.

PROGRAM - The CAL was established in 1963 to serve the museums of the Smithsonian Institution. Based upon examination or analysis of objects, the conservators and scientists on CAL's staff provide advice to curatorial units on conservation procedures. Objects which cannot be treated by their units, present special problems, or require more specialized equipment than is available locally, are treated in this central laboratory.

Analyses of objects or their materials (e.g., pigments, resins, fibers, alloys, or corrosion products) by advanced instrumentation serve to determine appropriate conservation procedures or to provide museum archeologists and historians with basic research data concerned with dates, attribution, and earlier production methods -- "archeometry." Commercial products proposed for prolonged contact with artifacts (or fumigants used in storage) are examined for suitability.

The CAL is continuing the development of its data processing system in conjunction with the Office of Computer Services to meet the increasing demands of conservators by providing rapid retrieval of tested procedures. In addition, technical information on conservation practices in the form of video-taped programs and tape-slide lectures is provided for use by Smithsonian staff, Federal organizations, and others throughout the nation.

Progress made in conservation during the past year has been multifaceted. Over 400 objects or samples, from 19 units were analyzed and/or treated. Under the Institution's higher education program, a postdoctoral Fellow has resumed study of the composition of "Steatite" objects to ascertain possible sources. Seminars on science applied to the study of museum artifacts, in association with the National Bureau of Standards, continue. The goal is to stimulate interest in archeometry.

One of the accomplishments expected in FY 1978 will involve the video-recording of elements of the conservator's work for later use in training. Also, increased attention is being given to archeometry by the funding of postdoctoral fellows who work with archeologists or curators and analytical scientists.

The difficulty of recruiting adequately trained staff, however, has slowed down considerably the rate of preservation of objects and has created a significant savings in personnel costs. These savings are being used to contract out the work for several bureaus and to purchase essential equipment and supplies. In FY 1979, it is anticipated that intensified recruiting efforts will enable the CAL to reach its authorized staffing level.

SMITHSONIAN INSTITUTION LIBRARIES

1977 Actual.....\$2,033,000  
 1978 Estimate.....\$2,260,000  
 1979 Estimate.....\$2,372,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>96</u>	<u>-2</u>	<u>94</u>
11 Personnel Compensation.....	1,493	9	1,502
12 Personnel Benefits.....	143	1	144
21 Travel & Trans. of Persons..	12		12
22 Transportation of Things....	2		2
23 Rent, Comm. & Utilities.....	15		15
24 Printing and Reproduction...	83	9	92
25 Other Services.....	113	-5	108
26 Supplies and Materials.....	230	49	279
31 Equipment.....	<u>169</u>	<u>49</u>	<u>218</u>
TOTAL	<u>2,260</u>	<u>112</u>	<u>2,372</u>
<u>Analysis of Change</u>			
Necessary Pay.....		37	
Program Funds.....		75	

ABSTRACT - The Smithsonian Institution Libraries provides library and information services to support the research, exhibits, public service, and education programs of the Institution. In FY 1979, a net increase of \$75,000 is proposed. Additional funds are requested to meet the following needs: (1) to acquire necessary research literature (\$98,000); (2) to bring additional uncatalogued materials under bibliographic control (\$14,000); and (3) to extend the conservation measures applied to library materials (\$9,000). These proposed increases will be offset by a decrease of 2 positions and \$46,000. An amount of \$37,000 is required for necessary pay.

PROGRAM - The Smithsonian Institution Libraries is a decentralized system comprising 13 bureau libraries and 6 major branches, as well as many departmental library locations. The system is supported by centralized reference and circulation, acquisitions, cataloguing, conservation, and administrative services. The Libraries' collections are especially strong in natural history, American ethnology and culture, tropical biology, decorative arts and design, astrophysics, and the history of science and technology, including the Dibner Collection of rare books and manuscripts in the history of science and technology. Collections in the history of aeronautics and astronautics are developing rapidly.

Significant improvements in services were made in FY 1977 through expanded use of automated techniques. Cataloguing productivity was increased substantially as a result of the on-line computerized system, allowing additional cataloguing support for the Cooper-Hewitt Museum in preparation for the opening of its library. In FY 1978, cataloguing assistance will be provided for the Smithsonian Tropical Research Institute and the Smithsonian Astrophysical Observatory bureau libraries. As an alternative to full cataloguing records, a simplified means of abbreviated machine-readable record was designed in FY 1977, will be implemented in FY 1978, and further expanded in FY 1979. A computer-produced short title catalogue of the Dibner Library, started in FY 1977, will be completed in FY 1978 and later expanded to include all of the Institution's rare books. The computer-produced union list of the Libraries' serials will be improved and the statement of volumes held will be added. The conversion to machine-readable form of the index to periodicals, prepared by the National Air and Space Museum bureau library, was also completed in FY 1977.

During the past year, the Libraries continued to extend and expand on-site services to users by strengthening staff and reference collections at the National Zoological Park, the Radiation Biology Laboratory, the Chesapeake Bay Center for Environmental Studies, and the National Museum of Natural History. The Dibner Library opened to users and the Cooper-Hewitt Museum bureau library was prepared to be opened in FY 1978. A reference collection is also being developed at the Mount Hopkins Observatory as the program grows in anticipation of the operation of the Multiple Mirror Telescope. A major review of the Libraries collections at the North Capitol Street Service Center was undertaken. Over 35,000 volumes were removed from the collection and the remaining 31,400 volumes were organized for better access.

In FY 1978, the conservation laboratory will be completed and occupied. The conservator has recently reviewed the Libraries collections, outlined a conservation program, and begun its implementation. Increased use of staff to conserve non-rare materials is anticipated. Also, in the current year, distribution of a new acquisitions list, a direct product of computerized on-line cataloging, will begin.

The Library of Congress restriction on the loan of journals and the new copyright law which imposes royalty fees for copying journal articles will become effective this year. These developments will reduce the effectiveness of the Libraries interlibrary loan program and compel it to develop greater reliance on Smithsonian collections to supply necessary research materials. Despite growth of research staff and programs of the Institution in the last 5 years, dependence on outside libraries has been reduced. In 1972, 65 percent of the requests for literature were obtainable from the Institution's Libraries. In 1977, this figure increased to 74 percent.

EXPLANATION OF PROGRAM CHANGES - In FY 1979, a net increase of \$75,000 is requested to enable the Libraries to continue to acquire literature needed to support the programs of the Smithsonian Institution, to expand bibliographic control of materials and to apply adequate conservation measures to library materials. A requested increase of \$121,000 is offset by a planned reduction of 2 positions and \$46,000.

Additional funds of \$98,000 are requested to allow the Libraries to add about 600 new journal subscriptions and 750 new books and keep pace with an estimated inflation rate of 10 percent. It has been the goal of the Libraries to reduce its need to borrow frequently used journals or to buy photocopies from other libraries. Borrowing or soliciting photocopies is a costly and time-consuming process; and now with the growing disposition among libraries to charge for this service at rapidly increasing rates, it becomes still more beneficial for the Smithsonian Institution Libraries to have sufficient literature resources of its own. Further, the restrictions placed on lending journals by the Library of Congress and the implications of the new copyright law which prohibits unlimited article copying emphasize the need to increase this self-reliance for all heavily used materials in the subject fields of Smithsonian programs. The increase requested for FY 1979 will allow the addition of some critically needed research literature as well as compensate for restrictions and the added costs of obtaining literature from other libraries. In 1977 about 14,000 literature requests were filled from other libraries.

Implementation of a new system of bibliographic control for uncatalogued materials has begun. This system provides a new abbreviated bibliographic record in machine-readable form. An increase of \$14,000 is requested to expand this system. These funds will be used for coding and data input of bibliographic information for uncatalogued materials, such as large gift collections, selected backlogs, and microform collections, each reel of which may contain numerous separate works.

Currently, approximately \$70,000 are available for contract binding. These funds will allow the Libraries to bind most completed volumes of currently received journals. An increase of \$9,000 is requested to enable the Libraries to bind some of the 600 anticipated new journals and continue to rebind selected volumes.

The proposed program increase will be offset by a reduction of 2 positions and \$46,000 to be accomplished through consolidation in the administrative area and concentration of on-line computerized reference search services for all Smithsonian libraries in the main library office.

OFFICE OF EXHIBITS CENTRAL

1977 Actual.....\$1,037,000  
 1978 Estimate.....\$1,144,000  
 1979 Estimate.....\$1,111,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>48</u>	<u>-3</u>	<u>45</u>
11 Personnel Compensation.....	958	-30	928
12 Personnel Benefits.....	92	-3	89
21 Travel & Trans. of Persons..	3		3
22 Transportation of Things....	1		1
23 Rent, Comm. & Utilities.....	5		5
24 Printing and Reproduction...	5	-3	2
25 Other Services.....	19	9	28
26 Supplies and Materials.....	50	-3	47
31 Equipment.....	<u>11</u>	<u>-3</u>	<u>8</u>
TOTAL	<u>1,144</u>	<u>-33</u>	<u>1,111</u>
<u>Analysis of Change</u>			
Necessary Pay.....		17	
Program Funds.....		-50	

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. A program decrease of 3 positions and \$50,000 recommended for FY 1979 is made possible through improved coordination of future production schedules, securing advance information from units requiring OEC services, and the selective use of contractual services. An amount of \$17,000 is required for necessary pay.

PROGRAM - The OEC designs, produces, installs, and maintains exhibits; makes films and models; and provides other specialized services to the museums, bureaus, programs, and other offices of the Institution to support their exhibition and exhibit-related activities. These services multiply the capabilities and resources of units without full-time or specialized exhibits staffs. In addition to actual job performance, consultation and referral of certain work to other sources during especially busy periods are important parts of OEC operations. Highly specialized OEC capabilities include editorial services, motion picture production, audio-visual presentations, lighting, freeze-dry taxidermy, and the services of its models, plastics and restoration unit (specializing in museum uses of fluid, thermosetting and reinforced plastics).

In coordination with the Office of Museum Programs, the OEC also provides increasing amounts of training in exhibition media and techniques in workshops for museum professionals worldwide. New techniques, systems, and procedures are incorporated continually into programmed work and reported to the museum community. Relationships with other government offices that have public exhibition responsibilities exist at all levels of operation.

During FY 1977, the OEC completed 214 separate projects. Of these, more than 85 percent were "parts" of exhibits or related activities of the museums, programs, and offices of the Institution. Partial participation in an exhibition program was

demonstrated by OEC's preparation of labels for "200 Years of Architectural Drawings" presented at the Cooper-Hewitt. "The Silver Jubilee" commemorating the 25th anniversary of the coronation of Queen Elizabeth II was an example of a full-service exhibition by the OEC. The OEC fully designed, edited, filmed, produced, and installed the exhibit, then removed it after its showing.

During the past year, the exhibits motion picture unit received three "Emmy" awards from the National Academy of Television Arts and Sciences for "Festival of American Folklife," produced in FY 1975. Also, a manuscript for a definitive manual on freeze-dry taxidermy was completed recently and publication now is being scheduled.

For FY 1978, significant assignments to assist the National Museum of Natural History ("Dynamics of Evolution"), the National Museum of History and Technology ("100th Anniversary of the Geological Survey"), and the continuing commitment to 20 or more Smithsonian Institution Traveling Exhibition Service shows per year are in process. Special exhibitions in the Smithsonian Institution Building and other Smithsonian locations are in planning stages. Replacement or updating of highly successful Bicentennial presentations is anticipated and an exhibit for the information center at the Chesapeake Bay Center for Environmental Studies will be completed in spring of 1978.

EXPLANATION OF PROGRAM CHANGE - OEC plans its work schedule at least 18 months in advance, using data on forthcoming exhibits needs provided by various Institution units. Through an improved information gathering system which will extend the lead time to 24 months or longer, OEC will be able to use more efficient methods of exhibits production and coordinate schedules with even greater effectiveness. This can be accomplished by maintaining the established program of continual upgrading of production facilities in its exhibits shops and selective use of contract services. Accordingly, it is estimated that savings of 3 exhibits specialist positions and \$50,000 can be achieved in FY 1979. Should the total workload of OEC increase in future years in response to the exhibits requirements of Smithsonian museums, it will be necessary to restore this decrease to meet the full range of services required of OEC by the Institution.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

1977 Actual.....\$101,000  
 1978 Estimate.....\$165,000  
 1979 Estimate.....\$168,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>8</u>	<u>0</u>	<u>8</u>
11 Personnel Compensation.....	132	3	135
12 Personnel Benefits.....	13		13
21 Travel & Trans. of Persons..	2	1	3
22 Transportation of Things....	6		6
25 Other Services.....	5	-1	4
31 Equipment.....	<u>7</u>		<u>7</u>
TOTAL	<u>165</u>	<u>3</u>	<u>168</u>
<u>Analysis of Change</u>			
Necessary Pay.....		3	
Program Funds.....		0	

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) provides carefully selected, well-designed, and widely circulated traveling exhibits covering a diversified range in the fields of art, design, science, technology, history, and education. These exhibits include Smithsonian exhibits and those organized and lent by numerous Government agencies and individuals and organizations throughout the world. No program increase is requested for FY 1979. Necessary pay in the amount of \$3,000 is required for existing staff.

PROGRAM - SITES, founded in 1951, is the largest nationwide organization circulating exhibitions and the only one having a broad interdisciplinary coverage serving specialized and general museums, galleries, and educational and cultural organizations. The FY 1978 Federal base of 8 positions and \$165,000 represents 17 percent of SITES operating budget and is supplemented by an estimated income of \$420,000 from rental fees and \$400,000 of special purpose gifts, grants, and contracts.

Approximately 8 million people now view SITES exhibitions annually in approximately 800 installations. During FY 1977, 42 new exhibitions (including copies and versions of shows) began national tours. Approximately one-half of these exhibitions featured original objects; the others were panel shows in a variety of formats, particularly "information core" exhibitions (or those that require exhibitors to complete the exhibition through the addition of local artifacts and/or programs). These "information core" panel exhibitions save transportation costs and foster cooperation between the Smithsonian Institution and museums throughout the United States. All exhibitions produced were accompanied by a wide variety of educational, public affairs, and technical materials.

The increase in Federal support to \$165,000 in FY 1978 resulted in important savings to people receiving exhibitions from SITES. The Federal appropriation is applied primarily to personnel, shipping, and rental of equipment costs related to production and circulation of exhibitions based on Smithsonian collections. This support enables SITES to maintain a significant number of exhibitions that rent for \$200 and less. The goal of holding rental costs down is particularly important to smaller museums, galleries, and institutions throughout the United States which have limited financial resources. These organizations benefit most from SITES exhibits

since they generally lack exhibition design and production capabilities of their own. The following table depicts the relative numbers of exhibitions that rent for under and over \$200.

	<u>Exhibitions that rent for \$200 and less</u>	<u>Exhibitions that rent for more than \$200</u>
FY 1973	29	72
FY 1974*	52	52
FY 1975	68	49
FY 1976	107	70
FY 1977	104	131
FY 1978	82**	131

\*The first year of Federal support for SITES.

\*\*FY 1978 decline in number of exhibits that rent for \$200 or less is attributable mainly to the termination of special funding provided during the Bicentennial period.

The following bookings were scheduled in FY 1977 and the first three months of 1978:

	<u>FY 1977</u>	<u>FY 1978 1st 3 mos.</u>		<u>FY 1977</u>	<u>FY 1978 1st 3 mos.</u>
Alabama	15	8	Missouri	16	29
Alaska	6	2	Montana	1	4
Arizona	7	8	Nebraska	7	5
Arkansas	5	3	Nevada	7	6
California	62	37	New Hampshire	4	2
Colorado	25	14	New Jersey	11	10
Connecticut	10	6	New Mexico	3	3
Delaware	4	8	New York	67	36
Dist. of Columbia	20	4	North Carolina	20	11
Florida	30	16	Ohio	18	17
Georgia	12	7	Oklahoma	7	3
Hawaii	0	0	Oregon	10	6
Idaho	3	4	Pennsylvania	48	18
Illinois	33	20	Rhode Island	1	0
Indiana	21	12	South Carolina	3	6
Iowa	29	16	South Dakota	1	1
Kansas	23	16	Tennessee	0	15
Kentucky	11	9	Texas	61	37
Louisiana	13	4	Utah	1	3
Maine	10	0	Vermont	0	0
Maryland	23	11	Virginia	18	7
Massachusetts	32	15	Washington	9	9
Michigan	21	15	West Virginia	11	13
Minnesota	15	10	Wisconsin	27	16
Mississippi	6	4	Wyoming	2	0

Partial Listing of Exhibitions Beginning Tours  
During FY 1978

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Based on Smithsonian Collections

Bridges, Tunnels, and Hydraulic Works  
The Image of Urban Optimism  
Folk Arts and Crafts: The Deep South  
Korean Village in Transition  
What's in a Map?  
American Architectural Heritage (5 copies)  
Paper as a Medium  
New American Monotypes  
Exhibition Flight  
Louis M. Eilshemius in the Hirshhorn  
Museum Collection  
Scientific Illustration  
NASA Illustrations from Outer Space  
The Coast: A Closer Look  
Neoclassicism and Design  
Oil Sketches by Frederick E. Church

Based on Other Sources

Daum - 100 Years of Glass and Crystal  
The Great West  
French Popular Art  
Through the Microscope  
Adam and Eve  
Hungarian Art Nouveau  
Dorothea Lange: Photographs  
Birds of Prey: Paintings by Louis Agassiz  
Fuertes  
Treasures of Belgian Jewelry  
The Cell  
Handicrafts of the Southeast  
The Hidden World of Misericords  
Images of Old Age  
Indian Baskets of North America  
Charles Burchfield: The Charles Rand  
Penney Collection  
Portrait of America  
One Man's Vision: The Graphic Work of  
Odilon Redon  
Shaker Built  
Artists' Postcards  
World of Haitian Painting  
Sringar  
George Grosz: Works in Oil  
African Artists in America  
Contemporary American Quilts  
Embroideries by Children from Chijnaya

SMITHSONIAN INSTITUTION ARCHIVES

1977 Actual.....\$258,000  
 1978 Estimate.....\$289,000  
 1979 Estimate.....\$296,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>13</u>	<u>0</u>	<u>13</u>
11 Personnel Compensation.....	241	9	250
12 Personnel Benefits.....	23	1	24
21 Travel & Trans. of Persons..	2	1	3
24 Printing and Reproduction...	4	-3	1
25 Other Services.....	9	-1	8
26 Supplies and Materials.....	9	-5	4
31 Equipment.....	<u>1</u>	<u>5</u>	<u>6</u>
TOTAL	<u>289</u>	<u>7</u>	<u>296</u>
<u>Analysis of Change</u>			
Necessary Pay.....		7	
Program Funds.....		0	

ABSTRACT - The Smithsonian Archives is the official memory of the Smithsonian Institution and an important research resource for scholars working in the history of American science and culture.

No program increase is proposed for FY 1979, although further development of the Archives will take place within existing resources. Necessary pay in the amount of \$7,000 is requested.

PROGRAM - The overall goal of the Smithsonian Archives program is to preserve valuable archival documentation created by the Institution and to provide access to this body of archival documentation for administrators and scholars or scientists. Archives also are used to document the Smithsonian's specimen collections. Much of the archival documentation is sent to the Archives, but a large amount also remains in administrative or curatorial offices. Accordingly, the Archives provides access via centralized information systems to documentation that must remain dispersed physically.

Providing access to archives is quite different from cataloguing library books. Archivists begin by gaining general control over large bodies of archives and then proceed to develop more detailed control over these records as resources permit. The Smithsonian Archives program has been operational for 8 years, and its first objective is to preserve and provide some access to all archives in the Institution. Long range goals will be to provide detailed indexes to the most important of these documents. The following table summarizes work accomplished by the Smithsonian Archives in the past 8 years in providing access to archives throughout the Institution, and depicts work to be done in subsequent years.

Documentation Accessed by Central Archives  
(in millions of documents)

<u>Location</u>	<u>Survey only</u>	<u>Basic Guide</u>	<u>Full Guide</u>	<u>Detailed indexing</u>	<u>Total</u>
Central Archives	2.7		7.5		10.2
NMHT Curators' Collections		14			14
Other known	1.5		1		2.5
Subtotal	<u>4.2</u>	<u>14</u>	<u>8.5</u>	-	<u>26.7</u>
Estimated (but not yet surveyed)					<u>13.5</u>
TOTAL					<u>40.2</u>

Culmination of two major tasks was the milestone for calendar year 1977. First, the text was prepared for a new Guide to the Smithsonian Archives; this guide will give the public access to some 8.5 million documents of the Smithsonian, as compared with 2.7 million documents covered by the 1971 Guide. Second, text was prepared for a Guide to the Manuscripts Collections of the National Museum of History and Technology. This guide will give general access to some 14 million documents collected by the National Museum of History and Technology curators. Other achievements of FY 1977 include: microfilming of some 122,000 images; survey of 1.5 million documents in the National Air and Space Museum; increased transfers for major administrative offices in accordance with good records management practices; some 15 interviews in the part-time oral history project; completion of a records management manual by the Accounting Division covering some 7 million documents, and other progress in scheduling records throughout the Institution; and response to some 675 reference requests plus some 857 retrieval requests from accession records.

Major efforts during FY 1978 will be: publishing and distributing of the two guides prepared during FY 1977; initiating care of the official archives of the National Museum of History and Technology; and establishing a 5-year plan for complete coverage of the Smithsonian in the Archives program. During FY 1979, the Archives plans to have a full-fledged program operating in the National Museum of History and Technology; eliminate a backlog in the National Museum of Natural History; and start processing the 2.7 million document backlog in the Central Archives.

NATIONAL MUSEUM ACT

1977 Actual.....\$788,000  
 1978 Estimate.....\$794,000  
 1979 Estimate.....\$795,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	3	0	3
11 Personnel Compensation.....	47	1	48
12 Personnel Benefits.....	4		4
21 Travel & Trans. of Persons..	7	2	9
24 Printing and Reproduction...	5		5
25 Other Services.....	9	-2	7
26 Supplies and Materials.....	1		1
31 Equipment.....	1		1
41 Grants.....	720		720
TOTAL	794	1	795
<u>Analysis of Change</u>			
Necessary Pay.....		1	
Program Funds.....		0	

ABSTRACT - The National Museum Act is a technical assistance program under which grants are made for specific proposals which enhance the quality of museum operations by increasing the opportunities for training individuals to perform museum work; encouraging research and special studies for improvement of museum methods and practices; and assisting in the dissemination of technical information to the museum profession. No program increase is sought for FY 1979. Necessary pay in the amount of \$1,000 is required for existing staff.

PROGRAM - Funds appropriated to the Smithsonian Institution for the implementation of the National Museum Act are made available through grants and contracts to museums, professional museum-related associations, and universities. 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 to the Advisory Council thoughtful planning, careful structure, and sound administration receive support.

Since the program's inception, support has been provided for fellowships, internships, seminars and workshops, and travel-study projects, many of them concentrating on studies in museum conservation. The Act 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. In FY 1977, 223 applications for support were received and reviewed, and 82 grants totalling \$726,000 were made. Of these, 31, for a total of \$286,000, were related to museum conservation training and research activities.

Following the first grant application submission deadline in FY 1978, 86 applications were reviewed at the November, 1977 Advisory Council meeting and 46 grants totalling \$408,000 were awarded. Four grants were designated for seminar

workshop activities, 19 for conservation studies, 3 for advanced academic degree work, 10 for museum internship programs, and 10 for graduate/professional museum education and training. These grants were distributed among 22 individuals, 9 museums, 7 educational institutions, and 3 professional organizations. An additional 85 applications, submitted under the travel/study, professional assistance, and special studies and research programs, will be reviewed in March, 1978.

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. Continuous liaison is maintained with the National Conservation Advisory Council (NCAC), funded by the Act, whose aim is to assess the nation's needs in conservation training, research, and facilities, and to identify the most effective means of meeting those needs. Under support provided in FY 1977, NCAC continued to study issues related to a national institute for museum conservation and established special committees to investigate and report on particular aspects of conservation matters. During this period, a report of the study committee on architectural conservation was issued, as was a statement on control of environmental conditions for the preservation of cultural property in times of energy shortages. In FY 1978, reports will be issued by the committee for library and archival conservation and by the committee examining scientific support of conservation. A discussion paper on a national center for the conservation of cultural property will soon be completed, and during 1978 and 1979, NCAC will develop comprehensive guidelines and recommendations for the education and training of museum conservators and on the relationship of a national center for conservation to regional conservation programs.

## SMITHSONIAN INSTITUTION SPECIAL PROGRAMS

These special programs make use of total Institutional resources, including staff research competence and collections, and encourage interbureau or interdisciplinary cooperation. They produce outstanding scholarship, presentations, and additional opportunities for public education. Special programs include:

- The American and Folklife Studies Program coordinates the study of the material aspects of American civilization and the traditional folk cultures of the United States. This program provides a focal point for these areas dispersed in several bureaus.
- The International Environmental Science Program coordinates the special capabilities of the Smithsonian's science bureaus to study complex biological processes to better understand them so that solutions to national ecological problems can be determined.
- The Academic and Educational Programs offices conduct interdisciplinary seminar series, coordinate educational programs for students at the elementary and secondary school levels, and provide opportunities for outstanding pre- and postdoctoral investigators to work at the Institution, using staff and collections resources.
- The Smithsonian Research Awards Program enables the Institution to fund new and innovative research projects through a competitive selection process that involves rigorous scientific peer review. The Program is now administered by the Office of the Assistant Secretary for Science, in accordance with all applicable Federal personnel and procurement procedures.

Full descriptions of these programs appear in the following sections of this budget.

OFFICE OF AMERICAN AND FOLKLIFE STUDIES

1977 Actual.....\$129,000  
 1978 Estimate.....\$239,000  
 1979 Estimate.....\$293,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>4</u>	<u>0</u>	<u>4</u>
11 Personnel Compensation.....	136	43	179
12 Personnel Benefits.....	13	4	17
21 Travel & Trans. of Persons..	4	7	11
22 Transportation of Things....	2	-2	
23 Rent, Comm. & Utilities.....	3	-2	1
24 Printing & Reproduction.....	15	10	25
25 Other Services.....	51	-1	50
26 Supplies and Materials.....	5	2	7
31 Equipment.....	<u>10</u>	<u>-7</u>	<u>3</u>
TOTAL	<u>239</u>	<u>54</u>	<u>293</u>
<u>Analysis of Change</u>			
Necessary Pay.....		2	
Program Funds.....		52	

ABSTRACT - The American and Folklife Studies Program is engaged in the study of the material aspects of American civilization and the traditional folk cultures of the United States. In FY 1979, an increase of \$52,000 is requested to fund new ethnomusicologist and folklorist positions (\$42,000) and printing and publication costs (\$10,000). (No additional positions are required for the ethnomusicologist and folklorist since full-time permanent positions currently authorized will be reassigned to cover them.) Necessary pay in the amount of \$2,000 is required for existing staff.

PROGRAM - The American and Folklife Studies Program has been reviewed in detail by the Smithsonian Folklife Advisory Council, comprising folklorists, anthropologists, cultural historians, musicologists, and museum curators from within and outside the Institution. The Advisory Council has recommended, and the Smithsonian administration has agreed that the annual folklife presentation in Washington should be continued; that further research and publication exploiting the documentary source material amassed during the previous 10 years of festivals should be undertaken; and that cooperative arrangements between the Smithsonian Institution, the Library of Congress' new Folklife Center, the National Endowment for the Arts, and appropriate state and local organizations should be encouraged and pursued.

Working toward these objectives, a Washington folklife festival is being planned for the fall of 1978, based on the 1977 festival which closely integrated its folklife presentations with existing Smithsonian museum programs. Archival and editorial work continues on tape recordings and film footage gathered from past festivals from which three instructional video-tapes on ethnic children's lore with accompanying teacher's materials will be prepared. Resource finders' guides are also projected for future publication, and discussions are underway with officials of the State of Nevada who wish to undertake a folklife festival similar to the Smithsonian's with technical assistance from the Smithsonian and the Library of Congress and with grants-in-aid from the National Endowment for the Arts. Federal support available during FY 1978 for folklife programs under this heading totals 2 full-time permanent positions and \$178,000.

With the remainder of the resources identified under this heading, the Office of American Studies engages in cooperative programs at the graduate level with area and other universities in the material aspects of American culture. To date, approximately 75 students have enrolled in this program which makes available unique museum facilities as well as Smithsonian staff expertise. Of 21 students enrolled in the Ph.D. program since its inception, 20 are now employed in positions related to their academic training. This program provides the university community with a direct link to the museum.

EXPLANATION OF PROGRAM CHANGES - Currently, the Smithsonian's folklife unit performs research and programming in preparation for the annual Festival of American Folklife, archival research work related to the collections of documentary source materials, and all work entailed in the program of cooperative technical assistance provided to outlying state and local organizations interested in furthering their own folklife programs. For FY 1979, an increase of \$52,000 is requested to fund new ethnomusicologist and folklorist positions (\$42,000) and additional printing and publications costs (\$10,000) to improve the capability to meet the growing popular and scholarly interest in the Institution's folklife activities. The addition of an ethnomusicologist and a folklorist to the staff will be central to each of the three major program activities of this office: festival presentations, research competence, and cooperative technical assistance capabilities--especially in the fields of occupational folklore and musical presentation. The accompanying \$10,000 in printing funds will support the beginnings of a folklife publication program with scholarly works on occupational and family folklore.

