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FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND OTHER SCIENTIFIC
ACTIVITIES, FISCAL YEARS 1965, 1966 AND 1967.

NATIONAL SCIENCE FOUNDATION, WASHINGTON, D.C.

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SPACE ADMINISTRATION, ATOMIC ENERGY COMMISSION, DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE, NATIONAL INSTITUTE OF HEALTH,

THIS REPORT COVERING THE YEARS 1965, 1966, AND 1967 IS
THE FIFTEENTH IN A SERIES REPORTING FEDERAL OBLIGATIONS AND
EXPENDITURES FOR SCIENTIFIC PROGRAMS. THE DATA WERE OBTAINED
BY MEANS OF A QUESTIONNAIRE FORMULATED AND DISTRIBUTED BY THE
NATIONAL SCIENCE FOUNDATION (NSF) TO FEDERAL AGENCIES IN
JANUARY AND FEBRUARY, 1966. EACH AGENCY REPORTED ONLY ON
FUNDS APPROPRIATED TO IT. THIS DOCUMENT REPRESENTS THE
FOUNDATION'S INTERPRETATION OF THE STATISTICAL DATA AND
DESCRIPTIVE MATERIAL SUBMITTED. AMOUNTS FOR 1965 REPRESENT
TRANSACTIONS FOR A COMPLETED FISCAL YEAR. THE DATA FOR
1966-67 REPRESENT ESTIMATES. THE DESCRIPTION OF THESE
ACTIVITIES IS ORGANIZED INTO THREE PARTS--(1) FEDERAL FUNDS
FOR RESEARCH, DEVELOPMENT, AND RESEARCH AND DEVELOPMENT
FACILITIES, (2) FUNDS FOR ACTIVITIES RELATED TO COLLECTION
AND DISSEMINATION OF SCIENTIFIC AND TECHNICAL INFORMATION,
AND (3) FUNDS OBLIGATED FOR THE COLLECTION, ANALYSIS, AND
PUBLICATION OF GENERAL PURPOSE SCIENTIFIC DATA. APPENDED ARE
(1) TECHNICAL NOTES DEALING WITH ADJUSTMENTS IN DATA, TERM
DEFINITIONS, LIMITATIONS IN DATA, AND OTHER BACKGROUND
INFORMATION, (2) A LIST OF FEDERAL CONTRACT RESEARCH CENTERS,
AND (3) STATISTICAL TABLES FOR THE THREE AREAS OF INQUIRY.
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Federal Funds for Research, Development, and Other Scientific Activities

Fiscal Years 1965, 1966, and 1967
Volume XV



Surveys of Science Resources Series

NATIONAL SCIENCE FOUNDATION

NSF 66-25

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FOREWORD

SINCE 1953 the National Science Foundation has published each year data on the Federal research and development budget. The purpose of this series is to provide a body of systematic statistical information on the size and scope of Federal spending for scientific activities, to indicate the methods by which these funds are spent, and to show important trends in major spending areas. The statistics are designed to contribute to understanding the current situation and to be useful in formulating science policy and plans from the point of view both of the Federal Government and of the Nation as a whole.

Federal participation in scientific research and development is not a single and separate entity, easy to measure and describe. It springs from many sources within different agencies to help meet the needs in the discharge of their various missions, and its effectiveness for this purpose must be judged primarily in terms of agency goals. However, the national interest also requires that Federal investment in research and development and other scientific activities be summarized in broad totals, cutting across agency lines, to provide a measure of the impact of Federal programs on national scientific resources.

This report breaks down total dollar amounts for the present budget period into key components which serve to measure the direction of Federal scientific effort. These components are character of work (basic research, applied research, and development) plus R&D plant, agency, performer, and field of science. Federal funding now represents two-thirds of the Nation's total expenditures on research and development and reaches deeply into the national economy, yet the gross total has limited meaning until its distribution is studied.

The type and detail of data in the *Federal Funds* series have expanded over the years. From an initial report that covered only funds for research and development spent by the Federal Government at nonprofit institutions, the survey has been broadened to cover all Federal funds spent in R&D work, including all kinds of performers. Character of work has been better delineated since the early reporting days, and fields of science have been further defined by discipline and subdiscipline.

In 1961 the series was amplified to include funds for activities relating to collection and dissemination of scientific and technical information. In 1963 coverage was extended to include Federal obligations for collection of general-purpose scientific data on social and natural phenomena.

There is a continuing need for more precise evaluation of the status of our science resources, including the status of individual scientific disciplines. *Federal Funds*, as an annual statistical reference series, provides a broad foundation for more detailed studies. As certain areas appear to require deeper investigation, the data presented in *Federal Funds* may be further extended.

The criterion of feasibility will have to be kept in mind, however, in adding new items, since each one increases the problem of obtaining meaningful answers from an ever-growing number of respondents. Nevertheless, the Foundation will continue its efforts to improve the service rendered by this report and to make it more widely useful.

Our appreciation extends to all agencies and their staffs that have helped in the preparation of the present edition.

LELAND J. HAWORTH

Director, National Science Foundation

JULY 1966

Federal Role in the National R&D Effort

The Federal Government accounts for almost two-thirds of the expenditures within the Nation for research and development. In 1965, for example, it was the source of 64 percent of the funds for work in this area. Federal agencies underwrote 55 percent of the R&D expenditures by industry and 59 percent of the R&D expenditures by universities and colleges proper (excluding Federal contract research centers).¹

Although the Federal Government is the major *provider* of funds for research and development, industry is the major R&D *performer*, spending an estimated 69 percent of the national total from all sources in 1965. Government personnel working in Government installations performed an estimated 15 percent of the national R&D total during the year, and universities and colleges and other nonprofit institutions performed the remaining 16 percent.

¹The statistics cited are based on data derived from National Science Foundation surveys of the Federal Government, industry, and educational and other nonprofit institutions.

ACKNOWLEDGMENTS

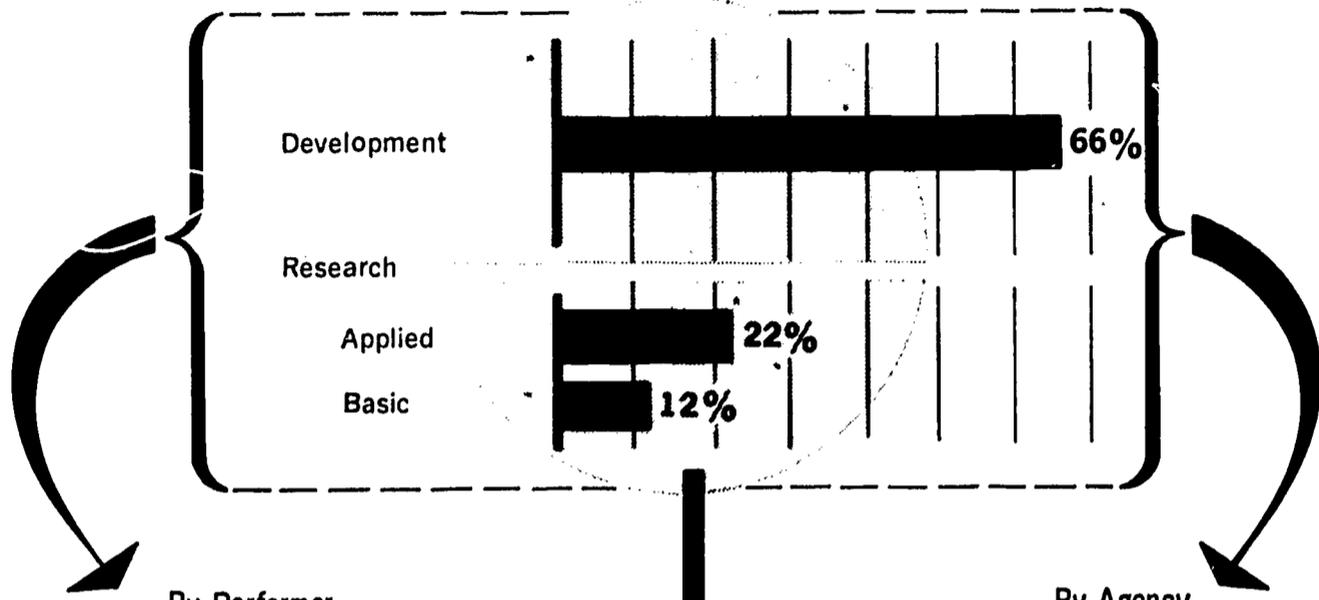
This report was prepared in the Office of Economic and Manpower Studies under the overall guidance of H. E. Riley, Head, and the special guidance of Kenneth Sanow, Head, Research and Development Studies Section. The survey was conducted and the report published under the direction of Benjamin Olsen, Study Director, Government Studies Group. Major responsibility for coordination and final review was taken by Bertrand J. Curland. Jane Pugh, Eleanor Stoddard, and Wayne Zajac assisted in developing the data and the graphic illustrations, as well as in writing the text.

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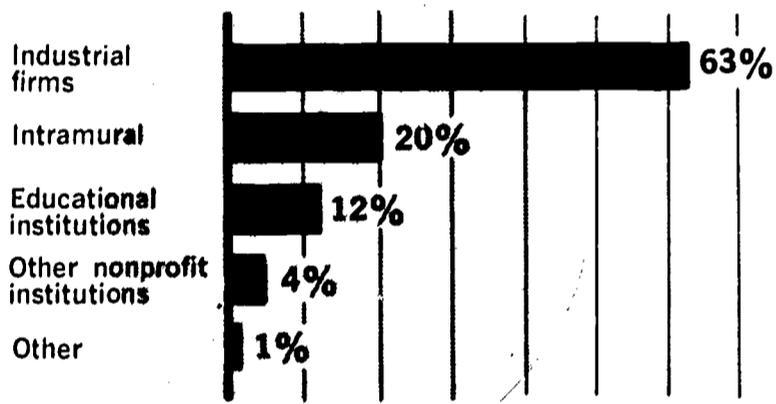
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Distribution of Federal obligations for research and development*, FY 1966 (est.)

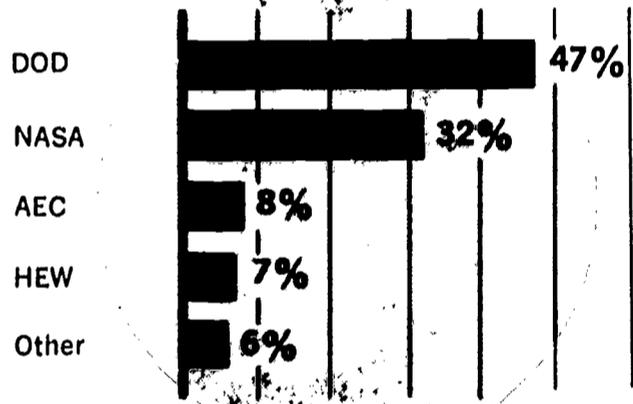
By Character of Work
\$15.9 billion



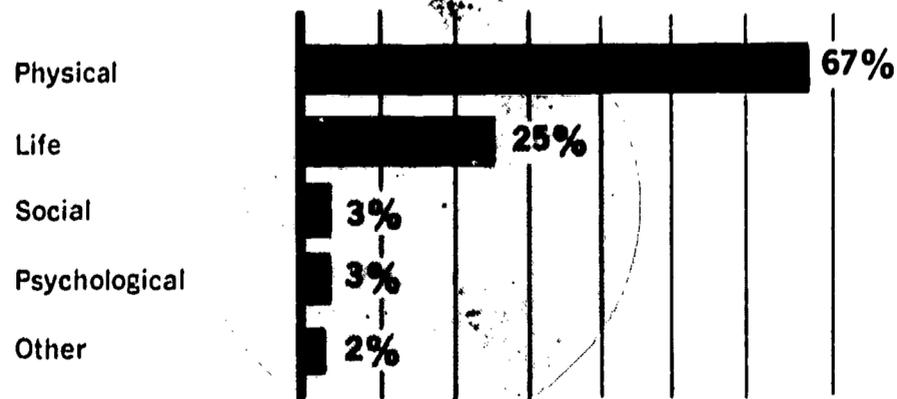
By Performer
\$15.9 billion



By Agency
\$15.9 billion



By Field of Science
(Basic and Applied Research)
\$5.5 billion



*Excludes R&D plant

Source: National Science Foundation

SUMMARY OF THE REPORT

Federal Funds for Research and Development

Federal obligations for basic research, applied research, and development (plant excluded) totaled \$14.6 billion in fiscal year 1965, and are expected to total \$15.9 billion in both fiscal years 1966 and 1967.

From 1952 through 1966, Federal agencies will have spent almost \$110 billion for research and development. Three-fifths of the cumulative Federal expenditures during this period have been made in the last 5 years (1962 through 1966). However, in the current 1965-67 reporting period there is a sharply reduced growth rate in Federal R&D funds.

Basic Research

Obligations for basic research have risen from \$1.7 billion in fiscal year 1965 to an estimated \$1.9 billion in 1966 and \$2.1 billion in 1967. As a share of total Federal research and development (plant excluded), basic research has risen from 12 percent in 1965 and 1966 to 13 percent in 1967. Basic research is the only R&D component expected to receive increased support in fiscal year 1967.

Applied Research

Applied research obligations are expected to increase from \$3.2 billion in fiscal year 1965 to \$3.5 billion in 1966 and just under \$3.5 billion in 1967. This component accounted for 22 percent of the Federal R&D total in 1965 and will account for an estimated 22 percent in both 1966 and 1967.

Development

Development obligations have grown from \$9.7 billion in fiscal year 1965 to an estimated \$10.5 billion in 1966 but are expected to drop to \$10.4 billion in 1967. As a share of Federal research and development (plant excluded), these obligations have declined from 67 percent to 66 percent and 65 percent in 1965, 1966, and 1967, respectively.

R&D Plant

In fiscal year 1965, obligations for R&D plant totaled \$1.1 billion and are estimated to total \$1.1 billion in 1966. In 1967, however, they are expected to drop to \$0.7 billion.

Major R&D Agencies and Programs

Some 85 percent of Federal support for research, development, and R&D plant will be initiated by three agencies—the Department of Defense, the National Aeronautics and Space Administration, and the Atomic Energy Commission—in the 1965-67 reporting period. The DOD obligations in 1966 are expected to

amount to 44 percent of the Federal R&D total (including plant); NASA, 32 percent; and AEC, 10 percent. The remaining 14 percent will be provided by 27 other departments and agencies that support R&D programs.

Organizations Performing Research and Development

During the years 1965-67, about four-fifths of Federal R&D funds (plant excluded) are expected to go to extramural performers and the remaining one-fifth to federally owned and operated laboratories and installations both for performance and for planning and administration of contractual and grant programs. In fiscal year 1966 an estimated 63 percent of Federal R&D funds will be obligated to industrial performers, 12 percent to educational institutions, and 5 percent to other performers (mostly nonprofit institutions). The above figures for extramural performers include Federal contract research centers administered by them; these contract research centers, as a whole, account for 8 percent of 1966 obligations.

For research alone, industry is expected to receive 34 percent in 1966; educational institutions, 30 percent; intramural, 28 percent; other nonprofit institutions, 7 percent; and other performers, 2 percent. Federal contract research centers, when shown separately from these estimated totals, account for 10 percent.

Fields of Science

In the 3-year period of this report, two-thirds of the obligations for research will be allocated for work in the physical sciences, about one-fourth for work in the life sciences, and less than one-tenth for studies in the psychological and social sciences. Between 1956 and 1966 funds for the psychological and social sciences have shown a faster average annual growth rate than that for the other sciences combined.

Scientific and Technical Information

A result of the spectacular growth of science and technology since World War II has been a similar increase in the volume of scientific and technical information as well as in the need for it. Federal obligations for scientific and technical information have risen from \$225 million in fiscal year 1965 to an estimated \$261 million in 1966 and \$273 million in 1967.

Collection of General-Purpose Scientific Data

A variety of users, including government agencies on various levels, the general public, and research investigators, are served by general-purpose scientific data covering natural and social phenomena. Federal obligations for its collection, totaling \$343 million in fiscal year 1965, are expected to drop to \$333 million in 1966 but to rise again in 1967 to \$381 million.

SCOPE AND METHOD

This report is the 15th in an annual series covering Federal obligations and expenditures for scientific programs. It is one of a number of continuing studies issued by the National Science Foundation on various aspects of U.S. science.

The data in *Federal Funds for Research, Development, and Other Scientific Activities, Volume XV* were obtained by means of a questionnaire formulated and distributed by the Foundation to Federal agencies in January-February 1966. Although Foundation staff members assisted respondents in the interpretation of concepts and definitions and evaluated responses, the final decisions as to classification of activities and the amounts reported were made by responding agencies. Each agency reported only on funds appropriated to it. Funds transferred by one agency to another were reported by the transferring agency. The text and graphic presentations represent the Foundation's interpretation of the statistical data and descriptive material submitted.

The structure of this report is governed by the fact that Federal science is not a single entity but rather a group of interrelated activities. The descriptions of these activities are organized into three parts: part I is concerned with Federal funds for research, development, and R&D plant or facilities; part II reports on funds for activities related to collection and dissemination of scientific and technical information; part III covers the amounts obligated for the collection, analysis, and publication of general-purpose scientific data.

A supplementary report on the geographic distribution of fiscal year 1965 Federal obligations for research and development and for R&D plant will be issued later.

The respondents have reconciled the data appearing in this report with amounts for scientific

activities shown in *The Budget of the United States Government, Fiscal Year 1967*. This report is, however, a later and more detailed analysis of the R&D portion of the budget presented by the President to Congress in January 1966. Following Federal budget practice, obligation and expenditure data are reported in 3-year cycles, in this case for fiscal years 1965, 1966, and 1967. Amounts for 1965 are termed "actual" because they represent transactions of a completed fiscal year. Data for 1966 and 1967 reflect various stages of the budget and planning cycles and consequently are "estimates."

The estimated amounts for 1966 and 1967 may differ from amounts for scientific activities appearing in *The Budget, 1967*, as presented to the Congress. The reason is that they may reflect reprogramming and administrative actions taken since that time. However, they do not take account of events, particularly Congressional appropriation actions for 1967, which may have occurred since the writing of this report in April-June 1966. To the extent that data in these pages do not agree with the figures presented in *The Budget* as of January 1966, the differences are attributed to the inclusion here of data obtained at a later stage in the budgeting process.

It must be borne in mind that all the statistics are estimates, including the actual obligations and expenditures for fiscal year 1965. The type of information presented in this report does not meet the standards of precision required for an accountant's statement. The reason lies in the difficulties inherent in classifying the diverse and dynamic activities that make up research and development; agencies report on components of larger activities related to their major functions, and a selection process is involved. "Best judgment" enters into

the task of classifying a large interdisciplinary research program by primary fields of science and by character of work, and each agency has its own criteria for meeting reporting definitions.

Compensating for this problem is the fact that most of the survey respondents have filled out the questionnaire many times; some have participated

in as many as 15 successive annual surveys. They have developed methods for extracting information from their records so as to meet the demands of this survey. Data were received this year from 91 respondents in 11 departments and 24 independent agencies covering the 3 scientific activities reported.

PART I

FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT

Section 1. LEVELS AND TRENDS

THE SHARPLY REDUCED RATE of growth in Federal R&D funds is the most significant characteristic of the 3-year period 1965-67. While obligations for basic research, applied research, and development show an increase from \$14.6 billion in fiscal year 1965 to \$15.9 billion in fiscal year 1966, a sizable amount in dollars, the average annual growth rate of 6 percent for these 2 years (from \$14.1 billion in 1964) was less than one-third that prevailing in 1956-64,¹ the time of most rapid expansion. For fiscal year 1967 the R&D level is scheduled to remain at \$15.9 billion. (See chart 1 and appendix table C-1.)

Obligations for R&D plant, the fourth of these components, reflect an absolute decrease during the 3 years—\$1.1 billion in both fiscal years 1965 and 1966 to an estimated \$0.7 billion in fiscal year 1967.

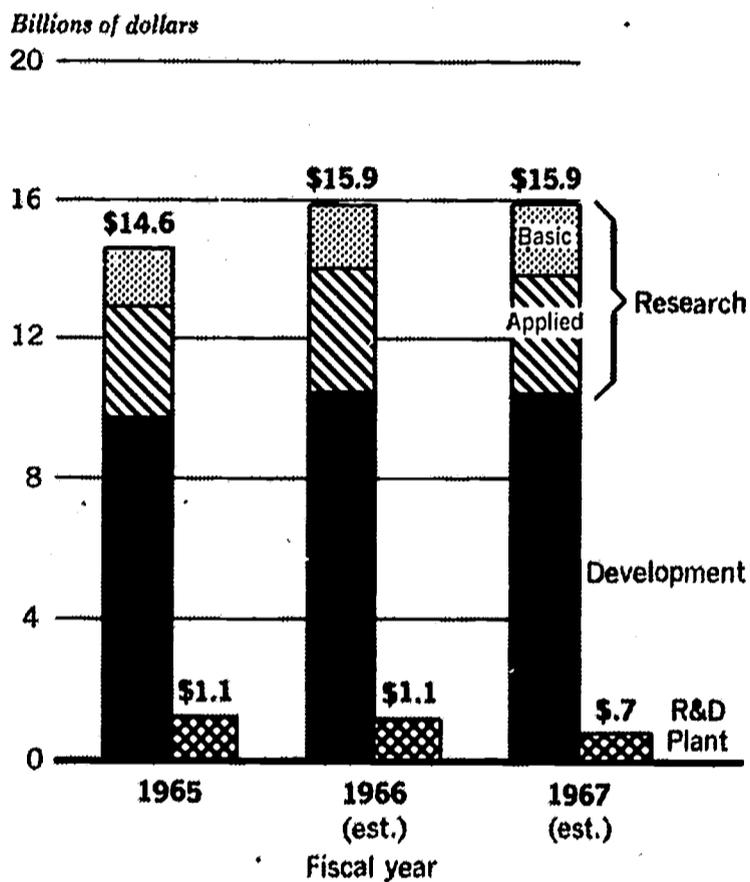
For the 1965-67 period obligations for research, development, and R&D plant will be apportioned about as follows: 62 percent to development, 21 percent to applied research, 12 percent to basic research, and 5 percent to plant. Clearly, the relative weight of development is such that changes in amounts allocated to this area will strongly influence the total.

Development forms a large part of Federal science dollar outlays because it includes in its scope costly prototype fabrication and testing of complex equipment: missiles, atomic reactors, space vehicles, supporting instrumentation, and the like. Nearly all development cost in the Federal R&D effort (95 to 99 percent) is incurred by the Department of Defense, the National Aeronautics and Space Administration, and the Atomic Energy Commission.

The slowing rate of growth for development in 1965 and 1966 is a major trend determinant for

¹ Growth rates throughout this report are based on an average annual compound increase.

Chart 1
Federal obligations for research,
development, and R&D plant



the R&D total. The average annual growth in this component was 4 percent from 1964 to 1966, contrasted with 21 percent in the 1956-64 period. The drop in dollar obligations for development scheduled for fiscal year 1967 is a prime cause of the leveling off of the R&D total.

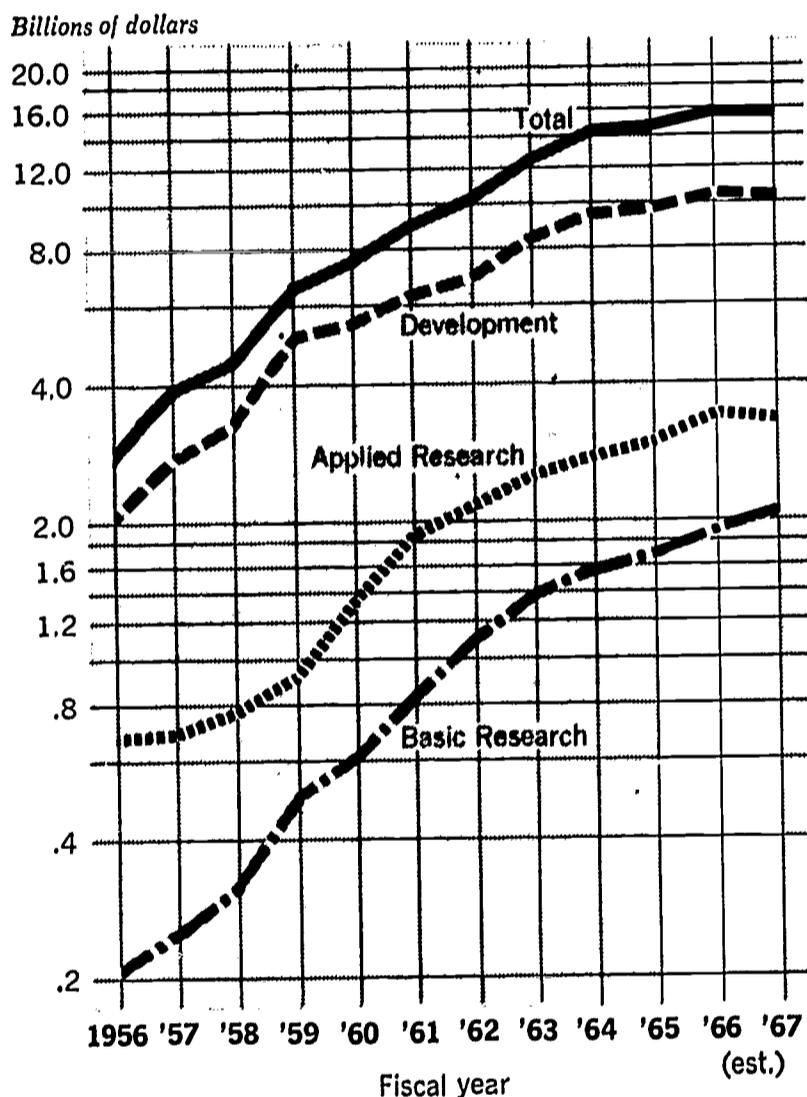
A second cause of the leveling off is the almost equal decline in dollar obligations for applied research. While total research shows a slowdown in year-to-year growth, applied research obligations are expected to decline absolutely in 1967 after ex-

periencing an average annual growth rate of 10 percent from 1964 to 1966, compared with 21 percent during 1956-64. (See chart 2.)

Basic research, on the other hand, shows a continuing dollar increase year after year. Compared with development, its rate of growth is slowing more gradually—from a 29 percent average annual growth rate during 1956-64 to 11 percent for the years 1965-66 and a projected 9 percent for 1967. The expected increase in basic research funds will cause a net increase in the overall research figure in fiscal year 1967.

Chart 2

Trends in Federal obligations for basic research, applied research, and development



SOURCE: National Science Foundation (Appendix table C-53)

Agency Programs

Three agencies—DOD, NASA, and AEC—account for some 85 percent of Federal funding for research, development, and R&D plant in the 3-year period of this report. (See table 1 and appendix

tables C-2—C-6.) Because of their strong involvement with interrelated programs and concentration on development activities, these agencies form a common group for analytical purposes. NASA, of course, differs from the other two in that it is committed to the objective that “activities in space should be devoted to peaceful purposes for the benefit of all mankind.”² Also the AEC, despite its original orientation toward defense and security, now devotes more than one-half of its R&D dollars to “civilian” ends. At the same time, AEC’s scientific work and that of NASA include cooperation with DOD on mutual programs and often in the use of the same industrial firms.

The combined research, development, and R&D plant programs of these three agencies grew at an average annual rate of only 3 percent in 1965 and 1966, with a slight overall net dollar reduction expected in 1967. This decline springs mainly from prospects that NASA will sustain in fiscal year 1967 the first budget decline since its establishment in 1958, caused largely by the completion of some of the more costly development and construction work for its manned lunar landing program.

TABLE 1. FEDERAL OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY

(Millions of dollars)

Agency	Actual, 1965	Estimates	
		1966	1967
Total	\$15,731	\$17,069	\$16,650
Department of Defense	6,865	7,506	7,418
National Aeronautics and Space Administration	5,482	5,506	5,005
Atomic Energy Commission	1,540	1,600	1,507
Department of Health, Education, and Welfare	971	1,232	1,271
National Science Foundation	261	319	341
Department of Agriculture	234	276	265
Department of the Interior	127	155	158
Federal Aviation Agency	72	186	375
Department of Commerce	64	108	105
Other agencies	117	181	205

NOTE: Detail may not add to totals because of rounding.

By contrast, the remaining Federal agencies currently engaged in scientific work show a steady increase in funding, amounting to an average annual growth rate of 19 percent for the 3-year period 1964-67. A major contributor is the Department

² Public Law 85-568, July 29, 1958.

of Health, Education, and Welfare with its far-reaching programs in the fields of health, medicine, and education. Another is the National Science Foundation, whose mission is to fund basic research to insure growth in the backlog of scientific knowledge.

The Departments of Agriculture, Interior, and Commerce carry out activities, some long established and some newly created, that relate to the better use of natural resources, to weather control, to problems of pollution and water supply, and to transportation. Other agencies are devoting increasing scientific effort to problems of urban living, poverty, and transportation, to name some major areas. There is an underlying growth trend, therefore, related to the Great Society and other public benefit programs, despite the projected net decline in 1967 that emerges from the fall-off in development and R&D plant support among certain programs of the defense-space-atomic energy group.

The Background

Between 1940 and 1966 Federal agencies spent over \$125 billion for research, development, and R&D plant.³ After a substantial dollar decline in the years just following World War II the curve of annual expenditures began a rise, unbroken since 1948. (See table 2.) The growing importance of research and development in Federal programs is attested by the fact that R&D and R&D plant expenditures were less than 3 percent of the Federal budget in 1950 but had risen to 10 percent in 1960 and to 15 percent in 1964. After holding to this level for the next two years, expenditures are expected to drop in 1967 to 14 percent of the budget. As a component of the gross national product, Federal R&D and R&D plant expenditures rose from 0.04 percent in 1950 to 2.2 percent in 1965.

In the past 2½ decades the rising level of R&D funds has originated from a number of sources. In the 1940's expenditures totaled almost \$8 billion, but during the 1950's they increased fourfold, to \$32 billion. More than two-thirds of this increase

³ Based on current dollars (not adjusted for price changes). A project exploring the feasibility of constructing an index of price change in R&D inputs is being carried out by the Bureau of Labor Statistics of the Department of Labor under a contract from the National Science Foundation. Technical problems arising in this experimental effort are reported by Allan D. Searle in "Research and Development Price Indexes," *Monthly Labor Review*, January 1966, pp. 57-61.

TABLE 2. FEDERAL OBLIGATIONS AND EXPENDITURES, FISCAL YEARS 1940-67

(Millions of dollars)

Fiscal years	Total Federal budget expenditures	Research, development, and R&D plant ^a		
		Obligations	Expenditures	Expenditures as percent of budget
1940.....	\$9,055	(b)	\$74	0.8
1941.....	13,255	(b)	198	1.5
1942.....	34,037	(b)	280	0.8
1943.....	79,368	(b)	602	0.8
1944.....	94,988	(b)	1,377	1.4
1945.....	98,303	(b)	1,591	1.6
1946.....	60,326	(b)	918	1.5
1947.....	38,923	\$691	900	2.3
1948.....	32,955	868	855	2.6
1949.....	39,474	1,105	1,082	2.7
1950.....	39,544	1,175	1,083	2.7
1951.....	43,970	1,812	1,301	3.0
1952.....	65,303	2,914	1,810	2.8
1953.....	74,120	3,361	3,101	4.2
1954.....	67,537	3,039	3,148	4.7
1955.....	64,389	2,745	3,308	5.1
1956.....	66,224	3,267	3,446	5.2
1957.....	68,966	4,389	4,462	6.5
1958.....	71,369	4,905	4,990	7.0
1959.....	80,342	7,116	5,803	7.2
1960.....	76,539	8,074	7,738	10.1
1961.....	81,515	9,601	9,278	11.4
1962.....	87,787	11,080	10,373	11.8
1963.....	92,642	13,650	11,988	12.9
1964.....	97,684	15,310	14,694	15.0
1965.....	96,507	15,731	14,875	15.4
1966 (estimate) ^c	106,428	17,089	15,963	15.0
1967 (estimate) ^c	112,847	16,650	16,152	14.3

^a Beginning in fiscal year 1953, amounts include pay and allowance of military personnel in research and development for both obligations and expenditures.

^b Not available.

^c These estimates are based on amounts shown in *The Budget, 1967*, subject to subsequent administrative action. Data for 1967, moreover, do not reflect congressional action.

NOTE: Data for fiscal year 1952 and subsequent years are based on surveys of the National Science Foundation. Prior data were prepared by the Bureau of the Budget. Since the NSF surveys began, agencies have, when necessary, submitted revised data to maintain historical comparability of reporting.

was accounted for by DOD; during these years, a period of major missile development, the Air Force gained the lead among the three military services in R&D activities. Meanwhile, the AEC entered into thermonuclear weapons research and started work on nuclear energy power sources for ships and submarines.

In addition, other Federal agencies were established, such as the National Science Foundation (1950) and the Department of Health, Education, and Welfare (1953), which added weight to the total science effort by focusing attention on the

importance of basic research and on research in health and medicine.

In 1958 the National Aeronautics and Space Administration was established with the main objective of pursuing space research and exploration. It took over certain of the space research activities of DOD and began to lay plans for R&D programs that were to place great demands on scientific resources.

The Shift in the 1960's

The groundwork was thus laid for a dramatic shift in the 1960's in the relative positions of the major agencies that make up the Federal scientific budget. Chart 3 shows that between 1960 and 1966 DOD's share of total obligations declined from 72 percent to 44 percent of the Federal total (although its R&D budget continued to increase) while NASA's share rose from 6 percent to 32 percent. The combined funds of both agencies represented more than three-fourths of the Federal total in each of these years, with aerospace programs taking a significant portion. During the same 6-year period

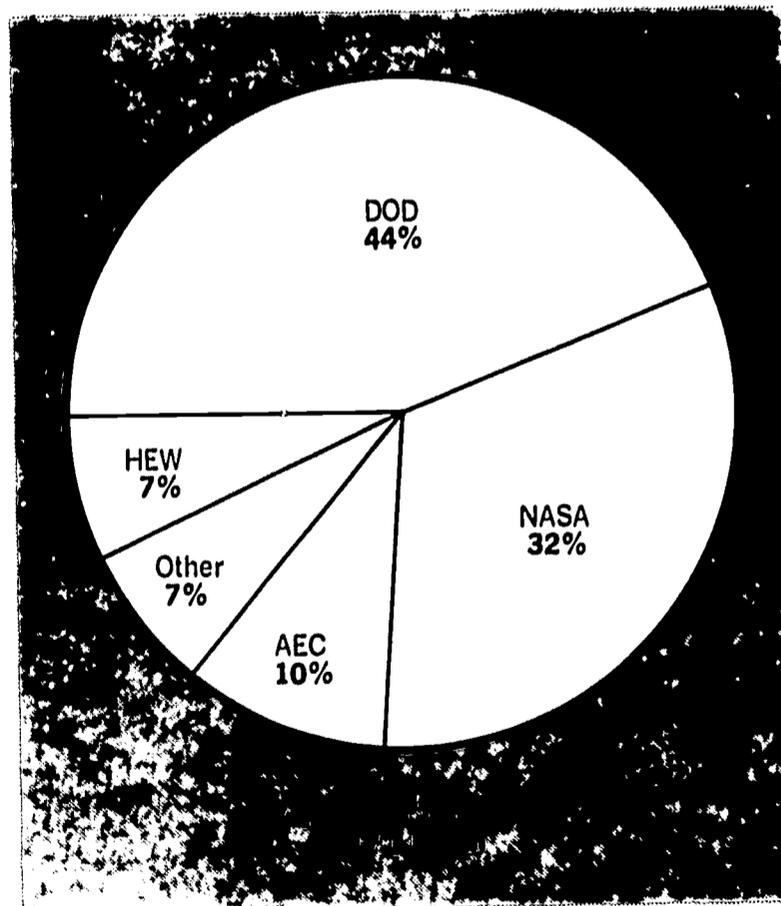
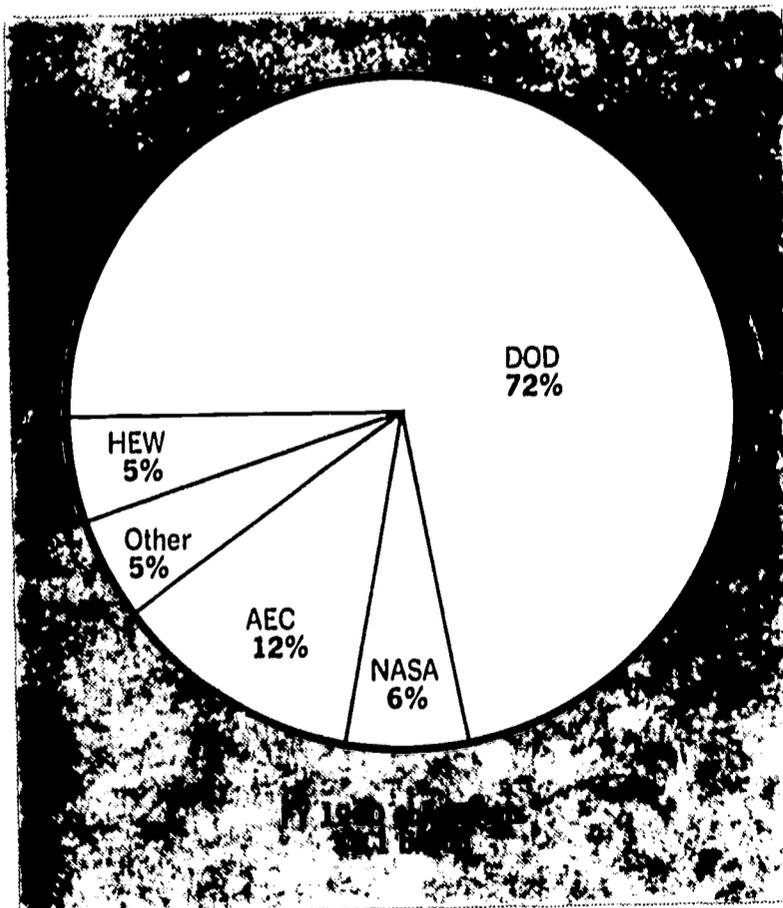
the AEC portion declined from 12 percent of the total to 10 percent (although gaining steadily in actual funds).

Omitting DOD, NASA, and AEC programs because of their special nature, consideration of the programs of other agencies shows them to have expanded impressively, from \$773 million obligated in 1960 to just over \$2.5 billion in 1966 (over four-fifths of their R&D effort in research rather than development). Some areas in which these activities are focused have been pointed out. Particularly notable is the more than threefold increase between 1960 and 1966 in the R&D programs of HEW, whose share of the expanding total has grown from 4 percent to 7 percent in the same timespan.

The involvement in research and development is now so widespread that the number of Federal agencies reporting R&D activities has grown from 44 departments or departmental subdivisions and 16 independent agencies in 1960 to 60 departments or departmental subdivisions and 21 independent agencies in 1966.

Chart 3

Agency participation in Federal research, development, and R&D plant, FY 1960 and 1966



SOURCE: National Science Foundation (Appendix table C-50)

Performers

Since World War II Federal R&D programs have been largely executed by outside performers under contract or grant. This method provides the advantage of flexibility in the use of scientific resources by drawing upon the specialized competence existing within the Nation. Industrial establishments concentrate on development while educational institutions focus more heavily on basic research than on other categories.⁴ In Federal laboratories about half the work is assigned to development, another third to applied research, and the rest to basic research. No performer, however, is limited to any one category of work.

The agencies with newer and larger programs tend to contract more of their work outside, while those with more established programs tend to carry out their R&D activities in their own facilities. (For example, NSF is even precluded by law from operating its own laboratories.) Some 75 percent of DOD's work, especially that calling for complex systems development, is performed outside. The other agencies with the largest programs—HEW, NASA, and AEC—reported that 80 percent to 98 percent of their funds were obligated extramurally in fiscal year 1966.

Only three agencies with large, established R&D programs—the Departments of Agriculture, Commerce, and Interior—perform most of their work in their own laboratories. However, 15 other departments and independent agencies with smaller R&D programs reported that the bulk of their work is done intramurally (appendix tables C-7—C-12).

Chart 4 indicates the growth trends for major performers of Federal research and development between the years 1956 and 1967. In the 1950's intramural work made up a higher share of the total, as much as 35 percent in 1956; but thereafter its share declined to 23 percent of total obligations in 1960 and as low as 18 percent in 1963. For the present 3-year reporting span it is approximately 21 percent.

⁴Most of the R&D work of these groups is funded by the Federal Government. In 1965, 55 percent of all industrial research and development and 59 percent of all R&D work done in universities and colleges proper was performed under grant or contract for Federal agencies. (Data derived from National Science Foundation surveys.)

On the other side of the scale, the extramural share has continued to grow. From less than two-thirds in 1956, it rose to account for more than four-fifths of Federal research and development (plant excluded) in 1963, and it has leveled off to just under four-fifths in the present period.

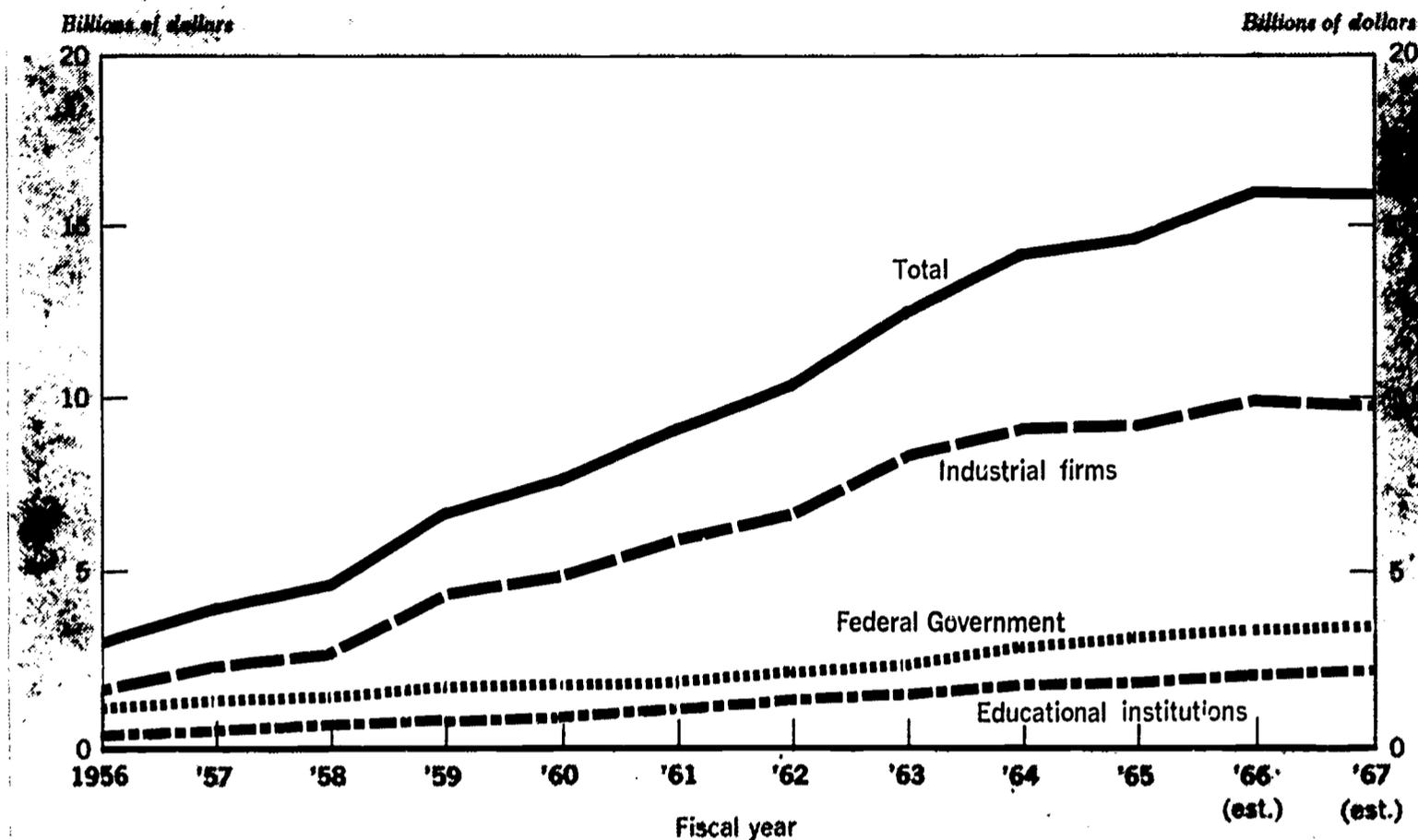
The nature of the R&D work done by DOD, NASA, and AEC largely accounts for the higher incidence of extramural performance. And it is not surprising—in view of the heavy investment of these agencies in development of space equipment and systems, atomic reactors and engines, missiles, aircraft, and cargo transport—to find almost 80 percent of the extramural work undertaken by industry (62 percent of total R&D) during 1965-67. Even so, industry has declined slightly in relative importance; in 1956, industrial firms performed more than 80 percent of all extramural research and development, compared with a share just under that level now.

Since 1956 the importance of educational institutions has increased; their share of total research and development has risen from 10 percent then to approximately 13 percent for the current reporting period. This growth is partly due to the increasing emphasis on basic research and on programs designed to encourage improvements in the universities' research capabilities. The remaining extramural dollars are received by nonprofit organizations.

A special performer category, included in the figures above, is the Federal contract research center. Administered on a contractual basis by industrial organizations and educational and other nonprofit institutions, research centers are organizations exclusively or substantially financed by the Federal Government. They were initiated in World War II when the size or specialized nature of undertakings, their security requirements, unusual facilities, or the need for objective program evaluation called for the creation of such new organizations rather than the expansion of existing Government laboratories.

The 47 research centers identified in this report accounted for 8 percent of all Federal research and development obligations in 1966. The four principal agencies using them are DOD, AEC, NASA, and NSF.

Chart 4
Trends in Federal R&D obligations, by performer



SOURCE: National Science Foundation (Appendix table C-58)

Fields of Science

Since the Federal scientific involvement undergirds two-thirds of all research and development in the United States, it can strongly influence the direction of growth among the fields of science. Recognizing this, the National Academy of Sciences in 1962 established its senior standing Committee on Science and Public Policy (COSPUP) to consider the status and needs of various fields of science. COSPUP has already issued several reports on broad issues and also has a number of others in process on needs and opportunities in specific areas.

Table 3 shows the distribution of Federal research obligations among major fields of science for 1956 and 1966 (development is excluded because of its engineering and multidisciplinary character). In both years the physical sciences received the dominant share of research funds, but it should be pointed out that they cover a range which includes chemistry, earth sciences, physics, astronomy, mathematics, and engineering sciences. Next in support were the life sciences (biology, medicine, and agri-

TABLE 3. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH, BY FIELD OF SCIENCE, FISCAL YEARS 1956 AND 1966

(Millions of dollars)

Field of science	1956	1966 estimate
Total.....	\$852	\$5,402
Life sciences.....	208	1,352
Medical sciences.....	109	953
Biological sciences.....	55	284
Agricultural sciences.....	44	115
Psychological sciences.....	(*)	137
Physical sciences.....	614	3,680
Physical sciences proper.....	245	1,840
Engineering sciences.....	357	1,707
Mathematical sciences.....	11	125
Social sciences.....	30	188
Other sciences.....	(*)	104

* Not available.
NOTE: Detail may not add to totals because of rounding.

culture) and in third place, the social sciences, followed by the psychological and other sciences. The physical sciences currently absorb two-thirds of the Federal Government's research dollars, the life sciences, one-fourth. Less than one-tenth of the funds are taken up by the social, psychological, and other sciences.

The relative levels of support may tend to shift somewhat in the future as the social and psychological sciences attain greater scientific and public recognition. Present programs put emphasis on edu-

cation and social adjustment, on problems of urban living and area development, and on the total life and behavior of man. Between 1956 and 1966 the social and psychological sciences combined have shown a 27 percent average annual growth rate, compared with 20 percent for all the other sciences combined. For 1967 they are expected to grow an additional 17 percent. Starting from a smaller base, their rate naturally tends to be higher, but the direction of the trend is clearly established (appendix tables C-13--C-16).

Section 2. BASIC RESEARCH

BASIC RESEARCH is motivated by the desire to pursue knowledge for its own sake. Such investigation seeks an understanding of natural laws without regard for immediate usefulness and, since the academic center is the most appropriate setting for effort of this kind, the performance of basic research is intimately involved with the education and training of first-class scientists and engineers.

Basic research is the only R&D component expected to receive increased support in fiscal year 1967. Federal obligations for basic research are scheduled to move from \$1.7 billion in 1965 to an estimated \$1.9 billion in 1966 and \$2.1 billion in 1967. (See table 4 and appendix tables C-17—C-19.) However, the average annual rate of growth has slowed; from 1956 through 1964 it was 29 percent, compared with 11 percent in the present 3-year period. Since the original dollar base was relatively small, basic research obligations, despite their rise, still represent only 13 percent of the R&D total, exclusive of plant.

Basic research shows continued growth because of general recognition that a portion of the national output should be purposely so assigned as a foundation for technological and cultural advance. In 1950 this recognition took official form with the creation of the National Science Foundation, which was given the responsibility to stimulate and support basic research, promote education in the sciences, and aid the exchange of scientific information. Since the mid-1950's basic research has shown the most rapid rise among the three R&D components. Its funds gained added impetus in the post-Sputnik era when new emphasis was placed both on space research and on education, and all major R&D agencies received increased appropriations for their basic research programs. Between 1956 and 1967 total basic research obligations rose from \$206 million to an expected \$2.1 billion, a

tenfold increase, compared with approximately a fivefold increase in funds for the R&D total.

TABLE 4. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY

(Millions of dollars)

Agency	Actual, 1965	Estimates	
		1966	1967
Total.....	\$1,090	\$1,926	\$2,093
National Aeronautics and Space Administration.....	528	603	653
Department of Health, Education, and Welfare.....	303	357	390
Department of Defense.....	263	273	298
Atomic Energy Commission.....	258	265	311
National Science Foundation.....	171	222	245
Other agencies.....	167	188	197

Note: Detail may not add to totals because of rounding.

Agencies

There are now 16 Federal departments and agencies that conduct or support basic research, although five of them are scheduled to obligate 90 percent of the total funds in 1965 through 1967. These are the National Aeronautics and Space Administration, the Department of Health, Education, and Welfare, Department of Defense, the Atomic Energy Commission, and the National Science Foundation. Of the remaining 10 percent of the funds, half are expected to be obligated by the Department of Agriculture and the rest by the Departments of Commerce, the Interior, Labor, the Treasury, and Housing and Urban Development, the Civil Service Commission, the Smithsonian Institution, the Veterans Administration, the Office of Economic Opportunity, and the Small Business Administration.

There are considerable differences among the agencies in the levels of support provided basic research. In DOD, basic research represents only

4 percent of the total agency R&D budget for 1966; in NASA, only 12 percent; and in the AEC, 23 percent. For HEW the share is 33 percent and for NSF, 99 percent. Basic research is thus almost the total of the R&D effort of the NSF and is strongly represented in the total of HEW. However, only the NSF and the Smithsonian Institution have R&D programs that are not mission-oriented. For all other agencies, including HEW, basic research is supported only in areas that could ultimately contribute to the applied science or development mission of the agency. While this mission-oriented emphasis does not detract from the value of the research being done, it tends to concentrate the work only in fields of interest to these agencies.

In the 1960's NASA assumed the leadership in basic research support and in fiscal year 1967 is scheduled to account for 31 percent of all Federal basic research effort. However, the size of its involvement is to some extent exaggerated by the inclusion of costs for expendable equipment in the forms of launch vehicles, spacecraft, and instruments used to obtain interplanetary data and test biological and mechanical reactions to space travel.

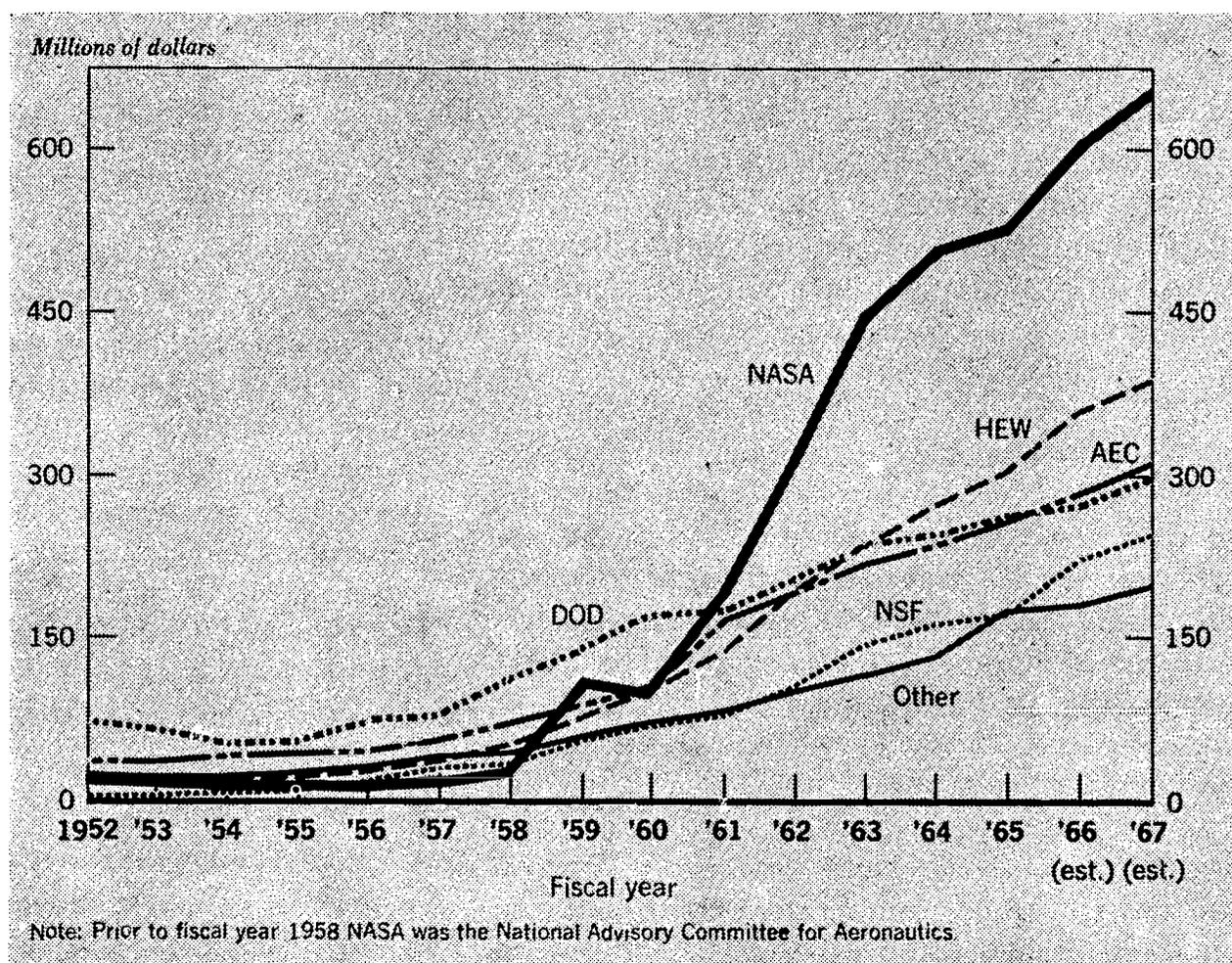
During the decade of the 1950's, DOD was the main Federal supporter of basic research, and AEC

was second. But in recent years "civilian" programs as a whole have been receiving more basic research support than have those of a military nature. Since 1963 HEW has been second in basic research funds, mainly the result of effort in the National Institutes of Health (administered by the Public Health Service), which sponsors a host of programs in the life sciences. The AEC and DOD, now third and fourth respectively, reflect gradual growth rates in the 1960's, but NSF, in fifth place, shows faster acceleration. (See chart 5.)

Performers

The increase in total Federal support for basic research over the past 8 years has been accompanied by some shifts in the relative positions of the major performers. In 1958 funds to the four major performers of basic research were distributed as follows: educational institutions, 45 percent; industry, 8 percent; Federal laboratories, 37 percent; other nonprofit institutions, 9 percent. (These figures include obligations to Federal contract research centers.) In 1966 the share received by educational institutions is expected to remain about the same, at 46 percent. But the industrial share is estimated at 19 percent of the total, a gain of 11

Chart 5
Trends in
Federal
obligations for
basic research,
by agency



SOURCE: National Science
Foundation
(Appendix table C-55)

percentage points, while Federal laboratories will receive about 24 percent, a loss of 13 percentage points. Other nonprofit institutions remain at 8 percent. (See chart 6.)

The shift is largely explained by increased basic research in the space sciences carried out under contract by industry. And despite the decline in the relative share of funds administered by Federal laboratories, their dollar obligations expanded 3½ times between 1958 and 1966.

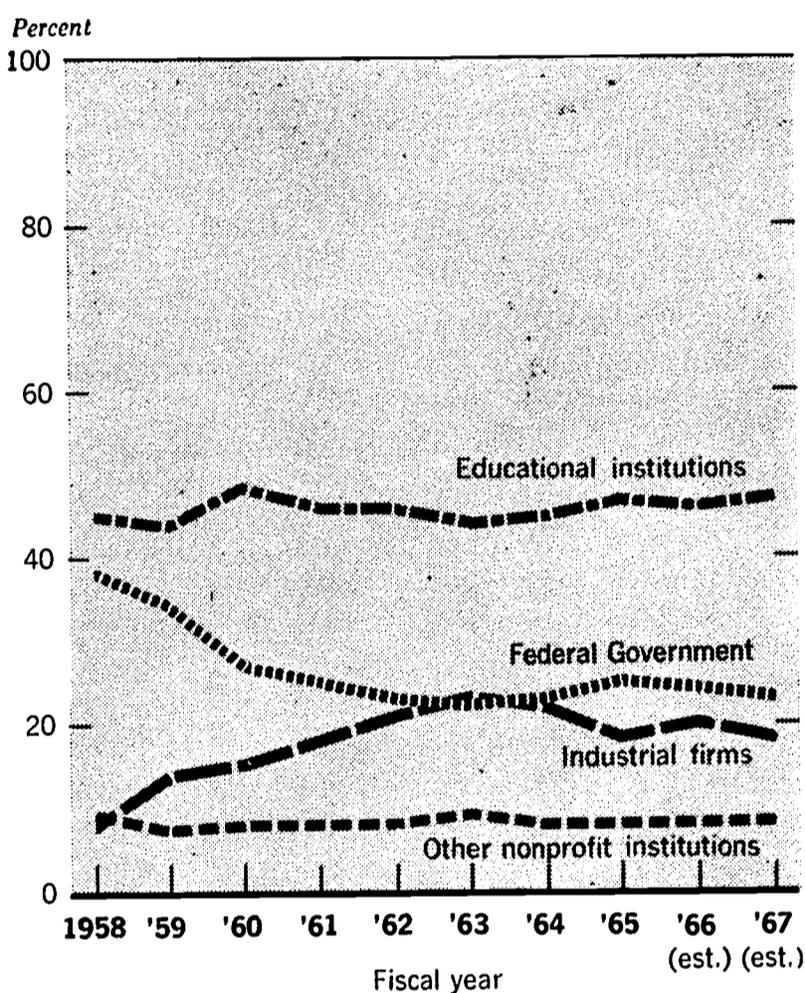
Research centers in fiscal year 1966 account for 13 percent of all basic research performed, and the bulk of this work is done under university administration. It is worth noting that some 76 percent of all research-center-located basic research is done for the AEC and more than 17 percent is done for NASA. (See table 5.)

Basic research funds to educational institutions are expected to increase 10 percent in fiscal year 1967. To some extent this growth reflects support for the President's September 13, 1965 directive that all agencies administer their research grant and contract programs to strengthen university capability for science and science education, including the establishment of university-administered programs in specialized areas. In this connection DOD in fiscal year 1967 is initiating a new program to strengthen the research potential in selected universities and colleges throughout the country. Another example is the HEW Public Health Service program to develop university research capability in environmental health. The NSF is also expanding its program of grants to universities in 1967 to encourage basic research and to improve academic science at a wider range of institutions. (For several years NASA has had a sustaining university

program to increase the supply of highly trained scientists and engineers for research in space-related fields.)

It should be pointed out that Federal agencies as a whole still perform almost one-fourth of their basic research on their own premises, using their

Chart 6
Share in Federal obligations for basic research, by performer



SOURCE: National Science Foundation (Appendix table C-59)

TABLE 5. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY PERFORMER AND AGENCY, FISCAL YEAR 1966 (EST.)

	(Millions of dollars)					
	NASA	HEW	DOD	AEC	NSF	OTHER
FEDERAL GOVERNMENT	157	54	80	5	18	135
INDUSTRIAL FIRMS	307	(a)	28	32	2	
Research Centers	(a)	--	--	(29)	--	(4)
EDUCATIONAL INSTITUTIONS	127	222	139	197	173	351
Research Centers	(40)	--	(3)	(120)	--	--
OTHER NONPROFIT INSTITUTIONS	4	67	11	47	28	1
Research Centers	(1)	--	--	(42)	(15)	--
OTHER	7	14	7	4	1	13

^a Less than \$500,000.

NOTE: Detail may not add to totals because of rounding.

own personnel. More than half of this work is done by NASA and DOD, but much of it is also accomplished by Federal agencies carrying out long-established programs in agriculture, weather, fisheries, and mining research, and in the setting of standards. The growing investment of HEW in the medical field is a more recent development, which now puts this agency in fourth place, after Agriculture, in basic research funding.

TABLE 6. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY FIELD OF SCIENCE

(Millions of dollars)

Field of science	1965 actual	1966 estimate	1967 estimate
Total.....	\$1,690	\$1,929	\$2,093
Life sciences.....	503	572	605
Psychological sciences.....	58	73	84
Physical sciences.....	1,091	1,233	1,344
Physical sciences proper.....	891	1,003	1,072
Mathematical sciences.....	57	62	68
Engineering sciences.....	143	167	204
Social sciences.....	37	49	58
Other sciences.....	2	2	2

NOTE: Detail may not add to totals because of rounding.

Fields

Support by fields for the three years, 1965, 1966, and 1967, is given in table 6 and appendix tables C-20—C-22. They show that in basic research, as in total research, the physical sciences—physics,

astronomy, solid earth sciences, atmospheric sciences, chemistry, oceanography, and the engineering and mathematical sciences—are receiving the bulk of the dollars (about 64 percent in each of these years). Less than half as much support (about 30 percent of total obligations) is given the life sciences—medical, biological, and agricultural. All other fields—i.e., the psychological, social, and other sciences—receive 6 percent of total obligations. However, from 1966 to 1967 the fastest growth rates are expected to be recorded by the social, psychological, and (within physical) the engineering sciences.

Table 7 shows a more detailed field breakdown for fiscal year 1966 in terms of major agency support. Four of the five leading basic research agencies—NASA, DOD, AEC, and NSF—concentrate in the physical sciences more heavily than in any other field. By contrast, HEW invests four-fifths of its obligations in the life sciences and accounts for almost one-half the Federal support of this field. In the psychological sciences support also comes mainly from HEW through its National Institutes of Health; the principal support for the social sciences comes from HEW and from NSF through its research grants program.

These data show that, within the physical science total, the physical sciences proper absorb the bulk of the dollar obligations, particularly in the fields of astronomy, elementary particle physics, atmospheric sciences, solid earth sciences, and chemistry. Within the life sciences, the medical sciences predominate.

TABLE 7. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY DETAILED FIELD OF SCIENCE AND AGENCY, FISCAL YEAR 1966 (EST.)

(Millions of dollars)

Field of science	Total	National Aeronautics and Space Administration	Department of Health, Education, and Welfare	Atomic Energy Commission	Department of Defense	National Science Foundation	Other
Total.....	\$1,920	\$603	\$357	\$285	\$273	\$222	\$188
Life sciences.....	572	61	280	62	30	54	84
Biological sciences.....	207	58	22	38	9	52	26
Medical sciences.....	320	3	258	22	21	1	14
Agricultural sciences.....	45		(*)	2		(*)	43
Psychological sciences.....	73	5	48		9	8	2
Physical sciences.....	1,233	536	12	223	232	145	85
Physical sciences proper.....	1,003	463	7	202	146	110	75
Astronomy.....	220	195			10	15	1
Chemistry.....	114	7	6	36	14	19	31
Atmospheric sciences.....	150	93	(*)	5	22	23	7
Oceanography.....	44		(*)	4	19	17	4
Solid earth sciences.....	118	86			3	10	18
Elementary particle physics.....	176	61	(*)	98	9	9	
Nuclear structure physics.....	45	1		32	7	4	1
Atomic, molecular, solid state physics.....	66	19	(*)	10	20	6	6
Other physics.....	46	2	(*)	10	25	4	4
Other physical sciences proper.....	24		(*)		18	3	3
Mathematical sciences.....	62	7	2	6	31	15	2
Engineering sciences.....	167	66	2	15	55	20	9
Social sciences.....	40	1	15		2	15	17
Other sciences.....	2		2				

* Less than \$500,000.

Section 3. APPLIED RESEARCH

LIKE BASIC RESEARCH, applied research is systematic, intensive study directed toward fuller knowledge of a given subject. However, it differs from basic research in that it seeks to show or indicate the means by which a recognized need may be met. In the process it draws on existing knowledge and also creates additional knowledge.

Funds for applied research rise and fall with project needs rather than stemming from an overall policy plan to fill gaps in knowledge or support the work of individual scientists. Between fiscal years 1965 and 1966 Federal obligations for applied research rose from \$3.2 billion to more than \$3.5 billion but are expected to be just under \$3.5 billion in 1967. (See table 8 and appendix tables C-24—C-26.) In contrast to the trend in basic research, the applied research has first slowed—from an annual average growth rate of 21 percent in the 1956-64 period to an annual average of 10 percent from 1964 through 1966—and then is expected to show a dollar drop in 1967.

A notable long-range trend is the changing dollar relationship of applied research to basic research. Applied research obligations increased fivefold from 1956 through 1967 while basic research obligations increased tenfold. As a result, applied research obligations dropped from a 76-percent share of the research total in 1956 to a 69-percent share in 1960 and thereafter have shown a steady decline to an indicated 62 percent of the research total in 1967.

The scheduled decline in net dollar obligations for fiscal year 1967 is mainly accounted for by the Department of Defense, with a decrease of \$119 million, and next by the National Aeronautics and Space Administration, with a decrease of \$58 million. These two decreases, plus a slight one for the Department of Agriculture, are partly counteracted by increased funds for the other agencies as a whole,

TABLE 8. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY

(Millions of dollars)

Agency	Actual, 1965	Estimates	
		1966	1967
Total.....	\$3,164	\$3,533	\$3,454
Department of Defense.....	1,488	1,643	1,524
National Aeronautics and Space Administration.....	762	785	727
Department of Health, Education, and Welfare.....	559	681	754
Department of Agriculture.....	128	137	129
Atomic Energy Commission.....	76	80	83
Other agencies.....	151	207	237

NOTE: Detail may not add to totals because of rounding.

the most important being for the Department of Health, Education, and Welfare in the amount of \$73 million. The net loss for 1967 is expected to be \$79 million.

It is significant that most of the increases occur in the funds for Great Society programs. In addition to those of HEW, these include programs carried out by the Departments of Commerce, the Interior, and Labor, the Veterans Administration, the Office of Economic Opportunity, and other agencies, in such areas as resources use, transportation, air and water pollution control, and human behavior and motivation.

Agencies

A total of 30 agencies reported activity in applied research in the current period, a larger number than reported for either basic research or development. The five agencies leading in funds for applied research are DOD, NASA, HEW, Agriculture, and the Atomic Energy Commission, in that order. Yet the percentage share allotted to applied research in their respective R&D budgets varies

widely. Not surprisingly, the applied component claims a low proportion of the DOD, NASA, and AEC budgets for research and development, since each of these agencies directs most of its dollars to development. DOD reports the largest share and is the leading contributor to the total Federal applied research effort.

However, in the period from 1956 through 1967 DOD has shown a steadily declining percentage of the total. (See chart 7.) During this time applied research obligations of NASA (prior to fiscal year 1958, National Advisory Committee for Aeronautics) have risen from 5 percent to 21 percent of total applied research obligations and HEW from 9 percent to 22 percent. These changing proportions reflect the present trend in Federal research and development to move significantly into non-military areas.

Performers

Between fiscal year 1963 (the first year in this series in which data on applied research obligations were collected by performer) and fiscal year 1967 a fairly consistent pattern appears for the execution of applied research. Industry currently receives approximately 40 percent of the total, educational in-

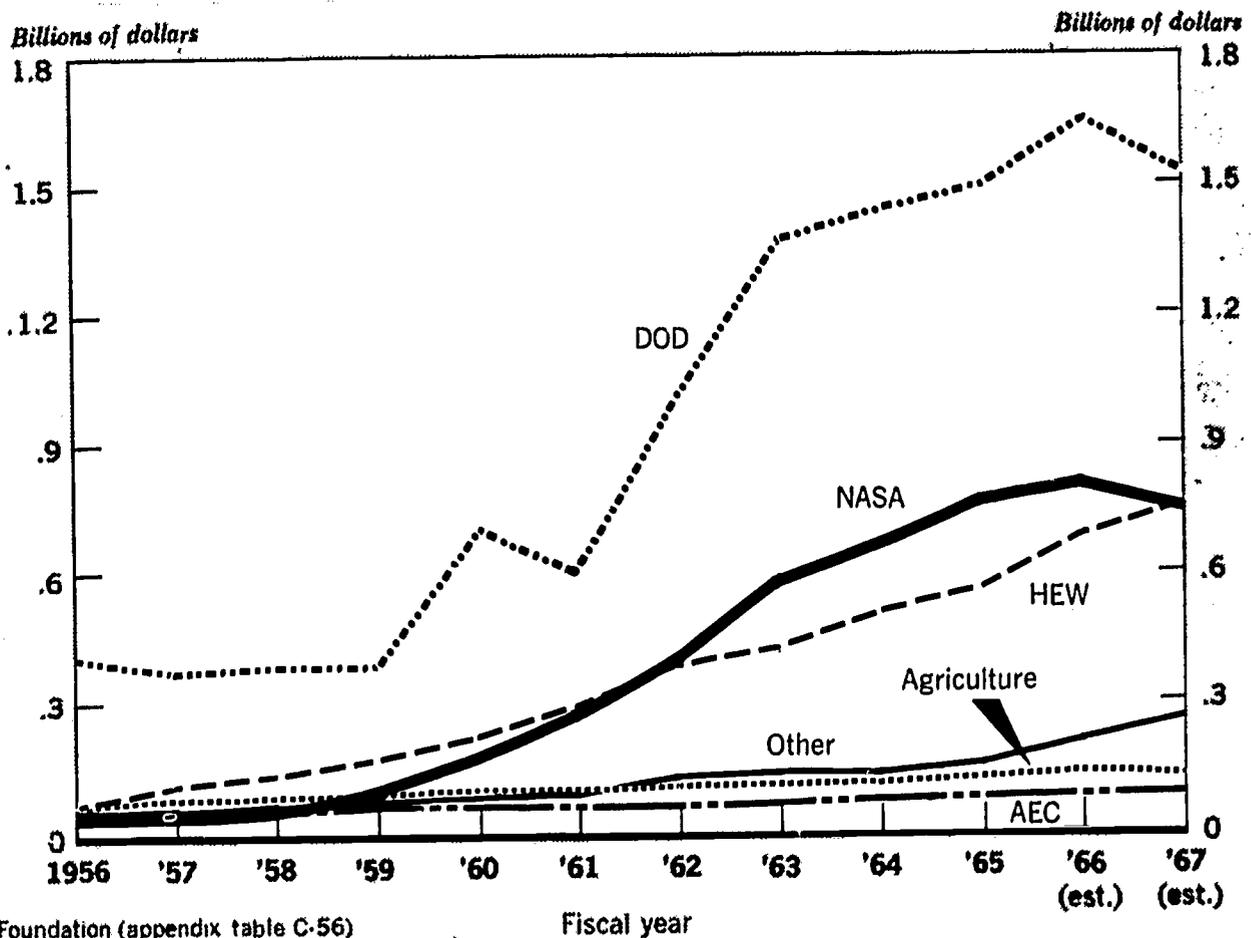
stitutions about 21 percent, and other nonprofit institutions about 6 percent, while Federal laboratories account for some 32 percent. (See chart 8.)

Many departments and agencies have continued a practice of assigning the great bulk of their applied research work to their own laboratories and their own personnel. Among these are the Departments of the Army and Navy, Agriculture, the Interior, Labor, Post Office, and the Treasury, and the Civil Aeronautics Board, the Tennessee Valley Authority, and the Veterans Administration. This factor partially accounts for the relatively high intramural performance ratio in applied research (higher than in either basic research or development).

Industry has maintained its role as the major performer of research of an applied character. Educational institutions and other nonprofit organizations continue lower in terms of Federal support for this research.

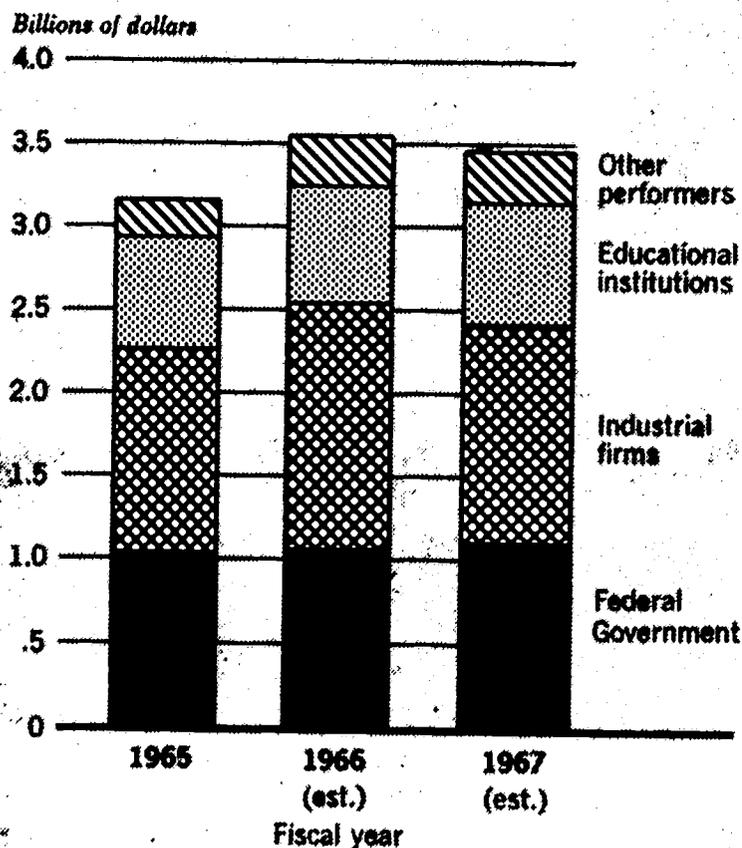
The work of Federal contract research centers, when separated from management performer categories, was found to represent 8 percent of all applied research obligations in 1966. The bulk of this research-center-based work is done for DOD and AEC under the administration of educational institutions. (See table 9.)

**Chart 7
Trends in
Federal
obligations
for applied
research,
by agency**



SOURCE: National Science Foundation (appendix table C-56)

Chart 8
Federal obligations for applied research,
by performer



SOURCE: National Science Foundation

Fields

Some 80 percent more Federal funds are scheduled to be obligated to applied research than to

basic research in the 3-year period of this report, and their flow by fields generally parallels but in some respects reverses the basic research support pattern.

The distribution of funds in the broad field categories is similar to that for basic research. The physical sciences are expected to make up 69 percent of total Federal applied research work in 1966 (compared with 64 percent for basic research), with DOD and NASA providing the main support. The life sciences comprise another 22 percent (compared with 30 percent for basic research) and are mainly underwritten by HEW. Another 9 percent is accounted for by the social, psychological, and other sciences combined. (See table 10 and appendix tables C-27—C-30.)

However, within the field of physical sciences the applied research emphasis on disciplines varies markedly from the basic research pattern. The engineering sciences in 1966 comprise 63 percent of the overall physical sciences group (compared with 14 percent in basic research). Within the engineering sciences the aeronautical, astronautical, and electrical sciences receive the major support. Physical sciences proper make up 35 percent of total physical sciences (against 81 percent in the basic research area). In this group the solid earth sciences, chemistry, and the atmospheric sciences predominate. In the life sciences, as with basic research, the medical sciences lead in applied research. (See table 11.)

TABLE 9. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY PERFORMER AND AGENCY, FISCAL YEAR 1966 (EST.)

(Millions of dollars)

	DOD	NASA	HEW	USDA	AEC	OTHER
FEDERAL GOVERNMENT	478	237	130	100	1	124
INDUSTRIAL FIRMS	875	493	30	1	29	27
Research Centers	(30)	(*)	—	(*)	(27)	(*)
EDUCATIONAL INSTITUTIONS	210	51	350	36	43	35
Research Centers	(86)	(40)	—	—	(40)	—
OTHER NONPROFIT INSTITUTIONS	72	4	110	(*)	6	12
Research Centers	(42)	(*)	—	—	(5)	(*)
OTHER	0	1	52	1	(*)	8

* Less than \$500,000.

NOTE: Detail may not add to totals because of rounding.

TABLE 10. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY FIELDS OF SCIENCE
(Millions of dollars)

Field of science	Actual, 1965	Estimates	
		1966	1967
Total.....	\$3,164	\$3,533	\$3,454
Life sciences.....	680	781	822
Psychological sciences.....	46	64	74
Physical sciences.....	2,280	2,448	2,305
Physical sciences proper.....	803	846	783
Mathematical sciences.....	48	62	68
Engineering sciences.....	1,429	1,539	1,454
Social sciences.....	90	139	164
Other sciences.....	68	102	80

NOTE: Detail may not add to totals because of rounding.

Eight Federal departments and agencies⁵ plan to obligate *most* of their applied research funds in 1966 to the social sciences, in such disciplines as economics, sociology, and political science. Other agencies concentrate their support in varying fields—the Veterans Administration and the Federal Aviation Agency in medical sciences, the Library of Congress in communication, the Civil Service Commission in the psychological sciences, the Post Office Department in the mathematical sciences, Com-

⁵ Advisory Commission on Intergovernmental Relations, Civil Aeronautics Board, Department of Housing and Urban Development, Department of Labor, Federal Home Loan Bank Board, Federal Trade Commission, National Science Foundation, and Small Business Administration.

TABLE 11. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY DETAILED FIELD OF SCIENCE AND AGENCY, FISCAL YEAR 1966 (EST.)

(Millions of dollars)

Field of science	Total	Department of Defense	National Aeronautics and Space Administration	Department of Health, Education, and Welfare	Department of Agriculture	Atomic Energy Commission	Other
Total.....	\$3,533	\$1,643	\$785	\$681	\$137	\$80	\$207
Life sciences.....	781	70	2	551	78	0	70
Biological sciences.....	77	29	2	8	9	6	23
Medical sciences.....	334	41		543	7	3	39
Agricultural sciences.....	70	(*)		(*)	62	(*)	8
Psychological sciences.....	64	12	(*)	49			2
Physical sciences.....	2,448	1,461	782	23	36	70	76
Physical sciences proper.....	846	400	324	16	24	48	25
Astronomy.....	13	11	3				(*)
Chemistry.....	138	77	4	15	16	20	6
Atmospheric sciences.....	128	62	56	(*)	1	1	9
Oceanography.....	23	19	1	1			2
Solid earth sciences.....	301	42	251		(*)		6
Elementary particle physics.....	7	3	4	(*)			
Nuclear structure physics.....	28	6				22	1
Atomic, molecular, solid state physics.....	56	52	3	(*)		(*)	1
Other physics.....	127	117	3		1	5	1
Other physical sciences proper.....	25	20		(*)	5		(*)
Mathematical sciences.....	62	57	1	2	(*)	(*)	2
Engineering sciences.....	1,539	995	457	5	12	21	48
Aeronautical.....	343	246	96				1
Astronautical.....	310	138	179				
Chemical.....	108	84	3	1	1	6	13
Civil.....	23	17	(*)	1	(*)		5
Electrical.....	296	257	36	(*)	(*)	2	2
Mechanical.....	115	97	12	2	(*)	(*)	2
Metallurgy and materials.....	104	70	3	(*)	2	13	7
Other engineering.....	234	78	128	1	9		18
Social sciences.....	139	2	1	57	23		56
Other sciences.....	102	98		1		(*)	3

* Less than \$500,000.

merce and Treasury in the physical sciences, and the Tennessee Valley Authority in the engineering and agricultural sciences.

The major support of certain key disciplines (see table 11) is provided by DOD and AEC in chemis-

try, DOD and NASA in atmospheric sciences, NASA in solid earth sciences, NIH in medical sciences, DOD in biological sciences, Agriculture in agricultural sciences, and DOD and NASA in engineering sciences.

Section 4. DEVELOPMENT

IN DEVELOPMENT the findings and understanding derived from research are directed toward the production of useful materials, devices, systems, or methods; this work includes design and improvement of prototypes and processes. Development activities are dependent upon research results and usually involve engineering and testing to advance a component, product, or process to the point where it meets specific functional or economic requirements.

Federal obligations for development in fiscal year 1965 were \$9.7 billion, a nominal increase over the year before. They are expected to rise to the \$10.5 billion level in fiscal year 1966 but to show a slight decrease to \$10.4 billion in fiscal year 1967. (See table 12 and appendix tables C-31—C-33.) Development outlays, even more than those for basic and applied research, show a slowing growth rate, from an annual average increase of 21 percent for 1956 through 1964 to 4 percent from 1964 through 1966.

Agencies

For a number of years Federal development obligations have made up the dominant share of the R&D total, and three agencies have been consistently responsible for the great bulk of this effort. They are the Department of Defense, the National Aeronautics and Space Administration, and the Atomic Energy Commission (although NASA has been important in these funds only since 1963). While 16 other departments and agencies currently report development activities, only one supports a development effort of sufficient size to merit mention here: the Federal Aviation Agency's supersonic jet transport program, now in the development

TABLE 12. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY
(Millions of dollars)

Agency	Actual, 1965	Estimates	
		1966	1967
Total.....	\$9,745.7	\$10,484.2	\$10,395.8
Department of Defense.....	5,045.0	5,505.1	5,491.2
National Aeronautics and Space Administration.....	3,661.6	3,770.8	3,501.7
Atomic Energy Commission.....	906.7	890.8	875.5
Other agencies.....	132.4	317.6	527.4

NOTE: Detail may not add to totals because of rounding.

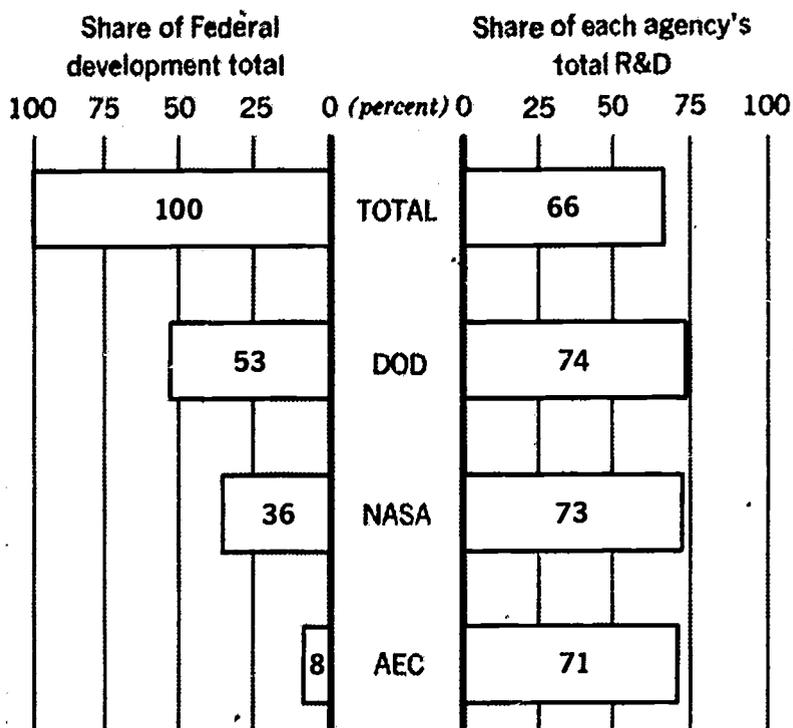
stage and slated for significant growth in the next few years.

In the current period, DOD, NASA, and the AEC together account for 95 to 99 percent of development obligations for all Federal agencies. Each of them projects a decline in these obligations in 1967, thereby lowering the overall development level and strongly affecting the Federal R&D total.

High development costs are a logical result of the extent to which the missions of these three agencies call for the creation of new materials and complex equipment and systems, including the design of prototypes. In 1966 development is expected to represent close to three-fourths of each agency's total R&D program. (See chart 9.)

In the 1950's DOD became deeply committed to the development of missiles, aircraft, and related equipment and did extensive work in military astronautics. It still puts its greatest R&D effort (some 25 to 30 percent) into the missile area. After NASA's establishment in 1958 it soon engaged in a range of development projects for launch vehicles, spacecraft, and instrumentation. The AEC has, of course, from its inception been concerned with the

Chart 9
Distribution of Federal obligations for development, by agency, FY 1966 (est.)



SOURCE: National Science Foundation

development of reactors and special nuclear materials and weapons. Included in the costs of developing mechanisms such as those listed above are the costs of repetitive testing, frequently under environmentally simulated conditions, of components and subassemblies, both as parts and as organized systems of end items.

The size and expense of these undertakings can be surmised from consideration of a few major projects under development during the current reporting period. These include the Army's Nike-X anti-missile defense system; the Navy's submarine-launched Poseidon missile (successor to the Polaris); the Air Force's Minuteman III ballistic missile and its C-5A military transport; NASA's Saturn launch vehicle for its Apollo program and the three modules of its Apollo spacecraft; the AEC's reactor development program, which covers a host of applications ranging from those for civilian power generation to Project Rover for space propulsion (in cooperation with NASA).

Trends

Despite the size of development programs, the growth of research in the past decade has been great enough to bring about a long-term downward trend in the development share of total R&D funds. For example, development obligations in 1956 represented 71 percent of total Federal research and development; they were then almost entirely incurred by DOD and AEC. By 1959, development had risen to a high point of 79 percent, the same two agencies still being largely responsible. Since that year, development has shown an almost continuous decline in relative importance and in the present period makes up about two-thirds of the R&D total.

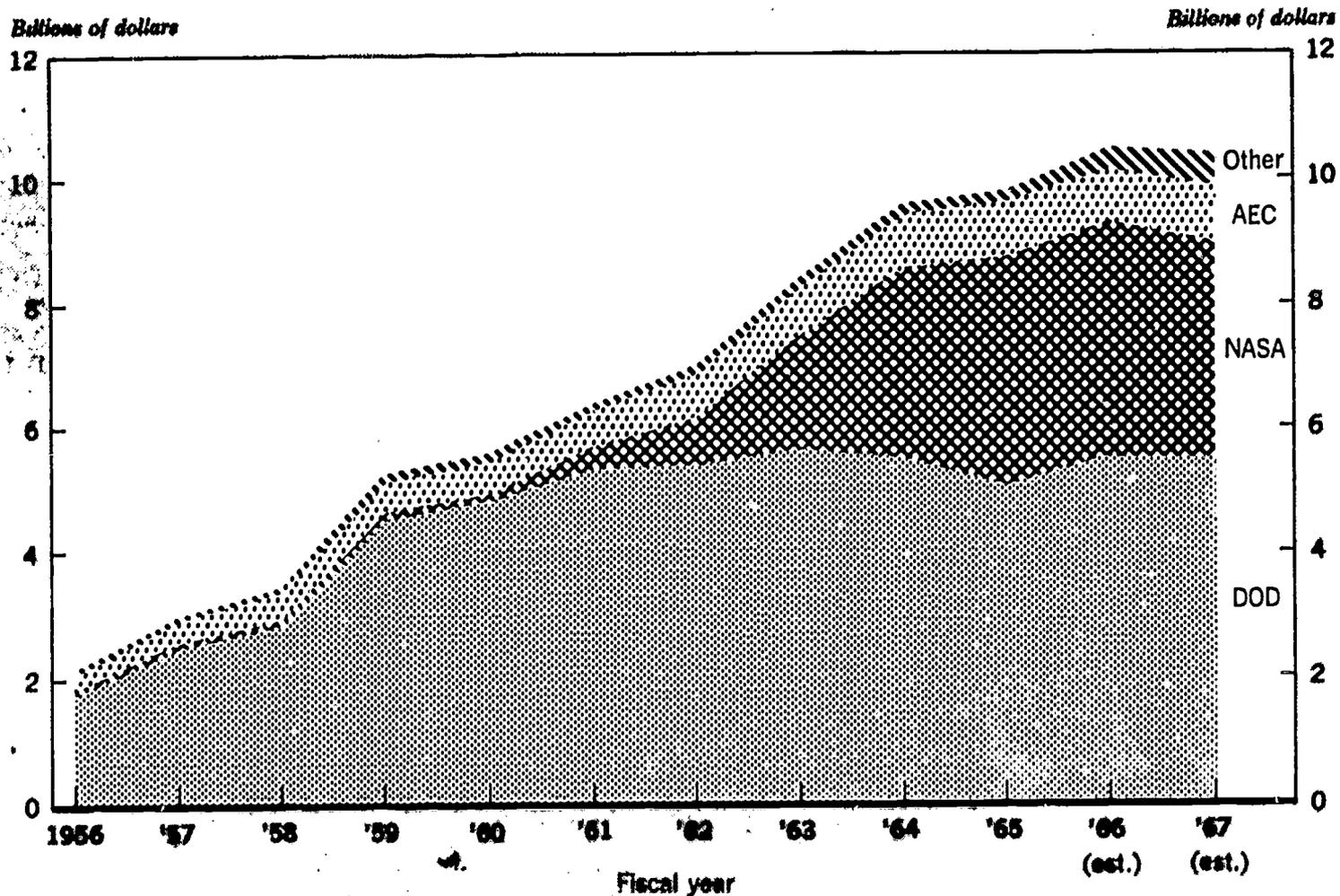
Chart 10 shows the growth in dollar obligations for development between 1956 and 1967, its leveling off in the current period, and the extent to which NASA is responsible for the overall rise in the 1960's. DOD still accounts for more than one-half the total and NASA for about one-third.

Performers

Industrial organizations perform most Federal development work. (See table 13.) Of the \$10.5 billion obligated to development in 1966, industry is expected to perform work amounting to \$8.1 billion, or 78 percent. Next are the Federal installations, which are scheduled to perform \$1.7 billion worth, or 17 percent. The combined efforts of educational and other nonprofit institutions account for 6 percent of the total.

Table 13 shows that DOD, NASA, and AEC place their main reliance on industry or industrially managed Federal contract research centers to carry out their development programs. Next, DOD and NASA use their own intramural resources to a notable extent, in contrast to AEC, whose second-ranking performer group is made up of Federal contract research centers run by educational institutions. In the nonprofit sector, research centers again are the main organizational unit for accomplishing developmental work (for DOD and AEC). All in all, Federal contract research centers will probably perform 6 percent of total development in 1966, making the development category their most important R&D function in dollar terms.

Chart 10
Trends in Federal obligations for development, by agency



SOURCE: National Science Foundation (Appendix table C-57)

TABLE 13. FEDERAL OBLIGATIONS FOR DEVELOPMENT BY PERFORMER AND AGENCY, FISCAL YEAR 1966 (EST.)

(Millions of dollars)

	DOD	NASA	AEC	OTHER
FEDERAL GOVERNMENT	1,183	468	11	70
INDUSTRIAL FIRMS	4,039	3,261	648	186
Research Centers	(6)	(*)	(310)	(1)
EDUCATIONAL INSTITUTIONS	72	31	191	16
Research Centers	(33)	(5)	(188)	—
OTHER NONPROFIT INSTITUTIONS	202	11	30	39
Research Centers	(96)	—	(36)	(1)
OTHER	10	—	2	7

* Less than \$500,000.

NOTE: Detail may not add to totals because of rounding.

Section 5. PERFORMERS

THE LATEST DATA show a continued increase in the proportion of federally funded research and development performed in the private sector of the economy. In 1956 less than two-thirds of the total was performed extramurally; one-third was carried out in Government laboratories. Ten years later, in fiscal year 1966, it is anticipated that 80 percent of the work will be performed by non-Government organizations under grant or contract. (See chart 11 and appendix tables C-7—C-9.)

Distribution Patterns

In 1966 total anticipated Federal obligations to intramural performers (including funds for planning and administration) amounted to \$3.3 billion; to extramural performers, \$12.7 billion. The Department of Defense is the primary funding source for both types, underwriting 54 percent of intramural and 45 percent of extramural R&D obligations. The National Aeronautics and Space Administration ranks second, accounting for 26 percent of intramural and 34 percent of extramural obligations.

DOD and NASA together are responsible for the assignment of approximately 80 percent of all Federal research and development funds. (See table 14.) The remaining 20 percent is largely accounted for by the Departments of Health, Education, and Welfare, Agriculture, the Interior, and Commerce and the Atomic Energy Commission, the National Science Foundation, and the Federal Aviation Agency.

Until the mid-1940's most scientific investigation for the Federal Government was done by Government employees in the agencies' laboratories or centers of research. The vast expansion in research and development called forth by the military requirements of World War II was followed by con-

TABLE 14. FEDERAL OBLIGATIONS FOR INTRAMURAL AND EXTRAMURAL RESEARCH AND DEVELOPMENT, BY AGENCY, FISCAL YEAR 1966 (EST.)

Agency	Intramural		Extramural	
	Amount (millions of dollars)	Percent distribution	Amount (millions of dollars)	Percent distribution
Total.....	\$3,259	100	\$12,687	100
Department of Defense.....	1,750	54	5,671	45
National Aeronautics and Space Administration.....	862	26	4,297	34
Department of Health, Education, and Welfare.....	188	6	882	7
Department of Agriculture.....	171	5	72	1
Department of the Interior.....	91	3	46	(*)
Department of Commerce.....	51	2	38	(*)
Federal Aviation Agency.....	34	1	142	1
National Science Foundation.....	18	1	206	2
Atomic Energy Commission.....	17	1	1,239	10
Other agencies.....	77	2	94	1

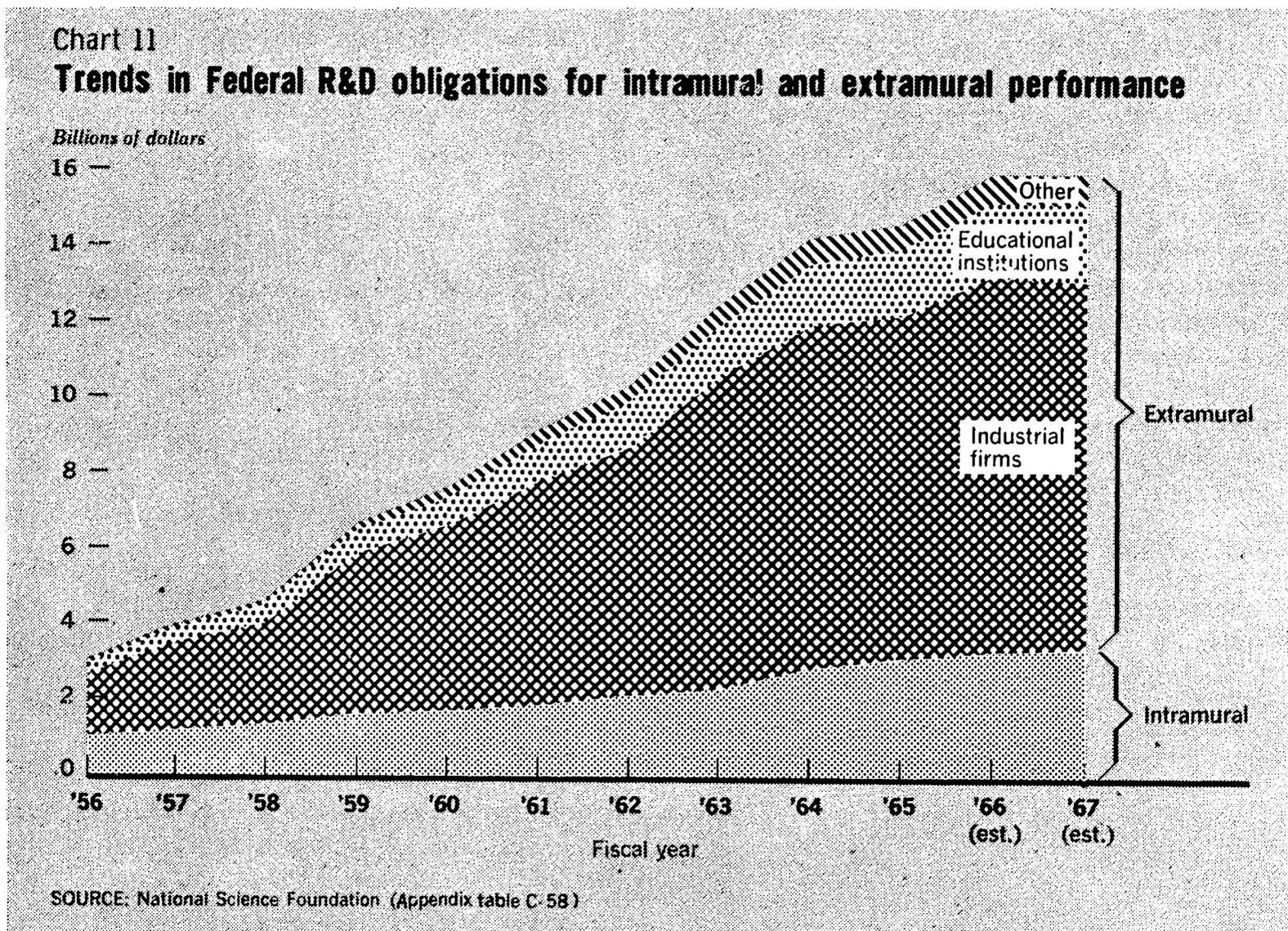
* Less than 0.5 percent.

NOTE: Detail may not add to totals because of rounding.

tinued demand for new weapons systems, military aircraft, and the exploitation of atomic energy in the post-war period, all of which required massive and diversified research capacity that could most readily be obtained by resorting to industrial and other nongovernmental research performers. DOD and AEC continued and extended the wartime practice of depending largely on the private sector for their R&D work.

NASA's later emergence added the demands of a full-scale research program in space, entailing intensive equipment development and testing, which by that time industry was prepared to undertake. Now DOD, NASA, and AEC together account for 95 to 99 percent of all Federal obligations for development, the great bulk of which is done extramurally.

Although HEW, the fourth largest R&D funding agency, supports a relatively small volume of devel-



opment, it relies heavily on nongovernmental sources, primarily educational and nonprofit institutions, to carry out its basic and applied research programs.

The other Federal agencies that rely primarily on extramural performers are the FAA and NSF. A major share of the FAA R&D funds are allocated to industrial firms for development while most of the NSF programs are aimed at supporting basic research in universities and colleges.

Intramural Performance

Aside from the six major R&D supporting agencies discussed above, most of the other agencies rely primarily upon their own facilities. These include three of the nine agencies leading in Federal R&D obligations—Agriculture, Interior, and Commerce. Other agencies that also carry out much in-house R&D work include the Departments of Labor, the Treasury, and Housing and Urban Development, the Veterans Administration, the Smithsonian Insti-

tution, and the U.S. Arms Control and Disarmament Agency.

Thus, most agencies spend substantial portions of their R&D budgets for intramural work, in 1966 an expected total of \$3.3 billion.⁶ Included in these budgets are the costs of operating Government facilities and planning and administrative expenses for both intramural and extramural activities. Although DOD obligates less than one-fourth of its R&D dollars intramurally, it supports more than one-half of all the Federal intramural effort because of the size of its total program. NASA also supports a sizable portion of the total (about one-fourth).

These two agencies largely account for the high proportion of obligations for development in the total intramural R&D effort, 53 percent in 1966.

⁶ The exceptions, those reporting 75 percent or more extramural obligations in 1966, were the Department of Defense, the Atomic Energy Commission, the National Aeronautics and Space Administration, the National Science Foundation, the Department of Health, Education, and Welfare, the Post Office Department, and the Peace Corps.

(See table 15.) The 33 percent in the applied research category and the 14 percent in the basic research category are ascribed to the whole range of Federal agencies that carry on in-house work. Historically, Government laboratories have concentrated on practical applications of knowledge, for example, in the operation of arsenals and in the provision of technical services, methods, and standards for industry and the achievement of improved crops and agricultural methods. In recent years, however, a substantial increase has occurred in intramural basic research. Whereas the intramural R&D total has more than doubled since 1958, there has been an almost fourfold increase in intramural basic research.

TABLE 15. OBLIGATIONS FOR INTRAMURAL AND EXTRAMURAL RESEARCH AND DEVELOPMENT, BY CHARACTER OF WORK, FISCAL YEAR 1966 (EST.)

Character of work	Intramural		Extramural	
	Amount (millions of dollars)	Percent distribution	Amount (millions of dollars)	Percent distribution
Total.....	\$3,259	100	\$12,687	100
Basic research.....	459	14	1,470	12
Applied research.....	1,069	33	2,464	19
Development.....	1,732	53	8,753	69

NOTE: Detail may not add to totals because of rounding.

Intramural obligations include salaries of scientists and engineers and other support personnel (about 55 percent of the total). In addition to actual R&D work, agency staffs are also involved in the administration of extramural grants and contracts and in evaluating outside proposals and performance.

Industrial Firms

In fiscal year 1966 some 63 percent of the Federal funds for research and development is expected to be awarded to industry (chart 12), compared with 50 percent in 1956.

Obligations to industrial firms in each of the 3 years of this report are scheduled to range between \$9 billion and \$10 billion. These totals will include approximately \$400 million annually going to Federal contract research centers under industrial management. Most of these research centers are doing work for AEC, which provides more than 90 percent of their financing. (See tables 16 and 17.)

TABLE 16. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY TYPE OF PERFORMER

(Millions of dollars)

Performer	Actual, 1965	Estimates	
		1966	1967
Total.....	\$14,600	\$15,946	\$15,943
Federal Government.....	3,093	3,259	3,364
Industrial firms.....	9,074	9,969	9,715
Research centers.....	(406)	(405)	(397)
Educational institutions.....	1,737	1,929	2,063
Research centers.....	(549)	(555)	(580)
Other nonprofit institutions.....	582	653	656
Research centers.....	(232)	(240)	(252)
Other.....	114	136	145

DOD and NASA together are expected to account for 90 percent of Federal R&D funds obligated to industry in 1966. Other agencies that now rely in large measure on industry to accomplish their R&D missions are FAA, the Post Office, and the United States Information Agency.

As chart 12 indicates, four-fifths of industry's federally financed work is in the development area, about one-sixth in applied research, and relatively little in basic research.

Nearly three-fifths of the obligations to industry are received by aircraft and missile companies, and another one-fifth by electronics and communications firms. The remaining portion goes principally to the transportation and chemical industries.⁷

Educational Institutions

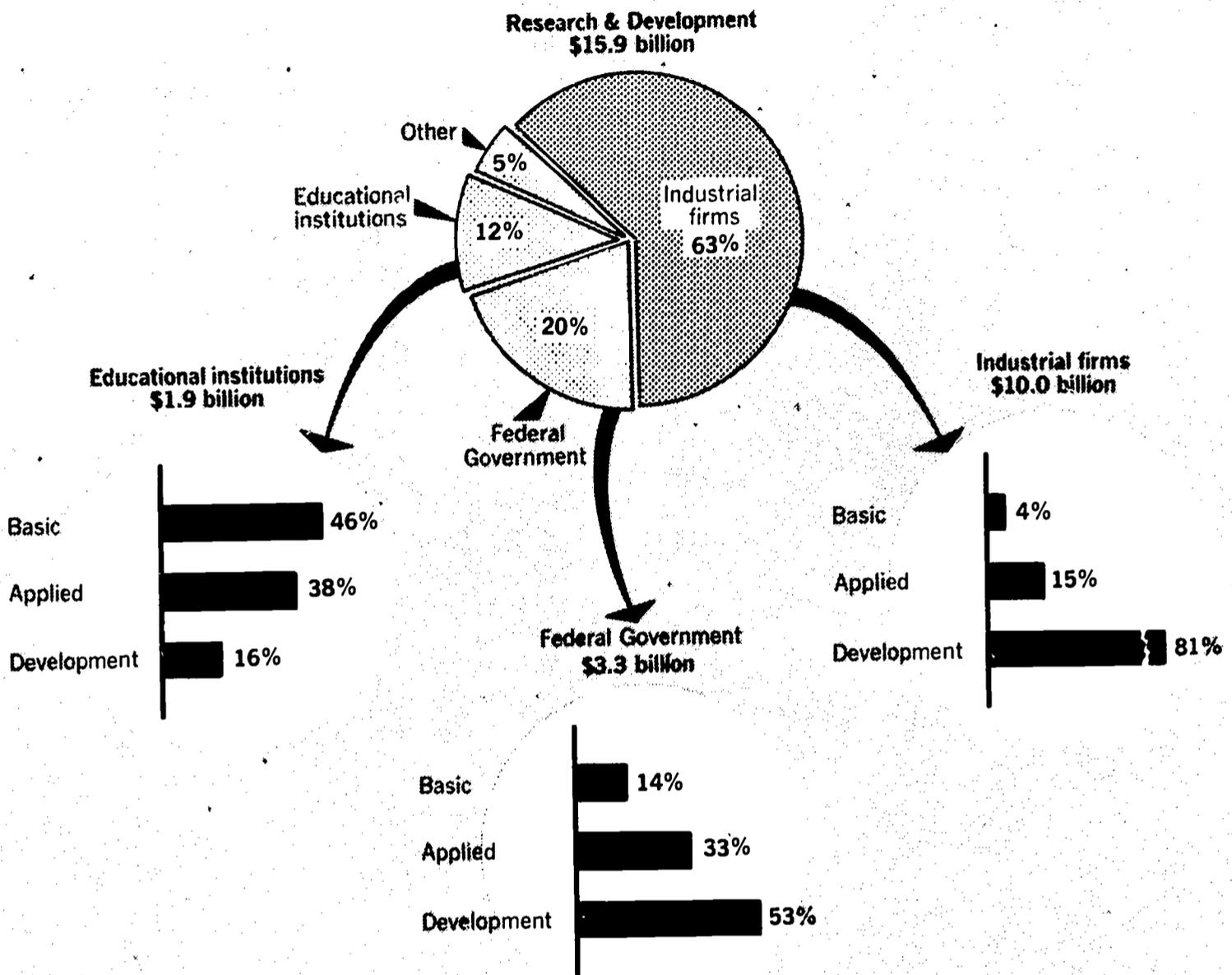
In the current 3-year period about 12 percent of the annual Federal R&D outlay is obligated to educational institutions (including Federal contract research centers). As a class of performer, these institutions are expected to receive funds totaling \$1.9 billion in 1966.

The great bulk of these funds is being distributed by HEW, AEC, DOD, NASA, NSF, and Agriculture, in that order. As shown in chart 12, academic centers, in direct contrast to industry, perform more than four-fifths of their work in research, less than one-fifth in development. In fiscal year 1966 the

⁷ National Science Foundation, *Reviews of Data on Science Resources*, No. 7, "Basic Research, Applied Research, and Development in American Industry, 1964." Washington, D.C. 20402: Supt. of Documents, U.S. Government Printing Office, January 1966.

Chart 12

Federal R&D obligations, by performer and character of work, FY 1966 (est.)



SOURCE: National Science Foundation

TABLE 17. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FEDERAL CONTRACT RESEARCH CENTERS, BY PERFORMER AND AGENCY, FISCAL YEAR 1966 (EST.)

(Millions of dollars)

	AEC	DOD	NASA	OTHER
INDUSTRIAL FIRMS	367	36	1	2
EDUCATIONAL INSTITUTIONS	347	122	86	—
OTHER NONPROFIT INSTITUTIONS	84	138	1	16

* See *Technical Notes* regarding obligations to the Jet Propulsion Laboratory, p. 67.

NOTE: Detail may not add to totals because of rounding.

agencies reported 46 percent of this effort was for basic research, 38 percent for applied research, and 16 percent for development.

The bulk of the development work undertaken by educational institutions is, in fact, carried out in their associated contract research centers.⁸ These Federal contract research centers under academic management are in a special class since they perform entirely for the AEC, DOD, and NASA, in that order of R&D funds, and are therefore more heavily engaged in development than are educational institutions proper.

Within the universities and colleges proper,

⁸ For this report AEC has deleted from its list of Federal contract research centers under academic management the biomedical projects at the University of California at Los Angeles and Davis and at the Universities of Rochester and Utah; also the Agricultural Research Laboratory at the University of Tennessee; the Argonne Cancer Research Hospital at the University of Chicago Medical School, and the Radiological Laboratory at the University of California Medical Radiation Center. The obligations of all these biomedical research facilities (primarily for basic research) have been allocated to the "educational institutions proper" performer category.

NASA also has reallocated a portion of its obligations in the same manner. Its work on the Apollo guidance system, formerly reported as performed at MIT's Lincoln Laboratory, a Federal contract research center, now has been assigned to the MIT Instrumentation Laboratory, which is classified in this report under "educational institutions proper." See *Technical notes*, page 67.

excluding research centers, HEW takes the lead as the principal R&D supporter, accounting for an estimated 42 percent of total funds obligated to educational institutions proper in 1966. Next in line are DOD with 22 percent and NSF with 13 percent. NASA and AEC reported 9 percent and 6 percent, respectively; Agriculture, 4 percent. From 1964 through 1967 the average annual gain of 11 percent in R&D obligations to educational institutions proper exceeds the rate of increase for any other type of performer.

Other Nonprofit Institutions

Obligations to nonprofit institutions other than universities and colleges account for 4 percent of all research and development in each reporting year, or a total of \$653 million in 1966. Nearly two-fifths of this amount will be expended in Federal contract research centers, such as RAND (Air Force), Brookhaven National Laboratory (AEC), and the National Radio Astronomy Observatory (NSF).

Other Performers

Less than 1 percent of Federal obligations for research and development in 1965-67 is scheduled for "other" performers, which include the States, unaffiliated individuals, and foreign nationals performing abroad. Obligations to the latter are described in a separate section.

Section 6. AGENCIES

FOR MOST AGENCIES of the Federal Government the support of research and development makes up an increasingly important but still a relatively small proportion of their operations. Yet there are several agencies, created since World War II, whose objectives are related primarily to scientific activities. These include the Atomic Energy Commission, the National Science Foundation, and the National Aeronautics and Space Administration. The estimated dollar obligations of these agencies for research and development in 1966 represent 53 percent, 47 percent, and 94 percent of their respective budgets.

On the other hand, the Department of Defense, although the leading Federal agency in dollar support for research and development in 1966, allocated only 15 percent of its total budget to these activities. Similarly, the Department of Agriculture, which has been concerned with research since its creation in 1862, scheduled only 3 percent of its 1966 budget for research and development. The Department of Health, Education, and Welfare, whose R&D obligations have more than tripled since 1960, still places them at only 12 percent of its total budget.

Thus far, this report has stressed the influential part played by DOD, NASA, and AEC in the total Federal R&D effort. Since the nature of their investment in categories of work, fields of science, and performers has been discussed in previous sections, it should be of interest also to study the remaining 27 agencies that reported R&D obligations in 1966.

Chart 13 contrasts the character of work supported by the three major funding agencies with that for the remaining 27 agencies together. The DOD-NASA-AEC complex allocated 74 percent of its total estimated 1966 obligations to development but only 8 percent to basic research. In sharp contrast, the

rest of the agencies obligated 15 percent to development and 36 percent to basic research. Their applied research share is 49 percent, compared with 18 percent for the heavy-equipment group.

Chart 14 offers the same comparisons by major performers. Of the \$13.8 billion (plant excluded) obligated by DOD, NASA, and AEC in 1966, some 70 percent was scheduled for industrial firms and 8 percent for educational institutions. Just under one-fifth, 19 percent, was retained for intramural performance. Of the estimated \$2.1 billion obligated by all the other agencies, only 12 percent went to industry, 41 percent to educational institutions, and 30 percent to intramural performance.

These differences are more readily understood when the characteristics of the "other" 27 agencies are analyzed. Their salient allocation patterns are shown in the following paragraphs, which relate character of work to category of performer, as found in the detailed table on all the agencies at the end of the section (table 18).

Applied Research—Intramural

It is significant that of the "other" 27 agencies, 17 rely primarily on intramural performance to accomplish their R&D missions, and 12 of these also allocate half or more of their R&D funds to applied research.

In fact, the R&D programs of 5 of the 12 agencies are devoted *entirely* to applied research performed intramurally. These are:

Advisory Commission on Intergovernmental Relations

Civil Aeronautics Board

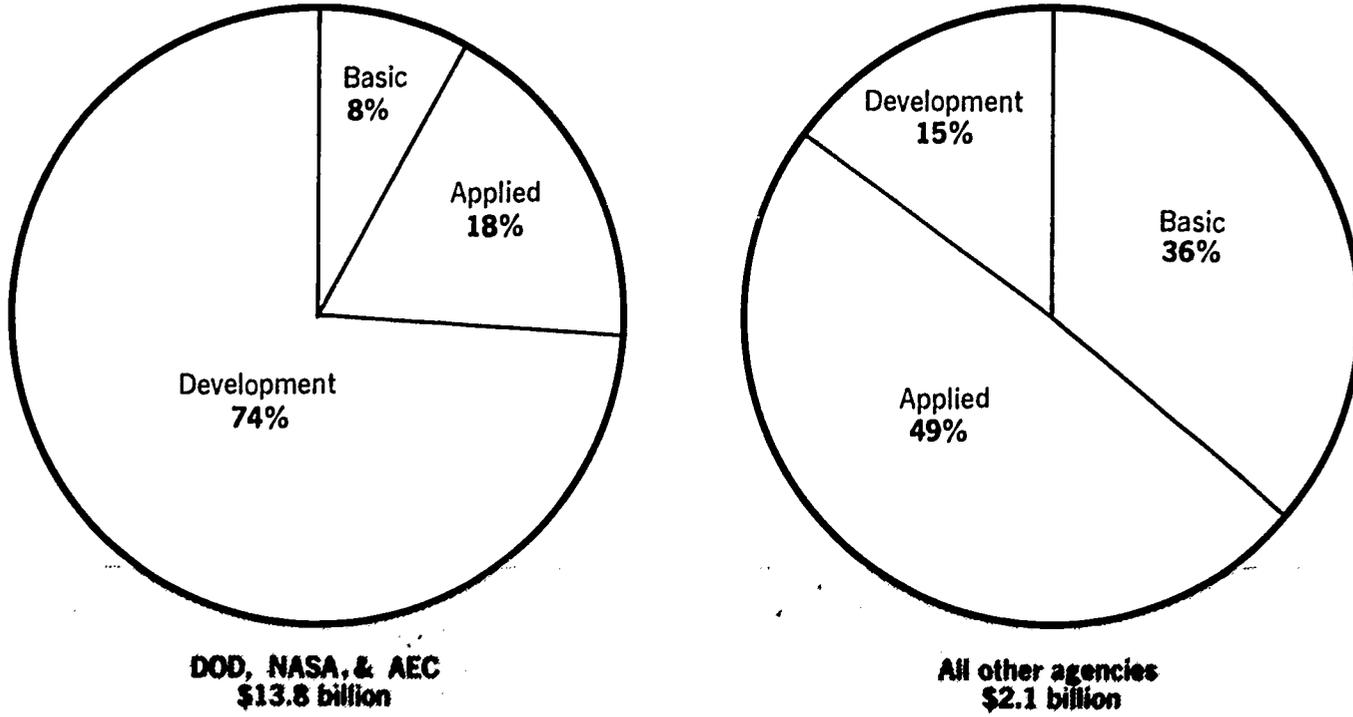
Federal Communications Commission

Federal Home Loan Bank Board

Federal Trade Commission

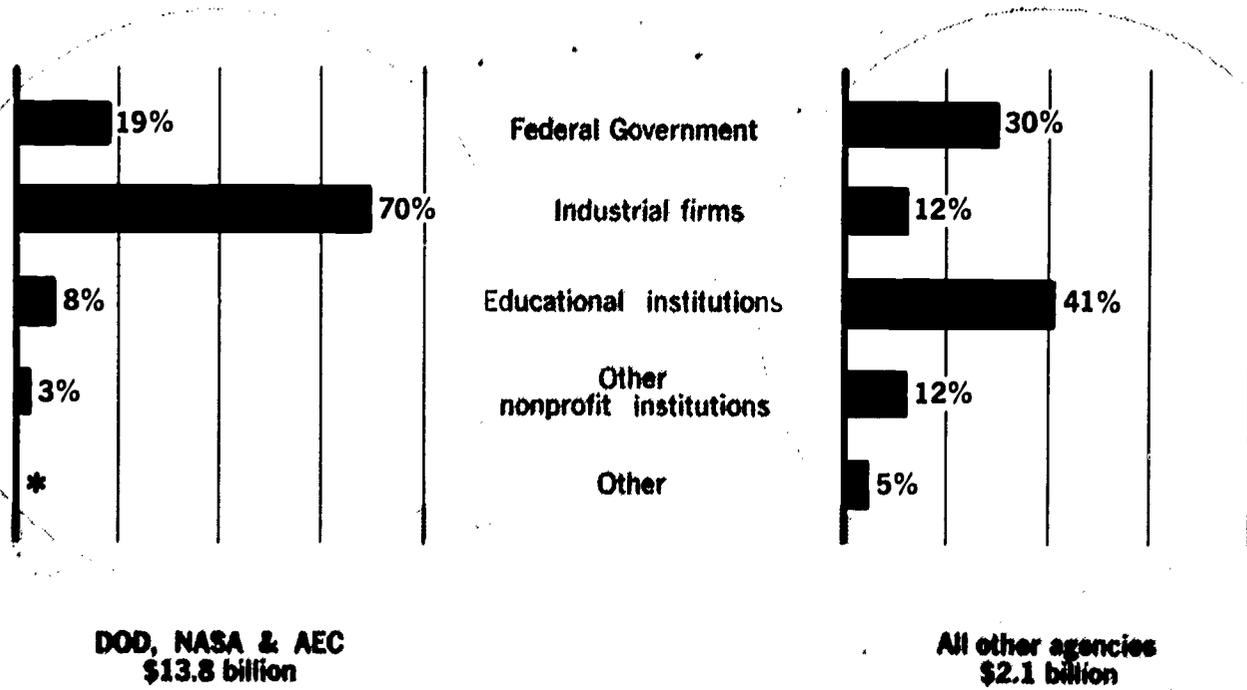
The other seven obligate between 50 percent and

Chart 13
Distribution of Federal R&D obligations, by agency groups and character of work, FY 1966 (est.)



SOURCE: National Science Foundation

Chart 14
Distribution of Federal R&D obligations, by agency groups and performer, FY 1966 (est.)



*Less than 0.5%

SOURCE: National Science Foundation

100 percent of their R&D funds for applied research.

These agencies are:

- Department of Agriculture
- Department of the Interior
- Department of Labor
- Civil Service Commission
- Library of Congress
- Tennessee Valley Authority
- Veterans Administration

One, the Department of Commerce, devotes *almost* half of its funds (47 percent) to applied research, carried out chiefly in the National Bureau of Standards, the new Environmental Science Services Administration, and the Bureau of Public Roads.

Basic Research—Intramural and Extramural

In addition to the 13 agencies just covered, 3 others also rely mainly on their own laboratories, but they engage primarily in basic research. These agencies are the Department of Housing and Urban Development, the Treasury Department, and the Small Business Administration.

The Smithsonian Institution makes the 17th agency whose R&D funds fall in the intramural category; all of its R&D budget goes for intramural basic research. Its work is not mission-oriented, and its funds are distributed widely among the various fields of science. The National Science Foundation is like the Smithsonian in that its R&D work is completely non-mission-oriented. However, NSF, which is also almost entirely in basic research, expends most of its funds extramurally.

Applied Research—Extramural

HEW is in a special class because its dollar outlays are large in comparison with the other 26 agencies but its main focus is on basic and applied research at educational institutions (rather than on development work in industrial firms, as in the case of DOD, NASA, and AEC).

Like HEW, the Department of State, the Peace Corps, the United States Information Agency, the United States Arms Control and Disarmament Agency, and the Office of Emergency Planning are chiefly concerned with applied research, and they also rely on outside performers. Most of the work for the Peace Corps and State Department (virtually all of which is managed by the Agency for International Development) is contracted to educational institutions. For USIA, industry performs research to improve the technical quality of Voice of America international broadcasting and to reduce operating costs.

Development—Extramural

The final group of agencies, whose work is oriented toward extramural development, includes the Post Office Department, the Federal Aviation Agency, and the Office of Economic Opportunity. Industry is the primary performer of the Post Office programs, largely devoted to the development of better mailing services, and of the FAA's programs for the development of a supersonic transport as well as air traffic control equipment. The R&D program of the OEO is related to the nature, causes, and potential cures of poverty in the United States and will be carried out primarily by educational, industrial, and other nonprofit institutions.

FEDERAL RESEARCH, DEVELOPMENT, AND R&D PLANT

TABLE 18. MAJOR CHARACTERISTICS OF R&D OBLIGATIONS OF REPORTING AGENCIES, FISCAL YEAR 1966 (EST.)

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of agency's total budget	Total research and development			Basic research		Applied research		Development	
			Character of work (percent distribution)			Major performers* (percent of total)	Major fields of science* (percent of total)	Major performers* (percent of total)	Major fields of science* (percent of total)	Major performers* (percent of total)	Major fields of science* (percent of total)
			Basic research	Applied research	Development						
Department of Agriculture, total.....	243.7	3	41	56	3	70 Intra. 25 Ed. Inst.	43 Agri. 21 Phy. prop. 14 Bio. 12 Med.	65 Intra. 25 Ed. Inst.	45 Agri. 17 Phy. prop. 17 Soc.	73 Intra. 26 Ed. Inst.	98 Intra.
Agricultural Research Service.....	143.6	-----	48	48	4	87 Intra.	45 Agri. 26 Phy. prop. 17 Med.	78 Intra. 14 Foreign	45 Agri. 28 Phy. prop. 12 Eng.	95 Intra.	98 Intra.
Cooperative State Research Service.....	53.3	-----	36	64	-----	97 Ed. Inst.	56 Agri. 22 Soc.	97 Ed. Inst.	56 Agri. 22 Soc.	97 Ed. Inst.	-----
Economic Research Service.....	12.0	-----	14	86	-----	93 Intra.	99 Soc.	96 Intra.	99 Soc.	93 Intra.	-----
Farmer Cooperative Service.....	.7	-----	12	88	-----	99 Intra.	100 Soc.	100 Intra.	100 Soc.	98 Intra.	-----
Forest Service.....	33.4	-----	29	67	4	96 Intra.	61 Bio. 19 Phy. prop.	88 Intra. 11 Ed. Inst.	51 Agri. 14 Bio. 12 Soc.	99 Intra.	100 Intra.
National Agricultural Library.....	.1	-----	-----	100	-----	100 Intra.	-----	-----	100 Agri.	100 Intra.	-----
Statistical Reporting Service.....	.6	-----	11	59	30	79 Intra.	88 Math.	69 Ed. Inst. 31 Intra.	53 Math. 47 Soc.	77 Intra. 23 Ind.	100 Intra.
Department of Commerce.....	88.9	8	29	47	24	57 Intra. 30 Ind.	75 Phy. prop. 14 Eng. 10 Soc.	90 Intra.	42 Soc. 34 Eng. 21 Phy. prop.	45 Intra. 34 Ind. 15 Ed. Inst.	53 Ind. 42 Intra.
Bureau of the Census.....	2.0	-----	15	55	31	95 Intra.	58 Math. 36 Psych.	71 Intra. 14 Ed. Inst. 12 N.P.	60 Soc. 29 Psych. 11 Math.	98 Intra.	100 Intra.
Bureau of Public Roads.....	7.1	-----	10	81	10	58 Intra. 22 Ed. Inst. 19 Ind.	93 Eng. 7 Soc.	79 Ind. 21 Intra.	89 Eng. 11 Soc.	59 Intra. 28 Ed. Inst. 13 Ind.	87 Intra. 11 N.P.
Economic Development Administration.	2.9	-----	-----	80	20	55 Ed. Inst. 35 Ind.	-----	-----	100 Soc.	61 Ed. Inst. 35 Ind.	35 Ind. 30 Ed. Inst. 18 Intra. 18 N.P.
Environmental Science Services Administration.	19.6	-----	42	35	23	77 Intra. 11 Ed. Inst.	86 Phy. prop. 14 Eng.	88 Intra. 10 Ed. Inst.	95 Phy. prop.	73 Intra. 15 Ed. Inst.	62 Intra. 25 Ind.

FEDERAL RESEARCH, DEVELOPMENT, AND R&D PLANT

TABLE 18. MAJOR CHARACTERISTICS OF R&D OBLIGATIONS OF REPORTING AGENCIES, FISCAL YEAR 1966 (EST.)—Continued

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of agency's total budget	Total research and development			Basic research		Applied research		Development	
			Character of work (percent distribution)			Major performers* (percent of total)	Major performers* (percent of total)	Major performers* (percent of total)	Major performers* (percent of total)		
			Basic research	Applied research	Development						
Public Health Service.....	906.2		36	63	(b)	54 Ed. Inst. 18 Intra. 18 N.P.	78 Med. 10 Psych.	61 Ed. Inst. 20 N.P. 15 Intra.	92 Med.	51 Ed. Inst. 20 Intra. 17 N.P.	51 Intra. 29 Ed. Inst.
National Institutes of Health.....	(809.0)		39	61		55 Ed. Inst. 19 N.P. 17 Intra.	77 Med. 11 Psych.	60 Ed. Inst. 21 N.P. 16 Intra.	92 Med.	53 Ed. Inst. 18 N.P. 17 Intra.	
Saint Elizabeths Hospital.....	.4		25	75		100 Intra.	74 Psych. 26 Med.	100 Intra.	66 Med. 34 Psych.	100 Intra.	
Social Security Administration.....	3.3		9	91		84 Intra. 15 Ed. Inst.	100 Soc.	100 Intra.	84 Soc. 16 Med.	82 Intra. 17 Ed. Inst.	
Vocational Rehabilitation Administration.	30.0			92	8	36 Ed. Inst. 28 N.P.			40 Med. 39 Soc. 19 Psych.	36 Ed. Inst. 27 N.P. 24 Other	43 Ed. Inst. 39 N.P. 16 Foreign
Welfare Administration.....	12.8			100		45 Ed. Inst. 23 N.P. 12 Other 11 Intra.			50 Soc. 50 Med.	45 Ed. Inst. 23 N.P.	
Department of Housing and Urban Development.	1.0	(b)	75	25		81 Intra.		100 Intra.	100 Soc.	32 Other 26 N.P. 21 Ed. Inst. 21 Intra.	
Department of the Interior, total.....	136.9	10	34	50	16	66 Intra. 10 Ind. 10 Ed. Inst.	69 Phy. prop. 19 Bio.	72 Intra. 15 Ed. Inst.	40 Eng. 33 Bio. 22 Phy. prop.	71 Intra. 11 Other	41 Intra. 36 Ind. 14 Other
Bonneville Power Administration.....	.5			38	62	77 Ind. 17 Ed. Inst.			65 Eng. 30 Phy. prop.	69 Intra. 24 Ed. Inst.	82 Intra. 14 Ed. Inst.
Bureau of Commercial Fisheries.....	25.3		28	54	18	75 Intra. 17 Other	64 Bio. 29 Phy. prop.	61 Intra. 26 Other	75 Bio. 16 Phy. prop.	86 Intra.	65 Intra. 33 Other
Bureau of Land Management.....	.7		2	91	7	66 Ed. Inst. 34 Intra.	100 Agri.	100 Ed. Inst.	87 Agri. 11 Soc.	71 Ed. Inst. 29 Intra.	100 Intra.
Bureau of Mines.....	30.3		15	72	13	99 Intra.	87 Phy. prop. 13 Math.	100 Intra.	80 Eng. 18 Phy. prop.	99 Intra.	98 Intra.
Bureau of Outdoor Recreation.....	.1			100		100 Intra.			67 Soc. 20 Bio. 13 Agri.		

AGENCIES

Bureau of Reclamation.....	5.4		4	96	(b)	50 Intra. 35 Ed. Inst.	91 Eng.	69 Intra. 19 Other	60 Phy. prop. 39 Engr.	49 Intra. 36 Ed. Inst.	83 Intra. 17 Ed. Inst.
Bureau of Sport Fisheries and Wildlife.....	17.3		18	69	13	50 Intra. 48 Other	100 Bio.	60 Intra. 27 Other	100 Bio.	50 Other 50 Intra.	65 Other 35 Intra.
Geological Survey.....	26.6		76	24		99 Intra.	96 Phy. prop.	93 Intra.	81 Phy. prop. 14 Eng.	100 Intra.	
National Park Service.....	2.1		100			69 Intra. 30 Ed. Inst.	87 Soc. 13 Bio.	68 Intra. 30 Ed. Inst.			
Office of Coal Research.....	3.7			39	61	68 Ind. 19 N.P.			81 Eng. 19 Soc.	50 Ind. 26 Ed. Inst. 2½ N.P.	80 Ind. 16 N.P.
Office of Saline Water.....	18.6		31	26	44	61 Ind. 13 Ed. Inst. 11 Intra.	94 Phy. prop.	37 Ed. Inst. 37 Ind. 10 Intra. 9 Ind. R.C.	100 Eng.	70 Ind. 12 Intra. 10 N.P.	74 Ind. 16 Ind. R.C. 10 Intra.
Office of Water Resources.....	6.3		50	50		94 Ed. Inst.	40 Eng. 25 Phy. prop. 15 Soc. 15 Bio.	94 Ed. Inst.	40 Eng. 25 Phy. prop. 15 Soc.	93 Ed. Inst.	
Department of Labor.....	11.8		12	61	27	63 Intra. 30 Ed. Inst.	100 Soc.	88 Intra.	98 Soc.	55 Intra. 36 Ed. Inst.	69 Intra. 25 Ed. Inst.
Post Office Department.....	14.5			4	96	86 Ind. 12 Intra.			74 Math. 17 Eng.	49 Ed. Inst. 45 Intra.	89 Ind. 11 Intra.
Department of State.....	14.6			55	45	41 Ed. Inst. 35 N.P. 19 Intra.			70 Agri. 21 Soc.	52 Ed. Inst. 34 N.P.	37 N.P. 31 Intra. 26 Ed. Inst.
Department of the Treasury, total.....	3.1		43	10	48	89 Intra.	100 Phy. prop.	99 Intra.	74 Phy. prop. 26 Eng.	84 Intra.	82 Intra. 18 Ind.
Bureau of Engraving and Printing.....	.5			44	56	100 Intra.			93 Phy. prop.	100 Intra.	100 Intra.
U.S. Coast Guard.....	2.6		51	3	46	87 Intra. 11 Ind.	100 Phy. prop.	99 Intra.	80 Eng. 21 Phy. prop.	40 Intra. 27 Ind. 25 N.P.	78 Intra. 22 Ind.
<i>Other</i>											
Advisory Commission on Intergovernmental Relations.....	.1			100		100 Intra.			100 Soc.	100 Intra.	
Atomic Energy Commission.....	1,255.9		23	6	71	29 Ind. R.C. 28 Ed. R.C. 27 Ind.	71 Phy. prop. 13 Bio. 8 Med.	42 Ed. R.C. 27 Ed. Inst. 15 N.P./R.C.	60 Phy. prop. 27 Eng.	50 Ed. R.C. 34 Ind. R.C.	38 Ind. 35 Ind. R.C. 21 Ed. R.C.
Civil Aeronautics Board.....	.1			100		100 Intra.			100 Soc.	100 Intra.	

See footnotes at end of table.

TABLE 18. MAJOR CHARACTERISTICS OF R&D OBLIGATIONS OF REPORTING AGENCIES, FISCAL YEAR 1966 (EST.)—Continued

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of agency's total budget	Total research and development			Basic research		Applied research		Development
			Character of work (percent distribution)			Major performers ^a (percent of total)	Major fields of science ^a (percent of total)	Major performers ^a (percent of total)	Major fields of science ^a (percent of total)	
			Basic research	Applied research	Development					
Civil Service Commission.....	.2	(b)	16	84	100 Intra.	100 Psych.	100 Intra.	100 Intra.		
Federal Aviation Agency.....	176.2	21		2	79 Ind. 19 Intra.			85 Intra. 15 Ind.	81 Ind. 18 Intra.	
Federal Communications Commission.....	.3	2		100	100 Intra.			100 Intra.		
Federal Home Loan Bank Board.....	.2	(b)		100	100 Intra.			100 Intra.		
Federal Trade Commission.....	.3	2		100	100 Intra.			100 Intra.		
Library of Congress.....	.4	2		100	77 Intra. 23 Ind.			77 Intra. 23 Ind.		
National Aeronautics and Space Administration.	5,158.5	94	12	15	79 Ind. 17 Intra.	77 Phy. prop. 11 Eng. 10 Bio.	51 Ind. 26 Intra. 14 Ed. Inst.	63 Eng. 30 Intra.	86 Ind. 12 Intra.	
National Science Foundation.....	224.3	47	99	(b)	1	49 Phy. prop. 24 Bio. 9 Eng. 7 Soc. 7 Math.	78 Ed. Inst. 8 Ind.	51 N.P. 32 Ed. Inst.	45 Ed. Inst. 40 N.P. 15 Ind.	
Office of Economic Opportunity.....	60.0	4	3	40	57	100 Soc.	100 Ed. Inst.	100 Soc.	49 N.P. 22 Ind. 22 Ed. Inst.	
Office of Emergency Planning.....	.2	2		100				41 Intra. 38 N.P. 21 Other		
Peace Corps.....	.5	(b)		100				67 Psych. 33 Soc.		
Small Business Administration.....	.4	(b)	90	10		100 Soc.	100 Intra.	100 Soc.		
Smithsonian Institution.....	7.3	28	100			50 Bio. 33 Soc. 17 Phy. prop.	100 Intra.			
Tennessee Valley Authority.....	6.7	11		78	22			44 Eng. 18 Agri. 15 Phy. prop. 15 Soc.	100 Intra.	

	7.9	80	85	15	43 Intra. 25 Ind. 15 Ed. Inst. 10 N.P.			30 Other 30 Eng. 30 Soc.	33 Intra. 30 Ind. 18 Ed. Inst. 12 N.P.	100 Intra.
U.S. Arms Control and Disarmament Agency.....										
U.S. Information Agency.....	.3	(b)	77	23	42 Ind. 35 Intra. 24 Ed. Inst.			100 Eng.	54 Ind. 31 Ed. Inst.	100 Intra.
Veterans Administration.....	40.8	1	90	2	98 Intra.	54 Psych. 45 Med.	98 Intra.	97 Med.	99 Intra.	37 Ind. 33 Intra. 25 Ed. Inst.

*Major is here defined as accounting for over 75 percent of total funds. ^bLess than 0.5 percent.

ABBREVIATIONS

Performers

Intra.—Intramural.
 Ind.—Industrial firms proper excluding research centers.
 Ind. R.C.—Federal contract research centers administered by industrial firms.
 Ed. Inst.—Educational institutions excluding research centers.

Fields of Science

Bio.—Biological sciences.
 Med.—Medical sciences.
 Agri.—Agricultural sciences.
 Psych.—Psychological sciences.

Phy. prop.—Physical sciences proper.
 Math.—Mathematical sciences.
 Eng.—Engineering sciences.
 Soc.—Social sciences.

Note: Dollar detail and percent distribution may not add to totals because of rounding.

Section 7. R&D PLANT

R&D PLANT consists of facilities and fixed equipment for use in R&D activities at Federal or non-Federal sites, regardless of where the title to the property may rest. It includes acquisition of land as well as construction of, major repairs to, and alterations in structures, works, equipment, or facilities.

Among the four funding components (basic research, applied research, development, and plant) the most pronounced change in 1967 will be in plant obligations, which are expected to decline 37 percent from the previous year's total. In both 1965 and 1966, obligations for R&D plant were \$1.1 billion, an annual level that has been fairly consistently maintained since 1963. However, 1967 obligations are scheduled for a decrease to \$0.7 billion, with more than half of the reduction accounted for by the National Aeronautics and Space Administration, resulting primarily from the near completion of launch and test facilities for its Apollo program. (See table 19 and appendix table C-34.) Thus, funds for R&D plant, which in 1965 and 1966 made up 7 percent of total Federal obligations for research, development, and R&D plant, are expected to drop to 4 percent in 1967.

This estimate must be considered highly tentative, however, as planning for future investment in plant tends to be subject to abrupt change. The data on R&D plant are likely to be understated, particularly in the case of the Department of Defense. Although DOD reports plant construction at Federal sites (but none at non-Federal sites), it is not able to identify separately the sums that are used for fixed equipment within an R&D contract. For the same reason there is also some understatement in the NASA figures for R&D plant.

TABLE 19. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY

(Millions of dollars)

Agency	Actual, 1965	Estimates	
		1966	1967
Total.....	\$1,132	\$1,123	\$707
National Aeronautics and Space Administration.....	530	347	124
Atomic Energy Commission.....	299	344	237
Department of Health, Education, and Welfare.....	101	163	94
National Science Foundation.....	88	95	93
Department of Defense.....	68	85	105
Other agencies.....	44	90	55

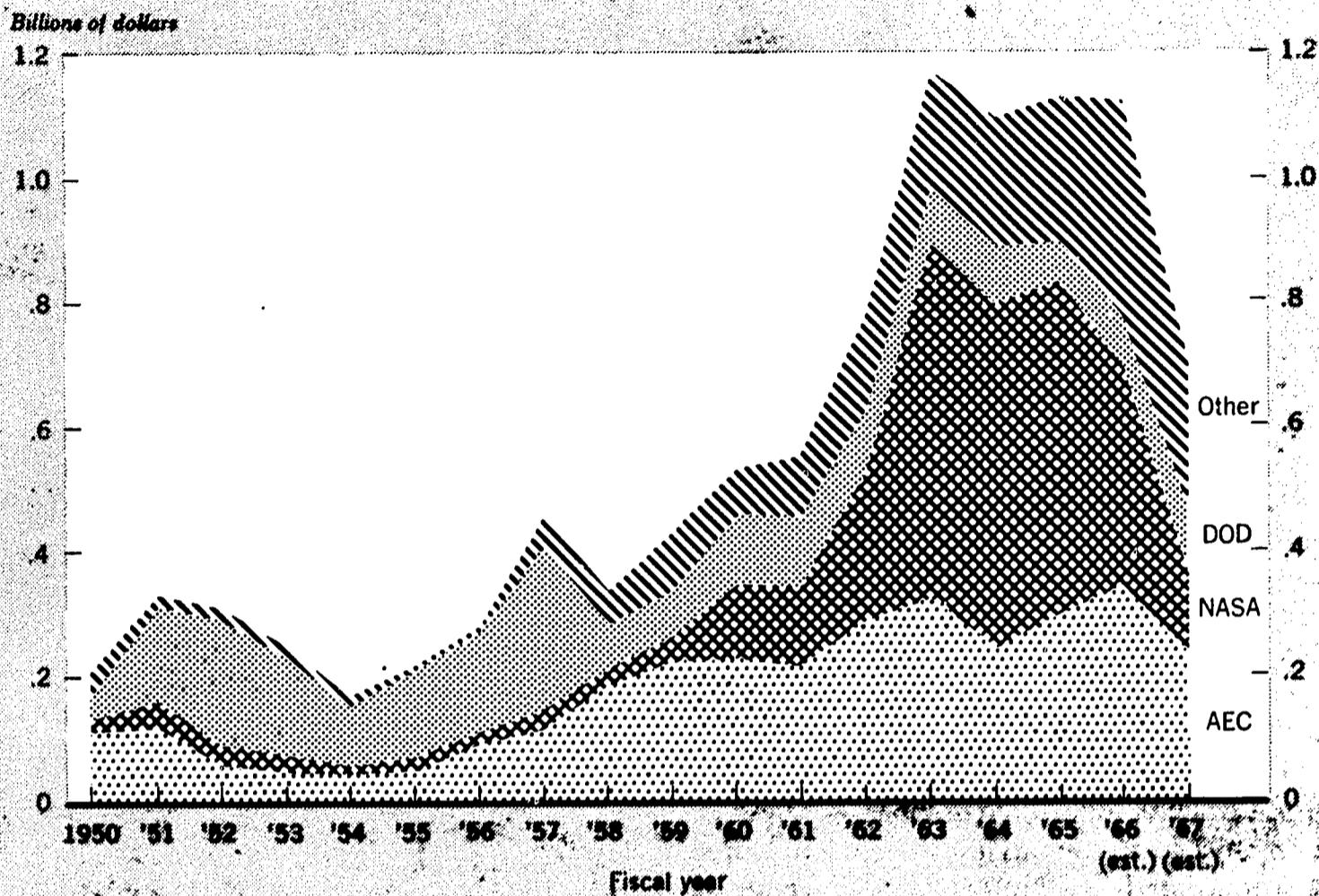
NOTE: Detail may not add to totals because of rounding.

During the 1965-67 period five agencies—NASA, AEC, HEW, DOD, and NSF—are expected to account for over 90 percent of total R&D plant obligations. But, as shown in table 19, their relative positions may shift from year to year. NASA, AEC, HEW, and NSF are anticipating decreases in 1967 obligations while DOD is projecting an increase.

In the years from 1947 through 1967, Federal agencies will have obligated \$10.5 billion for R&D plant, or approximately 7 percent of the total funds for research, development, and R&D plant. More than 80 percent of these obligations have originated in the programs of the AEC, DOD, and NASA.

In the early post-World War II period the AEC was the chief source among the Federal agencies of funds for R&D plant. It built facilities to replace those used during the war and constructed three national laboratories to encourage the participation of educational and other private institutions in its research programs. From 1951 through 1957, DOD became the largest source of R&D plant funds. (See chart 15.) Its construction programs supported

Chart 15
Trends in Federal obligations for R&D plant, by agency



SOURCE: National Science Foundation (Appendix table C-52)

R&D work related to the continental air defense network and included test facilities for rocket propulsion and electronic systems. In 1958 the AEC again became the major funding agency, chiefly because of its program for building high-energy particle accelerators in the multi-billion electron volt range. The development of more advanced experimental devices to control thermonuclear reactions also contributed to its plant outlays. Then, in 1963 the huge outlays of NASA for space-vehicle launching facilities, space simulators, and rocket testing, control, and guidance systems brought this agency to the fore. In 1963 and 1964 NASA's obligations alone accounted for one-half of the Federal total for R&D plant. However, in 1965 they fell below the half-way mark, and in 1966 were less than one-third of the total. In 1967 they are scheduled to be less than one-fifth, with AEC again to become the primary funding agency in this area.

Federal Sites Versus Non-Federal Sites

In the period of this report some 75 to 80 percent of R&D plant obligations are reported as used for construction and other plant-connected work on Federal sites. As shown in table 20 and appendix tables C-35—C-37, these obligations are expected to decline during this period, from \$913 million in 1965 to \$855 million in 1966 and an anticipated \$514 million in 1967. It should be noted that there is no direct correlation between these R&D plant obligations and intramural performance since the personnel working in such installations or manning the equipment may be on a contractor's payroll. This is often the case where Federal contract research centers are concerned.

Three agencies—NASA, AEC, and DOD—account for the dominant share of obligations for R&D plant on Federal sites, for about 85 percent of the total in the current 3-year period. But their rela-

tive shares of this support are expected to shift, as follows:

	Percent distribution		
	(Estimates)		
	1965	1966	1967
NASA.....	57	39	23
AEC.....	26	33	40
DOD.....	7	10	20
Other.....	10	18	17

Table 20 shows that R&D plant obligations at non-Federal sites, which account for some 20 to 25 percent of the total, are expected to rise in 1966 but decline in 1967. Most of these obligations are to educational institutions, including associated Federal contract research centers. However, AEC is the only agency reporting funds for R&D plant to research centers.

For educational institutions proper, R&D plant obligations totaled \$142 million in 1965 and are expected to be \$193 million in 1966 and \$133 million in 1967. The chief agencies obligating funds to educational institutions proper are HEW, NSF, AEC, and NASA. Nearly one-half of total obligations to educational institutions originate with HEW and are related to the research facilities grants program administered by the National Institutes of

Health, and to programs of the Office of Education, arising from recent education acts (Higher Education Facilities Act of 1963 and the Elementary and Secondary Education Act of 1965). NSF, which accounts for one-third of such obligations, earmarks its funds for a wide range of research facilities (including computer equipment). AEC plant obligations are mainly for equipment support, primarily in low- and medium-energy physics; NASA incurs such outlays in connection with its sustaining university program.

Major Construction Projects

Some examples of the kinds of construction included in Federal R&D plant obligations projected for 1967 are NASA's funding support of its launch complex at the John F. Kennedy Space Center in Florida, with an ultimate expected cost of \$450 million; facilities for testing engines in the 50,000-60,000-pound thrust range for supersonic jet aircraft at the Lewis Research Center, Ohio; a lunar sample receiving laboratory at the Manned Spacecraft Center in Texas; a wind tunnel at Langley Research Center in Virginia to simulate vertical and short field takeoff and landing (V/STOL) conditions for aircraft.

Important AEC plant projects include design of a fast-flux test facility and a fast neutron generator at the Argonne National Laboratory, an 800-million electron volt meson particle accelerator at Los Alamos Scientific Laboratory, and an increase in the intensity of the proton accelerator at Brookhaven National Laboratory.

Major 1967 R&D construction programs of DOD are ballistic missile defense (Nike-X) test facilities at Kwajalein Island, ground support facilities at Vandenberg Air Force Base in California for the Manned Orbiting Laboratory (MOL), and development and test facilities for the submarine-launched Poseidon missile at the Naval Ordnance Test Center in Florida.

TABLE 20. DISTRIBUTION OF FEDERAL R&D PLANT OBLIGATIONS, BY SITE

(Millions of dollars)

Location	Actual, 1965	Estimates	
		1966	1967
Total.....	\$1,132	\$1,123	\$707
Federal site.....	913	855	514
Non-Federal site.....	217	267	180
Educational institutions *.....	(192)	(230)	(155)
Foreign site.....	1	1	14

* Including Federal contract research centers.

NOTE: Detail may not add to totals because of rounding.

Section 8. FOREIGN PERFORMERS

FOREIGN PERFORMERS include foreign organizations and individuals in other countries who perform research and development financed by Federal agencies. The definition does not cover payments to U.S. agencies and private organizations and citizens working abroad for the Federal Government. Excluded also are payments to foreign scientists working in the United States. However, support for international organizations (NATO, UNESCO, etc.) performing research and development outside the United States is included in the "foreign performers" category.

With respect to plant, obligations are limited to costs of foreign labor, supplies, materials, and equipment purchased abroad. Equipment purchased in the United States and transported abroad for installation is not considered part of foreign R&D plant.

Obligations to foreign performers for research and development during the years 1965 through 1967 do not exceed 0.5 percent of total Federal obligations for research, development, and R&D plant; and, in fact, this proportion has not been exceeded since 1959, the first year that foreign obligations were reported. In 1965 such obligations totaled \$69 million and are estimated to reach \$72 million in 1966 and \$76 million in 1967 (appendix tables C-38—C-49). The part covered by "excess" foreign currencies was 25 percent in 1965, increasing to 36 percent in 1966 and 44 percent in 1967.⁹

⁹ Data on Public Law 480 currencies were collected for the first time for this issue of the *Federal Funds* report. While the main source for Federal support of foreign R&D performance is from regular budgetary appropriations, a significant portion comes from "excess" foreign currencies available through Public Law 480, the Agricultural Trade Development and Assistance Act of 1964, as amended, sections (a), (k), and (n). These sections provide that foreign currencies accruing abroad to the United States in exchange for surplus agricul-

Some 95 percent of Federal obligations for foreign research and development during the years 1965 through 1967 originate from programs of four agencies, of which the two highest in funds are DOD and HEW (see table 21). Although DOD was the primary source in 1965, HEW is scheduled to lead in 1966 and 1967, with DOD in second place. The Department of Agriculture and the Atomic Energy Commission also contribute importantly to foreign outlays.

Foreign R&D plant obligations (as distinct from research and development) make up a relatively small component of foreign spending and are incurred during the current period by only three agencies, the Department of Agriculture, the Atomic Energy Commission, and the National Science Foundation.¹⁰ In 1965 obligations for foreign R&D plant totaled \$1.4 million; in 1966 they are expected to be \$0.7 million, and in 1967, \$14 million. The sharp increase for fiscal year 1967 is occasioned by plans of the Agricultural Research Service to make use of excess currencies.

tural commodities can be used to sponsor research and other scientific activities in the countries concerned. Excess currencies under Public Law 480 are designated by the Department of the Treasury; for 1966 they included currencies of Burma, Ceylon, Guinea, India, Israel, Pakistan, Poland, Tunisia, United Arab Republic, and Yugoslavia. Over 90 percent of the obligating of such currencies was for work undertaken by HEW and Agriculture.

¹⁰ For this survey foreign obligations have been revised downward as a result of a review of reporting practices on the part of R&D agencies. Among those making revisions to previous estimates the most notable is the National Aeronautics and Space Administration, which reappraised its reporting of foreign R&D plant to assure the reporting only of costs of fixed equipment and facilities *purchased* abroad. Consequently, NASA no longer reports an R&D plant support item. NASA's foreign R&D obligations have also been reduced by the deletion of obligations for support of U.S. scientists abroad. Also, see *Technical Notes* for subsequent change in reporting by DOD for Thailand and Viet Nam.

TABLE 21. FEDERAL R&D OBLIGATIONS TO FOREIGN PERFORMERS, BY AGENCY

Agency	Actual, 1965	Estimates	
		1966	1967
Total (millions of dollars).....	\$68.6	\$72.1	\$76.3
Percent distribution			
Department of Defense.....	48	35	23
Department of Health, Education, and Welfare.....	29	38	47
Department of Agriculture.....	13	14	14
Atomic Energy Commission.....	6	8	11
National Aeronautics and Space Administration.....	1	1	(*)
Other agencies.....	3	4	4

* Less than 0.5 percent.

NOTE: Percent detail may not add to 100 because of rounding.