The Smithsonian's folklife program plans to use these additional resources, as it has used its resources for over 10 years, toward the fulfillment of a basic commitment to study, preserve, and revitalize public appreciation for America's increasingly endangered folk cultures.

Although for FY 1979 the request for increased folklife support is limited to the programs of the Office of American and Folklife Studies, it is anticipated that during the course of the coming year the Smithsonian's Folklife Advisory Council will study the Institution's museum-based collecting, exhibiting, and curatorial activities, and that further budget recommendations may be forthcoming for FY 1980 to strengthen folklife capabilities in these areas as well. Congressional support for this measured approach to improving the quality and scope of the Smithsonian's folklife programs will help ensure the appreciation of Americans now and in the future for the richness and diversity of our surviving folk traditions on which so much of our national heritage is based.

INTERNATIONAL ENVIRONMENTAL SCIENCE PROGRAM

1977 Actual.....\$373,000  
 1978 Estimate.....\$381,000  
 1979 Estimate.....\$384,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	<u>2</u>	<u>0</u>	<u>2</u>
11 Personnel Compensation.....	179	3	182
12 Personnel Benefits.....	17		17
21 Travel & Trans. of Persons..	30	5	35
22 Transportation of Things....	5		5
23 Rent, Comm. & Utilities.....	4		4
25 Other Services.....	104	-5	99
26 Supplies and Materials.....	20		20
31 Equipment.....	12		12
41 Grants.....	<u>10</u>		<u>10</u>
TOTAL	<u>381</u>	<u>3</u>	<u>384</u>
<u>Analysis of Change</u>			
Necessary Pay.....		3	
Program Funds.....		0	

**ABSTRACT** - The International Environmental Science Program is designed to coordinate the special capabilities of the Smithsonian's science bureaus to study ecosystems which are subject to human disturbance. The team-oriented approach to research conducted by this program draws on all science bureaus, allowing scientists to pursue interbureau, interdisciplinary research without sacrificing the traditional methods of a single bureau. The individual investigator gains considerable freedom, and the environmental research program, at times composed of as many as 50 separate projects, is consolidated, maximizing the use of available resources. Scientists are collecting such data as the biology, physics, and chemistry of various communities on a watershed, important in predicting environmental change. Other studies are focusing on the productivity of a llanos area in Venezuela which will have implications for the wildlife in the Florida everglades and Gulf Coast states. The Smithsonian, by emphasizing the study of subtropical and tropical ecosystems, will be able to assist in providing keys to questions of natural resource management, new food alternatives, and the development of new energy sources. In the process of carrying out these studies, it also may be possible to learn what measures are necessary to conserve endangered species (including plants) and their critical habits. No program increase is sought for FY 1979. Necessary pay in the amount of \$3,000 is required for existing staff.

**PROGRAM** - The International Environmental Science Program was established in FY 1976 by combining the closely related Environmental Science and International Environmental Programs. The Environmental Science Program was established in FY 1971 as a multi-bureau, interdisciplinary effort to monitor ecosystems at two specific Smithsonian research facilities -- the Tropical Research Institute in Panama and the Chesapeake Bay Center for Environmental Studies in Maryland. The International Environmental Program is an interbureau, interdisciplinary effort aimed at studying various ecosystems in the tropics and subtropics. The Smithsonian Institution is uniquely qualified to undertake this type of research since it has both traditional expertise in international environmental research and the capability to sustain scientific programs on the necessary long-term basis. The

establishment of this program has enabled the Smithsonian to make maximum use of its resources in regions of interest to several bureaus.

Staff resources consist primarily of specialists from the National Museum of Natural History, the National Zoological Park, the Radiation Biology Laboratory, the Tropical Research Institute, and the Chesapeake Bay Center for Environmental Studies, as well as faculty and pre- and postdoctoral students from United States universities and research organizations abroad. The most intensive and detailed studies are based at the Tropical Research Institute and at the Chesapeake Bay Center for Environmental Studies. Work at these locations is centered around concern with the responses of plant and animal populations and communities to relatively long-term fluctuations in their biotic and abiotic environments. Specific examples of work in progress include the responses of insect communities to seasonal changes in rainfall and humidity; the effects on arthropod diversity and stability of agriculture, grazing and other modes of human disturbance; the effects of storms and unusual tidal conditions on populations of estuarine and intertidal organisms; and the long-term impact of environmental contaminants on plant growth and community diversity.

Additional elements of the International Environmental Science Program network are located at non-permanent facilities in the tropics where work is conducted with host country nationals, with the hope that these areas will ultimately support research centers themselves. Projects currently being carried out at non-permanent sites include a study of the marine ecosystem of the Galapagos Islands, Ecuador, with particular attention on the marine algae; tropical diversity studies in the highlands near Wau Papua, New Guinea; broad scale theoretical and environmental monitoring of the Amazon region; comparative ecological analysis of savanna and forest sites in northern and central Venezuela, and an ecological study of the dynamics of Royal Chitwan National Park in the terai of Nepal. At the majority of these sites, scientists, assisted by advance work at permanent Smithsonian facilities, have keyed their research to monitor ecosystems that contain threatened or endangered species, and have made important contributions to better management of endangered species and parks.

ACADEMIC AND EDUCATIONAL PROGRAMS

1977 Actual.....\$634,000  
 1978 Estimate.....\$698,000  
 1979 Estimate.....\$775,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>12</u>	<u>2</u>	<u>14</u>
11 Personnel Compensation.....	232	19	251
12 Personnel Benefits.....	23	2	25
21 Travel & Trans. of Persons..	4	2	6
23 Rent, Comm. & Utilities....	3		3
24 Printing and Reproduction...	30	15	45
25 Other Services.....	5	-1	4
26 Supplies and Materials.....	3		3
31 Equipment.....	2		2
41 Grants.....	<u>396</u>	<u>40</u>	<u>436</u>
 TOTAL	 <u>698</u>	 <u>77</u>	 <u>775</u>
 <u>Analysis of Change</u>			
Necessary Pay.....		5	
Program Funds.....		72	

ABSTRACT - A major Smithsonian objective and responsibility is to make its resources for learning (collections, professional staff, libraries and laboratories) available to the general public and the academic community. This objective is accomplished through programs in higher education, symposia and seminars, and activities at the elementary and secondary level. In FY 1979, an increase of 2 positions and \$72,000 is requested to meet the following education-related requirements: (1) \$40,000 to enable the Smithsonian to approximate the same number of fellowships as in FY 1977, given necessarily increased stipend amounts; (2) 1 position and \$9,000 to provide adequate clerical support for the programs of the Office of Symposia and Seminars; and (3) 1 position and \$23,000 to strengthen the publications of the Office of Elementary and Secondary Education. Necessary pay in the amount of \$5,000 is required for existing staff.

PROGRAM - I. Office of Academic Studies: The National Collections in the Smithsonian's care, and the scholars of humanities and science who curate and study them, represent unparalleled resources for specialized study in many disciplines. These resources cannot be duplicated at any university and consequently may be essential to the success of many scholars' research efforts. In universities and colleges the education process relies heavily on the study of library materials. By contrast, at the Smithsonian students work directly with historical and anthropological objects, original works of art, natural history specimens, living animals, plants and ecological systems in the museums, at the National Zoological Park, and in the field. For these reasons, the Smithsonian's resources offer an important complement to university education. The Institution recognizes its responsibility to make these resources available through its academic programs to students and scholars throughout the country.

To meet this responsibility the Smithsonian offers fellowships through the Smithsonian-wide Visiting Research Program, which is supported with appropriated funds designated for the Office of Academic Studies, and through special programs developed at the bureau level, supported by appropriated funds designated for the bureaus or by gifts and grants to the Smithsonian for the purpose of providing fellowships. The

Visiting Research Program is the core of the Institution's efforts to ensure that its full range of resources are made available to the academic community; the bureau-level programs are devised to present opportunities for study and training that relate principally to the resources of a particular bureau or program. All fellowships are administered by the Office of Academic Studies.

In recent years one of the Institution's priorities has been to increase the number of fellowships offered under the Visiting Research Program. This Program is considered by the national academic community and the Smithsonian's research staff alike to be a vital part of the Institution's endeavors. Fellowships are awarded to young scholars for advanced research training under the guidance of senior Smithsonian staff members. Predoctoral fellowships are available to students who will conduct their dissertation research in residence at the Smithsonian; postdoctoral fellowships are available to persons holding the doctorate who can demonstrate a need for Smithsonian resources to advance their professional training.

Smithsonian fellowships are awarded only after a rigorous and highly competitive process involving evaluation by outside referees and Smithsonian professional staff members who serve on selection committees constituted in eight disciplines ranging from geology to art history. After careful screening, approximately 200 final applications are reviewed annually, and most of these are judged fully worthy of appointment. Funds permit only about 40 awards, however, and those who do receive fellowships are some of the most promising rising scholars in their fields. As such they provide a valuable intellectual stimulus to the work of the Smithsonian's own curators and scientists by offering new ideas and helping keep the staff current with the latest developments in their fields. Many lasting collaborations are begun during a fellowship year and sustained through correspondence, visits, and joint publications. Staff members are enthusiastic about the program, and commit substantial time and effort to its success. At present some 350 staff members have expressed the desire to work with Fellows and are active each year in the review of applications. Some 40 staff members also serve on the selection committees.

The Smithsonian's experience with the Fellows during their residency has been extremely positive, and their later performance as professionals in teaching, research and public service has been exemplary. Past Fellows are regularly contacted after several years to learn the long-term results of their study at the Smithsonian. Extensive publication is common. More than half the Fellows enter teaching careers in academic institutions, and most others enter government and industry. Since 1965 Smithsonian fellowships have supported 289 doctoral candidates and 281 postdoctoral Fellows in the Visiting Research Program.

II. Office of Smithsonian Symposia and Seminars: The Office of Smithsonian Symposia and Seminars successfully carried out the Institution's sixth international symposium, "Kin and Communities: The Peopling of America," which began on June 14, 1977, with formal opening ceremonies at the John F. Kennedy Center. As the symposium progressed through a week of public sessions, workshops, colloquia, panels, festivals, and exhibitions -- including contributions by scholars and writers such as Amaury deRiencourt, Elizabeth Janeway, Wyatt Cooper, Edward Fiske, and Laura Bornholdt -- a clear perspective emerged testifying to the enthusiasm of pursuing individual family histories and their role in the larger national experience during the extended Bicentennial period. The office is now engaged in preparing in cassette form the much-applauded opening proceedings for distribution at cost through Smithsonian and other appropriate facilities.

In July, 1977 the first meeting of a recently-appointed Advisory Committee for Smithsonian Symposia and Seminars (consisting of 16 of the Institution's professional staff spanning its many bureaus) convened to oversee and consult on the various interdisciplinary activities developed by the office; among the committee's chief

purposes is to involve closer participation of the entire Institution in symposia and seminar programs and to ensure that these follow the basic research interests with which the Smithsonian is identified closely. Preliminary discussions have taken place in this new framework about the seventh symposium and other, smaller endeavors.

Cooperation has been extended already to the departments of religion of Brown and Columbia Universities and the Redwood Library of Newport, oldest in continuous use in the United States (1748), for a 1978 symposium called "From Religious Toleration to Freedom of Religion" to be held in the unique architectural settings of Newport, Rhode Island. An agenda has been proposed for a new annual lecture series at the Smithsonian on "Knowledge and Society" for both internal and external intellectual participation and enrichment.

III. Office of Elementary and Secondary Education: A major objective of the Office of Elementary and Secondary Education is to make Smithsonian resources for learning available to the local school community. Program activities include planning and conducting teacher workshops, developing audio-visual materials, and preparing school publications. The preparation of materials for a national teacher audience is also of high priority.

To encourage cooperation and exchange of information among the Smithsonian education offices and between those offices and local schools, the office 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 Smithsonian services and suggest ways of using museums as educational resources. A workshop and seminar program for local teachers now in its sixth year attracted over 1,800 teachers in FY 1977. Summer workshops include an orientation series entitled "Tuesdays at the Smithsonian"; two, one-week seminars on museum teaching methods; and a three-week course on applying Smithsonian exhibits in the classroom.

To share Smithsonian teaching concepts with the national teacher audience, a publication, entitled Art to Zoo, is now distributed without cost to some 7,000 elementary schools throughout the United States. A series of regional workshops for school and museum educators is planned in conjunction with the publication. In planning for these workshops and as a supplement to Art to Zoo, a 16mm film has been prepared to inform schools of the learning opportunities available in museums.

Other important activities of the office include the chairing of a special Smithsonian committee to consider the needs of handicapped visitors and employees and to promote increased accessibility to exhibition galleries and education programs; operating a resource center; and sponsoring a Docent Roundtable which brings together volunteer guides from the various Smithsonian museums to learn of the work of their colleagues.

#### EXPLANATION OF PROGRAM CHANGES:

Office of Academic Studies (\$40,000) - The stipend amount for pre- and postdoctoral scholars (\$5,000 and \$10,000 respectively) remained unchanged from FY 1972 through FY 1977. During that period, however, there was a major increase in the cost of living, the Consumer Price Index having risen over 50 percent. Nonetheless, the Smithsonian was reluctant to increase stipends because that would have meant a reduction in the number of fellowships that could be offered. In FY 1978, however, conferences with Fellows who had just completed their tenure indicated that stipends would have to be raised if the Institution were to continue to attract top scholars. A review of other research fellowships nationwide further revealed that average grants elsewhere had become significantly higher than the Smithsonian's \$5,000 and \$10,000 annual stipends. For example, the National Endowment for the Humanities now offers

fellowships for college teachers at \$14,500 for nine months and postdoctoral fellowships for independent study and research at \$20,000 for twelve months; the National Academy of Sciences/National Research Council grants an amount of \$17,000 for one-year studies in a range of scientific disciplines including biology, earth sciences and space sciences; and the Woods Hole Oceanographic Institution provides \$14,500 for one-year studies.

Given this substantial divergence with amounts awarded under other fellowship programs, and the increasing financial hardship Smithsonian Fellows have been facing, a decision was reached in the fall of 1977 to increase the stipend level to \$7,000 for predoctoral scholars and \$12,000 for postdoctoral scholars. Even with savings associated with the administration of the program and application of the FY 1978 increase of \$25,000, this change in stipend amounts will result in a reduction of five in the number of fellowships the Institution can offer beginning in FY 1978. This reduction in the number of awards will impair the Smithsonian's capability to meet the needs of universities and their young scholars who require the National Collections for research and professional development.

The Institution formally requested reprogramming authority from the Appropriations Committees early in FY 1978 to compensate for the higher stipend amounts. This request was denied with the counsel that proposed increases would receive consideration in the normal budget process. Accordingly, an increase of \$40,000 is sought in FY 1979 to permit the Smithsonian to approximate the FY 1977 level of fellowship awards in this important and productive program.

Office of Symposia and Seminars (1 position and \$9,000) - The continuing responsibilities of this office in developing symposia, seminars, and lecture series as well as maintaining correspondence with a large number of educational institutions require substantial typing and clerical support. For the office to meet its various responsibilities in a timely manner, 1 clerk-typist position and \$9,000 are essential to assist the professional staff.

Office of Elementary and Secondary Education (1 position and \$23,000) - An increase of 1 position and \$23,000 is requested to strengthen the publications program of this office. The proposed position is for a writer/editor who will assume responsibility for two major Office of Elementary and Secondary Education publications -- Let's Go (a news bulletin) and Learning Opportunities for Schools (an annual brochure). To date, these publications have been produced with the assistance of part-time appointments. The new writer/editor will also assume other responsibilities including creation of a publication format directed toward secondary school teachers for the office's national publication, Art to Zoo, and the development of teacher workshops and audio-visual materials for schools. Included in the requested increase is an amount of \$16,000 for printing funds needed to expand the distribution of Art to Zoo from its present 7,000 elementary schools to 17,000 schools nationally in FY 1979. This publication has been immensely successful since its inception in 1976 when it was distributed to an audience of 300 pilot schools. A portion of these funds may enable OESE to pilot a similar Art to Zoo format for secondary schools.

NATIONAL ANTHROPOLOGICAL FILM CENTER (CENTER FOR THE STUDY OF MAN)

1977 Actual..... \$ 42,000  
 1978 Estimate..... \$404,000  
 1979 Estimate..... \$409,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments<sup>/2</sup></u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>1</u>	<u>0</u>	<u>1</u>
11 Personnel Compensation.....	133	35	168
12 Personnel Benefits.....	12	4	16
21 Travel & Trans. of Persons..	50		50
22 Transportation of Things....	5		5
23 Rent, Comm. & Utilities.....	5		5
25 Other Services.....	57	-5	52
26 Supplies and Materials.....	47		47
31 Equipment.....	<u>95</u>	<u>-29</u>	<u>66</u>
TOTAL	<u>404<sup>/1</sup></u>	<u>5</u>	<u>409</u>
<u>Analysis of Change</u>			
Necessary Pay.....		5	
Program Funds.....		0	

ABSTRACT - The National Anthropological Film Center (NAFC) is engaged in the development of an anthropological film study center, and the coordination of international anthropological efforts on current social problems. No program increase is sought for FY 1979. Necessary pay in the amount of \$5,000 is required for existing staff.

<sup>/1</sup> Includes requested pay supplemental of \$10,000 for FY 1978.

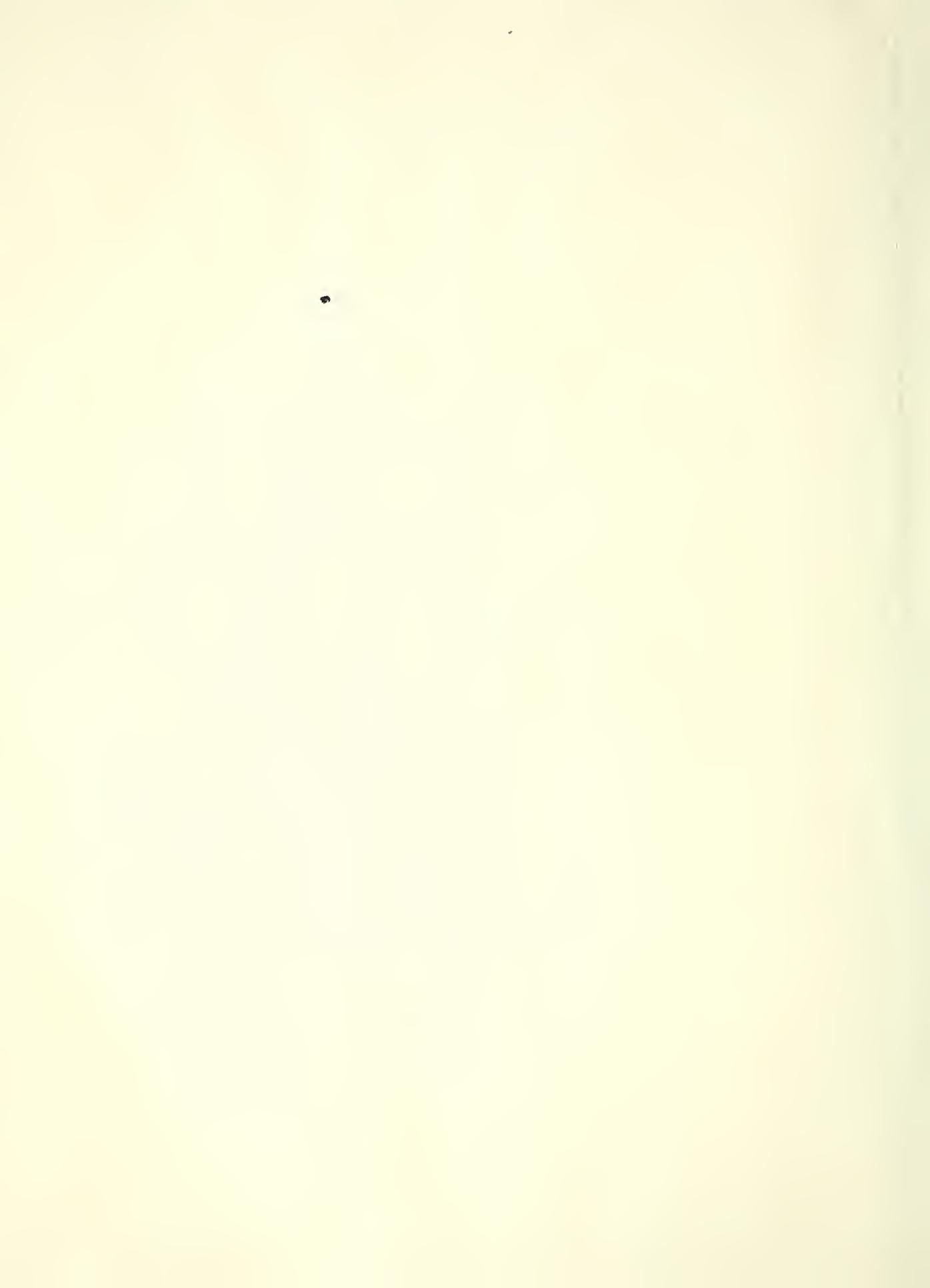
<sup>/2</sup> The adjustments in object class spending between FY 1978 and FY 1979 reflect the fact that key equipment and services will be purchased during the current year and that equivalent funds will be reapplied for temporary staffing in FY 1979.



Treaty Impact on STRI - FY 1979

1. Utilities - Utilities will be provided by the Republic of Panama. Rates approximately 40% higher	\$30,000
2. Supplies - Supplies formerly purchased from the Panama Canal Co. will have to be purchased from the Republic of Panama. Approximately 30% higher	35,000
3. Cost of living allowance because of possible loss of military privileges (i.e., P.X., commissary, schools, hospitals, etc.) Uncertain whether these privileges can be extended after ratification of the Treaty. Estimated costs:	
U.S. Nationals	126,517
Thrid Country Nationals	32,058
4. Housing Allowance - "Living Quarters Allowance" in lieu of 15% "Tropical Differential" should be established to be comparable with employees of Panama Canal Co., Dept. of State, AID, etc.	82,000
5. Ancon facility rental from Panama Canal Company (currently rent from Panama Canal Company @ \$240 month - after Treaty - rent free)	(2,880)

*approx 300K*



SMITHSONIAN RESEARCH AWARDS PROGRAM

1977 Actual.....\$390,000  
 1978 Estimate.....\$110,000  
 1979 Estimate.....\$390,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	0	0	0
11 Personnel Compensation.....	43	120	163
12 Personnel Benefits.....	4	12	16
21 Travel & Trans. of Persons..		95	95
22 Transportation of Things....	1	5	6
23 Rent, Comm. & Utilities.....	5	7	12
24 Printing & Reproduction.....	1	5	6
25 Other Services.....	41	18	59
26 Supplies and Materials.....	4	5	9
31 Equipment.....	11	13	24
<b>TOTAL</b>	<b>110</b>	<b>280</b>	<b>390</b>

Analysis of Change

Necessary Pay.....	0
Program Funds.....	280

ABSTRACT - The Research Awards Program was initiated in FY 1966 to fund new and innovative research projects. Since then, over 475 such projects have been funded through this program, resulting in some 650 publications. An increase of \$280,000 is proposed for FY 1979 to allow the continuation of this vital means of sustaining new research approaches under rigorous, impartial outside scientific review.

PROGRAM - The Research Awards Program which began in 1966 with an appropriation of \$350,000 has continued to finance innovative fundamental research on a competitive basis. Proposals are solicited from the staff and reviewed by a committee of distinguished scholars drawn from a variety of universities and research organizations throughout the United States. Prior to FY 1978, approved Research Awards proposals were administered by the Smithsonian Research Foundation. Pursuant to the recommendation in the Government Accounting Office Report GGD-77-43 and the language in the FY 1978 Appropriations Bill, use of the Smithsonian Research Foundation was terminated in 1978. The program is now administered directly, following all appropriate Federal personnel and procurement practices and procedures.

The Research Awards Program is designed to provide the opportunity and the stimulus for Smithsonian staff to respond quickly to new research initiatives. Many of these initiatives reflect current national problems. Moreover, the program is a true zero-base one in that only the best developed and most significant projects are funded regardless of the organizational location of the individual researcher. It is the Smithsonian position that a program that encourages annual competition for relatively limited funds, as opposed to one that provides base allocations to individual bureaus, stimulates innovation and creativity.

The Research Awards Program is intended to provide resources for initial investigation of promising new ideas on a much shorter term basis than the continuing research efforts that the Institution is committed to pursuing. Moreover, the program is intended only to fund projects through an initial investigation phase,

when the purchase of special research equipment and the hiring of temporary field and laboratory assistants must be done on very short notice. Promising, longer-term projects are submitted for funding through the regular budgetary cycle.

It should be emphasized that the Research Awards Program never contributes any part of the salary of any Smithsonian staff member except for field and laboratory assistants, who are hired only for the duration of the funded project. Further, when an award is made, the recipient is not relieved from his other normal responsibilities to develop and maintain collections, create exhibits, and attend scientific meetings.

Examples of projects funded under this program include research into the shape and vein patterns of fossil leaves which has enabled the much more accurate mapping of sedimentary deposits in the western interior of the United States. This information is useable in the search for oil, coal, and uranium in the area. Another project pertained to the detailed analysis of structure, chemistry, and mineralogy of numerous large meteorites. This work revealed the tremendous variety of processes which formed these bodies early in the evolution of planets. Also, under a Research Awards grant, the High-Energy and Optical and Infrared Divisions at the Smithsonian Astrophysical Observatory have developed a new detector for use in optical observations which will permit, by virtue of its significantly greater sensitivity and stability, observations of faint celestial objects heretofore unobserved, such as clusters of galaxies on the very edge of the known universe. This detector will be used at the Smithsonian Observatory at Mt. Hopkins, Arizona on its 60-inch and Multiple Mirror Telescopes for independent astronomical studies, as well as in support of the High-Energy Astronomy Observatory satellite (HEAO-B) to be launched by NASA in late 1978. These observations are anticipated to yield new information on the structure and evolution of the universe.

EXPLANATION OF PROGRAM CHANGE - The Smithsonian Institution continues to regard its Research Awards Program as a high priority item. The program -- which allows the opportunity for creativity on the part of staff researchers -- is essential to enable the Institution to compete with universities or private firms for the most talented scientists. While the role of the Smithsonian Research Foundation was only administrative, with its abolishment it is essential that the Research Awards Program be judged on the basis of its merit and accomplishments. With a small infusion of Federal funds (some \$5 million in 13 years), there has been ample pay-off in terms of scientific breakthroughs and discoveries.

Most basically, however, if the Smithsonian Institution is to retain its leadership role in basic research in the United States and abroad, the Research Awards Program requires an adequate funding level. The incentive, provided by the program, for staff scientists to evolve original research projects is crucial to the continued vitality, intellectual growth and scientific integrity of the Institution. For FY 1979, an amount of \$390,000, the same funding level as FY 1977 and a \$280,000 increase over the current year, is considered to be about the minimum investment necessary for an effective awards program throughout the Institution. It should be noted that this request includes a substantial amount, \$95,000, for essential travel associated with the funded projects. The nature of the research conducted under this program necessitates travel to field sites throughout the world.

March 14, 1978

Jameson, Yell - 1

Administration

Office of the General Counsel

FY 1978 Request disallowed -- \$23,000 to hire a part-time law clerk and a part-time secretarial assistant and to meet the essential needs of the office for maintenance of a law library, attendance at seminars by the legal staff and for the purchase of supplies and materials. (In addition to denying the requested increase of \$23,000, Congress reduced the base funding for this organization by an additional \$2,000.)

FY 1979 Request -- \$15,000 to provide sufficient support funds to meet operational needs of the office (\$8,000 would allow increased hours for part-time staff and \$7,000 would fund essential, minimal needs of the office, including office supplies, law library subscriptions, office equipment maintenance and rental, and reimbursement to GPO for printing and distribution costs of Smithsonian material in the Federal Register and the Code of Federal Regulations.)

Office of Supply Services

FY 1978 Request disallowed -- 1 position and \$13,000 to hire contract specialist to keep pace with mounting workload and cope with the greater complexity of contract administration and \$12,000 to stock essential supplies.

FY 1978 Request -- 1 position and \$16,000 to hire contract specialist to keep pace with mounting workload and cope with the greater complexity of contract administration and \$4,000 to purchase and stock essential supplies.

Management Analysis Office

FY 1978 Request disallowed -- \$8,000 to purchase supplies and materials and rent copier equipment.

FY 1979 Request -- \$6,000 to fund equipment rental contracts (word processing and distribution equipment and an electronic composer) essential to improvement of the directives and forms management systems within the Institution.

Not forwarded to Senate, used only as Hearing back-up.



ADMINISTRATION

1977 Actual.....\$5,494,000  
 1978 Estimate.....\$6,292,000  
 1979 Estimate.....\$6,513,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	235	3	238
11 Personnel Compensation.....	5,066	196	5,262
12 Personnel Benefits.....	485	19	504
21 Travel & Trans. of Persons..	40	7	47
22 Transportation of Things....	4		4
23 Rent, Comm. & Utilities.....	97	22	119
24 Printing and Reproduction...	92	1	93
25 Other Services.....	333	-24	309
26 Supplies and Materials.....	106	8	114
31 Equipment.....	64	-3	61
Acquisitions for Collections	5	-5	
TOTAL	6,292	221	6,513
<u>Analysis of Change</u>			
Necessary Pay.....		102	
Program Funds.....		119	

ABSTRACT - The Administration activity provides for the overall direction of the Smithsonian Institution, for legal services, for managing its administrative support, including financial, personnel, facilities, and computer services; for public information; and for the maintenance of internal controls. For FY 1979, a net increase of 3 positions and \$119,000 is requested, including proposed increases of 7 positions and \$165,000 offset by planned reductions of 4 positions and \$46,000. The additional requested resources will be used to strengthen the audit, facilities planning, supply services, budget, management analysis and legal functions. The planned decreases are associated mainly with completing the conversion to an integrated automated accounting system, personnel costs savings in the area of travel services, a position reduction in computer services, and an alternative approach to funding meetings of the Smithsonian Council. An amount of \$102,000 is required for necessary pay.

PROGRAM - Within this activity, the Office of the Secretary with the assistance of the Office of the Assistant Secretary for Administration is responsible for planning, implementing, and reviewing the progress of all programs of the Institution.

The Office of the General Counsel provides all legal services for the Smithsonian which combine those arising from the operation of a university-like charitable corporation with those common to government organizations.

The Office of the Treasurer has primary responsibility for Smithsonian financial management. This includes overall direction of financial planning and budgeting, accounting and financial reporting functions, administration of grants and insurance, management of certain auxiliary activities such as the Museum Shops, bank relations, and oversight of investments.

The Office of the Coordinator of Public Information consists of the Offices of

Public Affairs, Special Events, and Congressional Liaison. These offices are responsible for providing information about the Smithsonian and its programs to the general public and to the Congress; and arranging a variety of functions including exhibit and museum openings, lectures and services.

The Office of Personnel Administration is responsible for recruitment, placement, position classification, and equal opportunity as it relates to personnel management. The office also has the responsibility for employee training and development, labor-management relations, and for personnel management evaluation and personnel policy and program development.

The Office of Audits is responsible for performing all internal and external auditing functions of the Institution. The internal function includes responsibility for auditing the more than 50 Federal operating units, programs, and staff offices, as well as all trust fund activities of the Institution. The external audit function involves the audit of documentation in support of claims, costs, cost proposals and cost and pricing data arising from Smithsonian-funded contracts, grants and other financial agreements. These audits are performed upon request of the contracting officer and as required by law.

The Equal Opportunity Program, established by Executive Order 11246 and further implemented by the "Equal Employment Opportunity Act of 1972" (P.L. 92-261), requires the Smithsonian to conduct a positive action program which will provide true equality in all Smithsonian employment practices. It is the responsibility of the Office of Equal Opportunity to conduct such a program. Major efforts currently underway include counseling, upward mobility, a Women's Program, a Sixteen Point Program for the Spanish-speaking, a program for handicapped persons, and ensuring equality of opportunity through affirmative action.

The Office of Computer Services is responsible for developing automated administrative and collections management systems and works with curators, historians, scientists, and management personnel to apply mathematical techniques to research problems.

The Office of Supply Services procures supplies, materials, contractual services, and equipment for research, curatorial, exhibits preparation, and other Smithsonian activities. The office also maintains all property records and schedules and oversees periodic inventories to ensure proper accountability and security.

The Management Analysis Office performs a wide range of general management staff assistance and advisory services related to museum, research, and support operations in the Smithsonian. The office provides management advisory services, makes studies of systems and procedures particularly as they relate to proposed administrative instructions, and assists in the evaluation and analysis of management problem areas.

The Office of Facilities Planning and Engineering Services provides professional architectural and engineering services for the buildings and facilities management function, including long and short range planning, engineering analysis, design, cost and budgetary estimates, contract supervision, construction management, engineering analysis, and general construction administration.

EXPLANATION OF PROGRAM CHANGES - Within the Administration activity, 7 new positions and \$165,000 are requested for program improvements in audit, facilities planning, supply, budget, management analysis, and legal functions.

The "Hughes Report," as one of its recommendations, suggested that the Smithsonian Office of Audits should be augmented by such additional positions as will

permit it to maintain a 5-year audit cycle. Additional resources are proposed for the Office of Audits to enable it to make progress toward meeting that goal.

Facilities planning continues to be a major focus of management attention. Since the establishment of the Office of Facilities Planning and Engineering Services (OFPES) in FY 1974, there has been a strong emphasis placed on improved management methods to ensure the cost effectiveness of construction projects, to develop a planning capability to forecast needs accurately, and to promote maximum efficient use of resources. With existing staffing levels, approximately one-third of the requests for architectural and engineering assistance must be deferred with resultant cost increases stemming from inflation. Accordingly, additional staff is needed to enable OFPES to provide professional service to all Smithsonian bureaus on a timely basis. Additional staffing and support cost increases are also proposed in the budget, management analysis, legal services, and supply functions to meet steadily growing workloads.

Offsetting the requested new resources are recommended reductions of 4 positions and \$46,000. The position decreases are designated for the Accounting Division and the Office of Computer Services and can be achieved by the completion of conversion to an integrated automated accounting system and increased efficiencies in computer operation. Also, the termination of the Smithsonian Research Foundation has required that alternative approaches be found for the administration of certain programs and projects. Included among these are the meetings of the Smithsonian Council, a group of distinguished scientists and scholars from across the country who meet twice a year to review and advise on the Institution's programs. Henceforth, the expenses of the Council members will be met with unrestricted trust funds. Dollar savings in the Federal appropriation will result. And, finally, as a result of filling vacant positions in the travel services area with lower-graded personnel, savings in personnel costs are projected.

OFFICE OF PRINTING AND PHOTOGRAPHIC SERVICES

1977 Actual.....\$901,000  
 1978 Estimate.....\$976,000  
 1979 Estimate.....\$954,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>39</u>	<u>0</u>	<u>39</u>
11 Personnel Compensation.....	613	23	636
12 Personnel Benefits.....	59	2	61
21 Travel & Trans. of Persons..	2		2
22 Transportation of Things....	1		1
23 Rent, Comm. & Utilities.....	15		15
24 Printing and Reproduction...	5		5
25 Other Services.....	125	-67	58
26 Supplies and Materials.....	126		126
31 Equipment.....	<u>30</u>	<u>20</u>	<u>50</u>
 TOTAL	 <u>976</u>	 <u>-22</u>	 <u>954</u>
 <u>Analysis of Change</u>			
Necessary Pay.....		15	
Program Funds.....		-37	

ABSTRACT - The Office of Printing and Photographic Services (OPPS) is the Institution's central office for technical advice, guidance, and production of all matters concerning photographic, duplicating, and printing services. The office coordinates photographic and printing activities and supplies technical support to the curatorial, scientific, technical, and administrative staffs. It also provides photographs, slides, and transparencies with lectures to the general public, schools, research foundations, educational publications, other museums, and government agencies. A decrease of \$37,000 is recommended for FY 1979 reflecting the decision to substitute a Smithsonian-owned phototype capability for the service currently provided by the Government Printing Office (GPO) on a reimbursable basis. Necessary pay in the amount of \$15,000 is required for existing staff.

PROGRAM - OPPS provides photographic, printing and other reproduction services in support of research, collections management, and public education. Photographic services include studio and on-site photography, photographic copy restoration, processing and printing, filing and retrieval of negatives, preparation of responses to public inquiries, and filling orders. In FY 1977, the office processed some 300,000 color slides and transparencies and produced more than 200,000 black and white prints.

Printing and reproduction services include the production of certain exhibit catalogues, education pamphlets, and information leaflets. In addition, OPPS prints and reproduces a variety of manuals, reports, specimen labels, and administrative directives. These services are accomplished through the use of multilith and electrostatic copier equipment.

EXPLANATION OF PROGRAM CHANGES - Currently, the Government Printing Office provides phototype capability to the Institution on a reimbursable basis. A cost analysis of this service has indicated that a one-time phototype equipment purchase (\$20,000) and a part-time machine operator (\$10,000) can enable the Smithsonian to perform its own phototype service more economically than under the present arrangement. Savings of \$37,000 can be identified for FY 1979, with additional reductions anticipated in future years once the equipment is in place.

OFFICE OF PROTECTION SERVICES

1977 Actual.....\$7,508,000  
 1978 Estimate.....\$8,727,000  
 1979 Estimate.....\$8,974,000

(Dollars in thousands)	<u>Base FY 1978</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1979</u>
Number of Permanent Positions..	<u>547</u>	<u>3</u>	<u>550</u>
11 Personnel Compensation.....	7,295	213	7,508
12 Personnel Benefits.....	701	22	723
21 Travel & Trans. of Persons..	11	4	15
23 Rent, Comm. & Utilities.....	8		8
24 Printing and Reproduction...	3		3
25 Other Services.....	371	-4	367
26 Supplies and Materials.....	287	3	290
31 Equipment.....	<u>51</u>	<u>9</u>	<u>60</u>
TOTAL	<u>8,727</u>	<u>247</u>	<u>8,974</u>

Analysis of Change

Necessary Pay.....	147
Program Funds.....	100

ABSTRACT - The Office of Protection Services (OPS) is responsible for the security, fire protection, safety and health programs of the Institution. For FY 1979, a net increase of 3 positions and \$100,000 is requested. A proposed increase of 5 positions and \$260,000 is sought to meet the following requirements: (1) Implementation of Protection Study Recommendations -- \$160,000 to upgrade selected groups of security force positions commensurate with General Services Administration standards; (2) Proprietary System -- 4 positions and \$80,000 to provide an alarms maintenance capability for the Smithsonian-owned system; and (3) Health Services -- 1 position and \$20,000 for a nurse to strengthen the health services program. These proposed increases will be offset by a reduction of 2 positions and \$160,000 associated mainly with the planned rescheduling of extended summer hours. An amount of \$147,000 is also required for necessary pay.

PROGRAM - The Office of Protection Services provides security, fire protection, safety and health services to the visitors (over 23,000,000 in FY 1977) and employees (some 5,000) of the Institution. The responsibilities of OPS are carried out pursuant to P. L. 82-206 and 88-391 related to the policing of the buildings and grounds of the Smithsonian Institution and its constituent bureaus, and P. L. 91-596 and Executive Order 11807 which deal with occupational health and safety. OPS responsibilities extend to 10 major museums and art galleries and various other Smithsonian facilities in the Metropolitan Washington, D.C. area as well as the Cooper-Hewitt Museum of Decorative Arts and Design in New York City. Occupational health and safety programs have also been administered at the National Zoological Park, the Smithsonian Tropical Research Institute, the Chesapeake Bay Center for Environmental Studies, and the Smithsonian Astrophysical Observatory. Inspections, technical assistance, and other advisory services are also provided to these Smithsonian activities.

The mission of OPS is carried out by a staff including guards who protect the facilities, staff, and visitors and enforce laws on Smithsonian property; safety specialists who administer occupational safety and health programs and conduct

inspections throughout the Smithsonian; fire engineers and inspectors who help plan the fire prevention program and inspect the buildings and facilities; medical staff who administer health programs for the staff and visitors; alarm systems specialists who work with and help plan and install electronic and other physical security systems; and administrative support personnel who are involved in managing personnel, budget, training, supply, and clerical functions.

The primary function of OPS is to provide security to the exhibits, reference collections, and the visiting public. This is accomplished by placing security officers in the galleries, grounds, and at entrances and exits during the day and by conducting security and fire patrols after the museum buildings are closed to the public. The placement of security officers is based on the designation of "posts." A post may be one point (for example, an entrance to a museum), or an area, varying in size, based upon: the use of the area; crowd conditions; the value of objects on display; the vulnerability of those objects to accidental damage, theft, and vandalism; the effective field of vision of the assigned protection personnel; and the ability to employ electronic protective systems. The number of persons required to staff one post may vary from 1 (the post must be staffed eight hours a day, five days a week), to 5 (the post must be staffed 24 hours a day, seven days a week). An extensive radio and telephone communications network enables security officers to respond quickly to all situations. Over 250 alarms are received per day, all of which demand immediate response. The security force is in operation 24 hours a day, 7 days a week. It is responsible also for investigating accidents, reporting possible fire and safety hazards and malfunctions in mechanical and environmental equipment, and acting as an information resource for the visitors to the museum.

The fire and safety programs have been expanded to include quarterly fire inspections of each facility and annual safety and industrial hygiene inspections. The inspections have enabled OPS to institute long range plans for installation of required new and upgraded fire systems for compliance with safety regulations. The health services program operates four health units for the convenience, assistance, and emergency calls of the staff and visitors. During FY 1977, the health units provided some 40,000 treatments (an average of 110 per day).

The development of the Smithsonian Institution proprietary alarm system is proceeding according to schedule, which calls for completion by 1983. By early 1979, the preliminary preparation of each of the buildings for connection to the control center will be completed. Initial monitoring equipment should be installed in each of the security offices later in that year.

The number of misdemeanors and felonious incidents committed in calendar year 1977 totaled 330, slightly higher than the 1975 and 1976 figures. The minor increase can be attributed to steadily rising visitation. Special efforts are made to curtail crime through use of canine teams after hours and the deployment of plainclothes officers.

#### EXPLANATION OF PROGRAM CHANGES:

Implementation of Protection Study Recommendations - In September, 1977, a comprehensive personnel management survey of the Office of Protection Services was completed. The survey found that a significant portion of the security force was undergraded as compared with other protective forces in the area. The study report recommended an upward reclassification of selected groups of positions on the security force. An amount of \$160,000 is needed to effect the proposed upgradings.

Proprietary Alarm System Installation and Maintenance - During the past several years, Smithsonian-owned alarm and security systems have been installed as part of the Institution's objective of achieving a security system that is entirely

self-owned and operated. Four new alarms maintenance positions and an amount of \$80,000 are requested to provide the capability to install systems and establish and conduct preventive maintenance programs for fire and exit doors, "panic" hardware, door closers and electric locking devices. The additional positions will be used also to identify, connect and electronically match the different alarm systems with a device that will enable all systems to become part of the proprietary system and to maintain some alarm systems equipment not covered by maintenance contract.

Health Program - An additional nurse position and \$20,000 are requested to contribute toward the establishment of a full-fledged health services program, including pre-employment physical examinations. The additional position will also permit all health units to be open 5 days a week and two units to be opened on weekends as well. Moreover, additional coverage will be available during the summer evening hours.

The proposed increase of 5 positions and \$260,000 will be offset by savings of 2 positions and \$160,000 from minor reorganizations and the planned rescheduling of extended summer hours. In past years the summer hours at the Smithsonian have extended the closing time of major museums from 5:30 to 9:00 for the period April 1 through Labor Day. The first two months of this period, April and May, historically, have had low visitation. Therefore, it is proposed that in FY 1979 extended summer hours not begin until the Memorial Day weekend with the notable exception of extended evening hours on Easter weekend also. Savings of \$110,000 can be realized by this means with minimal inconvenience to the visiting public.

OFFICE OF PLANT SERVICES

1977 Actual.....\$13,905,000  
 1978 Estimate.....\$16,124,000  
 1979 Estimate.....\$16,110,000

(Dollars in thousands)	Base FY 1978	Proposed Adjustments	Est. FY 1979
Number of Permanent Positions..	322	0	322
11 Personnel Compensation.....	5,548	111	5,659
12 Personnel Benefits.....	533	11	544
21 Travel & Trans. of Persons..	3	2	5
23 Rent, Comm. & Utilities....	9,141	-138	9,003
24 Printing and Reproduction...	7		7
25 Other Services.....	427		427
26 Supplies and Materials.....	400		400
31 Equipment.....	65		65
TOTAL	16,124	-14	16,110

Analysis of Change

Necessary Pay.....	118
Program Funds.....	-132

ABSTRACT - The Office of Plant Services (OPLANTS) operates, maintains, and repairs 10 museums and art gallery buildings and a number of other work and collection storage areas located in the Washington Metropolitan area. It provides utilities, transportation, mail, and telephone services in support of research, exhibit, education, and other public programs. In addition, technical advice and assistance is made available to other Smithsonian units located away from the Washington, D.C. area. For FY 1979, a net decrease of \$132,000 is recommended. A proposed increase of 3 positions and \$77,000 is sought for the following requirements: (1) 2 positions (sheetmetal mechanics) and \$31,000 to implement a preventive maintenance program for the roofs of Smithsonian museums and buildings in the Washington area; (2) 1 position and \$16,000 for supply management; and (3) \$30,000 for telephone switchboard expansion. These proposed increases will be offset by a reduction of 3 positions and \$209,000 mainly related to savings anticipated from utilities conservation measures. An amount of \$118,000 is required for necessary pay.

PROGRAM - 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 10 museums and art galleries. Services are provided also to other work and storage areas including space in leased facilities. Operational responsibilities for utilities funding and management include large and complex air-conditioning, heating, and ventilating systems and electric or electronic environmental controls and systems for the comfort of visitors and for the protection of buildings, natural history specimens, paintings, sculpture, and objects of American history and technology. In FY 1978, OPLANTS assumed responsibility for the utilities accounts (electricity, oil, steam, gas, and water) of most off-Mall units. This step toward full centralization of utilities funding is designed to promote greater efficiency in budgeting in this complex area.

Trade and craft assistance, such as carpentry, painting, and electrical work is provided to hundreds of research projects, exhibition installations, and special

public events every year. Packing, crating, warehousing, and moving services are carried out for museum objects and collections. OPLANTS also has responsibility for communications systems including the management and funding of telephone installations and services (Federal Telecommunications System and local calls), the processing of outgoing mail, and the delivery of incoming mail. Transportation services including maintenance, repair and operation of vehicles are also conducted by the office.

The computerized power management system, installed in the History and Technology Building in early 1975, was extended into the Arts and Industries, Smithsonian Institution, and Natural History Buildings in FY 1977. The system -- which assures through the use of remote sensors that prescribed levels of power consumption are not exceeded -- is scheduled to be completed in the current year, with installation planned in the National Air and Space Museum.

Also in FY 1977, a computerized instruction and report system for identifying preventive maintenance requirements of all fire prevention, automatic lighting and guard stations throughout Smithsonian buildings in the Washington area and a similar system for all heating, ventilating, and airconditioning mechanical equipment were installed in the National Museum of History and Technology, Smithsonian Institution and Arts and Industries Buildings. The latter system is scheduled to be extended this year to include the National Museum of Natural History, Silver Hill facilities, Anacostia Neighborhood Museum, and the Smithsonian Institution Service Center. These computerized systems are designed to assure efficient maintenance of the Institution's security equipment and heating, ventilation and air-conditioning systems, thus contributing to the safety of the Smithsonian's collections and buildings.

In addition, the Institution has initiated the installation of a computerized system to monitor and analyze the various mechanical equipment in buildings located on the Mall, the Renwick Gallery, and the Fine Arts and Portrait Galleries Building. This system, anticipated to be completed in FY 1979, involves the installation of sensors on over 3,900 pieces of equipment which will automatically alert a central computerized control center when the equipment is malfunctioning. Currently, OPLANTS operating engineers must inspect all equipment on a continual basis once each eight-hour shift; these tours require a total of 46 employees. In FY 1978 and 1979 these employees will be redirected from inspection tours to much needed operations, preventive maintenance and repair tasks related to the heating, ventilating and air-conditioning (HVAC) systems. Based on a thorough inventory of equipment, preventive maintenance tasks needed to be performed, and the frequency and time needed to perform each task, it is estimated that current staffing for the preventive maintenance of HVAC systems is short by over 50 mechanics. The planned redirection of employees will, by the end of FY 1979, have significantly reduced this shortfall.

EXPLANATION OF PROGRAM CHANGES - An increase of 3 positions and \$77,000 is requested for the following buildings management requirements:

Preventive Maintenance - 2 positions (sheetmetal mechanics) and \$31,000 are needed to implement a preventive maintenance program for the roofing systems in all Smithsonian Institution museums and buildings in the Washington Metropolitan area. This program will reduce or eliminate the potential danger of water damage which could cause irreparable damage to the National Collections and Smithsonian buildings and will reduce future expenditures for major renovation and repair work.

Supply Management - An additional position (supply specialist) and \$10,000 are requested to enable OPLANTS to identify, requisition, stock, issue, and control adequately supplies used for the craft and trade operations and preventive maintenance programs. The volume of work in the supply office has increased to the point that backlogs have developed in the receipt and issuance of necessary supplies.

These backlogs, in turn, have created delays in the performance of necessary repairs and improvements and preventive maintenance tasks. In addition, support funds of \$6,000 are requested for essential supplies, materials, and shelving equipment to improve stockroom capabilities.

Telephone Switchboard Expansion - A survey of the Smithsonian's switchboard capacity has indicated that the Institution is approaching its limit of available telephone numbers. Additional telephone lines are required to meet the demands of increased telephone usage associated with programmatic growth over the past several years, inquiries about the Smithsonian and its programs, and expanded reliance on telephonic communication as travel has decreased. Steps have been taken to assure that existing numbers are assigned on an up-to-date basis. An amount of \$30,000 is requested for additional lines and related costs.

These proposed increases are offset by a reduction of 3 positions and \$209,000. The major part of these savings (some \$168,000) is anticipated as a result of conservation measures in the utilities area, such as installation of the building equipment monitoring system and more efficient lighting. Additional reductions (3 positions and \$41,000) will be achieved through elimination of bus shuttle service between the History and Technology Building and the Fine Arts and Portrait Galleries Building, no longer necessary because of Metro; planned institution of a contractual paid parking system for employees; and curtailment of internal mail delivery from three to two deliveries a day.

TAB B

SCIENCE INFORMATION EXCHANGE



SMITHSONIAN SCIENCE INFORMATION EXCHANGE, INC.

1977 Actual.....\$1,972,000  
1978 Estimate.....\$1,862,000<sup>/1</sup>  
1979 Estimate.....\$2,218,000

The Smithsonian Science Information Exchange (SSIE) is the only single source of information on research in progress in all fields of science. By providing an information resource which spans both agency missions and the traditional disciplines of science, SSIE is able to assist the nation's research community in:

- avoiding unnecessary and unwitting duplication of research;
- improving the process of scientific communication; and
- enhancing the development and implementation of strategies for research planning, management, and science policymaking.

In serving this purpose, SSIE makes every effort to maintain and operate the most comprehensive and timely data base of ongoing research information possible and to facilitate its widespread use.

Response to Prior Requests of the House and Senate Appropriations Committees

The appropriation request for SSIE in FY 1978 was cut by \$200,000 based on the belief, as stated in the conference committee's report: "...that user fees should bear a greater share of the operating costs of the Exchange." While the Institution agrees that user revenues should contribute to a greater extent to the cost of SSIE's operations, the increases in revenues which are needed require prior improvements in the comprehensiveness and timeliness of the data base. These improvements could be made if Federal agencies were to insure that their information on research in progress was reported to SSIE on a more complete and timely basis.

In the interim, Federal support at a level which will ensure the processing of all information currently received is necessary if the Exchange is to maintain its present value to its users and its present rate of growth in user revenues. The proposed budget for SSIE includes a request for the additional funding necessary to provide for the processing of project records in FY 1979 which would otherwise have to be set aside. The decrease in staffing of 10 people in FY 1978 which was necessitated by the budget cut is expected to limit FY 1978 increases in user income. The restoration of funding to process information not entered into the system during FY 1978, on the other hand, should aid in increasing user revenues in FY 1979 by an estimated \$200,000.

The request by the Senate Appropriations Subcommittee that efforts be initiated to "...effect the smooth transition of this Exchange to Federal status..." has resulted in a series of meetings between SSIE and OMB officials to determine the most appropriate institutional affiliation for SSIE. OMB has recommended that this question be addressed by the President's Reorganization Project in the spring of 1978 and, in the meantime, that SSIE continue to be operated as it has been in the past, with the increases in Federal support which are included in the present budget request.

With regard to the House Appropriations Subcommittee's request that "...the Smithsonian Institution request reports from [SSIE] comparable to those required of government corporations pursuant to the Corporation Control Act, and in turn, supply copies of these reports to the Committee," the Institution plans to provide these reports as soon as audited data for FY 1977 are available.

<sup>/1</sup> Includes requested FY 1978 pay supplemental appropriation of \$85,000.

## Increase in Federal Support

The Institution is seeking an appropriation of \$2,218,000 (Table I) to support the continued operation of the Exchange in FY 1979. This request represents restoration of the FY 1978 reduction of \$200,000 from SSIE's FY 1977 appropriation level, and adds \$156,000, for a total increase of \$356,000 over the FY 1978 appropriation. The proposed increase will allow the Exchange to meet OMB's request that SSIE:

- (1) Process into its data base approximately 20,000 research project descriptions, which would not otherwise be processed in FY 1979, in order to maintain a comprehensive data base.
- (2) Develop and implement revised indexing techniques which will further minimize the cost of processing input but maintain the scientific quality necessary to assure meeting user needs.
- (3) Develop methods for the "tracking" of a research project from its conception up through and including the development of technical reports and publication in the scientific literature.

With regard to Item (1), SSIE has developed relationships with over 1,300 supporting organizations for the voluntary registration of research project information. Many of these relationships have existed for long periods of time and are linked with continued usage of SSIE services, the value of which tends to justify the organizational costs of data collection. Failure by SSIE to register information on these additional 20,000 descriptions would carry with it the risk of permanently jeopardizing some of these relationships by weakening both the coverage of the data base and its value to users. It is essential that this risk be avoided, if SSIE is to continue to increase its income from user revenues in order to offset and eventually reduce Federal appropriations.

With regard to Items (2) and (3), the Exchange will design the improvements in its indexing system so as to be as compatible as possible with the National Technical Information Service (NTIS). The Exchange will also work toward the development of a "tracking" system for research projects, so that it will be possible to identify reports emanating from individual research projects, irrespective of an organizational merger with NTIS.

Revisions to SSIE's present system of indexing are necessary if the cost of indexing increasing numbers of projects is to be minimized and if Federal appropriations ultimately are to be reduced to a significant extent. Moreover, these changes are expected to reduce retrieval costs and help increase output product and service income. Funding for this effort, which is long overdue, cannot be expected to impact on user revenues in FY 1979, but it should show an effect in FY 1980 on both the Federal appropriation and user income.

The development of a "tracking" system for linking research in progress to technical reports and publications is an important effort which will provide R&D managers and policymakers with one method of measuring output derived from the expenditure of Federal funds for research, and may provide insight into why some projects produce more technical reports and publications than others. It will also simplify and expedite the identification and procurement of documents describing the results emanating from research projects for research investigators and managers.

The Institution therefore requests that an increase of \$356,000 be appropriated for SSIE in the FY 1979 budget in order that the above actions might be taken. This increase will help ensure: (1) that the comprehensiveness of the SSIE data base is maintained at a level adequate to support continued increases in user income; (2) that improvements in indexing techniques and methods will be implemented; and (3) that

methods for tracking research will be developed in a mode compatible with other information systems, such as NTIS. With this approach, users of information systems concerned with Federal research can anticipate easier and more reliable access to such information, a desirable goal regardless of the ultimate organizational location of the Exchange.

### User Revenues

SSIE provides information compiled from its data base directly to users in the form of search products as well as indirectly through a number of specialized information centers. In addition, SSIE information is processed regularly under contract for publication in catalogues of research in progress in specific subject areas, such as toxicology, water resources, cancer, international energy research, and dental research. Distribution of these catalogues by the organizations which sponsor their compilation brings SSIE information to users on a significantly broader scale than would be possible through response to requests submitted directly to the Exchange by individuals.

A major example of the information services provided by SSIE under contract is the establishment and operation by the Exchange of the Current Cancer Research Project Analysis Center within the framework of the International Cancer Research Data Bank program. Under funding provided by the National Cancer Institute for the past four years, SSIE, through the Center, has undertaken to expand input in the cancer field, improve existing indexes and indexing techniques involving cancer research information, and provide a wide variety of information services to both the national and the international cancer research communities. As an integral part of this effort, SSIE's file of information on cancer research in progress is also being made available to on-line users through the computerized MEDLINE system operated by the National Library of Medicine.

The Institution shares the objective of the Congress that Federal support for SSIE's operations be held to a minimum. SSIE has worked successfully toward this objective by continuing to increase user revenues (projected at \$1.5 million in FY 1979). The increase of an estimated \$200,000 in user income for FY 1979, which is related to the processing of an additional 20,000 project records, will be used for staffing and development of new products and services as well as increased user education efforts which are expected to yield further increases in user revenues in subsequent years.

As a result of its user education efforts, SSIE has been able to reduce its Federal support requirements from 80 percent of the total cost of its operation in FY 1974 to an estimated 60 percent of the total cost in FY 1979 (Table II). Greater progress in this area is desirable, as the Congress has noted, and it is anticipated that conditions which can be expected to lend themselves to further increases in user revenues will be considered by the President's Reorganization Project in its overall examination of SSIE's situation.

SSIE user fees consistently have been raised, most recently in April, 1976, when it was determined that increases could be effected without their being counterproductive to the goal of maximizing revenues. User fees were not increased in FY 1978 based on market tests which indicated that an increase in fees would not result in an overall increase in revenues. A decline in sales would negate the impact of increased charges. The Exchange's current prices are presently compatible with information products offered by similar organizations.

The Institution believes that Federal use of SSIE will continue to increase in the future, in large part as a result of GAO and Congressional interest in improved coordination of research efforts by the Federal agencies. SSIE is currently working toward the development of more effective methods of disseminating information which will further enhance the ability of the Government to use the SSIE data for improved management purposes. An important part of its ability to do this, however, rests on further strengthening of the comprehensiveness and timeliness of data base coverage of both Federally and non-Federally supported research. The funds requested in the present budget will enable SSIE to make progress in this direction by making the data base more complete, and by allowing more rapid and useful indexing and retrieval of data in response to research management needs.