Character of Work

Federal foreign R&D payments are primarily for research rather than development. The research share of the foreign R&D total shows a rise from 72 percent in 1965 to 88 percent in 1967. (See chart 16.) The change is largely due to a scheduled reduction of DOD's development obligations.

There is little year-to-year change in the level of funds for basic research (\$25 million in 1965, about \$27 million in 1966, and \$28 million in 1967). (See table 22.) Investments in basic research are being made by Agriculture in India and Israel; by DOD in England and Canada; by HEW in Europe; by AEC in Japan.

Applied research obligations are expected to increase from \$24 million in 1965 to \$32 million in 1966 and \$39 million in 1967. HEW is by far the largest contributor, followed by DOD.

TABLE 22. FEDERAL R&D OBLIGATIONS TO FOREIGN PERFORMERS, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1966

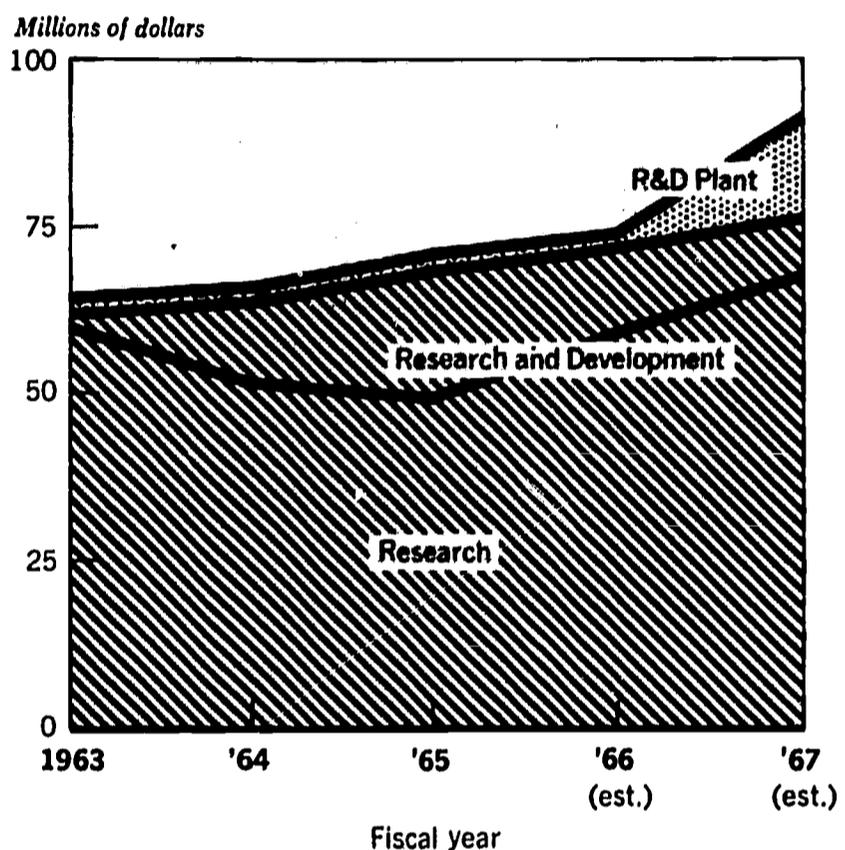
(Millions of dollars)

Agency	Total	Basic research	Applied research	Development
Total.....	\$72.1	\$27.4	\$32.0	\$12.7
Department of Health, Education, and Welfare.....	27.6	5.4	21.8	.4
Department of Defense.....	25.1	6.4	8.6	10.1
Department of Agriculture.....	10.3	9.8	.5	
Atomic Energy Commission.....	6.0	4.0	.2	1.9
National Aeronautics and Space Administration.....	.5	.3	.2	
Other agencies.....	2.6	1.5	.7	.3

Development obligations are reported declining; from \$19 million in 1965 to \$13 million in 1966 and \$9 million in 1967. DOD accounts for over 80 percent of the total in 1966 and 50 percent in 1967. The projected decline is largely attributable to the scheduled completion of DOD's tri-country undertaking with England and West Germany for the development of an experimental vertical and short-field takeoff and landing aircraft (Hawker P-1127).

Chart 16

Trends in Federal obligations for research, development, and R&D plant in foreign countries.



SOURCE: National Science Foundation

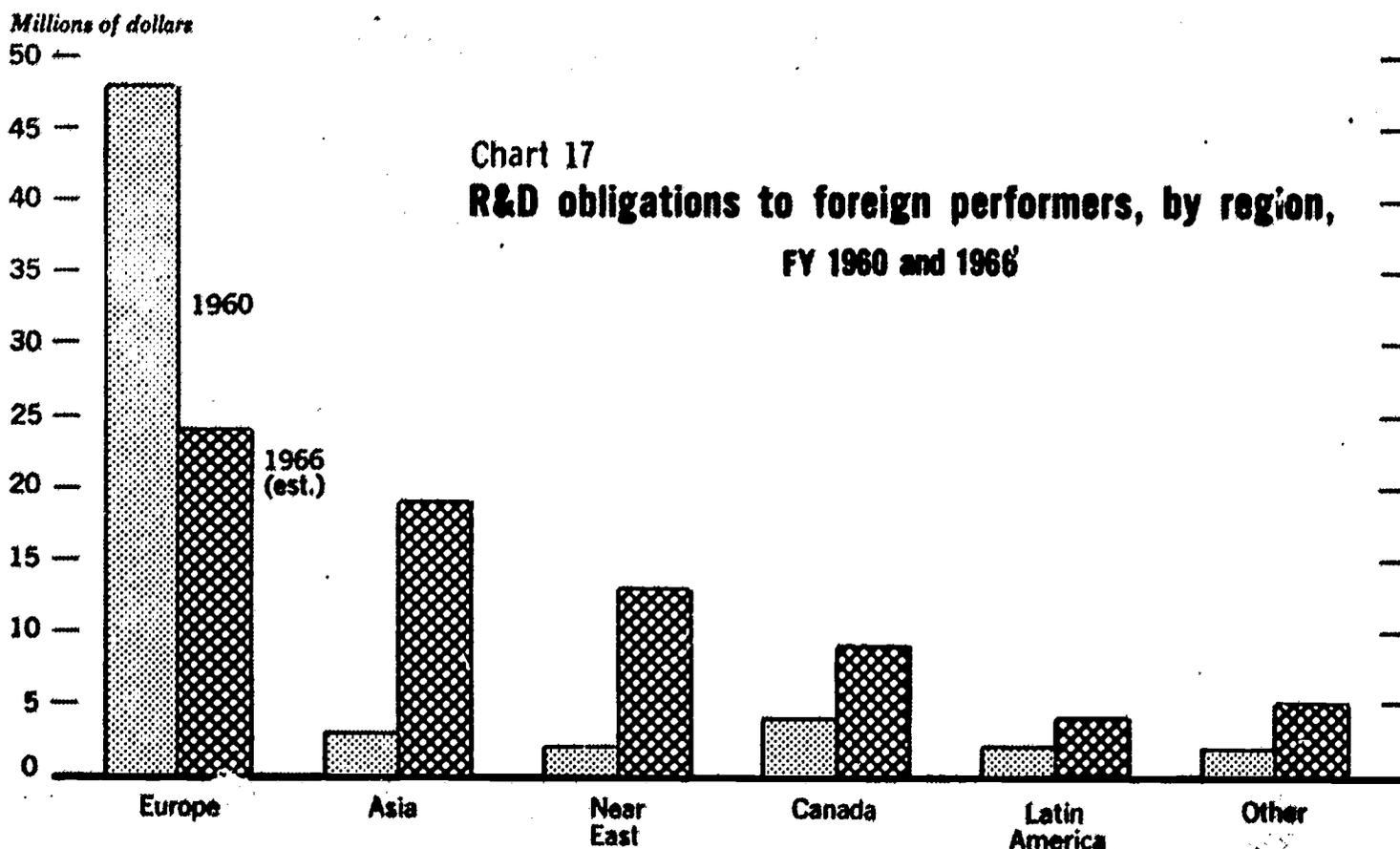
Regions

Chart 17 shows the change that has taken place from 1960 to 1966 in allocation of foreign R&D obligations by region. Europe, although still the main recipient of funds, has lost ground in absolute terms while Asia, the Near East, Canada, and Latin America all show a rise in R&D funds. The large increases in funds for research and development to Asia and the Near East were supported chiefly by foreign currencies available under Public Law 480.

In 1967, Asia is expected to receive as much support as Europe. This change results chiefly from the scheduled reduction from \$16 million in 1965 to

\$2 million in 1967 of the DOD programs in England, which until the latest year accounted for more than one-half the U.S. total in Europe. Most of the rise in R&D funds to Asia is occasioned by increased HEW obligations to Japan and India.

Three-fourths of the funds obligated to the Near East in 1967, mainly from HEW and Agriculture programs, will be received by Israel. In Latin America the main support will come from HEW; in Canada, from DOD and AEC.



SOURCE: National Science Foundation

PART II
FEDERAL FUNDS FOR SCIENTIFIC AND TECHNICAL INFORMATION

Section 1: CHARACTERISTICS

SCIENTIFIC AND TECHNICAL INFORMATION, as defined in this survey, is knowledge or data resulting from the conduct of research and development or required for organizing, administering, or performing research and development. Excluded are raw scientific and technical data and statistical or general-purpose data collected and organized for other than R&D use. Information intended primarily to inform or instruct the general public is also excluded for purposes of this survey. The acronym, STINFO, is used frequently for scientific and technical information in this report.

Levels and Trends

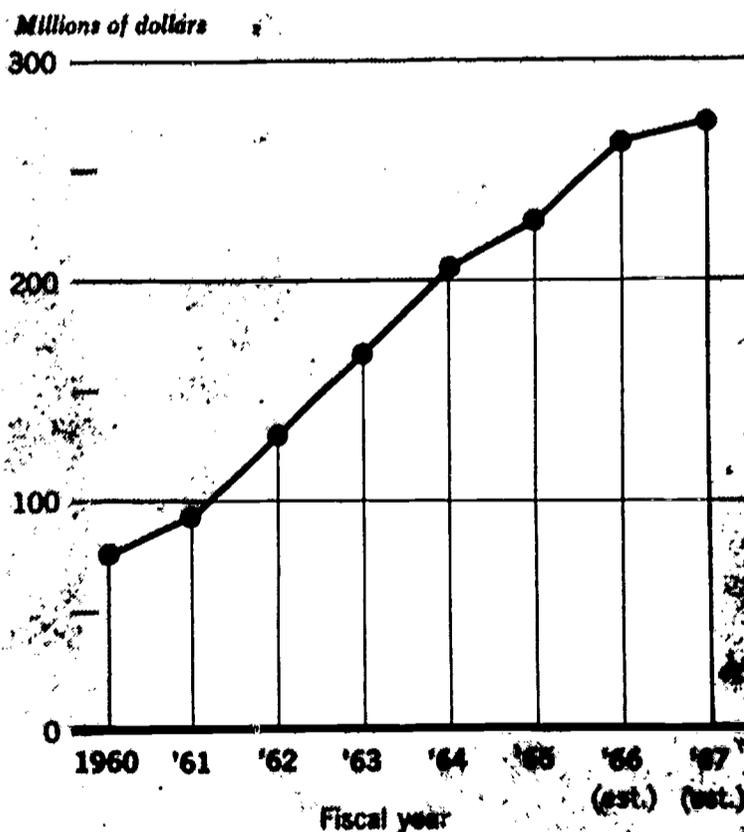
Federal obligations for STINFO activities amounted to \$225 million in fiscal year 1965 and were estimated to increase to \$261 million in 1966 and to \$273 million in 1967 (appendix tables D-1 and D-2). By comparison, obligations in fiscal year 1960, the earliest year for which STINFO data were reported in this survey, amounted to \$76 million. Thus, from 1960 to 1965, obligations reported for these activities almost tripled.¹¹ (See chart 18.)

This survey was the sixth to include STINFO activities of Government agencies. Obligations have increased every year since 1960 but have generally grown at a reduced rate since 1963. The annual rate of growth has varied considerably, reaching a high of 40 percent from 1961 to 1962. However, in the three years covered in this report, the increase was 11 percent from 1964 to 1965 and was expected to be 16 percent from 1965 to 1966 but only 5 percent from 1966 to 1967.

¹¹ Some of this increase may have occurred because of more accurate reporting by the agencies after several years' experience. Hence, the actual increase in effort in the STINFO area between 1960 and 1965 may differ somewhat from the reported tripling of obligations.

The continuous annual upward trend in Federal funding of STINFO activities reflects both the expanding R&D programs of the Government and the increasing emphasis and importance being placed on the dissemination of information through a variety of means. However, there is some evidence of a leveling off of funds for information activities in recent years. This is due, in part, to the decrease in rate of growth of Federal funds for research and development, to which scientific and technical information is closely related.

Chart 18
Trends in Federal obligations for
scientific and technical
information activities



SOURCE: National Science Foundation

Importance

Scientific and technical information has been called both a raw material for and one of the principal products of scientific research. The effective exchange of such information is as vital to the progress of science and technology as is good equipment or competent scientists and engineers. In the infancy of science and technology, information concerning discoveries, findings, and progress was relatively easily disseminated to interested persons. Now, the problem of communication among scientists and related persons is many times more complex and difficult.

The President's Science Advisory Committee stated in 1963 that "Science and technology can flourish only if each scientist interacts with his colleagues and his predecessors, and only if every branch interacts with other branches of science; in this sense science must remain unified if it is to remain effective. The ideas and data that are the substance of science and technology are embodied in the literature; only if the literature remains a unity can science itself be unified and viable. Yet, because of the tremendous growth of the literature, there is danger of science fragmenting into a mass of repetitious findings, or worse, into conflicting specialties that are not recognized as being mutually inconsistent . . ." ¹² Hence, vast improvements in the dissemination of scientific and technical information must be forthcoming if progress is to be maintained and furthered.

Agencies and Performers

Of the 22 departments and independent agencies reporting obligations for STINFO activities, 9 accounted for about 99 percent of the total obligations for such activities during the years 1965-67. However, there was considerable range among these nine leading agencies—from \$4.6 million for the Atomic Energy Commission to \$98.6 million for the Department of Defense in 1965.

The various scientific and technical information activities reported by these 22 agencies were classified as performed "intramurally" if by Government personnel or "extramurally" if by some organization outside the Federal Government. Intramural per-

¹² U.S. President's Science Advisory Committee, *Science, Government, and Information*. Washington, D.C., 20502: Supt. of Documents, U.S. Government Printing Office, 1963, p. 7.

formance accounted for about 70 percent, and extramural performance for 30 percent, of the total Federal obligations reported for each of the three years 1965-67. Extramural performance, however, is believed to be substantially understated because obligations for information activities that are part of extramural R&D contracts are not included. (See *Technical Notes*.)

Approximately 90 percent of the intramural performance is reported by six agencies: DOD, Department of Commerce, Department of Health, Education, and Welfare, Library of Congress, Department of the Interior, and National Aeronautics and Space Administration. Practically all extramural activity is reported by only four agencies: DOD, NASA, HEW, and the National Science Foundation. Among the four agencies reporting the largest totals, DOD, HEW, and NASA rank high in both intramural and extramural obligations for these activities. On the other hand, Commerce, which is the second largest reporting respondent, relies very little on extramural performance. (See chart 19, table 23, and appendix tables D-3--D-6.)

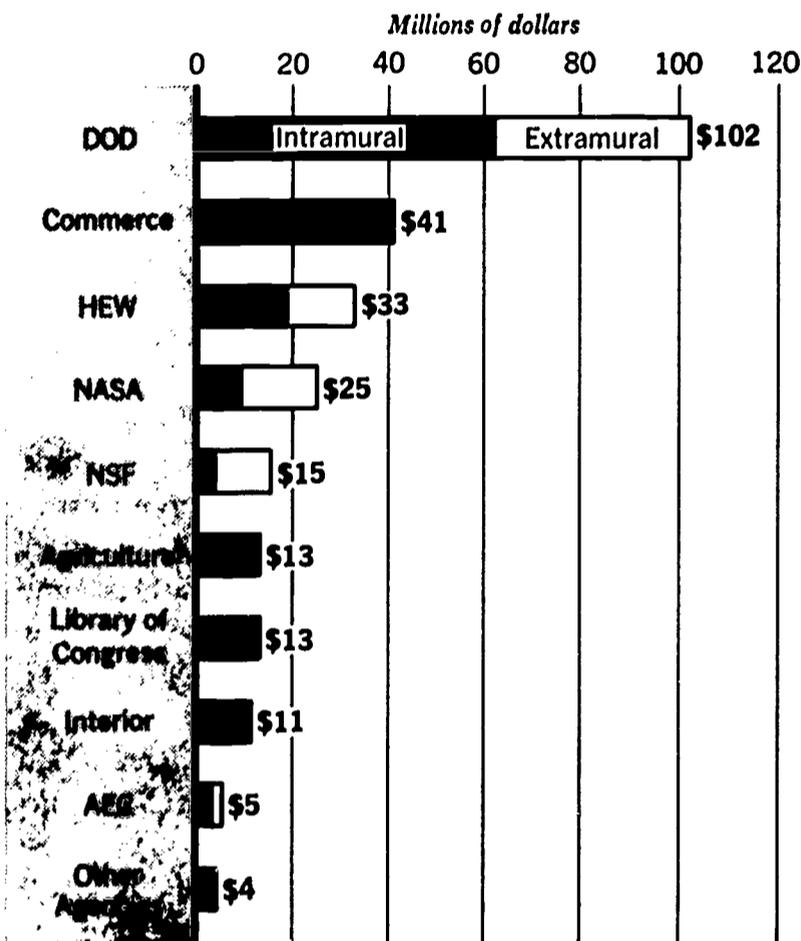
Two of the departments—Commerce and HEW—show one major subdivision in each case accounting for most of the STINFO total. The Patent Office made up about 80 percent of the Commerce total, and the Public Health Service made up between 87 and 92 percent of the HEW total for the three years covered.

TABLE 23. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY

Agency	Actual, 1965	Estimates	
		1966	1967
Total (millions of dollars).....	\$225	\$261	\$273
Percent distribution			
Department of Defense.....	44	39	36
Department of Commerce.....	17	16	16
Department of Health, Education, and Welfare.....	11	13	18
National Aeronautics and Space Administration.....	8	10	10
National Science Foundation.....	6	6	5
Library of Congress.....	4	5	5
Department of the Interior.....	4	4	4
Department of Agriculture.....	2	5	3
Atomic Energy Commission.....	2	2	2
Other agencies.....	1	1	1

NOTE: Percent detail may not add to 100 because of rounding.

Chart 19
Federal obligations for scientific and technical information, by agency and performer, FY 1966 (est.)



SOURCE: National Science Foundation

Relationship to Research and Development

For each of the three years, 1965-67, Federal funds reported for STINFO activities were equal to about 1½ percent of total Federal obligations reported for research and development. This ratio has risen slightly since 1960 when it was about 1 percent.

Within agencies, however, there are wide differences in the dispersion of funds between research and development and STINFO activities. At NASA,

for example, obligations reported for STINFO equal less than 1 percent of its R&D funds, but at Commerce these funds equal close to 50 percent of R&D obligations. But this ratio alone is not a valid measurement of the role played by STINFO programs because:

(1) Certain agencies, and agency subdivisions, i.e., the Library of Congress or Commerce's Patent Office, have specific information missions that entail the collection and dissemination of scientific and technical information from a wide variety of sources for an extensive number of users, who may be within or outside the Government. Other agencies and subdivisions conduct information activities mainly to serve their individual R&D programs, for example, DOD and HEW's National Institutes of Health. On the other hand, the National Science Foundation supports research and development leading to improved information services and systems for the scientific community as a whole. Thus, the nature and purpose of the STINFO programs within different agencies vary considerably and usually are not comparable.

(2) The ratio in many cases is believed to be substantially understated because the principal extramural data reported were obligations for grants and contracts whose primary purpose was the support of STINFO activities. Most funds entering into information activities as part of grants or contracts primarily for research and development were not reported and, hence, were not included in the computation of the ratio. Attempts made to collect these data were largely unsuccessful because the responding agencies found it very difficult to identify and separate STINFO from R&D activities in their extramural R&D contracts or grants.

Three of the agencies with very large extramural R&D programs are DOD, NASA, and AEC, and all three probably obligated far more for STINFO activities than is reported in this survey.

Section 2. ACTIVITIES

FEDERAL OBLIGATIONS for STINFO activities were reported under four categories: Publication and Distribution; Documentation, Reference and Information Services; Symposia and Audio/Visual Media; and Research and Development in Information Sciences, Documentation and Information Systems, Techniques, and Devices. The first three categories were further subdivided (see chart 20, table 24, and appendix tables D-7—D-9).¹³ Obligations under the first three categories, all of which deal with the scientific and technical information process, were to be reported only in that portion of the survey dealing with STINFO activities,¹⁴ but obligations under category 4, which has to do with research and development in information, were to be reported both in part I and part II of this report.

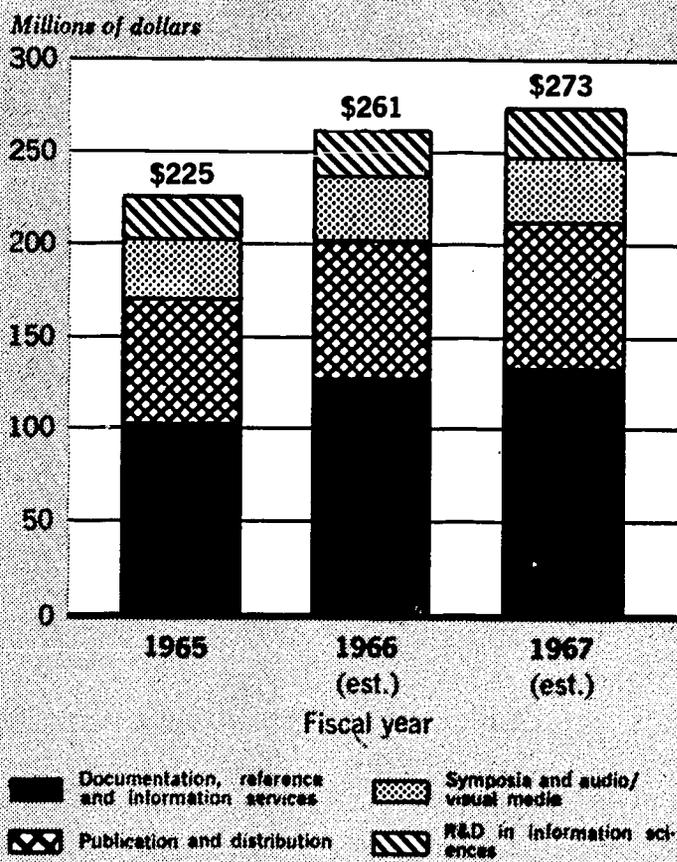
Category 1: Publication and Distribution

The first listed category is the second largest in funding, accounting for about 30 percent of total Federal funds for scientific and technical informa-

¹³ In last year's report, Volume XIV, a fifth category—management administration costs—was included. However, because of reporting difficulties associated with separation and identification of these costs, it was decided to return to the standard four categories of previous *Federal Funds* surveys. Management and administration costs are again prorated among the four standard categories, as was done in previous surveys.

¹⁴ Several of the larger agencies were unable to separate their funds for STINFO activities from those reported for research and development, with the result that in some cases STINFO obligations under categories 1-3 have also been reported as obligations for research and development under part I. As a result, for the 3 years of this report, 1965-67, about 40 percent of the total obligations in categories 1-3 of part II is also reported as research and development in part I. (See *Technical Notes*, table A-1.) The agencies whose STINFO activities are thus reported in both parts I and II of this report are the Departments of the Air Force and Navy, the Defense agencies of DOD, and HEW's National Institutes of Health. The Department of the Army was able to identify separately a small portion (which was reported in part II only) of its STINFO activities.

Chart 20
Federal obligations for scientific and technical information, by activity



tion activities in each of the three years 1965-67. Almost all of the total for this category was reported under the subcategory covering publication and initial distribution of scientific and technical information. Only 5 percent fell under the second subcategory, support of publications. This one includes items such as page charges, special subscription arrangements, publication and distribution of conference proceedings, monographs, and textbooks. NSF and HEW account for most of the funds for this kind of support.

TABLE 24. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1966 (EST.)

Agency	Total	Category 1	Category 2	Category 3	Category 4
		Publication and distribution	Documentation, reference and information services	Symposia and audio/visual media	Research and development in information sciences, documentation and information systems, techniques and devices
Total (millions of dollars).....	\$261	\$75	\$126	\$35	\$24
Percent distribution					
Department of Defense.....	39	28	40	50	53
Department of Commerce.....	16	33	11	2	4
Department of Health, Education, and Welfare.....	13	6	13	23	14
National Aeronautics and Space Administration.....	10	13	8	12	2
National Science Foundation.....	6	2	6	4	18
Department of Agriculture.....	5	3	7	4	1
Library of Congress.....	5	-----	10	*	2
Department of the Interior.....	4	9	2	2	3
Atomic Energy Commission.....	2	3	1	1	3
Other agencies.....	1	2	1	3	1

* Less than 0.5 percent.

NOTE: Percent detail may not add to 100 because of rounding.

Five agencies account for about 90 percent of the total for category 1 activities. They are the Departments of Defense and Commerce, the National Aeronautics and Space Administration, and the Departments of the Interior and of Health, Education, and Welfare. Commerce and DOD together are expected to comprise 61 percent of the total in 1966. The Patent Office and Army make up the main supporting subdivisions within the latter two agencies.

The Patent Office has been disseminating scientific and technical information since 1872 through the *Official Gazette*, a weekly publication which contains a drawing and a claim or description of each patent granted during the week. However, primary dissemination of scientific and technical information by the Patent Office is carried out by distribution of copies of patents and by reports on research and development.

In the case of DOD, the technical reports resulting from its research, development, test, and evaluation efforts are distributed to certain qualified users within Federal agencies and to DOD contractors. Copies of all of them are sent to the Defense Documentation Center (DDC) for secondary distribution to authorized users, and those having no release limitations are sent to the Federal Clearinghouse for Scientific and Technical Information, National

Bureau of Standards, Department of Commerce, for sale to the technical and industrial community.

Category 2: Documentation, Reference and Information Services

This is the major information category in dollar terms, representing about half of the total Federal support for STINFO activities in each of the three years 1965-67. It is divided into three subcategories, of which bibliographic and reference services account for about 85 percent of the total. Specialized information centers, the second, account for approximately 12 percent of the total and translations for the balance.

Seven agencies—DOD, Commerce, HEW, Library of Congress, NASA, the Department of Agriculture, and the National Science Foundation—in 1966 are expected to account for 95 percent of the total obligations for this category. DOD alone is responsible for 40 percent of the total.

In the obligations reported by DOD for bibliographic and reference services are funds for the Defense Documentation Center. The mission of this center (which is part of the Defense Supply Agency) includes the acquisition, announcement, secondary dissemination, and related bibliographic servicing of scientific and technical documents to the defense community. DDC serves approximately

5,700 military, industrial, educational, and non-profit organizations engaged in defense-related research and development.

The Department of Defense also maintains specialized information centers at research institutions, universities, and Government laboratories throughout the country. These information analysis centers collect and evaluate published and unpublished scientific and technical literature and maintain contact with scientists in their specialized fields in order to provide DOD's scientific and technical community with relevant and up-to-date findings. Information is processed to meet user requirements, which may range from condensed data for management purposes to detailed data for scientists and engineers.

HEW's obligations for bibliographic and reference services were reported principally by the Public Health Service for its National Institutes of Health and National Library of Medicine. MEDLARS (Medical Literature Analysis and Retrieval System) is the Library's computer-based information handling system, which provides scientists, medical practitioners, and educators with rapid bibliographic access to the world's biomedical literature. The Library uses MEDLARS to compile and compose *Index Medicus*, a comprehensive monthly listing of references to scientific journal articles. Plans exist to extend MEDLARS throughout the United States by means of MEDLARS search centers. There are two such centers in operation: one at the University of California Medical Center, Los Angeles, and another at the University of Colorado Medical Center, Denver. A third is planned for the University of Alabama Medical Center in Birmingham.

NSF funds for information centers include support of the Science Information Exchange and the National Referral Center for Science and Technology. SIE, under the Smithsonian Institution, is a clearinghouse for information on current research projects in the life, physical, and social sciences. The National Referral Center for Science and Technology is located at the Library of Congress and provides two basic services: (1) referral of inquiries to relevant sources of information and (2) preparation and publication of directories listing information resources available in selected scientific

or technical fields. NSF is the principal supporter of translations within the Government.

Category 3: Symposia and Audio/Visual Media

Obligations under this third category account for about 14 percent of total Federal funds for STINFO activities for 1965-67. Within this category, the subdivision, symposia and technical meetings, accounted for 54-58 percent of the total; audio/visual and other forms of oral communication, the remaining 42-46 percent.

Most Federal support of category 3 was reported in 1966 by two departments—DOD (50 percent) and HEW (23 percent). NASA, NSF, and Agriculture accounted for most of the remainder.

HEW's National Institutes of Health is a major supporter of symposia and technical meetings. Such programs are found to be a very effective method of communicating research findings on disease and health problems. NIH scientists are encouraged to attend scientific meetings, communicate and collaborate with others in their fields, and exchange information on matters of mutual interest.

Within DOD, the Army is the major supporter of audio/visual media and other forms of oral communication. Among its efforts in this subcategory is the recording of progress in R&D projects on sound tracks and film. Distribution of these audio/visual reports is carried out through the same channels as standard written documents.

Category 4: Research and Development in Information Sciences, Documentation and Information Systems, Techniques, and Devices

This is the smallest category among the four scientific and technical information activities, accounting for about 10 percent of the total obligations for 1965-67. Its importance, however, lies in the continuing improvement of scientific and technical information dissemination.

DOD, NSF, and HEW in 1966 reported 85 percent of the total for this category. Among its efforts in this area, NSF obligates funds to various organizations for research and development directed toward systematic and mechanized procedures for handling large volumes of scientific information. Support is provided for research, development, ex-

perimental applications, and evaluation of systems in the area of information storage and retrieval, mechanical translation, and libraries. NSF is also concentrating on developments that will lead to

science information systems for the several scientific and technical disciplines, improvements in key information services, and consolidation of prior research and development for useful application.

PART III
FEDERAL FUNDS FOR COLLECTION
OF GENERAL-PURPOSE SCIENTIFIC DATA

Section 1: CHARACTERISTICS

AS DEFINED in this survey, general-purpose scientific data include statistics, observations, readings, specimens, and other facts obtained from surveys, field investigations, laboratory analyses, or compilations of operating records that are disseminated to a wide variety of users, such as public agencies, the general public, and possibly research investigators. Data solely for the internal operational or administrative use of the collecting agency are not included.

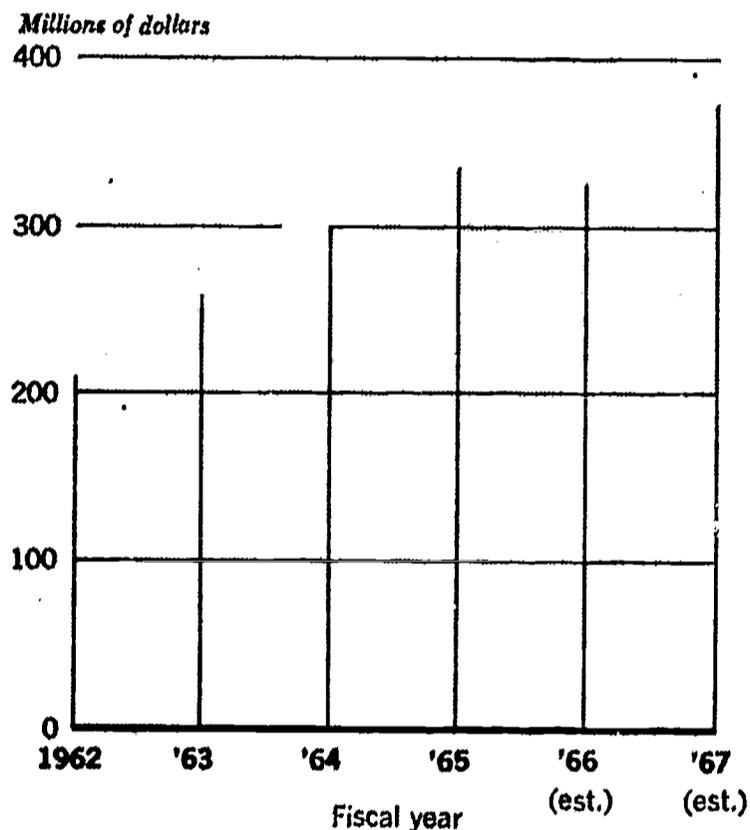
Levels and Trends

Federal obligations for the collection of general-purpose scientific data amounted to \$343 million in fiscal year 1965. A decrease to \$333 million is estimated in 1966. In 1967, however, obligations are scheduled to rise to \$381 million (appendix table E-1). These changes mainly derive from the fluctuating programs of the Bureau of the Census and the Department of the Navy.¹⁵ The periodic censuses conducted by the Bureau of the Census cause variations in annual levels of obligations for collection of general-purpose scientific data. The Navy's obligations tend to vary somewhat because their funds for data collection include supporting equipment that is not procured every year (such as ships). Also, in 1967 the Navy will undertake a geophysical survey that will cause its data collection obligations to increase over the 1966 level.

Collection of general-purpose scientific data for this survey began in 1962. That year, Federal obligations totaled \$220 million, and annual increases have occurred every year since then except for 1966. (See chart 21.)

¹⁵ Obligations for these two agencies were reported as follows (millions of dollars): Navy—FY 1965, \$57.4; FY 1966 (est.), \$42.6; FY 1967 (est.), \$64.6. Bureau of the Census—FY 1965, \$37.7; FY 1966 (est.), \$25.9; FY 1967 (est.), \$25.5.

Chart 21'
Trends in Federal obligations for
general-purpose scientific
data collection



SOURCE: National Science Foundation

In all other years the annual rate of growth has been relatively constant, with a high of 22 percent between 1962 and 1963. Obligations increased 11 percent from 1964 to 1965 but are expected to decrease 3 percent from 1965 to 1966. In 1967, obligations are expected to increase 14 percent over the 1966 level. The generally continuous growth in Federal funds for scientific data collection reflects the increasing need of Government agencies for more accurate, comprehensive, and timely data so

that their assigned responsibilities and goals can be better met.

Agencies and Performers

Of the 22 departments and independent agencies reporting obligations for the collection of general-purpose scientific data, 6 accounted for over 90 percent of the total Federal funds for these activities during 1965-67. Among these six leading agencies, obligations vary considerably: in 1966 from \$149 million for the Department of Commerce, the largest, down to \$15 million for the Department of Health, Education, and Welfare, the smallest of the top six. (See table 25 and appendix table E-2.)

Among several of the leading departments one or two subdivisions account for a large share of the department's total. The Environmental Science Services Administration (hereafter frequently referred to as ESSA),¹⁰ accounts for about 80 percent of the Commerce total in 1966, with Census accounting for most of the remainder. The Navy reported about 95 percent of the Department of Defense total. However, the Air Force reported no funds for this activity, and only the Corps of Engineers reported under the Department of the Army. Within the Department of the Interior, the Geological Survey is responsible for over 90 percent of the total, and within the Department of Labor, the Bureau of Labor Statistics for over 95 percent.

In fiscal years 1965-67, from 95 to 98 percent of obligations in this activity represent intramural performance. The predominance of intramural obligations is in sharp contrast to the predominance of extramural obligations for research and development reported in part I (about 80 percent of the Federal R&D total for fiscal years 1965-67). Intramural performance of general-purpose scientific data collection reflects a long history of Federal activity in this area. By contrast, Federal research and development, often because of the urgent need, has relied heavily on outside performers in the past 25 years.

Natural and Social Phenomena

This survey requested the Government agencies to report their obligations for collection of general-

¹⁰ In fiscal year 1966, the Weather Bureau, the Coast and Geodetic Survey, and the Propagation Laboratory of the National Bureau of Standards were combined into the Environmental Science Services Administration in the Department of Commerce. The Weather Bureau remains the major ESSA subdivision throughout this portion of the report.

TABLE 25. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY

Agency	Actual, 1965	Estimates	
		1966	1967
Total (millions of dollars).....	\$343	\$333	\$381
Percent distribution			
Department of Commerce.....	47	45	43
Department of Defense.....	18	14	18
Department of the Interior.....	11	13	11
Department of Agriculture.....	10	11	9
Department of Labor.....	5	5	5
Department of Health, Education, and Welfare.....	4	5	6
Other agencies.....	6	8	9

NOTE: Percent detail may not add to 100 because of rounding.

purpose scientific data by kind of activity, to be discussed later, and by type of data—natural phenomena or social phenomena. Natural phenomena pertain to data collected in the physical or life sciences, while social phenomena pertain to data collected in the social sciences. Precipitation measurements, stream and tide gaugings, and topographical mappings are examples of natural phenomena data. Such items as population statistics, employment data, and production figures are examples of social phenomena data.

In 1966 approximately 73 percent of the total Federal funds for general-purpose data were used for natural phenomena and the remainder for social phenomena. The high proportion devoted to natural phenomena is caused, in part, by the more complex and expensive equipment required for gathering such data. Almost every departmental subdivision and independent agency reported its obligations as pertaining to either natural phenomena or social phenomena rather than both. (See chart 22 and appendix tables E-3—E-6.)

Four agency subdivisions that accounted for over 90 percent of the total Federal obligations for natural phenomena were: ESSA, in the Department of Commerce; Navy, in DOD; the Geological Survey, in Interior; and the Soil Conservation Service, in Agriculture. In the area of social phenomena, four subdivisions were responsible for approximately 70 percent of the total: Census, in Commerce; BLS, in

Labor; the Statistical Reporting Service, in Agriculture,¹⁷ and the Public Health Service, in HEW.

Relation to Other Scientific Activities

There is considerable variation among agencies in the relationship of general-purpose scientific data collection either to research and development or to scientific and technical information activities. For example, Commerce and Interior have very large data collection programs but conduct relatively little research and development. On the other hand, the National Aeronautics and Space Administration and the Atomic Energy Commission have very large R&D programs but reported nothing for general-purpose scientific data collection. Several of the agencies that reported large obligations for these data also reported large obligations for scientific and technical information activities.

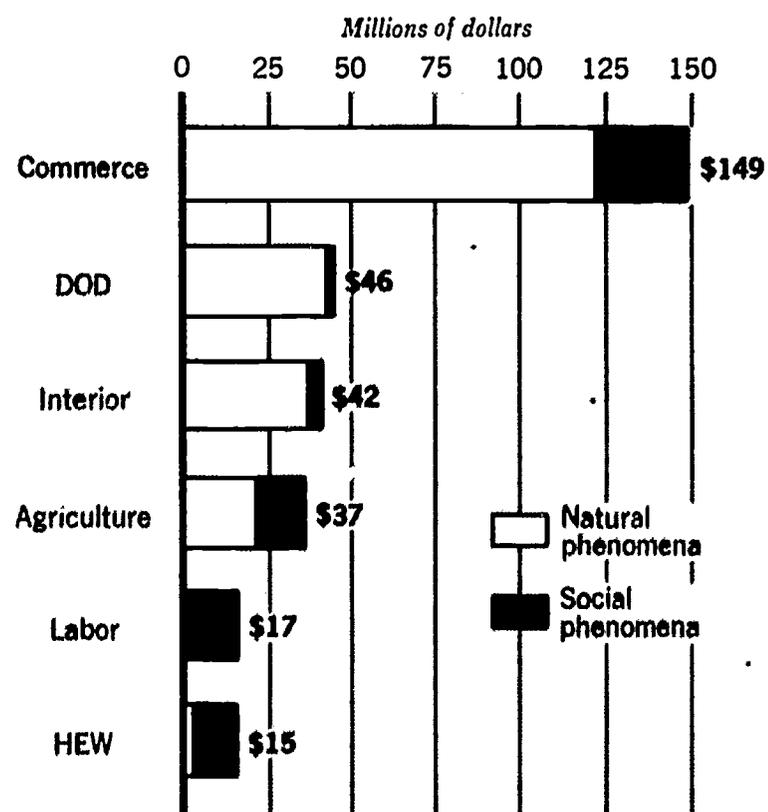
General-purpose scientific data do not include those collected in the conduct of research and development since the latter are regarded as an integral part of the research and development process. Furthermore, general-purpose scientific data are distinguished from scientific and technical information that is derived from R&D activities or is used primarily by scientists and engineers engaged in R&D activities. It should be emphasized that all three activities are often closely interlocked in day-to-day operations. In general, research and development

¹⁷ In last year's report, Volume XIV, the Consumer and Marketing Service of the Department of Agriculture was a major subdivision in the area of social phenomena. However, no obligations were reported for this survey because Agriculture no longer feels that the activities of this subdivision meet the criteria of general-purpose scientific data.

both build on and create new scientific and technical information, while general-purpose data serve as a stockpile of more general socioeconomic facts for use in R&D activities. These general-purpose data, also serve a much broader public in government, industry, and education.

Chart 22

Federal obligations for collection of general-purpose scientific data, by agency and type of phenomena, FY 1966 (est.)



SOURCE: National Science Foundation

Section 2: ACTIVITIES

FEDERAL OBLIGATIONS for the collection of general-purpose scientific data were reported under four categories of collection activity besides the two broad areas of natural and social phenomena. These categories parallel the data collection sequence. First, data must be gathered, processed, and collated (category 1) before the next step, analysis (category 2), can be accomplished. The data are then published (category 3) in usable form for interested persons. The equipment used (category 4) enters into the first step of gathering, processing, and collating the data. (See chart 23 and table 26.)

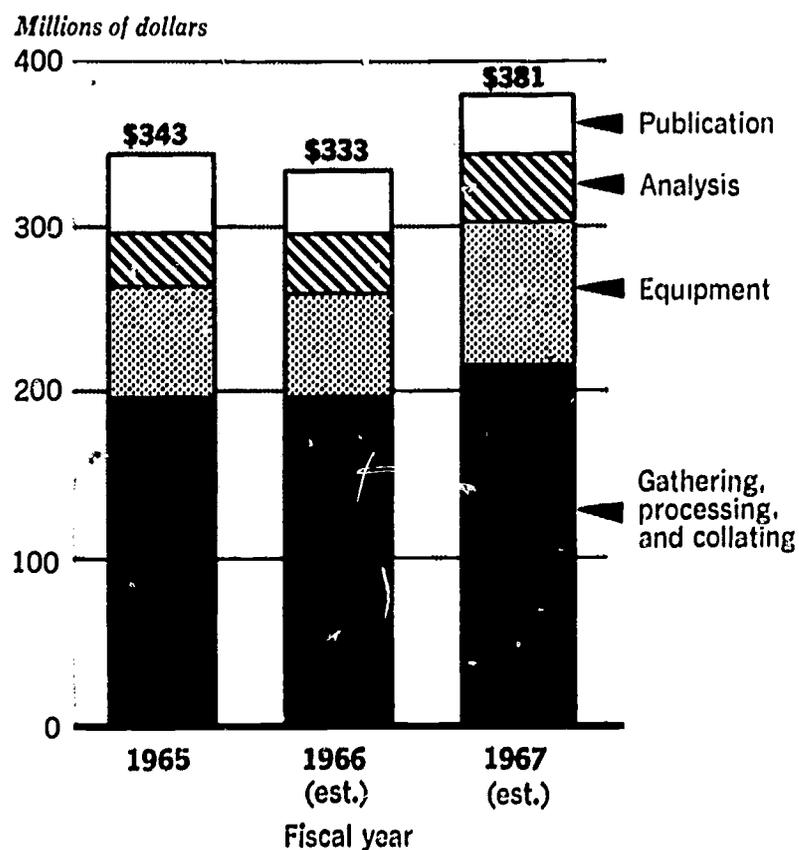
Category 1: Gathering, Processing, and Collating

This is the largest category of collection activities, accounting for approximately 60 percent of the total Federal obligations for general-purpose scientific data collection in 1965-67. Most agencies reported the major portion of their funds for data collection activities as going for this category. The main exception is the Navy, which reported the largest portion of its obligations for category 4, equipment for data gathering, processing, or collating. About 65 percent of the category 1 total was under natural phenomena.

Commerce was by far the largest supporter of category 1 activities, accounting for around 45 percent of the total. Within Commerce, ESSA and Census reported practically all of the Department's total. Subdivisions of other departments which were very active in this category included the Geological Survey, in Interior; the Soil Conservation Service, in Agriculture; and the Bureau of Labor Statistics, in Labor.

The programs of the Geological Survey in this area provide for (1) portrayal on maps of the eleva-

Chart 23
Federal obligations for collection of general-purpose scientific data, by activity



SOURCE: National Science Foundation

tion, shape, and position of natural and man-made features of the earth's surface, (2) collection of hydrologic data to inventory and describe the quantity and quality of surface and ground waters, and (3) classification of public lands to provide the basis for a system of public land administration.

There is some difference in the distribution of funds for category 1 activities between natural and social phenomena. Of the total funds under natural phenomena, about one-half went for gathering, processing, and collating data. Under social phe-

TABLE 26. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA BY AGENCY AND ACTIVITY, FISCAL YEAR 1966 (EST.)

Agency	Total	Category 1	Category 2	Category 3	Category 4
		Gathering, processing, and collating	Analysis	Publication	Equipment for data gathering, processing, or collating
Total (in millions of dollars).....	\$333	\$108	\$38	\$36	\$62
Percent Distribution					
Department of Commerce.....	45	44	50	51	41
Department of Defense.....	14	3	7	24	47
Department of the Interior.....	13	15	14	12	4
Department of Agriculture.....	11	14	9	7	3
Department of Labor.....	5	7	7	2	1
Department of Health, Education, and Welfare.....	5	6	7	2	1
Other agencies.....	8	12	6	2	2

NOTE: Percent detail may not add to 100 because of rounding.

nomena, over three-fourths of the total went for category 1 activities.

Category 2: Analysis

Obligations for this category of activity have accounted for about 11 percent of the total Federal obligations reported for part III of the survey for 1965-67. The Weather Bureau (within ESSA of the Department of Commerce) reported 48 percent and the Geological Survey (in Interior) reported 13 percent of the total obligations for this category.

The activities of the Weather Bureau well illustrate the many uses of general-purpose scientific data. The Bureau collects surface- and upper-air weather data from many sources—weather stations located throughout the United States and its possessions and on ships, and from foreign countries through cooperative agreements. After collection, these data are processed and analyzed for the preparation of the familiar weather forecasts and warnings. River and flood-stage advices are also prepared from such data. Scientists make use of these data in connection with research in the atmospheric sciences.

Category 3: Publication

Obligations under this category of activity account for 10 to 13 percent of the total Federal funds for collection of general-purpose scientific data during

1965-67. Again ESSA and the Navy are the major subdivisions, accounting for 70 percent of the total.

The Navy Oceanographic Office accounts for all of Navy's activity in this area. This subdivision collects various hydrographic, oceanographic, and aeronautical data and publishes these data in the form of charts, directives, and other related material for use by Navy and Merchant Marine ships and naval aircraft. In addition, special charts and related materials are published for training and operational use.

Category 4: Equipment for Data Gathering, Processing, or Collating

This is the second largest category of activity, representing from 18 to 22 percent of the total Federal obligations for data collection during 1965-67. The Navy and ESSA are the major obligators, accounting for close to 90 percent of the total for this category. Both of these agencies have large data collection programs requiring a range of expensive equipment including computers, weather satellites, and ships. As might be expected, there is a wide difference in the distribution of funds under this category between natural and social phenomena. Of the total obligations under natural phenomena, about 25 percent went for category 4, but under social phenomena only 4-10 percent went for equipment covered by this activity.

APPENDICES

APPENDIX A

TECHNICAL NOTES

These technical notes deal with adjustments in data, definitions of terms, changes in reporting, limitations of data, relation to other estimates, and sources. The definitions are unchanged from prior issues of the *Federal Funds* series although new interpretations of data have been made in some cases to better fit the definitions. Attention is called to *Scope and Method*, which discusses the survey technique, reconciliation of data with those in *The Budget of the United States Government*, and the difficulties of identifying scientific activities. Other limitations are noted at appropriate points within the text of Part I, Federal Funds for Research, Development, and R&D Plant; Part II, Federal Funds for Scientific and Technical Information; and Part III, Federal Funds for Collection of General-Purpose Scientific Data.

Adjustments in Data

In general, obligations for the three scientific activities covered in this report were separately identified by the responding departments and independent agencies. However, two departments with large R&D programs and many extramural contracts—DOD and HEW (specifically NIH)—had some difficulty separating the three scientific activities, research and development, scientific and technical information, and general-purpose scientific data. This has resulted in reporting by these agencies of the same obligations under more than one scientific activity. From 34 to 39 percent of the total obligations for categories 1-3 of scientific and technical information activities in the years 1965-67 were also reported as research and development. Such funds amounted to 0.6 percent of

the total Federal obligations for research and development. Category 4 of the STINFO activities is, by definition, an R&D activity and, therefore, was included in part I by all reporting agencies. (See table A-1.)

In addition to the overlapping of funds described above, the National Institutes of Health reported all its obligations for collection of general-purpose scientific data under part I—funds for research, development, and R&D plant—as well as under part III. In order to obtain a figure representing only research and development, table A-2 eliminates the overlaps and shows the net totals for the three scientific activities covered in this report.

Definitions

The definitions are presented to correspond with the three parts of the report. However, some definitions in part I are also applicable to parts II and III.

PART I. RESEARCH, DEVELOPMENT, AND R&D PLANT

(1) *Research, development, and R&D plant* include all direct, indirect, incidental, or related costs resulting from or necessary to research, development, and R&D plant, regardless of whether the research and development are performed by a Federal agency (intramural) or performed by private individuals and organizations under grant or contract (extramural). Research and development *exclude* routine product testing, quality control, mapping and surveys, collection of general-purpose statistics, experimental production, and activities concerned primarily with the dissemination of scientific information and the training of scientific manpower.

TABLE A-1. OBLIGATIONS REPORTED BOTH FOR CATEGORIES 1-3 OF SCIENTIFIC AND TECHNICAL INFORMATION* AND FOR RESEARCH AND DEVELOPMENT, BY AGENCY

(Millions of dollars)

Agency	Actual, 1965	Estimates		Information activities as percent of agency R&D total (approximate)
		1966	1967	
Total.....	\$88.7	\$94.5	\$93.3	1
Department of Defense.....	76.8	81.0	78.3	1
Department of the Army.....	35.9	38.2	36.0	3
Department of the Navy.....	12.1	12.9	13.5	1
Department of the Air Force.....	17.7	17.3	16.6	1
Defense Agencies.....	11.2	12.6	12.1	2
National Institutes of Health.....	11.9	13.5	15.0	2

* The categories are (1) publication and distribution; (2) documentation, reference and information services; and (3) symposia and audio/visual media.

TABLE A-2. ADJUSTED OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT; SCIENTIFIC AND TECHNICAL INFORMATION; AND COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA

(Millions of dollars)

Activity	Actual, 1965	Estimates	
		1966	1967
Adjusted total, three scientific activities.....	\$16,186.6	\$17,543.5	\$17,185.4
1. Research, development, and R&D plant, adjusted total.....	15,641.6	16,974.0	16,556.3
Research, development, and R&D plant (as reported).....	15,731.2	17,069.4	16,650.5
Scientific and technical information (categories 1-3) also reported as R&D.....	-88.7	-94.5	-93.3
General-purpose scientific data collection also reported as R&D.....	-.9	-.9	-.9
2. Scientific and technical information, adjusted total.....	202.2	236.5	248.0
Scientific and technical information (as reported).....	224.7	260.7	273.1
R&D included in information activities (category 4).....	-22.5	-24.2	-25.1
3. Collection of general-purpose scientific data, total (as reported).....	342.8	333.0	381.2

NOTE: Detail may not add to totals because of rounding.

a. Research is systematic, intensive study directed toward fuller scientific knowledge or understanding of the subject studied. Research may be classified as either basic or applied.

In *basic research* the investigator is concerned primarily with gaining a fuller knowledge or understanding of the subject under study.

In *applied research* the investigator is primarily interested in a practical use of the knowledge or understanding for the purpose of meeting a recognized need.

b. Development is the systematic use of the knowledge and understanding, gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes. It excludes quality control, routine product testing, and production.

c. R&D plant (or R&D facilities and fixed equipment such as reactors, wind tunnels, and radio telescopes) includes acquisition of, construction of, major repairs to, or alterations in structures, works, equipment, facilities, or land, for use in R&D activities at Federal or non-Federal sites, regardless of where the title to the property may rest.

(2) *Obligations and Expenditures.* In this report obligations and expenditures are defined as follows:

a. Obligations represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when future payment of money is required.

b. Expenditures represent the amounts for checks issued and cash payments made during a given period, regardless of when the funds were appropriated.

For those agencies operating on a cost-type budget, accrued expenditures and costs are reported instead of obligations. Accrued expenditures represent all costs accrued during the reporting period except those subject to reimbursement from other agencies. The information on expenditures represents net cash payments for research, development, and R&D plant, exclusive of any receipts of the agency for these purposes.

An agency making transfer of funds to another agency includes such transfers in its report of obligations and expenditures. The data include all funds available to the agency from

direct appropriations, trust funds or special account receipts, corporate income, or other sources, including that portion of funds appropriated to the President that the agency received or expects to receive. The amounts shown for each year reflect obligations and expenditures as incurred for that year regardless of when the funds were originally authorized or received and regardless of whether they were appropriated, received, or identified in the agency's budget specifically for research, development, or R&D plant. The receiving agency does not report, for purposes of this survey, on funds transferred to it from another agency.

Obligations and expenditures for work performed in foreign countries include funds directly available to Federal agencies and foreign currencies arising out of Public Law 480, sections (a), (k), and (n).

(3) *Cost Coverage.* Funds reported for research and development reflect full costs. In addition to costs identified with specific R&D projects, the applicable overhead costs are included. The amounts reported reflect the costs of planning and administering R&D programs and other costs closely related to and directly associated with research and development. Items such as laboratory overhead, pay of military personnel, and departmental administration are reported when administratively possible.

(4) *Fiscal Year.* The fiscal year is the Government accounting period beginning July 1 and ending June 30 of the following calendar year; thus, fiscal year 1967 began on July 1, 1966 and will end June 30, 1967.

(5) *Agency.* Any organization of the Federal Government whose principal executive officer reports to the President is classified as an agency. The Library of Congress, under the legislative branch of the Government, is included also. The term *sub-division* refers to any major organizational unit of a reporting agency, such as a bureau, division, office, or service.

(6) *Performer.* Either an intramural organization accomplishing an operating function, or an extramural organization or person receiving support or providing services as a result of a contract or grant constitutes a performer. The two categories of performers are:

a. Intramural performers, the agencies of the Federal Government, whose work is carried

on directly by their personnel. Obligations and expenditures reported under this category are for activities performed or to be performed by the reporting agency itself, and they include funds that this agency transfers to another Federal agency for the performance of the reporting agency's activities. However, the transfer of funds to another Federal agency is not the basis for reporting that funds are for intramural performance. The agency making the transfer of funds reports, within administrative practicability, whether the *ultimate* performer is intramural or extramural. If the ultimate performer is an extramural one, the funds so transferred are reported by the transferring agency under the appropriate extramural performer category, e.g., industrial firms, educational institutions, other nonprofit institutions.

Agencies were asked to include under intramural performance the costs of supplies and equipment, essentially of an off-the-shelf nature, which were procured for use in intramural research and development. Also included as part of the intramural performance total were the expenses for planning and administering programs by Federal personnel of contracts and grants for extramural work.

b. Extramural performers, all organizations outside the Federal complex which perform for the Federal government under contract or grant. Only those costs associated with the actual extramural performance are required to be reported. The costs of procurement from extramural sources of "off-the-shelf" types of supplies and equipment required to support intramurally performed research and development are reported as part of the costs of intramural performance. For example, the purchase from an extramural source of a launch vehicle which was operational (i.e., had gone beyond the development or prototype stage) and which was used in an intramural Federal installation for the performance of research and development, would be reported as a part of the cost of intramural research and development. Extramural performers are identified as follows:

(i) *Industrial firms,* those organizations which may legally distribute net earnings to

individuals or to other organizations. These were formerly designated as "profit organizations."

(ii) *Educational institutions*, nonprofit organizations engaged primarily in providing resident instruction above the secondary school level. Included are universities and colleges proper, consisting of colleges of liberal arts, schools of arts and sciences, professional schools, such as medicine and engineering, affiliated research institutions, hospitals, and agricultural experiment stations and associated schools of agriculture.

(iii) *Other nonprofit institutions*, private organizations other than educational institutions, no part of whose net earnings inure to the benefit of a private stockholder or individual, and other private organizations organized for the exclusive purpose of turning over their entire net earnings to such nonprofit organizations.

(iv) *Other domestic performers*, all other miscellaneous performers not covered in the foregoing categories, e.g., State and local governments and private individuals.

(v) *Foreign performers*, foreign organizations and individuals in foreign countries who are performing research and development financed by Federal agencies. Funds reported for foreign performers include support for international organizations, e.g., NATO, UNESCO, WHO, performing research and development outside the United States. Funds spent by the United States Government in foreign countries for work performed by agencies of the United States and funds included for support of foreign scientists in the United States are not classified as foreign performance.

c. *Federal contract research centers*, R&D organizations exclusively or substantially financed by the Government, which in most instances were originally established to meet an R&D need of the Federal Government. They are administered by extramural organizations, as described above, through contracts.

(7) *Fields of Science*. The fields of science covered in this survey include the life, psychological, physical, social, and "other" sciences.

a. *Life sciences* are the biological, medical, and agricultural sciences.

(i) *Biological sciences* are those which, apart from the medical and agricultural sciences as defined below, deal with the origin, development, structure, function, and interaction of living things.

(ii) *Medical sciences* are concerned with maintaining health and understanding disease.

(iii) *Agricultural sciences* are directed primarily toward understanding and improving the production of animals and plants.

b. *Psychological sciences* deal with behavior, mental processes, and individual and group characteristics and abilities. Psychological sciences are divided into two categories:

(i) *Biological psychology* includes research on animal behavior; sensory, perceptual, and physiological psychology; learning; motivation; higher mental processes; and clinical psychology.

(ii) *Social psychology* includes research on personality; educational psychology; personnel psychology; and social psychology, including group processes, interpersonal relations, opinion and attitude change, and developmental psychology.

c. *Physical sciences* are the physical sciences proper and the mathematical and engineering sciences.

(i) *Physical sciences proper* are concerned primarily with the understanding of the natural phenomena associated with non-living things.

(ii) *Mathematical sciences* employ logical reasoning with the aid of symbols and are concerned with the development of methods of operations employing such symbols.

(iii) *Engineering sciences* are directed toward developing engineering principles or toward making specific scientific principles usable in engineering practice.

The following is not intended as a complete enumeration of all subdisciplines in a particular discipline of the physical sciences. These examples illustrate, however, their composition.

*Physical Sciences Proper**Astronomy*

Astronomy
 Astronometry
 Astrophysics
 Celestial mechanics
 Solar systems physics

Chemistry

Analytical chemistry
 Inorganic chemistry
 Organic chemistry
 Physical chemistry

Earth sciences

Atmospheric sciences
 Meteorology and climatology
 Upper atmospheric physics
 Oceanography
 Chemical
 Geological
 Physical
 Solid earth sciences
 Geology
 Geochemistry
 Geophysics
 Paleontology

Physics

Elementary particle physics
 Cosmic rays
 High energy accelerators
 High energy particles
 Nuclear structure physics
 Nuclear reactions and scattering
 Nuclear spectroscopy
 Reactors
 Accelerators
 Atomic, molecular, and solid-state physics
 Semiconductors
 Dielectronics
 Ferromagnetism
 Atomic and molecular beams, structures,
 and spectra

*Mathematical Sciences**Algebra and foundations**Analysis**Topology and geometry**Applied mathematics**Numerical analysis**Engineering Sciences**Aeronautical and astronautical*

Aerodynamics
 Craft propulsion systems

Chemical

Unit operations
 Fundamentals

Civil

Sanitary
 Structures

Electrical

Power
 Communication

Mechanical

Mechanics
 Design
 Heat power

Metallurgy and materials

Physical
 Process

d. Social sciences are directed toward an understanding of the behavior of social institutions and groups and of individuals as members of a group. These include such sciences as cultural anthropology, economics, history, political science, and sociology. In addition to work in disciplines or subjects traditionally considered social science, it is intended that this field should also include work in other disciplines or subjects in which the work is undertaken primarily for the purpose of understanding group behavior.

e. Other sciences is the category provided for reporting research which cannot be readily classified under one of the above named fields.

PART II. SCIENTIFIC AND TECHNICAL INFORMATION

Scientific and technical information is knowledge or data resulting from the conduct of research and development, or required for organizing, administering, or performing research and development. It encompasses any information in recorded or other communicable form which presents the status, progress or results of research and development in science or technology, or which has potential use in advancing current and future research and development.

Exclusions are:

a. raw scientific and technical data that have not been processed for use by scientific personnel engaged in research and development (included in part I of this report);

b. statistical and general-purpose data that are collected and organized for other than specific use in research and development (included in part III of this report);

c. information that has been prepared primarily to inform or instruct the general public or others below the graduate or professional level of scientific activity.

Scientific and technical information activities include all management, administrative, and operational efforts directed to the planning, support, control, performance, and improvement of the functions or tasks which deal with the processing, handling, and communication of scientific and technical information. Also included is the acquisition and maintenance or rental of special equipment for primary use in scientific and technical information activities.

*Categories of Scientific and Technical Information Activity**(1) Publication and Distribution*

a. *Publication and distribution.* Included in this subcategory are efforts directed toward and involved in the publication and initial distribution of newly documented or recorded scientific and technical information.

Publication is further defined as all document production tasks performed *after* the author's manuscript or similar initial recording of the information has been prepared, and tasks associated with the initial issuance of distribution of the finished document. Such tasks include all professional writing, editing, and revising not performed by the author; preparation of final copy for printing or other reproduction or other processes for producing multiple copies and related tasks. Examples of publication activities covered are: typing, composing, typesetting, proofreading, display, illustrating, photographing, layout, makeup, printing, mimeographing, and photo-duplication.

Distribution includes tasks related to the initial transmission or dissemination of newly documented scientific and technical informa-

tion, i.e., mailing, shipping, and maintenance of distribution controls.

Excluded from this category are all efforts, except publication and distribution, involved in the preparation or compilation of reference and bibliographic tools and the reproduction of document copies for secondary or request dissemination. These activities are included under category 2, Documentation, Reference and Information Services. Also excluded are audio/visual aids, such as taped talks and motion picture films. These are included in category 3, Symposia and Audio/Visual Media.

b. *Support of publications.* This subcategory includes all page charges paid to primary journals using Federal funds, special subscription arrangements to maintain primary journals, and grants or contracts for publication and distribution of conference proceedings, monographs, or textbooks.

(2) *Documentation, Reference and Information Services.* This category includes all efforts not covered in the other categories directed to providing means and services by which users can be assisted in obtaining and exploiting available information.

a. *Bibliographic and reference services.* This subcategory encompasses acquisition, collection, exchange, and storage of scientific and technical documentary materials, such as journals, books, periodicals, manuals, reports, and drawings, and such related bibliographic and collective reference sources as abstract journals, indexes, and subject-heading and title lists. It also covers bibliographic organizing and processing of scientific and technical documentary materials to enhance their usefulness and availability to internal and external users. Included are such tasks as reviewing, screening, documenting, cataloging, indexing, coding, filing, subject classifying, abstracting, announcing, and listing. Included are initial preparation and maintenance of catalogs or other listings for keeping the organized records of available documentary material current; rental or acquisition and maintenance of special equipment; and library and retrieval services provided in response to requests or

needs of users. These services include reference and bibliographic searching, sale and loan of documentary materials, dissemination of documents via mail and personal visit, and liaison activities with users and other information services.

b. Specialized information centers. In general, these are functional elements which collect, review, digest, analyze, appraise, and summarize scientific and technical information and data in well-defined, specialized fields, and provide advisory and other user services concerning such data. They may be either discipline- or mission-oriented. Included are centers exclusively concerned with review or analysis of scientific or engineering data. Specialized information centers are distinguished from documentation centers and libraries, whose functions are primarily concerned with the handling of documents rather than the technical information contained in the documents. Documentation centers and libraries would be reported under subcategory a.

c. Translations. Included in this subcategory are costs resulting from and involved in the translation of documents and other materials from one language to another as a specific activity in support of research and development activities. Purchase of foreign journals and other materials to be translated were also reported in this subcategory.

(3) *Symposia and Audio/Visual Media*

a. Symposia and technical meetings. This subcategory includes all efforts directed to planning, scheduling, announcing, supporting, sponsoring, conducting, and attending symposia, conferences, and meetings held primarily for the discussion or other exchange and dissemination of scientific and technical information. Included are the travel and subsistence of participants in such symposia, conferences, and meetings.

b. Audio/visual media and other forms of oral communication. Included are the costs of producing technical and documentary motion picture films for R&D purposes. Audio and visual aids, such as taped talks or television film, are also included. Ex-

cluded are media primarily intended for training or public information purposes.

(4) *Research and Development in Information Sciences, Documentation and Information Systems, Techniques, and Devices.* This category includes the conduct and support of research and development of new and nonconventional methods, techniques, systems, and machines for improving the scientific and technical information tasks covered in the other categories. It also includes the conduct and support of studies and surveys to identify broad and specific aspects of scientific information problems. Examples of activities included in this category are: development and testing of machines, devices, and techniques for storage and retrieval of information and data; linguistics research; language and machine translation; communication and information theory; operations or systems research of scientific or technical information systems and processes; information theory; automata theory; artificial intelligence, logic, and switching theory; computer programming (including language, compilers, assemblers, simulators); documentation or document storage and retrieval; library science; network design; studies of subject classification and indexing schemes and scientific and technical information communication systems.

Also included in this category are applicable R&O costs for improving, modernizing, and renovating current information, data, and communication systems. In addition, research and development in information analysis and evaluation centers of a general nature, as contrasted with the costs of developing specialized information and data centers, were included in this category.

PART III. COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA

(1) *General-Purpose Scientific Data.* General-purpose scientific data include newly gathered statistics, observations, readings, specimens, and other facts obtained from such activities as surveys, field investigations, laboratory analyses, and compilations of operating records. Such data represent available information which separately or in combination with other information can be applied to useful, general scientific purposes. They are disseminated

to a wide variety of users, including public agencies, the general public, and possibly research investigators. These data may have been collected primarily for general-purpose use or may have been derived from an operating function. They are not data used solely for internal operating administrative purposes.

Exclusion. General-purpose scientific data are distinguished in this survey from data collected in the conduct of research and development and from scientific and technical information activities. For example, the gathering of raw data primarily to further an R&D project is an integral part of the R&D process. Further, for purposes of this survey, research on statistical survey methods and techniques is considered a part of research and development. Data collected as part of scientific and technical information activities are distinguished from general-purpose scientific data in that the former are derived from R&D activities or used in R&D activities primarily by scientists and engineers.

(2) *Natural and Social Phenomena.* The general-purpose scientific data pertain to two phenomena:

a. Natural phenomena. Natural phenomena data refer to data collected in the physical and life sciences. Examples of general-purpose scientific data relating to natural phenomena are precipitation measurements, tide and stream gauging, topographic mapping, physical and chemical constants, and entomological specimens.

b. Social Phenomena. Social phenomena data are data collected in the social sciences. Examples of general-purpose scientific data relating to social phenomena are data concerned with population, employment, industrial and agricultural production, housing construction, education, crime, and other socioeconomic phenomena.

(3) *Categories of General-Purpose Scientific Data Collection Activity*

a. Gathering, processing, and collating. Includes the planning and preparation of questionnaires and the evaluation of data for validity.

b. Analysis. Includes narrative analysis and summarization of data for general use.

Excluded from this category is the analysis of scientific general-purpose data in conjunction with R&D projects; such activity is considered a part of research and development.

c. Publication. Includes preparation for publication of general-purpose scientific data, or any other activities such as preparation of exhibits, which make data available to the general public.

d. Equipment. Includes procurement or rental of equipment for gathering, processing, or collating data.

Changes in Reporting

A. RESEARCH AND DEVELOPMENT

Responses from the agencies in this survey, as in previous ones, reflect updating of estimates for the last 2 years of the previous report. Such updating is normal in the budgetary cycle. In addition, the responses reflect reappraisals and revisions in classification of agencies' R&D operations. Conceptual changes arise from the abstract nature of the scientific activities surveyed and the consequent problems encountered by the respondents in evolving a rationale for classifying their operations to fit the survey's categories of activities. Since no statistical inquiry is free of problems of concepts and definitions for the respondents, revisions to improve the reporting are encouraged by the National Science Foundation. Historical data for fiscal year 1964 and prior years have been revised to maintain consistency and comparability with conceptual revisions introduced in the current report.

Although the conceptual revisions that were made affect equally the 2 years of the current report, only revisions of the fiscal year 1965 data, compared to the way they were reported in last year's report (*Federal Funds*, vol. XIV), are discussed below. Changes from other revisions arising out of updating of estimates, or reprogramming, are also discussed in particular instances.

National Aeronautics and Space Administration

For this report, as compared with volume XIV, NASA has introduced a number of reporting changes covering obligations for R&D plant; support of development activities; obligations for basic research; obligations for foreign R&D performers and R&D plant abroad; and Federal contract research centers.

(1) *R&D Plant.* Obligations for tracking and data acquisition equipment, totaling in excess of \$100 million in fiscal year 1965, were excluded from R&D plant and assigned to R&D programs. NASA's tracking and data acquisition equipment, procured with R&D appropriation funds, is considered operating equipment. Therefore NASA, in consultation with the Bureau of the Budget, determined that R&D plant obligations include equipment and facilities funded out of NASA's construction appropriation and facilities grants to educational institutions.

(2) *Development.* NASA's 1965 obligations for development, as given in volume XIV, were increased by almost \$120 million in volume XV. The main factor in the change was the transfer of obligations for tracking and data acquisition equipment from R&D plant to development; some other factors were an actual increase in obligations for the Apollo program and reclassification of a portion of the Apollo Mission Support obligations from applied research to development. (This change contributed to a reduction of NASA's applied research obligations in the engineering disciplines.)

(3) *Basic Research.* Obligations for 1965 were reduced approximately \$55 million, largely because of the evolution of NASA's Surveyor project. Essentially designed to serve as a stationary laboratory for measuring the physical and chemical characteristics of the lunar surface and subsurface and environmental conditions, the Surveyor is now relied upon to provide information on lunar surface characteristics which will assure the high confidence required before manned landings are attempted. These funds, previously reported as basic research, have now been assigned to the applied research category. This change is reflected in the current report, mainly in reduced basic research obligations for solid earth sciences and a corresponding increase for solid earth sciences under applied research obligations.

(4) *Foreign R&D.* Obligations for 1965 were revised by NASA to comply more closely with the survey's definition of a foreign performer, which excludes support of U.S. scientists and work performed by agencies of the United States abroad. About \$10 million obligated for the operation of U.S. tracking stations abroad, which were classified as foreign R&D by virtue of their overseas locations, is now excluded.

(5) *R&D Plant Abroad.* Estimated obligations of \$75 million in volume XIV have been deleted from this category. About \$45 million relates to tracking and data acquisition equipment now considered operating equipment, as discussed in item 1 above. The remainder of the reduction involves construction of facilities abroad, formerly classified by location of the site.

(6) *Federal Contract Research Centers.* An amount of \$14 million (reported in volume XIV as obligated in 1965 for the Lincoln Laboratory, a Federal contract research center administered by the Massachusetts Institute of Technology, for work done on the Apollo guidance system) has been deleted from the current report covering the Lincoln Laboratory. It has since been established by NASA, and reported accordingly, that the work was primarily performed at the MIT Instrumentation Laboratory, which is now included under the "educational institutions proper" performer category.

As in the previous report, NASA's obligations to the Jet Propulsion Laboratory research center, operated by the California Institute of Technology, continue to reflect only those obligations which support work actually performed at JPL. Thus, NASA's current report for 1965 includes only \$82.5 million in obligations to the Jet Propulsion Laboratory. The Laboratory's \$137 million in subcontracting in 1965 to other performers, the majority of which are industrial, is reported under the appropriate ultimate performer categories.

Department of Defense

(1) *Funding From Other Than RDT&E Appropriation.* DOD for this report, after reappraisal and review of its reporting practices, has allocated to development activities all R&D funding originating out of its military personnel, procurement, and operations and maintenance appropriations. (This change reverts to reporting practices followed for volume XIII and prior surveys of the *Federal Funds* series.) As a consequence, 1965 basic research obligations were reduced by \$18.3 million, and applied research obligations by \$80.6 million.

(2) *Federal Contract Research Centers.* DOD continued its review of organizations classified as Federal contract research centers, and for this report deleted the following organizations, under sponsorship of the Departments of the Air Force and Army:

Arnold Engineering Development Center
(ARO, Inc.)

Space Technology Laboratory (Thompson
Ramo Wooldridge, Inc.)

Electromagnetic Compatibility Analysis Center
(Illinois Institute of Technology Research
Institute)

Prevention of Deterioration Center (National
Academy of Sciences)

Obligations for services rendered by the above organizations are now assigned to the appropriate performer's proper category.

(3) *Foreign R&D Obligations.* Subsequent to the print-out of the statistical tables presented in this report DOD revised its R&D obligations to Thailand and Vietnam for 1965, 1966, and 1967 in accordance with the definitions of this survey. Thus, foreign obligations on the part of DOD should be reduced by \$2.8 million for 1965, \$3.5 million for 1966, and \$2.7 million for 1967 and should be included under intramural performance since they arise from work performed by U.S. Government personnel abroad.

Atomic Energy Commission

AEC deleted from the list of Federal contract research centers the below-listed biomedical research facilities, and has allocated their obligations, totaling \$10.2 million in 1965, to the "educational institutions proper" performer category.

Agricultural Research Laboratory (University
of Tennessee)

Argonne Cancer Research Hospital (Univer-
sity of Chicago Medical School)

Biomedical Project (University of California at
Los Angeles)

Biomedical Project (University of California
at Davis)

Biomedical Project (University of Rochester)

Biomedical Project (University of Utah)

Radiological Laboratory (University of Cali-
fornia, Medical Radiation Center)

The AEC indicated that these facilities should be considered an integral part of their administering educational institutions, being either within a university department or coexisting with a department, with professional staffs largely composed of faculty and graduate students. Furthermore, the type of research performed by these facilities is similar to that performed under on-campus university contracts.

National Science Foundation

Obligations for deep crustal studies of the earth (Project Mohole), previously reported as basic research, are now classified as R&D plant. Revision was based on the fact that the existing phase of the program involves the development, design, and fabrication of an item of capital equipment.

B. SCIENTIFIC AND TECHNICAL INFORMATION

In volume XIV, additional data on STINFO activities were requested by the National Science Foundation for the use of the Committee on Scientific and Technical Information (COSATI) of the Federal Council for Science and Technology and the Bureau of the Budget. This information was not requested by this committee this year, and, hence, is not included in volume XV.

The costs of management and administration of STINFO activities were separately identified in volume XIV covering fiscal years 1964-66. However, due to difficulty encountered by the responding agencies in identifying these costs, it was decided to return to the previous method of reporting and prorate these costs under the standard four categories of information activities.

C. COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA

The Consumer and Marketing Service of the Department of Agriculture estimated obligations of about \$6.6 million for fiscal years 1965 and 1966 in volume XIV. However, no such obligations are reported in this report because this agency now believes that the criteria of general-purpose scientific data do not apply to its statistical activities.

Organizational Changes

It should also be noted that in the years covered in this report, there have been some changes in the organization of departments along with the creation of new agencies and subdivisions. The Department of Commerce underwent a reorganization in 1966, combining the Coast and Geodetic Survey, the Weather Bureau, and the Propagation Laboratory (National Bureau of Standards) into the Environmental Science Services Administration. Its Economic Development Administration was previously reported as the Area Redevelopment Administration. Also, in 1966, a new cabinet-level department was created—the Department of Housing and Urban Development—with the Housing and Home

Finance Agency as the nucleus. In the latter part of fiscal year 1966, after responses to this survey had been received and tabulated, the Federal Water Pollution Control Administration was transferred from HEW to the Department of the Interior. Funds for this subdivision, however, are reported under HEW in this report. Fiscal year 1965 saw the creation of the Office of Economic Opportunity to carry out some of the Great Society programs. Obligations for this agency in the area of general-purpose scientific data have gone from an initial figure of \$75,000 in 1965 to an estimated \$9 million in 1967.

Limitations of Data

The principal limitations are discussed under *Scope and Method*. Other factors affecting data on research and development, scientific and technical information, and general-purpose scientific data collection are discussed below.

It is important to bear in mind that the data presented in this report are based upon the Federal budget. The respondents have reconciled the data reported with amounts for scientific activities shown in *The Budget of the United States Government, Fiscal Year 1967*. The amounts reported for each year, however, indicate the obligations or expenditures incurred, or expected to be incurred, in that year, regardless of when the funds were authorized or received by the agency and regardless of whether the funds were identified in the agency's budget specifically for research, development, R&D plant, scientific and technical information, or collection of general-purpose data. Following the format of Federal budgets, data are reported in terms of a 3-year cycle.

In this report, amounts for 1965 reflect transactions of a completed fiscal year and thus are "actual" amounts. Data for 1966 and 1967 are based on various stages of the budget and planning cycles and consequently are "estimates." Data for 1967, moreover, do not reflect appropriation, apportionment, or allocation decisions that took place subsequent to receipt of data from the respondents. The text and statistical tables for 1967, thus, are agency proposals to undertake programs. In addition, both the 1966 and 1967 data are subject to reprogramming and other administrative changes instituted after publication of *The Budget, 1967*.

Aside from being estimates in budgetary terms, in a broader sense all data reported are estimates, and accounting precision cannot be imputed to them. Quantification of research and development is complicated by difficulties of classifying abstract and dynamic activities. "Best judgment" must be used when a respondent classifies and identifies funds for basic research, applied research, and development. There are often no clear-cut demarcations between these work categories. The same element of subjective judgment holds, for instance, in categorizing a large interdisciplinary research program by primary field of science. Compensating for such factors, however, is the fact that the survey respondents, in general, are a continuing group who have participated in as many as 15 successive annual surveys and who have developed a general rationale for using information in agency records to meet the demands of the survey as accurately as possible.

In the area of scientific and technical information, extramural obligations are limited to funds allocated for grants and contracts that are *primarily* for the support of scientific and technical information activities. As in prior volumes of this series, extramural funds for information activities performed as a supplemental, supporting service under grants or contracts primarily for research and development, have been excluded. This is because the data are not believed to be sufficiently reliable since it is often not feasible for the respondent to determine what portion of an R&D grant or contract actually supports information activities. Also, R&D projects frequently receive support from several agencies through a number of grants and/or contracts. In such instances, related information activities might pertain to the overall R&D project and the funds supporting them not be identifiable under a particular grant or contract.

Relation to Other Estimates

In a special analysis of *The Budget of the United States Government*, the Bureau of the Budget publishes estimates of obligations and expenditures for research, development, and R&D plant. These estimates are generally comparable with those presented in this report. Differences occurring may be attributed primarily to timing, since the special analysis is published concurrently with *The Budget* in January before the fiscal year begins. Further, the data in the special analysis are classified differently and do not provide as much detail.

Another point regarding other estimates is that individual agencies may summarize their programs for purposes other than those for which this survey is conducted. Definitions and guidelines are used that are suitable to those other purposes and, consequently, the information may not be comparable with the reports transmitted to the Foundation for this publication.

Since 1956, the Bureau of the Budget has included a special analysis within *The Budget* which delineates the principal statistical programs of the Federal Government for the collection of data on social phenomena. In a number of instances, obligations for programs of the agencies classified by the Bureau of the Budget as statistical activities were reported as obligations for research and development or scientific and technical information in the survey by the National Science Foundation. Also, the Bureau analysis did not report on programs of many agencies that were included in the Foundation's survey. These differences reflect the varying methods used to obtain the findings for and the di-

verse purposes of the two compilations. Comparison of these compilations, however, may clarify individual agency concepts and reveal areas of under-reporting in this survey.

Sources

Data on R&D funds in this report for years prior to 1952 were compiled by the Bureau of the Budget. These data have been published in previous issues of this series, with adjustments to reflect comparability with later reporting concepts introduced by the agencies.

In addition to the statistical data collected through the Foundation's survey of Federal agencies, the text of the report is based on a variety of sources, including the narrative statements submitted by the agencies, published records of testimony presented by the agencies to committees of the U.S. Senate and the House of Representatives, and personal contacts with representatives of the responding agencies.

APPENDIX B

FEDERAL CONTRACT RESEARCH CENTERS

Department of Defense

SECRETARY OF DEFENSE

Managed by Other Nonprofit Institutions

Hudson Institute

Institute for Defense Analyses

DEPARTMENT OF THE ARMY

Managed by Profit Organizations

Rocket and Propellant Laboratory (Rohm & Haas, Inc.)

Thiokol Project (Thiokol Chemical Corp.)

Managed by Educational Institutions

Army Mathematics Center (University of Wisconsin)

Human Resources Research Office (George Washington University)

Special Operations Research Office (American University)

Managed by Other Nonprofit Institutions

Research Analysis Corporation

DEPARTMENT OF THE NAVY

Managed by Profit Organizations

Ordnance Aerophysics Laboratory (Convair Division, General Dynamics Corp.)

Managed by Educational Institutions

Applied Physics Laboratory (Johns Hopkins University)

Applied Physics Laboratory (University of Washington)

Arctic Research Laboratory (University of Alaska)

Hudson Laboratory (Columbia University)

Navy Biological Laboratory (University of California)

Ordnance Research Laboratory (Pennsylvania State University)

Managed by Other Nonprofit Institutions

Center for Naval Analyses (Franklin Institute)

DEPARTMENT OF THE AIR FORCE

Managed by Profit Organizations

Nuclear Aerospace Research Facility (Convair Division, General Dynamics Corp.)

International Telephone and Telegraph Communications Systems (International Telephone & Telegraph Corp.)

Managed by Educational Institutions

Lincoln Laboratory (Massachusetts Institute of Technology)

Managed by Other Nonprofit Institutions

Aerospace Corp.

Department of Defense—Continued**DEPARTMENT OF THE AIR FORCE—Continued**

Anser (Analytic Services, Inc.)

MITRE Corp.

RAND Corp.

Atomic Energy Commission*Managed by Profit Organizations*

Bettis Atomic Power Laboratory (Westinghouse Electric Corp.)

Connecticut Aircraft Nuclear Engine Laboratory (Pratt & Whitney Aircraft Division United Aircraft Corp.)

Engineering Test Reactor, National Reactor Testing Station (Phillips Petroleum Co.)

Knolls Atomic Power Laboratory (General Electric Co.)

Savannah River Laboratory (E. I. duPont de Nemours & Co., Inc.)

Mound Laboratory (Monsanto Chemical Co.)

Oak Ridge National Laboratory (Union Carbide Nuclear Co.)

Sandia Laboratory (Sandia Corp.)

Managed by Educational Institutions

Ames Laboratory (Iowa State University of Science and Technology)

Argonne National Laboratory (University of Chicago)

Cambridge Electron Accelerator (Harvard University and Massachusetts Institute of Technology)

Lawrence Radiation Laboratory (including the Livermore Radiation Laboratory, University of California)

Los Alamos Scientific Laboratory (University of California)

Princeton-Pennsylvania Proton Accelerator (Princeton University and University of Pennsylvania)

Princeton Stellerator (Princeton University)

Stanford Linear Accelerator Laboratory (Stanford University)

Managed by Other Nonprofit Institutions

Brookhaven National Laboratory (Associated Universities, Inc.)

Oak Ridge Institute of Nuclear Studies (Oak Ridge Associated Universities)

Pacific Northwest Laboratory (Battelle Memorial Institute)

National Aeronautics and Space Administration*Managed by Educational Institutions*

Jet Propulsion Laboratory (California Institute of Technology)

National Science Foundation*Managed by Other Nonprofit Institutions*

Kitt Peak National Observatory (Association of Universities for Research in Astronomy, Inc.)

National Radio Astronomy Observatory (Associated Universities, Inc.)

National Center for Atmospheric Research (University Corp. for Atmospheric Research)

Cerro Tololo Inter-American Observatory (Association of Universities for Research in Astronomy Inc.)

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NOTES

- The source of data is the National Science Foundation, except where noted on individual tables (C-36 and C-47).
- Detail may not add to totals because of rounding.
- Estimates for 1967 are based on requested amounts included in *The Budget, 1967*, hence they do not reflect subsequent congressional action.
- Asterisks appearing in lieu of figure indicate that the amount is less than \$50,000.
- Defense agencies within the Department of Defense include agencies such as: Advanced Research Projects Agency (ARPA), Defense Atomic Support Agency, and Defense Communications Agency.
- Departmentwide funds of the Department of Defense include the Emergency Fund, Civil Defense, and Military Assistance funds.
- The Atomic Energy Commission's data reflect accrued obligations and expenditures.
- In tables showing extramural performers, support of agricultural experiment stations is included under obligations to educational institutions proper.
- Data for the Environmental Science Services Administration (ESSA) of the Department of Commerce, for 1965 and prior years, appear in statistics of ESSA's organizational predecessors within the Department: Coast and Geodetic Survey, Weather Bureau, and the Central Radio Propagation Laboratory of the National Bureau of Standards.
- Data for the Department of Housing and Urban Development, for 1965 and prior years, appear in statistics of its predecessor Housing and Home Finance Agency.
- The Federal Water Pollution Control Administration reported as part of the Department of Health, Education, and Welfare in these tables, became a bureau in the Department of the Interior under Reorganization Plan 2 of May 10, 1966.

TABLE C-1. SUMMARY OF FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, FISCAL YEARS 1965, 1966, AND 1967

(Millions of dollars)

Item	Actual, 1965	Estimates	
		1966	1967
TOTAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND R&D PLANT	14,874.7	15,962.5	16,151.8
RESEARCH AND DEVELOPMENT.....	13,790.2	14,913.5	15,280.0
R&D PLANT.....	1,084.4	1,049.0	871.8
TOTAL OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT	15,731.2	17,069.4	16,650.5
RESEARCH AND DEVELOPMENT.....	14,599.6	15,946.3	15,943.0
Total research.....	4,853.9	5,462.1	5,547.3
Basic research.....	1,689.9	1,928.8	2,093.0
Applied research.....	3,164.0	3,533.3	3,454.3
Development.....	9,745.7	10,484.2	10,395.8
R&D PLANT.....	1,131.6	1,123.1	707.4
RESEARCH AND DEVELOPMENT			
Performers			
Federal Government.....	3,092.7	3,259.2	3,363.5
Industrial firms, proper.....	8,667.7	9,563.9	9,317.9
Industrial firms research centers.....	406.1	405.3	397.3
Educational institutions, proper.....	1,188.1	1,373.5	1,483.1
Educational institution research centers.....	549.1	555.3	579.9
Other nonprofit organizations, proper.....	349.9	413.4	404.4
Other nonprofit organization research centers.....	231.9	239.5	251.8
Other domestic.....	45.4	64.2	69.0
Foreign.....	68.6	72.1	76.3
Research			
Performers			
Federal Government.....	1,453.9	1,527.7	1,588.2
Industrial firms, proper.....	1,463.5	1,747.6	1,630.6
Industrial firms research centers.....	70.3	88.4	77.9
Educational institutions, proper.....	1,119.4	1,289.6	1,385.9
Educational institution research centers.....	331.6	329.1	349.8
Other nonprofit organizations, proper.....	224.1	256.2	271.5
Other nonprofit organization research centers.....	98.7	106.1	113.7
Other domestic.....	43.1	58.0	62.6
Foreign.....	49.4	59.4	67.1
Field of science			
Life sciences, total.....	1,182.9	1,352.4	1,427.4
Biological sciences.....	258.1	283.9	302.9
Medical sciences.....	819.4	953.1	1,015.9
Agricultural sciences.....	105.3	115.4	108.7

TABLE C-1. SUMMARY OF FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, FISCAL YEARS 1965, 1966, AND 1967—Continued

(Millions of dollars)

Item	Actual, 1965	Estimates	
		1966	1967
Research—Continued			
Psychological sciences.....	103.5	136.7	157.9
Physical sciences, total.....	3,370.3	3,680.7	3,649.2
Physical sciences, proper.....	1,693.8	1,849.2	1,855.7
Mathematical sciences.....	104.6	124.9	135.4
Engineering sciences.....	1,572.0	1,706.6	1,658.1
Social sciences.....	127.4	188.4	221.9
Other sciences.....	69.8	103.9	90.8
Basic research			
Performers			
Federal Government.....	424.4	458.6	490.0
Industrial firms, proper.....	271.5	342.1	372.4
Industrial firms research centers.....	27.5	30.3	32.2
Educational institutions, proper.....	634.2	730.9	804.4
Educational institution research centers.....	150.7	162.6	179.7
Other nonprofit organizations, proper.....	88.2	99.6	105.5
Other nonprofit organization research centers.....	52.0	58.3	62.1
Other domestic.....	16.0	19.1	18.8
Foreign.....	25.4	27.4	28.0
Field of science			
Life sciences, total.....	502.6	571.6	605.3
Biological sciences.....	176.7	206.9	221.9
Medical sciences.....	285.7	319.5	338.3
Agricultural science.....	40.2	45.2	45.1
Psychological sciences.....	57.8	73.1	83.7
Physical sciences, total.....	1,090.7	1,232.6	1,343.9
Physical sciences, proper.....	890.9	1,002.8	1,072.3
Mathematical sciences.....	56.5	62.5	67.6
Engineering sciences.....	143.3	167.3	204.0
Social sciences.....	36.9	49.4	57.9
Other sciences.....	1.9	2.0	2.1

TABLE C-1. SUMMARY OF FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, FISCAL YEARS 1965, 1966, AND 1967—Continued

(Millions of dollars)

Item	Actual, 1965	Estimates	
		1966	1967
Applied research			
Performers			
Federal Government.....	1,029.5	1,069.0	1,098.3
Industrial firms, proper.....	1,192.0	1,405.5	1,258.2
Industrial firms research centers.....	42.8	58.2	45.7
Educational institutions, proper.....	485.2	558.7	581.5
Educational institution research centers.....	181.0	166.6	170.1
Other nonprofit organizations, proper.....	135.8	156.6	165.9
Other nonprofit organization research centers.....	46.7	47.8	51.7
Other domestic.....	27.1	38.9	43.8
Foreign.....	24.0	32.0	39.2
Field of science			
Life sciences, total.....	680.3	780.8	822.1
Biological sciences.....	81.4	77.0	81.0
Medical sciences.....	533.7	633.6	677.6
Agricultural sciences.....	65.2	70.2	63.5
Psychological sciences.....	45.7	63.6	74.2
Physical sciences, total.....	2,279.6	2,448.1	2,305.3
Physical sciences, proper.....	802.9	846.3	783.3
Mathematical sciences.....	48.0	62.5	67.8
Engineering sciences.....	1,428.7	1,539.2	1,454.2
Social sciences.....	90.5	139.0	164.0
Other sciences.....	67.9	101.9	88.7
Development			
Performers			
Federal Government.....	1,638.8	1,731.5	1,775.3
Industrial firms, proper.....	7,204.2	7,816.3	7,687.3
Industrial firms research centers.....	335.9	316.9	319.4
Educational institutions, proper.....	68.7	83.8	97.2
Educational institution research centers.....	217.5	226.1	230.1
Other nonprofit organizations, proper.....	125.8	157.2	132.9
Other nonprofit organization research centers.....	133.3	133.5	138.0
Other domestic.....	2.3	6.2	6.4
Foreign.....	19.2	12.7	9.2
R&D PLANT			
Federal civilian or military installations.....	913.0	855.0	513.7
Non-Federal site			
Educational institutions, proper.....	141.6	193.2	133.0
Educational institution research centers.....	50.2	36.4	21.8
Other non-Federal sites.....	25.5	37.8	24.9
Foreign.....	1.4	.7	14.1

APPENDIX C

TABLE C-2. FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1965, 1966, AND 1967
-MILLIONS OF DOLLARS-

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
TOTAL, ALL AGENCIES.....	15,731.2	17,069.4	16,650.5	14,874.7	15,962.5	16,151.8
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	233.7	276.4	264.6	205.7	249.7	245.7
AGRICULTURAL RESEARCH SERVICE.....	138.0	170.1	169.4	113.3	137.3	148.6
COOPERATIVE STATE RESEARCH SERVICE.....	50.3	55.3	47.6	50.0	60.2	47.6
ECONOMIC RESEARCH SERVICE.....	10.7	12.0	12.3	10.0	11.7	12.2
FARMER COOPERATIVE SERVICE.....	.7	.7	.7	.7	.7	.7
FOREST SERVICE.....	33.2	37.6	33.5	31.1	39.0	35.5
NATIONAL AGRICULTURAL LIBRARY.....	.2	.1	.4	.1	.1	.5
STATISTICAL REPORTING SERVICE.....	.7	.6	.6	.5	.6	.7
DEPARTMENT OF COMMERCE, TOTAL.....	63.5	108.3	104.9	85.8	89.1	102.3
BUREAU OF THE CENSUS.....	2.5	2.0	1.9	2.5	2.0	1.9
BUREAU OF PUBLIC ROADS.....	5.9	7.1	11.7	5.4	6.6	10.5
COAST AND GEODETIC SURVEY.....	2.1	.....	.....	2.1	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	.5	2.9	3.0	.3	1.3	2.2
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	20.7	22.4	.....	19.0	20.4
MARITIME ADMINISTRATION.....	8.0	9.3	8.8	8.0	9.3	8.8
NATIONAL BUREAU OF STANDARDS.....	28.6	41.1	26.2	53.4	42.0	34.8
OFFICE OF BUSINESS ECONOMICS.....	2.3	2.6	3.0	2.3	2.4	2.8
PATENT OFFICE.....	.7	.4	.4	.7	.4	.4
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	2.0	22.3	27.5	1.1	6.0	20.5
WEATHER BUREAU.....	10.9	.....	.....	10.0	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	6,865.0	7,506.2	7,418.1	6,727.6	6,849.8	6,885.9
DEPARTMENT OF THE ARMY, TOTAL.....	1,478.3	1,599.8	1,626.4	1,428.9	1,484.3	1,535.1
RDT&E APPROPRIATIONS.....	1,393.3	1,502.0	1,520.0	1,344.4	1,400.0	1,435.0
CIVIL FUNCTIONS.....	4.6	5.2	7.9	4.6	5.2	7.9
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	10.7	3.1	3.9	9.3	3.1	3.9
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	50.9	52.5	52.5	50.4	52.4	52.3
MILITARY CONSTRUCTION.....	18.8	37.0	42.1	20.2	23.6	36.0
DEPARTMENT OF THE NAVY, TOTAL.....	1,462.2	1,734.0	1,830.8	1,419.4	1,523.3	1,698.2
RDT&E APPROPRIATIONS.....	1,340.6	1,601.6	1,690.0	1,293.6	1,400.0	1,565.0
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	24.6	35.3	38.3	21.1	34.3	34.3
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	22.6	21.4	24.6	21.0	20.4	23.2
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	61.7	57.7	58.9	61.2	57.6	58.7
MILITARY CONSTRUCTION.....	12.7	18.0	19.0	22.5	11.0	17.0
DEPARTMENT OF THE AIR FORCE, TOTAL.....	3,382.0	3,615.7	3,347.7	3,404.8	3,357.2	3,177.6
RDT&E APPROPRIATIONS.....	3,127.8	3,366.4	3,083.8	3,145.8	3,100.0	2,940.0
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	46.6	38.7	41.7	39.6	37.6	36.8
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	11.9	15.3	17.8	11.0	14.6	16.8
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	164.7	170.3	164.4	163.4	170.0	164.0
MILITARY CONSTRUCTION.....	31.0	25.0	40.0	45.0	35.0	20.0
DEFENSE AGENCIES, TOTAL.....	531.2	526.3	478.2	464.7	475.0	455.0
RDT&E APPROPRIATIONS.....	525.2	521.3	474.5	452.4	470.0	450.0
MILITARY CONSTRUCTION.....	6.0	4.9	3.6	12.2	5.0	5.0
DEPARTMENTWIDE FUNDS.....	11.3	30.4	135.0	9.9	10.0	20.0
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	970.5	1,232.4	1,271.3	737.9	986.2	1,131.1
ADMINISTRATION ON AGING.....	.....	.9	1.8	.....	.9	1.8
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	16.2	41.8	42.2	13.1	22.0	38.5
FOOD AND DRUG ADMINISTRATION.....	7.7	15.7	17.1	6.6	10.8	13.6
OFFICE OF EDUCATION.....	51.5	124.3	141.3	19.4	51.2	88.9
PUBLIC HEALTH SERVICE.....	861.1	1,003.2	1,016.0	666.2	860.2	940.7
NATIONAL INSTITUTES OF HEALTH.....	787.6	901.0	889.0	594.9	760.9	831.1
SAINT ELIZABETHS HOSPITAL.....	.4	.4	.4	.4	.5	.4
SOCIAL SECURITY ADMINISTRATION.....	1.9	3.3	3.5	2.0	3.0	3.7
VOCATIONAL REHABILITATION ADMINISTRATION.....	22.4	30.0	32.6	20.8	25.6	29.5
WELFARE ADMINISTRATION.....	9.3	12.8	16.3	9.5	12.1	14.1
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	.....	1.0	.6	.....	.7	.6

CONTINUED ON NEXT PAGE

TABLE C-2.

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
DEPARTMENT OF THE INTERIOR, TOTAL.....	127.4	155.0	158.2	118.8	138.6	149.6
BONNEVILLE POWER ADMINISTRATION.....	.9	3.1	1.4	.9	.7	3.4
BUREAU OF COMMERCIAL FISHERIES.....	26.8	27.6	24.9	26.1	29.7	27.2
BUREAU OF LAND MANAGEMENT.....	.5	.7	.7	.5	.7	.7
BUREAU OF MINES.....	27.2	30.3	32.4	27.2	27.5	31.1
BUREAU OF OUTDOOR RECREATION.....	.1	.1	.1	.1	.1	.1
BUREAU OF RECLAMATION.....	3.3	5.6	5.2	3.3	5.6	5.2
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	17.6	19.1	18.9	17.1	18.5	18.2
GEOLOGICAL SURVEY.....	25.3	26.6	24.2	24.1	25.3	25.8
NATIONAL PARK SERVICE.....	2.0	2.1	2.2	2.0	2.1	2.2
OFFICE OF COAL RESEARCH.....	6.0	7.8	8.2	3.8	5.8	6.8
OFFICE OF SALINE WATER.....	14.3	25.8	30.9	11.5	16.3	22.3
OFFICE OF WATER RESOURCES RESEARCH.....	3.4	6.3	6.8	2.3	6.4	6.6
DEPARTMENT OF JUSTICE, TOTAL.....	.....	.....	.2	.....	.....	.2
FEDERAL BUREAU OF INVESTIGATION.....	.....	.....	.2	.....	.....	.2
DEPARTMENT OF LABOR, TOTAL.....	8.8	11.8	16.1	7.3	11.7	15.9
BUREAU OF APPRENTICESHIP AND TRAINING.....	.1	.1	.2	.1	.1	.2
BUREAU OF EMPLOYMENT SECURITY.....	1.3	1.7	2.6	1.3	1.7	2.6
BUREAU OF LABOR STANDARDS.....	.3	.3	.3	.3	.3	.3
BUREAU OF LABOR STATISTICS.....	2.4	3.0	3.5	2.2	2.9	3.4
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	.1	.1	.1	.1	.1	.1
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	3.2	5.1	8.0	1.8	5.1	8.0
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1.3	1.4	1.4	1.3	1.4	1.4
WOMENS BUREAU.....	.2	.2	.....	.2	.2	.....
POST OFFICE DEPARTMENT.....	7.6	14.5	12.0	8.3	9.6	12.3
DEPARTMENT OF STATE, TOTAL.....	12.9	14.6	14.9	11.2	12.9	15.1
DEPARTMENTAL FUNDS.....	.1	.1	.1	.1	.1	.1
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	12.7	14.5	14.8	11.1	12.7	15.0
DEPARTMENT OF THE TREASURY, TOTAL.....	3.8	3.8	3.9	3.7	3.8	3.7
BUREAU OF ENGRAVING AND PRINTING.....	.4	.5	.5	.4	.5	.5
UNITED STATES COAST GUARD.....	3.4	3.3	3.3	3.3	3.3	3.1
OTHER AGENCIES						
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	.1	.1	.1	.1	.1	.1
ATOMIC ENERGY COMMISSION.....	1,539.7	1,599.8	1,506.6	1,520.0	1,516.5	1,511.2
CIVIL AERONAUTICS BOARD.....	.1	.1	.2	.1	.1	.1
CIVIL SERVICE COMMISSION.....	.2	.2	.2	.2	.2	.2
FEDERAL AVIATION AGENCY.....	71.7	186.0	375.4	96.4	133.5	350.3
FEDERAL COMMUNICATIONS COMMISSION.....	.3	.3	.4	.3	.3	.4
FEDERAL HOME LOAN BANK BOARD.....	.2	.2	.3	.2	.2	.3
FEDERAL TRADE COMMISSION.....	.3	.3	.3	.3	.3	.3
HOUSING AND HOME FINANCE AGENCY.....	.1	.....	.....	.1	.....	.....
LIBRARY OF CONGRESS.....	.1	.4	.8	.1	.4	.8
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	5,481.9	5,505.7	5,005.2	5,092.9	5,600.0	5,300.0
NATIONAL SCIENCE FOUNDATION.....	260.6	319.1	341.3	192.2	231.0	278.0
OFFICE OF ECONOMIC OPPORTUNITY.....	14.9	60.0	80.0	4.2	55.8	74.4
OFFICE OF EMERGENCY PLANNING.....	.2	.2	.2	.1	.2	.2
PEACE CORPS.....	.6	.5	1.4	.4	.6	.7
SMALL BUSINESS ADMINISTRATION.....	.3	.4	.7	.6	.3	.6
SMITHSONIAN INSTITUTION.....	6.3	8.1	9.3	7.4	7.1	8.1
TENNESSEE VALLEY AUTHORITY.....	5.7	6.7	7.1	5.7	6.7	7.1
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7.2	7.9	7.9	5.7	6.9	7.3
UNITED STATES INFORMATION AGENCY.....	.3	.3	.4	.7	.3	.3
VETERANS ADMINISTRATION.....	47.3	49.0	47.0	40.4	50.0	43.9

APPENDIX C

TABLE C-3. FEDERAL FUNDS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY, FISCAL YEARS 1965, 1966, AND 1967
-MILLIONS OF DOLLARS-

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
TOTAL, ALL AGENCIES.....	14,599.6	15,946.3	15,943.0	13,790.2	14,913.5	15,280.0
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	224.6	243.7	237.5	199.6	237.5	225.5
AGRICULTURAL RESEARCH SERVICE.....	135.9	143.6	142.3	111.5	130.9	128.7
COOPERATIVE STATE RESEARCH SERVICE.....	47.1	53.3	47.6	46.8	58.2	47.6
ECONOMIC RESEARCH SERVICE.....	10.7	12.0	12.3	10.0	11.7	12.2
FARMER COOPERATIVE SERVICE.....	.7	.7	.7	.7	.7	.7
FOREST SERVICE.....	29.3	33.4	33.5	30.1	35.2	35.1
NATIONAL AGRICULTURAL LIBRARY.....	.2	.1	.4	.1	.1	.5
STATISTICAL REPORTING SERVICE.....	.7	.6	.6	.5	.6	.7
DEPARTMENT OF COMMERCE, TOTAL.....	61.3	88.9	102.7	58.1	69.7	90.7
BUREAU OF THE CENSUS.....	2.5	2.0	1.9	2.5	2.0	1.9
BUREAU OF PUBLIC ROADS.....	5.9	7.1	11.7	5.4	6.6	10.5
COAST AND GEODETIC SURVEY.....	2.1	.....	.....	2.1	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	.5	2.9	3.0	.3	1.3	2.2
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	19.6	22.4	.....	18.5	19.7
MARITIME ADMINISTRATION.....	8.0	8.7	7.8	8.0	8.7	7.8
NATIONAL BUREAU OF STANDARDS.....	26.4	23.5	25.1	25.7	23.7	24.9
OFFICE OF BUSINESS ECONOMICS.....	2.3	2.6	3.0	2.3	2.4	2.8
PATENT OFFICE.....	.7	.4	.4	.7	.4	.4
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	2.0	22.3	27.5	1.1	6.0	20.5
WEATHER BUREAU.....	10.9	.....	.....	10.0	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	6,796.5	7,421.3	7,313.4	6,627.8	6,775.2	6,807.9
DEPARTMENT OF THE ARMY, TOTAL.....	1,459.5	1,562.8	1,584.3	1,408.7	1,460.7	1,499.1
ACTIVE APPROPRIATIONS.....	1,393.3	1,502.0	1,520.0	1,344.4	1,400.0	1,435.0
CIVIL FUNCTIONS.....	4.6	5.2	7.9	4.6	5.2	7.9
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	10.7	3.1	3.9	9.3	3.1	3.9
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	50.9	52.5	52.5	50.4	52.4	52.3
DEPARTMENT OF THE NAVY, TOTAL.....	1,449.5	1,716.0	1,811.8	1,396.9	1,512.3	1,681.2
ACTIVE APPROPRIATIONS.....	1,340.6	1,601.6	1,690.0	1,293.6	1,400.0	1,565.0
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	24.6	35.3	38.3	21.1	34.3	34.3
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	22.6	21.4	24.6	21.0	20.4	23.2
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	61.7	57.7	58.9	61.2	57.6	58.7
DEPARTMENT OF THE AIR FORCE, TOTAL.....	3,351.0	3,590.7	3,307.7	3,359.8	3,322.2	3,157.6
ACTIVE APPROPRIATIONS.....	3,127.8	3,366.4	3,083.8	3,145.8	3,100.0	2,940.0
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	46.6	38.7	41.7	39.6	37.6	36.8
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	11.9	15.3	17.8	11.0	14.6	16.8
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	164.7	170.3	164.4	163.4	170.0	164.0
DEFENSE AGENCIES, TOTAL.....	525.2	521.3	474.5	452.4	470.0	450.0
ACTIVE APPROPRIATIONS.....	525.2	521.3	474.5	452.4	470.0	450.0
DEPARTMENTWIDE FUNDS.....	11.3	30.4	135.0	9.9	10.0	20.0
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	869.4	1,069.8	1,177.7	681.4	906.9	1,042.1
ADMINISTRATION ON AGING.....	.....	.9	1.8	.....	.9	1.8
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	9.4	32.9	37.2	8.4	13.6	30.5
FOOD AND DRUG ADMINISTRATION.....	7.3	10.4	12.0	6.6	10.5	12.4
OFFICE OF EDUCATION.....	34.4	72.9	97.9	19.4	47.6	74.8
PUBLIC HEALTH SERVICE.....	784.2	906.2	976.0	614.3	793.3	874.9
NATIONAL INSTITUTES OF HEALTH.....	/715.1/	/809.0/	/856.7/	/555.0/	/707.3/	/772.0/
SAINT ELIZABETHS HOSPITAL.....	.4	.4	.4	.4	.4	.4
SOCIAL SECURITY ADMINISTRATION.....	1.9	3.3	3.5	2.0	3.0	3.7
VOCATIONAL REHABILITATION ADMINISTRATION.....	22.4	30.0	32.6	20.8	25.6	29.5
WELFARE ADMINISTRATION.....	9.3	12.8	16.3	9.5	12.1	14.1
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	.....	1.0	.6	.....	.7	.6

CONTINUED ON NEXT PAGE

TABLE C-3.

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
DEPARTMENT OF THE INTERIOR, TOTAL.....	113.2	136.9	139.6	108.7	123.5	131.4
BONNEVILLE POWER ADMINISTRATION.....	.5	.5	1.0	.4	.5	.6
BUREAU OF COMMERCIAL FISHERIES.....	19.4	25.3	24.8	20.3	23.7	24.6
BUREAU OF LAND MANAGEMENT.....	.5	.7	.7	.5	.7	.7
BUREAU OF MINES.....	27.2	30.3	29.8	27.1	27.3	29.4
BUREAU OF OUTDOOR RECREATION.....	.1	.1	.1	.1	.1	.1
BUREAU OF RECLAMATION.....	3.2	5.4	5.2	3.2	5.4	5.2
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	15.3	17.3	17.2	15.1	16.8	16.8
GEOLOGICAL SURVEY.....	24.4	26.6	26.2	24.0	24.7	25.6
NATIONAL PARK SERVICE.....	2.0	2.1	2.2	2.0	2.1	2.2
OFFICE OF COAL RESEARCH.....	3.3	3.7	3.9	3.2	4.1	4.5
OFFICE OF SALINE WATER.....	14.0	18.6	21.5	10.7	11.8	15.1
OFFICE OF WATER RESOURCES RESEARCH.....	3.4	6.3	6.8	2.3	6.4	6.6
DEPARTMENT OF JUSTICE, TOTAL.....	.....	.....	.2	.....	.....	.2
FEDERAL BUREAU OF INVESTIGATION.....	.....	.....	.2	.....	.....	.2
DEPARTMENT OF LABOR, TOTAL.....	8.8	11.8	16.1	7.3	11.7	15.9
BUREAU OF APPRENTICESHIP AND TRAINING.....	.1	.1	.2	.1	.1	.2
BUREAU OF EMPLOYMENT SECURITY.....	1.3	1.7	2.6	1.3	1.7	2.6
BUREAU OF LABOR STANDARDS.....	.3	.3	.3	.3	.3	.3
BUREAU OF LABOR STATISTICS.....	2.4	3.0	3.5	2.2	2.9	3.4
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	.1	.1	.1	.1	.1	.1
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	3.2	5.1	8.0	1.8	5.1	8.0
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1.3	1.4	1.4	1.3	1.4	1.4
WOMENS BUREAU.....	.2	.2	.....	.2	.2	.....
POST OFFICE DEPARTMENT.....	7.6	14.5	11.9	8.3	9.5	12.2
DEPARTMENT OF STATE, TOTAL.....	12.9	14.6	14.9	10.9	12.2	14.7
DEPARTMENTAL FUNDS.....	.1	.1	.1	.1	.1	.1
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	12.7	14.5	14.8	10.7	12.0	14.6
DEPARTMENT OF THE TREASURY, TOTAL.....	2.7	3.1	3.1	2.7	3.1	3.1
BUREAU OF ENGRAVING AND PRINTING.....	.4	.5	.5	.4	.5	.5
UNITED STATES COAST GUARD.....	2.2	2.6	2.6	2.2	2.6	2.6
OTHER AGENCIES						
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	.1	.1	.1	.1	.1	.1
ATOMIC ENERGY COMMISSION.....	1,240.7	1,255.9	1,269.5	1,240.7	1,255.9	1,269.5
CIVIL AERONAUTICS BOARD.....	.1	.1	.2	.1	.1	.1
CIVIL SERVICE COMMISSION.....	.2	.2	.2	.2	.2	.2
FEDERAL AVIATION AGENCY.....	64.4	176.2	374.1	94.0	125.6	342.8
FEDERAL COMMUNICATIONS COMMISSION.....	.3	.3	.4	.3	.3	.4
FEDERAL HOME LOAN BANK BOARD.....	.2	.2	.3	.2	.2	.3
FEDERAL TRADE COMMISSION.....	.3	.3	.3	.3	.3	.3
HOUSING AND HOME FINANCE AGENCY.....	.1	.....	.....	.1	.....	.....
LIBRARY OF CONGRESS.....	.1	.4	.8	.1	.4	.8
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	4,951.5	5,158.5	4,881.2	4,555.0	5,097.0	4,993.0
NATIONAL SCIENCE FOUNDATION.....	172.4	224.3	248.3	135.6	164.3	187.0
OFFICE OF ECONOMIC OPPORTUNITY.....	14.9	60.0	80.0	4.2	55.8	74.4
OFFICE OF EMERGENCY PLANNING.....	.2	.2	.2	.1	.2	.2
PEACE CORPS.....	.6	.5	1.4	.4	.6	.7
SMALL BUSINESS ADMINISTRATION.....	.3	.4	.7	.6	.3	.6
SMITHSONIAN INSTITUTION.....	5.9	7.3	9.0	5.0	6.2	7.7
TENNESSEE VALLEY AUTHORITY.....	5.6	6.7	7.1	5.6	6.7	7.1
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7.2	7.9	7.9	5.7	6.9	7.3
UNITED STATES INFORMATION AGENCY.....	.3	.3	.4	.7	.3	.3
VETERANS ADMINISTRATION.....	37.4	40.8	43.2	36.6	42.2	42.6

TABLE C-4. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK
FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
TOTAL, ALL AGENCIES.....	14,599,604	1,689,931	3,163,953	9,745,720
DEPARTMENTS				
DEPARTMENT OF AGRICULTURE, TOTAL.....	224,552	90,254	127,570	6,728
AGRICULTURAL RESEARCH SERVICE.....	135,940	65,009	65,589	5,342
COOPERATIVE STATE RESEARCH SERVICE.....	47,062	15,536	31,526	.....
ECONOMIC RESEARCH SERVICE.....	10,719	1,635	9,084	.....
FARMER COOPERATIVE SERVICE.....	684	82	602	.....
FOREST SERVICE.....	29,322	7,917	20,232	1,173
NATIONAL AGRICULTURAL LIBRARY.....	170	.....	170	.....
STATISTICAL REPORTING SERVICE.....	655	75	367	213
DEPARTMENT OF COMMERCE, TOTAL.....	61,339	24,235	19,336	17,768
BUREAU OF THE CENSUS.....	2,513	296	761	1,456
BUREAU OF PUBLIC ROADS.....	5,918	743	4,428	747
COAST AND GEODETIC SURVEY.....	2,050	385	1,153	512
ECONOMIC DEVELOPMENT ADMINISTRATION.....	480	.....	410	70
MARITIME ADMINISTRATION.....	8,012	352	949	6,711
NATIONAL BUREAU OF STANDARDS.....	26,442	16,537	5,507	4,398
OFFICE OF BUSINESS ECONOMICS.....	2,348	2,348	.....	.....
PATENT OFFICE.....	705	75	325	305
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	2,004	.....	2,004	.....
WEATHER BUREAU.....	10,867	3,499	3,799	3,569
DEPARTMENT OF DEFENSE, TOTAL.....	6,796,540	263,326	1,488,167	5,045,047
DEPARTMENT OF THE ARMY, TOTAL.....	1,459,488	48,858	242,988	1,167,642
RD&E APPROPRIATIONS.....	1,393,277	48,600	240,900	1,103,777
CIVIL FUNCTIONS.....	4,611	258	2,088	2,265
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	10,700	.....	.....	10,700
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	50,900	.....	.....	50,900
DEPARTMENT OF THE NAVY, TOTAL.....	1,449,534	88,900	230,600	1,130,034
RD&E APPROPRIATIONS.....	1,340,634	88,900	230,600	1,021,134
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	24,600	.....	.....	24,600
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	22,600	.....	.....	22,600
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	61,700	.....	.....	61,700
DEPARTMENT OF THE AIR FORCE, TOTAL.....	3,350,991	81,800	585,600	2,683,591
RD&E APPROPRIATIONS.....	3,127,791	81,800	585,600	2,460,391
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	46,600	.....	.....	46,600
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	11,900	.....	.....	11,900
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	164,700	.....	.....	164,700
DEFENSE AGENCIES, TOTAL.....	525,227	43,768	417,679	63,780
RD&E APPROPRIATIONS.....	525,227	43,768	417,679	63,780
DEPARTMENTWIDE FUNDS.....	11,300	.....	11,300	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	869,354	302,915	558,820	7,619
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	9,371	3,183	5,023	1,165
FOOD AND DRUG ADMINISTRATION.....	7,335	954	4,988	1,393
OFFICE OF EDUCATION.....	34,419	9,126	25,293	.....
PUBLIC HEALTH SERVICE.....	784,242	289,382	491,954	2,906
NATIONAL INSTITUTES OF HEALTH.....	/715,072/	/275,302/	/439,770/	.....
SAINT ELIZABETHS HOSPITAL.....	387	94	293	.....
SOCIAL SECURITY ADMINISTRATION.....	1,887	176	1,711	.....
VOCATIONAL REHABILITATION ADMINISTRATION.....	22,422	20,267	2,155
WELFARE ADMINISTRATION.....	9,291	9,291

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TABLE C-4.

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
DEPARTMENT OF THE INTERIOR, TOTAL.....	113,173	40,463	57,062	15,648
BONNEVILLE POWER ADMINISTRATION.....	467	.....	226	241
BUREAU OF COMMERCIAL FISHERIES.....	19,357	5,041	11,250	3,066
BUREAU OF LAND MANAGEMENT.....	530	22	477	31
BUREAU OF MINES.....	27,206	4,355	19,733	3,118
BUREAU OF OUTDOOR RECREATION.....	56	.....	56	.....
BUREAU OF RECLAMATION.....	3,207	202	2,973	32
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	15,342	2,733	10,563	2,046
GEOLOGICAL SURVEY.....	24,422	18,634	5,788	.....
NATIONAL PARK SERVICE.....	1,959	1,959	.....	.....
OFFICE OF COAL RESEARCH.....	3,265	.....	1,285	1,980
OFFICE OF SALINE WATER.....	14,002	5,837	3,031	5,134
OFFICE OF WATER RESOURCES RESEARCH.....	3,360	1,680	1,680	.....
DEPARTMENT OF LABOR, TOTAL.....	8,751	1,146	5,142	2,463
BUREAU OF APPRENTICESHIP AND TRAINING.....	129	.....	65	64
BUREAU OF EMPLOYMENT SECURITY.....	1,279	300	411	568
BUREAU OF LABOR STANDARDS.....	260	.....	184	76
BUREAU OF LABOR STATISTICS.....	2,366	729	884	753
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	113	12	101	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	3,159	105	2,155	899
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,290	.....	1,290	.....
WOMENS BUREAU.....	155	.....	52	103
POST OFFICE DEPARTMENT.....	7,617	.....	159	7,458
DEPARTMENT OF STATE, TOTAL.....	12,870	.....	8,571	4,299
DEPARTMENTAL FUNDS.....	125	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	12,745	.....	8,446	4,299
DEPARTMENT OF THE TREASURY, TOTAL.....	2,662	812	336	1,514
BUREAU OF ENGRAVING AND PRINTING.....	414	.....	205	209
UNITED STATES COAST GUARD.....	2,248	812	131	1,305
OTHER AGENCIES				
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	.....	130	.....
ATOMIC ENERGY COMMISSION.....	1,240,664	258,196	75,801	906,667
CIVIL AERONAUTICS BOARD.....	74	.....	74	.....
CIVIL SERVICE COMMISSION.....	200	33	167	.....
FEDERAL AVIATION AGENCY.....	64,408	.....	4,294	60,114
FEDERAL COMMUNICATIONS COMMISSION.....	280	.....	280	.....
FEDERAL HOME LOAN BANK BOARD.....	189	.....	189	.....
FEDERAL TRADE COMMISSION.....	263	.....	263	.....
HOUSING AND HOME FINANCE AGENCY.....	101	.....	101	.....
LIBRARY OF CONGRESS.....	107	.....	107	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	4,951,522	527,786	762,104	3,661,632
NATIONAL SCIENCE FOUNDATION.....	172,431	171,057	675	699
OFFICE OF ECONOMIC OPPORTUNITY.....	14,922	.....	9,730	5,192
OFFICE OF EMERGENCY PLANNING.....	211	.....	211	.....
PEACE CORPS.....	601	.....	601	.....
SMALL BUSINESS ADMINISTRATION.....	279	251	28	.....
SMITHSONIAN INSTITUTION.....	5,857	5,857	.....	.....
TENNESSEE VALLEY AUTHORITY.....	5,630	.....	4,382	1,248
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7,182	.....	6,287	895
UNITED STATES INFORMATION AGENCY.....	324	.....	156	168
VETERANS ADMINISTRATION.....	37,371	3,600	33,210	561

APPENDIX C

TABLE C-5. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK
FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
TOTAL, ALL AGENCIES.....	15,946,344	1,928,842	3,533,303	10,484,199
DEPARTMENTS				
DEPARTMENT OF AGRICULTURE, TOTAL.....	243,737	99,769	137,085	6,883
AGRICULTURAL RESEARCH SERVICE.....	143,576	68,833	69,373	5,370
COOPERATIVE STATE RESEARCH SERVICE.....	53,322	19,449	33,873	.....
ECONOMIC RESEARCH SERVICE.....	12,047	1,655	10,392	.....
FARMER COOPERATIVE SERVICE.....	713	86	627	.....
FOREST SERVICE.....	33,381	9,681	22,365	1,335
NATIONAL AGRICULTURAL LIBRARY.....	109	.....	109	.....
STATISTICAL REPORTING SERVICE.....	589	65	346	178
DEPARTMENT OF COMMERCE, TOTAL.....	88,946	25,805	41,427	21,714
BUREAU OF THE CENSUS.....	1,997	294	1,092	611
BUREAU OF PUBLIC ROADS.....	7,096	693	5,727	676
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,850	.....	2,280	570
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	19,561	8,187	6,853	4,521
MARITIME ADMINISTRATION.....	8,700	420	1,750	6,530
NATIONAL BUREAU OF STANDARDS.....	23,493	13,661	5,309	4,523
OFFICE OF BUSINESS ECONOMICS.....	2,550	2,550	.....	.....
PATENT OFFICE.....	413	.....	130	283
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	22,286	.....	18,286	4,000
DEPARTMENT OF DEFENSE, TOTAL.....	7,421,286	273,313	1,642,874	5,505,099
DEPARTMENT OF THE ARMY, TOTAL.....	1,562,794	48,813	237,549	1,276,432
RDT&E APPROPRIATIONS.....	1,501,995	48,500	235,100	1,218,395
CIVIL FUNCTIONS.....	5,199	313	2,449	2,437
RDT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	3,100	.....	.....	3,100
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	52,500	.....	.....	52,500
DEPARTMENT OF THE NAVY, TOTAL.....	1,715,970	91,000	216,000	1,408,970
RDT&E APPROPRIATIONS.....	1,601,570	91,000	216,000	1,294,570
RDT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	35,300	.....	.....	35,300
RDT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	21,400	.....	.....	21,400
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	57,700	.....	.....	57,700
DEPARTMENT OF THE AIR FORCE, TOTAL.....	3,590,747	84,600	796,000	2,710,147
RDT&E APPROPRIATIONS.....	3,366,447	84,600	796,000	2,485,847
RDT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	38,700	.....	.....	38,700
RDT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	15,300	.....	.....	15,300
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	170,300	.....	.....	170,300
DEFENSE AGENCIES, TOTAL.....	521,349	48,900	382,325	90,124
RDT&E APPROPRIATIONS.....	521,349	48,900	382,325	90,124
DEPARTMENTWIDE FUNDS.....	30,426	.....	11,000	19,426
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,069,786	357,198	681,368	31,220
ADMINISTRATION ON AGING.....	900	.....	300	600
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	32,867	3,954	6,748	22,165
FOOD AND DRUG ADMINISTRATION.....	10,420	1,355	6,981	2,084
OFFICE OF EDUCATION.....	72,875	21,896	50,979	.....
PUBLIC HEALTH SERVICE.....	906,211	329,606	572,764	3,841
NATIONAL INSTITUTES OF HEALTH.....	/808,958/	/311,449/	/497,509/	.....
SAINT ELIZABETHS HOSPITAL.....	404	103	301	.....
SOCIAL SECURITY ADMINISTRATION.....	3,301	284	3,017	.....
VOCATIONAL REHABILITATION ADMINISTRATION.....	29,990	.....	27,460	2,530
WELFARE ADMINISTRATION.....	12,818	12,818
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	955	720	235

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TABLE C-5.

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
DEPARTMENT OF THE INTERIOR, TOTAL.....	136,851	46,237	68,919	21,695
BONNEVILLE POWER ADMINISTRATION.....	470	.....	178	292
BUREAU OF COMMERCIAL FISHERIES.....	25,258	7,000	13,602	4,656
BUREAU OF LAND MANAGEMENT.....	701	15	636	50
BUREAU OF MINES.....	30,311	4,630	21,675	4,006
BUREAU OF OUTDOOR RECREATION.....	61	.....	61	.....
BUREAU OF RECLAMATION.....	5,350	220	5,112	18
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	17,345	3,108	11,929	2,308
GEOLOGICAL SURVEY.....	26,601	20,290	6,311	.....
NATIONAL PARK SERVICE.....	2,095	2,095	.....	.....
OFFICE OF COAL RESEARCH.....	3,693	.....	1,443	2,250
OFFICE OF SALINE WATER.....	18,627	5,709	4,803	8,115
OFFICE OF WATER RESOURCES RESEARCH.....	6,339	3,170	3,169	.....
DEPARTMENT OF LABOR, TOTAL.....	11,838	1,424	7,208	3,206
BUREAU OF APPRENTICESHIP AND TRAINING.....	144	.....	72	72
BUREAU OF EMPLOYMENT SECURITY.....	1,701	293	631	777
BUREAU OF LABOR STANDARDS.....	250	.....	173	77
BUREAU OF LABOR STATISTICS.....	3,008	929	1,072	1,007
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	116	12	104	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	5,092	190	3,743	1,159
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,356	.....	1,356	.....
WOMENS BUREAU.....	171	.....	57	114
POST OFFICE DEPARTMENT.....	14,489	.....	557	13,932
DEPARTMENT OF STATE, TOTAL.....	14,623	.....	8,027	6,596
DEPARTMENTAL FUNDS.....	125	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	14,498	.....	7,902	6,596
DEPARTMENT OF THE TREASURY, TOTAL.....	3,083	1,315	793	1,475
BUREAU OF ENGRAVING AND PRINTING.....	486	.....	216	270
UNITED STATES COAST GUARD.....	2,597	1,315	77	1,205
OTHER AGENCIES				
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	.....	130	.....
ATOMIC ENERGY COMMISSION.....	1,255,914	285,131	80,010	890,773
CIVIL AERONAUTICS BOARD.....	81	.....	81	.....
CIVIL SERVICE COMMISSION.....	195	31	164	.....
FEDERAL AVIATION AGENCY.....	176,249	.....	4,125	172,124
FEDERAL COMMUNICATIONS COMMISSION.....	300	.....	300	.....
FEDERAL HOME LOAN BANK BOARD.....	205	.....	205	.....
FEDERAL TRADE COMMISSION.....	303	.....	303	.....
LIBRARY OF CONGRESS.....	410	.....	410	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	5,158,487	602,733	784,998	3,770,756
NATIONAL SCIENCE FOUNDATION.....	224,253	222,142	774	1,337
OFFICE OF ECONOMIC OPPORTUNITY.....	60,000	1,800	24,200	34,000
OFFICE OF EMERGENCY PLANNING.....	232	.....	232	.....
PEACE CORPS.....	500	.....	500	.....
SMALL BUSINESS ADMINISTRATION.....	445	400	45	.....
SMITHSONIAN INSTITUTION.....	7,314	7,314	.....	.....
TENNESSEE VALLEY AUTHORITY.....	6,679	.....	5,194	1,485
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7,946	.....	6,746	1,200
UNITED STATES INFORMATION AGENCY.....	281	.....	217	64
VETERANS ADMINISTRATION.....	40,826	3,510	36,676	640

TABLE C-6. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK
FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
TOTAL, ALL AGENCIES.....	15,943,025	2,092,978	3,454,296	10,395,751
DEPARTMENTS				
DEPARTMENT OF AGRICULTURE, TOTAL.....	237,473	101,775	128,665	7,033
AGRICULTURAL RESEARCH SERVICE.....	142,267	69,193	67,560	5,514
COOPERATIVE STATE RESEARCH SERVICE.....	47,636	20,291	27,345	.....
ECONOMIC RESEARCH SERVICE.....	12,328	1,759	10,569	.....
FARMER COOPERATIVE SERVICE.....	715	86	629	.....
FOREST SERVICE.....	33,483	10,380	21,764	1,339
NATIONAL AGRICULTURAL LIBRARY.....	449	.....	449	.....
STATISTICAL REPORTING SERVICE.....	595	66	349	180
DEPARTMENT OF COMMERCE, TOTAL.....	102,694	28,390	52,104	22,200
BUREAU OF THE CENSUS.....	1,922	294	1,060	568
BUREAU OF PUBLIC ROADS.....	11,650	1,505	9,295	850
ECONOMIC DEVELOPMENT ADMINISTRATION.....	3,000	.....	2,400	600
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	22,390	9,171	8,352	4,867
MARITIME ADMINISTRATION.....	7,785	375	1,565	5,845
NATIONAL BUREAU OF STANDARDS.....	25,095	14,080	5,839	5,176
OFFICE OF BUSINESS ECONOMICS.....	2,965	2,965	.....	.....
PATENT OFFICE.....	424	.....	130	294
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	27,463	.....	23,463	4,000
DEPARTMENT OF DEFENSE, TOTAL.....	7,313,350	297,748	1,524,419	5,491,183
DEPARTMENT OF THE ARMY, TOTAL.....	1,584,334	56,248	231,966	1,296,120
RDT&E APPROPRIATIONS.....	1,520,000	55,600	228,500	1,235,900
CIVIL FUNCTIONS.....	7,934	648	3,466	3,820
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	3,900	.....	.....	3,900
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	52,500	.....	.....	52,500
DEPARTMENT OF THE NAVY, TOTAL.....	1,811,800	99,400	203,800	1,508,600
RDT&E APPROPRIATIONS.....	1,690,000	99,400	203,800	1,386,800
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	38,300	.....	.....	38,300
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	24,600	.....	.....	24,600
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	58,900	.....	.....	58,900
DEPARTMENT OF THE AIR FORCE, TOTAL.....	3,307,700	90,600	731,600	2,485,500
RDT&E APPROPRIATIONS.....	3,083,800	90,600	731,600	2,261,600
DT&E SUPPORT FROM PROCUREMENT APPROPRIATIONS.....	41,700	.....	.....	41,700
DT&E SUPPORT FROM OPERATIONS AND MAINTENANCE APPROPRIATIONS.....	17,800	.....	.....	17,800
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D.....	164,400	.....	.....	164,400
DEFENSE AGENCIES, TOTAL.....	474,516	51,500	347,053	75,963
RDT&E APPROPRIATIONS.....	474,516	51,500	347,053	75,963
DEPARTMENTWIDE FUNDS.....	135,000	.....	10,000	125,000
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,177,733	389,615	753,832	34,286
ADMINISTRATION ON AGING.....	1,800	.....	600	1,200
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	37,210	4,773	9,388	23,049
FOOD AND DRUG ADMINISTRATION.....	12,000	1,540	8,300	2,160
OFFICE OF EDUCATION.....	97,864	32,380	65,484	.....
PUBLIC HEALTH SERVICE.....	975,993	350,466	620,455	5,072
NATIONAL INSTITUTES OF HEALTH.....	/856,657/	/329,813/	/526,844/	.....
SAINT ELIZABETHS HOSPITAL.....	427	105	322	.....
SOCIAL SECURITY ADMINISTRATION.....	3,531	351	3,180	.....
VOCATIONAL REHABILITATION ADMINISTRATION.....	32,563	.....	29,758	2,805
WELFARE ADMINISTRATION.....	16,345	16,345
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	578	345	233

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TABLE C-6.

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
DEPARTMENT OF THE INTERIOR, TOTAL.....	139,572	47,581	71,311	20,680
BONNEVILLE POWER ADMINISTRATION.....	1,000	.....	218	782
BUREAU OF COMMERCIAL FISHERIES.....	24,789	6,677	13,958	4,154
BUREAU OF LAND MANAGEMENT.....	700	15	618	67
BUREAU OF MINES.....	29,831	4,574	21,251	4,006
BUREAU OF OUTDOOR RECREATION.....	53	.....	53	.....
BUREAU OF RECLAMATION.....	5,245	216	5,014	15
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	17,244	3,443	11,583	2,218
GEOLOGICAL SURVEY.....	26,216	19,792	6,424	.....
NATIONAL PARK SERVICE.....	2,222	2,222	.....	.....
OFFICE OF COAL RESEARCH.....	3,887	.....	1,587	2,300
OFFICE OF SALINE WATER.....	21,541	7,220	7,183	7,138
OFFICE OF WATER RESOURCES RESEARCH.....	6,844	3,422	3,422	.....
DEPARTMENT OF JUSTICE, TOTAL.....	200	.....	.....	200
FEDERAL BUREAU OF INVESTIGATION.....	200	.....	.....	200
DEPARTMENT OF LABOR, TOTAL.....	16,061	2,187	10,190	3,684
BUREAU OF APPRENTICESHIP AND TRAINING.....	195	.....	98	97
BUREAU OF EMPLOYMENT SECURITY.....	2,623	516	976	1,131
BUREAU OF LABOR STANDARDS.....	255	.....	176	79
BUREAU OF LABOR STATISTICS.....	3,529	1,329	1,184	1,016
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	119	12	107	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	7,966	330	6,275	1,361
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,374	.....	1,374	.....
POST OFFICE DEPARTMENT.....	11,945	.....	575	11,370
DEPARTMENT OF STATE, TOTAL.....	14,928	.....	9,887	5,041
DEPARTMENTAL FUNDS.....	125	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	14,803	.....	9,762	5,041
DEPARTMENT OF THE TREASURY, TOTAL.....	3,143	1,749	238	1,156
BUREAU OF ENGRAVING AND PRINTING.....	529	.....	222	307
UNITED STATES COAST GUARD.....	2,614	1,749	16	849
OTHER AGENCIES				
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	145	.....	145	.....
ATOMIC ENERGY COMMISSION.....	1,269,495	310,914	83,079	875,502
CIVIL AERONAUTICS BOARD.....	153	.....	153	.....
CIVIL SERVICE COMMISSION.....	200	32	168	.....
FEDERAL AVIATION AGENCY.....	374,149	.....	3,478	370,671
FEDERAL COMMUNICATIONS COMMISSION.....	404	.....	404	.....
FEDERAL HOME LOAN BANK BOARD.....	270	.....	270	.....
FEDERAL TRADE COMMISSION.....	310	.....	310	.....
LIBRARY OF CONGRESS.....	810	.....	810	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	4,881,216	652,727	726,819	3,501,670
NATIONAL SCIENCE FOUNDATION.....	248,315	245,448	817	2,050
OFFICE OF ECONOMIC OPPORTUNITY.....	80,000	1,200	33,800	45,000
OFFICE OF EMERGENCY PLANNING.....	185	.....	185	.....
PEACE CORPS.....	1,400	.....	1,400	.....
SMALL BUSINESS ADMINISTRATION.....	659	527	132	.....
SMITHSONIAN INSTITUTION.....	9,040	9,040	.....	.....
TENNESSEE VALLEY AUTHORITY.....	7,058	.....	5,495	1,563
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7,917	.....	6,477	1,440
UNITED STATES INFORMATION AGENCY.....	425	.....	90	335
VETERANS ADMINISTRATION.....	43,197	3,700	38,810	687

APPENDIX C

TABLE C-7. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1965
-MILLIONS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	INTRA MURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	14,599.6	3,092.7	8,667.7	406.1	1,188.1	549.1	349.9	231.9	45.4	68.6	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	224.6	152.7	2.5	.....	58.4	.....	2.1	.....	.....	8.9
AGRICULTURAL RESEARCH SERVICE.....	135.9	111.8	2.2	.....	11.3	.....	1.8	.....	.....	8.9
COOPERATIVE STATE RESEARCH SERVICE.....	47.1	1.4	.....	.....	45.4	.....	.2	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	10.7	10.4	.1	.....	.2	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	.7	.6	.....	.....	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	29.3	27.9	.1	.....	1.3	.....	.1	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	.7	.4	.1	.....	.1	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	61.3	45.5	10.6	*	3.7	.....	.5	*	.3	.7
BUREAU OF THE CENSUS.....	2.5	2.4	*	.....	.1	.....	*	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	5.9	4.0	1.2	.....	.7	.....	.1	.....	.....	.....
COAST AND GEODETIC SURVEY.....	2.1	1.8	.1	.....	.2	.....	*	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	.5	.1	.2	.....	.2	.....	*	.....	.....	.....
MARITIME ADMINISTRATION.....	8.0	.6	7.2	.....	.1	.....	*	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	26.4	25.5	*	.....	.2	.....	.....	*	*	.7
OFFICE OF BUSINESS ECONOMICS.....	2.3	2.3	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	.7	.7	*	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT	2.0	.4	.7	.....	.8	.....	.2	.....	.....	.....
WEATHER BUREAU.....	10.9	7.7	1.2	*	1.4	.....	.2	.....	.....	.3
DEPARTMENT OF DEFENSE, TOTAL.....	6,796.5	1,647.4	4,373.3	22.8	292.1	144.9	144.0	138.9	*	33.2	
DEPARTMENT OF THE ARMY.....	1,459.5	501.2	866.7	4.5	46.9	6.4	8.0	9.6	*	16.1	
DEPARTMENT OF THE NAVY.....	1,449.5	530.6	771.4	.....	63.4	59.3	13.1	6.8	.....	4.9
DEPARTMENT OF THE AIR FORCE.....	3,351.0	470.5	2,525.6	3.6	169.2	31.9	105.4	97.4	*	7.4	
DEFENSE AGENCIES.....	525.2	141.1	206.9	14.5	71.7	47.2	14.9	24.0	.....	4.9
DEPARTMENTWIDE FUNDS.....	11.3	4.0	2.6	.3	.9	.....	2.6	1.0	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	869.4	161.4	29.8	.....	474.4	.....	156.1	.....	27.9	19.8
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	9.4	2.7	.3	.....	5.7	.....	.6	.....	.....	*
FOOD AND DRUG ADMINISTRATION.....	7.3	7.2	.....	.....	.1	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	34.4	2.1	.1	.....	26.1	.....	.1	.....	5.8	.2
PUBLIC HEALTH SERVICE.....	784.2	145.5	29.3	.....	430.5	.....	145.4	.....	16.3	17.2
NATIONAL INSTITUTES OF HEALTH.....	/715.1	/115.6/	/20.6/	.....	/402.4/	.....	/139.7/	.....	/13.2/	/15.5/
SAINT ELIZABETHS HOSPITAL.....	.4	.4	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	1.9	1.7	.....	.....	*	.....	.....	.....	.....	*
VOCATIONAL REHABILITATION ADMIN.....	22.4	.4	.....	.....	7.6	.....	7.7	.....	4.6	2.2
WELFARE ADMINISTRATION.....	9.3	1.2	.1	.....	4.4	.....	2.4	.....	1.2	.1
DEPARTMENT OF THE INTERIOR, TOTAL.....	113.2	81.5	11.3	1.0	9.8	.....	1.3	.....	7.9	.3
BONNEVILLE POWER ADMINISTRATION.....	.5	.3	.....	.....	.1	.....	.....	.....	*	.....
BUREAU OF COMMERCIAL FISHERIES.....	19.4	17.2	.2	.....	1.4	.....	.1	.....	.2	.2
BUREAU OF LAND MANAGEMENT.....	.5	.2	.....	.....	.3	.....	.....	.....	.....	.....
BUREAU OF MINES.....	27.4	27.2	.....	.....	*	.....	.....	.....	.....	.....
BUREAU OF GEOLOGICAL RECREATION.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	3.2	2.1	.....	.....	.9	.....	.....	.....	.3	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	15.3	7.4	.....	.....	.6	.....	*	.....	7.4	.....
GEOLOGICAL SURVEY.....	24.4	24.1	.....	.....	.3	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	2.0	1.4	.....	.....	.4	.....	.2	.....	*	.....
OFFICE OF COAL RESEARCH.....	3.3	*	2.5	.....	.3	.....	.5	.....	.....	.....
OFFICE OF SALINE WATER.....	14.0	1.3	8.5	1.0	2.461	
OFFICE OF WATER RESOURCES RESEARCH.....	3.4	.2	3.2	

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TABLE C-7.

AGENCY AND SUBDIVISION	TOTAL	INTRA MURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	8.8	6.0	*	.....	2.2	.....	.5	.....	*	.....
BUREAU OF APPRENTICESHIP AND TRAINING..	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	1.3	1.3	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	2.4	2.4	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUA- TION AND RESEARCH.....	3.2	.4	*	.....	2.2	.....	.5	.....	*	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1.3	1.3	.....	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	7.6	1.4	6.1	.....	.....	.....	.....	.....	.....	.1
DEPARTMENT OF STATE, TOTAL.....	12.9	2.2	.3	.....	6.0	.....	4.0	.....	*	.2
DEPARTMENTAL FUNDS.....	.1	.1	.....	.....	.....	.....	*	.....	*	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT...	12.7	2.2	.3	.....	6.0	.....	4.0	.....	.....	.2
DEPARTMENT OF THE TREASURY, TOTAL.....	2.7	2.2	.4	.....	*	.....	*	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	.4	.4	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	2.2	1.8	.4	.....	*	.....	*	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	1,240.7	30.9	342.5	381.1	74.4	320.1	9.1	78.2	.3	4.1
CIVIL AERONAUTICS BOARD.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	64.4	31.0	31.2	*	.4	.....	.8	.9	.....	.1
FEDERAL COMMUNICATIONS COMMISSION.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
HOUSING AND HOME FINANCE AGENCY.....	.1	*	.....	.....	*	.....	*	.....	*	.....
LIBRARY OF CONGRESS.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	4,951.5	863.1	3,852.1	1.0	124.1	84.1	16.7	1.6	8.1	.6
NATIONAL SCIENCE FOUNDATION.....	172.4	13.7	1.9	.....	133.5	.....	10.7	12.0	.1	.5
OFFICE OF ECONOMIC OPPORTUNITY.....	14.9	.5	3.7	.....	7.1	.....	3.1	.....	.6	.....
OFFICE OF EMERGENCY PLANNING.....	.2	.1	.....	.....	.....	.....	.1	.....	*	.....
PEACE CORPS.....	.6	.....	*	.....	.5	.....	.1	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	5.9	5.9	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	5.6	5.4	.....	.....	.2	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7.2	3.4	1.6	.1	1.1	.....	.5	.4	*	.....
UNITED STATES INFORMATION AGENCY.....	.2	.1	.2	.....	*	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	37.4	36.6	.2	.....	.3	.....	.2	.....	.....	.....

APPENDIX C

TABLE C-8. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1966--ESTIMATED
-MILLIONS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	INTRA MURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	15,946.3	3,259.2	9,563.9	405.3	1,373.5	555.3	413.4	239.5	64.2	72.1
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	243.7	171.4	1.1	•	60.1	•••••	.9	•••••	•••••	10.3
AGRICULTURAL RESEARCH SERVICE.....	143.6	125.2	.5	•••••	6.0	•••••	.8	•••••	•••••	10.3
COOPERATIVE STATE RESEARCH SERVICE.....	53.3	1.8	•••••	•••••	51.5	•••••	•••••	•••••	•••••	•••••
ECONOMIC RESEARCH SERVICE.....	12.0	11.2	.5	•	.4	•••••	•••••	•••••	•••••	•••••
FARMER COOPERATIVE SERVICE.....	.7	.7	•	•••••	•	•••••	•••••	•••••	•••••	•••••
FOREST SERVICE.....	33.4	31.9	.1	•••••	1.3	•••••	.1	•••••	•••••	•••••
NATIONAL AGRICULTURAL LIBRARY.....	.1	.1	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
STATISTICAL REPORTING SERVICE.....	.6	.5	.1	•••••	•	•••••	•••••	•••••	•••••	•••••
DEPARTMENT OF COMMERCE, TOTAL.....	88.9	50.9	26.3	•••••	8.0	•••••	2.7	•••••	•	1.0
BUREAU OF THE CENSUS.....	2.0	1.9	•	•••••	.1	•••••	•	•••••	•••••	•••••
BUREAU OF PUBLIC ROADS.....	7.1	4.1	1.3	•••••	1.6	•••••	.1	•••••	•••••	•••••
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2.9	.2	1.0	•••••	1.6	•••••	.1	•••••	•••••	•••••
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	19.6	15.0	1.5	•••••	2.2	•••••	.3	•••••	•••••	.5
MARITIME ADMINISTRATION.....	8.7	.8	7.5	•••••	.3	•••••	.1	•••••	•••••	•••••
NATIONAL BUREAU OF STANDARDS.....	23.5	22.8	•••••	•••••	.2	•••••	•••••	•••••	•	.5
OFFICE OF BUSINESS ECONOMICS.....	2.6	2.6	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
PATENT OFFICE.....	.4	.4	•	•••••	•••••	•••••	•••••	•••••	•••••	•••••
TRANSPORTATION RESEARCH AND DEVELOPMENT	22.3	3.3	14.8	•••••	2.1	•••••	2.1	•••••	•••••	•••••
DEPARTMENT OF DEFENSE, TOTAL.....	7,421.3	1,749.8	4,905.1	36.0	298.9	122.1	145.5	130.4	.3	25.1
DEPARTMENT OF THE ARMY.....	1,562.8	555.7	919.6	5.2	50.0	5.7	10.1	9.1	.1	7.3
DEPARTMENT OF THE NAVY.....	1,716.0	561.9	1,010.6	•••••	64.6	52.2	14.1	7.0	•••••	5.6
DEPARTMENT OF THE AIR FORCE.....	3,590.7	489.9	2,750.0	.8	112.6	30.8	103.8	96.3	.3	6.3
DEFENSE AGENCIES.....	521.3	137.4	206.3	29.7	69.0	33.4	15.0	24.6	•••••	6.0
DEPARTMENTWIDE FUNDS.....	30.4	4.9	18.5	.3	2.8	•••••	2.4	1.5	•••••	•••••
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,069.8	187.8	44.5	•••••	576.0	•••••	194.5	•••••	39.4	27.6
ADMINISTRATION ON AGING.....	.9	•	•••••	•••••	.3	•••••	.6	•••••	•••••	•••••
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	32.9	4.4	5.3	•••••	7.0	•••••	16.1	•••••	•••••	.1
FOOD AND DRUG ADMINISTRATION.....	10.4	9.0	•••••	•••••	.7	•••••	.7	•••••	•••••	•••••
OFFICE OF EDUCATION.....	72.9	2.4	.1	•••••	57.9	•••••	.3	•••••	11.7	.6
PUBLIC HEALTH SERVICE.....	906.2	167.0	39.0	•••••	492.8	•••••	165.5	•••••	19.5	22.3
NATIONAL INSTITUTES OF HEALTH.....	/809.0	/133.8/	/37.9/	•••••	/448.4/	•••••	/157.0/	•••••	/14.8/	/17.0/
SAINT ELIZABETHS HOSPITAL.....	.4	.4	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
SOCIAL SECURITY ADMINISTRATION.....	3.3	2.8	•••••	•••••	.5	•••••	•••••	•••••	•	•
VOCATIONAL REHABILITATION ADMIN.....	30.0	.5	•••••	•••••	10.9	•••••	8.4	•••••	6.7	3.5
WELFARE ADMINISTRATION.....	12.8	1.4	.1	•••••	5.8	•••••	2.9	•••••	1.5	1.1
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	1.0	.8	•••••	•••••	.1	•••••	.1	•••••	.1	•••••
DEPARTMENT OF THE INTERIOR, TOTAL.....	136.9	90.9	14.0	1.8	14.3	•••••	1.7	•••••	13.6	.5
BONNEVILLE POWER ADMINISTRATION.....	.5	.4	•••••	•••••	.1	•••••	•••••	•••••	•	•
BUREAU OF COMMERCIAL FISHERIES.....	25.3	18.9	•	•••••	1.4	•••••	.2	•••••	4.3	.4
BUREAU OF LAND MANAGEMENT.....	.7	.2	•••••	•••••	.5	•••••	•••••	•••••	•••••	•••••
BUREAU OF MINES.....	30.3	30.0	•••••	•••••	.3	•••••	•••••	•••••	•••••	•••••
BUREAU OF OUTDOOR RECREATION.....	.1	.1	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
BUREAU OF RECLAMATION.....	5.4	2.7	•••••	•••••	1.9	•••••	•••••	•••••	.8	•••••
BUREAU OF SPORT FISHERIES AND WILDLIFE	17.3	8.6	•••••	•••••	.4	•••••	•••••	•••••	8.4	•••••
GEOLOGICAL SURVEY.....	26.6	26.3	•	•••••	.3	•••••	•••••	•••••	•••••	•••••
NATIONAL PARK SERVICE.....	2.1	1.4	•••••	•••••	.6	•••••	•••••	•••••	•	•••••
OFFICE OF COAL RESEARCH.....	3.7	•	2.5	•••••	.5	•••••	.7	•••••	•••••	•••••
OFFICE OF SALINE WATER.....	18.6	2.0	11.4	1.8	2.5	•••••	.8	•••••	•••••	.2
OFFICE OF WATER RESOURCES RESEARCH.....	6.3	.4	•••••	•••••	5.9	•••••	•••••	•••••	•••••	•••••

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TABLE C-8.

AGENCY AND SUBDIVISION	TOTAL	INTRA MURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	11.8	7.4	.1	.....	3.5	.....	.8	.....	*	.....
BUREAU OF APPRENTICESHIP AND TRAINING..	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	1.7	1.7	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	3.0	3.0	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUA- TION AND RESEARCH.....	5.1	.7	.1	.....	3.5	.....	.8	.....	*	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1.4	1.4	.....	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	14.5	1.7	12.4	.....	.3	.....	.....	.....	.....	.1
DEPARTMENT OF STATE, TOTAL.....	14.6	2.8	.4	.....	5.9	.....	5.2	.....	.1	.3
DEPARTMENTAL FUNDS.....	.1	.1	.....	.....	.....	.....	.....	.....	.1	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT...	14.5	2.7	.4	.....	5.9	.....	5.2	.....	.....	.3
DEPARTMENT OF THE TREASURY, TOTAL.....	3.1	2.8	.3	.....	*	.....	*	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	.5	.5	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	2.6	2.3	.3	.....	*	.....	*	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	1,255.9	17.4	341.4	366.6	84.4	347.3	8.9	83.7	.2	6.0
CIVIL AERONAUTICS BOARD.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	176.2	34.3	139.9	*	.7	.....	.2	1.2	.....	*
FEDERAL COMMUNICATIONS COMMISSION.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	.4	.3	.1	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	5,156.5	861.9	4,060.4	.8	123.4	85.9	17.5	1.0	7.1	.5
NATIONAL SCIENCE FOUNDATION.....	224.3	17.9	2.6	.....	174.2	.....	13.8	14.9	.2	.7
OFFICE OF ECONOMIC OPPORTUNITY.....	60.0	1.9	13.0	.....	21.5	.....	20.5	.....	3.0	.....
OFFICE OF EMERGENCY PLANNING.....	.2	.1	.....	.....	.....	.....	.1	.....	*	.....
PEACE CORPS.....	.5	.....	*	.....	.4	.....	.1	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	.4	.4	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	7.3	7.3	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	6.7	6.4	.....	.....	.3	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7.9	3.4	2.0	.1	1.2	.....	.8	.3	.1	.....
UNITED STATES INFORMATION AGENCY.....	.3	.1	.1	.....	.1	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	40.8	40.1	.2	.....	.3	.....	.1	.....	.....	.....