TABLE I  
SMITHSONIAN SCIENCE INFORMATION EXCHANGE  
PROPOSED BUDGET FY 1979

	<u>Total Cost of Operations</u>	<u>Federal Support Requested</u>	<u>User Support</u>
PERSONNEL			
Salaries	\$2,353,000	\$1,534,000	\$ 819,000
Benefits	383,000	250,000	133,000
OPERATING EXPENSES			
Travel	22,000	8,000	14,000
Transportation of Things	4,000	2,000	2,000
Telephone	12,000	7,000	5,000
Computer	288,000	149,000	139,000
Photocopying	18,000	10,000	8,000
Building	123,000	72,000	51,000
Postage	48,000	5,000	43,000
Printing	89,000	8,000	81,000
Equipment Maintenance	13,000	8,000	5,000
Other Services	98,000	12,000	86,000
Supplies	92,000	49,000	43,000
TOTAL	\$3,543,000	\$2,114,000	\$1,429,000
SI Services	175,000	104,000	71,000
GRAND TOTAL	\$3,718,000	\$2,218,000	\$1,500,000

TABLE II

SSIE PROCESSING WORKLOAD AND SOURCES OF REVENUE

<u>Processing Workload</u>	<u>Actual FY 1974</u>	<u>Actual FY 1975</u>	<u>Actual FY 1976</u>	<u>Estimated FY 1977</u>	<u>Projected FY 1978</u>	<u>Projected FY 1979</u>
Input (no. of research projects) <u>/1</u>	112,400	132,300	119,500	125,000	110,000	130,000
Output services (hours of effort) <u>/2</u>	18,100	34,400	50,500	44,000	45,600	50,800
<u>Source of Revenue (\$000)</u>						
Federal Support	\$1,695.0	\$1,805.0	\$1,940.0	\$1,972.0	\$1,862.0 <sup>/3</sup>	\$2,218.0
User Revenues						
Search Products	305.9	339.0	357.1	365.5	391.2	475.0
Contract Services <sup>/4</sup>	<u>110.4</u>	<u>495.0</u>	<u>838.7</u>	<u>888.1</u>	<u>903.8</u>	<u>1,025.0</u>
Total User Revenues	\$ 416.3	834.0	1,195.8	1,253.6	1,295.0	1,500.0
Total Cost of Operation	<u>\$2,111.3</u>	<u>\$2,639.0</u>	<u>\$3,135.8</u>	<u>\$3,225.6</u>	<u>\$3,157.0</u>	<u>\$3,718.0</u>
<u>Distribution of Total Costs</u>						
Federal Support	80%	68%	62%	61%	59%	60%
User Revenues	20%	32%	38%	39%	41%	40%

/1 Notices of Research Projects processed, plus end of year backlog, less backlog set aside (an estimated 15,000 projects in FY 1978).

/2 Total staff time required to deliver products and services sold.

/3 Includes an anticipated supplemental appropriation request of \$85,000 to offset the impact on input operations of the October, 1977 comparability pay increase.

/4 Includes contract support to the National Cancer Institute under the International Cancer Research Data Bank program beginning in FY 1975.



TAB C

MUSEUM PROGRAMS AND RELATED RESEARCH  
(SPECIAL FOREIGN CURRENCY PROGRAM)



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

1977 Appropriation.....	\$3,481,000	} Equivalent in Excess Foreign Currencies
1978 Appropriation.....	\$4,000,000	
1979 Estimate.....	\$3,700,000	

An appropriation of \$3,700,000 equivalent in foreign currencies which have been determined by the Treasury Department to be in excess of the normal needs of the United States is requested for FY 1979. This appropriation will be used to continue a program of grants to United States institutions for field research in the program areas listed below in those countries where excess local currencies are available. Of the total requested, \$2,800,000 will be available for one-year funding of continuing projects, \$400,000 will support new projects, and \$500,000 will provide multi-year funding of projects for which assurance of funding continuity is important.

Obligations of Funds by Program Area  
(dollar equivalents)

	<u>FY 1977</u> <u>Actual</u>	<u>FY 1978</u> <u>Estimate</u>	<u>FY 1979</u> <u>Estimate</u>
Archeology and Related Disciplines	\$2,588,000 <sup>/1</sup>	\$2,873,000 <sup>/1</sup>	\$2,139,000
Systematic and Environmental Biology	603,000	455,000	618,000
Astrophysics and Earth Sciences	299,000	336,000	640,000
Museum Programs	226,000	139,000	140,000
Grant Administration <sup>/2</sup>	70,000	85,000	20,000
NSF -- Science Information Program (Translations)	<u>-0-</u>	<u>381,000</u>	<u>150,000</u>
<b>Total</b>	<b>\$3,786,000</b>	<b>\$4,269,000</b>	<b>\$3,707,000</b>

<sup>/1</sup> FY 1977 and FY 1978 amounts include respectively the third and fourth of four annual payments, each of \$1,000,000 equivalent in excess Egyptian pounds, which together constitute the United States contribution to the project to save the Temples of Philae.

<sup>/2</sup> Includes transfers to the State Department for "Shared Administrative Expenses."

PROGRAM OF GRANTS FOR FIELD RESEARCH

The purpose of the Smithsonian Foreign Currency Program is, like that of the Institution itself, "the increase and diffusion of knowledge among men." The Smithsonian Foreign Currency Program supports this purpose 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 \$3,700,000 equivalent in excess foreign currencies is sought for these grants.

The Smithsonian program is the principal source of excess foreign currency support for research carried out by United States institutions in the excess currency countries. The Smithsonian program contrasts with 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 importance of this source of funds grows as inflation diminishes funds available from other sources for such research.

The Smithsonian program strengthens the research and training activities of collaborating institutions abroad as well, because most projects directly involve host country institutions and scholars. Enduring professional ties which result from such joint efforts and scholarly exchange contribute to the strongest form of United States cultural relations with other nations. Moreover, these ties contribute both directly and indirectly to the integration of the worldwide scientific process which serves to narrow the gap between the industrial and the developing nations.

### The Importance of Research in the Natural Sciences and Cultural History

Research in the natural sciences and cultural history is important to understanding and managing a world where human population growth exceeds the increase in resources available to support that population.

In an era of rapid environmental change, grants awarded by the Smithsonian in systematic and environmental biology have contributed to the management of available natural resources. In FY 1977, grants supported the following projects of special interest in this connection:

- Texas Tech University is studying plants in Egypt which thrive in soils of high salinity. One objective is to identify those plants which could serve as a source of high protein forage for livestock.
- Four teams of paleobiologists from Howard and Yale Universities, the Smithsonian and the University of Michigan, working in collaboration with the Geological Survey of Pakistan, are contributing to the knowledge of the mineral resources of that country.

In astrophysics and the earth sciences, two Smithsonian projects in Egypt of special interest in the study of the earth and contributing to its management, received support:

- The opening of an Egyptian satellite tracking facility at Helwan Observatory added a link to the Smithsonian Astrophysical Observatory's global studies of the earth's motion and magnetism and of the upper atmosphere. This station employs Egyptian scientists and a Czechoslovak laser in an American program which always has provided for the free exchange of data with Eastern European countries.
- A study of desert erosion and sand movement is testing data obtained from satellite photos against data being acquired by surface surveys.

Smithsonian grants in cultural history contribute to an understanding of man and society, past and present, and may contribute to better relations among increasingly interdependent nations. In FY 1977, grants supported the following projects of special interest in this connection:

- The University of California at Los Angeles translation of the best of Arabic writing today is providing the English-speaking world with new insights into Arabic culture.

- A Lehman College (City University of New York) study is analyzing the effects of resettlement and economic development in an Egyptian village in the Nile River delta.
- The American Schools of Oriental Research excavations in Tunisia of Punic and Roman Carthage is part of an international program which seeks to describe the nature and the fate of these ancient societies.

The special role of museum programs in acquainting one culture with another across language barriers was exemplified in FY 1977 by Smithsonian support for projects sponsored by the Museum Committee of the Indo-U.S. Subcommission on Education and Culture:

- The Franklin Institute is circulating in India an exhibit on the history of industrial technology in the United States.
- The Carnegie Museum of Natural History participated in an exchange of curators with the expanding museum of Natural History in New Delhi.

#### The Importance of Multi-Year Grants

The FY 1979 appropriation request will allow increased multi-year funding of major programs. Rational planning by the United States grantee institution and by the host country collaborator involves the advance commitment of professors and graduate students as well as of facilities. The broad objectives of the participating institutions often depend on the coordination of such resources. Multi-year grants, with annual disbursements subject to a finding by the Smithsonian that satisfactory progress has been made, are essential to provide reasonable assurance of funding to these institutions.

The Smithsonian Foreign Currency Program appropriation has been sufficient in the past to provide funding only on an annual basis for most of its grantees even though approved proposals are frequently of a multi-year nature. Multi-year funding, the standard practice of other Special Foreign Currency Program agencies, has been undertaken by the Smithsonian primarily when it was essential to protect investments in successful projects against the possibility that some excess currency accounts would be exhausted. This happened in Poland and Tunisia in FY 1977.

#### Benefits to United States Institutions

Since the inception of the program in FY 1966, Smithsonian grants have been made to 191 United States institutions in 31 states and the District of Columbia to support more than 480 individual projects. Publications known to have resulted from program grants totaled more than 1,000 at the end of FY 1977.

More than 100 research collections have been returned to United States universities and museums. A similar number of collections has been added to the research resources of the excess currency countries. These collections are the original biological specimens and the archeological and ethnographic materials acquired in the course of field research. They will 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.

The benefits of the program have extended to a far larger number of institutions than the 191 direct grant recipients mentioned above. 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 29 institutional members; the American Research Center in Egypt (ARCE) in Princeton, New Jersey, with

22 institutional and some 600 individual members; and the American Schools of Oriental Research (ASOR) in Cambridge, Massachusetts, with 135 member institutions, including three scholarly associations.

Smithsonian grants have supported the research in India of 186 AIIS fellows over the ten-year period from FY 1968 through FY 1977. The fellows were drawn from some 43 United States institutions in 22 states. Program grants have also supported 39 ARCE projects over the 12-year period from FY 1966 through FY 1977. Nine ASOR excavations in Israel and Tunisia over ten years have provided research opportunities for more than 260 senior U.S. scholars and field training for more than 324 graduate students.

#### Scientific Review Under the Smithsonian Program

The Smithsonian's Special Foreign Currency Program provides a mechanism for American private sector institutions, such as universities, to make use of excess foreign currencies for the support of their own research programs.

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 science to be studied and convenes annual advisory councils of senior scholars from across the nation in the relevant program areas. The councils discuss and evaluate the proposals, taking into consideration the experts' opinions, and provide specific advice to the Smithsonian regarding the selection of projects for support and the priority among proposals recommended for support.

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.

Projects lasting more than one year are subject to 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 Smithsonian Employees of Awards for New Research

Basic research has been one of the primary functions of the Smithsonian since its establishment in 1846. Smithsonian scholars have traditionally competed with their peers in museums and universities for grants from private and governmental sources in order to conduct their own research. Access to funds for independent research is an essential factor in enabling the Smithsonian to attract and retain leading researchers and thus 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 (initiated at the recommendation of the Department of State because of the recognized competence of the Institution in archeology) 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. The conduct of such research is considered a basic job requirement and career advancement is directly tied to the quality of the research results.

Under the Special Foreign Currency Program guidelines, Smithsonian proposals are reviewed by the same councils of distinguished scholars from across the nation as are proposals from other institutions. Furthermore, continuing projects are subject to annual reviews. These processes are described above in the section entitled "Scientific Review Under the Smithsonian Program." Smithsonian Foreign Currency Program awards to Smithsonian employees, as to other scholars around the country, often involve participants from other organizations and universities as collaborators. No Smithsonian employee, nor any other grantee, receives personal compensation duplicating or supplementing his salary. Program awards cover only field research costs in the excess currency country and international travel to the country.

Foreign Currency Program awards to Smithsonian employees are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended in accordance with Federal procurement and personnel regulations. No new funds have been allocated to the Smithsonian Research Foundation since the summer of 1977 and prior awards to the Foundation are being withdrawn and allocated to the bureau of the principal investigator for his approved project.

#### SPECIAL FOREIGN CURRENCY PROGRAM APPROPRIATIONS AND THE U.S. TAXPAYER

An appropriation for this program does not add to the tax burden of Americans because the money used for foreign currency grants comes from U.S. holdings of foreign currencies abroad in existing accounts that were established in connection with the "Food for Peace" (P.L. 480) program. These accounts were generated largely through sales of surplus U.S. agricultural commodities abroad in exchange for local currencies. In cases where these accounts are greatly in excess of the projected normal U.S. needs, the Treasury Department designates them "excess foreign currencies." They then become available through the Special Foreign Currency Program appropriation process for U.S. uses like scientific research.

Erosion of these accounts by inflation is in many countries dramatically reducing their value to the United States. Indian and Pakistani rupees have, for example, lost almost half their value since 1970. As a consequence, when a worthy use of these excess currencies can be identified through programs like the Smithsonian Foreign Currency Program, the U.S. can effectively employ at least some of these currencies before inflation effectively eliminates their usefulness.

OBLIGATIONS OF TOTAL PROGRAM FUNDS BY COUNTRY  
(dollar equivalents)

	<u>FY 1977</u> <u>Actual</u>	<u>FY 1978</u> <u>Estimate</u>	<u>FY 1979</u> <u>Estimate</u>
Burma	\$ 1,000	\$ 5,000	\$ 5,000
Egypt	1,943,000 <sup>/1</sup>	2,279,000 <sup>/1</sup>	1,676,000
Guinea	-0-	18,000	18,000
India	697,000	1,549,000	1,328,000 <sup>/2</sup>
Pakistan	84,000	418,000	680,000
Poland	315,000	-0-	-0-
Tunisia	<u>746,000</u>	<u>-0-</u>	<u>-0-</u>
	\$3,786,000	\$4,269,000	\$3,707,000

<sup>/1</sup> Includes payments of \$1,000,000 equivalent in excess Egyptian pounds for the salvage of the Temples of Philae.

<sup>/2</sup> Includes \$381,000 equivalent (FY 1978) and \$150,000 equivalent (FY 1979) obligated by the NSF Science Information Program for Translations.

STATUS OF SMITHSONIAN SFCP FUNDS  
(dollar equivalents)

	<u>FY 1977</u> <u>Actual</u>	<u>FY 1978</u> <u>Estimate</u>	<u>FY 1979</u> <u>Estimate</u>
Unobligated Balance, Start of year	\$ 28,000	\$ 282,000	\$ 113,000
Appropriation	3,481,000	4,000,000	3,700,000
Recovery of Prior Years' Obligations	559,000	100,000	100,000
Unobligated Balance, End of year	<u>-282,000</u>	<u>-113,000</u>	<u>-206,000</u>
Total Obligations	\$3,786,000	\$4,269,000	\$3,707,000

TAB D

FACILITIES PLANNING, RENOVATION,  
RESTORATION, AND CONSTRUCTION



FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION

Summary

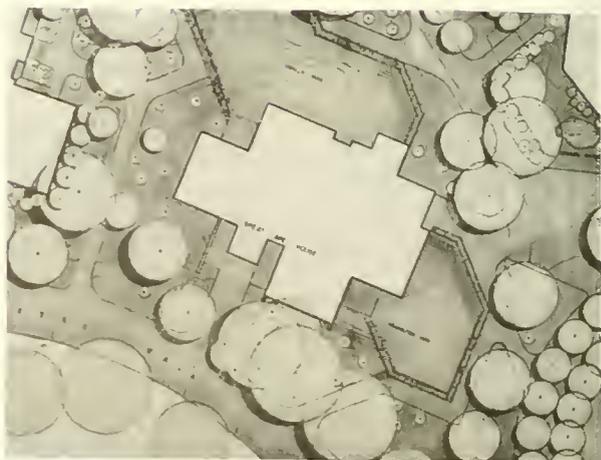
<u>Account</u>	<u>FY 1977 Appropriation</u>	<u>FY 1978 Appropriation</u>	<u>FY 1979 Estimate</u>
Construction and Improvements, National Zoological Park	\$6,580,000	\$2,500,000	\$3,900,000
Restoration and Renovation of Buildings	2,950,000	2,425,000	3,100,000
Construction: Museum Support Center Planning	<u>    --</u>	<u>    325,000</u>	<u>    575,000</u>
Totals	\$9,530,000	\$5,250,000	\$7,575,000

The FY 1979 appropriation requested for Construction and Improvements, National Zoological Park will be used to continue progress on the implementation of the approved Master Plan for the improvement of the Zoo's animal and public facilities and to perform essential renovation, repair, and improvement projects at Rock Creek Park and at the Front Royal, Virginia, Conservation and Research Center. Master Plan development to be undertaken in the budget year will include the construction of a new facility to provide modern, environmentally-improved housing for the orangutans and gorillas.

The FY 1979 appropriation for Restoration and Renovation of Buildings emphasizes installation of fire detection and suppression systems; facility development at outlying Smithsonian research sites including the Mt. Hopkins, Arizona, Observatory, the Tropical Research Institute in Panama, and the Chesapeake Bay Center for Environmental Studies; repairs to the History and Technology Building terrace; modifications to eliminate or mitigate existing architectural barriers which impede the access of handicapped persons; correction of hazardous conditions; installation of building equipment monitoring systems; and general repairs and improvements, including those to facade and roofs, for building preservation and safety purposes.

Funds requested in the FY 1979 Construction appropriation will be used in association with FY 1978 funds for architectural and engineering planning for the construction of a Museum Support Center.

Justification for these programs and projects appear in the following sections.



Great Ape House

Top: Architectural conception of modernized Great Ape House featuring spacious yards for the animals and increased ease of viewing for visitors.

Left: Existing antiquated outdoor cages for orangutans and gorillas.

Right: Site of proposed new Great Ape House.

CONSTRUCTION AND IMPROVEMENTS,  
NATIONAL ZOOLOGICAL PARK

1977 Appropriation.....	\$6,580,000
1978 Appropriation.....	\$2,500,000
1979 Estimate.....	\$3,900,000

This appropriation is used 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 implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973.

The requested FY 1979 appropriation will be used as follows:

Great Ape House construction	\$3,000,000
Renovations, Repairs and Improvements	
National Zoological Park -- Rock Creek	450,000
Front Royal Conservation and Research Center	<u>450,000</u>
Total	\$3,900,000

Status of Construction Program

The National Zoological Park has been undergoing major renovation and improvement over the past several years in implementation of a master development program. Through transfer of selected breeding functions to Front Royal, elimination of projects considered to be too costly, and scaling down of others, the overall renovation program has been reduced from an original plan of 41 major projects to 30 and from an original cost estimate of \$118,000,000 to a current estimate of \$72,000,000. Funds appropriated to date by the Congress have brought Master Plan construction to about the half-way mark, with 17 new exhibits and support facilities either completed or under construction. During FY 1977 the first phase of the General Services and Parking Facility and new exhibits for grizzly and polar bears were completed. Construction in the Beaver Valley Area, including exhibits for beavers, otters, seals and sea lions, wolves, and bush dogs, is scheduled to be completed in early summer, 1978. In addition, by the winter of 1978, improvement of existing aquatic bird facilities and provision of new facilities for climbing cats are anticipated to be finished. Approximately \$45,000,000 will be required in future years to complete a number of additional projects.

To ensure an orderly development program with minimum disruptions to animals and to visitor circulation, construction projects around the periphery of the Park were accomplished first. Design work has been completed for a cluster of projects in the Central Area of the Zoo which are no less important but which could not have been accomplished previously due to difficulty of access and unacceptable disruption to utility systems. Included in the Central Area projects is a new great ape house for which additional funding is requested in FY 1979. Renovation of the reptile house and the small mammal house and construction of a new monkey island will be included in future funding requests to complete the Central Area. Planned for 1981 to 1984 are completion of a multi-level parking facility; construction of an aquatics habitat facility which will house a cluster of marine animal exhibits, such as penguins, sea otters, and manatees; completion of entrance area exhibits and services; and the improvement of clinical health and research facilities.

Great Ape House (\$3,000,000). With funds previously appropriated, plans and specifications for a new great ape house have been completed and advance preparation

of the site is well underway. The new facility will provide modern housing for orangutans and gorillas, the Zoo's most heavily visited primates and at present the most inadequately housed animals at the Zoo. Located in the open area between the existing small mammal house and the existing reptile house, the new 20,000 square foot structure will be made compatible with the landscape through the use of earth berms, planting boxes, trees, and shrubs. The building will provide a fully conditioned and controlled environment for both orangutans and gorillas in interior glass-fronted habitat spaces and in spacious exterior yards. Exterior viewing will be across open moats or through glass walls to maximize ease of viewing. Moreover, the exhibit has been carefully designed to provide isolated areas conducive to the breeding of these rare and endangered animals and necessary for their medical treatment. The ability to isolate and treat these primates, which are highly sensitive to human illnesses, within their familiar surroundings will prevent the spread of disease, and facilitate the recovery of animals that do contract disease.

Funding sought in FY 1979 will be used for construction, landscaping, exhibits, graphics, and equipment for the building. The new great ape house is scheduled for completion in February 1980 and is expected to serve more than two million visitors yearly. Operating expenses are estimated to total approximately \$100,000 a year, including 3 positions -- an animal keeper, a utility repairer, and a laborer -- at a cost of about \$40,000 and \$60,000 for utilities, supplies, parts, and materials. A solar energy system incorporated into the building design is expected to offset water heating expenses by 80 percent.

Renovations, Repairs, and Improvements (\$900,000). An amount of \$900,000 is required to continue a program of renovation, repair, and preventive maintenance of existing facilities. This level of funding will permit repairs and improvements that will reduce or possibly eliminate the need for future, more costly expenses. Of this amount \$450,000 will be used to accomplish the following essential renovation at Rock Creek facilities in Washington:

-- Hospital Improvements include conversion of an old pathology room to a modern operating room, conversion of old animal holding rooms to up-to-date laboratories, and improvements to storage facilities and mechanical systems. These improvements were made possible with the construction in FY 1977 of an autopsy facility and a quarantine and holding facility freeing space in the existing hospital and research building.

-- Mechanical Renovation and Animal Support Improvements include repairs and renovations to mechanical, electrical, plumbing, and support systems in a number of areas throughout the Park, including the small mammal building, reptile house, and the deer area.

-- Grounds Improvements include repair of curbs, streets, and walks to eliminate dangerous potholes that have resulted in injuries to visitors and employees. In addition, planting and landscape improvements, installation and repair of street furniture, and sign restoration are needed throughout the Park.

-- Buildings Restoration includes replacement of the badly deteriorated 40-year old roof on the police station and adjoining restroom facilities, and general repairs to other buildings.

The balance of \$450,000 is requested for the National Zoological Park Conservation and Research Center at Front Royal, Virginia, to accomplish the following work necessary to the proper maintenance and operation of existing facilities and grounds:

-- Utilities Improvements include completion of the rehabilitation of the Center's sewage system to comply with regulations imposed by the State of Virginia and the Environmental Protection Agency. Temporary repairs will be made in FY 1978 with funds

appropriated for this purpose. In FY 1979, it is planned to extend the Center's sewer line to tie in with the City of Front Royal's new sewage disposal plant which is anticipated to be operational late this year.

-- Renovation of Buildings, Roadways, and Animal Compounds includes demolition of obsolete buildings to permit preparation of additional area for animal programs and the improvement of existing facilities for animal holding and isolation during medical treatment. Funds also are needed to continue road resurfacing and grounds improvements permitting easier access for security patrol. Such patrol is necessary to ensure the safety of the Center's animals, many of which roam free over large fenced areas and are vulnerable to accidental or intentional harm by trespassers.

Construction and improvement work is accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are exorbitant in relationship to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase with this appropriation of supplies, materials, and equipment, and the use of staff or temporary labor, is the most cost effective solution. Furthermore, it is occasionally necessary to fund from this account other expenses directly associated with the displacement of animals and materials as a result of the construction program.

NATIONAL ZOOLOGICAL PARK  
Construction Program  
1974-1984

Estimates include cost escalation  
to October 1979

Activity	Fiscal Years										TOTAL	
	1974	1975	1976	TQ	1977	1978	1979	1980	1981	1982		1983
I. <u>Master Plan</u>												
Lion-Tiger Facility	3,000											3,000
Elephant/Bird Houses	160	2,970										3,130
Education-Administration Building		2,500										2,500
General Services and Parking Facility	300	2,700	4,000									20,500
Lower Rock Creek Valley	100	400	2,500							13,500		3,000
Beaver Valley Area		80	490									6,410
Central Area		100		900	5,840	250	3,000	5,900				10,150
Waterfowl Pond and Small Cats		20				500		1,000	12,000			520
Aquatic Habitats Health & Research Hill (Incl Holt House Renovations)					100			1,000	2,000			3,000
Master Graphics			100							500	6,000	200
Restaurant & Entrances												6,500
Subtotals	3,560	8,770	7,090	900	5,940	750	3,000	7,900	12,000	16,000	6,000	71,910
Rock Creek Renovations	230	650	600	160	440	300	450	400	400	400	400	4,830
III. <u>Front Royal Conservation Center</u>												
Necessary Repairs and Improvements			700	380	200	1,450	450	1,500	1,500	1,500	1,500	10,680
GRAND TOTALS	3,790	9,420	8,390	1,440	6,580	2,500	3,900	9,800	13,900	17,900	7,900	87,420

/1 Excludes \$275,000 for planning appropriated in FY 1973.  
 /2 An additional \$800,000 has been reprogrammed with Congressional approval to the General Services Facility from Beaver Valley FY 1976 appropriation (\$350,000) and from the Central Area TQ appropriation (450,000).  
 /3 Includes site work; Reptile House main level and Nocturnal Exhibit level; Crocodile Exhibit; Monkey Island; Small Mammal House.  
 /4 Does not reflect parking revenue contributions.  
 /5 Does not reflect potential private participation.  
 /6 Amount of \$125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings account.

RESTORATION AND RENOVATION OF BUILDINGS

1977 Appropriation.....\$2,950,000  
1978 Appropriation.....\$2,425,000  
1979 Estimate.....\$3,100,000

This account is used to fund major repairs, alterations, and improvements of a long-term nature and benefit. From time to time, it is used for construction of major additions to existing facilities or for minor new temporary or permanent buildings or other facilities. Facilities planning and studies and other related expenses also may be funded from this account. Projects undertaken are in support of research, care, and protection of collections; public accommodation and safety; and maintenance and development of a valuable physical plant and natural areas. Work is accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are exorbitant in relationship to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase with this appropriation of supplies, materials, and equipment and the use of staff or temporary labor, is the most cost effective solution.

With funds now available, the Institution is carrying out several significant projects, the most notable of which are the continuing phased renovation of the Arts and Industries Building, and repairs to the History and Technology Building terrace and the Renwick Gallery exterior.

An amount of \$3,100,000 is requested in FY 1979 for the following projects:

1. General repairs and improvements	\$1,000,000
2. Facade and roof repairs	590,000
3. History and Technology Building terrace repairs	100,000
4. Mt. Hopkins, Arizona, Observatory site development	260,000
5. Fire detection and suppression systems	500,000
6. Handicapped access and correction of hazardous conditions	325,000
7. Tropical Research Institute dormitory	125,000
8. Building equipment monitoring systems	50,000
9. Chesapeake Bay Center for Environmental Studies maintenance building	<u>150,000</u>
Total	\$3,100,000

Details of these projects appear in the following justifications.

1. General Repairs and Improvements (\$1,000,000).

The Smithsonian (exclusive of the National Zoological Park separately presented) has 10 major museum buildings (ranging in age from new to well over 100 years old) containing some 2.6 million net usable square feet and having a replacement value of several hundred million dollars. It also includes in its space inventory (not including rental properties) many lesser structures containing about 0.5 million square feet used for research, collections management, and administrative purposes. Several thousand

acres of land are dedicated to research, conservation, and education. Heavy public use of these facilities, general deterioration because of age and weathering, visitor and staff safety requirements, and the need to make improvements to keep pace with program changes create a demand for regular, annual attention beyond the capability of the Institution's maintenance staffs.

Specific, generally major, projects are budgeted in this appropriation under individual building or other headings. There is an urgent need, however, for substantial annual funding for planning, engineering, repair, and improvement response to other projects including those that arise unexpectedly. An appropriation of \$1,000,000 (about \$0.32 a square foot not including grounds areas) is requested for FY 1979.

The most pressing need to be addressed in FY 1979 is the repair, replacement or improvement of the mechanical and electrical distribution systems located throughout the physical plant. Other work will involve such projects as minor interior and exterior structural repairs, improvements to plumbing and sewer systems, water proofing of mechanical rooms, and architectural and engineering studies.

2. Facade and Roof Repairs (\$590,000).

Maintaining the integrity of the water and weather protective exterior of all facilities is critical to prevention of major structural damage and deterioration as well as to providing a weather tight environment for collections. The contents of most Institution facilities and the age of many structures make work in this category a high priority. An amount of \$590,000 is requested to accomplish repair, replacement, and renovation work related to exterior and roof damage. The scope of work for exteriors includes recaulking, waterproofing, pointing, and replacing any damaged materials. Roofing work includes the removal and replacement of existing surfaces and underlayments, due to blistered or expanded conditions caused by weathering over the years. Some of the locations requiring work include the Fine Arts and Portrait Galleries Building, the Natural History Building, the Renwick Gallery, the Hirshhorn Museum Building, and the Freer Gallery. In the case of the Freer Gallery, a major project was initiated in FY 1978 to replace and repair the roof and other components starting at the eave line in a two-phased operation. A portion of the funds sought in FY 1979 would be used to complete this project.