APPENDIX C

TABLE C-9. FEDERAL ALLOCATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1967--ESTIMATED
-MILLIONS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	15,943.0	3,363.5	9,317.9	397.3	1,483.1	579.9	404.4	251.8	69.0	76.3
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	237.5	167.9	1.3	.....	56.0	.....	1.7	.....	.....	10.6
AGRICULTURAL RESEARCH SERVICE.....	142.3	120.9	1.1	.....	8.1	.....	1.6	.....	.....	10.6
COOPERATIVE STATE RESEARCH SERVICE.....	47.6	1.7	.....	.....	46.0	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	12.3	11.9	.1	.....	.3	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	.7	.7	.....	.....	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	33.5	31.7	.1	.....	1.6	.....	.1	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	.4	.4	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	.6	.5	.1	.....	.1	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	102.7	57.9	29.8	.....	10.6	.....	3.5	.....	.....	.9
BUREAU OF THE CENSUS.....	1.9	1.8	.....	.....	.1	.....	.....	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	11.7	5.3	3.3	.....	2.7	.....	.4	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	3.0	.2	1.2	.....	1.5	.....	.1	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	22.4	17.0	1.9	.....	2.6	.....	.4	.....	.....	.4
MARITIME ADMINISTRATION.....	7.8	.8	6.6	.....	.4	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	25.1	24.3	.1	.....	.3	.....	.....	.....	.....	.5
OFFICE OF BUSINESS ECONOMICS.....	3.0	3.0	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	.4	.4	.....	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	27.5	5.1	16.7	.....	3.0	.....	2.6	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	7,313.4	1,764.7	4,798.2	21.8	326.4	122.2	114.5	147.3	.3	17.9
DEPARTMENT OF THE ARMY.....	1,584.3	580.8	919.0	5.5	52.9	5.8	8.6	8.8	.....	2.9
DEPARTMENT OF THE NAVY.....	1,811.8	580.5	1,076.9	.....	72.8	52.3	15.7	9.3	.....	4.3
DEPARTMENT OF THE AIR FORCE.....	3,307.7	470.6	2,510.5	.....	113.0	30.8	75.3	101.5	.3	5.6
DEFENSE AGENCIES.....	474.5	123.3	183.6	16.0	74.4	33.4	12.7	26.1	.....	5.0
DEPARTMENTWIDE FUNDS.....	135.0	9.5	108.2	.3	13.3	.....	2.3	1.5	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,177.7	209.2	48.9	.....	629.2	.....	208.4	.....	46.1	35.9
ADMINISTRATION ON AGING.....	1.8	.1	.....	.....	.6	.....	1.2	.....	.....	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	37.2	6.4	6.3	.....	7.9	.....	16.5	.....	.....	.1
FOOD AND DRUG ADMINISTRATION.....	12.0	10.6	.....	.....	1.4	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	97.9	2.7	.1	.....	79.3	.....	.4	.....	13.9	1.4
PUBLIC HEALTH SERVICE.....	976.0	183.4	42.5	.....	521.4	.....	177.1	.....	23.3	28.4
NATIONAL INSTITUTES OF HEALTH.....	1,856.7	1,143.5	140.1	.....	1,475.5	.....	163.9	.....	15.9	17.8
SAINT ELIZABETH'S HOSPITAL.....	.4	.4	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	3.5	3.5	.....	.....	.....	.....	.....	.....	.....	.....
VOCATIONAL REHABILITATION ADMIN.....	32.6	.6	.....	.....	11.8	.....	8.9	.....	7.2	4.0
WELFARE ADMINISTRATION.....	16.3	1.5	.1	.....	6.8	.....	4.2	.....	1.7	2.0
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	.6	.4	.....	.....	.1	.....	.1	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	139.6	91.8	16.5	1.5	15.6	.....	1.9	.....	11.6	.6
BONNEVILLE POWER ADMINISTRATION.....	1.0	.4	.5	.....	.1	.....	.....	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	24.8	19.8	.1	.....	1.3	.....	.2	.....	3.0	.4
BUREAU OF LAND MANAGEMENT.....	.7	.3	.....	.....	.4	.....	.....	.....	.....	.....
BUREAU OF MINES.....	29.8	25.1	.....	.....	.4	.....	.....	.....	.3	.....
BUREAU OF OUTDOOR RECREATION.....	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	5.2	2.7	.....	.....	1.8	.....	.....	.....	.8	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	17.2	9.5	.....	.....	.3	.....	.....	.....	7.4	.....
GEOLOGICAL SURVEY.....	26.2	25.9	.....	.....	.3	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	2.2	1.6	.....	.....	.6	.....	.....	.....	.....	.....
OFFICE OF COAL RESEARCH.....	3.9	.....	2.6	.....	.5	.....	.7	.....	.....	.....
OFFICE OF SALINE WATER.....	21.5	2.1	13.3	1.5	3.4	1.12
OFFICE OF WATER RESOURCES RESEARCH.....	6.8	.4	6.4

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TABLE C-9.

AGENCY AND SUBDIVISION	TOTAL	INTRA MURAL	EXTRAMURAL							FOREIGN
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF JUSTICE, TOTAL.....	.2	.....	.2	.....	.....	.....	.....	.....	.....	.....
FEDERAL BUREAU OF INVESTIGATION.....	.2	.....	.2	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	16.1	9.2	.1	.....	5.5	.....	1.2	.....	*	.....
BUREAU OF APPRENTICESHIP AND TRAINING..	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	2.6	2.6	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	3.5	3.5	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUA- TION AND RESEARCH.....	8.0	1.1	.1	.....	5.5	.....	1.2	.....	*	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1.4	1.4	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	11.9	2.4	9.3	.....	.3	.....	.....	.....	.....	*
DEPARTMENT OF STATE, TOTAL.....	14.9	4.1	.5	.....	5.8	.....	3.5	.....	.1	1.0
DEPARTMENTAL FUNDS.....	.1	.1	.....	.....	.....	.....	.....	.....	.1	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT...	14.8	4.0	.5	.....	5.8	.....	3.5	.....	.....	1.0
DEPARTMENT OF THE TREASURY, TOTAL.....	3.1	3.0	.2	.....	*	.....	*	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	.5	.5	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	2.6	2.4	.2	.....	*	.....	*	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	1,269.5	11.7	324.6	372.9	91.8	366.5	8.4	85.0	.2	8.3
CIVIL AERONAUTICS BOARD.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	374.1	39.6	333.5	.....	.1	.....	.....	.9	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	.4	.4	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	.3	.3	.....	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	.8	.3	.5	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	4,881.2	912.2	3,733.7	.9	118.4	91.1	16.8	1.4	6.3	.3
NATIONAL SCIENCE FOUNDATION.....	248.3	19.7	2.9	.....	192.4	.....	15.3	17.0	.2	.8
OFFICE OF ECONOMIC OPPORTUNITY.....	80.3	5.3	15.1	.....	28.1	.....	27.5	.....	4.1	.....
OFFICE OF EMERGENCY PLANNING.....	.2	.2	.....	.....	.....	.....	.....	.....	.....	.....
PEACE CORPS.....	1.4	.....	.1	.....	1.0	.....	.3	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	.7	.5	.1	.....	*	.....	.....	*	*	.....
SMITHSONIAN INSTITUTION.....	9.0	9.0	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	7.1	6.8	.....	.....	.3	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	7.9	3.7	1.8	.2	1.0	.....	1.0	.1	.1	.....
UNITED STATES INFORMATION AGENCY.....	.4	.1	.3	.....	*	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	43.2	42.5	.3	.....	.3	.....	.2	.....	.....	.....

APPENDIX C

TABLE C-10. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1965
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL RESEARCH	INTRA MURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	4,853,884	1,453,874	1,463,529	70,251	1,119,385	331,631	224,066	98,677	43,084	49,387
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	217,824	146,712	2,078	.....	58,248	.....	1,945	.....	.....	8,841
AGRICULTURAL RESEARCH SERVICE.....	130,598	107,087	1,808	.....	11,252	.....	1,610	.....	.....	8,841
COOPERATIVE STATE RESEARCH SERVICE.....	47,062	1,438	.....	.....	45,390	.....	234	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	10,719	10,437	88	.....	193	.....	1	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	684	648	16	.....	20	.....	.....	.....	.....	.....
FOREST SERVICE.....	28,149	26,687	58	.....	1,304	.....	100	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	170	170	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	442	245	108	.....	89	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	43,571	36,228	3,107	.....	3,140	.....	382	8	15	691
BUREAU OF THE CENSUS.....	1,057	948	17	.....	56	.....	36	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	5,171	3,466	1,031	.....	644	.....	30	.....	.....	.....
COAST AND GEODETIC SURVEY.....	1,538	1,335	35	.....	157	.....	11	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	410	.....	190	.....	210	.....	10	.....	.....	.....
MARITIME ADMINISTRATION.....	1,301	417	784	.....	90	.....	10	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	22,044	21,095	23	.....	212	.....	.....	8	15	691
OFFICE OF BUSINESS ECONOMICS.....	2,348	2,348	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	400	380	20	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT	2,004	429	656	.....	767	.....	152	.....	.....	.....
WEATHER BUREAU.....	7,298	5,810	351	.....	1,004	.....	133	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,751,493	551,727	718,952	15,734	262,636	107,438	38,516	41,463	35	14,992
DEPARTMENT OF THE ARMY.....	291,846	158,856	71,119	20	36,871	6,367	6,038	9,620	5	2,950
DEPARTMENT OF THE NAVY.....	319,500	139,388	88,205	.....	52,367	21,951	8,376	6,800	.....	2,413
DEPARTMENT OF THE AIR FORCE.....	667,400	138,485	381,258	955	101,765	31,880	8,253	.....	30	4,774
DEFENSE AGENCIES.....	461,447	111,044	175,747	14,499	70,752	47,240	13,282	24,028	.....	4,855
DEPARTMENTWIDE FUNDS.....	11,300	3,954	2,623	260	881	.....	2,567	1,015	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	861,735	158,393	29,674	.....	471,734	.....	154,685	.....	27,775	19,474
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	8,206	2,721	346	.....	4,965	.....	127	.....	.....	47
FOOD AND DRUG ADMINISTRATION.....	5,942	5,819	.....	.....	123	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	34,419	2,126	51	.....	26,138	.....	100	.....	5,756	248
PUBLIC HEALTH SERVICE.....	781,336	143,908	29,212	.....	429,467	.....	145,287	.....	16,239	17,223
NATIONAL INSTITUTES OF HEALTH.....	/715,072	/115,584/	/28,633/	.....	/402,398/	.....	/139,746/	.....	/13,214/	/15,497/
SAINT ELIZABETHS HOSPITAL.....	387	387	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	1,887	1,863	.....	.....	12	.....	.....	.....	.....	12
VOCATIONAL REHABILITATION ADMIN.....	20,267	357	.....	.....	6,631	.....	6,815	.....	4,600	1,864
WELFARE ADMINISTRATION.....	9,291	1,212	65	.....	4,398	.....	2,356	.....	1,180	80
DEPARTMENT OF THE INTERIOR, TOTAL.....	97,525	74,357	4,966	600	9,691	.....	1,174	.....	6,452	285
BONNEVILLE POWER ADMINISTRATION.....	226	137	.....	.....	55	.....	.....	.....	34	.....
BUREAU OF COMMERCIAL FISHERIES.....	16,291	14,520	9	.....	1,440	.....	94	.....	69	159
BUREAU OF LAND MANAGEMENT.....	499	153	.....	.....	346	.....	.....	.....	.....	.....
BUREAU OF MINES.....	24,088	24,083	.....	.....	5	.....	.....	.....	.....	.....
BUREAU OF OUTDOOR RECREATION.....	56	56	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	3,175	2,083	.....	.....	838	.....	.....	.....	254	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE	13,296	6,668	.....	.....	550	.....	8	.....	6,070	.....
GEOLOGICAL SURVEY.....	24,422	24,122	.....	.....	300	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	1,959	1,389	.....	.....	376	.....	169	.....	25	.....
OFFICE OF COAL RESEARCH.....	1,285	9	780	.....	195	.....	301	.....	.....	.....
OFFICE OF SALINE WATER.....	8,868	943	4,177	600	2,420	602	126
OFFICE OF WATER RESOURCES RESEARCH.....	3,360	194	3,166

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TABLE C-10.

AGENCY AND SUBDIVISION	TOTAL RESEARCH	INTRA MURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	6,288	4,341	31	.....	1,562	.....	352	.....	2	.....
BUREAU OF APPRENTICESHIP AND TRAINING..	65	65	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	711	711	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	184	184	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	1,613	1,613	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	113	113	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	2,260	313	31	.....	1,562	.....	352	.....	2	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,290	1,290	.....	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	52	52	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	159	131	28	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,571	672	129	.....	5,644	.....	1,892	.....	38	196
DEPARTMENTAL FUNDS.....	125	58	.....	.....	.....	.....	29	.....	38	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	8,446	614	129	.....	5,644	.....	1,863	.....	.....	196
DEPARTMENT OF THE TREASURY, TOTAL.....	1,148	1,058	41	.....	4	.....	45	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	205	205	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	943	853	41	.....	4	.....	45	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	130	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	333,997	6,093	3,744	52,987	70,803	146,062	5,717	44,297	270	4,024
CIVIL AERONAUTICS BOARD.....	74	74	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	200	200	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,294	3,756	538	.....	.....	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	280	280	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	189	189	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	263	263	.....	.....	.....	.....	.....	.....	.....	.....
HOUSING AND HOME FINANCE AGENCY.....	101	25	.....	.....	29	.....	40	.....	7	.....
LIBRARY OF CONGRESS.....	107	107	.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	1,289,890	405,597	594,173	794	95,630	78,131	6,518	541	8,134	372
NATIONAL SCIENCE FOUNDATION.....	171,732	13,686	1,805	.....	133,321	.....	10,310	11,969	129	512
OFFICE OF ECONOMIC OPPORTUNITY.....	9,730	467	2,607	.....	4,962	.....	1,547	.....	147	.....
OFFICE OF EMERGENCY PLANNING.....	211	50	.....	.....	.....	.....	121	.....	40	.....
PEACE CORPS.....	601	.....	43	.....	452	.....	106	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	279	279	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	5,857	5,857	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	4,382	4,180	.....	.....	202	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,287	2,505	1,562	136	1,115	.....	530	399	40	.....
UNITED STATES INFORMATION AGENCY.....	156	87	34	.....	35	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	36,810	36,430	17	.....	177	.....	186	.....	.....	.....

APPENDIX C

TABLE C-11. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL RESEARCH	INTRAMURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	5,462,145	1,527,662	1,747,607	88,413	1,289,627	329,146	256,170	106,070	50,031	59,419
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	236,854	164,680	1,013	1	59,988	.....	896	.....	.....	10,276
AGRICULTURAL RESEARCH SERVICE.....	138,206	119,992	417	.....	6,730	.....	791	.....	.....	10,276
COOPERATIVE STATE RESEARCH SERVICE.....	53,322	1,834	.....	.....	51,488	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	12,047	11,210	453	1	383	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	713	703	3	.....	7	.....	.....	.....	.....	.....
FOREST SERVICE.....	32,046	30,546	60	.....	1,335	.....	105	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	109	109	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	411	286	80	.....	45	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	67,232	41,691	14,808	.....	7,391	.....	2,488	.....	15	839
BUREAU OF THE CENSUS.....	1,386	1,278	7	.....	66	.....	35	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	6,420	3,514	1,320	.....	1,586	.....	.....	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,280	80	800	.....	1,400	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	15,040	12,213	413	.....	1,868	.....	233	.....	.....	313
MARITIME ADMINISTRATION.....	2,170	433	1,418	.....	235	.....	84	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	18,970	18,243	.....	.....	186	.....	.....	.....	15	526
PATENT OFFICE.....	2,550	2,550	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	130	120	10	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	18,286	3,260	10,840	.....	2,050	.....	2,136	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,916,187	567,001	872,051	30,424	259,953	89,081	40,227	42,099	324	15,027
DEPARTMENT OF THE ARMY.....	286,362	172,150	50,010	20	37,781	5,588	9,059	9,065	60	2,629
DEPARTMENT OF THE NAVY.....	307,000	135,590	82,232	.....	52,778	19,304	8,046	7,000	.....	2,050
DEPARTMENT OF THE AIR FORCE.....	880,600	157,532	578,281	400	100,952	30,800	8,019	.....	264	4,352
DEFENSE AGENCIES.....	431,225	97,769	159,528	29,684	67,562	33,389	12,743	24,554	.....	5,996
DEPARTMENTWIDE FUNDS.....	11,000	3,960	2,000	320	880	.....	2,360	1,480	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,038,566	183,806	39,234	.....	572,359	.....	176,966	.....	38,999	27,202
ADMINISTRATION ON AGING.....	300	15	.....	.....	195	.....	90	.....	.....	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	10,702	4,357	300	.....	5,790	.....	177	.....	.....	78
FOOD AND DRUG ADMINISTRATION.....	8,336	7,006	.....	.....	660	.....	670	.....	.....	.....
OFFICE OF EDUCATION.....	72,875	2,389	57	.....	57,900	.....	300	.....	11,671	558
PUBLIC HEALTH SERVICE.....	902,370	165,028	38,798	.....	491,731	.....	165,366	.....	19,101	22,346
NATIONAL INSTITUTES OF HEALTH.....	/808,958	/133,844/	/37,894/	.....	/448,438/	.....	/157,015/	.....	/14,807/	/16,960/
SAINT ELIZABETHS HOSPITAL.....	404	404	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	3,301	2,771	.....	.....	508	.....	.....	.....	5	17
VOCATIONAL REHABILITATION ADMIN.....	27,460	465	.....	.....	9,765	.....	7,425	.....	6,702	3,103
WELFARE ADMINISTRATION.....	12,818	1,371	79	.....	5,810	.....	2,938	.....	1,520	1,100
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	955	770	.....	.....	50	.....	60	.....	75	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	115,156	82,061	6,209	500	14,065	.....	1,311	.....	10,525	485
BONNEVILLE POWER ADMINISTRATION.....	178	122	.....	.....	42	.....	.....	.....	14	.....
BUREAU OF COMMERCIAL FISHERIES.....	20,602	15,889	20	.....	1,424	.....	143	.....	2,806	320
BUREAU OF LAND MANAGEMENT.....	651	187	.....	.....	464	.....	.....	.....	.....	.....
BUREAU OF MINES.....	26,305	26,105	.....	.....	200	.....	.....	.....	.....	.....
BUREAU OF OUTDOOR RECREATION.....	61	61	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	5,332	2,648	.....	.....	1,855	.....	.....	.....	829	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	15,037	7,786	.....	.....	400	.....	.....	.....	6,851	.....
GEOLOGICAL SURVEY.....	26,601	26,281	20	.....	300	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	2,095	1,435	.....	.....	635	.....	.....	.....	25	.....
OFFICE OF COAL RESEARCH.....	1,443	5	727	.....	368	.....	343	.....	.....	.....
OFFICE OF SALINE WATER.....	10,512	1,130	5,442	500	2,450	825	165
OFFICE OF WATER RESOURCES RESEARCH.....	6,339	412	5,927

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TABLE C-11.

AGENCY AND SUBDIVISION	TOTAL RESEARCH	INTRAMURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	8,632	5,242	55	.....	2,717	.....	614	.....	4	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	72	72	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	924	924	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	173	173	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	2,001	2,001	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	116	116	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	3,933	543	55	.....	2,717	.....	614	.....	4	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,356	1,356	.....	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	57	57	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	557	249	33	.....	275	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,027	768	.....	.....	4,204	.....	2,739	.....	65	251
DEPARTMENTAL FUNCS.....	125	60	.....	.....	.....	.....	.....	.....	65	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	7,902	708	.....	.....	4,204	.....	2,739	.....	.....	251
DEPARTMENT OF THE TREASURY, TOTAL.....	1,608	1,545	21	.....	6	.....	36	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	216	216	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	1,392	1,329	21	.....	6	.....	36	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	130	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	365,141	6,037	3,862	56,678	81,189	159,454	5,839	47,696	220	4,166
CIVIL AERONAUTICS BOARD.....	81	81	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	195	195	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,125	3,492	633	.....	.....	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	300	300	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	205	205	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	303	303	.....	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	410	315	95	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	1,387,731	393,999	799,325	710	97,614	80,611	6,821	1,035	7,127	489
NATIONAL SCIENCE FOUNDATION.....	222,916	17,868	2,401	.....	173,584	.....	13,273	14,940	166	684
OFFICE OF ECONOMIC OPPORTUNITY.....	26,000	1,942	5,705	.....	14,142	.....	3,848	.....	363	.....
OFFICE OF EMERGENCY PLANNING.....	232	95	.....	.....	.....	.....	89	.....	48	.....
PEACE CORPS.....	500	.....	45	.....	405	.....	50	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	445	445	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	7,314	7,314	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	5,194	4,913	.....	.....	281	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,746	2,246	2,000	100	1,200	.....	800	300	100	.....
UNITED STATES INFORMATION AGENCY.....	217	33	117	.....	67	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	40,186	39,936	.....	.....	137	.....	113	.....	.....	.....

APPENDIX C

TABLE C-12. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1967--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL RESEARCH	INTRAPURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	5,547,274	1,588,202	1,630,605	77,878	1,385,896	149,758	271,465	113,739	62,584	67,147	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	230,440	161,156	1,112	.....	55,977	.....	1,607	.....	.....	10,588
AGRICULTURAL RESEARCH SERVICE.....	136,753	115,739	884	.....	8,055	.....	1,487	.....	.....	10,588
COOPERATIVE STATE RESEARCH SERVICE.....	47,626	1,682	.....	.....	45,954	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	12,328	11,908	75	.....	345	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	715	705	3	.....	7	.....	.....	.....	.....	.....
FOREST SERVICE.....	32,144	30,394	70	.....	1,560	.....	120	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	449	449	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	415	279	80	.....	56	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	80,494	47,650	18,901	.....	9,682	.....	3,275	.....	15	931
BUREAU OF THE CENSUS.....	1,354	1,269	.....	.....	65	.....	20	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	10,800	4,620	3,175	.....	2,705	.....	300	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,400	100	1,000	.....	1,300	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	17,523	13,905	695	.....	2,182	.....	310	.....	.....	431
MARITIME ADMINISTRATION.....	1,940	417	1,293	.....	230	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	19,919	19,204	.....	.....	200	.....	.....	.....	15	500
OFFICE OF BUSINESS ECONOMICS.....	2,965	2,965	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	130	130	.....	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	23,463	5,080	12,738	.....	3,000	.....	2,645	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,822,167	555,218	787,862	16,325	276,330	89,053	38,008	45,726	316	13,329	
DEPARTMENT OF THE ARMY.....	288,214	174,640	48,661	30	42,153	5,565	6,030	8,800	35	2,300	
DEPARTMENT OF THE NAVY.....	303,200	143,102	63,283	.....	56,131	19,338	10,077	9,300	.....	1,969
DEPARTMENT OF THE AIR FORCE.....	822,200	145,356	578,868	.....	104,026	30,800	8,839	.....	281	4,030
DEFENSE AGENCIES.....	398,553	88,920	145,150	15,975	73,220	33,350	10,762	26,146	.....	5,030
DEPARTMENT-WISE FUNDS.....	1,000	3,200	1,900	320	800	.....	2,300	1,480	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,143,447	204,233	43,401	.....	624,837	.....	189,841	.....	45,834	35,301
ADMINISTRATION ON AGING.....	600	20	.....	.....	380	.....	200	.....	.....	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	14,161	6,391	1,300	.....	6,150	.....	236	.....	.....	84
FGCC AND CRUC ADMINISTRATION.....	9,840	8,564	.....	.....	1,276	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	97,864	2,697	63	.....	79,302	.....	.....	.....	.....	.....
PUBLIC HEALTH SERVICE.....	970,921	180,496	41,967	.....	520,169	.....	407	.....	13,946	1,449
NATIONAL INSTITUTES OF HEALTH.....	1,856,657	1,143,462	1,401,122	.....	1,475,450	.....	176,807	.....	23,109	28,373
SAINT ELIZABETH'S HOSPITAL.....	427	427	.....	.....	.....	.....	163,932	.....	15,891	17,800
SOCIAL SECURITY ADMINISTRATION.....	3,531	3,480	.....	.....	36	.....	.....	.....	.....	.....
VOCATIONAL REHABILITATION ADMIN.....	29,758	618	.....	.....	10,694	.....	7,947	.....	7,119	3,380
WELFARE ADMINISTRATION.....	16,345	1,540	71	.....	6,830	.....	4,244	.....	1,660	2,000
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	578	380	.....	.....	140	.....	50	.....	8	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	118,892	83,402	8,530	500	15,372	.....	1,544	.....	9,018	524
BOZEMAN POWER ADMINISTRATION.....	218	151	.....	.....	52	.....	.....	.....	15	.....
BUREAU OF COMMERCIAL FISHERIES.....	20,625	16,890	.....	.....	1,347	.....	122	.....	1,935	341
BUREAU OF LAND MANAGEMENT.....	623	209	.....	.....	424	.....	.....	.....	.....	.....
BUREAU OF MINES.....	25,825	25,425	.....	.....	300	.....	.....	.....	100	.....
BUREAU OF OUTDOOR RECREATION.....	53	43	.....	.....	10	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	5,230	2,667	.....	.....	1,750	.....	.....	.....	313	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	15,026	8,596	.....	.....	300	.....	.....	.....	6,130	.....
GEOLOGICAL SURVEY.....	26,216	25,916	.....	.....	300	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	2,222	1,566	.....	.....	631	.....	.....	.....	25	.....
OFFICE OF COAL RESEARCH.....	1,587	15	780	.....	420	.....	372	.....	.....	.....
OFFICE OF SALINE WATER.....	14,403	1,518	7,750	500	3,400	1,050	185	
OFFICE OF WATER RESOURCES RESEARCH.....	6,844	406	6,438	

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TABLE C-12.

AGENCY AND SUBDIVISION	TOTAL RESEARCH	INTRAMURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	12,377	6,684	93	.....	4,564	.....	1,030	.....	6	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	58	58	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	1,492	1,492	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	176	176	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	2,513	2,513	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	119	119	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	5,605	912	93	.....	4,564	.....	1,030	.....	6	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,374	1,374	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	57 ^F	271	75	.....	275	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	9,397	2,572	.....	.....	4,250	.....	2,000	.....	65	1,000
DEPARTMENTAL FLAHS.....	12 ^F	60	.....	.....	.....	.....	.....	.....	65	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	9,762	2,512	.....	.....	4,250	.....	2,000	.....	.....	1,000
DEPARTMENT OF THE TREASURY, TOTAL.....	1,987	1,564	.....	.....	6	.....	17	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	227	222	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	1,765	1,742	.....	.....	6	.....	17	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	145	145	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	393,993	6,419	3,477	60,008	88,661	175,195	5,666	49,920	169	4,398
CIVIL AERONAUTICS BOARD.....	152	153	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	200	200	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	3,479	3,280	198	.....	.....	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	404	404	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	270	270	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	310	310	.....	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	210	310	500	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	1,379,546	428,709	756,325	765	93,614	85,510	7,025	935	6,343	320
NATIONAL SCIENCE FOUNDATION.....	246,265	19,705	2,618	.....	191,334	.....	14,633	17,038	183	754
OFFICE OF ECONOMIC OPPORTUNITY.....	35,000	5,252	5,429	.....	18,438	.....	5,374	.....	507	.....
OFFICE OF EMERGENCY PLANNING.....	18 ^F	185	.....	.....	.....	.....	.....	.....	.....	.....
PEACE CORPS.....	1,400	.....	140	.....	980	.....	280	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	6 ^F	459	140	.....	20	.....	.....	20	20	.....
SMITHSONIAN INSTITUTION.....	9,040	9,040	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	5,495	5,214	.....	.....	281	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,477	2,277	1,000	200	1,000	.....	1,000	100	100	.....
UNITED STATES INFORMATION AGENCY.....	50	40	50	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	42,510	42,260	.....	.....	135	.....	115	.....	.....	.....

TABLE C-13. FEDERAL OBLIGATIONS FOR RESEARCH, BY DETAILED FIELD OF SCIENCE
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

FIELD OF SCIENCE	ACTUAL 1965	ESTIMATES	
		1966	1967
TOTAL, ALL FIELDS.....	4,853,884	5,462,145	5,547,274
LIFE SCIENCES, TOTAL.....	1,182,899	1,352,425	1,427,443
BIOLOGICAL SCIENCES.....	258,128	283,934	302,857
MEDICAL SCIENCES.....	819,430	953,079	1,015,930
AGRICULTURAL SCIENCES.....	105,341	115,412	108,656
PSYCHOLOGICAL SCIENCES.....	103,479	136,718	157,911
PHYSICAL SCIENCES, TOTAL.....	3,370,312	3,680,707	3,649,231
PHYSICAL SCIENCES PROPER, TOTAL.....	1,693,774	1,849,178	1,855,659
ASTRONOMY.....	192,326	233,390	220,870
CHEMISTRY.....	232,940	251,580	263,828
EARTH SCIENCES			
ATMOSPHERIC SCIENCES.....	244,160	278,466	297,356
OCEANOGRAPHY.....	56,761	66,912	62,855
SOLID EARTH SCIENCES.....	375,301	418,473	385,970
PHYSICS			
ELEMENTARY PARTICLE PHYSICS.....	186,123	182,468	204,899
NUCLEAR STRUCTURE PHYSICS.....	62,830	73,416	75,552
ATOMIC, MOLECULAR, AND SOLID-STATE PHYSICS.....	111,511	122,065	125,872
OTHER PHYSICS.....	175,344	173,103	172,668
OTHER PHYSICAL SCIENCES PROPER.....	56,478	49,305	45,789
MATHEMATICAL SCIENCES.....	104,562	124,944	135,423

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TABLE C-13.

FIELD OF SCIENCE	ACTUAL 1965	ESTIMATES	
		1966	1967
ENGINEERING SCIENCES, TOTAL.....	1,571,976	1,706,585	1,658,149
AERONAUTICAL.....	299,502	354,524	313,647
ASTRONAUTICAL.....	345,944	337,932	309,103
CHEMICAL.....	108,881	118,850	116,343
CIVIL.....	31,254	37,309	64,622
ELECTRICAL.....	267,399	323,127	317,040
MECHANICAL.....	137,052	138,083	126,552
METALLURGY AND MATERIALS.....	140,598	150,205	152,556
OTHER ENGINEERING SCIENCES.....	241,346	246,555	258,286
SOCIAL SCIENCES, TOTAL.....	127,389	188,375	221,894
ANTHROPOLOGY.....	8,121	9,369	10,382
ECONOMICS.....	47,157	75,633	80,913
SOCIOLOGY.....	25,344	38,523	46,350
OTHER SOCIAL SCIENCES.....	46,767	64,850	84,249
OTHER SCIENCES.....	69,805	103,920	90,795

TABLE C-14. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1965
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL RESEARCH	LIFE SCIENCES			PSYCH-LOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIO-LOGICAL SCIENCES	MEDICAL SCIENCES	AGRI-CULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHE-MATICAL SCIENCES	ENGI-NEERING SCIENCES		
TOTAL, ALL AGENCIES.....	4,853,884	258,128	819,430	105,341	103,479	1,693,774	104,562	1,571,976	127,389	69,805
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	217,824	27,287	18,568	96,802	.....	41,764	690	13,920	25,793	.....
AGRICULTURAL RESEARCH SERVICE.....	130,598	8,731	16,443	58,605	.....	35,342	.....	9,766	1,711	.....
COOPERATIVE STATE RESEARCH SERVICE.....	47,062	3,771	2,125	26,477	.....	2,612	.....	1,612	10,465	.....
ECONOMIC RESEARCH SERVICE.....	10,719	.....	.....	.....	.....	.....	90	.....	10,629	.....
FARMER COOPERATIVE SERVICE.....	684	.....	.....	.....	.....	.....	.....	.....	684	.....
FOREST SERVICE.....	28,149	7,785	.....	11,550	.....	3,810	360	2,542	2,102	.....
NATIONAL AGRICULTURAL LIBRARY.....	170	.....	.....	170	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	442	.....	.....	.....	.....	.....	240	.....	202	.....
DEPARTMENT OF COMMERCE, TOTAL.....	43,571	.....	.....	.....	263	25,300	641	11,337	5,630	400
BUREAU OF THE CENSUS.....	1,057	.....	.....	.....	263	.....	274	.....	520	.....
BUREAU OF PUBLIC ROADS.....	5,171	.....	.....	.....	.....	.....	.....	4,372	799	.....
COAST AND GEODETIC SURVEY.....	1,538	.....	.....	.....	.....	1,480	.....	58	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	410	.....	.....	.....	.....	.....	.....	.....	410	.....
MARITIME ADMINISTRATION.....	1,301	.....	.....	.....	.....	.....	.....	1,251	50	.....
NATIONAL BUREAU OF STANDARDS.....	22,044	.....	.....	.....	.....	16,703	367	4,830	144	.....
OFFICE OF BUSINESS ECONOMICS.....	2,348	.....	.....	.....	.....	.....	.....	.....	2,348	.....
PATENT OFFICE.....	400	.....	.....	.....	.....	.....	.....	.....	.....	400
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	2,004	.....	.....	.....	.....	.....	.....	645	1,359	.....
WEATHER BUREAU.....	7,298	.....	.....	.....	.....	7,117	.....	181	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,751,493	48,646	50,176	205	21,321	547,498	71,593	942,635	4,886	64,533
DEPARTMENT OF THE ARMY.....	291,846	16,770	35,549	75	6,468	60,442	7,214	143,181	2,147	20,000
DEPARTMENT OF THE NAVY.....	319,500	12,397	7,208	.....	6,917	102,454	22,963	167,561	.....	.....
DEPARTMENT OF THE AIR FORCE.....	667,400	14,820	4,000	.....	4,277	145,311	23,090	457,169	1,581	17,152
DEFENSE AGENCIES.....	461,447	4,164	3,039	90	2,469	237,281	18,326	171,964	388	23,726
DEPARTMENTWIDE FUNDS.....	11,300	495	380	40	1,190	2,010	.....	2,760	770	3,655
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	861,735	25,625	688,174	52	64,644	20,395	4,169	5,547	50,644	2,485
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	8,206	1,897	359	52	.....	2,311	102	3,228	257	.....
FOOD AND DRUG ADMINISTRATION.....	5,942	2,376	238	.....	.....	3,328	.....	.....	.....	.....
OFFICE OF EDUCATION.....	34,419	.....	.....	.....	21,839	.....	.....	.....	12,580	.....
PUBLIC HEALTH SERVICE.....	781,336	21,352	676,315	.....	39,290	14,756	4,067	2,319	21,109	2,128
NATIONAL INSTITUTES OF HEALTH.....	/715,072/	/18,480/	/617,914/	.....	/37,953/	/14,656/	/3,608/	/2,292/	/18,061/	/2,108/
SAINT ELIZABETHS HOSPITAL.....	387	.....	217	.....	170	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	1,887	.....	.....	.....	.....	.....	.....	.....	1,887	.....
VOCATIONAL REHABILITATION ADMIN.....	20,267	.....	6,666	.....	3,345	.....	.....	.....	9,899	357
WELFARE ADMINISTRATION.....	9,291	.....	4,379	.....	.....	.....	.....	.....	4,912	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	97,525	26,331	480	854	522	40,643	1,540	24,498	2,657	.....
BONNEVILLE POWER ADMINISTRATION.....	226	.....	.....	.....	.....	51	10	165	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	16,291	11,846	480	231	522	2,743	.....	275	194	.....
BUREAU OF LAND MANAGEMENT.....	499	12	.....	430	.....	35	.....	.....	22	.....
BUREAU OF MINES.....	24,088	.....	.....	.....	.....	7,558	828	15,702	.....	.....
BUREAU OF OUTDOOR RECREATION.....	56	15	.....	5	.....	.....	.....	.....	36	.....
BUREAU OF RECLAMATION.....	3,175	.....	.....	20	.....	1,178	.....	1,973	4	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	13,296	13,296	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	24,422	270	.....	.....	.....	22,576	702	874	.....	.....
NATIONAL PARK SERVICE.....	1,959	213	.....	.....	.....	.....	.....	.....	1,746	.....
OFFICE OF COAL RESEARCH.....	1,285	.....	.....	.....	.....	.....	.....	1,134	151	.....
OFFICE OF SALINE WATER.....	8,868	175	5,662	3,031
OFFICE OF WATER RESOURCES RESEARCH.....	3,360	504	168	840	1,344	504

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TABLE C-14.

AGENCY AND SUBDIVISION	TOTAL RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
DEPARTMENT OF LABOR, TOTAL.....	6,288	.....	.....	.....	.....	.....	.....	184	6,104	.....
BUREAU OF APPRENTICESHIP AND TRAINING...	65	.....	.....	.....	.....	.....	.....	.....	65	.....
BUREAU OF EMPLOYMENT SECURITY.....	711	.....	.....	.....	.....	.....	.....	.....	711	.....
BUREAU OF LABOR STANDARDS.....	184	.....	.....	.....	.....	.....	.....	184	.....	.....
BUREAU OF LABOR STATISTICS.....	1,613	.....	.....	.....	.....	.....	.....	.....	1,613	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	113	.....	.....	.....	.....	.....	.....	.....	113	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	2,260	.....	.....	.....	.....	.....	.....	.....	2,260	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,290	.....	.....	.....	.....	.....	.....	.....	1,290	.....
WOMENS BUREAU.....	52	.....	.....	.....	.....	.....	.....	.....	52	.....
POST OFFICE DEPARTMENT.....	159	.....	.....	.....	.....	.....	159	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,571	.....	499	4,605	.....	.....	.....	80	3,387	.....
DEPARTMENTAL FUNDS.....	125	.....	.....	.....	.....	.....	.....	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	8,446	.....	499	4,605	.....	.....	.....	80	3,262	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,148	.....	.....	.....	.....	1,017	.....	131	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	205	.....	.....	.....	.....	191	.....	14	.....	.....
UNITED STATES COAST GUARD.....	943	.....	.....	.....	.....	826	.....	117	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	.....	.....	.....	.....	.....	.....	.....	130	.....
ATOMIC ENERGY COMMISSION.....	333,997	41,063	23,455	2,019	.....	225,518	5,839	35,031	.....	272
CIVIL AERONAUTICS BOARD.....	74	.....	.....	.....	.....	.....	.....	.....	74	.....
CIVIL SERVICE COMMISSION.....	200	.....	.....	.....	200	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,294	.....	2,783	.....	9	394	.....	1,086	22	.....
FEDERAL COMMUNICATIONS COMMISSION.....	280	.....	.....	.....	.....	.....	.....	280	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	189	.....	.....	.....	.....	.....	.....	.....	189	.....
FEDERAL TRADE COMMISSION.....	263	.....	.....	.....	.....	.....	.....	.....	263	.....
HOUSING AND HOME FINANCE AGENCY.....	101	.....	.....	.....	.....	.....	.....	.....	101	.....
LIBRARY OF CONGRESS.....	107	.....	.....	.....	.....	.....	.....	.....	.....	107
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	1,289,890	49,752	800	.....	5,693	708,815	7,193	516,325	1,312	.....
NATIONAL SCIENCE FOUNDATION.....	171,732	42,997	1,115	.....	7,285	80,744	12,301	15,518	11,772	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	9,730	.....	.....	.....	.....	.....	.....	.....	9,730	.....
OFFICE OF EMERGENCY PLANNING.....	211	.....	.....	.....	.....	.....	141	.....	.....	70
PEACE CORPS.....	601	.....	11	.....	352	.....	.....	.....	238	.....
SMALL BUSINESS ADMINISTRATION.....	279	.....	.....	.....	.....	.....	.....	.....	279	.....
SMITHSONIAN INSTITUTION.....	5,857	2,783	.....	.....	.....	981	.....	.....	2,093	.....
TENNESSEE VALLEY AUTHORITY.....	4,382	402	.....	804	.....	705	.....	1,996	475	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,287	242	.....	.....	.....	.....	296	2,201	1,610	1,938
UNITED STATES INFORMATION AGENCY.....	156	.....	.....	.....	.....	.....	.....	156	.....	.....
VEETERANS ADMINISTRATION.....	36,810	.....	33,369	.....	3,190	.....	.....	251	.....	.....

TABLE C-15. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
TOTAL, ALL AGENCIES.....	5,462,145	283,934	953,079	115,412	136,718	1,849,178	124,944	1,706,505	188,375	103,920
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	236,854	22,480	19,466	105,156	.....	44,425	751	15,467	29,109	.....
AGRICULTURAL RESEARCH SERVICE.....	138,206	9,135	17,059	62,383	.....	37,201	.....	10,793	1,635	.....
COOPERATIVE STATE RESEARCH SERVICE.....	53,322	4,309	2,407	29,999	.....	2,924	.....	1,026	11,057	.....
ECONOMIC RESEARCH SERVICE.....	12,047	.....	.....	.....	.....	.....	93	.....	11,954	.....
FARMER COOPERATIVE SERVICE.....	713	.....	.....	.....	.....	.....	.....	.....	713	.....
FOREST SERVICE.....	32,046	9,036	.....	12,665	.....	4,300	416	2,848	2,781	.....
NATIONAL AGRICULTURAL LIBRARY.....	109	.....	.....	109	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	411	.....	.....	.....	.....	.....	242	.....	169	.....
DEPARTMENT OF COMMERCE, TOTAL.....	67,232	.....	.....	.....	426	28,128	697	17,808	20,043	130
BUREAU OF THE CENSUS.....	1,386	.....	.....	.....	426	.....	287	.....	673	.....
BUREAU OF PUBLIC ROADS.....	6,420	.....	.....	.....	.....	.....	.....	5,738	682	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,280	.....	.....	.....	.....	.....	.....	.....	2,280	.....
ENVIRONMENTAL SCIENCES SERVICES										
ADMINISTRATION.....	15,040	.....	.....	.....	.....	13,508	.....	1,532	.....	.....
MARITIME ADMINISTRATION.....	2,170	.....	.....	.....	.....	.....	.....	2,170	.....	.....
NATIONAL BUREAU OF STANDARDS.....	18,970	.....	.....	.....	.....	14,620	410	3,788	152	.....
OFFICE OF BUSINESS ECONOMICS.....	2,550	.....	.....	.....	.....	.....	.....	.....	2,550	.....
PATENT OFFICE.....	130	.....	.....	.....	.....	.....	.....	.....	.....	130
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	18,286	.....	.....	.....	.....	.....	.....	4,580	13,706	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,916,187	38,575	62,057	210	21,561	554,644	87,455	1,050,647	3,377	97,661
DEPARTMENT OF THE ARMY.....	286,362	11,725	43,044	80	5,195	56,891	8,568	141,940	975	17,944
DEPARTMENT OF THE NAVY.....	307,000	6,229	7,050	.....	7,543	102,617	26,494	157,067	.....	.....
DEPARTMENT OF THE AIR FORCE.....	880,600	16,236	8,000	.....	4,012	187,913	33,197	603,075	1,488	26,679
DEFENSE AGENCIES.....	431,225	3,970	3,453	50	3,756	205,363	19,196	146,190	169	49,078
DEPARTMENTWIDE FUNDS.....	11,000	415	510	80	1,055	1,860	.....	2,375	745	3,960
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,038,566	30,051	801,156	60	97,414	23,485	4,414	6,873	72,007	3,106
ADMINISTRATION ON AGING.....	300	.....	.....	.....	100	.....	.....	.....	200	.....
FEDERAL WATER POLLUTION CONTROL										
ADMINISTRATION.....	10,702	2,482	527	60	.....	3,016	120	4,197	300	.....
FOOD AND DRUG ADMINISTRATION.....	8,336	3,584	750	.....	.....	4,002	.....	.....	.....	.....
OFFICE OF EDUCATION.....	72,875	.....	.....	.....	46,709	.....	.....	.....	26,166	.....
PUBLIC HEALTH SERVICE.....	902,370	23,985	781,816	.....	45,189	16,467	4,294	2,676	25,302	2,641
NATIONAL INSTITUTES OF HEALTH.....	7808,958	20,829	7698,105	.....	743,789	716,367	74,034	72,625	720,818	72,391
SAINT ELIZABETHS HOSPITAL.....	404	.....	226	.....	178	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	3,301	.....	494	.....	.....	.....	.....	.....	2,807	.....
VOCATIONAL REHABILITATION ADMIN.....	27,460	.....	10,943	.....	5,238	.....	.....	.....	10,814	465
WELFARE ADMINISTRATION.....	12,818	.....	6,400	.....	.....	.....	.....	.....	6,418	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	955	.....	.....	.....	.....	625	.....	.....	330	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	115,156	31,607	480	1,279	316	46,877	1,669	29,392	3,536	.....
BONNEVILLE POWER ADMINISTRATION.....	178	.....	.....	.....	.....	53	10	115	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	20,602	14,663	480	348	316	4,212	.....	234	349	.....
BUREAU OF LAND MANAGEMENT.....	651	13	.....	569	.....	.....	.....	.....	69	.....
BUREAU OF MINES.....	26,305	.....	.....	.....	.....	7,994	901	17,410	.....	.....
BUREAU OF OUTDOOR RECREATION.....	61	12	.....	8	.....	.....	.....	.....	41	.....
BUREAU OF RECLAMATION.....	5,332	.....	.....	37	.....	3,064	.....	2,209	22	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	15,037	15,037	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	26,601	295	.....	.....	.....	24,625	758	923	.....	.....
NATIONAL PARK SERVICE.....	2,095	271	.....	.....	.....	.....	.....	.....	1,824	.....
OFFICE OF COAL RESEARCH.....	1,443	.....	.....	.....	.....	.....	.....	1,163	280	.....
OFFICE OF SALINE WATER.....	10,512	365	5,344	4,803
OFFICE OF WATER RESOURCES RESEARCH.....	6,339	951	317	1,585	2,535	951

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TABLE C-15.

AGENCY AND SUBDIVISION	TOTAL RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
DEPARTMENT OF LABOR, TOTAL.....	8,632	.....	.....	.....	.....	.....	.....	173	8,459	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	72	.....	.....	.....	.....	.....	.....	.....	72	.....
BUREAU OF EMPLOYMENT SECURITY.....	924	.....	.....	.....	.....	.....	.....	.....	924	.....
BUREAU OF LABOR STANDARDS.....	173	.....	.....	.....	.....	.....	.....	173	.....	.....
BUREAU OF LABOR STATISTICS.....	2,001	.....	.....	.....	.....	.....	.....	.....	2,001	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	116	.....	.....	.....	.....	.....	.....	.....	116	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	3,933	.....	.....	.....	.....	.....	.....	.....	3,933	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,356	.....	.....	.....	.....	.....	.....	.....	1,356	.....
WOMENS BUREAU.....	57	.....	.....	.....	.....	.....	.....	.....	57	.....
POST OFFICE DEPARTMENT.....	557	.....	.....	.....	50	.....	412	95	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,027	.....	715	5,611	.....	.....	.....	38	1,663	.....
DEPARTMENTAL FUNCS.....	125	.....	.....	.....	.....	.....	.....	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	7,902	.....	715	5,611	.....	.....	.....	38	1,538	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,608	.....	.....	.....	.....	1,532	.....	76	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	216	.....	.....	.....	.....	201	.....	15	.....	.....
UNITED STATES COAST GUARD.....	1,392	.....	.....	.....	.....	1,331	.....	61	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	.....	.....	.....	.....	.....	.....	.....	130	.....
ATOMIC ENERGY COMMISSION.....	365,141	44,329	24,994	2,085	.....	250,073	6,546	36,621	.....	493
CIVIL AERONAUTICS BOARD.....	81	.....	.....	.....	.....	.....	.....	.....	81	.....
CIVIL SERVICE COMMISSION.....	195	.....	.....	.....	195	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,125	.....	2,676	.....	9	378	.....	1,042	20	.....
FEDERAL COMMUNICATIONS COMMISSION.....	300	.....	.....	.....	.....	.....	.....	300	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	205	.....	.....	.....	.....	.....	.....	.....	205	.....
FEDERAL TRADE COMMISSION.....	303	.....	.....	.....	.....	.....	.....	.....	303	.....
LIBRARY OF CONGRESS.....	410	.....	.....	.....	.....	.....	.....	.....	.....	410
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	1,387,731	60,117	3,389	.....	5,171	787,163	7,582	522,896	1,413	.....
NATIONAL SCIENCE FOUNDATION.....	222,916	52,384	1,171	100	8,281	109,825	14,923	20,325	15,907	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	26,000	.....	.....	.....	.....	.....	.....	.....	26,000	.....
OFFICE OF EMERGENCY PLANNING.....	232	.....	.....	.....	.....	.....	95	63	.....	74
PEACE CORPS.....	500	.....	.....	.....	334	.....	.....	.....	166	.....
SMALL BUSINESS ADMINISTRATION.....	445	.....	.....	.....	.....	.....	.....	.....	445	.....
SMITHSONIAN INSTITUTION.....	7,314	3,652	.....	.....	.....	1,240	.....	.....	2,422	.....
TENNESSEE VALLEY AUTHORITY.....	5,194	439	.....	911	.....	783	.....	2,302	759	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,746	300	.....	.....	.....	.....	400	2,000	2,000	2,046
UNITED STATES INFORMATION AGENCY.....	217	.....	.....	.....	.....	.....	.....	217	.....	.....
VETERANS ADMINISTRATION.....	40,186	.....	36,975	.....	2,961	.....	.....	250	.....	.....

APPENDIX C

TABLE C-16. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
TOTAL, ALL AGENCIES.....	5,547,274	302,857	1,015,930	108,656	157,911	1,855,659	135,423	1,658,149	221,894	90,795
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	230,440	22,416	19,082	99,857	.....	45,214	766	15,152	27,953	.....
AGRICULTURAL RESEARCH SERVICE.....	136,753	9,200	16,931	60,160	.....	38,443	.....	10,710	1,309	.....
COOPERATIVE STATE RESEARCH SERVICE.....	47,636	3,848	2,151	26,800	.....	2,612	.....	1,632	10,593	.....
ECONOMIC RESEARCH SERVICE.....	12,328	.....	.....	.....	.....	.....	93	.....	12,235	.....
FARMER COOPERATIVE SERVICE.....	715	.....	.....	.....	.....	.....	.....	.....	715	.....
FOREST SERVICE.....	32,144	9,368	.....	12,448	.....	4,159	426	2,810	2,933	.....
NATIONAL AGRICULTURAL LIBRARY.....	449	.....	.....	449	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	415	.....	.....	.....	.....	.....	247	.....	168	.....
DEPARTMENT OF COMMERCE, TOTAL.....	80,494	.....	.....	.....	364	31,212	735	29,852	18,201	130
BUREAU OF THE CENSUS.....	1,354	.....	.....	.....	364	.....	335	.....	655	.....
BUREAU OF PUBLIC ROADS.....	10,800	.....	.....	.....	.....	.....	.....	10,000	800	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,400	.....	.....	.....	.....	.....	.....	.....	2,400	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	17,523	.....	.....	.....	.....	15,769	.....	.....	.....	.....
MARITIME ADMINISTRATION.....	1,940	.....	.....	.....	.....	.....	.....	1,754	.....	.....
NATIONAL BUREAU OF STANDARDS.....	19,919	.....	.....	.....	.....	15,443	400	3,920	156	.....
OFFICE OF BUSINESS ECONOMICS.....	2,965	.....	.....	.....	.....	.....	.....	.....	2,965	.....
PATENT OFFICE.....	130	.....	.....	.....	.....	.....	.....	.....	.....	130
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	23,463	.....	.....	.....	.....	.....	.....	12,238	11,225	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,822,167	43,190	59,205	180	23,638	547,722	94,428	965,730	3,985	84,089
DEPARTMENT OF THE ARMY.....	288,214	14,914	39,969	125	6,910	59,221	9,074	142,161	1,545	14,295
DEPARTMENT OF THE NAVY.....	303,200	6,354	6,895	.....	7,467	106,221	28,517	147,746	.....	.....
DEPARTMENT OF THE AIR FORCE.....	822,200	16,898	8,000	.....	4,156	193,599	36,573	535,475	1,700	25,799
DEFENSE AGENCIES.....	398,553	4,694	3,861	.....	4,180	187,091	20,264	138,148	20	40,295
DEPARTMENT-WIDE FUNDS.....	10,000	330	480	55	925	1,590	.....	2,200	720	3,700
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,143,447	33,356	863,504	64	114,036	25,266	4,986	8,396	90,837	3,002
ADMINISTRATION ON AGING.....	600	.....	.....	.....	200	.....	.....	.....	400	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	14,161	3,346	833	64	.....	3,866	130	5,600	322	.....
FOOD AND DRUG ADMINISTRATION.....	9,840	4,232	885	.....	.....	4,723	.....	.....	.....	.....
OFFICE OF EDUCATION.....	97,864	.....	.....	.....	61,876	.....	.....	.....	35,988	.....
PUBLIC HEALTH SERVICE.....	970,921	25,778	841,583	.....	47,139	16,677	4,856	2,796	29,708	2,384
NATIONAL INSTITUTES OF HEALTH.....	785,657	22,133	742,199	.....	45,249	16,377	4,362	2,731	21,222	2,384
SAINT ELIZABETHS HOSPITAL.....	427	.....	239	.....	188	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	3,531	.....	.....	.....	.....	.....	.....	.....	3,531	.....
VOCATIONAL REHABILITATION ADMIN.....	29,758	.....	11,764	.....	4,633	.....	.....	.....	12,743	618
WELFARE ADMINISTRATION.....	16,345	.....	8,200	.....	.....	.....	.....	.....	8,145	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	578	.....	.....	.....	.....	345	.....	.....	233	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	118,892	31,732	560	1,276	461	47,646	1,654	31,920	3,643	.....
BONNEVILLE POWER ADMINISTRATION.....	218	.....	.....	.....	.....	68	10	140	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	20,635	14,577	560	350	461	4,076	.....	264	347	.....
BUREAU OF LAND MANAGEMENT.....	633	10	.....	557	.....	.....	.....	.....	66	.....
BUREAU OF MINES.....	25,825	.....	.....	.....	.....	7,864	878	17,083	.....	.....
BUREAU OF OUTDOOR RECREATION.....	53	.....	.....	.....	.....	.....	.....	.....	53	.....
BUREAU OF RECLAMATION.....	5,230	.....	.....	27	.....	.....	.....	.....	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	15,026	15,026	.....	.....	.....	3,000	.....	2,203	.....	.....
GEOLOGICAL SURVEY.....	26,216	286	.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	2,222	271	.....	.....	.....	24,242	766	922	.....	.....
OFFICE OF COAL RESEARCH.....	1,587	.....	.....	.....	.....	.....	.....	.....	1,951	.....
OFFICE OF SALINE WATER.....	14,403	534	.....	.....	.....	.....	.....	.....	200	.....
OFFICE OF WATER RESOURCES RESEARCH.....	6,844	1,028	342	6,686	7,183
						1,710	2,738	1,026

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TABLE C-16.

AGENCY AND SUBDIVISION	TOTAL RESEARCH	LIFE SCIENCES			PSYCH-LOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIO-LOGICAL SCIENCES	MEDICAL SCIENCES	AGRI-CULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHE-MATICAL SCIENCES	ENGI-NEERING SCIENCES		
DEPARTMENT OF LABOR, TOTAL.....	12,377	.....	.....	.....	.....	.....	.....	176	12,201	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	98	.....	.....	.....	.....	.....	.....	.....	98	.....
BUREAU OF EMPLOYMENT SECURITY.....	1,492	.....	.....	.....	.....	.....	.....	.....	1,492	.....
BUREAU OF LABOR STANDARDS.....	176	.....	.....	.....	.....	.....	.....	176	.....	.....
BUREAU OF LABOR STATISTICS.....	2,513	.....	.....	.....	.....	.....	.....	.....	2,513	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	119	.....	.....	.....	.....	.....	.....	.....	119	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	6,605	.....	.....	.....	.....	.....	.....	.....	6,605	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,374	.....	.....	.....	.....	.....	.....	.....	1,374	.....
POST OFFICE DEPARTMENT.....	575	.....	.....	.....	50	.....	430	95	.....	.....
DEPARTMENT OF STATE, TOTAL.....	9,887	.....	2,194	4,318	.....	.....	.....	450	2,925	.....
DEPARTMENTAL FUNDS.....	125	.....	.....	.....	.....	.....	.....	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	9,762	.....	2,194	4,318	.....	.....	.....	450	2,800	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,987	.....	.....	.....	.....	1,972	.....	15	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	222	.....	.....	.....	.....	207	.....	15	.....	.....
UNITED STATES COAST GUARD.....	1,765	.....	.....	.....	.....	1,765	.....	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	145	.....	.....	.....	.....	.....	.....	.....	145	.....
ATOMIC ENERGY COMMISSION.....	393,993	47,424	26,565	1,992	.....	271,624	7,078	38,663	.....	647
CIVIL AERONAUTICS BOARD.....	153	.....	.....	.....	.....	.....	.....	.....	153	.....
CIVIL SERVICE COMMISSION.....	200	.....	.....	.....	200	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	3,478	.....	2,689	.....	5	206	.....	567	11	.....
FEDERAL COMMUNICATIONS COMMISSION.....	404	.....	.....	.....	.....	.....	.....	404	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	270	.....	.....	.....	.....	.....	.....	.....	270	.....
FEDERAL TRADE COMMISSION.....	310	.....	.....	.....	.....	.....	.....	.....	310	.....
LIBRARY OF CONGRESS.....	810	.....	.....	.....	.....	.....	.....	.....	.....	810
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	1,379,546	61,617	1,682	.....	5,560	764,394	7,341	537,585	1,367	.....
NATIONAL SCIENCE FOUNDATION.....	246,265	57,875	1,323	50	9,786	117,623	17,705	24,234	17,669	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	35,000	.....	.....	.....	.....	.....	.....	.....	35,000	.....
OFFICE OF EMERGENCY PLANNING.....	185	35	.....	.....	.....	.....	.....	70	40	40
PEACE CORPS.....	1,400	.....	.....	.....	688	.....	.....	.....	712	.....
SMALL BUSINESS ADMINISTRATION.....	659	.....	.....	.....	.....	.....	.....	.....	659	.....
SMITHSONIAN INSTITUTION.....	9,040	4,435	.....	.....	.....	1,652	.....	.....	2,953	.....
TENNESSEE VALLEY AUTHORITY.....	5,495	477	.....	919	.....	783	.....	2,589	727	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,477	300	.....	.....	.....	.....	300	1,900	1,900	2,077
UNITED STATES INFORMATION AGENCY.....	90	.....	.....	.....	.....	.....	.....	90	.....	.....
VETERANS ADMINISTRATION.....	42,510	.....	39,126	.....	3,123	.....	.....	261	.....	.....

TABLE C-17. FEDERAL AGENCIES FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1965
 -THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL BASIC RESEARCH	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	1,689,931	424,421	271,547	27,467	634,221	150,673	88,236	51,993	16,010	25,363	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	90,254	56,952	635	.....	23,766	.....	776	.....	.....	8,125
AGRICULTURAL RESEARCH SERVICE.....	65,009	48,033	597	.....	7,655	.....	599	.....	.....	8,125
COOPERATIVE STATE RESEARCH SERVICE.....	15,526	480	.....	.....	14,979	.....	77	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	1,635	1,569	27	.....	39	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	82	82	.....	.....	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	7,917	6,778	11	.....	1,028	.....	100	.....	.....	.....
STATISTICAL RESEARCH SERVICE.....	75	10	.....	.....	65	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	24,235	21,758	703	.....	929	.....	131	8	15	691
BUREAU OF THE CENSUS.....	296	244	.....	.....	16	.....	36	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	743	143	500	.....	100	.....	.....	.....	.....	.....
COAST AND GEODETIC SURVEY.....	385	320	.....	.....	65	.....	.....	.....	.....	.....
MARITIME ADMINISTRATION.....	352	122	130	.....	90	.....	10	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	16,527	15,588	23	.....	212	.....	.....	8	15	691
OFFICE OF BUSINESS ECONOMICS.....	2,348	2,348	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	75	65	10	.....	.....	.....	.....	.....	.....	.....
WEATHER BUREAU.....	3,499	2,928	40	.....	446	.....	85	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	263,326	80,010	30,399	.....	132,636	3,537	9,755	.....	30	6,959
DEPARTMENT OF THE ARMY.....	48,858	21,812	2,078	.....	21,220	571	1,582	.....	.....	1,595
DEPARTMENT OF THE NAVY.....	88,900	30,720	7,054	.....	41,352	2,966	4,813	.....	.....	1,995
DEPARTMENT OF THE AIR FORCE.....	81,800	27,006	11,953	.....	37,286	.....	2,275	.....	30	3,210
DEFENSE AGENCIES.....	43,768	472	9,274	.....	32,778	.....	1,085	.....	.....	159
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	302,915	46,591	12	.....	185,780	.....	58,181	.....	7,039	4,912
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	3,183	603	10	.....	2,483	.....	63	.....	.....	24
FOOD AND DRUG ADMINISTRATION.....	954	954	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	9,126	655	2	.....	7,380	.....	10	.....	967	112
PUBLIC HEALTH SERVICE.....	289,382	44,509	.....	.....	175,917	.....	58,108	.....	6,072	4,776
NATIONAL INSTITUTES OF HEALTH.....	/275,302/	/43,133/	.....	.....	/165,230/	.....	/57,204/	.....	/5,469/	/4,266/
SAINT ELIZABETH'S HOSPITAL.....	94	94	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	176	176	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	40,463	30,492	2,124	600	5,838	.....	459	.....	768	182
BUREAU OF COMMERCIAL FISHERIES.....	5,041	4,176	.....	.....	700	.....	69	.....	.....	96
BUREAU OF LAND MANAGEMENT.....	22	.....	.....	.....	22	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,355	4,350	.....	.....	5	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	202	136	.....	.....	63	.....	.....	.....	3	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	2,732	1,435	.....	.....	550	.....	8	.....	740	.....
GEOLOGICAL SURVEY.....	18,634	18,334	.....	.....	300	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	1,959	1,389	.....	.....	376	.....	169	.....	25	.....
OFFICE OF SALINE WATER.....	5,837	575	2,124	600	2,239	.....	213	.....	.....	86
OFFICE OF WATER RESOURCES RESEARCH.....	1,680	97	.....	.....	1,583	.....	.....	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	1,146	1,056	1	.....	73	.....	16	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	300	300	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	729	729	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	12	12	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	105	15	1	.....	73	.....	16	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	812	803	.....	.....	.....	.....	9	.....	.....	.....
UNITED STATES COAST GUARD.....	812	803	.....	.....	.....	.....	9	.....	.....	.....
OTHER AGENCIES											
ATOMIC ENERGY COMMISSION.....	258,196	4,838	1,974	26,556	67,521	108,110	5,504	39,609	249	3,835	
CIVIL SERVICE COMMISSION.....	33	33	.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	527,786	158,222	233,877	311	84,554	39,026	3,462	407	7,780	147	
NATIONAL SCIENCE FOUNDATION.....	171,057	13,650	1,805	.....	133,104	.....	9,888	11,969	129	512
SMALL BUSINESS ADMINISTRATION.....	251	251	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	5,857	5,857	.....	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	3,600	3,508	17	.....	20	.....	55	.....	.....	.....

PART I, STATISTICAL TABLES

TABLE C-18. FEDERAL EXPENDITURES FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1966--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL BASIC RESEARCH	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	1,928,842	458,644	342,109	30,253	730,878	162,568	99,606	58,252	19,147	27,385	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	99,769	64,729	349	.....	24,473	.....	456	.....	.....	9,762
AGRICULTURAL RESEARCH SERVICE.....	68,833	53,853	339	.....	4,528	.....	351	.....	.....	9,762
COOPERATIVE STATE RESEARCH SERVICE.....	19,449	669	.....	.....	18,780	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	1,655	1,590	.....	.....	65	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	86	86	.....	.....	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	9,681	8,511	10	.....	1,055	.....	105	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	65	20	.....	.....	45	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	25,805	23,156	607	.....	1,271	.....	207	.....	15	549
BUREAU OF THE CENSUS.....	294	210	7	.....	42	.....	35	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	692	143	550	.....	.....	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	8,187	7,218	50	.....	808	.....	88	.....	.....	23
MARITIME ADMINISTRATION.....	420	101	.....	.....	235	.....	84	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	13,661	12,934	.....	.....	186	.....	.....	.....	15	526
OFFICE OF BUSINESS ECONOMICS.....	2,550	2,550	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	273,313	89,184	27,566	.....	136,557	2,754	10,538	.....	266	6,449
DEPARTMENT OF THE ARMY.....	48,813	22,488	2,056	.....	20,758	145	1,672	.....	50	1,644
DEPARTMENT OF THE NAVY.....	91,000	32,369	7,187	.....	42,300	2,609	4,912	.....	.....	1,623
DEPARTMENT OF THE AIR FORCE.....	84,600	28,805	11,256	.....	38,529	.....	2,814	.....	216	2,980
DEFENSE AGENCIES.....	48,900	5,522	7,067	.....	34,970	.....	1,140	.....	.....	201
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	357,198	54,098	13	.....	221,968	.....	66,667	.....	9,025	5,427
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	3,954	921	10	.....	2,896	.....	88	.....	.....	39
FEDERAL COMMUNICATIONS COMMISSION.....	1,355	1,355	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	21,896	750	3	.....	18,696	.....	30	.....	2,166	251
PUBLIC HEALTH SERVICE.....	329,606	50,685	.....	.....	200,376	.....	66,349	.....	6,859	5,137
NATIONAL INSTITUTES OF HEALTH.....	/311,445/	/49,381/	.....	.....	/186,217/	.....	/65,163/	.....	/6,182/	/4,506/
SAINT ELIZABETHS HOSPITAL.....	103	102	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	284	284	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	720	720	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	46,237	33,074	2,116	500	7,120	.....	447	.....	2,722	250
BUREAU OF COMMERCIAL FISHERIES.....	7,000	4,236	.....	.....	680	.....	122	.....	1,819	143
BUREAU OF LAND MANAGEMENT.....	15	.....	.....	.....	15	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,630	4,630	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	220	152	.....	.....	26	.....	.....	.....	42	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	3,100	1,872	.....	.....	400	.....	.....	.....	836	.....
GEOLOGICAL SURVEY.....	20,290	19,970	20	.....	300	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	2,095	1,435	.....	.....	635	.....	.....	.....	25	.....
OFFICE OF SALINE WATER.....	5,709	573	2,096	500	2,100	.....	325	.....	.....	115
OFFICE OF WATER RESOURCES RESEARCH.....	3,170	206	.....	.....	2,964	.....	.....	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	1,424	1,260	3	.....	131	.....	30	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	293	293	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	929	929	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	12	12	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	190	26	3	.....	131	.....	30	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,315	1,298	.....	.....	.....	.....	17	.....	.....	.....
UNITED STATES COAST GUARD.....	1,315	1,298	.....	.....	.....	.....	17	.....	.....	.....
OTHER AGENCIES											
ATOMIC ENERGY COMMISSION.....	285,131	4,771	2,144	29,463	77,692	119,540	5,042	42,338	205	3,976	
CIVIL SERVICE COMMISSION.....	71	31	.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	602,733	57,369	306,968	290	86,554	40,274	3,275	974	6,748	281	
NATIONAL SCIENCE FOUNDATION.....	222,142	17,758	2,343	.....	173,335	.....	12,876	14,940	166	684
OFFICE OF ECONOMIC OPPORTUNITY.....	1,800	.....	.....	.....	1,800	.....	.....	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	400	400	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	7,314	7,314	.....	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	3,510	3,442	.....	.....	17	.....	51	.....	.....	.....

APPENDIX C

TABLE C-19. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1967--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL BASIC RESEARCH	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	2,092,978	469,951	372,364	32,178	804,409	179,681	105,523	62,073	18,806	27,993	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	101,775	65,022	402	.....	25,864	.....	428	.....	.....	10,059
AGRICULTURAL RESEARCH SERVICE.....	69,193	53,480	387	.....	4,959	.....	308	.....	.....	10,059
COOPERATIVE STATE RESEARCH SERVICE.....	20,291	717	.....	.....	19,574	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	1,759	1,714	.....	.....	45	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	86	86	.....	.....	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	10,380	9,015	15	.....	1,230	.....	120	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	66	10	.....	.....	56	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	28,390	24,805	860	.....	1,975	.....	220	.....	15	515
BUREAU OF THE CENSUS.....	294	219	.....	.....	55	.....	20	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	1,505	325	675	.....	505	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	9,171	7,835	120	.....	1,001	.....	200	.....	.....	15
MARITIME ADMINISTRATION.....	375	96	65	.....	214	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	14,080	13,365	.....	.....	200	.....	.....	.....	15	500
OFFICE OF BUSINESS ECONOMICS.....	2,965	2,965	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	297,748	87,822	26,599	.....	163,424	2,913	10,887	.....	218	5,885
DEPARTMENT OF THE ARMY.....	56,248	23,437	2,371	.....	27,154	300	1,679	.....	.....	1,307
DEPARTMENT OF THE NAVY.....	99,400	32,952	7,297	.....	49,951	2,613	4,989	.....	.....	1,598
DEPARTMENT OF THE AIR FORCE.....	90,600	29,033	11,356	.....	44,174	.....	2,839	.....	218	2,980
DEFENSE AGENCIES.....	51,500	2,400	5,575	.....	42,145	.....	1,380	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	389,619	57,566	303	.....	245,571	.....	69,968	.....	10,185	6,022
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	4,772	1,238	300	.....	3,075	.....	118	.....	.....	42
FOOD AND DRUG ADMINISTRATION.....	1,540	1,509	.....	.....	31	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	32,280	861	.....	.....	27,938	.....	41	.....	2,885	652
PUBLIC HEALTH SERVICE.....	350,466	53,502	.....	.....	214,527	.....	69,809	.....	7,300	5,328
NATIONAL INSTITUTES OF HEALTH.....	/329,813/	/52,160/	.....	.....	/198,146/	.....	/68,232/	.....	/6,550/	/4,725/
SAINT ELIZABETH'S HOSPITAL.....	105	105	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	351	351	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	345	345	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	47,581	33,494	2,710	500	7,846	.....	562	.....	2,197	272
BUREAU OF COMMERCIAL FISHERIES.....	6,677	4,477	.....	.....	666	.....	112	.....	1,275	147
BUREAU OF LAND MANAGEMENT.....	15	.....	.....	.....	15	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,574	4,574	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	216	198	.....	.....	15	.....	.....	.....	3	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	3,442	2,249	.....	.....	300	.....	.....	.....	894	.....
GEOLOGICAL SURVEY.....	19,792	19,492	.....	.....	300	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	2,222	1,566	.....	.....	631	.....	.....	.....	25	.....
OFFICE OF SALINE WATER.....	7,220	735	2,710	500	2,700	.....	450	.....	.....	125
OFFICE OF WATER RESOURCES RESEARCH.....	3,422	203	.....	.....	3,219	.....	.....	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	2,187	1,903	5	.....	228	.....	51	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	516	516	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	1,329	1,329	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	12	12	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	330	46	5	.....	228	.....	51	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,749	1,732	.....	.....	.....	.....	17	.....	.....	.....
UNITED STATES COAST GUARD.....	1,749	1,732	.....	.....	.....	.....	17	.....	.....	.....
OTHER AGENCIES											
ATOMIC ENERGY COMMISSION.....	310,914	5,119	1,912	31,358	84,634	134,196	5,173	44,190	165	4,166	
CIVIL SERVICE COMMISSION.....	32	32	.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	652,727	179,503	336,849	320	82,554	42,572	3,961	825	5,823	320	
NATIONAL SCIENCE FOUNDATION.....	245,448	19,620	2,583	.....	191,076	.....	14,194	17,038	183	754
OFFICE OF ECONOMIC OPPORTUNITY.....	1,200	.....	.....	.....	1,200	.....	.....	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	527	327	140	.....	20	.....	.....	20	20	.....
SMITHSONIAN INSTITUTION.....	9,040	9,040	.....	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	3,700	3,621	.....	.....	17	.....	62	.....	.....	.....