3. History and Technology Building Terrace Repairs (\$100,000).

An amount of \$100,000 is required to continue a phased program (estimated to cost \$800,000) of repairing the terrace of the History and Technology Building, which serves both as a pedestrian walkway around the building and as the roof to interior basement work machinery, and storage space. Apparent original construction deficiencies have led to general deterioration of the waterproofing under the paving material and consequent extensive leakage into work and collection areas. A total of \$350,000 has been appropriated for this project in FY 1977 and FY 1978. During FY 1977 an engineering analysis was conducted to determine the exact extent of water damage. Plans and specifications have now been completed and the first phase of repair work will be accomplished in FY 1978.

4. Mt. Hopkins, Arizona, Observatory Site Development (\$260,000).

For several years, the Smithsonian has pursued a phased program of physical site improvements at the Mt. Hopkins, Arizona, Observatory, designed to provide adequate, safe, and economic facilities for staff and visitors. In FY 1979, a total of \$260,000 is sought to continue this work.

An amount of \$60,000 is requested to complete development of a water supply system for which initial funds were approved in FY 1975 and FY 1977. Current annual water consumption is approximately 250,000 gallons. This amount is estimated to double when

the new Multiple Mirror Telescope becomes operational in the summer of 1979. The existing temporary water source on Mt. Hopkins supplies some 150,000 gallons per year with the remaining 100,000 gallons being trucked from the valley over 17 miles of mountain road. At the projected increased rate of consumption, the annual cost of trucking will amount to \$25,000. Original plans for pumping water from a nearby mountain have been revised to conform with recommendations of the United States Forest Service. The new system, as now designed, will provide for construction on Mt. Hopkins of catchment basins to collect water drawn from springs and rain run-off. This water will then be pumped to holding tanks located at the summit and ridge areas. From there the water will be transported via a new pipe into the existing water distribution system serving all Observatory sites.

An amount of \$125,000 is sought to continue the phased multi-year plan of converting the hazardous single-lane, unpaved, access road built in 1967 to an in-sloped, paved, all-weather access road. These funds would permit completion of the paving of the road from the summit to the 7,600 foot elevation ridge where a number of observing instruments are located. This project is essential for the safety of the staff who travel this road daily as well as the safety of visitors. It will also reduce the dust which damages sensitive optical surfaces, thus minimizing the need for their recoating, and will reduce road maintenance costs.

Finally, an amount of \$75,000 is requested for the construction of a support building which will connect the 1.5 millimeter telescope building to the 0.6 millimeter dome structure, located approximately 60 feet apart. This building will not only fulfill the requirement for additional laboratory space essential to the use of the two telescopes but will also provide the environment required for proper storage, operation, and movement of sensitive electro-optical equipment. Since some instrumentation and recording equipment are interchangeable between the two telescopes, a safe and environmentally controlled means of moving this equipment between the two buildings will ensure their maximum efficient use.

#### 5. Fire Detection and Suppression Systems (\$500,000).

Fire protection surveys have been conducted in all major facilities identifying specific needs for fire detection and suppression systems. Fire detection systems are presently lacking in many public areas and should be installed for the protection of visitors, exhibits, and property. Similar safeguards are needed in areas where museum collections are housed and where research by staff and visiting students and scholars takes place. Other fire protection needs include the addition of booster pumps to give adequate water pressure, the installation of approved fire doors to retard the spread of heat and smoke, and the installation of systems, such as automatic sprinklers, to suppress fires. During FY 1977, major water and pumping systems were installed in the Natural History Building and as new exhibit areas in the Building were developed, fire detection and suppression systems were added. In addition, sprinklersystems were expanded in the History and Technology and the Smithsonian Institution Buildings. Similar improvements will be made in FY 1978 with continued emphasis being placed on improving the water and pumping systems in additional buildings on the Mall. Additional funding of \$500,000 is sought in FY 1979 to continue this phased program of safety improvements.

#### 6. Handicapped Access and Correction of Hazardous Conditions (\$325,000).

Many of the Smithsonian Institution buildings and facilities in the Washington Metropolitan area were designed and constructed before the development of current standards for handicapped access and public safety. As a result, the buildings require modifications to eliminate or mitigate existing architectural barriers and hazardous conditions. The modifications required include such projects as providing adequate building access; installing elevators, lifts or ramps; renovating restroom facilities; providing access to

and wheelchair spaces within auditoriums; eliminating slippery walking surfaces; correcting fall hazards from parapet walls or pedestals; installing guard railings; and providing adequate exit capacity. Projects in the planning stage or currently underway with funds appropriated in previous years include the automating of entrance doors at the History and Technology Building; improvements to ease handicapped access to the courtyard in the Fine Arts and Portrait Galleries Building, the Hirshhorn Sculpture Garden, and the north entrance of the Natural History Building; and modification to the south entrance of the Natural History Building to provide increased emergency exit capacity in addition to improved handicapped access. An amount of \$325,000 is requested in FY 1979 to continue a phased program of such improvements. A major portion of the requested funds will be used to construct a critically needed storage facility in the National Museum of Natural History for the safekeeping of combustible materials used in the work of research scientists and curatorial staff.

7. Tropical Research Institute Dormitory (\$125,000).

The Smithsonian Tropical Research Institute, a research organization devoted to the study and support of tropical biology, education, and conservation, maintains laboratory complexes in Panama offering immediate access to tropical forest and marine environments. Chief among these is the 6,000 acre forest reserve of Barro Colorado Island which is located in Gatun Lake, approximately 1½ hours travel time from the nearest commercial center. Due to the remote location of the Island, on-site residence of Institute staff and visiting researchers while conducting research projects is essential to the efficient accomplishment of program objectives. Presently a wooden structure, built in 1924, exists for dormitory purposes. The tropical climate and extreme termite infestations have caused this structure to be severely deteriorated, in constant need of repair, and virtually uninhabitable. An amount of \$125,000 is requested in FY 1979 for construction of a new masonry dormitory facility with the capacity to house approximately 16 researchers and visiting scholars representing universities throughout the United States.

In the event that the Panama Canal Treaties are ratified, then under the terms of ancillary agreements and exchanges of notes, Barro Colorado Island will be declared a Nature Monument as defined in the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere of October 12, 1940. In addition, the Smithsonian Tropical Research Institute will be designated by both governments as custodian of the Barro Colorado Nature Monument and will "have sole responsibility to act on behalf of our Governments in authorizing use of the Nature Monument for the purposes of scientific research..." It is apparent that investigations conducted by the Smithsonian on Barro Colorado Island will not be affected by the terms of the proposed new Panama Canal Treaty.

8. Building Equipment Monitoring Systems (\$50,000).

Smithsonian buildings contain a vast array of pumps, chillers, condensers, fans, and airconditioning, dehumidifying, and other complex and costly mechanical equipment. Monitoring of this equipment for safe, efficient, and economical (increasingly important as utility costs steadily rise) operation is done currently on a tour basis involving personal inspection by journeyman-level mechanics.

Industry systems now exist that are being installed in the Institution to monitor operating equipment by sensors and report results electronically to central control panels. With funds appropriated in FY 1977 and 1978, the Smithsonian is installing a computerized system to monitor and analyze the various mechanical equipment in buildings located on the Mall, the Renwick Gallery, and the Fine Arts and Portrait Galleries Building. Approximately 50 percent of the system will be operational by the end of FY 1978. Additional funds in the amount of \$50,000 are required to complete this project in FY 1979.

9. Chesapeake Bay Center for Environmental Studies Maintenance Building (\$150,000).

Maintenance and storage functions at the Chesapeake Bay Center are currently housed in five diverse locations including two surplus trailers obtained from the Department of Housing and Urban Development and three structures which were part of a 368 acre tract of farm land bequeathed to the Institution in 1962. These buildings which were constructed in the early 1900's and include a tin-roofed, open-sided storage shed, a milking shed, and an old calf barn are totally inadequate for their present use. The overcrowded conditions now existing in these facilities present serious safety hazards. Equipment and supplies placed into the storage shed are unprotected from extreme temperature and humidity. Moreover, the scarcity of shop space and the inadequate ceiling heights in shop areas often require that vehicle maintenance be performed out of doors.

In order to consolidate maintenance services and provide a safe, efficient working environment, an amount of \$150,000 is requested for the construction and partial equipping of a 2,600 square foot maintenance building. This facility will provide space for vehicle and boat maintenance, as well as metal and carpentry shops and will also provide a much needed loading dock and indoor storage area.

CONSTRUCTION: MUSEUM SUPPORT CENTER PLANNING

1977 Appropriation.....	\$ 0
1978 Appropriation.....	\$325,000
1979 Estimate.....	\$575,000

The objects, specimens, and works of art housed in Smithsonian museums constitute a tangible and irreplaceable record rich in information on human achievement, historical and cultural development, and the natural environment and its influence on the growth of civilizations. It is a fundamental responsibility of museums to preserve, manage, and use these collections through examination and study, so they will contribute to the expansion of man's knowledge and understanding. In meeting these responsibilities, the Institution is engaged in a continuing analysis of space requirements, standards for the care of collections, technology capable of meeting these standards, and procedures for the conservation and storage of collections. Through these efforts the Institution has documented that additional space offering properly controlled environments for long-term storage of collections is critically needed, and that this space should be adjacent to office and laboratory facilities for the conservation and study of these collections.

In the National Museum of Natural History, most particularly, collections have significantly outgrown the storage and supporting laboratory space available. It has been necessary to convert exhibition areas to storage use, as well as hallways, attics, and other spaces that do not provide minimum environmental conditions necessary for the proper care of collections. Plans for the development of a Museum Support Center, therefore, have focused chiefly on the collections of the National Museum of Natural History with provision for only the most critical needs of other museums of the Institution.

In FY 1975, the President signed Public Law 94-98, authorizing the Regents of the Smithsonian to prepare plans for museum support facilities. Since then, Smithsonian staff have worked closely with a consortium of consultants to analyze existing and future space requirements, establish optimum standards for the care of collections, and complete a planning study to serve as a guide to development of architectural and engineering designs and specifications. Also, a "Collection Management and Policy Study" has addressed questions of present and future collections management practices and the factors involved in the growth of collections. A tract of 59 acres in Suitland, Maryland, has been acquired for support facilities by the General Services Administration and a request for an additional 23 acres is being processed at this time. Use of this land for support facilities has been approved by the National Capital Planning Commission and by local planning boards and commissions. An appropriation of \$325,000 was made available in FY 1978 for the initial phase of planning and design.

Congressional hearings on proposed legislation to authorize construction are expected to be held in the spring of 1978. Total project funding is estimated to be approximately \$21.5 million including planning and design costs of \$900,000. This cost estimate assumes that construction of the Center will begin in 1980. A comprehensive cost estimate will be available upon completion of planning and design. In FY 1979, the Institution is requesting the balance of planning and design funds (\$575,000).

Components of the Museum Support Center

Based on an analysis of existing space requirements and future needs for the storage, care, and study of collections it is estimated that the Museum Support Center will provide 338,000 square feet of storage, office, laboratory, and conservation space.

The largest component of the Center is visualized as a single-story, double-decked structure that will contain 239,000 square feet for storage of collections in space designed to protect them properly and make them efficiently accessible for study and conservation. Of this total, 187,000 square feet will be allocated to the National Museum of Natural History, 28,000 square feet to the National Museum of History and Technology, and 24,000 square feet to other bureaus of the Institution. The National Museum of Natural History has tentatively designated the following percentages of its departmental collections for transfer to the Center: anthropology 95 percent, botany 25 percent, entomology 60 percent, invertebrate zoology 20 percent, mineral sciences 50 percent, paleobiology 20 percent, and vertebrate zoology 20 percent. A significant result of these transfers will be to release approximately 40,000 square feet of exhibit space in the Museum for its original purposes. The transfer of collections to the Center will also enhance educational and research activities on the Mall and will improve the level of care for remaining collections.

It is essential for the Center to provide space for research and study of the collections to be housed there. A building adjoining the storage component will contain about 68,000 square feet of laboratories and offices for the professional and technical staff associated directly with the collections so they can have ready access to them in the performance of their research and related duties. Some laboratory, office, and storage space will be used to house the Smithsonian oceanographic sorting center, presently occupying rented quarters in the Washington Navy Yard, in a more appropriate location adjacent to related program elements of the National Museum of Natural History.

Conservation is the key to the total process of caring for collections. Without conservation research and treatment, objects deteriorate and may completely lose their usefulness as scholarly documents, and their capacity to convey aesthetic values. The Conservation-Analytical Laboratory component of the Center will contain approximately 31,000 square feet of space and will include a collections receiving and fumigation unit; a conservation information referral center; space for the treatment of objects and research on conservation techniques; and a major facility for training staff and visiting interns in scientific theory and practical conservation skills. Locating these facilities in the Center in proximity to the processing and conservation laboratories of the department of anthropology and the oceanographic sorting center will greatly strengthen the Institution's overall capability in research, training, and treatment.

A special core facility for shipping and receiving, packing and crating, registration, photography, fumigation, and distribution will be incorporated into the Center. Coordination of these activities will provide the Institution with a well-planned facility that will assure greater safety for all objects in movement and storage.

#### Estimated Annual Cost of Museum Support Center Operations

Based on operating experience in the Mall museums, it is estimated that the Museum Support Center will cost approximately \$1,700,000 for annual operating expenses. This estimate includes approximately \$1,000,000 to fund 68 additional positions and \$700,000 for materials, maintenance, repairs, and utilities. In addition, the Institution's new conservation programs offered by the Museum Support Center could require as many as 20 additional positions at an annual cost of \$374,000 and a one-time cost of up to \$700,000 for specialized laboratory furnishings, instruments, equipment, and training facilities.

#### Planning and Design Process

The Institution will request the General Services Administration to undertake

the management of the design and construction of this project and will make use of the full range of services offered by this agency. The Smithsonian will participate fully in all matters and will designate an individual on its staff to serve as project coordinator. Also, the Smithsonian will use a portion of the planning and construction funds for additional term and temporary staff to monitor planning and construction, and to provide necessary liaison with Smithsonian bureaus. The Institution will also apply some planning funds to the preparation of a comprehensive statement of building program requirements drawn from information already assembled. This statement will be a valuable aid to the selection of the best qualified architect and to that architect as he prepares detailed plans and specifications.

#### Collections Management and Growth

In conjunction with the readjustments which the creation of the Center would make possible in the existing museums on the Mall, the Institution was requested by the Office of Management and Budget to undertake a study and prepare a report on the policies and practices controlling its management of collections and their growth. The study provided an opportunity for the Institution to review its existing collections management policies and to develop a program leading to the strengthening and refinement of those policies to assure their responsiveness to current and future needs. The study, completed in September, 1977, brought together much new information and resulted in a series of recommendations for improved methods of administering the collections. These recommendations are now being addressed by task forces whose memberships consist of Smithsonian staff having specialized knowledge to contribute to the effort. Also, special attention was given to the question of collections growth, a matter intimately associated with space and conservation requirements. The information thus far produced will enable the Institution to improve and develop new practices and policies responsive to space and other resources as well as to the scope and quality of its many and diverse collections.

TAB E

SOURCE AND APPLICATION OF OPERATING FUNDS





(\$1,000's)

Source and Application of Operating Funds (All Sources)  
 FY 1978 - FY 1979

FY 1978 Budget      FY 1979 Estimated

SCIENCE	FY 1978 Budget						FY 1979 Estimated							
	Federal Funds		Unrestricted		Federal Grants and Contracts		Federal Funds		Unrestricted		Federal Grants and Contracts			
	F/T Empl.	\$	F/T Empl.	Special Purpose \$	Restricted \$	F/T Empl.	F/T Empl.	\$	F/T Empl.	Special Purpose \$	Restricted \$	F/T Empl.	F/T Empl.	
Ass't Sect'y, Science	7	288	--	--	75	11	420	7	291	--	--	75	11	425
Museum of Natural History	498	12,419	3	131	245	36	1,015	498	12,893	3	86	240	36	1,000
Smithsonian Astrophysical Obs. (SAO Overhead Recovery)	73	4,518	81	31	375	145	7,875	73	4,555	82	2,011	375	145	7,950
Tropical Research Institute	65	1,633	2	21 (7)	25	1	10	67	1,749	3	87	25	1	10
Radiation Biology Laboratory	48	1,734	--	1	25	3	69	48	1,755	--	--	25	3	75
Office of Internat'l Programs	11	266	--	1	--	--	--	10	227	--	--	--	--	--
Chesapeake Bay Center	21	626	1	71	20	18	500	22	668	2	77	20	18	500
National Air & Space Museum	230	6,030	--	840 (679)	1	20	375	229	5,876	--	11	20	8	375
National Zoological Park	325	7,630	--	25 (18)	30	3	62	324	7,767	--	44	30	3	65
Center for the Study of Man	15	854	--	5	50	1	67	15	867	--	--	50	1	75
Research Awards Program	--	110	--	--	--	--	--	--	390	--	--	--	--	--
Int'l Environ. Science Program	2	381	--	--	--	--	--	2	384	--	--	--	--	--
Fort Pierce	--	--	--	--	7	400	--	--	--	--	--	7	400	--
TOTAL SCIENCE	1,295	36,489	87	1,051	9	1,265	10,393	1,295	37,412	90	407	1,260	226	10,475
Less expenses of generating revenue	--	--	--	(704)	--	--	--	--	--	--	--	(735)	--	--
TOTAL SCIENCE (Net)	1,295	36,489	87	347	9	1,265	10,393	1,295	37,412	90	407	1,260	226	10,475

/1 Expenses covered all or in part from revenues of activity.  
 \*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds (All Sources)  
 FY 1978 - FY 1979

FY 1978 Budget

FY 1979 Estimated

	Federal Funds				Unrestricted				Federal Grants and Contracts				Unrestricted				Restricted				Federal Grants and Contracts							
	F/T		Empl.		F/T		Empl.		F/T		Empl.		F/T		Empl.		F/T		Empl.		F/T		Empl.		F/T		Empl.	
	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	
HISTORY AND ART																												
Ass't Sect'y, History and Art	4	136	1	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-- Joseph Henry Papers	4	112	--	--	--	3	170	--	5	2	70	--	--	--	--	--	1	180	--	1	5	2	75	--	--	--	--	
Nat'l Museum History & Tech.	275	6,526	--	10	--	(20)	1	380	1	380	15	--	--	--	--	--	--	(25)	425	2	425	--	15	--	--	--	--	
Nat'l Collection of Fine Arts	106	2,821	--	93	--	126	--	70	--	106	--	--	--	--	--	--	--	100	75	--	75	--	110	--	--	--	--	
Nat'l Portrait Gallery	75	2,112	--	16	--	14	--	110	--	85	--	--	--	--	--	--	--	20	100	--	100	--	85	--	--	--	--	
Hirshhorn Museum	83	2,048	--	15	--	15	--	20	--	--	--	--	--	--	--	--	--	20	5	--	5	--	--	--	--	--	--	
Freer Gallery of Art	30	585	--	--	--	--	--	17	947	30	--	--	--	--	--	--	--	--	1,000	--	1,000	--	30	--	--	--	--	
Archives of American Art	17	426	--	--	--	--	--	10	270	--	--	--	--	--	--	--	--	--	285	--	285	--	--	--	--	--	--	
Cooper-Hewitt Museum	19	354	16	314	--	25	--	11	1,048	30	--	--	--	--	--	--	--	25	1,120	--	1,120	--	30	--	--	--	--	
Office of Academic Studies	5	509	--	18	--	--	--	--	10	--	--	--	--	--	--	--	--	--	10	--	10	--	--	--	--	--	--	
American & Folklife Studies	4	239	5	121	--	19	--	10	31	31	--	--	--	--	--	--	--	20	10	20	10	2	30	--	--	--	--	
TOTAL HISTORY AND ART	622	15,868	22	649	--	372	--	41	2,870	8	367	--	--	--	--	--	--	366	3,035	48	3,035	7	375	--	--	--	--	
Less expenses of generating revenue	--	--	--	--	--	(20)	--	--	--	--	--	--	--	--	--	--	--	(25)	--	--	--	--	--	--	--	--	--	
TOTAL HISTORY AND ART	622	15,868	22	649	--	352	--	41	2,870	8	367	--	--	--	--	--	--	341	3,035	48	3,035	7	375	--	--	--	--	
/1 Expenses covered all or in part from revenues of activity.																												

\*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds (All Sources)  
 FY 1978 - FY 1979

(\$1,000's)

FY 1978 Budget

	Federal Funds				Unrestricted				Restricted				Federal Grants and Contracts				
	F/T		Empl.		General*		Special Purpose		F/T		Empl.		F/T		Empl.		
	\$		\$		\$		\$		\$		\$		\$		\$		
PUBLIC SERVICE	8	205	6	225	--	--	--	--	--	--	--	--	--	--	--	--	15
Ass't Sect'y, Public Service			6	(220)/1													
-- Ofc. of Telecommunications	2	39	5	300	--	--	--	--	--	--	--	--	--	--	--	--	--
			5	(300)/1													
Anacostia Neighborhood Museum	19	618	1	21	--	--	18	8	75	--	--	--	--	10	8	75	--
International Exchange Service	8	232	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Division of Performing Arts	9	367	12	1,804/1	--	--	--	--	65	2	271	--	--	--	--	65	4
			12	(1,800)													
Smithsonian Institution Press	28	732	7	527	--	--	--	--	--	--	25	--	--	--	--	--	25
			7	(527)/1													
Office of Symposia & Seminars	2	48	1	61	--	--	--	--	--	--	--	--	--	--	--	50	--
Office of Elementary and Secondary Education	5	141	--	10	--	--	--	--	10	--	--	--	--	--	--	10	--
			--	10													
TOTAL PUBLIC SERVICE	81	2,382	32	2,948	--	--	18	8	200	2	304	--	--	10	8	200	4
Less expenses of generating revenue	--	--	--	2,847	--	--	--	--	--	--	--	--	--	--	--	--	--
			--	2,847													
TOTAL PUBLIC SERVICE (Net)	81	2,382	32	101	--	--	18	8	200	2	304	--	--	10	8	200	4
			32	101													

/1 Expenses covered all or in part from revenues of activity.

\*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds (All Sources)  
 FY 1978 - FY 1979

(\$1,000's)

FY 1978 Budget      FY 1979 Estimated

	Federal Funds				Unrestricted				Restricted				Federal Grants and Contracts					
	F/T		Empl.		F/T		Empl.		F/T		Empl.		F/T		Empl.			
	\$		\$		\$		\$		\$		\$		\$		\$			
MUSEUM PROGRAMS																		
Asst. Sect'y & Museum Programs	6	217	--	--	53	(53)/1	--	--	5	--	--	--	20	(20)/1	--	--	5	--
-- Office of Museum Programs	12	300	--	--	18	(18)/1	--	--	--	--	--	--	15	(15)/1	--	--	--	--
-- Office of Horticulture	28	672	--	--	13	(13)/1	--	--	--	--	--	--	20	(20)/1	--	--	--	--
-- South Building Group	46	694	--	--	16	--	--	--	--	--	--	--	20	--	--	--	--	--
Office of the Registrar	4	102	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conservation-Analytical Laboratory	23	658	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Smithsonian Inst. Libraries	96	2,260	8	148	--	--	--	--	--	--	--	--	9	165	--	--	--	--
Office of Exhibits Central	48	1,144	--	--	9	--	--	--	--	--	--	--	15	--	--	--	--	--
Traveling Exhibition Service	8	165	17	490	(490)/1	--	--	--	--	--	1	236	8	168	18	550	--	--
Smithsonian Archives	13	289	--	22	--	--	--	--	--	--	--	--	25	296	--	--	--	--
National Museum Act	3	794	--	--	--	--	--	--	--	--	--	--	3	795	--	--	--	--
TOTAL MUSEUM PROGRAMS	287	7,295	25	666	109	(84)	--	--	5	256	1	236	281	7,417	27	747	5	225
Less expenses of generating revenue	--	--	--	490	(84)	--	--	--	--	--	--	--	--	--	--	550	--	--
TOTAL MUSEUM PROGRAMS (Net)	287	7,295	25	176	25	--	--	--	5	236	1	236	281	7,417	27	197	5	225
/1 Expenses covered in part from revenues of activity.																		

\*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds (All Sources)  
 FY 1978 - FY 1979

(\$1,000's)

FY 1978 Budget

	Federal Funds				Unrestricted				Restricted				Federal Grants and Contracts				
	F/T		Empl.		Special Purpose		Restricted		Federal Grants and Contracts		Unrestricted		Restricted		Federal Grants and Contracts		
	F/T	Empl.	\$		F/T	Empl.	\$		F/T	Empl.	\$		F/T	Empl.	\$		
OTHER ACTIVITIES																	
Associates -- National	--	--	2,980		--	--	--		--	--	3,200		--	--	--	--	
			(2,980)								(3,200)						
-- Magazine	--	--	21,844		--	--	--		--	--	25,600		--	--	--	--	
			(21,844)								(25,600)						
-- Resident	--	--	1,694		2	/1	--		--	--	1,850		5	/1	--	--	
			(1,694)		(2)	/1					(1,850)		(5)	/1			
-- Foreign Study Tours	--	--	768		--	--	--		--	--	1,500		--	--	--	--	
			(768)								(1,500)						
Business Management -- Museum Shops	--	--	5,594		--	--	--		--	--	6,150		--	--	--	--	
			(5,594)								(6,150)						
-- Mail Order	--	--	2,781		--	--	--		--	--	2,850		--	--	--	--	
			(2,781)								(2,850)						
-- Belmont	--	--	371		--	--	--		--	--	280		--	--	--	--	
			(371)								(280)						
-- Other Business Management	--	--	286		--	--	--		--	--	335		--	--	--	--	
			(286)								(335)						
Popular Book Publishing	--	--	1,700		--	--	--		--	--	800		--	--	--	--	
			(1,700)								(800)						
Allowment for Research, Collections Acquisition, and Public Outreach	--	--	2,000		--	--	--		--	--	2,100		--	--	--	--	
			(2,000)								(2,100)						
TOTAL OTHER ACTIVITIES	--	--	40,018		2	--	--		--	--	44,665		5	--	--	--	
			(38,018)		(2)	--	--		--	--	(42,565)		(5)	--	--	--	
Less expenses of generating revenue	--	--	2,000		--	--	--		--	--	2,100		--	--	--	--	
			(2,000)								(2,100)						
TOTAL OTHER ACTIVITIES (Net)	--	--															
/1 Expenses covered all or in part from revenues of activity.																	

\*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds (All Sources)  
 FY 1978 - FY 1979

(\$1,000's)

FY 1978 Budget FY 1979 Estimated

	Federal Funds			Unrestricted			Restricted			Federal Grants and Contracts			Unrestricted			Restricted			Federal Grants and Contracts						
	F/T Empl.	\$	F/T Empl.	F/T Empl.	\$	F/T Empl.	F/T Empl.	\$	F/T Empl.	F/T Empl.	\$	F/T Empl.	F/T Empl.	\$	F/T Empl.	F/T Empl.	\$	F/T Empl.	F/T Empl.	\$	F/T Empl.	F/T Empl.	\$		
																								General*	Special Purpose
SUPPORT ACTIVITIES																									
-- Printing & Photographic Services	39	976	14	411 (353)/1	--	--	2	20	--	--	39	954	14	460 (395)/1	--	--	--	--	--	--	--	--	--	--	--
-- Protection Services	547	8,727	--	--	45	--	--	--	--	--	550	8,974	--	--	20	--	--	--	--	--	--	--	--	--	--
-- Office of Plant Services	322	16,124	3	234	52 (42)/1	2	--	--	--	--	322	16,110	3	250	60 (50)/1	2	--	--	--	--	--	--	--	--	--
Less expenses of generating revenue	--	--	--	(353)	--	--	--	--	--	--	--	--	--	(395)	--	--	--	--	--	--	--	--	--	--	--
SUPPORT ACTIVITIES (Net)	908	25,827	17	292	2	2	20	--	--	--	911	26,038	17	315	2	30	--	--	--	--	--	--	--	--	--
ADMINISTRATION	235	6,292	145	3,971	84 (30)/1	--	1	125	--	100	238	6,513	150	4,439	100 (30)/1	--	1	150	--	--	--	--	--	100	--
-- Overhead Recovery	--	--	--	(3,758)	--	--	--	--	--	--	--	--	--	(4,200)	--	--	--	--	--	--	--	--	--	--	--
ADMINISTRATION (Net)	235	6,292	145	213	54	--	1	125	--	100	238	6,513	150	239	70	--	1	150	--	--	--	--	--	100	--
TRANSFERS (IN)/OUT	--	--	--	6,309	(1,509)	--	--	175	--	--	--	--	--	5,875	(1,625)	--	--	175	--	--	--	--	--	--	--
GRAND TOTAL APPLIED	3,428	94,153	620	10,078	18	61	4,660	237	11,400	3,428	96,307	650	9,825	18	(725)	66	4,825	238	11,500	--	--	--	--	--	--
FUND BALANCE - Beginning of Year	--	--	--	4,082	--	--	3,518	--	42	--	--	--	--	4,416	--	--	--	3,531	--	--	--	--	--	--	--
Change in Fund Balance	--	--	--	334	1,481	--	13	--	(42)	--	--	--	--	125	1,625	--	--	25	--	--	--	--	--	--	--
FUND BALANCE - End of Year	--	--	--	4,416	5,773	--	3,531	--	--	--	--	--	--	4,541	7,398	--	--	3,556	--	--	--	--	--	--	--
/1 Expenses covered all or in part from revenues of activity.																									