TABLE C-20. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY DETAILED FIELD OF SCIENCE
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

FIELD OF SCIENCE	ACTUAL 1965	ESTIMATES	
		1966	1967
TOTAL, ALL FIELDS.....	1,689,931	1,928,842	2,092,978
LIFE SCIENCES, TOTAL.....	502,632	571,623	605,325
BIOLOGICAL SCIENCES.....	176,736	206,949	221,855
MEDICAL SCIENCES.....	285,710	319,500	338,340
AGRICULTURAL SCIENCES.....	40,186	45,174	45,130
PSYCHOLOGICAL SCIENCES.....	57,763	73,138	83,724
PHYSICAL SCIENCES, TOTAL.....	1,090,688	1,232,649	1,343,940
PHYSICAL SCIENCES PROPER, TOTAL.....	890,864	1,002,844	1,072,337
ASTRONOMY.....	176,895	220,171	206,978
CHEMISTRY.....	101,540	113,772	121,557
EARTH SCIENCES			
ATMOSPHERIC SCIENCES.....	133,309	150,298	158,828
OCEANOGRAPHY.....	33,811	44,060	40,335
SOLID EARTH SCIENCES.....	96,097	117,939	147,264
PHYSICS			
ELEMENTARY PARTICLE PHYSICS.....	180,894	175,643	198,228
NUCLEAR STRUCTURE PHYSICS.....	37,984	45,325	48,818
ATOMIC, MOLECULAR, AND SOLID-STATE PHYSICS.....	63,622	65,904	70,056
OTHER PHYSICS.....	44,624	45,704	55,708
OTHER PHYSICAL SCIENCES PROPER.....	22,088	24,028	24,565
MATHEMATICAL SCIENCES.....	56,544	62,459	67,605
ENGINEERING SCIENCES, TOTAL.....	143,280	167,346	203,998
AERONAUTICAL.....	10,601	11,121	11,354
ASTRONAUTICAL.....	19,894	21,791	22,743
CHEMICAL.....	10,805	10,682	11,314
CIVIL.....	3,366	14,220	39,866
ELECTRICAL.....	25,276	27,177	29,238
MECHANICAL.....	20,196	23,025	24,286
METALLURGY AND MATERIALS.....	42,917	46,573	50,367
OTHER ENGINEERING SCIENCES.....	10,225	12,757	14,830
SOCIAL SCIENCES, TOTAL.....	36,931	49,413	57,870
ANTHROPOLOGY.....	7,536	8,935	9,350
ECONOMICS.....	12,127	15,397	17,292
SOCIOLOGY.....	5,955	7,485	8,210
OTHER SOCIAL SCIENCES.....	11,313	17,596	23,018
OTHER SCIENCES.....	1,917	2,019	2,119

APPENDIX C

TABLE C-21. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL BASIC RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRI-CULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
TOTAL, ALL AGENCIES.....	1,689,931	176,736	285,710	40,186	57,763	890,864	56,544	143,280	36,931	1,917
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	90,254	11,900	11,985	38,249	.....	19,501	243	3,137	5,239	.....
AGRICULTURAL RESEARCH SERVICE.....	65,009	5,900	11,284	28,483	.....	17,054	.....	2,288	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	15,536	1,250	701	8,737	.....	863	.....	532	3,453	.....
ECONOMIC RESEARCH SERVICE.....	1,635	.....	.....	.....	.....	.....	20	.....	1,615	.....
FARMER COOPERATIVE SERVICE.....	82	.....	.....	.....	.....	.....	.....	.....	82	.....
FOREST SERVICE.....	7,917	4,750	.....	1,029	.....	1,584	158	317	79	.....
STATISTICAL REPORTING SERVICE.....	75	.....	.....	.....	.....	.....	65	.....	10	.....
DEPARTMENT OF COMMERCE, TOTAL.....	24,235	.....	.....	.....	106	18,073	171	3,293	2,517	75
BUREAU OF THE CENSUS.....	296	.....	.....	.....	106	.....	171	.....	19	.....
BUREAU OF PUBLIC ROADS.....	743	.....	.....	.....	.....	.....	.....	643	100	.....
COAST AND GEODETIC SURVEY.....	385	.....	.....	.....	.....	385	.....	.....	.....	.....
MARITIME ADMINISTRATION.....	352	.....	.....	.....	.....	.....	.....	302	50	.....
NATIONAL BUREAU OF STANDARDS.....	16,537	.....	.....	.....	.....	14,292	.....	2,245	.....	.....
OFFICE OF BUSINESS ECONOMICS.....	2,348	.....	.....	.....	.....	.....	.....	.....	2,348	.....
PATENT OFFICE.....	75	.....	.....	.....	.....	.....	.....	.....	.....	75
WEATHER BUREAU.....	3,499	.....	.....	.....	.....	3,396	.....	103	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	763,326	8,552	23,164	.....	7,955	140,298	28,476	52,621	2,260	.....
DEPARTMENT OF THE ARMY.....	48,858	2,267	18,464	.....	1,029	16,978	2,323	7,506	291	.....
DEPARTMENT OF THE NAVY.....	88,900	4,265	4,700	.....	3,380	60,473	6,026	10,056	.....	.....
DEPARTMENT OF THE AIR FORCE.....	81,800	2,020	.....	.....	1,077	43,463	6,090	27,569	1,581	.....
DEFENSE AGENCIES.....	43,768	.....	.....	.....	2,469	19,384	14,037	7,490	388	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	302,915	19,578	226,627	26	34,874	6,654	1,819	1,720	9,775	1,842
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	3,183	718	87	26	.....	925	51	1,247	129	.....
FOOD AND DRUG ADMINISTRATION.....	954	380	38	.....	.....	536	.....	.....	.....	.....
OFFICE OF EDUCATION.....	9,126	.....	.....	.....	6,243	.....	.....	.....	2,883	.....
PUBLIC HEALTH SERVICE.....	289,362	18,480	226,478	.....	28,561	5,193	1,768	473	6,887	1,842
NATIONAL INSTITUTES OF HEALTH.....	/275,302/	/18,480/	/212,524/	.....	/28,561/	/5,193/	/1,768/	/473/	/6,461/	/1,842/
SAINT ELIZABETHS HOSPITAL.....	94	.....	24	.....	70	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	176	.....	.....	.....	.....	.....	.....	.....	176	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	40,463	7,025	144	114	122	28,921	986	1,091	2,060	.....
BUREAU OF COMMERCIAL FISHERIES.....	5,041	3,382	144	.....	122	1,158	.....	173	62	.....
BUREAU OF LAND MANAGEMENT.....	22	.....	.....	22	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,355	.....	.....	.....	.....	3,786	544	25	.....	.....
BUREAU OF RECLAMATION.....	202	.....	.....	8	.....	.....	.....	194	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	2,733	2,733	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	18,634	270	.....	.....	.....	17,895	442	27	.....	.....
NATIONAL PARK SERVICE.....	1,959	213	.....	.....	.....	.....	.....	.....	1,746	.....
OFFICE OF SALINE WATER.....	5,837	175	.....	.....	.....	5,662	.....	.....	.....	.....
OFFICE OF WATER RESOURCES RESEARCH.....	1,680	252	.....	84	.....	420	.....	672	252	.....
DEPARTMENT OF LABOR, TOTAL.....	1,146	.....	.....	.....	.....	.....	.....	.....	1,146	.....
BUREAU OF EMPLOYMENT SECURITY.....	300	.....	.....	.....	.....	.....	.....	.....	300	.....
BUREAU OF LABOR STATISTICS.....	729	.....	.....	.....	.....	.....	.....	.....	729	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	12	.....	.....	.....	.....	.....	.....	.....	12	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	105	.....	.....	.....	.....	.....	.....	.....	105	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	812	.....	.....	.....	.....	812	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	812	.....	.....	.....	.....	812	.....	.....	.....	.....
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION.....	258,196	35,365	20,415	1,797	.....	180,419	5,593	14,607	.....	.....
CIVIL SERVICE COMMISSION.....	33	.....	.....	.....	33	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	527,786	48,536	800	.....	5,287	414,461	6,955	51,254	473	.....
NATIONAL SCIENCE FOUNDATION.....	171,657	42,997	1,115	.....	7,285	80,744	12,301	15,518	11,397	.....
SMALL BUSINESS ADMINISTRATION.....	251	.....	.....	.....	.....	.....	.....	.....	251	.....
SMITHSONIAN INSTITUTION.....	5,857	2,783	.....	.....	.....	981	.....	.....	2,093	.....
VETERANS ADMINISTRATION.....	3,600	.....	1,460	.....	2,101	.....	.....	39	.....	.....

TABLE C-22. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL BASIC RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRI-CULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGI-NEERING SCIENCES		
TOTAL, ALL AGENCIES.....	1,928,842	206,949	319,500	45,174	73,138	1,002,844	62,459	167,346	49,413	2,019
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	99,769	13,808	12,380	43,059	.....	20,516	271	3,582	6,153	.....
AGRICULTURAL RESEARCH SERVICE.....	68,833	6,343	11,501	30,850	.....	17,610	.....	2,529	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	19,449	1,560	879	10,950	.....	1,066	.....	666	4,328	.....
ECONOMIC RESEARCH SERVICE.....	1,655	.....	.....	.....	.....	.....	21	.....	1,634	.....
FARMER COOPERATIVE SERVICE.....	86	.....	.....	.....	.....	.....	.....	.....	86	.....
FOREST SERVICE.....	9,681	5,905	.....	1,259	.....	1,840	193	387	97	.....
STATISTICAL REPORTING SERVICE.....	65	.....	.....	.....	.....	.....	57	.....	8	.....
DEPARTMENT OF COMMERCE, TOTAL.....	25,805	.....	.....	.....	106	19,343	192	3,546	2,618	.....
BUREAU OF THE CENSUS.....	294	.....	.....	.....	106	.....	170	.....	18	.....
BUREAU OF PUBLIC ROADS.....	693	.....	.....	.....	.....	.....	.....	643	50	.....
ENVIRONMENTAL SCIENCES SERVICES										
ADMINISTRATIVE.....	8,187	.....	.....	.....	.....	7,021	.....	1,166	.....	.....
MARITIME ADMINISTRATIVE.....	420	.....	.....	.....	.....	.....	.....	420	.....	.....
NATIONAL BUREAU OF STANDARDS.....	13,661	.....	.....	.....	.....	12,322	22	1,317	.....	.....
OFFICE OF BUSINESS ECONOMICS.....	2,550	.....	.....	.....	.....	.....	.....	.....	2,550	.....
DEPARTMENT OF DEFENSE, TOTAL.....	273,313	9,395	21,070	.....	9,435	145,852	30,550	55,329	1,682	.....
DEPARTMENT OF THE ARMY.....	48,813	3,146	16,301	.....	1,250	17,877	2,437	7,777	25	.....
DEPARTMENT OF THE NAVY.....	91,000	4,013	4,769	.....	3,459	63,131	5,902	9,726	.....	.....
DEPARTMENT OF THE AIR FORCE.....	84,600	2,236	.....	.....	1,012	45,592	6,197	28,075	1,488	.....
DEFENSE AGENCIES.....	48,900	.....	.....	.....	3,714	19,252	16,014	9,751	169	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	357,198	22,294	257,909	30	48,325	7,418	2,216	2,197	14,790	2,019
FEDERAL WATER POLLUTION CONTROL										
ADMINISTRATIVE.....	3,954	892	123	30	.....	1,159	60	1,540	150	.....
FOOD AND DRUG ADMINISTRATION.....	1,355	573	120	.....	.....	662	.....	.....	.....	.....
OFFICE OF EDUCATION.....	21,896	.....	.....	.....	15,064	.....	.....	.....	6,832	.....
PUBLIC HEALTH SERVICE.....	329,606	20,829	257,639	.....	33,185	5,597	2,156	657	7,524	2,019
NATIONAL INSTITUTES OF HEALTH.....	/311,449/	/20,829/	/239,537/	.....	/33,185/	/5,597/	/2,156/	/657/	/7,469/	/2,019/
SAINT ELIZABETHS HOSPITAL.....	103	.....	27	.....	76	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATIVE.....	284	.....	.....	.....	.....	.....	.....	.....	284	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	720	.....	.....	.....	.....	625	.....	.....	95	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	46,237	8,961	168	197	110	31,679	1,056	1,675	2,391	.....
BUREAU OF COMMERCIAL FISHERIES.....	7,000	4,446	168	5	110	2,032	.....	148	91	.....
BUREAU OF LAND MANAGEMENT.....	15	.....	.....	15	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,630	.....	.....	.....	.....	4,019	583	28	.....	.....
BUREAU OF RECLAMATION.....	220	.....	.....	19	.....	.....	.....	201	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	3,108	3,108	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	20,290	295	.....	.....	.....	19,492	473	30	.....	.....
NATIONAL PARK SERVICE.....	2,095	271	.....	.....	.....	.....	.....	.....	1,824	.....
OFFICE OF SALINE WATER.....	5,709	365	.....	.....	.....	5,344	.....	.....	.....	.....
OFFICE OF WATER RESOURCES RESEARCH.....	3,170	476	.....	158	.....	792	.....	1,268	476	.....
DEPARTMENT OF LABOR, TOTAL.....	1,424	.....	.....	.....	.....	.....	.....	.....	1,424	.....
BUREAU OF EMPLOYMENT SECURITY.....	293	.....	.....	.....	.....	.....	.....	.....	293	.....
BUREAU OF LABOR STATISTICS.....	929	.....	.....	.....	.....	.....	.....	.....	929	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	12	.....	.....	.....	.....	.....	.....	.....	12	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	190	.....	.....	.....	.....	.....	.....	.....	190	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,315	.....	.....	.....	.....	1,315	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	1,315	.....	.....	.....	.....	1,315	.....	.....	.....	.....
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION.....	285,131	38,382	21,850	1,788	.....	201,674	6,299	15,138	.....	.....
CIVIL SERVICE COMMISSION.....	31	.....	.....	.....	31	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE										
ADMINISTRATIVE.....	602,733	58,073	3,389	.....	4,947	463,357	6,952	65,519	505	.....
NATIONAL SCIENCE FOUNDATION.....	222,142	52,384	1,171	100	8,281	109,825	14,923	20,325	15,133	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	1,800	.....	.....	.....	.....	.....	.....	.....	1,800	.....
SMALL BUSINESS ADMINISTRATIVE.....	400	.....	.....	.....	.....	.....	.....	.....	400	.....
SMITHSONIAN INSTITUTION.....	7,314	3,652	.....	.....	.....	1,240	.....	.....	2,422	.....
VETERANS ADMINISTRATION.....	3,510	.....	1,563	.....	1,903	.....	.....	44	.....	.....

TABLE C-23. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1967--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL BASIC RESEARCH	LIFE SCIENCES			PSYCHO- LOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIO- LOGICAL SCIENCES	MEDICAL SCIENCES	AGRI- CULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHE- MATICAL SCIENCES	ENGI- NEERING SCIENCES		
TOTAL, ALL AGENCIES.....	2,092,978	221,855	338,340	45,130	83,724	1,072,337	67,605	203,998	57,870	2,119
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	101,775	1,635	12,362	43,135	.....	21,194	287	3,714	6,448	.....
AGRICULTURAL RESEARCH SERVICE.....	69,193	6,458	11,446	30,369	.....	18,316	.....	2,604	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	20,291	1,638	916	11,417	.....	1,113	.....	695	4,512	.....
ECONOMIC RESEARCH SERVICE.....	1,759	.....	.....	.....	.....	.....	21	.....	1,738	.....
FARMER COOPERATIVE SERVICE.....	86	.....	.....	.....	.....	.....	.....	.....	86	.....
FOREST SERVICE.....	10,380	6,539	.....	1,349	.....	1,765	208	415	104	.....
STATISTICAL REPORTING SERVICE.....	66	.....	.....	.....	.....	.....	58	.....	8	.....
DEPARTMENT OF COMMERCE, TOTAL.....	28,390	.....	.....	.....	106	20,696	170	4,285	3,133	.....
BUREAU OF THE CENSUS.....	294	.....	.....	.....	106	.....	170	.....	18	.....
BUREAU OF PUBLIC ROADS.....	1,505	.....	.....	.....	.....	.....	.....	1,355	150	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	9,171	.....	.....	.....	.....	7,978	.....	1,193	.....	.....
MARITIME ADMINISTRATION.....	375	.....	.....	.....	.....	.....	.....	375	.....	.....
NATIONAL BUREAU OF STANDARDS.....	14,080	.....	.....	.....	.....	12,718	.....	1,362	.....	.....
OFFICE OF BUSINESS ECONOMICS.....	2,965	.....	.....	.....	.....	.....	.....	.....	2,965	.....
DEPARTMENT OF DEFENSE, TOTAL.....	297,748	10,227	22,232	.....	10,751	159,832	32,408	60,313	1,935	50
DEPARTMENT OF THE ARMY.....	56,248	3,899	17,653	.....	1,750	18,841	2,930	10,910	215	50
DEPARTMENT OF THE NAVY.....	99,400	4,030	4,579	.....	3,665	71,321	5,905	9,900	.....	.....
DEPARTMENT OF THE AIR FORCE.....	90,600	2,298	.....	.....	1,156	49,398	6,573	29,475	1,700	.....
DEFENSE AGENCIES.....	51,500	.....	.....	.....	4,180	20,272	17,000	10,028	20	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	389,615	23,871	275,443	32	55,690	7,798	2,526	2,588	19,598	2,069
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	4,773	1,096	186	32	.....	1,355	65	1,879	161	.....
FOOD AND DRUG ADMINISTRATION.....	1,540	642	142	.....	.....	756	.....	.....	.....	.....
OFFICE OF EDUCATION.....	32,380	.....	.....	.....	21,148	.....	.....	.....	11,232	.....
PUBLIC HEALTH SERVICE.....	350,466	22,133	275,088	.....	34,464	5,687	2,461	710	7,854	2,069
NATIONAL INSTITUTES OF HEALTH.....	/329,813/	/22,133/	/254,535/	.....	/34,464/	/5,687/	/2,461/	/710/	/7,754/	/2,069/
SAINT ELIZABETHS HOSPITAL.....	105	.....	27	.....	78	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	351	.....	.....	.....	.....	.....	.....	.....	351	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	345	.....	.....	.....	.....	345	.....	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	47,581	9,286	185	206	159	32,355	1,040	1,763	2,587	.....
BUREAU OF COMMERCIAL FISHERIES.....	6,677	4,238	185	5	159	1,829	.....	138	123	.....
BUREAU OF LAND MANAGEMENT.....	15	.....	.....	15	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,574	.....	.....	.....	.....	3,983	565	26	.....	.....
BUREAU OF RECLAMATION.....	216	.....	.....	15	.....	.....	.....	201	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE..	3,443	3,443	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	19,792	286	.....	.....	.....	19,002	475	29	.....	.....
NATIONAL PARK SERVICE.....	2,222	271	.....	.....	.....	.....	.....	.....	1,951	.....
OFFICE OF SALINE WATER.....	7,220	534	.....	.....	.....	6,686	.....	.....	.....	.....
OFFICE OF WATER RESOURCES RESEARCH.....	3,422	514	.....	171	.....	855	.....	1,369	513	.....
DEPARTMENT OF LABOR, TOTAL.....	2,187	.....	.....	.....	.....	.....	.....	.....	2,187	.....
BUREAU OF EMPLOYMENT SECURITY.....	516	.....	.....	.....	.....	.....	.....	.....	516	.....
BUREAU OF LABOR STATISTICS.....	1,329	.....	.....	.....	.....	.....	.....	.....	1,329	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	12	.....	.....	.....	.....	.....	.....	.....	12	.....
OFFICE OF MANPOWER, POLICY, EVALUA- TION AND RESEARCH.....	330	.....	.....	.....	.....	.....	.....	.....	330	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,749	.....	.....	.....	.....	1,749	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	1,749	.....	.....	.....	.....	1,749	.....	.....	.....	.....
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION.....	310,914	41,614	23,467	1,707	.....	220,964	6,821	16,341	.....	.....
CIVIL SERVICE COMMISSION.....	32	.....	.....	.....	32	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	652,727	59,912	1,682	.....	5,196	488,129	6,648	90,710	450	.....
NATIONAL SCIENCE FOUNDATION.....	245,448	57,875	1,323	50	9,786	177,623	17,705	24,234	16,852	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	1,200	.....	.....	.....	.....	.....	.....	.....	1,200	.....
SMALL BUSINESS ADMINISTRATION.....	527	.....	.....	.....	.....	.....	.....	.....	527	.....
SMITHSONIAN INSTITUTION.....	9,040	4,435	1,652	2,953
VETERANS ADMINISTRATION.....	3,700	1,646	2,004	50

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TABLE C-24. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1965
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROFPER	RESEARCH CENTERS	PROFPER	RESEARCH CENTERS	PROFPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	3,163,953	1,029,453	1,191,982	42,784	485,164	180,958	135,830	46,684	27,074	24,024	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	127,570	89,760	1,443	.....	34,482	.....	1,169	.....	.....	716
AGRICULTURAL RESEARCH SERVICE.....	65,589	59,054	1,211	.....	3,597	.....	1,011	.....	.....	716
COOPERATIVE STATE RESEARCH SERVICE.....	31,526	25,858	.....	.....	30,411	.....	157	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	9,084	8,868	61	.....	154	.....	1	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	602	566	16	.....	20	.....	.....	.....	.....	.....
FOREST SERVICE.....	20,232	19,909	47	.....	276	.....	.....	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	170	170	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	367	235	108	.....	24	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	19,326	14,470	2,404	.....	2,211	.....	251	.....	.....	.....
BUREAU OF THE CENSUS.....	761	704	17	.....	40	.....	.....	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	4,428	3,323	531	.....	544	.....	30	.....	.....	.....
COAST AND GEODETIC SURVEY.....	1,152	1,015	35	.....	92	.....	11	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	410	.....	150	.....	210	.....	10	.....	.....	.....
MARITIME ADMINISTRATION.....	949	295	654	.....	.....	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,507	5,507	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	325	315	10	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT	2,004	429	656	.....	767	.....	152	.....	.....	.....
WEATHER BUREAU.....	3,759	2,882	311	.....	558	.....	48	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,488,167	471,717	688,553	15,734	130,000	103,901	28,761	41,463	5	8,033	
DEPARTMENT OF THE ARMY.....	242,988	137,044	69,041	20	15,651	5,750	4,456	9,620	5	1,355	
DEPARTMENT OF THE NAVY.....	230,600	108,668	81,151	.....	11,015	18,985	3,563	6,800	.....	418
DEPARTMENT OF THE AIR FORCE.....	585,600	111,479	369,265	955	64,479	31,880	5,978	.....	.....	1,564
DEFENSE AGENCIES.....	417,679	110,572	166,473	14,499	37,974	47,240	12,197	24,028	.....	4,696
DEPARTMENTAL FUNDS.....	11,300	3,954	2,623	260	891	.....	2,567	1,015	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	558,820	111,402	29,662	.....	285,954	.....	96,504	.....	20,736	14,562
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	5,023	2,113	376	.....	2,482	.....	64	.....	.....	23
FOOD AND DRUG ADMINISTRATION.....	4,988	4,865	.....	.....	123	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	25,292	1,471	49	.....	18,758	.....	90	.....	4,789	136
PUBLIC HEALTH SERVICE.....	491,954	99,359	29,212	.....	253,550	.....	87,179	.....	10,167	12,447
NATIONAL INSTITUTES OF HEALTH.....	1439,770	172,451	128,633	.....	1237,168	.....	182,542	.....	17,745	11,231
SAINT ELIZABETH'S HOSPITAL.....	293	293	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	1,711	1,687	.....	.....	12	.....	.....	.....	.....	12
VOCATIONAL REHABILITATION ADMIN.....	2,267	357	.....	.....	6,631	.....	6,815	.....	4,600	1,864
WELFARE ADMINISTRATION.....	9,291	1,212	65	.....	4,398	.....	2,356	.....	1,180	80
DEPARTMENT OF THE INTERIOR, TOTAL.....	57,062	43,865	2,842	.....	3,853	.....	715	.....	5,684	103
BONNEVILLE POWER ADMINISTRATION.....	226	137	.....	.....	55	.....	.....	.....	34	.....
BUREAU OF COMMERCIAL FISHERIES.....	11,250	10,344	9	.....	740	.....	25	.....	69	63
BUREAU OF LAND MANAGEMENT.....	477	153	.....	.....	324	.....	.....	.....	.....	.....
BUREAU OF MINES.....	19,713	19,733	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF GEOLOGICAL RECONSTRUCTION.....	56	56	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	2,973	1,947	.....	.....	775	.....	.....	.....	251	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	10,563	5,233	.....	.....	.....	.....	.....	.....	5,330	.....
GEOLOGICAL SURVEY.....	5,788	5,788	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF COAL RESEARCH.....	1,285	9	780	.....	195	.....	301	.....	.....	.....
OFFICE OF SALINE WATER.....	3,021	268	2,053	181	389	40	
OFFICE OF WATER RESOURCES RESEARCH.....	1,600	97	1,583	

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TABLE C-24.

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	INTRAMURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	5,142	3,285	30	.....	1,489	.....	336	.....	2	.....
BUREAU OF APPRENTICESHIP AND TRAINING..	65	65	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	411	411	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	184	184	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	884	884	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	101	101	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	2,155	298	30	.....	1,489	.....	336	.....	2	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,290	1,290	.....	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	52	52	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	159	131	28	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,571	672	129	.....	5,644	.....	1,892	.....	38	196
DEPARTMENTAL FUNDS.....	125	58	.....	.....	.....	.....	29	.....	38	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT...	8,446	614	129	.....	5,644	.....	1,863	.....	.....	196
DEPARTMENT OF THE TREASURY, TOTAL.....	326	255	41	.....	4	.....	36	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	205	205	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	131	50	41	.....	4	.....	36	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	130	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	75,801	1,255	1,770	26,431	3,282	37,952	213	4,688	21	189
CIVIL AERONAUTICS BOARD.....	74	74	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	167	167	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,294	3,756	538	.....	.....	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	280	280	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	189	189	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	263	263	.....	.....	.....	.....	.....	.....	.....	.....
HOUSING AND HOME FINANCE AGENCY.....	101	25	.....	.....	29	.....	40	.....	7	.....
LIBRARY OF CONGRESS.....	107	107	.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	762,104	247,375	460,296	483	11,076	39,105	3,056	134	354	225
NATIONAL SCIENCE FOUNDATION.....	675	36	.....	.....	217	.....	422	.....	.....	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	9,730	467	2,607	.....	4,962	.....	1,547	.....	147	.....
OFFICE OF EMERGENCY PLANNING.....	211	50	.....	.....	.....	.....	121	.....	40	.....
PEACE CORPS.....	601	.....	43	.....	452	.....	106	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	28	28	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	4,382	4,180	.....	.....	202	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,287	2,505	1,562	136	1,115	.....	530	399	40	.....
UNITED STATES INFORMATION AGENCY.....	156	87	34	35
VETERANS ADMINISTRATION.....	33,210	32,922	157	131

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TABLE C-25. FEDERAL ALLOCATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1966--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	3,533,303	1,069,018	1,405,498	58,160	558,749	166,578	156,564	47,818	38,884	32,034	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	137,085	99,951	664	1	35,515	.....	440	.....	.....	514
AGRICULTURAL RESEARCH SERVICE.....	69,373	66,139	78	.....	2,202	.....	440	.....	.....	514
COOPERATIVE STATE RESEARCH SERVICE.....	33,873	1,165	.....	.....	32,708	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	10,292	9,620	453	1	318	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	627	617	3	.....	7	.....	.....	.....	.....	.....
FOREST SERVICE.....	22,305	22,035	50	.....	280	.....	.....	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	109	109	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	346	266	80	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	41,427	18,525	14,201	.....	6,120	.....	2,281	.....	.....	290
BUREAU OF THE CENSUS.....	1,092	1,068	.....	.....	24	.....	.....	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	5,727	3,371	770	.....	1,586	.....	.....	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,260	80	300	.....	1,400	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	6,853	4,955	363	.....	1,060	.....	145	.....	.....	290
MARITIME ADMINISTRATION.....	1,750	332	1,418	.....	.....	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,305	5,309	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	120	120	10	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT	18,286	3,260	10,840	.....	2,050	.....	2,136	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,642,874	477,817	844,485	30,424	123,396	86,327	29,689	42,099	58	8,579	
DEPARTMENT OF THE ARMY.....	237,549	149,662	47,954	20	17,023	5,443	7,387	9,065	10	985	
DEPARTMENT OF THE NAVY.....	215,000	103,221	75,045	.....	10,478	16,695	3,134	7,000	.....	427
DEPARTMENT OF THE AIR FORCE.....	796,000	128,727	567,025	400	62,423	30,800	5,205	.....	48	1,372
DEFENSE AGENCIES.....	382,325	92,247	152,461	29,684	32,592	33,369	11,603	24,554	.....	5,795
DEPARTMENT-WIDE FUNDS.....	11,000	3,560	2,000	320	800	.....	2,360	1,480	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	681,368	129,709	39,221	.....	350,391	.....	110,299	.....	29,974	21,775
ADMINISTRATION ON AGING.....	300	15	.....	.....	195	.....	90	.....	.....	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	6,748	3,436	290	.....	2,894	.....	89	.....	.....	39
FOOD AND DRUG ADMINISTRATION.....	6,981	5,651	.....	.....	660	.....	670	.....	.....	.....
OFFICE OF EDUCATION.....	50,979	1,539	54	.....	39,204	.....	270	.....	9,505	307
PUBLIC HEALTH SERVICE.....	572,764	114,343	38,798	.....	291,355	.....	98,817	.....	12,242	17,209
NATIONAL INSTITUTES OF HEALTH.....	1,457,509	184,463	137,894	.....	1,262,221	.....	1,191,852	.....	18,625	12,454
SAINTE ELIZABETHS HOSPITAL.....	301	301	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	3,017	2,487	.....	.....	508	.....	.....	.....	5	17
VOCATIONAL REHABILITATION ADMIN.....	27,460	465	.....	.....	9,765	.....	7,425	.....	6,702	3,103
WELFARE ADMINISTRATION.....	12,818	1,371	79	.....	5,810	.....	2,938	.....	1,520	1,100
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	725	50	.....	.....	50	.....	60	.....	75	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	68,915	48,987	4,043	.....	6,945	.....	864	.....	7,803	227
BOZEMAN POLYMER ADMINISTRATION.....	178	122	.....	.....	42	.....	.....	.....	14	.....
BUREAU OF COMMERCIAL FISHERIES.....	13,602	11,653	20	.....	744	.....	21	.....	987	177
BUREAU OF LAND MANAGEMENT.....	636	167	.....	.....	449	.....	.....	.....	.....	.....
BUREAU OF MINES.....	21,675	21,475	.....	.....	200	.....	.....	.....	.....	.....
BUREAU OF OUTDOOR RECREATION.....	61	61	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	5,112	2,496	.....	.....	1,829	.....	.....	.....	787	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	11,925	5,914	.....	.....	.....	.....	.....	.....	6,015	.....
GEOLOGICAL SURVEY.....	6,311	6,311	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF COAL RESEARCH.....	1,443	5	727	.....	368	.....	343	.....	.....	.....
OFFICE OF SALINE WATER.....	4,803	557	3,346	350	500	50	
OFFICE OF WATER RESOURCES RESEARCH.....	3,169	206	2,963	

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TABLE C-25.

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	INTRA PLURAL	EXTRAMURAL							FOREIGN
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	7,208	3,582	52	.....	2,586	.....	584	.....	4	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	72	72	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	631	631	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	173	173	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	1,072	1,072	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	104	104	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	3,743	517	52	.....	2,586	.....	584	.....	4	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,356	1,356	.....	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	57	57	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	557	249	33	.....	275	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,027	768	.....	.....	4,204	.....	2,739	.....	65	251
DEPARTMENTAL FUNDS.....	125	60	.....	.....	.....	.....	.....	.....	65	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	7,902	708	.....	.....	4,204	.....	2,739	.....	.....	251
DEPARTMENT OF THE TREASURY, TOTAL.....	293	247	21	.....	6	.....	19	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	216	216	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	77	31	21	.....	6	.....	19	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	130	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	80,010	1,266	1,718	27,215	3,537	39,914	797	5,358	15	190
CIVIL AERONAUTICS BOARD.....	81	81	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	164	164	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,125	3,492	633	.....	.....	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	300	300	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL DEPOSITARY BANK BOARD.....	205	205	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	303	303	.....	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	410	315	95	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	784,958	236,630	492,357	420	11,060	40,337	3,546	61	379	208
NATIONAL SCIENCE FOUNDATION.....	774	70	58	.....	249	.....	397	.....	.....	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	24,200	1,942	5,705	.....	12,342	.....	3,848	.....	363	.....
OFFICE OF EMERGENCY PLANNING.....	232	95	.....	.....	.....	.....	89	.....	48	.....
PEACE CORPS.....	500	.....	45	.....	405	.....	50	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	45	45	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	5,154	4,913	.....	.....	281	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,746	2,246	2,000	100	1,200	.....	800	300	100	.....
UNITED STATES INFORMATION AGENCY.....	217	33	117	67
VETERANS ADMINISTRATION.....	36,676	36,494	120	62

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TABLE C-26. FEDERAL ALLOCATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1967--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	3,454,256	1,099,251	1,258,241	45,700	581,487	170,077	165,942	51,666	43,778	39,154	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	128,464	56,134	710	.....	30,113	.....	1,179	.....	.....	529
AGRICULTURAL RESEARCH SERVICE.....	67,560	62,259	497	.....	3,096	.....	1,179	.....	.....	529
COOPERATIVE STATE RESEARCH SERVICE.....	27,345	265	.....	.....	26,380	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	10,569	10,194	75	.....	300	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	629	619	3	.....	7	.....	.....	.....	.....	.....
FOREST SERVICE.....	21,764	21,379	55	.....	330	.....	.....	.....	.....	.....
NATIONAL AGRICULTURAL LIBRARY.....	449	449	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	349	269	80	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	52,104	22,865	18,041	.....	7,707	.....	3,055	.....	.....	416
BUREAU OF THE CENSUS.....	1,060	1,050	.....	.....	10	.....	.....	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	9,295	4,255	2,500	.....	2,200	.....	300	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,400	100	1,000	.....	1,300	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	8,352	6,070	575	.....	1,181	.....	110	.....	.....	416
MARITIME ADMINISTRATION.....	1,565	321	1,228	.....	16	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,836	5,829	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	120	130	.....	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	23,462	5,080	12,738	.....	3,000	.....	2,645	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,524,419	467,396	761,263	16,325	112,906	86,140	27,121	45,726	98	7,444	
DEPARTMENT OF THE ARMY.....	231,966	151,203	46,290	30	14,999	5,265	4,351	8,800	25	993	
DEPARTMENT OF THE NAVY.....	205,800	110,150	55,986	.....	6,180	16,725	5,088	9,300	.....	371
DEPARTMENT OF THE AIR FORCE.....	731,600	116,323	517,512	.....	59,852	30,800	6,000	.....	63	1,050
DEFENSE AGENCIES.....	347,053	86,520	139,575	15,975	31,075	23,350	5,382	26,146	.....	5,030
DEPARTMENT OF FUNDS.....	10,000	3,200	1,900	320	800	.....	2,300	1,480	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	753,832	146,667	43,098	.....	379,266	.....	119,873	.....	35,649	29,279
ADMINISTRATION ON AGING.....	600	20	.....	.....	380	.....	200	.....	.....	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	5,380	5,153	1,000	.....	3,075	.....	118	.....	.....	42
FEDERAL FOOD AND DRUG ADMINISTRATION.....	2,300	7,059	.....	.....	1,245	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	65,484	1,836	60	.....	51,364	.....	366	.....	11,061	797
PUBLIC HEALTH SERVICE.....	620,455	120,594	41,967	.....	305,642	.....	106,998	.....	15,809	23,045
NATIONAL INSTITUTES OF HEALTH.....	7526,844	751,302	740,122	.....	7277,304	.....	795,700	.....	79,341	13,075
SAINT ELIZABETHS HOSPITAL.....	322	322	.....	.....	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	2,180	3,124	.....	.....	36	.....	.....	.....	.....	15
VOCATIONAL REHABILITATION ADMINISTRATION.....	29,758	618	.....	.....	10,694	.....	7,947	.....	7,119	3,380
WELFARE ADMINISTRATION.....	16,245	1,540	71	.....	6,830	.....	4,244	.....	1,660	2,000
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	222	25	.....	.....	140	.....	50	.....	8	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	71,311	49,908	5,820	.....	7,526	.....	982	.....	6,821	254
HOENNEVILLE POWER ADMINISTRATION.....	210	151	.....	.....	52	.....	.....	.....	15	.....
BUREAU OF COMMERCIAL FISHERIES.....	12,956	12,413	.....	.....	681	.....	10	.....	660	194
BUREAU OF LAND MANAGEMENT.....	618	709	.....	.....	409	.....	.....	.....	.....	.....
BUREAU OF MINES.....	21,291	20,851	.....	.....	300	.....	.....	.....	100	.....
BUREAU OF OUTDOOR RECREATION.....	51	43	.....	.....	10	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	5,014	2,469	.....	.....	1,735	.....	.....	.....	810	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	11,582	6,347	.....	.....	.....	.....	.....	.....	5,236	.....
GEOLOGICAL SURVEY.....	6,424	6,424	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF COAL RESEARCH.....	1,587	15	780	.....	420	.....	372	.....	.....	.....
OFFICE OF SALINE WATER.....	7,182	783	5,040	700	600	60	
OFFICE OF WATER RESOURCES RESEARCH.....	2,422	203	3,219	

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TABLE C-26.

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	INTRAMURAL	EXTRAMURAL							FOREIGN
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
DEPARTMENT OF LABOR, TOTAL.....	10,190	4,781	88	.....	4,336	.....	979	.....	6	.....
BUREAU OF APPRENTICESHIP AND TRAINING..	58	58	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	976	976	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	176	176	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	1,184	1,184	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	107	107	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	6,275	866	88	.....	4,336	.....	979	.....	6	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,374	1,374	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	57	271	29	.....	275	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	9,887	7,572	.....	.....	4,250	.....	2,000	.....	65	1,000
DEPARTMENTAL FUNDS.....	125	60	.....	.....	.....	.....	.....	.....	65	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT...	9,762	2,512	.....	.....	4,250	.....	2,000	.....	.....	1,000
DEPARTMENT OF THE TREASURY, TOTAL.....	232	232	.....	.....	6	.....	.....	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	227	227	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	16	10	.....	.....	6	.....	.....	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	145	145	.....	.....	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	83,079	1,300	1,564	28,730	4,027	40,999	493	5,730	4	232
CIVIL AERONAUTICS BOARD.....	153	153	.....	.....	.....	.....	.....	.....	.....	.....
CIVIL SERVICE COMMISSION.....	168	168	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	3,478	3,280	198	.....	.....	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	404	404	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	270	270	.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL TRADE COMMISSION.....	310	310	.....	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	810	310	500	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	726,819	249,206	419,476	445	11,060	42,938	3,064	110	520	.....
NATIONAL SCIENCE FOUNDATION.....	817	85	35	.....	258	.....	439	.....	.....	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	33,800	5,252	5,429	.....	17,238	.....	5,374	.....	507	.....
OFFICE OF EMERGENCY PLANNING.....	185	185	.....	.....	.....	.....	.....	.....	.....	.....
PEACE CORPS.....	1,400	.....	140	.....	980	.....	280	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	132	132	.....	.....	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	5,495	5,214	.....	.....	281	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,477	2,277	1,800	200	1,000	.....	1,000	100	100	.....
UNITED STATES INFORMATION AGENCY.....	90	40	50	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	38,810	28,639	.....	.....	118	.....	53	.....	.....	.....

TABLE C-27. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY DETAILED FIELD OF SCIENCE
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

FIELD OF SCIENCE	ACTUAL 1965	ESTIMATES	
		1966	1967
TOTAL, ALL FIELDS.....	3,163,953	3,533,303	3,454,296
LIFE SCIENCES, TOTAL.....	680,267	780,802	822,118
BIOLOGICAL SCIENCES.....	81,392	76,985	81,002
MEDICAL SCIENCES.....	533,720	633,579	677,590
AGRICULTURAL SCIENCES.....	65,155	70,238	63,526
PSYCHOLOGICAL SCIENCES.....	45,716	63,580	74,187
PHYSICAL SCIENCES, TOTAL.....	2,279,624	2,448,058	2,305,291
PHYSICAL SCIENCES PROPER, TOTAL.....	802,910	846,334	783,322
ASTRONOMY.....	15,431	13,219	13,892
CHEMISTRY.....	131,400	137,808	142,271
EARTH SCIENCES			
ATMOSPHERIC SCIENCES.....	110,851	128,168	138,528
OCEANOGRAPHY.....	22,950	22,852	22,520
SOLID EARTH SCIENCES.....	279,204	300,534	238,706
PHYSICS			
ELEMENTARY PARTICLE PHYSICS.....	5,229	6,825	6,671
NUCLEAR STRUCTURE PHYSICS.....	24,846	28,091	26,734
ATOMIC, MOLECULAR, AND SOLID-STATE PHYSICS.....	47,889	56,161	55,816
OTHER PHYSICS.....	130,720	127,399	116,960
OTHER PHYSICAL SCIENCES PROPER.....	34,390	25,277	21,224
MATHEMATICAL SCIENCES.....	48,018	62,485	67,818
ENGINEERING SCIENCES, TOTAL.....	1,428,696	1,539,239	1,454,151
AERONAUTICAL.....	288,901	343,403	302,293
ASTRONAUTICAL.....	326,050	316,141	286,360
CHEMICAL.....	98,076	108,168	105,029
CIVIL.....	27,888	23,089	24,756
ELECTRICAL.....	242,123	295,950	287,802
MECHANICAL.....	116,856	115,058	102,266
METALLURGY AND MATERIALS.....	97,681	103,632	102,189
OTHER ENGINEERING SCIENCES.....	231,121	233,798	243,456
SOCIAL SCIENCES, TOTAL.....	90,456	138,962	164,024
ANTHROPOLOGY.....	585	434	1,032
ECONOMICS.....	35,030	60,236	63,621
SOCIOLOGY.....	19,389	31,038	38,140
OTHER SOCIAL SCIENCES.....	35,454	47,254	61,231
OTHER SCIENCES.....	67,888	101,901	88,676

TABLE C-28. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
TOTAL, ALL AGENCIES.....	3,163,953	81,392	533,720	65,155	45,716	802,910	48,018	1,428,696	90,458	67,888
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	127,570	8,387	6,583	58,553	.....	22,263	447	10,783	20,554	.....
AGRICULTURAL RESEARCH SERVICE.....	65,589	2,831	5,159	30,122	.....	18,288	.....	7,478	1,711	.....
COOPERATIVE STATE RESEARCH SERVICE.....	31,526	2,521	1,424	17,740	.....	1,749	.....	1,080	7,012	.....
ECONOMIC RESEARCH SERVICE.....	9,084	.....	.....	.....	.....	.....	70	.....	9,014	.....
FARMER COOPERATIVE SERVICE.....	602	.....	.....	.....	.....	.....	.....	.....	602	.....
FOREST SERVICE.....	20,232	3,035	.....	10,521	.....	2,226	202	2,225	2,023	.....
NATIONAL AGRICULTURAL LIBRARY.....	170	.....	.....	170	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	367	.....	.....	.....	.....	.....	175	.....	192	.....
DEPARTMENT OF COMMERCE, TOTAL.....	19,336	.....	.....	.....	157	7,227	470	8,044	3,113	325
BUREAU OF THE CENSUS.....	761	.....	.....	.....	157	.....	103	.....	501	.....
BUREAU OF PUBLIC ROADS.....	4,428	.....	.....	.....	.....	.....	.....	3,729	699	.....
COAST AND GEODETIC SURVEY.....	1,153	.....	.....	.....	.....	1,095	.....	58	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	410	.....	.....	.....	.....	.....	.....	.....	410	.....
MARITIME ADMINISTRATION.....	949	.....	.....	.....	.....	.....	.....	949	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,507	.....	.....	.....	.....	2,411	367	2,585	144	.....
PATENT OFFICE.....	325	.....	.....	.....	.....	.....	.....	.....	.....	325
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	2,004	.....	.....	.....	.....	.....	.....	645	1,359	.....
WEATHER BUREAU.....	3,799	.....	.....	.....	.....	3,721	.....	78	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,488,167	40,094	27,012	205	13,366	407,200	43,117	890,014	2,626	64,533
DEPARTMENT OF THE ARMY.....	242,988	14,503	17,085	75	5,439	43,464	4,891	135,675	1,856	20,000
DEPARTMENT OF THE NAVY.....	230,600	8,132	2,508	.....	3,537	41,981	16,937	157,505	.....	.....
DEPARTMENT OF THE AIR FORCE.....	585,600	12,800	4,000	.....	3,200	101,848	17,000	429,600	.....	17,152
DEFENSE AGENCIES.....	417,679	4,164	3,039	93	.....	217,897	4,289	164,474	.....	23,726
DEPARTMENT-WIDE FUNDS.....	11,300	495	380	40	1,190	2,010	.....	2,760	770	3,655
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	558,820	6,047	461,547	26	29,770	13,741	2,350	3,827	40,869	663
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	5,023	1,179	272	26	.....	1,386	51	1,981	128	.....
FOOD AND DRUG ADMINISTRATION.....	4,988	1,996	200	.....	.....	2,792	.....	.....	.....	.....
OFFICE OF EDUCATION.....	25,293	.....	.....	.....	15,596	.....	.....	.....	9,697	.....
PUBLIC HEALTH SERVICE.....	491,954	2,872	449,837	.....	10,729	9,563	2,299	1,846	14,522	286
NATIONAL INSTITUTES OF HEALTH.....	7439,770	.....	7405,390	.....	79,392	79,463	71,840	71,819	711,600	7266
SAINT ELIZABETH'S HOSPITAL.....	293	.....	193	.....	100	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	1,711	.....	.....	.....	.....	.....	.....	.....	1,711	.....
VOCATIONAL REHABILITATION ADMIN.....	20,267	.....	6,666	.....	3,345	.....	.....	.....	9,899	357
WELFARE ADMINISTRATION.....	9,291	.....	4,379	.....	.....	.....	.....	.....	4,912	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	57,062	19,306	336	740	400	11,722	554	23,407	597	.....
BONNEVILLE POWER ADMINISTRATION.....	226	.....	.....	.....	.....	51	10	165	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	11,250	8,464	336	231	400	1,585	.....	102	132	.....
BUREAU OF LAND MANAGEMENT.....	477	12	.....	408	.....	35	.....	.....	22	.....
BUREAU OF MINES.....	19,733	.....	.....	.....	.....	3,772	284	15,677	.....	.....
BUREAU OF OUTDOOR RECREATION.....	56	15	.....	5	.....	.....	.....	.....	36	.....
BUREAU OF RECLAMATION.....	2,973	.....	.....	12	.....	1,178	.....	1,779	4	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	10,563	10,563	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	5,788	.....	.....	.....	.....	4,681	260	847	.....	.....
OFFICE OF COAL RESEARCH.....	1,285	.....	.....	.....	.....	.....	.....	1,134	151	.....
OFFICE OF SALINE WATER.....	3,031	3,031
OFFICE OF WATER RESOURCES RESEARCH.....	1,680	252	84	420	672	292

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TABLE C-28.

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRI-CULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
DEPARTMENT OF LABOR, TOTAL.....	5,142	.....	.....	.....	.....	.....	.....	184	4,958	.....
BUREAU OF APPRENTICESHIP AND TRAINING...	65	.....	.....	.....	.....	.....	.....	.....	65	.....
BUREAU OF EMPLOYMENT SECURITY.....	411	.....	.....	.....	.....	.....	.....	.....	411	.....
BUREAU OF LABOR STANDARDS.....	184	.....	.....	.....	.....	.....	.....	184	.....	.....
BUREAU OF LABOR STATISTICS.....	884	.....	.....	.....	.....	.....	.....	.....	884	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	101	.....	.....	.....	.....	.....	.....	.....	101	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	2,155	.....	.....	.....	.....	.....	.....	.....	2,155	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,290	.....	.....	.....	.....	.....	.....	.....	1,290	.....
WOMENS BUREAU.....	52	.....	.....	.....	.....	.....	.....	.....	52	.....
POST OFFICE DEPARTMENT.....	159	.....	.....	.....	.....	.....	.....	159	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,571	.....	499	4,605	.....	.....	.....	80	3,387	.....
DEPARTMENTAL FUNDS.....	125	.....	.....	.....	.....	.....	.....	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	8,446	.....	499	4,605	.....	.....	.....	80	3,262	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	336	.....	.....	.....	.....	205	.....	131	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	205	.....	.....	.....	.....	191	.....	14	.....	.....
UNITED STATES COAST GUARD.....	131	.....	.....	.....	.....	14	.....	117	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	.....	.....	.....	.....	.....	.....	.....	130	.....
ATOMIC ENERGY COMMISSION.....	75,801	5,698	3,040	222	.....	45,099	246	21,224	.....	272
CIVIL AERONAUTICS BOARD.....	74	.....	.....	.....	.....	.....	.....	.....	74	.....
CIVIL SERVICE COMMISSION.....	167	.....	.....	.....	167	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,294	.....	2,783	.....	9	394	.....	1,086	.....	22
FEDERAL COMMUNICATIONS COMMISSION.....	280	.....	.....	.....	.....	.....	.....	280	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	189	.....	.....	.....	.....	.....	.....	.....	189	.....
FEDERAL TRADE COMMISSION.....	263	.....	.....	.....	.....	.....	.....	.....	263	.....
HOUSING AND HOME FINANCE AGENCY.....	101	.....	.....	.....	.....	.....	.....	.....	101	.....
LIBRARY OF CONGRESS.....	107	.....	.....	.....	.....	.....	.....	.....	.....	7
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	762,104	1,216	.....	.....	406	294,354	738	465,071	819	.....
NATIONAL SCIENCE FOUNDATION.....	675	.....	.....	.....	.....	.....	.....	.....	675	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	9,730	.....	.....	.....	.....	.....	.....	.....	9,730	.....
OFFICE OF EMERGENCY PLANNING.....	211	.....	.....	.....	.....	.....	141	.....	.....	70
PEACE CORPS.....	601	.....	11	.....	352	.....	.....	.....	238	.....
SMALL BUSINESS ADMINISTRATION.....	28	.....	.....	.....	.....	.....	.....	.....	28	.....
TENNESSEE VALLEY AUTHORITY.....	4,382	402	.....	804	.....	705	.....	1,996	475	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,287	242	.....	.....	.....	.....	296	2,201	1,610	1,938
UNITED STATES INFORMATION AGENCY.....	156	.....	.....	.....	.....	.....	.....	156	.....	.....
VETERANS ADMINISTRATION.....	33,210	.....	31,909	.....	1,089	.....	.....	212	.....	.....

APPENDIX C

TABLE C-29. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1966--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	LIFE SCIENCES			PSYCHOL- OGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIO- LOGICAL SCIENCES	MEDICAL SCIENCES	AGRI- CULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHE- MATICAL SCIENCES	ENGI- NEERING SCIENCES		
TOTAL, ALL AGENCIES.....	3,533,303	76,985	633,579	70,238	63,580	846,334	62,485	1,539,239	138,962	101,901
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	137,085	8,672	7,086	62,097	.....	23,909	480	11,885	22,956	.....
AGRICULTURAL RESEARCH SERVICE.....	69,373	2,792	5,550	31,533	.....	19,591	.....	8,264	1,635	.....
COOPERATIVE STATE RESEARCH SERVICE.....	33,873	2,749	1,528	19,049	.....	1,858	.....	1,160	7,529	.....
ECONOMIC RESEARCH SERVICE.....	10,392	.....	.....	.....	.....	.....	72	.....	10,320	.....
FARMER COOPERATIVE SERVICE.....	627	.....	.....	.....	.....	.....	.....	.....	627	.....
FOREST SERVICE.....	22,365	3,131	.....	11,406	.....	2,460	223	2,461	2,684	.....
NATIONAL AGRICULTURAL LIBRARY.....	109	.....	.....	109	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	346	.....	.....	.....	.....	.....	185	.....	161	.....
DEPARTMENT OF COMMERCE, TOTAL.....	41,427	.....	.....	.....	320	8,785	505	14,262	17,425	130
BUREAU OF THE CENSUS.....	1,092	.....	.....	.....	320	.....	117	.....	655	.....
BUREAU OF PUBLIC ROADS.....	5,727	.....	.....	.....	.....	.....	.....	5,095	632	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,280	.....	.....	.....	.....	.....	.....	.....	2,280	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	6,853	.....	.....	.....	.....	6,487	.....	366	.....	.....
MARITIME ADMINISTRATION.....	1,750	.....	.....	.....	.....	.....	.....	1,750	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,309	.....	.....	.....	.....	2,298	388	2,471	152	.....
PATENT OFFICE.....	130	.....	.....	.....	.....	.....	.....	.....	.....	130
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	18,286	.....	.....	.....	.....	.....	.....	4,380	13,706	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,642,874	29,180	40,987	210	12,126	408,792	56,905	995,318	1,695	97,661
DEPARTMENT OF THE ARMY.....	237,549	8,579	26,743	80	3,945	39,014	6,131	134,163	950	17,944
DEPARTMENT OF THE NAVY.....	216,000	2,216	2,281	.....	4,084	39,486	20,592	147,341	.....	.....
DEPARTMENT OF THE AIR FORCE.....	796,000	14,000	8,000	.....	3,000	142,321	27,000	575,000	.....	28,679
DEFENSE AGENCIES.....	382,325	3,970	3,453	50	42	186,111	3,182	136,439	.....	49,078
DEPARTMENTWIDE FUNDS.....	11,000	415	510	80	1,055	1,860	.....	2,375	745	3,960
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	681,368	7,757	543,247	30	49,089	16,067	2,198	4,676	57,217	1,087
ADMINISTRATION ON AGING.....	300	.....	.....	.....	100	.....	.....	.....	200	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	6,748	1,590	404	30	.....	1,857	60	2,657	150	.....
FOOD AND DRUG ADMINISTRATION.....	6,981	3,011	630	.....	.....	3,340	.....	.....	.....	.....
OFFICE OF EDUCATION.....	50,979	.....	.....	.....	31,645	.....	.....	.....	19,334	.....
PUBLIC HEALTH SERVICE.....	572,764	3,156	524,177	.....	12,004	10,870	2,138	2,019	17,778	622
NATIONAL INSTITUTES OF HEALTH.....	/497,509/	.....	/458,568/	.....	/10,604/	/10,770/	/1,878/	/1,968/	/13,349/	/372/
SAINT ELIZABETHS HOSPITAL.....	301	.....	199	.....	102	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	3,017	.....	494	.....	.....	.....	.....	.....	2,523	.....
VOCATIONAL REHABILITATION ADMIN.....	27,460	.....	10,943	.....	5,238	.....	.....	.....	10,814	465
WELFARE ADMINISTRATION.....	12,818	.....	6,400	.....	.....	.....	.....	.....	6,418	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	235	.....	.....	.....	.....	.....	.....	.....	235	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	68,919	27,646	312	1,082	206	15,198	613	27,717	1,145	.....
BONNEVILLE POWER ADMINISTRATION.....	178	.....	.....	.....	.....	53	10	115	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	13,602	10,217	312	343	206	2,180	.....	86	258	.....
BUREAU OF LAND MANAGEMENT.....	636	13	.....	554	.....	.....	.....	.....	69	.....
BUREAU OF MINES.....	21,675	.....	.....	.....	.....	3,975	318	17,382	.....	.....
BUREAU OF OUTDOOR RECREATION.....	61	12	.....	8	.....	.....	.....	.....	41	.....
BUREAU OF RECLAMATION.....	5,112	.....	.....	18	.....	3,064	.....	2,008	22	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	11,929	11,929	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	6,311	.....	.....	.....	.....	5,133	285	893	.....	.....
OFFICE OF COAL RESEARCH.....	1,443	.....	.....	.....	.....	.....	.....	1,163	280	.....
OFFICE OF SALINE WATER.....	4,803	4,803
OFFICE OF WATER RESOURCES RESEARCH.....	3,169	475	159	793	1,267	475

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TABLE C-29.

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRI-CULTURAL SCIENCES		PHYSICAL SCIENCES OTHER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
DEPARTMENT OF LABOR, TOTAL.....	7,208	.....	.....	.....	.....	.....	.....	173	7,035	.....
BUREAU OF APPRENTICESHIP AND TRAINING...	72	.....	.....	.....	.....	.....	.....	.....	72	.....
BUREAU OF EMPLOYMENT SECURITY.....	631	.....	.....	.....	.....	.....	.....	.....	631	.....
BUREAU OF LABOR STANDARDS.....	173	.....	.....	.....	.....	.....	.....	173	.....	.....
BUREAU OF LABOR STATISTICS.....	1,072	.....	.....	.....	.....	.....	.....	.....	1,072	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	104	.....	.....	.....	.....	.....	.....	.....	104	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	3,743	.....	.....	.....	.....	.....	.....	.....	3,743	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,356	.....	.....	.....	.....	.....	.....	.....	1,356	.....
WOMENS BUREAU.....	57	.....	.....	.....	.....	.....	.....	.....	57	.....
POST OFFICE DEPARTMENT.....	557	.....	.....	.....	50	.....	412	95	.....	.....
DEPARTMENT OF STATE, TOTAL.....	8,027	.....	715	5,611	.....	.....	.....	38	1,663	.....
DEPARTMENTAL FUNDS.....	125	.....	.....	.....	.....	.....	.....	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	7,902	.....	715	5,611	.....	.....	.....	38	1,538	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	293	.....	.....	.....	.....	217	.....	76	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	216	.....	.....	.....	.....	201	.....	15	.....	.....
UNITED STATES COAST GUARD.....	77	.....	.....	.....	.....	16	.....	61	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	130	.....	.....	.....	.....	.....	.....	.....	130	.....
ATOMIC ENERGY COMMISSION.....	80,010	5,947	3,144	297	.....	48,399	247	21,483	.....	493
CIVIL AERONAUTICS BOARD.....	81	.....	.....	.....	.....	.....	.....	.....	81	.....
CIVIL SERVICE COMMISSION.....	164	.....	.....	.....	164	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	4,125	.....	2,676	.....	9	378	.....	1,042	20	.....
FEDERAL COMMUNICATIONS COMMISSION.....	300	.....	.....	.....	.....	.....	.....	300	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	205	.....	.....	.....	.....	.....	.....	.....	205	.....
FEDERAL TRADE COMMISSION.....	303	.....	.....	.....	.....	.....	.....	.....	303	.....
LIBRARY OF CONGRESS.....	410	.....	.....	.....	.....	.....	.....	.....	.....	410
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	784,998	2,044	.....	.....	224	323,806	630	457,386	908	.....
NATIONAL SCIENCE FOUNDATION.....	774	.....	.....	.....	.....	.....	.....	.....	774	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	24,200	.....	.....	.....	.....	.....	.....	.....	24,200	.....
OFFICE OF EMERGENCY PLANNING.....	232	.....	.....	.....	.....	.....	95	63	.....	71
PEACE CORPS.....	500	.....	.....	.....	334	.....	.....	.....	166	.....
SMALL BUSINESS ADMINISTRATION.....	45	.....	.....	.....	.....	.....	.....	.....	45	.....
TENNESSEE VALLEY AUTHORITY.....	5,194	439	.....	911	.....	783	.....	2,302	759	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,746	300	.....	.....	.....	.....	400	2,000	2,000	2,046
UNITED STATES INFORMATION AGENCY.....	217	.....	.....	.....	.....	.....	.....	217	.....	.....
VETERANS ADMINISTRATION.....	36,676	.....	35,412	.....	1,058	.....	.....	206	.....	.....

APPENDIX C

TABLE C-30. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
TOTAL, ALL AGENCIES.....	3,454,296	81,002	677,590	63,526	74,187	763,322	67,818	1,454,151	164,024	88,676
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	128,665	7,781	6,720	56,722	.....	24,020	479	11,438	21,505	.....
AGRICULTURAL RESEARCH SERVICE.....	67,560	2,742	5,485	29,791	.....	20,127	.....	8,106	1,309	.....
COOPERATIVE STATE RESEARCH SERVICE.....	27,345	2,210	1,235	15,383	.....	1,499	.....	937	6,081	.....
ECONOMIC RESEARCH SERVICE.....	10,569	.....	.....	.....	.....	.....	72	.....	10,497	.....
FARMER COOPERATIVE SERVICE.....	629	.....	.....	.....	.....	.....	.....	.....	629	.....
FOREST SERVICE.....	21,764	2,829	.....	11,099	.....	2,394	218	2,395	2,829	.....
NATIONAL AGRICULTURAL LIBRARY.....	449	.....	.....	449	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	349	.....	.....	.....	.....	.....	189	.....	160	.....
DEPARTMENT OF COMMERCE, TOTAL.....	52,104	.....	.....	.....	258	10,516	565	25,567	15,068	130
BUREAU OF THE CENSUS.....	1,060	.....	.....	.....	258	.....	165	.....	637	.....
BUREAU OF PUBLIC ROADS.....	9,295	.....	.....	.....	.....	.....	.....	8,645	650	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	2,400	.....	.....	.....	.....	.....	.....	.....	2,400	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	8,352	.....	.....	.....	.....	7,791	.....	561	.....	.....
MARITIME ADMINISTRATION.....	1,565	.....	.....	.....	.....	.....	.....	1,565	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,839	.....	.....	.....	.....	2,725	400	2,558	156	.....
PATENT OFFICE.....	130	.....	.....	.....	.....	.....	.....	.....	.....	130
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	23,463	.....	.....	.....	.....	.....	.....	12,238	11,225	.....
DEPARTMENT OF DEFENSE, TOTAL.....	1,524,419	32,963	36,973	180	12,887	387,890	62,020	905,417	2,050	84,039
DEPARTMENT OF THE ARMY.....	231,966	11,015	22,316	125	5,160	40,380	6,144	131,251	1,330	14,245
DEPARTMENT OF THE NAVY.....	203,800	2,324	2,316	.....	3,802	34,900	22,612	137,846	.....	.....
DEPARTMENT OF THE AIR FORCE.....	731,600	14,600	8,000	.....	3,000	144,201	30,000	506,000	.....	25,799
DEFENSE AGENCIES.....	347,053	4,694	3,861	.....	.....	166,819	3,264	128,120	.....	40,295
DEPARTMENTWIDE FUNDS.....	10,000	330	480	55	925	1,590	.....	2,200	720	3,700
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	753,832	9,485	588,061	32	58,346	17,468	2,460	5,808	71,239	933
ADMINISTRATION ON AGING.....	600	.....	.....	.....	200	.....	.....	.....	400	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	9,388	2,250	647	32	.....	2,511	65	3,722	161	.....
FOOD AND DRUG ADMINISTRATION.....	8,300	3,590	743	.....	.....	3,967	.....	.....	.....	.....
OFFICE OF EDUCATION.....	65,484	.....	.....	.....	40,728	.....	.....	.....	24,756	.....
PUBLIC HEALTH SERVICE.....	620,455	3,645	566,495	.....	12,675	10,990	2,395	2,086	21,854	315
NATIONAL INSTITUTES OF HEALTH.....	1,526,844	.....	1,487,664	.....	10,785	10,690	1,901	2,021	13,468	315
SAINT ELIZABETHS HOSPITAL.....	322	.....	212	.....	110	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	3,180	.....	.....	.....	.....	.....	.....	.....	3,180	.....
VOCATIONAL REHABILITATION ADMIN.....	29,758	.....	11,764	.....	4,633	.....	.....	.....	12,743	618
WELFARE ADMINISTRATION.....	16,345	.....	8,200	.....	.....	.....	.....	.....	8,145	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	233	.....	.....	.....	.....	.....	.....	.....	233	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	71,311	22,446	375	1,070	302	15,291	614	30,157	1,056	.....
BONNEVILLE POWER ADMINISTRATION.....	218	.....	.....	.....	.....	68	10	140	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	13,958	10,339	375	345	302	2,247	.....	126	224	.....
BUREAU OF LAND MANAGEMENT.....	618	10	.....	542	.....	.....	.....	.....	66	.....
BUREAU OF MINES.....	21,251	.....	.....	.....	.....	3,881	313	17,057	.....	.....
BUREAU OF OUTDOOR RECREATION.....	53	.....	.....	.....	.....	.....	.....	.....	53	.....
BUREAU OF RECLAMATION.....	5,014	.....	.....	12	.....	3,000	.....	2,002	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	11,583	11,583	.....	.....	.....	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	6,424	.....	.....	.....	.....	5,240	291	.....	893	.....
OFFICE OF COAL RESEARCH.....	1,587	.....	.....	.....	.....	.....	.....	1,387	200	.....
OFFICE OF SALINE WATER.....	7,183	.....	.....	.....	.....	.....	.....	7,183	.....	.....
OFFICE OF WATER RESOURCES RESEARCH.....	3,422	514	.....	171	.....	855	.....	1,369	513	.....

CONTINUED ON NEXT PAGE

TABLE C-30.

AGENCY AND SUBDIVISION	TOTAL APPLIED RESEARCH	LIFE SCIENCES			PSYCHOLOGICAL SCIENCES	PHYSICAL SCIENCES			SOCIAL SCIENCES	OTHER SCIENCES
		BIOLOGICAL SCIENCES	MEDICAL SCIENCES	AGRICULTURAL SCIENCES		PHYSICAL SCIENCES PROPER	MATHEMATICAL SCIENCES	ENGINEERING SCIENCES		
DEPARTMENT OF LABOR, TOTAL.....	10,190	.....	.....	.....	.....	.....	.....	176	10,014	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	98	.....	.....	.....	.....	.....	.....	.....	98	.....
BUREAU OF EMPLOYMENT SECURITY.....	976	.....	.....	.....	.....	.....	.....	.....	976	.....
BUREAU OF LABOR STANDARDS.....	176	.....	.....	.....	.....	.....	.....	176	.....	.....
BUREAU OF LABOR STATISTICS.....	1,184	.....	.....	.....	.....	.....	.....	.....	1,184	.....
OFFICE OF LABOR MANAGEMENT POLICY DEVELOPMENT.....	107	.....	.....	.....	.....	.....	.....	.....	107	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	6,275	.....	.....	.....	.....	.....	.....	.....	6,275	.....
WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS.....	1,374	.....	.....	.....	.....	.....	.....	.....	1,374	.....
POST OFFICE DEPARTMENT.....	575	.....	.....	.....	50	.....	430	95	.....	.....
DEPARTMENT OF STATE, TOTAL.....	9,887	.....	2,194	4,318	.....	.....	.....	450	2,925	.....
DEPARTMENTAL FUNDS.....	125	.....	.....	.....	.....	.....	.....	.....	125	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	9,762	.....	2,194	4,318	.....	.....	.....	450	2,800	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	238	.....	.....	.....	.....	223	.....	15	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	222	.....	.....	.....	.....	207	.....	15	.....	.....
UNITED STATES COAST GUARD.....	16	.....	.....	.....	.....	16	.....	.....	.....	.....
OTHER AGENCIES										
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	145	.....	.....	.....	.....	.....	.....	.....	145	.....
ATOMIC ENERGY COMMISSION.....	83,079	5,810	3,098	285	.....	50,660	257	22,322	.....	647
CIVIL AERONAUTICS BOARD.....	153	.....	.....	.....	.....	.....	.....	.....	153	.....
CIVIL SERVICE COMMISSION.....	168	.....	.....	.....	168	.....	.....	.....	.....	.....
FEDERAL AVIATION AGENCY.....	3,478	.....	2,689	.....	5	206	.....	567	11	.....
FEDERAL COMMUNICATIONS COMMISSION.....	404	.....	.....	.....	.....	.....	.....	404	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	270	.....	.....	.....	.....	.....	.....	.....	270	.....
FEDERAL TRADE COMMISSION.....	310	.....	.....	.....	.....	.....	.....	.....	310	.....
LIBRARY OF CONGRESS.....	810	.....	.....	.....	.....	.....	.....	.....	.....	810
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	726,819	1,705	.....	.....	364	276,265	693	446,875	917	.....
NATIONAL SCIENCE FOUNDATION.....	817	.....	.....	.....	.....	.....	.....	.....	817	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	33,800	.....	.....	.....	.....	.....	.....	.....	33,800	.....
OFFICE OF EMERGENCY PLANNING.....	185	35	.....	.....	.....	.....	.....	70	40	40
PEACE CORPS.....	1,400	.....	.....	.....	688	.....	.....	.....	712	.....
SMALL BUSINESS ADMINISTRATION.....	132	.....	.....	.....	.....	.....	.....	.....	132	.....
TENNESSEE VALLEY AUTHORITY.....	5,495	477	.....	919	.....	783	.....	2,589	727	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	6,477	300	.....	.....	.....	.....	300	1,900	1,900	2,077
UNITED STATES INFORMATION AGENCY.....	90	.....	.....	.....	.....	.....	.....	90	.....	.....
VETERANS ADMINISTRATION.....	38,810	.....	37,480	.....	1,119	.....	.....	211	.....	.....

APPENDIX C

TABLE C-21. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1965
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL DEVELOPMENT	INTRAMURAL	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER	
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	9,745,720	1,638,835	7,204,201	335,876	68,727	217,477	125,830	133,262	2,328	19,184
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.....	6,728	6,018	393	.....	114	.....	150	.....	.....	53
AGRICULTURAL RESEARCH SERVICE.....	5,342	4,666	393	.....	80	.....	150	.....	.....	53
FOREST SERVICE.....	1,173	1,173	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	213	179	.....	.....	34	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	17,768	9,256	7,512	45	512	.....	129	.....	314	.....
BUREAU OF THE CENSUS.....	1,456	1,456	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	747	510	122	.....	40	.....	75	.....	.....	.....
COAST AND GEODETIC SURVEY.....	512	435	77	.....	.....	.....	.....	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	70	70	.....	.....	.....	.....	.....	.....	.....	.....
MARITIME ADMINISTRATION.....	6,711	230	6,451	.....	30	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	4,398	4,398	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	305	292	13	.....	.....	.....	.....	.....	.....	.....
WEATHER BUREAU.....	3,569	1,865	849	45	442	.....	54	.....	314	.....
DEPARTMENT OF DEFENSE, TOTAL.....	5,045,047	1,095,709	3,654,312	7,106	29,418	37,420	105,435	97,420	.....	18,227
DEPARTMENT OF THE ARMY.....	1,167,642	342,389	795,604	4,492	10,000	44	1,957	.....	.....	13,156
DEPARTMENT OF THE NAVY.....	1,130,034	391,258	683,165	.....	11,033	37,376	4,758	.....	.....	2,444
DEPARTMENT OF THE AIR FORCE.....	2,662,591	322,056	2,144,371	2,614	7,400	.....	97,103	97,420	.....	2,627
DEFENSE AGENCIES.....	63,780	30,006	31,172	.....	985	.....	1,617	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	7,619	3,022	112	.....	2,628	.....	1,389	.....	123	345
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	1,165	.....	.....	.....	694	.....	471	.....	.....	.....
FOOD AND DRUG ADMINISTRATION.....	1,393	1,393	.....	.....	.....	.....	.....	.....	.....	.....
PUBLIC HEALTH SERVICE.....	2,906	1,629	112	.....	990	.....	70	.....	105	.....
VOCATIONAL REHABILITATION ADMIN.....	2,155	.....	.....	.....	944	.....	848	.....	18	345
DEPARTMENT OF THE INTERIOR, TOTAL.....	15,648	7,148	6,304	405	148	.....	158	.....	1,479	6
BONNEVILLE POWER ADMINISTRATION.....	241	201	.....	.....	40	.....	.....	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	3,066	2,702	211	.....	.....	.....	.....	.....	147	6
BUREAU OF LAND MANAGEMENT.....	31	31	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	3,118	3,118	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	32	14	.....	.....	18	.....	.....	.....	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	2,046	714	.....	.....	.....	.....	.....	.....	1,332	.....
OFFICE OF COAL RESEARCH.....	1,980	.....	1,732	.....	90	.....	158	.....	.....	.....
OFFICE OF SALINE WATER.....	5,134	368	4,361	405	.....	.....	.....	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	2,462	1,688	13	.....	621	.....	140	.....	1	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	64	64	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	568	568	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	76	76	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	753	753	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	899	124	13	.....	621	.....	140	.....	1	.....
WOMEN'S BUREAU.....	103	103	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	7,458	1,317	6,025	.....	.....	.....	.....	.....	.....	116
DEPARTMENT OF STATE, TOTAL.....	4,299	1,574	212	.....	391	.....	2,122	.....	.....	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	4,299	1,574	212	.....	391	.....	2,122	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,514	1,151	363	.....	.....	.....	.....	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	209	209	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	1,305	942	363	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION.....	906,667	24,827	338,763	328,104	3,564	174,042	3,351	33,923	.....	93
FEDERAL AVIATION AGENCY.....	60,114	27,289	30,689	20	355	.....	786	900	.....	75
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	3,661,632	457,512	3,157,964	156	28,510	6,015	10,147	1,019	.....	269
NATIONAL SCIENCE FOUNDATION.....	699	.....	70	.....	190	.....	439	.....	.....	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	5,192	.....	1,116	.....	2,116	.....	1,549	.....	411	.....
TENNESSEE VALLEY AUTHORITY.....	1,248	1,248	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	895	895	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES INFORMATION AGENCY.....	168	.....	168	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	561	181	185	.....	160	.....	35	.....	.....	.....

PART I, STATISTICAL TABLES

TABLE C-32. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1966--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL DEVELOPMENT	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES.....	10,484,199	1,731,511	7,816,313	316,857	83,825	226,145	157,236	133,472	6,171	12,669	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	6,883	6,758	44	.....	81	.....	.....	.....	.....	.....
AGRICULTURAL RESEARCH SERVICE.....	5,370	5,245	44	.....	81	.....	.....	.....	.....	.....
FOREST SERVICE.....	1,335	1,335	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	178	178	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	21,714	9,206	11,446	.....	643	.....	244	.....	.....	175
BUREAU OF THE CENSUS.....	611	611	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	676	589	12	.....	.....	.....	75	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	570	100	200	.....	170	.....	100	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	4,521	2,782	1,120	.....	375	.....	69	.....	.....	175
MARITIME ADMINISTRATION.....	6,530	333	6,099	.....	98	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	4,523	4,523	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	283	268	15	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT.....	4,000	.....	4,000	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	5,505,059	1,182,803	4,033,080	5,535	38,994	32,994	105,275	96,325	.....	10,093
DEPARTMENT OF THE ARMY.....	1,276,432	383,532	869,637	5,135	12,241	125	1,086	.....	.....	4,676
DEPARTMENT OF THE NAVY.....	1,408,970	426,293	928,389	.....	11,822	32,869	6,097	.....	.....	3,500
DEPARTMENT OF THE AIR FORCE.....	2,710,147	332,357	2,171,748	400	11,600	.....	95,800	96,325	.....	1,917
DEFENSE AGENCIES.....	90,124	39,650	46,794	.....	1,388	.....	2,292	.....	.....	.....
DEPARTMENTAL FUNDS.....	19,426	971	16,512	.....	1,943	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	31,220	3,980	5,240	.....	3,617	.....	17,539	.....	444	400
ADMINISTRATION ON AGING.....	600	15	.....	.....	85	.....	500	.....	.....	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	22,165	.....	5,000	.....	1,255	.....	15,910	.....	.....	.....
FOOD AND DRUG ADMINISTRATION.....	2,084	2,004	.....	.....	80	.....	.....	.....	.....	.....
PUBLIC HEALTH SERVICE.....	3,841	1,961	240	.....	1,111	.....	131	.....	398	.....
VOCATIONAL REHABILITATION ADMINISTRATION.....	2,530	.....	.....	.....	1,086	.....	998	.....	46	400
DEPARTMENT OF THE INTERIOR, TOTAL.....	21,695	8,873	7,788	1,275	228	.....	428	.....	3,040	63
BONNEVILLE POWER ADMINISTRATION.....	292	240	.....	.....	40	.....	.....	.....	.....	12
BUREAU OF COMMERCIAL FISHERIES.....	4,656	3,006	.....	.....	.....	.....	63	.....	1,536	51
BUREAU OF LAND MANAGEMENT.....	50	50	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,006	3,906	.....	.....	100	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	18	15	.....	.....	3	.....	.....	.....	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	2,300	804	.....	.....	.....	.....	.....	.....	1,504	.....
OFFICE OF COAL RESEARCH.....	2,250	.....	1,800	.....	85	.....	365	.....	.....	.....
OFFICE OF SALINE WATER.....	8,115	852	5,988	1,275	.....	.....	.....	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	3,206	2,207	16	.....	801	.....	181	.....	1	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	72	72	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	77	77	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	77	77	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	1,007	1,007	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	1,156	160	16	.....	801	.....	181	.....	1	.....
WOMENS BUREAU.....	114	114	.....	.....	.....	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	13,932	1,474	12,393	.....	.....	.....	.....	.....	.....	65
DEPARTMENT OF STATE, TOTAL.....	6,596	2,024	420	.....	1,740	.....	2,412	.....	.....	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	6,596	2,024	420	.....	1,740	.....	2,412	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,475	1,207	268	.....	.....	.....	.....	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	270	270	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	1,205	937	268	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES											
ATOMIC ENERGY COMMISSION.....	890,773	11,334	337,560	309,940	3,202	187,874	3,034	35,977	.....	1,852
FEDERAL AVIATION AGENCY.....	172,124	30,824	139,266	7	663	.....	173	1,170	.....	21
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	3,770,756	467,862	3,261,047	100	25,786	5,277	10,684	.....	.....	.....
NATIONAL SCIENCE FOUNDATION.....	1,337	.....	200	.....	600	.....	537	.....	.....	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	34,000	.....	7,310	.....	7,310	.....	16,694	.....	2,686	.....
TENNESSEE VALLEY AUTHORITY.....	1,485	1,485	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	1,200	1,200	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES INFORMATION AGENCY.....	64	64	.....	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	640	210	235	.....	160	.....	35	.....	.....	.....