\*Includes unrestricted allotments and auxiliary activities.



TAB F

APPENDIX



SMITHSONIAN INSTITUTION  
"Salaries and Expenses"

Report of Appropriation by Objects of Expense  
(In thousands of dollars)

	<u>1977</u> <u>Actual</u>	<u>1978</u> <u>Estimate</u>	<u>1979</u> <u>Estimate</u>	<u>Increase</u> <u>1979 over 1978</u>
11 Personnel Compensation.....	53,921	62,030	63,558	1,528
12 Personnel Benefits.....	5,148	6,006	6,190	184
21 Travel & Transportation of Persons.....	555	588	814	226
22 Transportation of Things.....	352	447	492	45
23 Rent, Communications and Utilities.....	9,335	10,414	10,185	-229
24 Printing and Reproduction.....	995	866	975	109
25 Other Services.....	5,970	5,815	5,649	-166
26 Supplies and Materials.....	3,967	3,937	4,136	199
31 Equipment.....	2,399	1,977	2,195	218
Acquisitions.....	665	827	827	-0-
32 Land and Structures.....	32	-0-	-0-	-0-
41 Grants.....	1,741	1,244	1,284	40
42 Insurance Claims and Indemnities.....	<u>6</u>	<u>2</u>	<u>2</u>	<u>-0-</u>
TOTAL.....	85,086	94,153 <sup>/1</sup>	96,307	2,154

<sup>/1</sup> This amount includes requested supplemental funding of \$4,815 thousand for the cost of the FY 1978 legislated pay raises and an amount of \$1,100 thousand for uncontrollable cost increases resulting from higher utility rates.

SMITHSONIAN VISITORS  
(By Fiscal Year)

Fiscal Year	Smithsonian Institution Building	Arts and Industries Building	Museum of Natural History	National Air & Space Building	Freer Gallery of Art	Museum of History & Technology	Fine Arts & Portrait Galleries	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 <sup>/6</sup>
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 <sup>/8</sup>
1968	847,176	1,344,622	3,257,957	1,123,698	169,533	4,750,023	30,888			11,523,897 <sup>/8</sup>
1969	275,259 <sup>/7</sup>	1,493,141	2,916,749	1,225,959	179,374	4,174,071	166,177			10,430,730 <sup>/9</sup>
1970		2,557,155	3,269,791	1,839,373	217,305	5,483,555	216,523			13,583,702
1971	681,255	1,985,732	3,456,755	1,337,445	190,425	5,955,128	194,468			13,801,208
1972	819,617	2,306,071	3,414,640	1,104,151	230,475	6,808,526	246,657	105,186		15,035,323
1973	807,294	2,285,603	3,306,105	1,223,917	204,858	6,905,339	254,005	165,846		15,152,967
1974	739,651	2,040,731	3,067,694	1,285,598	219,346	5,850,227	329,487	175,672		13,708,406
1975	967,164	1,973,356	3,668,587	1,416,432	215,061	7,111,054	368,948	165,433	1,620,540	17,506,575
1976	1,033,803	592,400 <sup>/10</sup>	4,342,601	1,451,049 <sup>/11</sup>	225,257	6,318,964	465,231	222,351	1,587,628	16,239,284
T.O.	291,808	543,007	1,535,613	3,062,254 <sup>/11</sup>	59,217	1,470,708	112,682	46,661	434,415	7,556,365
1977	755,146	1,223,703	4,925,741	9,886,350	214,675	4,507,020	399,364	155,792	1,342,892	23,210,683

<sup>/1</sup> Museum of History and Technology opened January 1964.

<sup>/2</sup> National Collection of Fine Arts opened May 1968 and National Portrait Gallery in October 1968.

<sup>/3</sup> Renwick Gallery opened January 1972.

<sup>/4</sup> Hirshhorn Museum and Sculpture Garden opened October 1974.

<sup>/5</sup> An additional 2-3,000,000 visitors to the National Zoological Park annually, 40,000 to the Anacostia Museum, and 212,000 to the Cooper-Hewitt Museum in New York are excluded from these totals.

<sup>/6</sup> July-August 1964, certain Smithsonian Institution buildings were open 4:30 to 10 p.m. for the first time.

<sup>/7</sup> Building closed for renovation October 1968.

<sup>/8</sup> Reflects the significant decrease in visitors in the Nation's Capital in the first six months of CY 1968 due to unsettled local conditions.

<sup>/9</sup> Fiscal year 1969 visitor totals represent the effect of local conditions in late 1968 on visitor attendance.

<sup>/10</sup> Building closed for installation of "1876" exhibition September, 1975 through April, 1976.

<sup>/11</sup> Old building closed November, 1975. Foyer of new museum opened to visitors February, 1976. New building completely opened July 1, 1976.

SMITHSONIAN YEAR - 1977

FINANCIAL REPORT

T. AMES WHEELER, TREASURER

SUMMARY

The Institution's financial results this year were generally favorable, as shown in the following tables and explanations. Increased federal appropriations were received, primarily to cover a large share of inflationary cost increases and to restore the Foreign Currency Program to previous appropriated levels. Congressional authorizations for operating purposes other than the Foreign Currency Program totaled \$87.2 million, up 4% from the previous year. Appropriations for construction added \$9,530,000. Research grants and contracts received from federal agencies continued at \$10.6 million.

During FY 1977 also, income from the Institution's trust fund activities, particularly from the Associates program, rose impressively, reflecting enthusiastic and widespread acceptance of the Smithsonian magazine and its related programs and benefits. Auxiliary activities such as the museum shops, and restaurant and parking concessions also contributed to improvement in trust fund financial results. Total net trust fund income, after deducting related costs of the auxiliary activities (see Table 1) was \$15.7 million, or 14% of total operating income, compared to 77% for federal appropriations, and 9% for grant and contract monies. While expenditures also rose, a favorable balance for unrestricted general purpose funds for this year permitted a further step forward in the program of making necessary additions to the Institution's unrestricted endowment funds to provide for future needs.

Efforts have been underway for the past two years to strengthen the Institution's accounting capability to cope with the expansion and growing complexity of Smithsonian activities. FY 1977 witnessed a shakedown period of modernization of our entire accounting system, coupled with the installation and programming of new, enlarged computer equipment--a truly difficult experience which called for and received heroic measures of effort from dedicated staff. Fiscal Year 1978 and future years will thus acquire measurable benefits and levels of efficiency from this new program.

#### Federal Appropriations

Federal operating funds received by the Institution in FY 1977, exclusive of funds for the Smithsonian Science Information Exchange, Inc., and the Special Foreign Currency Program, totaled \$85,236,000, an increase of \$3,672,000 over FY 1976. Since the FY 1976 appropriation included \$4,427,000 of non-recurring costs (largely Bicentennial-related) which were redirected in FY 1977 for other purposes, the FY 1977 appropriation actually provided some \$8,000,000 of additional funds for normal operations. Of this amount, however, over \$6,500,000 was required to meet uncontrollable cost increases (higher pay and health benefits, and utilities' charges and postage rate increases). The balance allowed modest research program improvements, implementation of a collections management study, increased collections purchase funds, and continued improvement of various technical and support services, including increments for guard services at the newly

opened National Air and Space Museum. In considering the Institution's FY 1977 federal budget request, the Congress directed the Institution to discontinue the previous practice of establishing a contingency fund to meet unexpected expenses and imposed a related 2% reduction, totaling some \$1,700,000 upon the otherwise approved appropriations for Smithsonian bureaus and activities. New reprogramming guidelines issued during FY 1977 by the Interior Appropriations Subcommittees now provide the Institution the means for meeting such emergency expenses in a timely and efficient manner.

For the Smithsonian Science Information Exchange, \$1,972,000 was provided for fiscal year 1977. The Smithsonian's Special Foreign Currency Program, which provides grants to United States institutions for field research in those countries where "excess" foreign currencies are available, received an FY 1977 federal appropriation of \$3,481,000, restoring this program to more normal levels compared to the \$500,000 provided in FY 1976. The increased funding included allowance for the payment of the third of four \$1,000,000 annual contributions to the campaign to save the monuments of Nubia. For general categories and geographical areas of spending under the Foreign Currency Program see Table 3.

Federal funds appropriated to the Institution for construction purposes in FY 1977 totaled \$9,530,000. Of this amount approximately \$6,600,000 was provided for continuation of the approved master plan for renovation of the National Zoological Park. This includes exhibits for beavers, otters, seals, sea lions, bears and wolves. An additional amount of almost

\$3,000,000 was designated for needed repairs and renovation of other Smithsonian buildings, including installation of fire detection and control systems and repairs to the Arts and Industries Building roof, the Renwick Gallery exterior and the History and Technology Building terrace.

#### Grants and Contracts

Federal agencies in FY 1977 again provided substantial grant and contract support for the Institution's research programs. Such funds are sought to finance specific research and educational projects that are related to the Institution's trust mandate where such work can be accommodated within the performing bureau's total program responsibilities. Projects are also requested of Smithsonian scientists by the funding agencies because of the Institution's expertise in given areas. Amounts received from major granting agencies are listed in Table 4. Representative projects included a Smithsonian Astrophysical Observatory development of masers and a helium-cooled infrared telescope for Space Lab II; continued analysis by the National Air and Space Museum of geological features of the lunar surface; four touring exhibits entitled "It's Your Coast" to promote a wider public understanding of the Coastal Zone Management Program; and an exhibit during the latest Folklife Festival of the many uses of energy.

#### Smithsonian Trust Funds

The trust funds of the Institution, established with the original Smithson bequest and increased over the years by many subsequent bequests

and gifts, have recently grown more rapidly. Total gross operating revenues rose to \$48,000,000, compared with \$35,500,000 for FY 1976; net income after deduction of related expenses was \$15,746,000 in 1977 against \$12,619,000 in 1976. Included therein, income from endowment fund and current investments rose modestly to \$2,847,000, while gifts for current operations declined to \$1,827,000 from the extraordinarily high level experienced during the prior two years in which wide support for Bicentennial related activities was received. Total trust fund income for Fiscal Year 1977 is summarized in Table 5. The major increase was derived from auxiliary activities, as detailed below.

#### Unrestricted Purpose Trust Funds

Unrestricted purpose trust fund income continued to increase this year, as shown in Table 6. For this the growth of auxiliary activities (see Table 7) was primarily responsible. National Associate Members now total more than 1,600,000, while Resident Associates, those living in the Washington metropolitan area and participating in a variety of cultural, educational and entertainment programs, now number 43,000. Income from restaurant and parking concessions rose with the opening of the West Court in the Natural History Building and the National Air and Space Museum, along with admissions to the NASM film theater and spacearium shows. Reduced income from the Product Development program was offset by increased Museum Shops revenues. Sales from our third annual mail order Christmas catalogue, although not contributing to any large extent to FY 1977 results, have also expanded; this effort and a new venture in

publishing, "The Smithsonian Experience," should mean a continuation of the improvement in trust fund revenues in FY 1978.

Smithsonian administrative costs rose with the growth of the Institution and increased salary scales commensurate with those mandated for federal employees. Distribution of portions of the income of museum shops, product development and concessions to various bureaus also rose along with operating allotments for a great variety of urgent special programmatic needs. Funds were also transferred from the operating account to complete final payments on the construction of West Court facilities in the Natural History Building, for additional renovation costs at the Cooper-Hewitt Museum and for building program costs at the Chesapeake Bay Center. It was possible also to transfer \$5,500,000 to the Institution's unrestricted purpose endowment funds, a high-priority goal set by the Regents to increase the present relatively small amount of such funds available to deal with possible future emergencies. At the end of FY 1977 such funds total about \$12,600,000.

#### Special Purpose Trust Funds

These funds include income received directly by individual bureaus for their general use and income set aside from Unrestricted General Purpose funds for bureau programs or other specific uses. Additional detail on special purpose funds is set forth this year in Table 8, as well as being included in Tables 2 and 5. Total income in FY 1977 amounted to \$2,111,000, compared with \$1,420,000 in the preceding 15 months. Admission fees of \$1,249,000 to the NASM film theater and

spacearium shows are responsible for most of the jump in income. Increased revenue sharing transfers to the bureaux from concession fees and museum shop income also added to this type of support which enables bureaux to add to their purchases for collections, exhibit improvements and other educational programs. In the case of NASM, net income from admission fees has been set aside to finance future film replacements, while other amounts there are being designated for a future Lindbergh Chair in Aerospace History for an appointed scholar. Also included in special purpose funds are Zoo parking receipts reserved for future expansion of parking facilities and a reserve for possible additional costs relating to the Smithsonian magazine.

#### Restricted Purpose Trust Funds

As indicated in Table 5, a major portion of Smithsonian trust fund income each year is received for specific purposes designated by donors. In FY 1977, total restricted purpose income amounted to \$4,407,000, of which \$1,690,000 was derived from restricted purpose endowment fund investment income, \$1,724,000 was in the form of gifts and \$993,000 represented bureau income from their membership activities, sales desks and special fund raising events. The Freer Gallery, Fort Pierce Bureau for Oceanographic Research in Florida, the Cooper-Hewitt Museum and the Archives of American Art are among the major recipients of this form of income. Detailed information on both income and uses of these restricted funds may be seen in Table 9.

## Endowment and Similar Funds

The Endowment Funds of the Smithsonian had a market value on September 30, 1977, of \$47,583,000, which included \$46,511,000 in the Consolidated Endowment Fund, \$1,000,000 on permanent deposit in the U.S. Treasury, and \$72,000 of miscellaneous securities (See Table 10). The majority of these funds, 67%, at September 30, 1977, are restricted, with income to be used only for the purposes originally specified by the donor. The Consolidated Endowment Fund (detailed in Table 13) consists of the Freer Fund, which supports the operation of the Freer Gallery of Art, Endowment Fund No. 3 used for oceanographic research at the Fort Pierce Bureau, and a number of smaller restricted and unrestricted funds which support a variety of research and museum programs. In order to facilitate their management, these endowments have been pooled for investment purposes since July 1, 1974; separate accounting and administration continues, however, for each fund. Table 11 shows the market values of the Consolidated Endowment Fund since June 30, 1973, while Table 12 shows the changes over the past year due to transfers, reinvestment of income, gifts and values in the securities markets. The decline in market value during this period was less than for the major stock market indexes. Income paid out under the total return policy, net of managers' and custodial fees, was \$2,090,000, which included \$304,000 from accumulated capital gains.

The investment management of the Consolidated Endowment Fund is conducted by three professional advisory firms under the close supervision

of the Investment Policy Committee and the Treasurer, subject to the policy guidelines set by the Smithsonian's Board of Regents. The Institution follows the total return policy, adopted by the Board of Regents in 1972, under which income is paid by each individual endowment fund at the annual rate of 4-1/2% of the running 5-year average of market values, adjusted for additions or withdrawals of capital.

A listing of the individual investments held in the Consolidated Endowment Fund as of September 30, 1977, may be obtained upon request to the Treasurer of the Institution.

#### Related Organizations

Not included in the preceding financial data are results of operations of several organizations affiliated in varying degrees with the Smithsonian Institution.

The Smithsonian Science Information Exchange, Inc., a non-profit entity incorporated in 1971, serves to facilitate the prompt exchange of information of on-going research activities among Government agencies and the scientific community. While funded in large measure by the federal appropriation made to the Smithsonian Institution for the Exchange, it also receives substantial revenues from users of its services. Unaudited figures for 1977 show that in addition to the \$1,972,000 federal appropriation, SSIE received approximately \$1,250,000 from contract fees and charges to customers; preliminary estimates indicate that expenditures exceeded total income during the year. During the year, an audit of the

Institution by the General Accounting Office recommended that the Exchange be dissolved as an independent corporation and that its operations be carried on as part of the Smithsonian's regular organizational structure or as a part of a federal government agency. At year's end, discussions were being held with the Office of Management and Budget regarding the resolution of this problem.

The Smithsonian Research Foundation was incorporated in 1966 in order to administer the Research Awards Program; these activities were paid for by federal appropriations to replace grants formerly received from the National Science Foundation in support of special research projects of Smithsonian scientists. In its audit, the General Accounting Office also recommended dissolution of the Research Foundation and it is being phased out in fiscal year 1978. Its activities will thereafter be directly administered by the Institution.

Reading is Fundamental, Inc., an organization dedicated to the improvement of reading abilities in children, has been associated with the Smithsonian since 1968, but now operates as an independent, separately incorporated entity for which the Institution, on a contract basis, provides certain administrative services.

Although established by Congress "in the Smithsonian Institution," The Woodrow Wilson International Center for Scholars is separately administered under its own Board of Trustees; office space and support services are provided by the Institution. In order to reflect more properly the Center's independent status, the non-federal funds of the Center, previously included within the Smithsonian's financial reports, have been reclassified to agency status and do not appear in preceding figures of this report.

Similarly, the National Gallery of Art and the John F. Kennedy Center for the Performing Arts, although legally bureaux of the Institution, are administered by separate Boards of Trustees, with financial reports prepared independently by these organizations.

Although closely tied to the National Zoological Park, the Friends of the National Zoo (FONZ) is an independent non-profit corporation which, under contract with the Smithsonian, operates restaurant, trackless train, gift shop and restaurant concessions at the Zoo. A report on FONZ activities for calendar 1976 (their report period) is contained in volume two of this annual report. During this period, FONZ paid concession fees to the Smithsonian of \$121,000, and in addition provided program support for Zoo programs of a value in excess of \$150,000. Members of FONZ contributed time of over 17,500 hours as tour guides, aides to keepers, and volunteers for the animal watches. As of December 31, 1976, FONZ had a fund balance of \$550,000 which is retained for future support of Zoo programs.

#### Accounting and Auditing

The nonfederal trust funds of the Institution are audited annually by independent public accountants, and their report for fiscal year 1977 is contained in the following pages. An audit of grant and contract moneys received from federal agencies is conducted annually by the Defense Contract Audit Agency. During FY 1977 the General Accounting Office undertook a thorough review of the Smithsonian's financial accountability to the Congress. In their report, dated March 1977, GAO recommended that

the Smithsonian provide certain additional reports to Congress, in addition to those already regularly furnished. A separate report issued in September 1977, reviewed the banking practices of the Institution for its trust funds, and concluded that adequate procedures for the management of cash were in effect.

An Audit Review Committee was established by the Board of Regents during this fiscal year to review the financial administration and audits of the Institution. The internal audit staff continued its audit program of various Smithsonian operations during the year.

TABLE 1 - Overall Sources of Financial Support

(\$1,000's)

Sources	FY 1975	FY 1976	Trans. Quarter	FY 1977
<b>OPERATING FUNDS</b>				
Federal appropriation:				
Salaries and expenses.....	\$ 70,706	\$ 81,564	\$22,629	\$ 85,236
Smithsonian Science Information				
Exchange.....	1,805	1,940	521	1,972
Special Foreign Currency Program..	2,000	500	-0-	3,481
Subtotal.....	\$ 74,511	\$ 84,004	\$23,150	\$ 90,689
Research grants and contracts.....	12,292	11,525	3,987	10,571
Nonfederal funds:				
Gifts (excluding gifts to endowments and Plant Funds)				
Restricted purpose.....	4,177	4,307	658	1,724
Unrestricted purpose.....	253*	354*	66*	103*
Income from endowment and current funds investment**				
Restricted purpose.....	1,724	1,634	503	1,690
Unrestricted purpose.....	953	1,110	264	1,157
Auxiliary activities - Gross.....	19,017	26,939	8,718	40,202
Less related expenses.....	(16,494)	(22,892)	(7,054)	(32,221)
Net income.....	2,523	4,047	1,664	7,981
Miscellaneous Restricted purpose..	636	474	212	993
Unrestricted purpose.....	554	693	452	2,098
Total Nonfederal Funds-Gross..	27,314	35,511	10,873	47,967
-Net....	10,820	12,619	3,819	15,746
Total Operating Support-Gross..	114,117	131,040	38,010	149,227
-Net... <u>\$ 97,623</u>	<u>\$ 97,623</u>	<u>\$108,148</u>	<u>\$30,956</u>	<u>\$117,006</u>
<b>CONSTRUCTION FUNDS</b>				
Federal Construction Funds:				
National Zoological Park.....	\$ 9,420	\$ 8,390	\$ 1,440	\$ 6,580
National Air & Space Museum.....	7,000	2,500	-0-	-0-
Restoration & Renovation of Bldgs.	1,490	1,192	400	2,950
Total Fed. Construction Funds	<u>\$ 17,910</u>	<u>\$ 12,082</u>	<u>\$ 1,840</u>	<u>\$ 9,530</u>
Nonfederal Plant & Land Acquisition Funds				
Cooper-Hewitt Museum.....	\$ 162	\$ 425	\$ 30	\$ 3
Chesapeake Bay Center.....	15	5	-0-	2
Anacostia Neighborhood Museum....	10	-0-	-0-	-0-
National Zoological Park.....	-0-	100	-0-	-0-
Total Nonfederal Plant and Land Acquisition Funds.....	<u>\$ 187</u>	<u>\$ 530</u>	<u>\$ 30</u>	<u>\$ 5</u>
<b>ENDOWMENT FUNDS</b>				
Gifts.....	-0-	\$ 45	\$ 24	\$ 234
Total Endowment Funds	<u>\$ -0-</u>	<u>\$ 45</u>	<u>\$ 24</u>	<u>\$ 234</u>

\* Excluding gifts to Associates (included under Auxiliary Activities).

\*\* Includes portion of investment gain appropriated to income under Total Return Policy.

(In \$1,000's) TABLE 2 - Source and Application of Operating Funds  
 Year Ended September 30, 1977  
 (Excludes Special Foreign Currency Funds, Plant Funds and Endowments)

Funds	Nonfederal Funds						
	Federal funds	Total nonfederal funds	Unrestricted			Restricted	
			General	Auxiliary Activities	Special Purpose	General	Grants and contracts
<b>FUND BALANCES -</b>							
1 October 1976 *	\$ -0-	\$10,245	\$4,074	\$ -0-	\$2,417	\$3,658	\$ 96
<b>FUNDS PROVIDED</b>							
Federal Appropriations	\$87,208	-	-	-	-	-	-
Investment Income	-	\$ 2,847	\$1,154	\$ -	\$ 3	\$1,690	\$ -
Grants and Contracts	-	10,515	-	-	-	-	10,515
Gifts	-	2,203	48	376	55	1,724	-
Sales and Revenue	-	41,420	-	39,826	1,594	-	-
Other	-	1,497	45	-	459	993	-
Total Provided	<u>\$87,208</u>	<u>\$58,482</u>	<u>\$1,247</u>	<u>\$40,202</u>	<u>\$2,111</u>	<u>\$4,407</u>	<u>\$10,515</u>
Total Available	<u>\$87,208</u>	<u>\$68,727</u>	<u>\$5,321</u>	<u>\$40,202</u>	<u>\$4,528</u>	<u>\$8,065</u>	<u>\$10,611</u>
<b>FUNDS APPLIED</b>							
<b>Science:</b>							
Natl. Museum of Nat. History	\$11,411	\$ 1,360	\$ 13	\$ -	\$ 91	\$ 269	\$ 987
Astrophysical Observatory	3,837	7,430	88	-	38	369	6,940
Tropical Research Inst.	1,477	98	17	-	47	24	10
Radiation Biology Lab.	1,872	100	-	-	6	22	72
Chesapeake Bay Center	613	575	46	-	-	17	512
Natl. Air and Space Museum	6,091	823	12	-	502	20	289
Natl. Zoological Park	7,067	173	33	-	38	37	65
Center for Study of Man	399	191	73	-	-	52	66
Science Info. Exchange**	1,972	-	-	-	-	-	-
Fort Pierce Bureau	-	424	1	-	-	423	-
Interdisciplinary Communi- cations Program	-	354	44	-	-	9	301
Other	1,260	602	76	-	(1)	94	433
Total Science	35,999	12,130	398	-	721	1,336	9,675
<b>History and Art:</b>							
Natl. Museum of History and Technology	5,944	470	12	-	81	373	4
Natl. Collections of Fine Arts	2,539	254	17	-	97	55	85
Natl. Portrait Gallery	1,921	229	118	-	27	13	71
Hirshhorn Museum	1,892	23	12	-	10	1	-
Freer Gallery of Art	492	973	-	-	-	960	13
Archives of American Art	349	288	-	-	-	288	-
Cooper-Hewitt Museum	415	1,457	37	-	-	1,399	21
Academic Studies	474	28	15	-	1	12	-
Bicentennial	419	-	-	-	-	-	-
Other	339	193	119	-	1	6	67
Total History & Art	14,784	3,915	330	-	217	3,107	261

\*Exclusive of funds of Woodrow Wilson International Center for Scholars (\$70,655 Special Purpose Unrestricted, \$326,414 General Restricted, \$4,152 Grants & Contracts) reclassified as Agency Funds.

\*\*Figures do not include revenues to SSIE from other sources of approximately \$1,250,000.

TABLE 2 - Source and Application of Operating Funds - Continued  
 Year Ended September 30, 1977

(In \$1,000's)

Funds	Nonfederal Funds						
	Federal funds	Total nonfederal funds	Unrestricted			Restricted	
			General	Auxiliary Activities	Special Purpose	General	Grants and contracts
<b>Public Service:</b>							
Anacostia Museum	527	193	19	-	3	171	-
Smithsonian Press	650	394	-	349	-	-	45
Performing Arts	320	1,017	-	736	19	18	244
Other	532	448	113	189	1	134	11
<b>Total Public Service</b>	<b>2,029</b>	<b>2,052</b>	<b>132</b>	<b>1,274</b>	<b>23</b>	<b>323</b>	<b>300</b>
<b>Museum Programs:</b>							
Conservation Analytical Lab.	538	-	-	-	-	-	-
Libraries	2,033	132	132	-	-	-	-
Exhibits	1,037	-	-	-	-	-	-
Traveling Exhibition Svc.	101	752	-	518	-	-	234
Natl. Museum Act	788	-	-	-	-	-	-
Other	1,941	73	18	-	55	2	(2)
<b>Total Museum Programs</b>	<b>6,438</b>	<b>957</b>	<b>150</b>	<b>518</b>	<b>55</b>	<b>2</b>	<b>232</b>
<b>Other Activities:</b>							
Associates Programs	-	23,679	-	23,668	11	-	-
Business Management	-	6,502	-	6,502	-	-	-
Other	-	131	-	131	-	-	-
<b>Total Other Activities</b>	<b>-</b>	<b>30,312</b>	<b>-</b>	<b>30,301</b>	<b>11</b>	<b>-</b>	<b>-</b>
<b>Support Activities</b>							
Administration	22,314	353	259	128	(34)	-	-
Overhead Recovered	5,494	5,420	1,083	1,205	146	609	2,377
Transfers for Designated Purposes - Out or (In)	-	(4,592)	(562)	(1,205)	(75)	(476)	(2,274)
	150***	6,246	(551)	7,981	(828)	(354)	(2)
<b>Total Funds Applied</b>	<b>\$87,208</b>	<b>\$56,793</b>	<b>\$1,239</b>	<b>\$40,202</b>	<b>\$ 236</b>	<b>\$4,547</b>	<b>\$10,569</b>
<b>FUND BALANCES</b>							
30 September 1977	\$ -0-	\$11,934	\$4,082	\$ -0-	\$4,292	\$3,518	\$ 42

\*\*\*Unobligated funds returned to Treasury.

TABLE 3 - Special Foreign Currency Program  
Fiscal Year 1977 - Obligations

Country	Archeology	System- atic & Environ- mental Biology	Astro- physics & Earth Sciences	Museum Programs	Grant Adminis- tration	Total
Burma.....	\$ -	\$ 1,000	\$ -	\$ -	\$ -	\$ 1,000
Egypt.....	1,638,705	100,689	199,213	(59)	3,751	1,942,299
India.....	485,814	30,416	17,510	152,626	11,120	697,486
Pakistan.....	24,556	56,607	2,829	-	325	84,317
Poland.....	55,434	53,950	79,841	70,927	54,360	314,512
Tunisia.....	383,000	360,418	-	2,415	168	746,001
TOTAL.....	\$2,587,509	\$603,080	\$299,393	\$225,909	\$69,724	\$3,785,615 *

\*An additional \$181,000 was transferred to the National Science Foundation for the translation and printing of scientific publications in India requested by the Smithsonian Institution.