TABLE C-33. FEDERAL ALLOCATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL DEVELOPMENT	INTRAMURAL	EXTRAMURAL								
			UNITED STATES AND TERRITORIES								FOREIGN
			INDUSTRIAL FIRMS		EDUCATIONAL INSTITUTIONS		OTHER NONPROFIT ORGANIZATIONS		OTHER		
			PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS	PROPER	RESEARCH CENTERS			
TOTAL, ALL AGENCIES	10,395,751	1,775,273	7,687,258	319,410	97,171	230,106	132,899	138,022	6,416	9,196	
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL	7,033	6,704	203	.....	27	.....	99	.....	.....	.....
AGRICULTURAL RESEARCH SERVICE.....	5,514	5,185	203	.....	27	.....	99	.....	.....	.....
FOREST SERVICE.....	1,339	1,339	.....	.....	.....	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	180	180	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL	22,200	10,194	10,854	.....	887	.....	265	.....	.....	.....
BUREAU OF THE CENSUS.....	568	568	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF PUBLIC ROADS.....	850	716	84	.....	.....	.....	50	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	600	60	180	.....	240	.....	120	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	4,867	3,094	1,227	.....	451	.....	95	.....	.....	.....
MARITIME ADMINISTRATION.....	5,845	386	5,313	.....	146	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,176	5,076	50	.....	50	.....	.....	.....	.....	.....
PATENT OFFICE.....	294	294	.....	.....	.....	.....	.....	.....	.....	.....
TRANSPORTATION RESEARCH AND DEVELOPMENT	4,000	.....	4,000	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL	5,491,183	1,209,524	4,010,354	5,448	50,083	33,169	76,536	101,528	.....	4,541
DEPARTMENT OF THE ARMY.....	1,296,120	406,176	870,357	5,448	10,758	240	2,527	.....	.....	614
DEPARTMENT OF THE NAVY.....	1,508,600	437,431	1,013,655	.....	16,633	32,929	5,607	.....	.....	2,345
DEPARTMENT OF THE AIR FORCE.....	2,485,500	325,291	1,981,599	.....	9,000	.....	66,500	101,528	.....	1,582
DEFENSE AGENCIES.....	75,963	34,376	38,493	.....	1,192	.....	1,902	.....	.....	.....
DEPARTMENT-WISE FUNDS.....	125,000	6,250	106,250	.....	12,500	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	34,286	4,966	5,500	.....	4,345	.....	18,582	.....	273	620
ADMINISTRATION ON AGING.....	1,200	30	.....	.....	170	.....	1,000	.....	.....	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	23,049	.....	5,000	.....	1,749	.....	16,300	.....	.....	.....
FOOD AND DRUG ADMINISTRATION.....	2,160	2,073	.....	.....	87	.....	.....	.....	.....	.....
PUBLIC HEALTH SERVICE.....	5,072	2,863	500	.....	1,203	.....	281	.....	225	.....
VOCATIONAL REHABILITATION ADMIN.....	2,805	.....	.....	.....	1,136	.....	1,001	.....	48	620
DEPARTMENT OF THE INTERIOR, TOTAL	20,680	8,392	7,970	1,010	275	.....	371	.....	2,587	75
BONNEVILLE POWER ADMINISTRATION.....	782	220	500	.....	62	.....	.....	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	4,154	2,898	70	.....	.....	.....	31	.....	1,080	75
BUREAU OF LAND MANAGEMENT.....	67	67	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	4,006	3,706	.....	.....	100	.....	.....	.....	200	.....
BUREAU OF RECLAMATION.....	15	12	.....	.....	3	.....	.....	.....	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE	2,218	911	.....	.....	.....	.....	.....	.....	1,307	.....
OFFICE OF COAL RESEARCH.....	2,300	.....	1,850	.....	110	.....	340	.....	.....	.....
OFFICE OF SALINE WATER.....	7,138	578	5,550	1,010	.....	.....	.....	.....	.....	.....
DEPARTMENT OF JUSTICE, TOTAL	200	.....	200	.....	.....	.....	.....	.....	.....	.....
FEDERAL BUREAU OF INVESTIGATION.....	200	.....	200	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL	3,684	2,511	19	.....	941	.....	212	.....	1	.....
BUREAU OF APPRENTICESHIP AND TRAINING.....	97	97	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	1,131	1,131	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	79	79	.....	.....	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STATISTICS.....	1,016	1,016	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	1,361	188	19	.....	941	.....	212	.....	1	.....
POST OFFICE DEPARTMENT	11,370	2,137	9,223	.....	.....	.....	.....	.....	.....	10
DEPARTMENT OF STATE, TOTAL	5,041	1,495	500	.....	1,546	.....	1,500	.....	.....	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	5,041	1,495	500	.....	1,546	.....	1,500	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL	1,156	995	161	.....	.....	.....	.....	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	307	307	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	849	688	161	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES											
ATOMIC ENERGY COMMISSION.....	875,502	9,242	321,084	312,852	3,185	191,320	2,755	35,114	.....	3,950
FEDERAL AVIATION AGENCY.....	370,671	36,344	333,291	.....	136	.....	.....	900	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	3,501,670	403,474	2,977,414	100	24,786	5,617	9,799	480	.....	.....
NATIONAL SCIENCE FOUNDATION.....	2,050	.....	300	.....	1,100	.....	650	.....	.....	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	45,000	.....	9,675	.....	9,675	.....	22,095	.....	3,555	.....
TENNESSEE VALLEY AUTHORITY.....	1,563	1,563	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	1,440	1,440	.....	.....	.....	.....	.....	.....	.....	.....
UNITED STATES INFORMATION AGENCY.....	335	60	250	25	
VETERANS ADMINISTRATION.....	687	232	260	160	35	

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TABLE C-34. FEDERAL FUNDS FOR R&D PLANT, BY AGENCY, FISCAL YEARS 1965, 1966, AND 1967

-MILLIONS OF DOLLARS-

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
TOTAL, ALL AGENCIES.....	1,131.6	1,123.1	707.4	1,084.4	1,049.0	871.8
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	9.1	32.7	27.1	6.1	12.2	20.2
AGRICULTURAL RESEARCH SERVICE.....	2.0	26.5	27.1	1.8	6.4	19.9
COOPERATIVE STATE RESEARCH SERVICE.....	3.2	2.0	.....	3.2	2.0	.....
FOREST SERVICE.....	3.9	4.2	.....	1.1	3.8	.4
DEPARTMENT OF COMMERCE, TOTAL.....	2.2	19.3	2.2	27.7	19.5	11.6
COAST AND GEODETIC SURVEY.....	.1	.....	.....	.1	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	1.1	*	.....	.5	.6
MARITIME ADMINISTRATION.....	.....	.6	1.0	.....	.6	1.0
NATIONAL BUREAU OF STANDARDS.....	2.1	17.6	1.1	27.7	18.4	9.9
DEPARTMENT OF DEFENSE, TOTAL.....	68.5	84.9	104.7	99.9	74.6	78.0
DEPARTMENT OF THE ARMY.....	18.8	37.0	42.1	20.2	23.6	36.0
DEPARTMENT OF THE NAVY.....	12.7	18.0	19.0	22.5	11.0	17.0
DEPARTMENT OF THE AIR FORCE.....	31.0	25.0	40.0	45.0	35.0	20.0
DEFENSE AGENCIES.....	6.0	4.9	3.6	12.2	5.0	5.0
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	101.2	162.6	93.6	56.6	79.2	89.0
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	6.8	9.0	5.0	4.6	8.4	8.0
FOOD AND DRUG ADMINISTRATION.....	.4	5.2	5.1	*	.3	1.1
OFFICE OF EDUCATION.....	17.1	51.4	43.5	.....	3.6	14.1
PUBLIC HEALTH SERVICE.....	76.9	96.9	40.0	51.9	66.9	65.7
NATIONAL INSTITUTES OF HEALTH.....	/72.6/	/92.1/	/32.3/	/39.9/	/53.6/	/59.1/
SAINT ELIZABETHS HOSPITAL.....	*	*	.....	.....	*	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	14.2	18.2	18.6	10.1	15.1	18.2
BONNEVILLE POWER ADMINISTRATION.....	.4	2.6	.4	.4	.2	2.8
BUREAU OF COMMERCIAL FISHERIES.....	7.4	2.3	.2	5.9	6.0	2.5
BUREAU OF MINES.....	*	.....	2.6	.2	.2	1.7
BUREAU OF RECLAMATION.....	.1	.2	.....	.1	.2	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	2.3	1.8	1.7	2.0	1.7	1.4
GEOLOGICAL SURVEY.....	.9	.....	.....	.1	.6	.2
OFFICE OF COAL RESEARCH.....	2.8	4.1	4.4	.7	1.7	2.3
OFFICE OF SALINE WATER.....	.3	7.2	9.4	.8	4.5	7.2
POST OFFICE DEPARTMENT.....	*	*	*	*	*	*
DEPARTMENT OF THE TREASURY, TOTAL.....	1.2	.7	.7	1.1	.7	.5
BUREAU OF ENGRAVING AND PRINTING.....	*	*	*	*	*	*
UNITED STATES COAST GUARD.....	1.2	.7	.7	1.1	.7	.5
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION.....	299.1	343.9	237.1	279.4	260.6	241.7
FEDERAL AVIATION AGENCY.....	7.3	9.8	1.3	2.4	7.9	7.5
FEDERAL COMMUNICATIONS COMMISSION.....	*	*	*	*	*	*
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	530.4	347.2	124.0	537.9	503.0	307.0
NATIONAL SCIENCE FOUNDATION.....	88.2	94.8	93.0	56.6	66.7	91.0
SMITHSONIAN INSTITUTION.....	.4	.8	.3	2.4	.9	.4
TENNESSEE VALLEY AUTHORITY.....	.1	.1	*	.1	.1	*
VETERANS ADMINISTRATION.....	9.9	8.1	4.7	3.8	7.8	6.4

APPENDIX C

TABLE C-35. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND SITE, FISCAL YEAR 1965
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL ALL U.S. AND FOREIGN	FEDERAL CIVILIAN OR MILITARY INSTALLATION	NON-FEDERAL SITE			FOREIGN	
			TOTAL	EDUCATIONAL INSTIT.			
				PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	1,131,603	912,987	217,265	141,554	50,177	25,534	1,351
DEPARTMENTS							
DEPARTMENT OF AGRICULTURE, TOTAL.....	9,120	5,778	3,342	3,342	.....	.....	.....
AGRICULTURAL RESEARCH SERVICE.....	2,010	2,010	.....	.....	.....	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	3,242	.....	3,242	3,242	.....	.....	.....
FOREST SERVICE.....	3,868	3,768	100	100	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	2,168	2,113	55	.....	.....	55	.....
COAST AND GEODETIC SURVEY.....	55	.....	55	.....	.....	55	.....
NATIONAL BUREAU OF STANDARDS.....	2,113	2,113	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	68,471	68,471	.....	.....	.....	.....	.....
DEPARTMENT OF THE ARMY.....	18,800	18,800	.....	.....	.....	.....	.....
DEPARTMENT OF THE NAVY.....	12,698	12,698	.....	.....	.....	.....	.....
DEPARTMENT OF THE AIR FORCE.....	31,000	31,000	.....	.....	.....	.....	.....
DEFENSE AGENCIES.....	5,973	5,973	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	101,169	19,127	82,042	71,859	.....	10,183	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	6,801	6,801	.....	.....	.....	.....	.....
FOOD AND DRUG ADMINISTRATION.....	394	394	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	17,062	.....	17,062	17,062	.....	.....	.....
PUBLIC HEALTH SERVICE.....	76,873	11,893	64,980	54,797	.....	10,183	.....
NATIONAL INSTITUTES OF HEALTH.....	/72,561/ 39	/7,628/ 39	/64,933/	/54,750/ .....	.....	/10,183/ .....	.....
SAINT ELIZABETH'S HOSPITAL.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	14,178	11,389	2,789	170	.....	2,619	.....
BONNEVILLE POWER ADMINISTRATION.....	399	399	.....	.....	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	7,419	7,419	.....	.....	.....	.....	.....
BUREAU OF MINES.....	22	22	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	55	55	.....	.....	.....	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	2,304	2,295	9	.....	.....	9	.....
GEOLOGICAL SURVEY.....	863	863	.....	.....	.....	.....	.....
OFFICE OF COAL RESEARCH.....	2,780	.....	2,780	170	.....	2,610	.....
OFFICE OF SALINE WATER.....	336	336	.....	.....	.....	.....	.....
POST OFFICE DEPARTMENT.....	18	18	.....	.....	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	1,178	1,178	.....	.....	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	6	6	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	1,172	1,172	.....	.....	.....	.....	.....
OTHER AGENCIES							
ATOMIC ENERGY COMMISSION.....	299,050	233,862	64,837	8,683	50,177	5,977	351
FEDERAL AVIATION AGENCY.....	7,253	7,253	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	10	10	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	530,378	522,178	8,200	8,200	.....	.....	.....
NATIONAL SCIENCE FOUNDATION.....	88,200	52,200	56,000	49,300	.....	6,700	1,000
SMITHSONIAN INSTITUTION.....	443	443
TENNESSEE VALLEY AUTHORITY.....	80	80
VETERANS ADMINISTRATION.....	9,887	9,887

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TABLE C-36. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND SITE, FISCAL YEAR 1966--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL ALL U.S. AND FOREIGN	FEDERAL CIVILIAN OR MILITARY INSTALLATION	NCA-FEDERAL SITE				FOREIGN
			TOTAL	EDUCATIONAL INSTIT.		OTHER	
				PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	1,123,073	854,960	267,413	193,185	36,410	37,818	700
DEPARTMENTS							
DEPARTMENT OF AGRICULTURE, TOTAL.....	32,695	27,647	5,048	5,048	.....	.....	.....
AGRICULTURAL RESEARCH SERVICE.....	26,512	26,512	.....	.....	.....	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	2,000	.....	2,000	2,000	.....	.....	.....
FOREST SERVICE.....	4,183	1,135	3,048	3,048	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	19,307	18,707	600	.....	.....	600	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATIVE.....	1,135	1,135	.....	.....	.....	.....	.....
MARITIME ADMINISTRATION.....	600	.....	600	.....	.....	600	.....
NATIONAL BUREAU OF STANDARDS.....	17,572	17,572	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	84,915	84,915	.....	.....	.....	.....	.....
DEPARTMENT OF THE ARMY.....	37,000	37,000	.....	.....	.....	.....	.....
DEPARTMENT OF THE NAVY.....	18,000	18,000	.....	.....	.....	.....	.....
DEPARTMENT OF THE AIR FORCE.....	25,000	25,000	.....	.....	.....	.....	.....
DEFENSE AGENCIES.....	4,915	4,915	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	162,566	54,873	107,693	99,293	.....	8,400	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATIVE.....	8,971	8,971	.....	.....	.....	.....	.....
FOOD AND DRUG ADMINISTRATION.....	5,231	5,231	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	51,418	.....	51,418	51,418	.....	.....	.....
PUBLIC HEALTH SERVICE.....	96,944	40,669	56,275	47,875	.....	8,400	.....
NATIONAL INSTITUTES OF HEALTH.....	/92,069/ 2	/36,069/ 2	/56,000/	/47,600/ .....	.....	/8,400/ .....	.....
SAINT ELIZABETHS HOSPITAL.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	18,169	7,937	10,232	400	.....	9,832	.....
BONNEVILLE POWER ADMINISTRATION.....	2,610	2,610	.....	.....	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	2,294	2,294	.....	.....	.....	.....	.....
BUREAU OF RECLAMATION.....	210	160	50	50	.....	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	1,758	1,633	125	.....	.....	125	.....
OFFICE OF COAL RESEARCH.....	4,100	.....	4,100	350	.....	3,750	.....
OFFICE OF SALINE WATER.....	7,197	1,240	5,957	.....	.....	5,957	.....
POST OFFICE DEPARTMENT.....	49	49	.....	.....	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	728	728	.....	.....	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	8	8	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	720	720	.....	.....	.....	.....	.....
OTHER AGENCIES							
ATOMIC ENERGY COMMISSION.....	343,893	279,053	64,640	15,744	36,410	12,486	200
FEDERAL AVIATION AGENCY.....	9,774	9,774	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	10	10	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	347,200	337,200	10,000	10,000	.....	.....	.....
NATIONAL SCIENCE FOUNDATION.....	94,800	25,100	69,200	62,700	.....	6,500	500
SMITHSONIAN INSTITUTION.....	770	770	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	55	55	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	8,142	8,142	.....	.....	.....	.....	.....

TABLE C-37. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND SITE, FISCAL YEAR 1967--ESTIMATED
-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL ALL U.S. AND FOREIGN	FEDERAL CIVILIAN OR MILITARY INSTALLATION	NON-FEDERAL SITE			FOREIGN	
			TOTAL	EDUCATIONAL INSTIT.			
				PROPER	RESEARCH CENTERS		
TOTAL, ALL AGENCIES.....	707,448	513,704	179,684	132,957	21,830	24,897	14,060
DEPARTMENTS							
DEPARTMENT OF AGRICULTURE, TOTAL.....	27,140	13,540	.....	.....	.....	.....	13,600
AGRICULTURAL RESEARCH SERVICE.....	27,140	13,540	.....	.....	.....	.....	13,600
DEPARTMENT OF COMMERCE, TOTAL.....	2,229	1,194	1,035	.....	.....	1,035	.....
ENVIRONMENTAL SCIENCES SERVICES							
ADMINISTRATIVE.....	45	45	.....	.....	.....	.....	.....
MARITIME ADMINISTRATION.....	1,035	.....	1,035	.....	.....	1,035	.....
NATIONAL BUREAU OF STANDARDS.....	1,149	1,149	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	104,740	104,740	.....	.....	.....	.....	.....
DEPARTMENT OF THE ARMY.....	42,100	42,100	.....	.....	.....	.....	.....
DEPARTMENT OF THE NAVY.....	19,000	19,000	.....	.....	.....	.....	.....
DEPARTMENT OF THE AIR FORCE.....	40,000	40,000	.....	.....	.....	.....	.....
DEFENSE AGENCIES.....	3,640	3,640	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	93,581	29,021	64,560	61,410	.....	3,150	.....
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	5,012	5,012	.....	.....	.....	.....	.....
FOOD AND DRUG ADMINISTRATION.....	5,121	5,121	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	43,480	.....	43,480	43,480	.....	.....	.....
PUBLIC HEALTH SERVICE.....	39,968	18,888	21,080	17,930	.....	3,150	.....
NATIONAL INSTITUTES OF HEALTH.....	/32,330/	/11,330/	/21,000/	/17,850/	.....	/3,150/	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	18,605	6,655	11,950	400	.....	11,550	.....
BONNEVILLE POWER ADMINISTRATION.....	406	406	.....	.....	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	160	160	.....	.....	.....	.....	.....
BUREAU OF MINES.....	2,600	2,600	.....	.....	.....	.....	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	1,684	1,584	100	.....	.....	100	.....
OFFICE OF COAL RESEARCH.....	4,350	.....	4,350	400	.....	3,950	.....
OFFICE OF SALINE WATER.....	9,405	1,905	7,500	.....	.....	7,500	.....
POST OFFICE DEPARTMENT.....	32	32	.....	.....	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL.....	710	710	.....	.....	.....	.....	.....
BUREAU OF ENGRAVING AND PRINTING.....	10	10	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	700	700	.....	.....	.....	.....	.....
OTHER AGENCIES							
ATOMIC ENERGY COMMISSION.....	237,130	204,031	32,889	8,297	21,830	2,762	210
FEDERAL AVIATION AGENCY.....	1,289	1,289	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	10	10	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	124,000	116,000	8,000	8,000	.....	.....	.....
NATIONAL SCIENCE FOUNDATION.....	93,000	31,500	61,250	54,850	.....	6,400	250
SMITHSONIAN INSTITUTION.....	280	280	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	45	45	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	4,657	4,657	.....	.....	.....	.....	.....

TABLE C-38. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION AND COUNTRY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

COUNTRY	ACTUAL 1965	ESTIMATES	
		1966	1967
TOTAL, ALL COUNTRIES	68,571	72,088	76,343
EUROPE, TOTAL	30,362	23,687	20,230
FRANCE.....	1,549	1,627	970
ITALY.....	1,860	1,678	2,840
NORWAY.....	874	1,522	743
POLAND.....	1,161	3,332	4,428
SWEDEN.....	1,530	1,216	1,144
UNITED KINGDOM.....	17,512	8,205	3,774
WEST GERMANY.....	1,668	806	876
YUGOSLAVIA.....	394	1,897	2,790
OTHER EUROPE.....	3,814	3,404	2,665
ASIA, TOTAL	15,191	18,503	22,948
INDIA.....	4,560	5,365	10,457
JAPAN.....	4,876	5,057	4,949
PAKISTAN.....	1,355	2,193	2,494
THAILAND.....	2,615	2,735	2,597
OTHER ASIA.....	1,785	3,153	2,451
NEAR EAST, TOTAL	9,251	12,555	14,262
ISRAEL.....	7,222	9,787	10,670
UNITED ARAB REPUBLIC.....	1,511	1,926	2,918
OTHER NEAR EAST.....	518	842	674
AFRICA, TOTAL	1,060	1,246	1,999
UNION OF SOUTH AFRICA.....	275	267	277
OTHER AFRICA.....	785	979	1,722
LATIN AMERICA, TOTAL	3,694	3,742	3,245
ARGENTINA.....	501	420	443
BRAZIL.....	720	658	574
CHILE.....	374	407	336
MEXICO.....	442	393	189
PERU.....	604	682	520
OTHER LATIN AMERICA.....	1,053	1,182	1,183
AUSTRALIA	1,088	2,112	2,201
CANADA	6,030	8,560	8,646
NEW ZEALAND	160	74	97
INTERNATIONAL ORGANIZATIONS	1,735	1,609	2,715

TABLE C-39. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY
FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	ATOMIC ENERGY COMMISSION	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	OTHER
TOTAL, ALL COUNTRIES.....	68,571	8,894	33,219	19,819	4,117	641	1,881
EUROPE, TOTAL.....	30,362	2,190	22,198	5,301	297	45	331
FRANCE.....	1,549	163	859	517	10	.....	.....
ITALY.....	1,860	185	1,080	406	122	.....	67
NORWAY.....	874	.....	618	197	40	19	.....
POLAND.....	1,161	492	.....	628	.....	.....	41
SWEDEN.....	1,530	160	450	901	19	.....	.....
UNITED KINGDOM.....	17,512	63	16,110	1,168	1	.....	170
WEST GERMANY.....	1,668	208	1,381	60	.....	18	1
YUGOSLAVIA.....	394	136	.....	258	.....	.....	.....
OTHER EUROPE.....	3,814	783	1,700	1,166	105	8	52
ASIA, TOTAL.....	15,191	3,502	4,384	3,530	3,263	.....	512
INDIA.....	4,540	3,029	31	1,012	.....	.....	488
JAPAN.....	4,876	313	202	1,096	3,263	.....	2
PAKISTAN.....	1,355	71	.....	1,262	.....	.....	22
THAILAND.....	2,615	.....	2,602	13	.....	.....	.....
OTHER ASIA.....	1,785	89	1,549	147	.....	.....	.....
NEAR EAST, TOTAL.....	9,251	3,064	992	4,823	28	.....	344
ISRAEL.....	7,222	2,802	868	3,180	28	.....	344
UNITED ARAB REPUBLIC.....	1,511	157	.....	1,354	.....	.....	.....
OTHER NEAR EAST.....	518	105	124	289	.....	.....	.....
AFRICA, TOTAL.....	1,060	.....	712	321	.....	.....	27
UNION OF SOUTH AFRICA.....	275	.....	39	236	.....	.....	.....
OTHER AFRICA.....	785	.....	673	85	.....	.....	27
LATIN AMERICA, TOTAL.....	3,694	138	1,096	2,119	292	.....	49
ARGENTINA.....	501	.....	154	306	27	.....	14
BRASIL.....	720	135	197	294	94	.....	.....
CHILE.....	374	.....	157	197	30	.....	.....
MEXICO.....	442	.....	.....	412	.....	.....	30
PERU.....	604	3	174	422	.....	.....	5
OTHER LATIN AMERICA.....	1,053	.....	414	488	151	.....	.....
AUSTRALIA.....	1,088	.....	212	627	132	10	107
CANADA.....	6,030	3,592	1,490	105	534	309
NEW ZEALAND.....	160	33	69	52	6
INTERNATIONAL ORGANIZATIONS.....	1,735	1,539	196

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TABLE C-40. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY
FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	ATOMIC ENERGY COMMISSION	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	OTHER
TOTAL, ALL COUNTRIES.....	72,088	10,276	25,120	27,402	6,018	489	2,583
EUROPE, TOTAL.....	23,687	3,056	11,532	9,203	431	138	327
FRANCE.....	1,627	62	962	590	13	.....	.....
ITALY.....	1,678	231	643	570	234	.....	.....
NORWAY.....	1,522	.....	1,257	203	54	8	.....
POLAND.....	3,332	1,227	.....	2,055	.....	.....	50
SWEDEN.....	1,216	63	232	899	22	.....	.....
UNITED KINGDOM.....	8,205	220	6,591	1,247	.....	.....	147
WEST GERMANY.....	806	57	699	50	.....	.....	.....
YUGOSLAVIA.....	1,897	393	.....	1,504	.....	.....	.....
OTHER EUROPE.....	3,404	803	1,148	1,085	108	130	130
ASIA, TOTAL.....	18,503	2,995	5,430	6,315	3,334	.....	429
INDIA.....	5,365	2,017	.....	3,035	22	.....	291
JAPAN.....	5,057	391	264	1,057	3,312	.....	31
PAKISTAN.....	2,193	246	.....	1,840	.....	.....	107
THAILAND.....	2,735	.....	2,695	40	.....	.....	.....
OTHER ASIA.....	3,153	341	2,469	343	.....	.....	.....
NEAR EAST, TOTAL.....	12,555	3,993	944	6,668	42	.....	908
ISRAEL.....	9,787	3,555	729	4,553	42	.....	908
UNITED ARAB REPUBLIC.....	1,926	161	.....	1,765	.....	.....	.....
OTHER NEAR EAST.....	842	277	215	350	.....	.....	.....
AFRICA, TOTAL.....	1,246	2	789	420	.....	3	32
UNION OF SOUTH AFRICA.....	267	.....	17	250	.....	.....	.....
OTHER AFRICA.....	979	2	772	170	.....	3	32
LATIN AMERICA, TOTAL.....	3,742	215	921	2,089	299	.....	218
ARGENTINA.....	420	.....	140	250	30	.....	.....
BRAZIL.....	658	101	116	350	91	.....	.....
CHILE.....	407	12	149	224	22	.....	.....
MEXICO.....	393	.....	23	370	.....	.....	.....
PERU.....	682	26	90	395	.....	.....	171
OTHER LATIN AMERICA.....	1,182	76	403	500	156	.....	47
AUSTRALIA.....	2,112	15	1,064	765	160	.....	108
CANADA.....	8,560	.....	4,440	1,634	1,752	324	410
NEW ZEALAND.....	74	.....	.....	50	.....	24	.....
INTERNATIONAL ORGANIZATIONS.....	1,609	.....	.....	1,458	.....	.....	151

TABLE C-41. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY
FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	ATOMIC ENERGY COMMISSION	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	OTHER
TOTAL, ALL COUNTRIES.....	76,343	10,588	17,870	35,921	8,348	320	3,296
EUROPE, TOTAL.....	20,230	1,763	6,072	10,315	1,645	20	415
FRANCE.....	970	7	379	570	14	.....	.....
ITALY.....	2,840	131	650	589	1,428	.....	42
NORWAY.....	743	.....	479	229	35	.....	.....
POLAND.....	4,428	1,091	.....	3,231	.....	.....	106
SWEDEN.....	1,144	2	239	883	20	.....	.....
UNITED KINGDOM.....	3,774	7	2,315	1,300	.....	.....	152
WEST GERMANY.....	876	2	774	100	.....	.....	.....
YUGOSLAVIA.....	2,790	505	.....	2,285	.....	.....	.....
OTHER EUROPE.....	2,665	18	1,236	1,128	148	20	115
ASIA, TOTAL.....	22,948	4,755	4,228	9,966	3,520	.....	479
INDIA.....	10,457	4,239	.....	5,809	15	.....	394
JAPAN.....	4,949	4	208	1,220	3,505	.....	12
PAKISTAN.....	2,494	507	.....	1,952	.....	.....	35
THAILAND.....	2,597	.....	2,537	60	.....	.....	.....
OTHER ASIA.....	2,451	5	1,483	925	.....	.....	38
NEAR EAST, TOTAL.....	14,262	3,646	996	8,867	47	.....	706
ISRAEL.....	10,670	3,432	717	5,768	47	.....	706
UNITED ARAB REPUBLIC.....	2,918	209	.....	2,709	.....	.....	.....
OTHER NEAR EAST.....	674	5	279	390	.....	.....	.....
AFRICA, TOTAL.....	1,999	402	799	761	.....	.....	37
UNION OF SOUTH AFRICA.....	277	.....	17	260	.....	.....	.....
OTHER AFRICA.....	1,722	402	782	501	.....	.....	37
LATIN AMERICA, TOTAL.....	3,245	19	941	1,910	320	.....	55
ARGENTINA.....	443	.....	154	260	20	.....	9
BRAZIL.....	574	4	130	350	90	.....	.....
CHILE.....	336	.....	154	160	22	.....	.....
MEXICO.....	189	.....	.....	170	.....	.....	19
PERU.....	520	10	80	430	.....	.....	.....
OTHER LATIN AMERICA.....	1,183	5	423	540	188	.....	27
AUSTRALIA.....	2,201	3	1,056	747	160	100	135
CANADA.....	8,646	3,778	1,711	2,656	155	346
NEW ZEALAND.....	97	50	45	2
INTERNATIONAL ORGANIZATIONS.....	2,715	1,594	1,121

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TABLE C-42. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION AND COUNTRY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

COUNTRY	ACTUAL 1965	ESTIMATES	
		1966	1967
TOTAL, ALL COUNTRIES.....	25,363	27,385	27,993
EUROPE, TOTAL.....	7,239	8,068	6,801
AUSTRIA.....	265	427	238
FINLAND.....	413	241	203
FRANCE.....	477	551	475
ITALY.....	1,002	904	784
POLAND.....	500	1,270	1,177
SWEDEN.....	816	540	469
UNITED KINGDOM.....	1,553	1,669	1,471
YUGOSLAVIA.....	135	488	604
OTHER EUROPE.....	2,078	1,978	1,380
ASIA, TOTAL.....	8,353	7,403	9,599
INDIA.....	3,576	2,275	4,497
JAPAN.....	3,990	4,275	4,175
PAKISTAN.....	93	260	575
TAIWAN.....	652	208	196
OTHER ASIA.....	42	385	156
NEAR EAST, TOTAL.....	4,331	5,816	5,570
ISRAEL.....	4,187	5,149	5,009
UNITED ARAB REPUBLIC.....	5	193	338
OTHER NEAR EAST.....	139	474	223
AFRICA, TOTAL.....	825	569	968
UNION OF SOUTH AFRICA.....	113	96	100
OTHER AFRICA.....	712	473	868
LATIN AMERICA, TOTAL.....	1,714	1,745	1,572
ARGENTINA.....	289	262	279
BRAZIL.....	404	358	335
CHILE.....	226	253	225
PERU.....	322	234	229
OTHER LATIN AMERICA.....	473	638	504
AUSTRALIA.....	665	865	972
CANADA.....	1,846	2,768	2,326
NEW ZEALAND.....	117	43	66
INTERNATIONAL ORGANIZATIONS.....	273	108	119

APPENDIX C

TABLE C-43. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY
FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION AND WELFARE	ATOMIC ENERGY COMMISSION	OTHER
TOTAL, ALL COUNTRIES.....	25,363	8,125	6,959	4,912	3,835	1,537
EUROPE, TOTAL.....	7,239	1,962	3,063	1,790	235	189
AUSTRIA.....	265	.....	208	16	35	6
FINLAND.....	413	272	28	98	15	.....
FRANCE.....	477	95	173	199	10	.....
ITALY.....	1,002	185	494	159	97	67
POLAND.....	500	492	.....	8	.....	.....
SWEDEN.....	816	160	290	347	19	.....
UNITED KINGDOM.....	1,553	63	1,000	427	.....	63
YUGOSLAVIA.....	135	93	.....	42	.....	.....
OTHER EUROPE.....	2,078	602	870	494	59	53
ASIA, TOTAL.....	8,353	3,384	688	512	3,262	507
INDIA.....	3,576	3,029	25	39	.....	483
JAPAN.....	3,990	218	79	429	3,262	2
PAKISTAN.....	93	71	.....	.....	.....	22
TAIWAN.....	652	66	572	14	.....	.....
OTHER ASIA.....	42	.....	12	30	.....	.....
NEAR EAST, TOTAL.....	4,331	2,779	652	551	28	321
ISRAEL.....	4,187	2,768	634	436	28	321
UNITED ARAB REPUBLIC.....	5	.....	.....	5	.....	.....
OTHER NEAR EAST.....	139	11	18	110	.....	.....
AFRICA, TOTAL.....	825	.....	674	124	.....	27
UNION OF SOUTH AFRICA.....	113	.....	22	91	.....	.....
OTHER AFRICA.....	712	.....	652	33	.....	27
LATIN AMERICA, TOTAL.....	1,714	.....	704	806	155	49
ARGENTINA.....	289	.....	135	113	27	14
BRAZIL.....	404	.....	197	113	94	.....
CHILE.....	226	.....	135	71	20	.....
PERU.....	322	.....	154	163	.....	5
OTHER LATIN AMERICA.....	473	.....	83	346	14	30
AUSTRALIA.....	665	.....	185	258	105	117
CANADA.....	1,846	960	572	50	264
NEW ZEALAND.....	117	33	26	58
INTERNATIONAL ORGANIZATIONS.....	273	273

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TABLE C-44. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY
FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION AND WELFARE	ATOMIC ENERGY COMMISSION	OTHER
TOTAL, ALL COUNTRIES.....	27,385	9,762	6,448	5,427	3,976	1,772
EUROPE, TOTAL.....	8,068	2,903	2,485	2,087	286	307
AUSTRIA.....	427	188	201	26	12	.....
FINLAND.....	241	56	56	103	26	.....
FRANCE.....	551	62	249	227	13	.....
ITALY.....	964	231	315	224	134	.....
POLAND.....	1,270	1,131	.....	139	.....	.....
SWEDEN.....	540	63	122	333	22	.....
UNITED KINGDOM.....	1,669	220	905	482	.....	62
YUGOSLAVIA.....	488	365	.....	123	.....	.....
OTHER EUROPE.....	1,978	587	637	430	79	245
ASIA, TOTAL.....	7,403	2,905	353	636	3,307	202
INDIA.....	2,275	1,927	.....	146	.....	202
JAPAN.....	4,275	391	170	407	3,307	.....
PAKISTAN.....	260	246	.....	14	.....	.....
TAIWAN.....	208	13	175	20	.....	.....
OTHER ASIA.....	385	328	8	49	.....	.....
NEAR EAST, TOTAL.....	5,816	3,793	729	687	42	565
ISRAEL.....	5,149	3,355	652	535	42	565
UNITED ARAB REPUBLIC.....	193	161	.....	32	.....	.....
OTHER NEAR EAST.....	474	277	77	120	.....	.....
AFRICA, TOTAL.....	569	.....	385	149	.....	35
UNION OF SOUTH AFRICA.....	96	.....	.....	96	.....	.....
OTHER AFRICA.....	473	.....	385	53	.....	35
LATIN AMERICA, TOTAL.....	1,745	146	604	792	156	47
ARGENTINA.....	262	.....	140	92	30	.....
BRAZIL.....	358	32	100	135	91	.....
CHILE.....	253	12	137	82	22	.....
PERU.....	234	26	60	148	.....	.....
OTHER LATIN AMERICA.....	638	76	167	335	13	47
AUSTRALIA.....	865	15	302	307	133	108
CANADA.....	2,768	1,590	642	52	484
NEW ZEALAND.....	43	19	24
INTERNATIONAL ORGANIZATIONS.....	108	108

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TABLE C-45. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY
FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION AND WELFARE	ATOMIC ENERGY COMMISSION	OTHER
TOTAL, ALL COUNTRIES.....	27,993	10,059	5,885	6,022	4,166	1,861
EUROPE, TOTAL.....	6,801	1,675	2,436	2,161	285	244
AUSTRIA.....	238	1	195	24	13	5
FINLAND.....	203	8	56	94	45	.....
FRANCE.....	475	7	234	220	14	.....
ITALY.....	784	131	284	229	98	42
POLAND.....	1,177	1,031	.....	146	.....	.....
SWEDEN.....	469	2	114	333	20	.....
UNITED KINGDOM.....	1,471	7	908	489	.....	67
YUGOSLAVIA.....	604	477	.....	127	.....	.....
OTHER EUROPE.....	1,380	11	645	499	95	130
ASIA, TOTAL.....	9,599	4,517	369	991	3,500	222
INDIA.....	4,497	4,027	.....	258	.....	212
JAPAN.....	4,175	4	193	476	3,500	2
PAKISTAN.....	575	481	.....	86	.....	8
TAIWAN.....	196	1	168	27	.....	.....
OTHER ASIA.....	156	4	8	144	.....	.....
NEAR EAST, TOTAL.....	5,570	3,464	707	822	47	530
ISRAEL.....	5,009	3,260	639	533	47	530
UNITED ARAB REPUBLIC.....	338	199	.....	139	.....	.....
OTHER NEAR EAST.....	223	5	68	150	.....	.....
AFRICA, TOTAL.....	968	382	336	213	.....	37
UNION OF SOUTH AFRICA.....	100	.....	.....	100	.....	.....
OTHER AFRICA.....	868	382	336	113	.....	37
LATIN AMERICA, TOTAL.....	1,572	18	628	726	145	55
ARGENTINA.....	279	.....	154	96	20	9
BRAZIL.....	335	4	106	135	90	.....
CHILE.....	225	.....	142	61	22	.....
PERU.....	229	9	60	160	.....	.....
OTHER LATIN AMERICA.....	504	5	166	274	13	46
AUSTRALIA.....	972	3	300	301	133	235
CANADA.....	2,326	1,109	670	56	491
NEW ZEALAND.....	66	19	47
INTERNATIONAL ORGANIZATIONS.....	119	119

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TABLE C-46. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	ACTUAL 1965		ESTIMATES			
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	1966		1967	
			TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES.....	68,571	17,237	72,088	25,935	76,343	33,700
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	8,894	8,894	10,276	10,276	10,588	10,588
AGRICULTURAL RESEARCH SERVICE.....	8,894	8,894	10,276	10,276	10,588	10,588
DEPARTMENT OF COMMERCE, TOTAL.....	691	683	1,014	958	931	916
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	.....	488	432	431	416
NATIONAL BUREAU OF STANDARDS.....	691	683	526	526	500	500
DEPARTMENT OF DEFENSE, TOTAL.....	33,219	924	25,120	601	17,870	601
DEPARTMENT OF THE ARMY.....	16,106	.....	7,305	.....	2,914	.....
DEPARTMENT OF THE NAVY.....	4,857	483	5,550	125	4,314	125
DEPARTMENT OF THE AIR FORCE.....	7,401	441	6,269	476	5,612	476
DEFENSE AGENCIES.....	4,855	.....	5,996	.....	5,030	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	19,819	6,565	27,602	13,800	35,921	21,300
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	47	.....	78	.....	84	.....
OFFICE OF EDUCATION.....	248	193	558	485	1,449	1,240
PUBLIC HEALTH SERVICE.....	17,223	4,083	22,346	8,712	28,373	14,040
NATIONAL INSTITUTES OF HEALTH.....	/15,497/	/3,163/	/16,960/	/4,000/	/17,800/	/4,200/
SOCIAL SECURITY ADMINISTRATION.....	12	.....	17	.....	15	.....
VOCATIONAL REHABILITATION ADMINISTRATION.....	2,209	2,209	3,503	3,503	4,000	4,000
WELFARE ADMINISTRATION.....	80	80	1,100	1,100	2,000	2,000
DEPARTMENT OF THE INTERIOR, TOTAL.....	291	165	548	300	601	295
BONNEVILLE POWER ADMINISTRATION.....	.....	.....	12	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	165	165	371	300	416	295
OFFICE OF SALINE WATER.....	126	.....	165	.....	185	.....
POST OFFICE DEPARTMENT.....	116	.....	65	.....	10	.....
DEPARTMENT OF STATE, TOTAL.....	196	6	251	.....	1,000	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	196	6	251	.....	1,000	.....
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION.....	4,117	.....	6,018	.....	8,348	.....
FEDERAL AVIATION AGENCY.....	75	.....	21	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	641	489	320
NATIONAL SCIENCE FOUNDATION.....	512	684	754

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TABLE C-47. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	ACTUAL 1965		ESTIMATES			
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	1966		1967	
			TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES.....	25,363	9,925	27,385	11,541	27,993	12,124
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	8,125	8,125	9,762	9,762	10,059	10,059
AGRICULTURAL RESEARCH SERVICE.....	8,125	8,125	9,762	9,762	10,059	10,059
DEPARTMENT OF COMMERCE, TOTAL.....	691	683	549	526	515	500
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	.....	23	.....	15	.....
NATIONAL BUREAU OF STANDARDS.....	691	683	526	526	500	500
DEPARTMENT OF DEFENSE, TOTAL.....	6,959	924	6,448	601	5,885	601
DEPARTMENT OF THE ARMY.....	1,595	.....	1,644	.....	1,307	.....
DEPARTMENT OF THE NAVY.....	1,995	483	1,623	125	1,598	125
DEPARTMENT OF THE AIR FORCE.....	3,210	441	2,980	476	2,980	476
DEFENSE AGENCIES.....	159	.....	201	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	4,912	97	5,427	509	6,022	817
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	24	.....	39	.....	42	.....
OFFICE OF EDUCATION.....	112	97	251	218	652	567
PUBLIC HEALTH SERVICE.....	4,776	.....	5,137	291	5,328	250
NATIONAL INSTITUTES OF HEALTH.....	14,266	.....	14,506	.....	14,725	.....
DEPARTMENT OF THE INTERIOR, TOTAL.....	182	96	258	143	272	147
BUREAU OF COMMERCIAL FISHERIES.....	96	96	143	143	147	147
OFFICE OF SALINE WATER.....	86	.....	115	.....	125	.....
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION.....	3,835	.....	3,976	.....	4,166	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	147	281	320
NATIONAL SCIENCE FOUNDATION.....	512	684	754

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TABLE C-42. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH TO FOREIGN PERFORMERS, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	ACTUAL 1965		ESTIMATES			
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	1966		1967	
			TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES.....	24,024	6,908	32,034	13,804	39,154	20,942
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	716	716	514	514	529	529
AGRICULTURAL RESEARCH SERVICE.....	716	716	514	514	529	529
DEPARTMENT OF COMMERCE, TOTAL.....	.....	.....	290	257	416	416
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	.....	290	257	416	416
DEPARTMENT OF DEFENSE, TOTAL.....	8,033	.....	8,579	.....	7,444	.....
DEPARTMENT OF THE ARMY.....	1,355	.....	985	.....	993	.....
DEPARTMENT OF THE NAVY.....	418	.....	427	.....	371	.....
DEPARTMENT OF THE AIR FORCE.....	1,564	.....	1,372	.....	1,050	.....
DEFENSE AGENCIES.....	4,696	.....	5,795	.....	5,030	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	14,562	6,123	21,775	12,891	29,279	19,863
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	23	.....	39	.....	42	.....
OFFICE OF EDUCATION.....	136	96	307	267	797	693
PUBLIC HEALTH SERVICE.....	12,447	4,083	17,209	8,421	23,045	13,790
NATIONAL INSTITUTES OF HEALTH.....	/11,231/	/3,163/	/12,454/	/4,000/	/13,075/	/4,200/
SOCIAL SECURITY ADMINISTRATION.....	12	.....	17	.....	15	.....
VOCATIONAL REHABILITATION ADMINISTRATION.....	1,864	1,864	3,103	3,103	3,380	3,380
WELFARE ADMINISTRATION.....	80	80	1,100	1,100	2,000	2,000
DEPARTMENT OF THE INTERIOR, TOTAL.....	103	63	227	142	254	134
BUREAU OF COMMERCIAL FISHERIES.....	63	63	177	142	194	134
OFFICE OF SALINE WATER.....	40	.....	50	.....	60	.....
DEPARTMENT OF STATE, TOTAL.....	196	6	251	.....	1,000	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	196	6	251	.....	1,000	.....
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION.....	189	190	232
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	225	208

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TABLE C-49. FEDERAL OBLIGATIONS FOR DEVELOPMENT TO FOREIGN PERFORMERS, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	ACTUAL 1965		ESTIMATES			
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	1966		1967	
			TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES.....	19,184	404	12,669	590	9,196	634
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	53	53	.....	.....	.....	.....
AGRICULTURAL RESEARCH SERVICE.....	53	53	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	.....	.....	175	175	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	.....	175	175	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	18,227	.....	10,093	.....	4,541	.....
DEPARTMENT OF THE ARMY.....	13,156	.....	4,676	.....	614	.....
DEPARTMENT OF THE NAVY.....	2,444	.....	3,500	.....	2,345	.....
DEPARTMENT OF THE AIR FORCE.....	2,627	.....	1,917	.....	1,582	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	345	345	400	400	620	620
VOCATIONAL REHABILITATION ADMINISTRATION.....	345	345	400	400	620	620
DEPARTMENT OF THE INTERIOR, TOTAL.....	6	6	63	15	75	14
BONNEVILLE POWER ADMINISTRATION.....	.....	.....	12	.....	.....	.....
BUREAU OF COMMERCIAL FISHERIES.....	6	6	51	15	75	14
POST OFFICE DEPARTMENT.....	116	.....	65	.....	10	.....
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION.....	93	.....	1,052	.....	3,950	.....
FEDERAL AVIATION AGENCY.....	75	.....	21	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	269	.....	.....	.....	.....	.....

TABLE C-50. FEDERAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1940-67

(Millions of dollars)

Agency	1940	1941	1942	1943	1944	1945	1946
TOTAL, ALL AGENCIES	74.1	197.9	280.3	602.4	1,377.2	1,590.7	917.8
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	29.1	28.3	29.9	30.7	32.1	33.7	36.8
DEPARTMENT OF COMMERCE.....	3.3	3.1	3.2	5.2	5.2	5.0	5.0
DEPARTMENT OF DEFENSE, TOTAL	26.4	143.7	211.1	395.1	448.1	513.0	418.0
DEPARTMENT OF THE ARMY ^a	3.8	18.7	68.4	149.0	161.3	134.0	114.0
DEPARTMENT OF THE NAVY ^a	13.9	24.6	58.9	130.5	176.6	243.0	183.0
DEPARTMENT OF THE AIR FORCE ^a	8.7	100.4	83.8	115.6	110.2	136.0	121.0
ADVANCED RESEARCH PROJECTS AGENCY ^b							
DEPARTMENTWIDE FUNDS ^b							
DEFENSE AGENCIES ^b							
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ^c	2.8	3.0	3.2	3.2	3.3	3.4	3.5
DEPARTMENT OF THE INTERIOR.....	7.9	9.5	13.5	17.0	20.7	18.0	17.0
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....							
FEDERAL AVIATION AGENCY.....							
MANHATTAN ENGINEER DISTRICT ^d				77.0	730.0	859.0	366.0
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^e	2.2	2.6	5.0	9.8	18.4	24.1	23.7
NATIONAL SCIENCE FOUNDATION.....							
OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT.....		5.3	11.0	52.2	86.8	114.5	36.8
VETERANS ADMINISTRATION.....							
ALL OTHER AGENCIES.....	2.4	2.4	3.4	12.2	32.6	20.0	11.0

See footnotes at end of table.

TABLE C-50. FEDERAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1940-67—Continued

(Millions of dollars)

Agency	1947	1948	1949	1950	1951	1952	1953
TOTAL, ALL AGENCIES	899.9	854.8	1,082.0	1,082.8	1,300.5	1,816.2	3,101.0
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE	39.2	42.4	50.5	53.0	52.4	57.1	54.9
DEPARTMENT OF COMMERCE.....	4.8	8.2	12.5	12.0	16.9	10.1	13.6
DEPARTMENT OF DEFENSE, TOTAL	550.8	592.2	695.4	652.3	823.4	1,317.0	2,454.8
DEPARTMENT OF THE ARMY ^a	100.0	116.4	136.6	123.1	161.6	318.0	743.3
DEPARTMENT OF THE NAVY ^a	293.8	287.5	332.9	310.8	363.8	476.0	678.3
DEPARTMENT OF THE AIR FORCE ^a	157.0	188.3	225.9	218.4	297.9	523.0	1,033.2
ADVANCED RESEARCH PROJECTS AGENCY ^b							
DEPARTMENTWIDE FUNDS ^b							
DEFENSE AGENCIES ^b							
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ^c	10.1	22.8	27.9	39.6	53.4	64.1	65.2
DEPARTMENT OF THE INTERIOR.....	20.3	31.4	38.2	32.1	32.1	32.8	35.2
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	37.7	107.5	196.1	221.4	242.6	249.6	378.1
FEDERAL AVIATION AGENCY.....							
MANHATTAN ENGINEER DISTRICT ^d	186.0						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^e	35.2	37.5	48.7	54.5	61.6	67.4	78.6
NATIONAL SCIENCE FOUNDATION.....					.1	.5	2.1
OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT.....	5.6	.9					
VETERANS ADMINISTRATION.....						3.3	4.6
ALL OTHER AGENCIES.....	10.2	11.8	12.8	17.7	18.2	14.3	13.9

See footnotes at end of table.

TABLE C-50. FEDERAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1940-67—Continued

(Millions of dollars)

Agency	1954	1955	1956	1957	1958	1959	1960
TOTAL, ALL AGENCIES	3, 147. 9	3, 308. 3	3, 446. 0	4, 461. 9	4, 989. 9	5, 802. 9	7, 738. 0
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	55. 4	72. 5	87. 7	97. 0	111. 8	124. 7	131. 4
DEPARTMENT OF COMMERCE.....	10. 6	9. 9	20. 4	19. 8	17. 8	30. 1	33. 1
DEPARTMENT OF DEFENSE, TOTAL	2, 487. 2	2, 630. 2	2, 639. 0	3, 371. 4	3, 664. 2	4, 183. 3	5, 653. 8
DEPARTMENT OF THE ARMY ^a	815. 7	1, 012. 8	702. 4	782. 1	875. 5	890. 9	1, 108. 9
DEPARTMENT OF THE NAVY ^a	664. 7	591. 9	635. 8	784. 9	854. 1	1, 034. 7	1, 300. 6
DEPARTMENT OF THE AIR FORCE ^a	1, 006. 8	982. 2	1, 278. 9	1, 780. 0	1, 894. 0	2, 134. 5	2, 978. 0
ADVANCED RESEARCH PROJECTS AGENCY ^b					3. 0	80. 9	226. 3
DEPARTMENTWIDE FUNDS ^b		43. 3	21. 9	24. 4	39. 6	42. 3	40. 0
DEFENSE AGENCIES ^b							
DEPARTMENT OF HEALTH, EDUCATION AND WELFARE ^c	62. 5	70. 2	86. 2	143. 5	180. 3	252. 8	324. 2
DEPARTMENT OF THE INTERIOR.....	39. 1	31. 9	35. 7	42. 3	48. 9	72. 2	65. 3
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	383. 1	385. 4	474. 0	656. 5	804. 2	877. 1	985. 9
FEDERAL AVIATION AGENCY.....					4. 2	27. 6	41. 2
MANHATTAN ENGINEER DISTRICT ^d							
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^e	89. 5	73. 8	71. 1	76. 1	89. 2	145. 5	401. 0
NATIONAL SCIENCE FOUNDATION.....	3. 6	8. 5	15. 4	30. 6	33. 0	50. 6	58. 0
OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT.....							
VETERANS ADMINISTRATION.....	5. 1	5. 3	6. 1	9. 4	12. 8	16. 8	18. 6
ALL OTHER AGENCIES.....	11. 8	21. 1	10. 4	15. 3	23. 5	22. 2	25. 4

See footnotes at end of table.

TABLE C-50. FEDERAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY
FISCAL YEARS 1940-67—Continued

(Millions of dollars)

Agency	1961	1962	1963	1964	1965	Estimates	
						1966	1967
TOTAL, ALL AGENCIES	9, 278. 1	10, 373. 3	11, 988. 3	14, 693. 9	14, 874. 7	15, 962. 5	16, 151. 8
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	147. 7	155. 7	172. 5	183. 4	205. 7	249. 7	245. 7
DEPARTMENT OF COMMERCE.....	35. 5	47. 5	70. 4	84. 5	85. 8	89. 1	102. 3
DEPARTMENT OF DEFENSE, TOTAL	6, 618. 1	6, 812. 0	6, 848. 8	7, 517. 0	6, 727. 6	6, 849. 8	6, 885. 9
DEPARTMENT OF THE ARMY ^a	1, 306. 0	1, 243. 5	1, 421. 2	1, 413. 6	1, 428. 9	1, 484. 3	1, 535. 1
DEPARTMENT OF THE NAVY ^a	1, 631. 0	1, 561. 0	1, 573. 6	1, 724. 2	1, 419. 4	1, 523. 3	1, 698. 2
DEPARTMENT OF THE AIR FORCE ^a	3, 440. 6	3, 672. 9	3, 539. 1	3, 951. 1	3, 404. 8	3, 357. 2	3, 177. 6
ADVANCED RESEARCH PROJECTS AGENCY ^b	206. 6	192. 9	.....	.....	.....	.....	.....
DEPARTMENTWIDE FUNDS ^b	33. 9	141. 7	14. 6	21. 1	9. 9	10. 0	20. 0
DEFENSE AGENCIES ^b.....	.....	.....	300. 4	406. 9	464. 7	475. 0	455. 0
DEPARTMENT OF HEALTH, EDUCATION, AND WEL- FARE ^c	374. 1	512. 1	632. 4	793. 4	737. 9	986. 2	1, 131. 1
DEPARTMENT OF THE INTERIOR.....	75. 1	86. 7	102. 7	102. 0	118. 8	138. 6	149. 6
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	1, 111. 1	1, 284. 3	1, 335. 6	1, 505. 0	1, 520. 0	1, 516. 5	1, 511. 2
FEDERAL AVIATION AGENCY.....	52. 9	53. 7	74. 7	74. 0	96. 4	133. 5	350. 3
MANHATTAN ENGINEER DISTRICT ^d.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^e	741. 6	1, 251. 3	2, 539. 5	4, 171. 0	5, 092. 9	5, 600. 0	5, 300. 0
NATIONAL SCIENCE FOUNDATION.....	76. 5	104. 8	142. 1	189. 8	192. 2	231. 0	278. 0
OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT.....	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	23. 1	30. 8	33. 1	34. 1	40. 4	50. 0	48. 9
ALL OTHER AGENCIES.....	22. 6	34. 3	36. 5	39. 7	56. 7	118. 2	148. 7

^a Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

^b Starting with 1963, Defense agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds.

Starting with 1963, departmentwide funds include Military Assistance, Civil Defense and Emergency Funds only.

^c Federal Security Agency prior to fiscal year 1952.

^d This agency, under the Department of War, is shown separately to identify funds for this atomic energy project from other R&D funds.

^e National Advisory Committee for Aeronautics prior to fiscal year 1958.

Sources: National Science Foundation and Bureau of the Budget (prior to 1952).

TABLE C-51. FEDERAL OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1947-67

(Millions of dollars)

Agency	1947	1948	1949	1950	1951	1952	1953
TOTAL, ALL AGENCIES	690.9	867.6	1,105.1	1,175.3	1,811.9	2,194.5	3,361.4
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	40.2	46.4	53.9	57.7	55.2	55.7	56.6
DEPARTMENT OF COMMERCE.....	6.4	9.8	11.9	22.7	12.3	14.1	11.2
DEPARTMENT OF DEFENSE, TOTAL	503.3	485.8	651.9	635.6	1,278.0	1,706.6	2,732.8
DEPARTMENT OF THE ARMY ^a	112.4	97.7	119.2	120.9	317.1	535.9	930.7
DEPARTMENT OF THE NAVY ^a	269.2	247.3	313.9	272.9	489.6	608.1	697.0
DEPARTMENT OF THE AIR FORCE ^a	121.7	140.8	218.8	241.8	471.3	562.6	1,105.1
ADVANCED RESEARCH PROJECTS AGENCY ^b							
DEPARTMENTWIDE FUNDS ^b							
DEFENSE AGENCIES ^b							
DEPARTMENT OF HEALTH, EDUCATION AND WELFARE ^c	18.8	27.1	39.9	65.3	53.0	52.0	58.7
DEPARTMENT OF THE INTERIOR.....	16.9	28.0	35.6	31.4	32.2	36.0	34.4
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	64.6	212.5	246.9	284.2	278.5	228.9	363.3
FEDERAL AVIATION AGENCY.....							
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^d	29.9	44.4	50.4	62.7	84.4	81.7	78.6
NATIONAL SCIENCE FOUNDATION.....					.1	.9	2.3
VETERANS ADMINISTRATION.....	1.4	3.1	4.3	3.8	5.1	3.9	5.1
ALL OTHER AGENCIES.....	9.4	10.5	10.3	11.9	13.1	14.7	18.4

See footnotes at end of table.

TABLE C-51. FEDERAL OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1947-67—Continued

(Millions of dollars)

Agency	1954	1955	1956	1957	1958	1959	1960
TOTAL, ALL AGENCIES.....	3,039.0	2,744.7	3,266.9	4,388.6	4,905.2	7,116.4	8,073.7
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	67.2	73.3	83.6	102.8	113.0	138.6	129.1
DEPARTMENT OF COMMERCE.....	8.3	15.9	18.4	19.3	18.6	30.1	33.4
DEPARTMENT OF DEFENSE, TOTAL.....	2,416.4	2,084.2	2,430.6	3,250.0	3,480.3	5,236.7	5,825.3
DEPARTMENT OF THE ARMY ^a	796.2	443.5	420.0	544.5	615.3	1,186.8	1,182.8
DEPARTMENT OF THE NAVY ^a	625.4	573.3	713.3	856.7	887.9	1,381.1	1,557.4
DEPARTMENT OF THE AIR FORCE ^a	994.8	1,045.7	1,252.8	1,811.9	1,903.6	2,461.4	2,833.5
ADVANCED RESEARCH PROJECTS AGENCY ^b					15.5	171.8	212.4
DEPARTMENTWIDE FUNDS ^b		21.7	44.5	36.9	58.0	35.6	39.2
DEFENSE AGENCIES ^b							
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ^c	62.0	70.9	88.9	177.9	217.9	278.7	358.6
DEPARTMENT OF THE INTERIOR.....	38.7	32.6	36.6	45.3	51.9	63.7	66.7
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	367.9	372.9	505.1	644.6	828.6	925.1	988.2
FEDERAL AVIATION AGENCY.....					18.4	35.1	52.9
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^d	56.9	64.5	65.7	83.4	97.3	299.7	486.9
NATIONAL SCIENCE FOUNDATION.....	4.6	10.3	17.4	37.1	40.7	69.1	81.3
VETERANS ADMINISTRATION.....	5.3	5.6	6.5	10.1	12.6	17.1	19.1
ALL OTHER AGENCIES.....	11.6	14.6	14.1	18.2	26.0	22.4	32.2

See footnotes at end of table.

TABLE C-51. FEDERAL OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1947-67—Continued

(Millions of dollars)

Agency	1961	1962	1963	1964	1965	Estimates	
						1966	1967
TOTAL, ALL AGENCIES	9,601.0	11,059.7	13,650.3	15,310.4	15,731.2	17,069.4	16,650.5
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE	145.7	166.1	174.8	191.4	233.7	276.4	264.6
DEPARTMENT OF COMMERCE	46.9	70.9	80.9	98.6	63.5	108.3	104.9
DEPARTMENT OF DEFENSE, TOTAL	6,687.9	6,816.5	7,372.8	7,352.5	6,865.0	7,506.2	7,418.1
DEPARTMENT OF THE ARMY ^a	1,153.5	1,224.6	1,311.6	1,389.3	1,478.3	1,599.8	1,626.4
DEPARTMENT OF THE NAVY ^a	1,564.6	1,556.6	1,609.5	1,640.0	1,462.2	1,734.0	1,830.8
DEPARTMENT OF THE AIR FORCE ^a	3,622.2	3,619.8	3,988.9	3,822.6	3,382.0	3,615.7	3,347.7
ADVANCED RESEARCH PROJECTS AGENCY ^b	222.4	209.1	.....	.....	.....	.....	.....
DEPARTMENTWIDE FUNDS ^b	125.2	206.5	11.1	11.8	11.3	30.4	135.0
DEFENSE AGENCIES ^b .....	.....	.....	451.7	488.8	531.2	526.3	478.2
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ^c	466.3	617.4	715.9	847.7	970.5	1,232.4	1,271.3
DEPARTMENT OF THE INTERIOR	79.1	89.4	105.9	114.3	127.4	155.0	158.2
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION	1,063.4	1,316.0	1,398.6	1,478.6	1,539.7	1,599.8	1,506.6
FEDERAL AVIATION AGENCY	52.9	74.6	90.6	73.7	71.7	186.0	375.4
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^d	905.1	1,684.2	3,434.1	4,842.2	5,481.9	5,505.7	5,005.2
NATIONAL SCIENCE FOUNDATION	100.2	160.3	205.6	224.4	260.6	319.1	341.3
VETERANS ADMINISTRATION	23.3	30.8	33.1	34.3	47.3	49.0	47.9
ALL OTHER AGENCIES	30.5	33.6	37.9	52.6	70.0	131.4	157.0

^a Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

^b Starting with 1963, Defense agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds.

Starting with 1963, departmentwide funds include Military Assistance, Civil Defense, and Emergency Funds only.

^c Federal Security Agency prior to fiscal year 1952.

^d National Advisory Committee for Aeronautics prior to fiscal year 1958.

Sources: National Science Foundation and Bureau of the Budget (prior to 1952).

TABLE C-52. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY, FISCAL YEARS 1947-67

(Millions of dollars)

Agency	1947	1948	1949	1950	1951	1952	1953
TOTAL, ALL AGENCIES	71.4	91.1	167.4	202.7	330.0	307.2	255.4
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	.2	.7	.7	.8	.1	.4	.6
DEPARTMENT OF COMMERCE.....	.7	.9	1.0	.3	1.3	3.8	.3
DEPARTMENT OF DEFENSE, TOTAL	34.0	.....	25.8	35.9	152.1	198.1	155.6
DEPARTMENT OF THE ARMY.....	8.1	.....	4.5	1.9	10.0	77.1	31.1
DEPARTMENT OF THE NAVY.....	16.9	.....	15.9	15.3	39.4	57.0	36.3
DEPARTMENT OF THE AIR FORCE.....	9.0	.....	5.3	18.7	102.7	64.0	88.2
ADVANCED RESEARCH PROJECTS AGENCY ^a.....	.....	.....	.....	.....	.....	.....	.....
DEFENSE AGENCIES ^a.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ^b	8.2	2.8	14.7	31.1	15.1	8.4	8.8
DEPARTMENT OF THE INTERIOR.....	.....	7.7	5.4	2.7	1.8	5.3	2.3
POST OFFICE DEPARTMENT.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE.....	.5	(°)	(°)	(°)	.....	.....	.....
DEPARTMENT OF THE TREASURY.....	.....	.....	.....	.....	.....	.....	.....
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	24.7	67.1	106.9	112.0	120.6	60.0	53.4
FEDERAL AVIATION AGENCY.....	.....	.....	.....	.....	.....	.....	.....
FEDERAL COMMUNICATIONS COMMISSION.....	.....	.....	.....	.....	.....	.....	.....
GENERAL SERVICES ADMINISTRATION.....	.....	.5	.7	.1	.1	(°)	4.3
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^d	3.2	11.4	12.1	19.9	39.0	31.2	30.2
NATIONAL SCIENCE FOUNDATION.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF CIVIL AND DEFENSE MOBILIZATION.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	.....	.....	.....	.....	.....	(°)	.....
TENNESSEE VALLEY AUTHORITY.....	.....	.....	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	.....	.....	.....	.....	.....	.....	.....

See footnotes at end of table.

TABLE C-52. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY, FISCAL YEARS 1947-67—Continued
(Millions of dollars)

Agency	1954	1955	1956	1957	1958	1959	1960
TOTAL, ALL AGENCIES	164.0	211.9	278.7	457.2	336.3	429.1	528.3
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	7.9	1.1	.6	3.0	2.8	17.9	3.4
DEPARTMENT OF COMMERCE.....	.5	.9	.2	1.6	.4	4.5	2.0
DEPARTMENT OF DEFENSE, TOTAL	96.4	139.1	162.0	264.4	77.0	75.1	113.7
DEPARTMENT OF THE ARMY.....	32.9	24.2	12.0	43.9	12.0	12.6	65.8
DEPARTMENT OF THE NAVY.....	10.1	8.5	40.0	52.5	20.0	31.6	21.9
DEPARTMENT OF THE AIR FORCE.....	53.4	106.4	110.0	168.0	45.0	21.4	18.0
ADVANCED RESEARCH PROJECTS AGENCY ^a						9.5	8.0
DEFENSE AGENCIES ^a							
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ^b	3.8	2.8	3.0	33.7	33.0	35.9	38.8
DEPARTMENT OF THE INTERIOR.....	1.0	.1	.5	.1	.8	3.1	2.7
POST OFFICE DEPARTMENT.....						.4	(°)
DEPARTMENT OF STATE.....			.4	.2	4.9	1.9	1.4
DEPARTMENT OF THE TREASURY.....			(°)	(°)	(°)	(°)	(°)
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	44.5	45.6	94.3	116.6	184.6	225.4	226.6
FEDERAL AVIATION AGENCY.....					2.1	7.8	5.0
FEDERAL COMMUNICATIONS COMMISSION.....							
GENERAL SERVICES ADMINISTRATION.....	.3						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^d	9.6	21.5	16.2	28.1	20.3	38.0	117.7
NATIONAL SCIENCE FOUNDATION.....	(°)	.7	1.4	7.1	7.9	14.8	12.8
OFFICE OF CIVIL AND DEFENSE MOBILIZATION.....						(°)	(°)
SMITHSONIAN INSTITUTION.....							(°)
TENNESSEE VALLEY AUTHORITY.....		.1	.1	(°)	(°)	(°)	(°)
VETERANS ADMINISTRATION.....				2.4	2.6	4.3	4.0

See footnotes at end of table.

TABLE C-52. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY, FISCAL YEARS 1947-67—Continued
(Millions of dollars)

Agency	1961	1962	1963	1964	1965	Estimates	
						1966	1967
TOTAL, ALL AGENCIES	548.5	779.1	1,168.3	1,098.5	1,131.6	1,123.1	707.4
<i>Departments</i>							
DEPARTMENT OF AGRICULTURE.....	2.2	9.0	6.8	2.4	9.1	32.7	27.1
DEPARTMENT OF COMMERCE.....	14.5	30.8	28.7	44.8	2.2	19.3	2.2
DEPARTMENT OF DEFENSE, TOTAL	113.9	93.6	87.2	90.6	68.5	84.9	104.7
DEPARTMENT OF THE ARMY.....	35.6	21.1	14.2	12.3	18.8	37.0	42.1
DEPARTMENT OF THE NAVY.....	25.6	17.5	12.3	18.8	12.7	18.0	19.0
DEPARTMENT OF THE AIR FORCE.....	33.3	50.0	44.2	38.6	31.0	25.0	40.0
ADVANCED RESEARCH PROJECTS AGENCY ^a	19.3	5.1	16.5	.....	.....	.....	.....
DEFENSE AGENCIES ^a.....	.....	.....	.....	20.9	6.0	4.9	3.6
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ^b	37.7	40.5	59.7	70.8	101.2	162.6	93.6
DEPARTMENT OF THE INTERIOR.....	5.8	3.8	13.7	7.9	14.2	18.2	18.6
POST OFFICE DEPARTMENT.....	.1	(°)	(°)	(°)	(°)	(°)	(°)
DEPARTMENT OF STATE.....	.6	1.1	.....	.....	.....	.....	.....
DEPARTMENT OF THE TREASURY.....	(°)	(°)	(°)	.8	1.2	.7	.7
<i>Other Agencies</i>							
ATOMIC ENERGY COMMISSION.....	213.3	286.8	320.7	242.6	299.1	343.9	237.1
FEDERAL AVIATION AGENCY.....	4.6	8.4	7.2	10.9	7.3	9.8	1.3
FEDERAL COMMUNICATIONS COMMISSION.....	(°)	.9	(°)	(°)	(°)	(°)	(°)
GENERAL SERVICES ADMINISTRATION.....	.....	.....	.....	.....	.....	.....	.....
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ^d	128.2	245.0	576.7	555.7	530.4	347.2	124.0
NATIONAL SCIENCE FOUNDATION.....	22.3	55.7	64.1	67.8	88.2	94.8	93.0
OFFICE OF CIVIL AND DEFENSE MOBILIZATION.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	4.0	.3	.3	3.7	.4	.8	.3
TENNESSEE VALLEY AUTHORITY.....	(°)	(°)	(°)	.1	.1	.1	(°)
VETERANS ADMINISTRATION.....	1.2	3.4	3.2	.5	9.9	8.1	4.7

^a Starting with 1963, Defense agencies include the Advanced Research Projects Agency and other agencies such as Defense Atomic Support Agency and Defense Communications Agency.

^b Federal Security Agency prior to fiscal year 1952.

^c Less than \$50,000.

^d National Advisory Committee for Aeronautics prior to fiscal year 1958.

TABLE C-53. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY CHARACTER OF WORK AND R&D PLANT, FISCAL YEARS 1956-67

(Millions of dollars)

Fiscal years	Total	Research		Development	R&D plant
		Basic	Applied		
1956.....	3,267	206	646	2,136	279
1957.....	4,389	262	662	3,007	457
1958.....	4,905	335	744	3,490	336
1959.....	7,116	517	886	5,285	429
1960.....	8,074	610	1,331	5,605	528
1961.....	9,601	825	1,796	6,432	549
1962.....	11,060	1,106	2,166	7,008	779
1963.....	13,650	1,389	2,652	8,442	1,168
1964.....	15,310	1,567	2,898	9,747	1,099
1965.....	15,731	1,690	3,164	9,746	1,132
1966 (estimate).....	17,069	1,929	3,533	10,484	1,123
1967 (estimate).....	16,651	2,093	3,454	10,396	707

TABLE C-54. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH, BY SELECTED AGENCY, FISCAL YEARS 1956-67

(Millions of dollars)

Agency	1956	1957	1958	1959	1960	1961
TOTAL.....	852	925	1,079	1,403	1,941	2,620
Department of Agriculture.....	83	95	105	116	121	138
Department of Defense ^a	482	445	489	523	861	1,173
Department of Health, Education, and Welfare.....	83	142	182	240	317	427
Atomic Energy Commission.....	87	99	131	170	199	220
National Aeronautics and Space Administration ^b	43	47	66	201	264	453
National Science Foundation.....	16	30	33	54	68	77
All others.....	59	56	72	98	110	132

Agency	1962	1963	1964	1965	Estimates	
					1966	1967
TOTAL.....	3,273	4,041	4,464	4,854	5,462	5,547
Department of Agriculture.....	150	160	182	218	237	230
Department of Defense ^a	1,311	1,605	1,672	1,751	1,916	1,822
Department of Health, Education, and Welfare.....	574	653	772	862	1,039	1,143
Atomic Energy Commission.....	247	281	308	334	365	394
National Aeronautics and Space Administration ^b	714	1,005	1,177	1,290	1,388	1,380
National Science Foundation.....	104	141	156	172	223	246
All others.....	172	195	197	227	296	331

^a Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations.

^b National Advisory Committee for Aeronautics prior to 1958.

TABLE C-55. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY SELECTED AGENCY, FISCAL YEARS 1952-67

(Millions of dollars)

Agency	1952	1953	1954	1955	1956	1957	1958	1959
TOTAL	162	154	148	162	206	262	335	517
Department of Defense ^a	72	65	52	53	78	84	111	137
Department of Health, Education, and Welfare....	15	15	17	21	26	38	50	75
Atomic Energy Commission.....	34	35	40	42	45	55	72	87
National Aeronautics and Space Administration ^b ..	18	16	14	12	13	16	26	107
National Science Foundation.....	1	2	5	10	15	30	33	54
All others.....	21	20	20	24	29	39	43	57

Agency	1960	1961	1962	1963	1964	1965	Estimates	
							1966	1967
TOTAL	610	825	1, 106	1, 389	1, 567	1, 690	1, 929	2, 093
Department of Defense ^a	168	173	204	231	241	263	273	298
Department of Health, Education, and Welfare....	103	137	190	236	274	303	357	390
Atomic Energy Commission.....	104	167	192	219	238	258	285	311
National Aeronautics and Space Administration ^b ..	97	190	316	447	524	528	603	653
National Science Foundation.....	68	77	104	141	155	171	222	245
All others.....	69	80	100	115	134	167	188	197

^a Includes pay and allowances of military personnel and support from procurement and operation and maintenance appropriations starting with fiscal year 1964 data.

^b National Advisory Committee for Aeronautics prior to 1958.

TABLE C-56. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY SELECTED AGENCY, FISCAL YEARS 1956-67
(Millions of dollars)

Agency	1956	1957	1958	1959	1960	1961
TOTAL	646	662	744	886	1,331	1,796
Department of Agriculture.....	68	76	81	87	87	97
Department of Defense ^a	404	361	378	386	693	1,000
Department of Health, Education, and Welfare.....	57	104	133	165	214	291
Atomic Energy Commission.....	42	44	59	83	95	53
National Aeronautics and Space Administration ^b	29	31	41	95	166	263
All others.....	46	46	52	71	75	92

Agency	1962	1963	1964	1965	Estimates	
					1966	1967
TOTAL	2,166	2,652	2,898	3,164	3,533	3,454
Department of Agriculture.....	101	104	114	128	137	129
Department of Defense ^a	1,107	1,374	1,431	1,488	1,643	1,524
Department of Health, Education, and Welfare.....	384	416	497	559	681	754
Atomic Energy Commission.....	55	62	71	76	80	83
National Aeronautics and Space Administration ^b	398	558	653	762	785	727
All others.....	121	137	132	151	207	237

^a Includes pay and allowances of military personnel and support from the procurement and operation and maintenance appropriations.

^b National Advisory Committee for Aeronautics prior to 1958.

TABLE C-57. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY SELECTED AGENCY, FISCAL YEARS 1956-67
(Billions of dollars)

Agency	1956	1957	1958	1959	1960	1961
	TOTAL	2.1	3.0	3.5	5.3	5.6	6.4
Department of Defense ^a	1.8	2.5	2.9	4.6	4.9	5.4
Atomic Energy Commission.....	.3	.4	.5	.5	.6	.6
National Aeronautics and Space Administration ^b	(^o)	(^o)	(^o)	.1	.1	.3
All others.....	(^o)	(^o)	.1	(^o)	.1	.1

Agency	1962	1963	1964	1965	Estimates	
					1966	1967
TOTAL	7.0	8.4	9.7	9.7	10.5	10.4
Department of Defense ^a	5.4	5.7	5.6	5.0	5.5	5.5
Atomic Energy Commission.....	.9	.8	.9	.9	.9	.9
National Aeronautics and Space Administration ^b.....	.7	1.9	3.1	3.7	3.8	3.5
All others.....	.1	.1	.1	.1	.3	.5

^a Includes pay and allowances of military personnel and support from the procurement and operation and maintenance appropriations.