TABLE 4 - Grants and Contracts

(In \$1,000's)

FEDERAL AGENCIES	FY 1975	FY 1976	Trans. Quarter	FY 1977
Atomic Energy Commission.....	\$ 84	\$ 85	\$ 48	\$ 157
Department of Commerce.....	242	218	90	82
Department of Defense.....	799	800	212	998
Department of Health, Education and Welfare.....	219	255	79	282
Department of Interior.....	246	272	48	155
Department of Labor.....	87	162	177	33
Department of State.....	1,549	1,252	242	282
National Aeronautics and Space Administration.....	7,670	6,222	1,845	6,346
National Endowment for the Arts and Humanities.....	420	451	174	356
National Science Foundation.....	502	432	128	315
Other.....	474	1,376	944	1,565
Total.....	\$12,292	\$11,525	\$3,987	\$10,571

TABLE 5 - Total Trust Funds Income Fiscal Year 1977

(In \$1,000's)

Revenue Sources	Unrestricted Purposes			Total
	General & Auxiliary Activities	Special Purpose*	Restricted Purposes***	
FOR OPERATING PURPOSES:				
Investments.....	\$1,154	\$ 3	\$1,690	\$ 2,847
Gifts.....	48**	55	1,724	1,827
Auxiliary Activities (net).....	7,981	-	-	7,981
Miscellaneous.....	45	2,053	993	3,091
Total Operating Funds.....	<u>9,228</u>	<u>2,111</u>	<u>4,407</u>	<u>15,746</u>
FOR PLANT:				
Gifts --				
Cooper-Hewitt.....	\$ -	\$ -	\$ 3	\$ 3
Chesapeake Bay Center.....	-	-	1	1
Total Gifts	\$ -	\$ -	\$ 4	\$ 4
Miscellaneous.....	\$ -	\$ -	\$ 1	\$ 1
Total Plant.....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 5</u>	<u>\$ 5</u>
FOR ENDOWMENT:				
Gifts.....	\$ -	\$ -	\$ 234	\$ 234
Total Endowment	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 234</u>	<u>\$ 234</u>
Grand Total	<u>\$9,228</u>	<u>\$2,111</u>	<u>\$4,646</u>	<u>\$15,985</u>

\*Represents unrestricted income designated by management to be used only for specific purposes.

\*\*Excluding gifts to Associates (included under Auxiliary Activities).

\*\*\*Excluding Grants and Contracts shown in Table 4.

TABLE 6 - Unrestricted Trust Funds  
General and Auxiliary Activities  
(Excluding Special Purpose Funds and Gifts to Endowment)  
(In \$1,000's)

Item	FY 1975	FY 1976	Trans. Quarter	FY 1977
INCOME				
General Income:				
Investments.....	\$ 950	\$1,107	\$ 263	\$1,154
Gifts.....	46	66	16	48
Miscellaneous.....	<u>13</u>	<u>54</u>	<u>13</u>	<u>45</u>
Total General Income.....	1,009	1,227	292	1,247
Auxiliary Activities (net):				
Associates.....	1,968	3,256	1,011	6,416
Shops and Product Development.....	635	521	261	828
Press.....	(96)	(146)	(46)	(108)
Performing Arts.....	(79)	(110)	(9)	(343)
Concessions.....	215	657	517	1,651
Other Activities.....	<u>(120)</u>	<u>(131)</u>	<u>(70)</u>	<u>(463)</u>
Total Activities.....	<u>2,523</u>	<u>4,047</u>	<u>1,664</u>	<u>7,981</u>
Total Income.....	<u>3,532</u>	<u>5,274</u>	<u>1,956</u>	<u>9,228</u>
EXPENDITURES AND TRANSFERS				
Administrative and Program Expense..	4,780	5,024	1,530	6,382
Less Administrative Recovery.....	<u>3,644</u>	<u>4,558</u>	<u>1,201</u>	<u>4,592</u>
Net Expense.....	1,136	466	329	1,790
Less Transfers:				
To Special Purpose and Restricted Funds for Program Purposes.....	546	1,151	499	1,350
To Plant Funds.....	97	2,495	207	559
To Endowment Funds.....	<u>1,463</u>	<u>1,021</u>	<u>755</u>	<u>5,521</u>
NET GAIN (LOSS).....	<u>290</u>	<u>141</u>	<u>166</u>	<u>8</u>
ENDING BALANCE.....	<u>\$3,767</u>	<u>\$3,908</u>	<u>\$4,074</u>	<u>\$4,082</u>

TABLE 7 - Auxiliary Activities for Fiscal Year 1977  
(In \$1,000's)

Item	Total	Museum Shops*	Smith-Sonian Press**	Smith-sonian Associates	Per-forming Arts	Con-cessions	Other***
Sales and Revenues....	\$39,689	\$6,848	\$ 241	\$29,683	\$ 393	\$1,717	\$ 807
Less Cost of Sales....	18,129	3,516	131	14,394	88	-	-
Gross Income.....	21,560	3,332	110	15,289	305	1,717	807
Gifts.....	377	-	-	352	-	-	25
Other Income.....	136	87	-	49	-	-	-
Total Income.....	22,073	3,419	110	15,690	305	1,717	832
Expenses.....	12,887	2,249	206	8,616	581	61	1,174
Administrative Costs..	1,205	342	12	658	57	5	121
Income (Loss) Before Transfers.....	7,981	828	(108)	6,416	(343)	1,651	(463)
Transfers In/(Out)....	(424)	(254)#	-	-	14	(184)#	-
Net Income (Loss)...	\$ 7,557	\$ 574	\$(108)	\$6,416	\$(329)	\$1,467	\$(463)

\*Includes Product Development and Mail Order Programs.

\*\*The privately funded activities of the Press as opposed to the federally supported publication of research papers.

\*\*\*Includes Traveling Exhibitions, Belmont Conference Center, Photo Sales, Telecommunications, Business Management Office, and Publishing Task Force.

# Allocations to the Smithsonian bureaux participating in this program.

TABLE 8 - Unrestricted Special Purpose Funds  
Fiscal Years 1975 - 1977  
(In \$1,000's)

	INCOME			TRANSFERS IN/(OUT)			Fund Balance End of Year		
	Gifts	Bureau Activities	Other	Total Income	From Unrestricted	Other		Deductions	Net Increase (Decrease)
FY 1975 - Total.....	\$207	\$339	\$205	\$751	\$323	\$42	\$505	\$611	\$1,071
FY 1976 and Transition Quarter - Total.....	\$338	\$630	\$452	\$1,420	\$1,202	\$43	\$1,248	\$1,417	\$2,488
FY 1977:									
Museum of Nat. History.....	\$1	\$20	\$15	\$36	\$90	\$-	\$91	\$35	\$137
Astrophysical Observ. ....	-	7	-	7	14	-	38	(17)	20
Tropical Rsch. Inst. ....	-	33	-	33	8	2	47	(4)	17
NASM - Theatres.....	-	1,249	-	1,249	-	(900)	334	14	236
- Other.....	-	101	98	199	151	900	168	1,082	1,335
Natl. Zoological Park.....	-	85	10	95	18	-	38	75	443
Museum of Hist. & Tech. ....	4	38	6	48	176	-	81	143	437
Natl. Collect. Fine Arts....	5	106	77	188	15	-	97	106	183
Hirshhorn Museum.....	1	4	3	8	23	-	10	21	68
Support Activities.....	-	3	14	17	8	-	(34)	59	87
Liability Reserves.....	-	-	-	-	270	-	-	270	900
Exhibits Central.....	-	1	6	7	2	-	-	9	49
Other.....	44	74	106	224	69	(18)	194	81	380
FY 1977 Total.....	\$55	\$1,721	\$335	\$2,111	\$844	\$(16)	\$1,064	\$1,875	\$4,292*

\*Exclusive of funds of Woodrow Wilson International Center For Scholars (\$70,655 as of 9/30/76) reclassified as Agency Funds.

TABLE 9 - Restricted Operating Trust Funds  
Fiscal Years 1975 - 1977  
(In \$1,000's)

	Income			Total Income	Deduc- tions	Transfers In (Out)	Net Increase (Decrease)	Fund Balance End of Year
	Invest- ment	Gifts	Misc.					
FY 1975 - Total.....	\$1,724	\$4,177	\$ 636	\$6,537	\$5,027	\$ 62	\$1,572	\$4,374
FY 1976 and Transition Quarter - Total.....	\$2,137	\$4,965	\$ 686	\$7,788	\$8,357	\$179	\$ (390)	\$3,984
FY 1977:			*	*	*	*	*	
Museum of Nat. History.....	\$ 71	275	14	360	269	39	130	479
Astrophysical Observ. ....	52	249	4	305	369	28	(36)	(48)
Natl. Air & Space Museum....	28	11	3	42	20	48	70	976
Fort Pierce Bureau.....	594	-	-	594	423	(138)	33	121
Museum of Hist. & Tech.								
-Person to Person.....	-	1	-	1	159	-	(158)	40
-Marine Hall.....	-	130	-	130	76	19	73	312
-Other.....	7	65	26	98	138	7	(33)	194
Natl. Collect. of Fine Arts.	13	57	2	72	55	2	19	64
Freer Gallery of Art.....	746	20	207	973	960	6	19	213
Archives of American Art....	-	122	123	245	288	11	(32)	177
Cooper-Hewitt - Operating....	6	87	475	568	917	349	-	-
- Other.....	-	185	66	251	482	69	(162)	395
Anacostia Neighborhood Mus..	-	97	-	97	171	2	(72)	(8)
Other.....	173	425	73	671	574	(88)	9	603
Total FY 1977.....	\$1,690	\$1,724	\$ 993	\$4,407	\$4,901	\$354	\$ (140)	\$3,518*

\*Exclusive of funds of Woodrow Wilson International Center For Scholars (\$326,414 as of 9/30/76) reclassified as Agency Funds.

TABLE 10 - Endowment and Similar Funds\*  
 Summary of Investments September 30, 1977

Accounts	Book Value	Market Value
INVESTMENT ACCOUNTS		
Consolidated Endowment Funds:		
Cash and Equivalents.....	\$ 4,111,447	\$ 4,111,447
Bonds.....	7,141,220	7,179,344
Convertible Bonds.....	2,408,186	2,273,721
Stocks.....	<u>33,259,348</u>	<u>33,314,316</u>
Total.....	\$46,920,201	\$46,878,828
Miscellaneous:		
Cash.....	\$ -0-	\$ -0-
Bonds.....	9,769	10,000
Common Stocks.....	<u>3,572</u>	<u>13,411</u>
Total.....	\$ 13,341	\$ 23,411
Total Investment Accounts.....	<u>\$46,933,542</u>	<u>\$46,902,239</u>
Other Accounts:		
Notes Receivable.....	\$ 44,323	\$ 44,323
Loan to U.S. Treasury in Perpetuity.....	<u>1,000,000</u>	<u>1,000,000</u>
Total Other Accounts.....	<u>\$ 1,044,323</u>	<u>\$ 1,044,323</u>
Total Endowment and Similar Fund Balances.....	<u>\$47,977,865</u>	<u>\$47,946,562</u>

\*Includes both true endowment, whose income only may be expended, and quasi endowments, whose principal as well as income may be used for current purposes on approval of the Board of Regents.

TABLE 11 - Market Values of Consolidated Endowment Funds\*  
(In \$1,000's)

Fund	6/30/73	6/30/74	6/30/75	9/30/76	9/30/77
Unrestricted.....	\$ 4,759	\$ 3,906	\$ 5,654	\$ 7,477	\$11,694
Freer.....	18,279	14,250	15,744	16,035	15,410
Endowment No. 3.....	13,196	11,128	12,321	12,701	12,343
Restricted.....	7,634	6,266	7,148	7,420	7,431
Total.....	<u>\$43,868</u>	<u>\$35,550</u>	<u>\$40,867</u>	<u>\$45,633</u>	<u>\$46,879</u>

\*Not including Endowment Funds of \$1,000,000 held in the United States Treasury, carrying 6 percent interest, nor minor amount of miscellaneous securities treated separately.

TABLE 12 - Changes in Consolidated Endowment Funds for Fiscal Year 1977  
(In \$1,000's)

Fund	Market value 9/30/76	Gifts and transfers	Interest and dividends*	Income paid out	Sub-total	Increase in market value	Market value 9/30/77
Unrestricted funds.....	\$ 7,477	\$5,500	\$ 356	\$ 417	\$12,902	\$1,207	\$11,695
Freer Fund.....	16,035	-0-	630	746	15,901	491	15,410
Endowment No. 3.....	12,701	138	499	592	12,732	389	12,343
Restricted funds.....	7,420	287	301	335	7,719	288	7,431
Total**.....	<u>\$43,633</u>	<u>\$5,925</u>	<u>\$1,786</u>	<u>\$2,090</u>	<u>\$49,254</u>	<u>\$2,375</u>	<u>\$46,879</u>

\* Income earned less managers fees.

\*\* Not including Endowment Funds of \$1,000,000 held in the United States Treasury, carrying 6 percent interest, nor minor amount of miscellaneous securities treated separately.

TABLE 13 - Consolidated Endowment Funds  
September 30, 1977

Funds participating in pool	Principal		Income	
	Book Value	Market Value	Net Income	Unex- pended Balance
UNRESTRICTED FUNDS.....	\$12,893,097	\$11,694,448	\$ 417,009	\$ -0-
FREER.....	14,798,076	15,410,247	745,806	193,664
ENDOWMENT NO. 3.....	12,055,002	12,342,776	591,919	86
RESTRICTED FUNDS:	194,621	203,137	9,831	6,610
Abbott, William L. ....	194,621	203,137	9,831	6,610
Armstrong, Edwin James.....	4,421	4,069	191	-0-
Arthur, James.....	55,998	76,227	3,689	92
Bacon, Virginia Purdy.....	171,346	158,537	7,673	21,615
Baird, Spencer Fullerton....	51,555	68,139	3,298	64
Barney, Alice Pike.....	40,164	54,624	2,644	7,640
Barstow, Frederic D. ....	1,866	1,945	94	2,117
Batchelor, Emma E. ....	62,601	56,503	2,735	15,089
Beauregard, Catherine Memorial Fund.....	72,698	75,910	3,192	4,727
Becker, George F. ....	294,238	274,398	13,280	5,830
Brown, Roland W. ....	48,115	52,097	2,191	9,104
Canfield, Frederick A. ....	52,163	83,985	4,065	-0-
Casey, Thomas Lincoln.....	23,405	24,472	1,184	396
Chamberlain, Frances Lea....	39,435	53,633	2,596	7,267
Cooper, G. Arthur, Curator's Fund.....	4,389	4,285	158	-0-
Cooper-Hewitt Museum.....	149,773	131,714	5,833	-0-
Desautels, Paul E. ....	14,257	15,580	720	-0-
Div. of Mammals Curator Fund.	3,154	3,115	131	1,758
Div. of Reptiles Curator Fund	2,140	2,127	63	183
Drake, Carl J. ....	285,874	270,643	11,233	41,120
Dykes, Charles.....	80,385	84,010	4,066	7,946
Eickemeyer, Florence Brevoort	15,223	20,694	1,002	5,129
Guggenheim, David & Florence.	226,932	195,592	8,224	-0-
Hanson, Martin Gustav and Caroline Runice.....	16,599	17,347	840	2,390
Henderson, Edward P. Meteorite Fund.....	573	677	33	103
Hillyer, Virgil.....	12,272	12,833	621	4,818
Hitchcock, Albert S. ....	2,204	3,053	148	573
Hrdlicka, Ales and Marie.....	87,690	94,899	4,593	4,742
Hughes, Bruce.....	26,798	36,499	1,766	19,209
Johnson, E. R. Fenimore.....	15,267	12,844	622	6,783
Kellogg, Remington, Memorial.	45,978	38,004	1,839	5,367
Kramar, Nada.....	5,018	4,961	240	301
Lindbergh, Charles A. ....	6,005	6,171	141	491
Lindsey, Jessie H. ....	1,269	1,251	61	1,444
Loeb, Morris.....	162,965	172,047	8,327	-0-
Long, Annette E. and Edith C.	757	1,062	51	91
Lyons, Marcus Ward.....	8,187	6,934	336	14
Maxwell, Mary E. ....	27,462	37,396	1,810	6,023

TABLE 13 - Consolidated Endowment Funds  
September 30, 1977

Funds participating in pool	Principal		Income	
	Book Value	Market Value	Net Income	Unex- pended Balance
Mineral Endowment.....	\$ 175,298	\$ 167,016	\$ 5,611	\$100,582
Mitchell, William A. ....	23,801	22,847	1,106	1,106
Myer, Catherine Walden.....	37,726	39,430	1,908	8
Natural History and Conservation.....	2,090	2,056	64	-0-
Nelson, Edward William.....	33,705	42,348	2,050	6,616
Noyes, Frank B. ....	1,806	1,987	96	1,555
Pell, Cornelia Livingston....	13,851	14,556	705	1,793
Petrocelli, Joseph, Memorial.	10,373	14,184	686	8,734
Ramsey, Admiral and Mrs. DeWitt Clinton.....	478,323	407,645	19,679	14,648
Rathbun, Richard, Memorial...	19,871	20,857	1,009	12,201
Reid, Addison T. ....	33,210	34,705	1,680	3,639
Roebing Collection.....	169,304	228,764	11,071	8,447
Roebing Solar Research.....	46,344	44,843	2,170	-0-
Rollins, Miriam and William..	296,433	350,210	16,722	1,058
Ruef, Bertha M. ....	59,541	50,053	2,422	3,158
Schultz, Leonard P. ....	24,203	23,504	1,137	14,232
Smithsonian Agency Account...	250,303	232,123	10,705	3,630
Sprague, Joseph White.....	2,191,534	2,088,911	86,872	12,728
Springer, Frank.....	25,391	34,136	1,652	19,814
Stern, Harold P., Memorial...	19,875	19,386	136	-0-
Stevenson, John A. ....	8,958	9,274	390	90
Strong, Julia D. ....	18,679	19,599	949	3,356
Walcott, Charles D. ....	192,282	217,603	9,032	194
Walcott, Charles D. and Mary Vaux.....	644,438	875,865	42,389	12,056
Walcott Botanical Publi- cations.....	81,559	106,247	5,142	7,327
Zerbee, Francis Brinckle.....	1,331	1,794	87	1,796
<b>Total Restricted Funds....</b>	<b>\$ 7,174,026</b>	<b>\$ 7,431,357</b>	<b>\$ 334,989</b>	<b>\$427,804</b>
<b>Total Consolidated Endowment Funds.....</b>	<b>\$46,920,201</b>	<b>\$46,878,828</b>	<b>\$2,089,723</b>	<b>\$621,554</b>

PEAT, MARWICK, MITCHELL & CO.

CERTIFIED PUBLIC ACCOUNTANTS

1025 CONNECTICUT AVENUE, N. W.

WASHINGTON, D. C. 20036

(202) 223-9525

The Board of Regents  
Smithsonian Institution:

We have examined the balance sheet of the Trust Funds of Smithsonian Institution as of September 30, 1977 and the related statement of changes in fund balances for the year then ended. Such statements 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 operations administered by the Institution under Federal appropriations as detailed in note 2 to the financial statements. 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.

In our opinion, the aforementioned financial statements present fairly the financial position of the Trust Funds of Smithsonian Institution at September 30, 1977 and the changes in its fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding period.

*Peat, Marwick, Mitchell & Co.*

December 20, 1977

SMITHSONIAN INSTITUTION - TRUST FUNDS

Balance Sheet

September 30, 1977

(with comparative figures at September 30, 1976)

	<u>1977</u>	<u>1976</u>	<u>1977</u>	<u>1976</u>
<b>Assets</b>				
<b>Current funds:</b>			<b>Liabilities and Fund Balances</b>	
Cash:				
In U.S. Treasury	\$ 435,038	820,381		
In banks and on hand	<u>788,249</u>	<u>694,934</u>		
Total cash	<u>1,223,287</u>	<u>1,515,315</u>		
Investments (note 3)	<u>11,689,366</u>	<u>8,149,723</u>		
<b>Receivables:</b>				
Accounts and notes, less allowance for doubtful accounts of \$459,000 (\$446,000 in 1976)	4,324,341	4,821,815		
Advances - travel and other	328,976	448,200		
Unbilled coats and fees - Grants and contracts	<u>2,673,721</u>	<u>2,219,357</u>		
Due from agency funds	<u>123,046</u>	<u>-</u>		
Total receivables	<u>7,650,084</u>	<u>7,489,372</u>		
Inventories	2,455,538	1,937,426		
Prepaid expenses	767,709	931,127		
Deferred expenses	<u>3,830,739</u>	<u>2,482,308</u>		
Capitalized improvements and equipment, used in income producing activities, net of accumulated depreciation and amortization of \$410,251 (\$724,198 in 1976)	<u>1,283,604</u>	<u>1,069,862</u>		
Total current funds	<u>\$ 28,900,327</u>	<u>23,595,132</u>		
<b>Endowment and similar funds:</b>				
Cash, net of receivables and payables on securities transactions	219,381	437,312		
Notes receivables	44,323	46,169		
Due from current funds	374,442	553,725		
Investments (note 3)	<u>46,339,719</u>	<u>40,296,458</u>		
Loan to U.S. Treasury in perpetuity at 6%	<u>1,000,000</u>	<u>1,000,000</u>		
Total endowment and similar funds	<u>\$ 47,977,865</u>	<u>42,333,664</u>		
<b>Plant funds:</b>				
Due from current funds	38,340	41,836		
Real estate (note 4)	<u>10,343,345</u>	<u>9,875,562</u>		
Total plant funds	<u>\$ 10,381,685</u>	<u>9,917,398</u>		
<b>Agency funds:</b>				
Investments	10,000	10,000		
Due from current funds	<u>1,521,129</u>	<u>371,990</u>		
Total agency funds	<u>\$ 1,531,129</u>	<u>381,990</u>		
See accompanying notes to financial statements.				

SMITHSONIAN INSTITUTION - TRUST FUNDS  
 Statement of Changes in Fund Balances  
 Year ended September 30, 1977

	Total Current Funds	Total unrestricted funds	Current funds				Endowment and similar funds	Plant Funds	
			General purpose	Unrestricted Auxiliary activities	Special purpose	Restricted		Acquisition	Investment in plant
Revenue and other additions:									
Auxiliary enterprises revenue	\$ 41,419,793	41,419,793	-	39,825,302	1,594,491	-	-	-	-
Federal grants and contracts	10,514,916	-	-	-	-	10,514,916	-	-	-
Investment income (net of \$102,638 management and custodian fees)	2,543,532	1,096,596	1,093,768	-	2,828	1,446,936	-	-	-
Gains on sale of securities	-	-	-	-	-	-	-	-	-
Gifts, bequests and foundation grants	2,203,189	479,619	47,764	376,293	55,562	1,723,570	23,253	-	-
Additions to equity in real estate	-	723,120	-	562,409	-	160,711	233,686	4,000	542,804
Rentals, fees and commissions	1,335,305	342,231	44,568	-	297,663	993,074	-	950	-
Other - net	58,739,855	44,061,359	1,748,509	40,201,595	2,111,255	14,678,496	256,939	4,950	542,804
Total revenue and other additions									
Expenditures and other deductions:									
Research and educational expenditures	14,588,574	1,873,387	1,450,776	-	422,611	12,715,187	-	-	-
Administrative expenditures	4,932,340	2,182,826	903,236	1,205,200	74,390	2,749,514	-	-	-
Auxiliary enterprises expenditures	31,582,560	31,582,560	-	31,015,277	567,283	-	-	-	-
Expended for real estate and equipment	6,566	-	-	-	-	6,566	-	469,188	-
Retirement of indebtedness	-	-	-	-	-	-	-	75,022	-
Interest on indebtedness	-	-	-	-	-	-	-	19,392	-
Total expenditures and other deductions	51,110,040	35,638,773	2,354,012	32,220,477	1,064,284	15,471,267	-	563,602	-
Transfers among funds - additions (deductions):									
Mandatory - principal and interest on notes	(94,414)	(94,414)	(94,414)	-	-	-	-	94,414	-
Portion of investment gain appropriated	304,053	60,969	60,969	-	-	243,084	(304,053)	-	-
For plant acquisition	(464,220)	(464,220)	(464,220)	-	-	-	-	464,220	-
Income added to endowment principal	(196,609)	-	-	-	-	(196,609)	196,609	-	-
Appropriated as quasi-endowment	(5,521,053)	(5,521,053)	(5,521,053)	-	-	-	5,521,053	-	-
For designated purposes	5,000	(521,871)	(925,570)	(424,000)	827,699	526,871	-	(5,000)	-
Endowment released	26,347	-	-	-	-	26,347	-	-	-
Net increase in auxiliary activities	-	-	7,557,118	(7,557,118)	-	-	-	-	-
Total transfers among funds - additions (deductions)	(5,940,896)	(6,540,589)	612,830	(7,981,118)	827,699	599,693	5,387,262	553,634	-
Net increase (decrease) for the year	1,688,919	1,881,997	7,327	-	1,874,670	(193,078)	5,644,201	(5,018)	542,804
Reclassification (note 7)	(401,221)	(70,655)	-	-	(70,655)	(330,566)	-	-	-
Fund balance at September 30, 1976	10,646,524	6,562,339	4,074,326	-	2,488,013	4,084,185	42,333,664	38,184	9,670,740
Fund balance at September 30, 1977	\$ 11,934,222	8,373,651	4,081,652	-	4,292,028	3,560,541	47,977,865	33,166	10,213,544

See accompanying notes to financial statements.

SMITHSONIAN INSTITUTION - TRUST FUNDS

Notes to Financial Statements

September 30, 1977

(1) Summary of Significant Accounting Policies and General Information

- (a) **Accrual Basis** - The financial statements of Smithsonian Institution - Trust Funds have been prepared on the accrual basis, except for depreciation of plant fund assets as explained in note 1(h) below, and are in substantial conformity with generally accepted accounting principles included in the American Institute of Certified Public Accountants Audit Guide, "Audits of Colleges and Universities."
- (b) **Current funds** include capitalized improvements and equipment used in income-producing activities having a net carrying value of \$1,283,604 and \$1,069,862 at September 30, 1977 and September 30, 1976, respectively. Current funds used to finance the acquisition of plant assets and for provisions for debt amortization and interest are accounted for as transfers to the plant fund.

Separate sub-fund groups of current unrestricted funds have been reflected in the statement of changes in fund balances for auxiliary activities (representing primarily the revenues and expenditures of the Smithsonian Associates program, including the Smithsonian Magazine, and museum shop sales) and Special Purposes (representing internally segregated funds for certain designated purposes).

- (c) **Fund Accounting** - In order to ensure observance of limitations and restrictions placed on the use of the 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 that are in accordance with activities or objectives specified. 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.

Within each fund group, fund balances restricted by outside sources are so indicated and are distinguished from unrestricted funds allocated to specific purposes by action of the governing board. Externally restricted funds may only be utilized in accordance with the purposes established by the source of such funds and are in contrast with unrestricted funds over which the governing board retains full control to use in achieving any of its institutional purposes.

Endowment funds are subject to the restrictions of gift instruments requiring in perpetuity that the principal be invested and income only be utilized. Also classified as endowment funds are gifts which will allow the expenditure of principal but only under certain specified conditions.

(Continued)

## SMITHSONIAN INSTITUTION - TRUST FUNDS

## Notes to Financial Statements

While quasi-endowment funds have been established by the governing board for the same purposes as endowment funds, 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.

All gains and losses arising from the sale, collection, or other disposition of investments and other noncash assets are accounted for in the fund which owned such assets. Ordinary income derived from investments, receivables, and the like, is accounted for in the fund owning such assets, except for income derived from investments of endowment and similar funds, which income is accounted for in the fund to which it is restricted or, if unrestricted, as revenues in unrestricted current funds.

All other unrestricted revenue is accounted for in the unrestricted current fund. Restricted gifts, grants, endowment income, and other restricted resources are accounted for in the appropriate restricted funds.

- (d) Investments are recorded at cost or fair market value at date of acquisition when acquired by gift.
- (e) Inventories are carried at lower of average cost or net realizable value.
- (f) Income and expenses with respect to the Institution's magazine and associates' activities are deferred and taken into income and expense over the applicable periods and are reported in the activities section of the current unrestricted funds.
- (g) 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. In applying this approach, it is the Institution's policy to provide 4-1/2% of the five year average of the market value of each fund (adjusted for gifts and transfers during this period) as being available for current expenditures; 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.
- (h) Capitalized improvements and equipment used in income-producing activities purchased with Trust Funds are capitalized in the current unrestricted fund at cost (see note 1(b)), and are depreciated on a straight-line basis over their estimated useful lives of five to ten years. Depreciation expense of \$165,667 for 1977 is reflected in expenditures of the current funds.

(Continued)

## SMITHSONIAN INSTITUTION - TRUST FUNDS

## Notes to Financial Statements

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 Chesapeake Bay and the Carnegie Mansion, which have been recorded at nominal values. Depreciation on buildings is not recorded.

All other land, buildings, fixtures and equipment (principally acquired with Federal funds), works of art, living or other specimens are not reflected in the accompanying financial statements.

- (i) The agency funds group consists of funds held by the Institution as custodian or fiscal agent for others.
- (j) Pension costs are funded as accrued.
- (k) The Institution has a number of contracts with the U.S. Government, which primarily provide for cost reimbursement to the Institution. Contract revenues are recognized as expenditures are incurred.

(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 year ended September 30, 1977 and the fifteen months ended September 30, 1976.

	<u>1977</u>	<u>1976</u>
Operating funds	\$ 87,208,000	106,654,000
Special foreign currency program	3,481,000	500,000
Construction funds	<u>9,530,000</u>	<u>13,922,000</u>
	<u>\$ 100,219,000</u>	<u>121,076,000</u>

(Continued)

## SMITHSONIAN INSTITUTION - TRUST FUNDS

## Notes to Financial Statements

The Institution provides fiscal and administrative services to certain separately incorporated organizations on 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 \$427,000 for the year ended September 30, 1977. The following summarizes the approximate expenditures of these organizations for the year ended September 30, 1977, and fifteen months ended September 30, 1976 as reflected in their individual financial statements and which are not included in the accompanying financial statements of the Institution:

	<u>1977</u>	<u>1976</u>
Smithsonian Research Foundation	\$ 2,100,000	2,500,000
Smithsonian Science Information Exchange	3,300,000	3,900,000
Reading Is Fundamental, Inc.	1,100,000	650,000
Center for Natural Areas, Inc.	-	420,000
Woodrow Wilson International Center for Scholars (note 7)	<u>1,500,000</u>	<u>-</u>

(3) Investments

Quoted market values and carrying values of investments (all marketable securities) of the funds indicated were as follows:

	<u>September 30, 1977</u>		<u>September 30, 1976</u>	
	<u>Carrying value</u>	<u>Market value</u>	<u>Carrying value</u>	<u>Market value</u>
Current funds	\$ 11,689,366	11,538,378	8,149,723	8,093,625
Endowment and similar funds	<u>46,339,719</u>	<u>46,237,339</u>	<u>40,296,458</u>	<u>42,667,967</u>
Total investments	\$ <u>58,029,085</u>	<u>57,775,717</u>	<u>48,446,181</u>	<u>50,761,592</u>

Total investment performance is summarized below:

	<u>Net gains (losses)</u>		
	<u>Current funds</u>	<u>Endowment and similar funds</u>	<u>Total</u>
Unrealized gains (losses):			
September 30, 1977	\$(150,988)	(103,381)	(254,369)
September 30, 1976	<u>(56,098)</u>	<u>2,371,509</u>	<u>2,315,411</u>
Unrealized net losses for period	(94,890)	(2,474,890)	(2,569,780)
Realized net gains for period	-	<u>23,253</u>	<u>23,253</u>
Total net losses for period	\$ <u>(94,890)</u>	<u>(2,451,637)</u>	<u>(2,546,527)</u>

(Continued)

## SMITHSONIAN INSTITUTION - TRUST FUNDS

## Notes to Financial Statements

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 calendar quarter within which the transaction takes place. Of the total units each having a market value of \$100.24 (\$103.69 in 1976), 338,743 units were owned by endowment, and 124,478 units by quasi-endowment at September 30, 1977.

The following tabulation summarizes the changes in the pooled investments during the year ended September 30, 1977:

	Carrying value	Market	Market value per unit
September 30, 1977	\$ 46,546,759	46,433,309	100.24
September 30, 1976	<u>40,720,429</u>	<u>43,079,172</u>	<u>103.69</u>
Increase (decrease)	\$ <u>5,826,330</u>	<u>3,354,137</u>	<u>(3.45)</u>

(4) Mortgage Notes Payable

The mortgage notes payable are secured by first deeds of trust on property acquired in connection with the Chesapeake Bay Center. The details of the mortgage notes payable are as follows:

	1977	1976
Mortgage note, payable in semiannual installments of \$13,300, plus interest at the prevailing prime rate at the due date of the installment payment but not less than 8%, through July 1, 1980	\$ 79,800	106,400
6% mortgage, note payable, due in monthly installments of \$451 including interest.	-	28,422
6% mortgage note, payable in semiannual installments of \$10,000, plus interest, through November 7, 1979	<u>50,000</u>	<u>70,000</u>
	\$ <u>129,800</u>	<u>204,822</u>

(5) Pension Plan

The Institution has a contributory pension plan providing for the purchase of retirement annuity contracts for those employees meeting certain age and length of service requirements who elect to be covered under the plan. Under terms of the plan, the Institution contributes the amount necessary to bring the total contribution to 12% of the participants' compensation subject to social security taxes and to 17% of the participants' compensation in excess of that amount. The total pension expense for the year ended September 30, 1977 was \$1,134,312 and \$1,404,788 for the fifteen months ended September 30, 1976.

(Continued)

## SMITHSONIAN INSTITUTION - TRUST FUNDS

## Notes to Financial Statements

(6) Income Taxes

The Institution has been recognized by the Internal Revenue Service as exempt from income taxation as an organization described in Section 501(c)(3) of the Internal Revenue Code. Organizations described in Section 501(c)(3) are subject to income taxation only on their unrelated business income as defined under Code Sections 522 et. seq. It is the opinion of the Institution that it is also exempt from taxation as an instrumentality of the United States as described in Section 501(c)(1) of the Code. Recognition of this dual status will be sought from the Internal Revenue Service. Should the Institution's position not prevail, income taxes in a substantial amount might be imposed on certain unrelated business income.

(7) Reclassification

The Institution has classified all trust fund financial activities of the Woodrow Wilson International Center for Scholars (WWICS) in the agency fund during the year. Previously, WWICS's trust fund financial activities were shown as part of the Institution's current funds. During the year WWICS's financial activities were processed by the Institution, but such financial activities are not reflected in the Institution's current funds balance sheet or statement of changes in fund balances. The following summarizes the trust fund financial activities of WWICS as reflected in its individual financial statement and which is not included in the accompanying financial statement of the Institution:

Fund balance, September 30, 1976	\$ 401,220
Revenues and other additions	1,880,463
Expenditures and other deductions	<u>1,509,384</u>
Fund balance, September 30, 1977	\$ <u><u>772,299</u></u>

The Institution will continue to provide financial and administrative services to WWICS for which the Institution will charge a fee.

Source and Application of Operating Funds

FY 1977 - 1979

(\$1,000's)

		Federal Appropriations	Trust Funds			Federal Grants	
			Unrestricted		Restricted		
			Gen'l/Aux. Acts.	Spec. Purp.			
<u>SCIENCE</u>							
Asst. Sec. Science <sup>1/</sup>	77	296	75	-	<sup>1/</sup>	94	433
	78	288	39	-		75	420
	79	291	41	-		75	425
Mus. of Nat. Hist.	77	11,411	13	91		269	987
	78	12,419	76	131		245	1,015
	79	12,883	86	140		240	1,000
Astrophysical Obs.	77	3,837	1,686 (1,603)**	38		369	6,940
	78	4,518	1,770 (1,750)**	31		375	7,875
	79	4,555	2,011 (1,950)**	40		375	7,950
Trop. Research Inst.	77	1,477	17	47 (41)*		24	10
	78	1,633	75	21 (7)*		25	10
	79	1,749	87	40 (20)*		25	10
Radiation Biol. Lab.	77	1,872	-	6		22	72
	78	1,734	-	1		25	69
	79	1,755	-	1		25	75
Ofc. of Intl. Pgms.	77	201	1	-		-	-
	78	266	1	-		-	-
	79	227	-	-		-	-
Chesapeake Bay Cen.	77	613	46	-		17	512
	78	626	71	2		20	500
	79	668	77	3		20	500
Natl Air & Space Mus.	77	6,091	12	502 (432)*		20	289
	78	6,030	10	840 (679)*		20	375
	79	5,876	11	900 (695)*		20	375
Natl Zoological Park	77	7,067	33	38 (26)*		37	65
	78	7,630	41	25 (18)*		30	62
	79	7,767	44	25 (20)*		30	65
Gen. for Study of Man	77	399	73	-		52	66
	78	854	5	-		50	67
	79	867	-	-		50	75

\* Expenses covered all or in part from revenues of activity.

\*\* Overhead recovery.

<sup>1/</sup> Includes Sec.'s Lab.



Source and Application of Operating Funds

FY 1977 - 1979

(\$1,000's)

		Federal Appropriations	Trust Funds			Federal Grants
			Unrestricted		Restricted	
			Gen'l/Aux. Acts.	Spec. Purp.		
<u>SCIENCE (Con't)</u>						
Research Awards Pgm.	77	390	-	-	-	-
	78	110	-	-	-	-
	79	390	-	-	-	-
Intl Envir. Sci. Pgm.	77	373	-	-	-	-
	78	381	-	-	-	-
	79	384	-	-	-	-
Fort Pierce	77	-	1	-	423	-
	78	-	-	-	400	-
	79	-	-	-	400	-
Interdis. Comm. Pgms.	77	-	44	-	9	301
TOTAL SCIENCE	77	35,999	2,001 (1,603)**	721 (499)*	1,336	9,675
	78	36,489	2,088 (1,750)**	1,051 (704)*	1,265	10,393
	79	37,412	2,357 (1,950)**	1,149 (735)*	1,260	10,475
<u>HISTORY &amp; ART</u>						
Asst. Sec. Hist. & Art	77	102	56	1	-	-
	78	136	62	-	-	-
	79	133	72	-	-	-
Joseph Henry Papers	77	108	-	-	1	38
	78	112	-	3	5	70
	79	144	-	1	5	75
Mus. Hist. & Tech.	77	5,944	12	81 (11)*	373	4
	78	6,526	10	170 (20)*	380	15
	79	6,452	12	180 (25)*	425	15
Coll. Fine Arts	77	2,539	17	97	55	85
	78	2,821	93	126	70	106
	79	3,003	18	100	75	110
Portrait Gallery	77	1,921	118	27	13	71
	78	2,112	16	14	110	85
	79	2,222	17	20	100	85
Hirshhorn Museum	77	1,892	12	10	1	-
	78	2,048	15	15	20	-
	79	2,060	16	20	5	-



Source and Application of Operating Funds  
FY 1977 - 1979

(\$1,000's)

		Federal Appropriations	Trust Funds			Federal Grants
			Unrestricted		Restricted	
			Gen'l/Aux. Acts.	Spec. Purp.		
<u>HISTORY &amp; ART (Con't)</u>						
Freer Gallery	77	492	-	-	960	13
	78	585	-	-	947	30
	79	590	-	-	1,000	30
Archives of Am. Art	77	349	-	-	288	-
	78	426	-	-	270	-
	79	480	-	-	285	-
Cooper-Hewitt Mus.	77	415	37	-	1,399	21
	78	354	314	25	1,048	30
	79	562	315	25	1,120	30
Academic Studies	77	474	15	1	12	-
	78	509	18	-	10	-
	79	551	19	-	10	-
American & Folklife Studies	77	129	63	-	5	29
	78	239	121	19	10	31
	79	293	136	20	10	30
Bicen. Am. Rev.	77	419	-	-	-	-
TOTAL HISTORY & ART	77	14,784	330	217 (11)*	3,107	261
	78	15,868	649	372 (20)*	2,870	367
	79	16,490	605	366 (25)*	3,035	375
<u>PUBLIC SERVICE</u>						
Asst. Sec. Pub. Svc. <sup>1/</sup>	77	164	211	(164)* <sup>1/</sup>	1	7
	78	205	225	(220)*	-	8
	79	192	240	(235)*	-	15
Ofc. Telecommunications	77	36	206	(189)*	-	-
	78	39	300	(300)*	-	-
	79	40	450	(450)*	-	-
Anacostia Museum	77	527	19	3	171	-
	78	618	21	18	75	-
	79	626	23	10	75	-
Intl. Exchange Svc.	77	172	-	-	-	-
	78	232	-	-	-	-
	79	213	-	-	-	-
<sup>1/</sup> Includes Reception Center						



## Source and Application of Operating Funds

FY 1977 - 1979

(\$1,000's)

		Federal Appropriations	Trust Funds			Federal Grants	
			Unrestricted		Restricted		
			Gen'l/Aux. Acts.	Spec. Purp.			
<u>PUBLIC SERVICE (Con't)</u>							
Div. Performing Arts	77	320	736	(736)*	19	18	244
	78	367	1,804	(1,800)*	-	65	271
	79	393	804	(800)*	-	65	295
SI Press	77	650	349	(349)*	-	-	45
	78	732	527	(527)*	-	-	25
	79	249	575	(575)*	-	-	25
Symposia & Seminars	77	41	49	-	-	121	3
	78	48	61	-	-	50	-
	79	58	55	-	-	50	-
Elem. & Sec. Ed.	77	119	-	-	-	12	-
	78	141	10	-	-	10	-
	79	166	-	-	-	10	-
TOTAL PUBLIC SVC.	77	2,029	1,570	(1,438)*	23	323	300
	78	2,382	2,948	(2,847)*	18	200	304
	79	2,437	2,147	(2,060)*	10	200	325
<u>MUSEUM PROGRAMS</u>							
Asst. Sec. Mus. Pgms.	77	182	3	24	(24)*	-	(2)
	78	217	6	53	(53)*	5	-
	79	218	7	20	(20)*	5	-
Ofc. of Mus. Pgms.	77	225	4	24	(24)*	2	-
	78	300	-	18	(18)*	-	-
	79	306	-	15	(15)*	-	-
Ofc. of Horticulture	77	612	-	10	(10)*	-	-
	78	672	-	13	(13)*	-	-
	79	719	-	20	(20)*	-	-
South Bldg. Group	77	573	-	(3)	-	-	-
	78	694	-	16	-	-	-
	79	658	-	20	-	-	-
Ofc. of Registrar	77	91	-	-	-	-	-
	78	102	-	-	-	-	-
	79	105	-	-	-	-	-



## Source and Application of Operating Funds

FY 1977 - 1979

(\$1,000's)

		Federal Appropriations	Trust Funds				Federal Grants
			Unrestricted		Restricted		
			Gen'l/Aux. Acts.	Spec. Purp.			
<u>MUSEUM PROGRAMS (Con't)</u>							
Conserv.-Analyt. Lab.	77	538	-	-	-	-	
	78	658	-	-	-	-	
	79	669	-	-	-	-	
SI Libraries	77	2,033	132	-	-	-	
	78	2,260	148	-	-	-	
	79	2,372	165	-	-	-	
Exhibits Central	77	1,037	-	-	-	-	
	78	1,144	-	9	-	-	
	79	1,111	-	15	-	-	
Traveling Exhib. Svc	77	101	518	(518)*	-	234	
	78	165	490	(490)*	-	236	
	79	168	550	(550)*	-	225	
SI Archives	77	258	6	-	-	-	
	78	289	22	-	-	-	
	79	296	25	-	-	-	
Natl Museum Act	77	788	-	-	-	-	
	78	794	-	-	-	-	
	79	795	-	-	-	-	
TOTAL MUS. PGMS.	77	6,438	668	(518)*	55 (58)*	232	
	78	7,295	666	(490)*	109 (84)*	236	
	79	7,417	747	(550)*	90 (55)*	225	
<u>OTHER ACTIVITIES</u>							
Assoc. - National	77	-	2,562	(2,562)*	-	-	
	78	-	2,980	(2,980)*	-	-	
	79	-	3,200	(3,200)*	-	-	
- Magazine	77	-	18,145	(18,145)*	-	-	
	78	-	21,844	(21,844)*	-	-	
	79	-	25,600	(25,600)*	-	-	
- Resident	77	-	1,420	(1,420)*	11 (11)*	-	
	78	-	1,694	(1,694)*	2 (2)*	-	
	79	-	1,850	(1,850)*	5 (5)*	-	
- For. Study Tours	77	-	1,377	(1,377)*	-	-	
	78	-	768	(768)*	-	-	
	79	-	1,500	(1,500)*	-	-	



Source and Application of Operating Funds  
FY 1977 - 1979

(\$1,000's)

	Federal Appropriations	Trust Funds				Federal Grants
		Unrestricted		Restricted		
		Gen'l/Aux. Acts.	Spec. Purp.			
<u>OTHER ACTIVITIES (Con't)</u>						
Business Management:						
- Museum Shops	77	-	5,097	(5,097)*	-	-
	78	-	5,594	(5,594)*	-	-
	79	-	6,150	(6,150)*	-	-
- Mail Order	77	-	962	(962)*	-	-
	78	-	2,781	(2,781)*	-	-
	79	-	2,850	(2,850)*	-	-
- Belmont	77	-	258	(258)*	-	-
	78	-	371	(371)*	-	-
	79	-	280	(280)*	-	-
- Other Bus. Mgt.	77	-	185	(185)*	-	-
	78	-	286	(286)*	-	-
	79	-	335	(335)*	-	-
Popular Book Pub.	77	-	131	(131)*	-	-
	78	-	1,700	(1,700)*	-	-
	79	-	800	(800)*	-	-
Allotment for Collections, etc.	77	-	-	-	-	-
	78	-	2,000	-	-	-
	79	-	2,100	-	-	-
TOTAL OTHER ACTS.	77	-	30,137	(30,137)*	11 (11)*	-
	78	-	40,018	(38,018)*	2 (2)*	-
	79	-	44,565	(42,565)*	5 (5)*	-
<u>SUPPORT ACTIVITIES</u>						
Printing & Photo Svcs.	77	901	185	(128)*	-	-
	78	976	411	(353)*	-	20
	79	954	460	(395)*	-	-
Protection Svcs.	77	7,508	-	(26)	-	-
	78	8,727	-	45	-	-
	79	8,974	-	20	-	-
Ofc. Plant Svcs.	77	13,905	202	(8) (16)*	-	-
	78	16,124	234	52 (42)*	-	-
	79	16,110	250	60 (50)*	-	-
TOTAL SUPPORT ACTS.	77	22,314	387	(128)*	(34) (16)*	-
	78	25,827	645	(353)*	97 (42)*	20
	79	26,038	710	(395)*	80 (50)*	-



Source and Application of Operating Funds  
FY 1977 - 1979

(\$1,000's)

		Federal Appropriations	Trust Funds				Federal Grants
			Unrestricted		Restricted		
			Gen'l/Aux. Acts.	Spec. Purp.			
<u>ADMINISTRATION</u>	77	5,494	3,817	(2,989)*	71 (64)*	133	103
	78	6,292	3,971	(3,758)*	84 (30)*	125	100
	79	6,513	4,439	(4,200)*	100 (30)*	150	100
<u>TOTAL APPLICATION OF OPERATING FUNDS</u>	77	87,208 <sup>2/</sup>	38,910	(32,221)*	1,064 (659)*	4,901	10,571
	78	94,153	50,985	(41,708)*	1,733 (882)*	4,485	11,400
	79	96,307	55,670	(45,570)*	1,800 (900)*	4,650	11,500

<sup>2/</sup> Includes \$150 refund to Treasury.



UNRESTRICTED FUNDS

RESTRICTED FUNDS

*John*

	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS
<b>SCIENCE</b>				
Museum of Nat'l History	6 Admin. Allot. Special Events	53 Fluid Research 26 Dir. Discretionary 11 Anthropology Discre. 1 Misc.	113 Endowment 45 Nat'l Geographic Grants 20 Amer. Indian Training 15 Appalachian Power 12 Tinker Fdn. - Amazon 21 Anthropology Grants 13 IMSWE 13 Insect Zoo 17 Misc.	224 NSF 395 Defense 55 NOAA 117 NIH 32 NEH 26 FDA 29 Interior 27 Marine Mammal C. 20 GSA 3 Misc. 60 O/H Adjust.
SAO	8 Computer Insur. Research Allot. 6 Computer Ctr. Exp. (should have been deferred) 69	15 Fluid Research 23 Dir. Discretionary	80 Endowment 118 MMT-SRF 127 Max Plank: H-Maser 16 Solar Physics Pgm. 11 N.R.A.O.-Calibrate Maser 17 Misc.	6119 NASA 474 Defense 213 MIT 85 ERDA 27 U. Calif. 11 Chalmers U. 11 Misc.
STRI	13 Allotment 2 Pratt Fellowship 2 Special Events 17	6 Fluid Research 41 Trust Fund	13 Noble Fdn. 6 Doherty Fdn. 3 Exxon Fdn. 2 Tupper Fdn. 24	10 NSF
RBL	-	5 Fluid Research 1 Discretionary 6	5 Endowment 17 Eppley Fdn. 17	64 Energy 3 Commerce 5 O/H Adjust. 72
CBCES	45 Allotment 1 Staff/Bus. Exp. 46	-	13 Noble Fdn. 3 Environ. Education 1 Penney Fdn. 17	439 EPA 30 CRC 13 Energy 30 O/H Adjust. 512



BUREAU	UNRESTRICTED FUNDS				RESTRICTED FUNDS			
	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS
NASM	12 Special Events	70 239 94 49 16 14 20 <u>502</u>	Dir. Discretionary Revolv: Theatre -Spacarium -Posters -Aircraft Fabric -Acoustiguide -Cachet Covers	11 5 4	Endowment Planetarium Fund Guggenheim Fellow	220 50 19	NASA HEW O/H Adj.	
NZP	27 Allotment (Barwick) 6 Special Events	12 26 <u>38</u>	Discretionary Front Royal	4 18 12 3 <u>37</u>	Endowment Animal Noble Fdn. Misc.	31 28 2 4 65	NSF HEW Marine Mammal C. O/H Adj.	
CSM	71 NAFC Allotment 2 RIIES Bus. Exp.	- <u>73</u>	-	30 22 <u>52</u>	RIIES Projects NAFC Projects	26 22 17 1 66	NEH-NAFC NEA-NAFC HEW-RIIES O/H Adj.	
Fort Pierce	1 Sealink Project		-	423	Endowment		-	
ICP	44 Allotment			6 3 9	ICA Drug Assessment	282 19 301	AID O/H Adj.	
Other Science	30 Darwin Fdn. Allot. 24 Bad Debt - CSLP	(1)	Discretionary	2 44 7	Endowment Rockefeller Bros. Rockefeller Bros. - (Peace Corps)	131 26 244 4 28	Defense NSF ACTION-Peace Corps. Interior " O/H Adj.	
-Secry's Lab.	21 Spec. Salaries			2 39	Endowment Misc. Grants			
-Int'l Activ.	1 Bus. Exp.	(1)		94		433		
TOTAL SCIENCE	398	721	1336	9675				



BUREAU	UNRESTRICTED FUNDS			RESTRICTED FUNDS				
	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS				
<u>HISTORY &amp; ART</u>	8 5 2 (3)	Special Events July 4th Celebration Dentzel Insurance Centennial Filmstrip	6 63 1 2 1 4 4	Fluid Research Dir. Discretionary Business Americana Revolv.-Mutoscope -Pinch Effect -Ship Plans -Centennial Post	7 159 76 57 22 8 11 11 9 13 373	Endowment Art Exhibit Marine Hall Doubleday Lectures Div. Musical Instru. Balloon Frame House 1876 Exhibits Ceramics Fund Historical Dresses Misc.	4	Commerce
<u>NMFT</u>	12		81			4		
<u>NCHA</u>	17	Special Events	97	Dir. Discretionary	11 37 3 3 1 55	Endowment Mobil-Images of an Era Laura Barney Trust Rauscheinberg Exh. Renwick Exhibits	80 5	Nat'l Endowments O/H Adjust.
<u>NPG</u>	5 113 118	Special Events Copley Portrait	3 24 27	Fluid Research Dir. Discretionary	13 13	Portrait Acquisitions	67 4 71	Nat'l Endowments O/H Adj.
<u>Hirshhorn</u>	12	Special Events	10	Dir. Discretionary	1	Amer. Phil. Society	-	
<u>Freer</u>					955 2 3 960	Operating Fund Weatherhead Fdn. Prof. Yamasari	12 1 13	Nat'l Endowment O/H Adj.
<u>Archives of Amer. Art</u>					269 7 4 5 3 288	Operating Fund Artists in Michigan Wilson Fdn. Oral History Pgm. McGregor Fdn.		



BUREAU	UNRESTRICTED FUNDS				RESTRICTED FUNDS			
	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS
<u>Cooper-Lewitt</u>	37	Special Events	-		917 346 22 65 18 12 6 5 8 <u>1399</u>	Operating Fund Johnson Wax N.Y. Community Trust Book of the Month N.Y. State Council Astor Fund Textile Dept. Drawings & Prints Misc.	18 2 1	Nat'l Endowment Transportation O/H Adj.
<u>Academic Study</u>	19	Admin. Allotment	1	Staff/Bus. Exp.	12	Stipend Support		
<u>Other Hist &amp; Art</u> <u>-Asst. Secry.</u>	53 <u>3</u> 56	Admin. Allotment Carleton Smith	1 <u>1</u>	Staff/Bus. Exp.	1	Nat'l. Academy Science	26 10 2 <u>38</u>	Nat'l Endowment GSA (NHPRC) O/H Adj.
<u>-Jos. Henry</u>	-		-		5 <u>5</u> 6	Dr. Washburn Exp.	19 8 2 <u>29</u> <u>67</u>	HEW ERDA O/H Adj.
<u>-American &amp; Folklife Stu.</u>	63	Folklife Unit Allot.						
Total Other	<u>119</u>		<u>1</u>					
<u>TOTAL HISTORY &amp; ART</u>	<u>330</u>		<u>217</u>		<u>3107</u>		<u>261</u>	
<u>PUBLIC SERVICE</u>								
<u>Anacostia</u>	19	Allotment	3	Staff/Bus. Exp.	171	Ford Fdn.	-	
<u>SI Press</u>	-		-		-		45	NCPC



BUREAU	UNRESTRICTED FUNDS				RESTRICTED FUNDS			
	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS
Performing Arts		3 16	(8) (12) 38	105 60 33 22	ARBA Nat'l Endowment Labor NASA			
		19		7 3 14 244	Interior Commerce O/H Adj.			
Other Pub. Svc. -Asst. Secry.	47 Black Presence - Patterson	1	-	7 1 8	Nat'l Endowment O/H Adj.			
-Telecomm.	17 W. Grayson	-	1	3	NASA			
-Seminars	49 Admin. Allotment		28 60 13 11 9 121					
-OESE	-	-	10 2 12		Dewitt Wallace Fdn. Monnell Fdn.			
Total Other	<u>113</u>	<u>1</u>	<u>134</u>	<u>11</u>				
TOTAL PUB. SVC.	<u>132</u>	<u>23</u>	<u>323</u>	<u>300</u>				
MUSEUM PROGRAMS								
Libraries	132 Admin. Allot.	-	-					
SITES	-	-	-	180 22 10 7 15 234	ARBA NOAA Nat'l Endowment NSF O/H Adj.			



BUREAU	UNRESTRICTED FUNDS				RESTRICTED FUNDS			
	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS	GENERAL	SPECIAL PURPOSE	GENERAL	GRANTS & CONTRACTS
Other Mus. Pgm. -Asst. Secry.	3	Staff/Bus. Exp.	24	Conserv. Inform. Pgm.	-		(4)	Nat'l Endowment
-Mus. Pgm.	4	Brochure	24	Jubilee Medal	2	Botswana Mus. Intern	2	Justice
-Horticulture	-		10	Cut Flowers Fund	-		-	
-S. Bldg. Group			(3)	Reimbursement Fd.	-		-	
-Registrar	5	Admin. Allot.						
-Archives	6	Admin. Allot.						
Total Other	18		55		2		(2)	
TOTAL MUS. PGMS	150		55		2		232	
OTHER ACTIVITIES								
Associates: -Resident	-		11	Posters	-		-	
SUPPORT ACTIV.								
Photo Services	57	Admin Allot.	-		-		-	
Protection	-		(26)	Reimbursement Fd.	-		-	
OPPLANTS	202	Admin Allot.	(24) 16	Reimbursement Fd. Audio Visual Unit	-		-	
	259		(8) (34)		-		-	
ADMINISTRATION	3510 1603 (4592)	SI Admin. SAO Admin. O/H Recovery	45 7 1	Computer Paper Gen'l Counsel Dir. Support Activ.	71 3 18	Secry. Office Spec. Asst. Secry. OCS	(32) 114 8	SI Fed. - OCS Commerce - OCS HEW-OCS
	521	Net Admin.	15 3 71	Secry. Office CBCES Land Tax	10 31 133	Treasurer Development	7 6 103	HEW-Pub. Affairs O/H Adj.
Transfers	551		(828)		(354)		(2)	
See attached schedule								



Transfers In (Out)

Schedule of Transfers  
FY 1977

Description of Transfer	Unrestricted			Restricted		Endowment Principal Funds	Plant Funds
	General Unrestricted Funds	Auxiliary Activities	Special Purpose Funds	Endowment Income Funds	All Other Restricted		
Net profit of Auxiliary Activities	7,557.1	(7,557.1)	--	--	--	--	--
Revenue Sharing Transfers	38.0	(438.0)	400.0	--	--	5,500.0	--
Transfers to Unrest. Endowments	(5,500.0)	--	--	--	--	21.1	--
Secretary's retirement	(21.1)	--	--	26.4	--	(26.4)	--
Endowment released	--	--	--	--	--	--	--
Land Acquisition -- CBCES	(94.4)	--	--	--	--	--	94.4
Plant Acquisition -- West Court & C/H	(464.2)	--	--	--	--	--	464.2
Income reinvested in principal	--	--	--	(196.6)	--	196.6	--
Set up reserve for tax liability -- Mag.	(270.0)	--	270.0	--	--	--	--
Cost sharing on grants	(2.8)	--	--	--	2.8	--	--
In-house interest transfers	(213.8)	--	95.1	36.3	82.4	--	--
Fluid Research Grant -- Awards	(72.6)	--	72.6	--	--	--	--
Cooper-Hewitt operating loss	(392.8)	--	--	--	392.8	--	--
Special Events -- SAO	(7.0)	--	7.0	--	--	--	--
Principal withdrawn to make 4% Principal restored (historic B.V.)	40.1	--	--	180.3	--	(220.4)	--
Managers Fees for 1977	(.1)	--	--	(18.9)	--	19.0	--
Staff and Business Expenses	21.0	--	--	81.6	--	(102.6)	--
Close Grants and Contracts	(8.8)	14.0	8.8	--	(9.7)	--	--
Womens Committee Transfers	(4.3)	--	--	--	18.0	--	--
Miscellaneous	--	--	--	--	(.8)	--	--
Reclass of Gift (Eberhardt Foundation)	8.6	--	--	--	5.0	--	(5.0)
<b>Totals</b>	<b>612.9</b>	<b>(7,981.1)</b>	<b>827.7</b>	<b>109.1</b>	<b>490.5</b>	<b>5,387.3</b>	<b>553.6</b>

Adjust to Table II:  
 Principal withdrawn (income) (40.1)  
 Mgr's Fees " (income) (20.0)  
 Principal restored (income) --

551.8

(7,981.1)

827.7

356.6

5,387.3

553.6





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