^b National Advisory Committee for Aeronautics prior to 1958.

^o Less than \$50 million.

TABLE C-58. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY PERFORMER, FISCAL YEARS
1955-67

(Billions of dollars)

Performer	1955	1956	1957	1958	1959	1960	1961
	TOTAL	2.5	3.0	3.9	4.6	6.7	7.5	9.1
Federal Government.....	.9	1.0	1.2	1.4	1.6	1.7	1.9
Industrial firms.....	1.3	1.6	2.2	2.6	4.2	4.8	5.9
Educational institutions.....	.3	.3	.4	.5	.6	.8	1.0
Proper.....	(.1)	(.2)	(.2)	(.3)	(.4)	(.5)	(.6)
Research centers.....	(.1)	(.1)	(.2)	(.2)	(.3)	(.3)	(.4)
All other performers.....	(*)	.1	.1	.1	.2	.2	.3

Performer	1962	1963	1964	1965	Estimates	
					1966	1967
TOTAL	10.3	12.5	14.2	14.6	15.9	15.9
Federal Government.....	2.1	2.3	2.8	3.1	3.3	3.4
Industrial firms.....	6.6	8.3	9.1	9.1	10.0	9.7
Educational institutions.....	1.2	1.4	1.6	1.7	1.9	2.1
Proper.....	(.8)	(.9)	(1.1)	(1.2)	(1.4)	(1.5)
Research centers.....	(.5)	(.5)	(.5)	(.5)	(.6)	(.6)
All other performers.....	.4	.5	.6	.7	.8	.8

* Less than \$50 million.

TABLE C-59. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY PERFORMER, FISCAL YEARS 1958-67
(Millions of dollars)

Performer	1958	1959	1960	1961	1962
	TOTAL	335	517	610	825	1, 106
Federal Government.....	125	173	160	206	251
Industrial firms.....	25	72	93	149	236
Educational institutions.....	152	225	294	381	507
Proper.....	(127)	(186)	(244)	(293)	(381)
Research centers.....	(25)	(40)	(49)	(88)	(127)
All other performers.....	32	47	62	88	112

Performer	1963	1964	1965	Estimates	
				1966	1967
TOTAL	1, 389	1, 567	1, 690	1, 929	2, 093
Federal Government.....	299	363	424	459	490
Industrial firms.....	322	336	299	372	405
Educational institutions.....	613	699	785	893	984
Proper.....	(473)	(562)	(634)	(731)	(804)
Research centers.....	(141)	(137)	(151)	(163)	(180)
All other performers.....	154	169	182	204	214

TABLE C-60. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH, BY FIELD OF SCIENCE, FISCAL YEARS 1956-67
(Millions of dollars)

Field of science	1956	1957	1958	1959	1960	1961
	TOTAL, ALL FIELDS	852	925	1,079	1,403	1,941	2,620
LIFE SCIENCES, TOTAL	208	292	343	420	516	635
Medical sciences.....	109	170	214	268	342	443
Biological sciences.....	55	67	70	88	106	129
Agricultural sciences.....	44	56	59	64	68	63
PSYCHOLOGICAL SCIENCES	(*)	(*)	(*)	24	38	51
PHYSICAL SCIENCES, TOTAL	614	596	696	895	1,319	1,757
Physical sciences, proper.....	245	262	332	462	604	855
Engineering sciences.....	357	322	350	415	689	862
Mathematical sciences.....	11	11	14	18	25	40
SOCIAL SCIENCES	30	36	40	31	35	45
OTHER SCIENCES	(*)	(*)	(*)	33	33	132

Field of science	1962	1963	1964	1965	Estimates	
					1966	1967
TOTAL, ALL FIELDS	3,273	4,041	4,464	4,854	5,462	5,547
LIFE SCIENCES, TOTAL	820	933	1,060	1,183	1,352	1,427
Medical sciences.....	604	672	761	819	953	1,016
Biological sciences.....	145	185	220	258	284	303
Agricultural sciences.....	71	76	80	105	115	109
PSYCHOLOGICAL SCIENCES	57	72	95	103	137	158
PHYSICAL SCIENCES, TOTAL	2,143	2,859	3,130	3,370	3,681	3,649
Physical sciences, proper.....	1,022	1,330	1,590	1,694	1,849	1,856
Engineering sciences.....	1,057	1,442	1,447	1,572	1,707	1,658
Mathematical sciences.....	64	87	93	105	125	135
SOCIAL SCIENCES	63	80	102	127	188	222
OTHER SCIENCES	190	97	77	70	104	91

* Not available.

TABLE C-61. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY FIELD OF SCIENCE, FISCAL YEARS 1956-67
(Millions of dollars)

Field of science	1956	1957	1958	1959	1960	1961
LIFE SCIENCES, TOTAL.....	59	84	100	138	176	245
Medical sciences.....	32	46	59	83	105	145
Biological sciences.....	19	29	28	41	55	82
Agricultural sciences.....	8	10	13	14	16	18
PSYCHOLOGICAL SCIENCES.....	(a)	(a)	(a)	9	17	21
PHYSICAL SCIENCES, TOTAL.....	143	172	226	361	408	540
Physical sciences, proper.....	120	146	191	289	315	438
Engineering sciences.....	17	19	25	58	75	81
Mathematical sciences.....	6	7	11	14	18	21
SOCIAL SCIENCES.....	4	6	9	5	8	11
OTHER SCIENCES.....	(a)	(a)	(a)	4	(b)	8

Field of science	1962	1963	1964	1965	Estimates	
					1966	1967
TOTAL, ALL FIELDS.....	1,106	1,389	1,567	1,690	1,929	2,093
LIFE SCIENCES, TOTAL.....	322	392	439	503	572	605
Medical sciences.....	204	250	272	286	320	338
Biological sciences.....	98	117	142	177	207	222
Agricultural sciences.....	21	24	24	40	45	45
PSYCHOLOGICAL SCIENCES.....	28	36	47	58	73	84
PHYSICAL SCIENCES, TOTAL.....	737	934	1,045	1,091	1,233	1,344
Physical sciences, proper.....	597	758	862	891	1,003	1,072
Engineering sciences.....	114	134	131	143	167	204
Mathematical sciences.....	26	42	52	57	62	68
SOCIAL SCIENCES.....	18	25	34	37	49	58
OTHER SCIENCES.....	2	2	2	2	2	2

^a Not available.

^b Less than \$500,000.

TABLE C-62. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY FIELD OF SCIENCE, FISCAL YEARS 1956-67
(Millions of dollars)

Field of science	1956	1957	1958	1959	1960	1961
TOTAL, ALL FIELDS	646	662	744	886	1,331	1,796
LIFE SCIENCES, TOTAL	149	208	243	282	340	391
Medical sciences.....	77	124	155	185	237	298
Biological sciences.....	36	38	41	47	51	48
Agricultural sciences.....	36	46	47	50	52	45
PSYCHOLOGICAL SCIENCES	(*)	(*)	(*)	15	21	30
PHYSICAL SCIENCES, TOTAL	471	424	470	535	910	1,217
Engineering sciences.....	340	304	325	357	614	781
Physical sciences, proper.....	126	116	142	173	289	417
Mathematical sciences.....	5	4	3	5	7	19
SOCIAL SCIENCES	26	30	31	26	27	34
OTHER SCIENCES	(*)	(*)	(*)	28	33	124

Field of science	1962	1963	1964	1965	Estimates	
					1966	1967
TOTAL, ALL FIELDS	2,166	2,652	2,898	3,164	3,533	3,454
LIFE SCIENCES, TOTAL	498	542	621	680	781	822
Medical sciences.....	401	422	488	534	634	678
Biological sciences.....	47	68	78	81	77	81
Agricultural sciences.....	49	52	55	65	70	64
PSYCHOLOGICAL SCIENCES	29	35	48	46	64	74
PHYSICAL SCIENCES, TOTAL	1,406	1,925	2,085	2,280	2,448	2,305
Engineering sciences.....	943	1,308	1,316	1,429	1,539	1,454
Physical sciences, proper.....	425	572	728	803	846	783
Mathematical sciences.....	38	45	41	48	62	68
SOCIAL SCIENCES	45	55	68	90	139	164
OTHER SCIENCES	189	95	75	68	102	89

* Not available.

APPENDIX D
STATISTICAL TABLES, PART II

(Federal Funds for Scientific and Technical Information)

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NOTES

- Estimates for 1967 are based on requested amounts included in *The Budget, 1967*, hence they do not reflect subsequent congressional action.
- Obligations for extramural performance are limited to contracts or grants with private individuals or organizations outside the Government, which have as their primary purpose the support of scientific and technical information. Excluded are most obligations for information efforts that supplement or support work under R&D contracts or grants.
- Defense Agencies include agencies such as the Advanced Research Projects Agency, the Defense Atomic Support Agency, the Defense Communications Agency, and the Defense Supply Agency.
- Obligations for *category 4*, research and development in information sciences, documentation and information systems, techniques and devices, are also reported under R&D obligations in Part I.
- In addition to the amounts reported for *category 4*, the Department of Defense also reported under R&D obligations in Part I, \$76.8 million of their total for the three other information activities for 1965; \$81.0 million for 1966; and \$78.3 million for 1967.
- The entire amount designated by the National Institutes of Health (HEW) for scientific and technical information activities is also reported as part of their obligations for research and development in Part I of this publication.
- Source of data is the National Science Foundation.

PART II, STATISTICAL TABLES

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TABLE O-1. SUMMARY OF FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

ACTIVITY	ACTUAL 1965			ESTIMATES					
	TOTAL	INTRA-MURAL	EXTRA-MURAL	1966			1967		
				TOTAL	INTRA-MURAL	EXTRA-MURAL	TOTAL	INTRA-MURAL	EXTRA-MURAL
TOTAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION.....	224,656	151,949	72,707	260,742	177,774	82,968	273,118	176,019	97,099
PUBLICATION AND DISTRIBUTION.....	68,248	50,940	17,308	75,385	55,495	19,890	79,810	58,409	21,401
PUBLICATION AND DISTRIBUTION.....	65,636	49,636	16,000	71,530	54,027	17,503	75,494	56,682	18,812
SUPPORT OF PUBLICATIONS.....	2,612	1,304	1,308	3,855	1,468	2,387	4,316	1,727	2,589
DOCUMENTATION, REFERENCE AND INFORMATION SERVICES.....	101,978	70,748	25,230	125,755	95,973	29,782	131,561	91,613	39,948
BIBLIOGRAPHIC AND REFERENCE SERVICES.....	85,697	67,184	18,513	107,061	85,783	21,278	112,079	81,834	30,245
SPECIALIZED INFORMATION CENTERS.....	12,588	8,630	3,958	14,293	9,159	5,134	14,643	8,687	5,956
TRANSLATIONS.....	3,693	934	2,759	4,401	1,031	3,370	4,839	1,092	3,747
SYMPOSIA AND AUDIO/VISUAL MEDIA.....	31,976	18,022	13,954	35,365	19,438	15,927	36,599	18,741	17,858
SYMPOSIA AND TECHNICAL MEETINGS.....	18,577	9,545	9,032	19,229	10,124	9,105	19,685	10,198	9,487
AUDIO/VISUAL MEDIA AND OTHER FORMS OF ORAL COMMUNICATION.....	13,399	8,477	4,922	16,136	9,314	6,822	16,914	8,543	8,371
RESEARCH AND DEVELOPMENT IN INFORMATION SCIENCES, DOCUMENTATION AND INFORMATION SYSTEMS, TECHNIQUES AND DEVICES.....	22,454	6,239	16,215	24,237	6,868	17,369	25,148	7,256	17,892

APPENDIX D

TABLE O-2. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	ACTUAL 1965	ESTIMATES	
		1966	1967
TOTAL, ALL AGENCIES.....	224,656	260,742	273,118
DEPARTMENTS			
DEPARTMENT OF AGRICULTURE, TOTAL.....	5,565	13,070	6,926
AGRICULTURAL RESEARCH SERVICE.....	1,849	1,969	2,069
COOPERATIVE STATE RESEARCH SERVICE.....	107	108	105
ECONOMIC RESEARCH SERVICE.....	254	201	267
FARMER COOPERATIVE SERVICE.....	102	106	107
FOREST SERVICE.....	1,643	1,802	1,864
NATIONAL AGRICULTURAL LIBRARY.....	1,600	8,790	2,501
STATISTICAL REPORTING SERVICE.....	10	14	13
DEPARTMENT OF COMMERCE, TOTAL.....	37,104	40,588	43,305
BUREAU OF THE CENSUS.....	216	241	241
BUREAU OF PUBLIC ROADS.....	468	554	468
COAST AND GEODETIC SURVEY.....	156	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	.....	175	200
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	919	964
MARITIME ADMINISTRATION.....	4	5	.....
NATIONAL BUREAU OF STANDARDS.....	5,532	5,538	6,766
OFFICE OF BUSINESS ECONOMICS.....	122	121	129
PATENT OFFICE.....	30,130	33,035	34,537
WEATHER BUREAU.....	476	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	98,605	101,808	98,428
DEPARTMENT OF THE ARMY.....	44,972	47,953	45,985
DEPARTMENT OF THE NAVY.....	16,891	17,597	17,207
DEPARTMENT OF THE AIR FORCE.....	25,507	23,594	23,041
DEFENSE AGENCIES.....	11,235	12,664	12,195
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	24,206	33,195	47,797
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	121	206	220
FOOD AND DRUG ADMINISTRATION.....	746	2,359	2,683
OFFICE OF EDUCATION.....	539	795	2,901
PUBLIC HEALTH SERVICE.....	22,339	29,198	41,397
NATIONAL INSTITUTES OF HEALTH.....	/13,511/	/16,098/	/17,735/
NATIONAL LIBRARY OF MEDICINE.....	/4,829/	/6,807/	/16,427/
SAINT ELIZABETHS HOSPITAL.....	5	6	6
SOCIAL SECURITY ADMINISTRATION.....	105	162	189
VOCATIONAL REHABILITATION ADMINISTRATION.....	240	367	304
WELFARE ADMINISTRATION.....	111	102	97

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TABLE D-2.

AGENCY AND SUBDIVISION	ACTUAL 1965	ESTIMATES	
		1966	1967
DEPARTMENT OF THE INTERIOR, TOTAL.....	8,828	10,884	11,416
BUREAU OF COMMERCIAL FISHERIES.....	1,224	1,539	1,650
BUREAU OF MINES.....	1,004	1,060	1,085
BUREAU OF OUTDOOR RECREATION.....	10	10	22
BUREAU OF RECLAMATION.....	300	501	568
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	447	588	634
DEPARTMENT LIBRARY.....	232	582	588
GEOLOGICAL SURVEY.....	5,365	6,310	6,617
NATIONAL PARK SERVICE.....	44	57	65
OFFICE OF COAL RESEARCH.....	11	20	32
OFFICE OF SALINE WATER.....	114	160	125
OFFICE OF WATER RESOURCES RESEARCH.....	77	57	50
DEPARTMENT OF LABOR, TOTAL.....	120	136	140
BUREAU OF EMPLOYMENT SECURITY.....	40	44	58
BUREAU OF LABOR STANDARDS.....	13	13	13
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	53	65	69
WOMENS BUREAU.....	14	14	.....
DEPARTMENT OF STATE, TOTAL.....	293	149	254
DEPARTMENTAL FUNDS.....	40	41	45
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	253	108	209
DEPARTMENT OF THE TREASURY, TOTAL.....	36	45	54
UNITED STATES COAST GUARD.....	36	45	54
OTHER AGENCIES			
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	46	47	47
ATOMIC ENERGY COMMISSION.....	4,615	5,138	5,705
FEDERAL AVIATION AGENCY.....	383	493	407
FEDERAL COMMUNICATIONS COMMISSION.....	13	13	14
FEDERAL HOME LOAN BANK BOARD.....	9	10	11
LIBRARY OF CONGRESS.....	10,098	12,707	13,607
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	18,909	24,771	28,174
NATIONAL SCIENCE FOUNDATION.....	13,407	14,692	13,695
OFFICE OF EMERGENCY PLANNING.....	3	8	23
SMALL BUSINESS ADMINISTRATION.....	11	11	7
SMITHSONIAN INSTITUTION.....	978	1,288	1,548
TENNESSEE VALLEY AUTHORITY.....	25	25	25
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	980	1,100	1,150
VETERANS ADMINISTRATION.....	422	564	385

APPENDIX D

TABLE O-3. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	INTRAMURAL			EXTRAMURAL		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
TOTAL, ALL AGENCIES.....	151,949	177,774	176,019	72,707	82,968	97,099
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	5,552	13,053	6,914	13	17	12
AGRICULTURAL RESEARCH SERVICE.....	1,849	1,969	2,069	.....	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	107	108	105	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	254	281	267	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	102	106	107	.....	.....	.....
FOREST SERVICE.....	1,630	1,785	1,852	13	17	12
NATIONAL AGRICULTURAL LIBRARY.....	1,600	8,790	2,501	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	10	14	13	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	36,094	39,750	41,902	1,010	838	1,403
BUREAU OF THE CENSUS.....	202	228	228	14	13	13
BUREAU OF PUBLIC ROADS.....	280	284	273	188	270	195
COAST AND GEODETIC SURVEY.....	131	.....	.....	25	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	.....	.....	.....	.....	175	200
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	836	879	.....	83	85
MARITIME ADMINISTRATION.....	4	3	.....	.....	2	.....
NATIONAL BUREAU OF STANDARDS.....	4,852	5,268	5,856	680	270	910
OFFICE OF BUSINESS ECONOMICS.....	122	121	129	.....	.....	.....
PATENT OFFICE.....	30,097	33,010	34,537	33	25	.....
WEATHER BUREAU.....	406	.....	.....	70	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	58,527	62,315	59,297	40,078	39,493	39,131
DEPARTMENT OF THE ARMY.....	32,376	34,475	32,730	12,596	13,478	13,255
DEPARTMENT OF THE NAVY.....	7,755	8,073	7,720	9,136	9,524	9,487
DEPARTMENT OF THE AIR FORCE.....	7,665	7,818	7,462	17,842	15,776	15,579
DEFENSE AGENCIES.....	10,731	11,949	11,385	504	715	810
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	14,109	19,547	24,649	10,097	13,648	23,148
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	118	196	210	3	10	10
FOOD AND DRUG ADMINISTRATION.....	578	1,469	1,662	168	890	1,021
OFFICE OF EDUCATION.....	242	459	2,565	297	336	336
PUBLIC HEALTH SERVICE.....	12,945	17,146	19,914	9,394	12,052	21,483
NATIONAL INSTITUTES OF HEALTH.....	15,826	17,249	18,282	17,685	18,849	19,453
NATIONAL LIBRARY OF MEDICINE.....	13,700	14,892	16,089	11,129	11,915	10,338
SAINT ELIZABETHS HOSPITAL.....	5	6	6	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	105	162	189	.....	.....	.....
VOCATIONAL REHABILITATION ADMINISTRATION.....	5	7	6	235	360	298
WELFARE ADMINISTRATION.....	111	102	97

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TABLE C-3.

AGENCY AND SUBDIVISION	INTRAMURAL			EXTRAMURAL		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
DEPARTMENT OF THE INTERIOR, TOTAL.....	8,605	10,584	11,124	223	300	292
BUREAU OF COMMERCIAL FISHERIES.....	1,177	1,509	1,627	47	30	23
BUREAU OF MINES.....	1,004	1,060	1,085	.....	.....	.....
BUREAU OF OUTDOOR RECREATION.....	5	5	18	5	5	4
BUREAU OF RECLAMATION.....	286	472	532	14	29	36
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	397	480	526	50	108	108
DEPARTMENT LIBRARY.....	232	582	568	.....	.....	.....
GEOLOGICAL SURVEY.....	5,365	6,310	6,617	.....	.....	.....
NATIONAL PARK SERVICE.....	44	57	65	.....	.....	.....
OFFICE OF COAL RESEARCH.....	7	8	16	4	12	16
OFFICE OF SALINE WATER.....	80	80	45	34	80	80
OFFICE OF WATER RESOURCES RESEARCH.....	8	21	25	69	36	25
DEPARTMENT OF LABOR, TOTAL.....	120	136	140	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	40	44	58	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	13	13	13	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	53	65	69	.....	.....	.....
WOMENS BUREAU.....	14	14	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	74	75	100	219	74	154
DEPARTMENTAL FUNDS.....	40	41	45	.....	.....	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	34	34	55	219	74	154
DEPARTMENT OF THE TREASURY, TOTAL.....	36	45	54	.....	.....	.....
UNITED STATES COAST GUARD.....	36	45	54	.....	.....	.....
OTHER AGENCIES						
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	46	47	47	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	2,761	2,987	3,156	1,854	2,151	2,549
FEDERAL AVIATION AGENCY.....	313	423	322	70	70	85
FEDERAL COMMUNICATIONS COMMISSION.....	13	13	14	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	9	10	11	.....	.....	.....
LIBRARY OF CONGRESS.....	10,093	12,612	13,107	5	95	500
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	8,202	9,644	9,980	10,707	15,127	18,194
NATIONAL SCIENCE FOUNDATION.....	5,078	3,692	2,190	8,329	11,000	11,505
OFFICE OF EMERGENCY PLANNING.....	3	3	3	.....	5	20
SMALL BUSINESS ADMINISTRATION.....	11	11	7	.....	.....	.....
SMITHSONIAN INSTITUTION.....	978	1,288	1,548	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	25	25	25	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	980	1,100	1,150	.....	.....	.....
VETERANS ADMINISTRATION.....	320	414	279	102	150	106

APPENDIX D

TABLE D-4. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION BY AGENCY AND ACTIVITY, FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL INTRAMURAL	PUBLICATION AND DISTRIB.	DOC, REF & INFO SERVICE	SYMPOSIUM & AUDIO VISUAL	R&D IN INFO SCIENCE	TOTAL EXTRAMURAL	PUBLICATION AND DISTRIB.	DOC, REF & INFO SERVICE	SYMPOSIUM & AUDIO VISUAL	R&D IN INFO SCIENCE
TOTAL, ALL AGENCIES.....	224,656	151,949	50,940	76,748	18,022	6,239	72,707	17,308	25,230	13,954	16,215
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	5,565	5,552	2,267	1,691	1,403	191	13	.....	5	.....	8
AGRICULTURAL RESEARCH SERVICE.....	1,849	1,849	888	269	692	.....	.....	.....	.....	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	107	107	9	.....	97	1	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	254	254	221	1	32	.....	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	102	102	89	.....	13	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	1,643	1,630	825	224	561	20	13	.....	5	.....	8
NATIONAL AGRICULTURAL LIBRARY.....	1,600	1,600	227	1,197	6	170	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	10	10	8	.....	2	.....	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	37,104	36,094	22,786	11,620	655	1,033	1,010	660	126	41	183
BUREAU OF THE CENSUS.....	216	202	51	26	26	99	14	.....	.....	14	.....
BUREAU OF PUBLIC ROADS.....	468	280	58	145	20	57	188	63	.....	.....	125
COAST AND GEODETIC SURVEY.....	156	131	94	20	14	3	25	.....	.....	25	.....
MARITIME ADMINISTRATION.....	4	4	.....	.....	4	.....	.....	.....	.....	.....	.....
NATIONAL BUREAU OF STANDARDS.....	5,532	4,852	1,776	2,351	541	184	680	594	76	.....	10
OFFICE OF BUSINESS ECONOMICS.....	122	122	122	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	30,130	30,097	20,550	8,875	20	652	33	.....	.....	.....	31
WEATHER BUREAU.....	476	406	135	203	30	38	70	3	50	.....	17
DEPARTMENT OF DEFENSE, TOTAL.....	98,605	58,527	10,442	35,048	10,048	2,989	40,078	9,832	10,942	7,941	11,363
DEPARTMENT OF THE ARMY.....	44,972	32,376	5,728	20,430	5,384	834	12,596	5,552	5,613	582	849
DEPARTMENT OF THE NAVY.....	16,891	7,755	2,141	2,417	1,553	1,644	9,136	2,065	2,064	1,881	3,126
DEPARTMENT OF THE AIR FORCE.....	25,507	7,665	2,170	2,201	2,783	511	17,842	2,215	2,890	5,393	7,344
DEFENSE AGENCIES.....	11,235	10,731	403	10,000	328	.....	504	.....	375	85	44
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	24,206	14,109	3,014	6,978	3,533	584	10,097	949	4,877	2,713	1,558
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	121	118	40	37	19	22	3	.....	1	2	.....
FOOD AND DRUG ADMINISTRATION.....	746	578	201	50	218	109	168	.....	168	.....	.....
OFFICE OF EDUCATION.....	539	242	59	70	.....	113	297	63	10	166	58
PUBLIC HEALTH SERVICE.....	22,339	12,945	2,550	6,800	3,255	340	9,394	853	4,613	2,428	1,500
NATIONAL INSTITUTES OF HEALTH..	/13,511/	/5,826/	/1,391/	/2,118/	/2,095/	/222/	/7,685/	/587/	/3,554/	/2,138/	/1,406/
NATIONAL LIBRARY OF MEDICINE....	/4,829/	/3,700/	/81/	/3,586/	.....	/33/	/1,129/	/236/	/893/	.....	.....
SAINTE ELIZABETHS HOSPITAL.....	5	5	4	.....	1	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION....	105	105	97	.....	8	.....	.....	.....	.....	.....	.....
VOCATIONAL REHABILITATION ADMIN..	240	5	.....	.....	5	.....	235	33	85	117	.....
WELFARE ADMINISTRATION.....	111	111	63	21	27	.....	.....	.....	.....	.....	.....

CONTINUED ON NEXT PAGE

TABLE O-4.

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL INTRAMURAL	PUBLICATI-ON AND DISTRIB.	DOC, REF & INFO SERVICE	SYMPOSTA & AUDIO VISUAL	R&D IN INFO SCIENCE	TOTAL EXTRA MURAL	PUBLICATI-ON AND DISTRIB.	DOC, REF & INFO SERVICE	SYMPOSTA & AUDIO VISUAL	R&D IN INFO SCIENCE
DEPARTMENT OF THE INTERIOR, TOTAL	8,828	8,605	5,792	1,733	482	598	223	164	10	23	26
BUREAU OF COMMERCIAL FISHERIES...	1,224	1,177	713	387	76	1	47	3	.....	19	25
BUREAU OF MINES.....	1,004	1,004	709	245	50	.....	.....	.....	.....	.....	.....
BUREAU OF OUTDOOR RECREATION.....	10	5	1	3	.....	1	5	1	3	.....	1
BUREAU OF RECLAMATION.....	300	286	65	191	24	6	14	6	7	1	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	447	397	195	61	136	5	50	50	.....	.....	.....
DEPARTMENT LIBRARY.....	232	232	.....	218	.....	14	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	5,365	5,365	4,049	605	140	571	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	44	44	40	1	3	.....	.....	.....	.....	.....	.....
OFFICE OF COAL RESEARCH.....	11	7	7	.....	.....	.....	4	4	.....	.....	.....
OFFICE OF SALINE WATER.....	114	80	8	20	52	.....	34	31	.....	3	.....
OFFICE OF WATER RESOURCES RESEARCH.....	77	8	5	2	1	.....	69	69	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	120	120	59	27	34	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	40	40	6	.....	34	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	13	13	13	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	53	53	24	27	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	14	14	14	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	243	74	.....	74	.....	.....	219	65	54	100	.....
DEPARTMENTAL FUNDS.....	40	40	.....	40	.....	.....	.....	.....	.....	.....	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	253	34	.....	34	.....	.....	219	65	54	100	.....
DEPARTMENT OF THE TREASURY, TOTAL	36	36	11	25	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	36	36	11	25	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES											
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	46	46	35	10	1	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	4,615	2,761	1,684	858	57	162	1,854	601	962	137	154
FEDERAL AVIATION AGENCY.....	383	313	78	203	32	.....	70	21	49	.....	.....
FEDERAL COMMUNICATIONS COMMISSION	13	13	3	5	5	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	9	9	.....	9	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	10,098	10,093	.....	9,986	5	102	5	.....	.....	.....	5
NATIONAL AERONAUTICS & SPACE ADMINISTRATION.....	18,909	8,202	3,762	3,237	1,153	50	10,707	4,227	4,729	1,712	39
NATIONAL SCIENCE FOUNDATION.....	13,407	5,078	130	4,648	50	250	8,329	778	3,476	1,196	2,879
OFFICE OF EMERGENCY PLANNING.....	3	3	.....	3	.....	.....	.....	.....	.....	.....	.....
SMALL BUSINESS ADMINISTRATION.....	11	11	11	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	978	978	480	428	70	.....	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	25	25	.....	25	.....	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	980	980	350	85	265	280	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	422	320	36	55	229	.....	102	11	.....	91	.....

APPENDIX D

TABLE D-5. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION BY AGENCY AND ACTIVITY, FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL INTRAMURAL	PUBLICATION AND DISTRIBUTION	DOC, REF & INFO SERVICE	SYMPOSIA & AUDIO VISUAL	R&D IN INFO SCIENCE	TOTAL EXTRAMURAL	PUBLICATION AND DISTRIBUTION	DOC, REF & INFO SERVICE	SYMPOSIA & AUDIO VISUAL	R&D IN INFO SCIENCE
TOTAL, ALL AGENCIES.....	260,742	177,774	55,495	95,973	19,438	6,868	82,968	19,890	29,782	15,927	17,369
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.....	13,070	13,053	2,584	8,868	1,473	128	17	.....	5	.....	12
AGRICULTURAL RESEARCH SERVICE.....	1,969	1,969	1,008	285	676	.....	.....	.....	.....	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	108	108	9	.....	97	2	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	281	281	220	1	60	.....	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	106	106	93	.....	13	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	1,802	1,785	941	210	618	16	17	.....	5	.....	12
NATIONAL AGRICULTURAL LIBRARY.....	8,790	8,790	303	8,372	6	109	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	14	14	10	.....	3	1	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	40,588	39,750	24,217	14,108	647	778	838	408	150	47	233
BUREAU OF THE CENSUS.....	241	228	76	31	26	95	13	.....	.....	13	.....
BUREAU OF PUBLIC ROADS.....	554	284	57	147	20	60	270	70	.....	.....	200
ECONOMIC DEVELOPMENT ADMINISTRATION.....	175	.....	.....	.....	.....	.....	175	175	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	919	836	373	223	182	58	83	3	50	30	.....
MARITIME ADMINISTRATION.....	5	3	.....	.....	3	.....	2	.....	.....	2	.....
NATIONAL BUREAU OF STANDARDS.....	5,538	5,268	2,068	2,607	396	197	270	160	100	.....	10
OFFICE OF BUSINESS ECONOMICS.....	121	121	121	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	33,035	33,010	21,522	11,100	20	368	25	.....	.....	2	23
DEPARTMENT OF DEFENSE, TOTAL.....	101,808	62,315	10,987	37,825	10,296	3,207	39,493	10,254	12,089	7,482	9,668
DEPARTMENT OF THE ARMY.....	47,953	34,475	6,161	21,791	5,648	875	13,478	5,941	6,006	623	908
DEPARTMENT OF THE NAVY.....	17,597	8,073	2,198	2,522	1,565	1,788	9,524	2,095	2,675	1,843	2,911
DEPARTMENT OF THE AIR FORCE.....	23,594	7,818	2,233	2,262	2,779	544	15,776	2,218	2,833	4,926	5,799
DEFENSE AGENCIES.....	12,664	11,949	395	11,250	304	.....	715	.....	575	90	50
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	33,195	19,547	3,501	10,920	4,153	973	13,648	1,201	6,041	3,900	2,506
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	206	196	54	77	30	35	10	.....	10	.....	.....
FOOD AND DRUG ADMINISTRATION.....	2,359	1,469	100	1,249	75	45	890	.....	890	.....	.....
OFFICE OF EDUCATION.....	795	459	66	70	.....	323	336	50	10	200	76
PUBLIC HEALTH SERVICE.....	29,198	17,146	3,081	9,500	3,995	570	12,052	1,059	5,046	3,517	2,430
NATIONAL INSTITUTES OF HEALTH.....	/16,098/	/7,249/	/1,663/	/2,935/	/2,396/	/255/	/8,849/	/678/	/3,227/	/2,613/	/2,331/
NATIONAL LIBRARY OF MEDICINE.....	/6,807/	/4,892/	/126/	/4,611/	.....	/155/	/1,915/	/341/	/1,574/	.....	.....
SAINTE ELIZABETHS HOSPITAL.....	6	6	4	.....	2	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION.....	162	162	148	.....	14	.....	.....	.....	.....	.....	.....
VOCATIONAL REHABILITATION ADMIN.....	367	7	7	360	92	85	183
WELFARE ADMINISTRATION.....	102	102	48	24	30

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TABLE C-5.

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL INTRAMURAL	PUBLICATION AND DISTRIB.	DOC. REF & INFO SERVICE	SYMPOSIUM & AUDIO VISUAL	REC'D IN INFO SCIENCE	TOTAL EXTRAMURAL	PUBLICATION AND DISTRIB.	DOC. REF & INFO SERVICE	SYMPOSIUM & AUDIO VISUAL	REC'D IN INFO SCIENCE
DEPARTMENT OF THE INTERIOR, TOTAL	10,884	10,584	6,582	2,846	531	625	300	146	118	35	1
BUREAU OF COMMERCIAL FISHERIES...	1,539	1,509	916	489	103	1	30	4	7	19	.....
BUREAU OF MINES.....	1,060	1,060	760	250	50	.....	.....	.....	.....	.....	.....
BUREAU OF OUTDOOR RECREATION.....	10	5	1	3	.....	1	5	1	3	.....	1
BUREAU OF RECLAMATION.....	501	472	139	302	21	10	29	13	10	6	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	588	480	215	119	141	5	108	50	58	.....	.....
DEPARTMENT LIBRARY.....	582	582	.....	572	.....	10	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	6,310	6,310	4,477	1,080	155	598	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	57	57	53	1	3	.....	.....	7	.....	5	.....
OFFICE OF COAL RESEARCH.....	20	8	8	.....	.....	.....	80	35	40	5	.....
OFFICE OF SALINE WATER.....	160	80	8	24	48	.....	.....	.....	.....	.....	.....
OFFICE OF WATER RESOURCES RESEARCH.....	57	21	5	6	10	.....	36	36	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL.....	136	136	69	33	34	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY.....	44	44	10	.....	34	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	13	13	13	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	65	65	32	33	.....	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	14	14	14	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL.....	149	75	.....	75	.....	.....	74	.....	74	.....	.....
DEPARTMENTAL FUNDS.....	41	41	.....	41	.....	.....	.....	.....	.....	.....	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	108	34	.....	34	.....	.....	74	.....	74	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL	45	45	13	32	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD.....	45	45	13	32	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES											
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.....	47	47	35	11	1	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	138	2,987	1,859	894	60	174	2,151	706	746	155	544
FEDERAL AVIATION AGENCY.....	493	423	102	186	135	.....	70	11	59	.....	.....
FEDERAL COMMUNICATIONS COMMISSION	13	13	3	5	5	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	10	10	.....	10	.....	.....	.....	.....	.....	.....	95
LIBRARY OF CONGRESS.....	12,707	12,612	.....	12,290	7	315	95	.....	.....	.....	.....
NATIONAL AERONAUTICS & SPACE ADMINISTRATION.....	24,771	9,644	4,358	3,818	1,340	128	15,127	5,712	6,127	2,978	310
NATIONAL SCIENCE FOUNDATION.....	14,692	3,692	135	3,232	50	275	11,000	1,440	4,330	1,230	4,000
OFFICE OF EMERGENCY PLANNING.....	8	3	.....	3	.....	.....	5	.....	.....	5	.....
SMALL BUSINESS ADMINISTRATION.....	11	11	11	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	1,288	1,288	637	566	70	15	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	25	25	.....	25	.....	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	1,100	1,100	350	100	400	250	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	564	414	52	126	236	.....	150	12	43	95	.....

APPENDIX D

TABLE D-6. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION BY AGENCY AND ACTIVITY, FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL INTRAMURAL	PUBLICATI-ON AND DISTRIB.	DOC,REF & INFO SERVICE	SYMPOSIA & AUDIO VISUAL	REG IN INFO SCIENCE	TOTAL EXTRA MURAL	PUBLICATI-ON AND DISTRIB.	DOC,REF & INFO SERVICE	SYMPOSIA & AUDIO VISUAL	REG IN INFO SCIENCE
TOTAL, ALL AGENCIES.....	273,118	176,019	58,409	91,613	18,741	7,256	97,099	21,401	39,948	17,858	17,892
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL.	6,926	6,914	2,781	2,179	1,501	453	12	.....	.....	.....	12
AGRICULTURAL RESEARCH SERVICE....	2,069	2,069	1,093	300	676	.....	.....	.....	.....	.....	.....
COOPERATIVE STATE RESEARCH SERVICE.....	105	105	7	.....	97	1	.....	.....	.....	.....	.....
ECONOMIC RESEARCH SERVICE.....	267	267	233	1	33	.....	.....	.....	.....	.....	.....
FARMER COOPERATIVE SERVICE.....	107	107	94	.....	13	.....	.....	.....	.....	.....	.....
FOREST SERVICE.....	1,864	1,852	950	230	670	2	12	.....	.....	.....	12
NATIONAL AGRICULTURAL LIBRARY.....	2,501	2,501	395	1,648	9	449	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	13	13	9	.....	3	1	.....	.....	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	43,305	41,902	26,067	14,374	644	817	1,403	1,035	190	43	135
BUREAU OF THE CENSUS.....	241	228	76	31	26	95	13	.....	.....	13	.....
BUREAU OF PUBLIC ROADS.....	468	273	53	140	20	60	195	70	.....	.....	125
ECONOMIC DEVELOPMENT ADMINISTRATION.....	200	.....	.....	.....	.....	.....	200	200	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	964	879	393	246	182	58	85	5	50	30	.....
NATIONAL BUREAU OF STANDARDS.....	6,766	5,856	2,558	2,702	396	200	910	760	140	.....	10
OFFICE OF BUSINESS ECONOMICS.....	129	129	129	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	34,537	34,537	22,858	11,255	20	404	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	98,428	59,297	10,799	36,339	9,300	2,859	39,131	10,147	12,482	7,377	9,125
DEPARTMENT OF THE ARMY.....	45,985	32,730	5,805	20,611	5,432	882	13,255	5,880	5,858	617	900
DEPARTMENT OF THE NAVY.....	17,207	7,720	2,307	2,580	1,605	1,228	9,487	2,172	2,888	1,927	2,500
DEPARTMENT OF THE AIR FORCE.....	23,041	7,462	2,268	2,488	1,957	749	15,579	2,095	3,086	4,743	5,655
DEFENSE AGENCIES.....	12,195	11,385	419	10,660	306	.....	810	.....	650	90	70
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	47,797	24,649	3,950	15,123	4,517	1,059	23,148	1,503	14,682	4,103	2,860
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	220	210	60	80	30	40	10	.....	10	.....	.....
FOOD AND DRUG ADMINISTRATION.....	2,683	1,662	115	1,409	86	52	1,021	.....	1,021	.....	.....
OFFICE OF EDUCATION.....	2,901	2,565	72	2,170	.....	323	336	50	10	200	76
PUBLIC HEALTH SERVICE.....	41,397	19,914	3,487	11,439	4,344	644	21,483	1,383	13,553	3,763	2,784
NATIONAL INSTITUTES OF HEALTH..	/17,735/	/8,282/	/1,750/	/3,650/	/2,687/	/195/	/9,453/	/716/	/3,466/	/2,772/	/2,499/
NATIONAL LIBRARY OF MEDICINE...	/16,427/	/6,089/	/189/	/5,600/	.....	/300/	/10,338/	/627/	/9,711/	.....	.....
SAINT ELIZABETHS HOSPITAL.....	6	6	4	.....	2	.....	.....	.....	.....	.....	.....
SOCIAL SECURITY ADMINISTRATION...	189	189	173	.....	16	.....	.....	.....	.....	.....	.....
VOCATIONAL REHABILITATION ADMIN..	304	6	6	298	70	88	140
WELFARE ADMINISTRATION.....	97	97	39	25	33

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TABLE D-6.

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL INTRAMURAL	PUBLICATION AND DISTRIB.	DOC, REF & INFO SERVICE	SYMPOSIUM & AUDIO VISUAL	R&O IN INFO SCIENCE	TOTAL EXTRAMURAL	PUBLICATION AND DISTRIB.	DOC, REF & INFO SERVICE	SYMPOSIUM & AUDIO VISUAL	R&O IN INFO SCIENCE
DEPARTMENT OF THE INTERIOR, TOTAL	11,416	11,124	6,781	3,128	539	676	292	137	119	36	.....
BUREAU OF COMMERCIAL FISHERIES...	1,650	1,627	981	533	112	1	23	4	.....	19	.....
BUREAU OF MINES.....	1,085	1,085	785	250	50	.....	.....	.....	.....	.....	.....
BUREAU OF OUTDOOR RECREATION.....	22	18	.....	10	.....	8	4	2	2	.....	.....
BUREAU OF RECLAMATION.....	568	532	173	324	20	15	36	14	16	6	.....
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	634	526	233	121	166	6	108	50	58	.....	.....
DEPARTMENT LIBRARY.....	568	568	.....	548	.....	20	.....	.....	.....	.....	.....
GEOLOGICAL SURVEY.....	6,617	6,617	4,517	1,306	168	626	.....	.....	.....	.....	.....
NATIONAL PARK SERVICE.....	65	65	61	1	3	.....	.....	.....	.....	.....	.....
OFFICE OF COAL RESEARCH.....	32	16	16	.....	.....	.....	16	7	3	6	.....
OFFICE OF SALINE WATER.....	125	45	10	25	10	.....	80	35	40	5	.....
OFFICE OF WATER RESOURCES RESEARCH.....	50	25	5	10	10	.....	25	25	.....	.....	.....
DEPARTMENT OF LABOR, TOTAL	140	140	70	35	35	.....	.....	.....	.....	.....	.....
BUREAU OF EMPLOYMENT SECURITY....	58	58	23	.....	35	.....	.....	.....	.....	.....	.....
BUREAU OF LABOR STANDARDS.....	13	13	13	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH.....	69	69	34	35	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL	254	100	.....	97	3	.....	154	65	89	.....	.....
DEPARTMENTAL FUNDS.....	45	45	.....	42	3	.....	.....	.....	.....	.....	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	209	55	.....	55	.....	.....	154	65	89	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL	54	54	15	39	.....	.....	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD	54	54	15	39	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES											
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS....	47	47	35	11	1	.....	.....	.....	.....	.....	.....
ATOMIC ENERGY COMMISSION.....	5,705	3,156	1,980	932	62	182	2,549	929	893	207	520
FEDERAL AVIATION AGENCY.....	407	322	84	212	26	.....	85	26	59	.....	.....
FEDERAL COMMUNICATIONS COMMISSION	14	14	3	5	6	.....	.....	.....	.....	.....	.....
FEDERAL HOME LOAN BANK BOARD.....	11	11	.....	11	.....	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	13,607	13,107	.....	12,787	10	310	500	.....	.....	.....	500
NATIONAL AERONAUTICS & SPACE ADMINISTRATION.....	28,174	9,980	4,591	3,933	1,306	150	18,194	6,147	6,959	4,748	340
NATIONAL SCIENCE FOUNDATION.....	13,695	2,190	150	1,690	50	300	11,505	1,400	4,475	1,230	4,400
OFFICE OF EMERGENCY PLANNING.....	23	3	.....	3	.....	.....	20	.....	.....	20	.....
SMALL BUSINESS ADMINISTRATION....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	1,548	1,548	695	583	70	200	.....	.....	.....	.....	.....
TENNESSEE VALLEY AUTHORITY.....	25	25	.....	25	.....	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	1,150	1,150	350	100	450	250	.....	.....	.....	.....	.....
VETERANS ADMINISTRATION.....	385	279	51	7	221	.....	106	12	.....	94	.....

APPENDIX D

TABLE D-7. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY
FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL ALL ACTIVITIES	PUBLICATION & DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIUMS & AUDIO/VISUAL MEDIA			R&D IN INFO SCIENCE
		TOTAL	PUBLIC. & DIST.	SUPPLY OF PUBLS.	TOTAL	BIBLIO-GRAPHIC & REFER-ENCE	SPECIAL-IZED INFO CENTERS	TRANS-LATIONS	TOTAL	SYMPOSIUMS	AUDIO/VISUAL MEDIA & OTHER	
TOTAL, ALL AGENCIES.....	224,456	68,248	65,636	2,612	101,978	85,697	12,588	3,693	31,976	18,577	13,399	22,454
DEPARTMENTS												
DEPT. OF AGRICULTURE, TOTAL..	5,565	2,267	2,062	205	1,696	1,673	.....	23	1,403	1,340	63	199
AGRICULTURAL RESEARCH SERVICE	1,849	888	693	195	269	251	.....	18	692	692	.....	.....
COOP. STATE RESEARCH SERVICE	107	9	9	.....	.....	.....	.....	.....	97	97	.....	1
ECONOMIC RESEARCH SERVICE...	254	221	221	.....	1	1	.....	.....	32	32	.....	.....
FARMER COOPERATIVE SERVICE...	162	89	89	.....	.....	.....	.....	.....	13	7	.....	.....
FOREST SERVICE.....	1,643	825	815	10	229	224	.....	5	561	504	57	28
NATIONAL AGRICULTURAL LIBRARY	1,600	227	227	.....	1,197	1,197	.....	.....	6	6	.....	170
STATISTICAL REPORTING SERVICE	10	8	8	.....	.....	.....	.....	.....	2	2	.....	.....
DEPARTMENT OF COMMERCE, TOTAL	37,104	23,446	23,443	3	11,746	9,841	1,587	318	696	656	40	1,216
BUREAU OF THE CENSUS.....	216	51	51	.....	26	18	8	.....	40	40	.....	99
BUREAU OF PUBLIC ROADS.....	468	121	121	.....	145	145	.....	.....	20	20	.....	182
COAST & GEODETIC SURVEY.....	156	94	94	.....	20	10	.....	10	39	14	25	3
MARITIME ADMINISTRATION.....	4	.....	.....	.....	.....	.....	.....	.....	4	4	.....	.....
NATIONAL BUREAU OF STANDARDS	5,532	2,370	2,370	.....	2,427	676	1,543	208	541	526	15	194
OFFICE OF BUSINESS ECONOMICS	122	122	122	.....	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	30,130	20,550	20,550	.....	8,875	8,785	.....	.....	.....	.....	.....	.....
WEATHER BUREAU.....	476	138	135	3	253	207	36	10	22	22	.....	683
DEPARTMENT OF DEFENSE, TOTAL	98,605	20,274	19,812	462	45,990	42,000	3,689	301	17,989	8,193	9,796	14,352
DEPARTMENT OF THE ARMY.....	44,972	11,280	11,280	.....	26,043	25,898	.....	145	5,966	.....	5,966	1,683
DEPARTMENT OF THE NAVY.....	16,891	4,206	4,111	95	4,481	3,414	1,032	35	3,434	3,058	376	4,770
DEPARTMENT OF THE AIR FORCE..	25,507	4,385	4,257	128	5,091	2,568	2,402	121	8,176	5,022	3,154	7,855
DEFENSE AGENCIES.....	11,235	403	164	239	10,375	10,120	255	.....	413	113	300	44
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL...	24,206	3,963	3,037	926	11,855	8,376	2,810	669	6,246	4,756	1,490	2,142
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	121	40	38	2	38	37	.....	1	21	21	.....	22
FOOD AND DRUG ADMINISTRATION	746	201	201	.....	218	218	.....	.....	218	218	.....	109
OFFICE OF EDUCATION.....	539	122	122	.....	80	80	.....	.....	166	166	.....	171
PUBLIC HEALTH SERVICE.....	22,339	3,403	2,523	880	11,413	8,007	2,741	665	5,683	4,193	1,490	1,840
NATL. INSTITUTES OF HEALTH..	/13,511/	/1,978/	/1,365/	/613/	/5,672/	/3,278/	/2,059/	/335/	/4,233/	/3,705/	/528/	/1,628/
NATL. LIBRARY OF MEDICINE..	/4,829/	/317/	/81/	/236/	/4,479/	/4,196/	.....	.....	.....	.....	.....	/33/
SAINTE ELIZABETHS HOSPITAL....	5	4	4	.....	.....	.....	.....	.....	1	1	.....	.....
SOCIAL SECURITY ADMIN.....	105	97	97	.....	.....	.....	.....	.....	8	8	.....	.....
VOC. REHABILITATION ADMIN....	240	33	33	85	13	69	3	122	122
WELFARE ADMINISTRATION.....	111	63	52	11	21	21	27	27

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TABLE D-7.

AGENCY AND SUBDIVISION	TOTAL ALL ACTIVITIES	PUBLICATION & DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIUMS & AUDIO/VISUAL MEDIA			REQ IN INFO SCIENCE
		TOTAL	PUBLIC. & DIST.	SUPPORT OF PUBLS.	TOTAL	BIBLIOGRAPHIC & REFERENCE	SPECIALIZED INFO CENTERS	TRANSLATIONS	TOTAL	SYMPOSIUMS	AUDIO/VISUAL MEDIA & OTHER	
DEPT. OF THE INTERIOR, TOTAL	8,828	5,956	5,951	5	1,743	1,427	232	84	505	502	3	624
BU. OF COMMERCIAL FISHERIES	1,224	716	715	1	387	189	167	31	95	95	.....	26
BUREAU OF MINES	1,004	709	709	.....	245	245	.....	.....	50	50	.....	.....
BUREAU OF OUTDOOR RECREATION	10	2	.....	2	6	6	.....	.....	.....	.....	.....	2
BUREAU OF RECLAMATION	300	71	71	.....	198	124	63	11	25	22	3	6
BUREAU OF SPORT FISHERIES AND WILDLIFE	447	245	243	2	61	61	.....	.....	136	136	.....	5
DEPARTMENT LIBRARY	232	.....	.....	.....	218	214	.....	4	.....	.....	.....	14
GEOLOGICAL SURVEY	5,365	4,049	4,049	.....	605	567	.....	38	140	140	.....	571
NATIONAL PARK SERVICE	44	40	40	.....	1	1	.....	.....	3	3	.....	.....
OFFICE OF COAL RESEARCH	11	11	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF SALINE WATER	114	39	39	.....	20	20	.....	.....	55	55	.....	.....
OFFICE OF WATER RESOURCES RES	77	74	74	.....	2	.....	2	.....	1	1	.....	.....
DEPARTMENT OF LABOR, TOTAL	120	59	59	.....	27	27	.....	.....	34	34	.....	.....
BUREAU OF EMPLOYMENT SECURITY	40	6	6	.....	.....	.....	.....	.....	34	34	.....	.....
BUREAU OF LABOR STANDARDS	13	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH	53	26	26	.....	27	27	.....	.....	.....	.....	.....	.....
WOMENS BUREAU	14	14	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL	293	65	65	.....	128	128	.....	.....	100	100	.....	.....
DEPARTMENTAL FUNDS	40	.....	.....	.....	40	40	.....	.....	.....	.....	.....	.....
AGENCY FOR INTERNATIONAL DEV.	253	65	65	.....	88	88	.....	.....	100	100	.....	.....
DEPT. OF THE TREASURY, TOTAL	36	11	11	.....	25	.....	25	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD	36	11	11	.....	25	.....	25	.....	.....	.....	.....	.....
OTHER AGENCIES												
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	46	35	35	.....	10	10	.....	.....	1	1	.....	.....
ATOMIC ENERGY COMMISSION	4,615	2,285	2,285	.....	1,820	1,761	.....	59	194	194	.....	316
FEDERAL AVIATION AGENCY	383	99	99	.....	252	252	.....	.....	32	27	5	.....
FEDERAL COMMUNICATIONS COMM.	13	3	3	.....	5	5	.....	.....	5	5	.....	.....
FEDERAL HOME LOAN BANK BOARD	9	.....	.....	.....	9	9	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS	10,098	.....	.....	.....	9,986	9,986	.....	.....	5	5	.....	107
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	18,909	7,989	7,771	218	7,966	7,570	109	287	2,865	953	1,912	89
NATIONAL SCIENCE FOUNDATION	13,407	908	230	678	8,124	2,036	4,136	1,952	1,246	1,241	5	3,129
OFFICE OF EMERGENCY PLANNING	3	.....	.....	.....	3	3	.....	.....	.....	.....	.....	.....
SMALL BUSINESS ADMINISTRATION	11	11	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION	978	480	450	30	428	428	.....	.....	70	70	.....	.....
TENNESSEE VALLEY AUTHORITY	25	.....	.....	.....	25	25	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	980	350	265	85	85	85	.....	.....	265	180	85	280
VETERANS ADMINISTRATION	422	47	47	.....	55	55	.....	.....	320	320	.....	.....

TABLE C-6. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY
FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL ALL ACTIVITIES	PUBLICATION & DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIA & AUDIO/VISUAL MEDIA			RED IN INFO SCIENCE
		TOTAL	PUBLIC. & DIST.	SUPPORT OF PUBLS.	TOTAL	BIBLIO-GRAPHIC REFERENCE	SPECIALIZED INFO CENTERS	TRANSLATIONS	TOTAL	SYMPOSIA	AUDIO/VISUAL MEDIA & OTHER	
TOTAL, ALL AGENCIES.....	260,742	75,385	71,530	3,855	125,755	107,061	14,293	4,401	35,365	19,229	16,136	24,237
DEPARTMENTS												
DEPT. OF AGRICULTURE, TOTAL..	13,070	2,584	2,366	218	8,873	8,849	.....	24	1,473	1,379	94	140
AGRICULTURAL RESEARCH SERVICE	1,969	1,008	800	208	285	266	.....	19	676	676	.....	.....
COOP. STATE RESEARCH SERVICE	108	9	9	.....	.....	.....	.....	.....	97	97	.....	.....
ECONOMIC RESEARCH SERVICE....	281	220	220	.....	1	1	.....	.....	60	35	25	.....
FARMER COOPERATIVE SERVICE....	106	93	93	.....	.....	.....	.....	.....	13	7	6	.....
FOREST SERVICE.....	1,802	941	931	10	215	210	.....	5	618	555	63	28
NATIONAL AGRICULTURAL LIBRARY	8,790	303	303	.....	8,372	8,372	.....	.....	6	6	.....	109
STATISTICAL REPORTING SERVICE	14	10	10	.....	.....	.....	.....	.....	3	3	.....	1
DEPARTMENT OF COMMERCE, TOTAL	40,588	24,625	24,622	3	14,258	12,048	1,850	360	694	664	30	1,011
BUREAU OF THE CENSUS.....	241	76	76	.....	31	18	13	.....	39	39	.....	95
BUREAU OF PUBLIC ROADS.....	554	127	127	.....	147	147	.....	.....	20	20	.....	260
ECONOMIC DEVELOPMENT ADMIN....	175	175	175	.....	.....	.....	.....	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION....	919	376	373	3	273	217	36	20	212	182	30	58
MARITIME ADMINISTRATION.....	5	.....	.....	.....	.....	.....	.....	.....	5	5	.....	.....
NATIONAL BUREAU OF STANDARDS..	5,538	2,228	2,228	.....	2,707	656	1,801	250	396	396	.....	207
OFFICE OF BUSINESS ECONOMICS..	121	121	121	.....	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	33,035	21,522	21,522	.....	11,100	11,010	.....	90	22	22	.....	391
DEPARTMENT OF DEFENSE, TOTAL..	101,808	21,241	20,670	571	49,914	44,931	4,703	280	17,778	7,701	10,077	12,875
DEPARTMENT OF THE ARMY.....	47,953	12,102	12,102	.....	27,797	27,659	.....	138	6,271	.....	6,271	1,783
DEPARTMENT OF THE NAVY.....	17,597	4,293	4,173	120	5,197	3,479	1,680	38	3,408	3,031	377	4,699
DEPARTMENT OF THE AIR FORCE..	23,594	4,491	4,232	219	5,095	2,543	2,448	104	7,705	4,547	3,158	6,343
DEFENSE AGENCIES.....	12,664	395	163	232	11,825	11,250	575	.....	394	123	271	50
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL...	33,195	4,702	3,459	1,243	16,961	12,191	3,926	844	8,053	5,506	2,547	3,479
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	206	54	52	2	87	85	.....	2	30	30	.....	35
FOOD AND DRUG ADMINISTRATION..	2,359	100	100	.....	2,139	2,139	.....	.....	75	75	.....	45
OFFICE OF EDUCATION.....	795	116	116	.....	80	80	.....	.....	200	200	.....	399
PUBLIC HEALTH SERVICE.....	29,198	4,140	3,003	1,137	14,546	9,836	3,874	836	7,512	4,965	2,547	3,000
NATL. INSTITUTES OF HEALTH..	/16,098/	/2,341/	/1,615/	/726/	/6,162/	/3,054/	/2,746/	/362/	/5,009/	/4,408/	/601/	/2,586/
NATL. LIBRARY OF MEDICINE..	/6,807/	/467/	/126/	/341/	/6,185/	/5,779/	.....	/406/	.....	.....	.....	/155/
SAINT ELIZABETHS HOSPITAL....	6	4	4	.....	.....	.....	.....	.....	2	2	.....	.....
SOCIAL SECURITY ADMIN.....	162	148	148	.....	.....	.....	.....	.....	14	14	.....	.....
VOC. REHABILITATION ADMIN....	367	92	92	85	27	52	6	190	190
WELFARE ADMINISTRATION.....	102	48	36	12	24	24	30	30

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TABLE D-8.

AGENCY AND SUBDIVISION	TOTAL ALL ACTIVITIES	PUBLICATION & DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIA & AUDIO/VISUAL MEDIA			R&D IN INFO SCIENCE
		TOTAL	PUBLIC. & DIST.	SUPPORT OF PUBLS.	TOTAL	BIBLIOGRAPHIC REFERENCE	SPECIALIZED INFO CENTERS	TRANSLATIONS	TOTAL	SYMPOSIA	AUDIO/VISUAL MEDIA & OTHER	
DEPT. OF THE INTERIOR, TOTAL	10,884	6,728	6,723	5	2,964	2,232	620	112	566	559	7	626
BUREAU OF COMMERCIAL FISHERIES..	1,539	920	919	1	496	242	214	40	122	122	.....	1
BUREAU OF MINES.....	1,060	760	760	.....	250	250	.....	.....	50	50	.....	.....
BUREAU OF OUTDOOR RECREATION..	10	2	.....	2	6	6	.....	.....	.....	.....	.....	2
BUREAU OF RECLAMATION.....	501	152	152	.....	312	190	110	12	27	20	7	10
BUREAU OF SPORT FISHERIES AND WILDLIFE.....	588	265	263	2	177	177	.....	.....	141	141	.....	5
DEPARTMENT LIBRARY.....	582	.....	.....	.....	572	472	80	20	.....	.....	.....	10
GEOLOGICAL SURVEY.....	6,310	4,477	4,477	.....	1,080	830	210	40	195	155	.....	598
NATIONAL PARK SERVICE.....	57	53	53	.....	1	1	.....	.....	3	3	.....	.....
OFFICE OF COAL RESEARCH.....	20	15	15	.....	.....	.....	.....	.....	5	5	.....	.....
OFFICE OF SALINE WATER.....	160	43	43	.....	64	64	.....	.....	53	53	.....	.....
OFFICE OF WATER RESOURCES RES.	57	41	41	.....	6	.....	6	.....	10	10	.....	.....
DEPARTMENT OF LABOR, TOTAL	136	69	69	.....	33	33	.....	.....	34	34	.....	.....
BUREAU OF EMPLOYMENT SECURITY	44	10	10	.....	.....	.....	.....	.....	34	34	.....	.....
BUREAU OF LABOR STANDARDS.....	13	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH....	65	32	32	.....	33	33	.....	.....	.....	.....	.....	.....
WOMENS BUREAU.....	14	14	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL	149	.....	.....	.....	149	149	.....	.....	.....	.....	.....	.....
DEPARTMENTAL FUNDS.....	41	.....	.....	.....	41	41	.....	.....	.....	.....	.....	.....
AGENCY FOR INTERNATIONAL DEV.	108	.....	.....	.....	108	108	.....	.....	.....	.....	.....	.....
DEPT. OF THE TREASURY, TOTAL	45	13	13	.....	32	.....	32	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD	45	13	13	.....	32	.....	32	.....	.....	.....	.....	.....
OTHER AGENCIES												
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	47	35	35	.....	11	11	.....	.....	1	1	.....	.....
ATOMIC ENERGY COMMISSION.....	5,138	2,565	2,565	.....	1,640	1,560	.....	80	215	215	.....	718
FEDERAL AVIATION AGENCY.....	493	113	113	.....	245	245	.....	.....	135	130	5	.....
FEDERAL COMMUNICATIONS COMM.	13	3	3	.....	5	5	.....	.....	5	5	.....	.....
FEDERAL HOME LOAN BANK BOARD	10	.....	.....	.....	10	10	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS.....	12,707	.....	.....	.....	12,290	12,290	.....	.....	7	7	.....	410
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.....	24,771	10,070	9,732	338	9,945	9,199	455	291	4,318	1,083	3,235	438
NATIONAL SCIENCE FOUNDATION..	14,692	1,575	235	1,340	7,562	2,445	2,707	2,410	1,280	1,250	30	4,275
OFFICE OF EMERGENCY PLANNING..	8	.....	.....	.....	3	3	.....	.....	5	5	.....	.....
SMALL BUSINESS ADMINISTRATION	11	11	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION.....	1,288	637	600	37	566	566	.....	.....	70	70	.....	15
TENNESSEE VALLEY AUTHORITY....	25	.....	.....	.....	25	25	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY.....	1,100	350	250	100	100	100	.....	.....	400	300	100	250
VETERANS ADMINISTRATION.....	564	64	64	.....	169	169	.....	.....	331	320	11	.....

APPENDIX D

TABLE C-9. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY
FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	TOTAL ALL ACTIVITIES	PUBLICATION & DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIA & AUDIO/VISUAL MEDIA			R&D IN INFO SCIENCE
		TOTAL	PUBLIC. & CIST.	SUPPORT OF PUBLS.	TOTAL	BIBLIOGRAPHIC REFERENCE	SPECIALIZED INFO CENTERS	TRANSLATIONS	TOTAL	SYMPOSIA	AUDIO/VISUAL MEDIA & OTHER	
TOTAL, ALL AGENCIES.....	273,118	79,810	75,494	4,316	131,561	112,079	14,643	4,839	36,599	19,605	16,914	25,148
DEPARTMENTS												
DEPT. OF AGRICULTURE, TOTAL..	6,926	2,781	2,549	232	2,179	2,159	.....	20	1,501	1,432	69	465
AGRICULTURAL RESEARCH SERVICE	2,069	1,093	871	222	300	280	.....	20	676	676	.....	.....
COOP. STATE RESEARCH SERVICE	105	7	7	.....	.....	.....	.....	.....	97	97	.....	.....
ECONOMIC RESEARCH SERVICE....	267	233	233	.....	1	1	.....	.....	33	33	.....	.....
FARMER COOPERATIVE SERVICE....	107	94	94	.....	.....	.....	.....	.....	13	7	6	.....
FOREST SERVICE.....	1,864	950	940	10	230	230	.....	.....	670	607	63	14
NATIONAL AGRICULTURAL LIBRARY	2,501	395	395	.....	1,648	1,648	.....	.....	9	9	.....	449
STATISTICAL REPORTING SERVICE	19	9	9	.....	.....	.....	.....	.....	3	3	.....	1
DEPARTMENT OF COMMERCE, TOTAL	43,305	27,102	27,097	5	14,564	12,264	1,910	302	687	657	30	952
BUREAU OF THE CENSUS.....	241	74	74	.....	31	18	19	.....	39	39	.....	95
BUREAU OF PUBLIC ROADS.....	468	123	123	.....	140	140	.....	.....	20	20	.....	185
ECONOMIC DEVELOPMENT ADMIN....	200	200	200	.....	.....	.....	.....	.....	.....	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION....	964	398	393	5	296	234	40	22	212	182	30	58
NATIONAL BUREAU OF STANDARDS..	6,766	3,318	3,318	.....	2,842	707	1,865	270	396	396	.....	210
OFFICE OF BUSINESS ECONOMICS..	129	129	129	.....	.....	.....	.....	.....	.....	.....	.....	.....
PATENT OFFICE.....	34,537	22,858	22,858	.....	11,255	11,165	.....	90	20	20	.....	404
DEPARTMENT OF DEFENSE, TOTAL..	98,428	20,946	20,308	638	48,821	43,463	5,056	302	16,677	7,661	9,016	11,984
DEPARTMENT OF THE ARMY.....	45,985	11,685	11,685	.....	26,469	26,318	.....	151	6,049	.....	6,049	1,782
DEPARTMENT OF THE NAVY.....	17,207	4,479	4,368	111	5,468	3,506	1,916	46	3,532	3,141	391	3,728
DEPARTMENT OF THE AIR FORCE..	23,041	4,363	4,071	292	5,574	2,979	2,490	105	6,700	4,395	2,305	6,404
DEFENSE AGENCIES.....	12,195	419	184	235	11,310	10,660	650	.....	396	125	271	70
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL....	47,797	5,453	3,835	1,618	29,805	23,842	4,852	1,111	8,620	5,896	2,724	3,919
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	220	60	58	2	90	88	.....	2	30	30	.....	40
FOOD AND DRUG ADMINISTRATION..	2,683	115	115	.....	2,430	2,430	.....	.....	86	86	.....	52
OFFICE OF EDUCATION.....	2,901	122	122	.....	2,180	2,180	.....	.....	200	200	.....	399
PUBLIC HEALTH SERVICE.....	41,397	4,870	3,336	1,534	24,992	19,092	4,797	1,103	8,107	5,383	2,724	3,428
NATL. INSTITUTES OF HEALTH..	/17,735/	/2,466/	/1,666/	/800/	/7,116/	/3,354/	/3,402/	/360/	/5,459/	/4,792/	/667/	/2,694/
NATL. LIBRARY OF MEDICINE..	/16,427/	/816/	/189/	/627/	/15,311/	/14,668/	.....	/643/	.....	.....	.....	/300/
SAINT ELIZABETHS HOSPITAL.....	6	4	4	.....	.....	.....	.....	.....	2	2	.....	.....
SOCIAL SECURITY ADMIN.....	189	173	173	.....	.....	.....	.....	.....	16	16	.....	.....
VOC. REHABILITATION ADMIN.....	304	70	70	88	27	55	6	146	146
WELFARE ADMINISTRATION.....	97	39	27	12	25	25	33	33

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TABLE O-9.

AGENCY AND SUBDIVISION	TOTAL ALL ACTIVITIES	PUBLICATION & DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIUM & AUDIO/VISUAL MEDIA			REC'D IN INFO SCIENCE
		TOTAL	PUBLIC. & DIST.	SUPPORT OF PUBLS.	TOTAL	BIBLIO-GRAPHIC REFER. ENCE	SPECIALIZED INFO CENTERS	TRANSLATIONS	TOTAL	SYMPOSIUM	AUDIO/VISUAL MEDIA & OTHER	
DEPT. OF THE INTERIOR, TOTAL	11,416	6,918	6,915	3	3,247	2,278	848	121	575	568	7	676
BU. OF COMMERCIAL FISHERIES	1,650	985	984	1	533	260	230	43	131	131	.....	1
BUREAU OF MINES	1,085	785	785	.....	250	250	.....	.....	50	50	.....	.....
BUREAU OF OUTDOOR RECREATION	22	2	2	.....	12	12	.....	.....	.....	.....	.....	8
BUREAU OF RECLAMATION	568	187	187	.....	340	197	129	18	24	19	7	15
BUREAU OF SPORT FISHERIES AND WILDLIFE	634	283	281	2	179	179	.....	.....	166	166	.....	6
DEPARTMENT LIBRARY	568	.....	.....	.....	548	445	83	20	.....	.....	.....	20
GEOLOGICAL SURVEY	6,617	4,517	4,517	.....	1,306	866	400	40	168	168	.....	626
NATIONAL PARK SERVICE	65	61	61	.....	1	1	.....	.....	3	3	.....	.....
OFFICE OF COAL RESEARCH	32	23	23	.....	3	3	.....	.....	6	6	.....	.....
OFFICE OF SALINE WATER	125	45	45	.....	65	65	.....	.....	15	15	.....	.....
OFFICE OF WATER RESOURCES RES.	50	30	30	.....	10	.....	10	.....	10	10	.....	.....
DEPARTMENT OF LABOR, TOTAL	140	70	70	.....	35	35	.....	.....	35	35	.....	.....
BUREAU OF EMPLOYMENT SECURITY	58	23	23	.....	.....	.....	.....	.....	35	35	.....	.....
BUREAU OF LABOR STANDARDS	13	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
OFFICE OF MANPOWER, POLICY, EVALUATION AND RESEARCH	69	34	34	.....	35	35	.....	.....	.....	.....	.....	.....
DEPARTMENT OF STATE, TOTAL	254	65	65	.....	186	186	.....	.....	3	3	.....	.....
DEPARTMENTAL FUNDS	45	.....	.....	.....	42	42	.....	.....	3	3	.....	.....
AGENCY FOR INTERNATIONAL DEV.	209	65	65	.....	144	144	.....	.....	.....	.....	.....	.....
DEPT. OF THE TREASURY, TOTAL	54	15	15	.....	39	.....	39	.....	.....	.....	.....	.....
UNITED STATES COAST GUARD	54	15	15	.....	39	.....	39	.....	.....	.....	.....	.....
OTHER AGENCIES												
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	47	35	35	.....	11	11	.....	.....	1	1	.....	.....
ATOMIC ENERGY COMMISSION	5,705	2,909	2,909	.....	1,825	1,725	.....	100	269	269	.....	702
FEDERAL AVIATION AGENCY	407	110	110	.....	271	271	.....	.....	26	21	.....	5
FEDERAL COMMUNICATIONS COMM.	14	3	3	.....	5	5	.....	.....	6	6	.....	.....
FEDERAL HOME LOAN BANK BOARD	11	.....	.....	.....	11	11	.....	.....	.....	.....	.....	.....
LIBRARY OF CONGRESS	13,607	.....	.....	.....	12,787	12,787	.....	.....	10	10	.....	810
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	28,174	10,738	10,363	375	10,892	9,809	790	293	6,054	1,121	4,933	490
NATIONAL SCIENCE FOUNDATION	13,695	1,550	250	1,300	6,165	2,515	1,140	2,510	1,280	1,250	30	4,700
OFFICE OF EMERGENCY PLANNING	23	.....	.....	.....	3	3	.....	.....	20	20	.....	.....
SMALL BUSINESS ADMINISTRATION	7	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
SMITHSONIAN INSTITUTION	1,548	695	650	45	583	583	.....	.....	70	70	.....	200
TENNESSEE VALLEY AUTHORITY	25	.....	.....	.....	25	25	.....	.....	.....	.....	.....	.....
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	1,150	350	250	100	100	100	.....	.....	450	350	100	250
VETERANS ADMINISTRATION	385	63	63	.....	7	7	.....	.....	315	315	.....	.....

APPENDIX E

STATISTICAL TABLES, PART III

(Federal Funds for Collection of General-Purpose Scientific Data)

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NOTES

- Estimates for 1967 are based on requested amounts included in *The Budget, 1967*, hence they do not reflect subsequent congressional action.

- The National Science Foundation separated by data collection activity the obligations for civil functions of the Department of the Army.

- The entire amount designated by the National Institutes of Health (HEW) for collection of general-purpose scientific data is also reported as part of the obligations for research and development in Part I of this publication.

- Source of data is the National Science Foundation.

APPENDIX E

TABLE E-1. SUMMARY OF FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

PERFORMER AND ACTIVITY	ACTUAL 1965			ESTIMATES					
	TOTAL	NATURAL PHENOMENA	SOCIAL PHENOMENA	1966			1967		
				TOTAL	NATURAL PHENOMENA	SOCIAL PHENOMENA	TOTAL	NATURAL PHENOMENA	SOCIAL PHENOMENA
TOTAL OBLIGATIONS FOR COLLECTION OF GENERAL PURPOSE SCIENTIFIC DATA.....	342,812	252,089	90,723	333,001	240,898	92,103	381,204	278,315	102,889
BY PERFORMER									
INTRAMURAL.....	334,890	247,333	87,557	323,268	238,151	85,117	361,712	266,062	95,650
EXTRAMURAL.....	7,922	4,756	3,166	9,733	2,747	6,986	19,492	12,253	7,239
BY ACTIVITY									
GATHERING, PROCESSING AND COLLATING.....	198,189	123,578	74,611	198,050	125,785	72,265	217,352	142,027	75,325
ANALYSIS.....	33,860	23,856	10,004	37,727	26,481	11,246	41,692	28,249	13,443
PUBLICATION.....	45,035	42,158	2,877	35,642	32,077	3,565	37,743	33,736	3,957
EQUIPMENT FOR DATA GATHERING, PROCESSING AND COLLATING.....	65,728	62,497	3,231	61,582	56,555	5,027	84,417	74,253	10,164

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TABLE E-2. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	ACTUAL	ESTIMATES	
	1965	1966	1967
TOTAL, ALL AGENCIES.....	342,812	333,001	381,204
DEPARTMENTS			
DEPARTMENT OF AGRICULTURE, TOTAL.....	33,255	36,565	32,772
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE.....	27	29	26
FARMER COOPERATIVE SERVICE.....	52	51	51
SOIL CONSERVATION SERVICE.....	21,928	22,634	19,427
STATISTICAL REPORTING SERVICE.....	11,248	13,851	13,268
DEPARTMENT OF COMMERCE, TOTAL.....	161,776	149,120	165,373
BUREAU OF THE CENSUS.....	35,692	25,950	25,467
COAST AND GEODETIC SURVEY.....	22,134	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	70	300	300
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	.....	122,870	139,606
WEATHER BUREAU.....	103,880	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	60,248	45,589	68,773
DEPARTMENT OF THE ARMY-CIVIL FUNCTIONS.....	2,893	2,995	4,326
DEPARTMENT OF THE NAVY.....	57,355	42,594	64,447
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	12,137	15,155	21,426
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	1,120	1,258	1,510
OFFICE OF EDUCATION.....	1,536	2,612	5,720
PUBLIC HEALTH SERVICE.....	8,201	9,788	12,437
NATIONAL INSTITUTES OF HEALTH.....	/914/	/915/	/915/
SOCIAL SECURITY ADMINISTRATION.....	985	1,147	1,351
WELFARE ADMINISTRATION.....	295	350	408
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	.....	610	530
DEPARTMENT OF THE INTERIOR, TOTAL.....	39,266	41,630	42,054
BUREAU OF COMMERCIAL FISHERIES.....	1,470	1,476	1,525
BUREAU OF LAND MANAGEMENT.....	29	29	29
BUREAU OF MINES.....	2,203	2,565	2,820
BUREAU OF OUTDOOR RECREATION.....	.....	5	20
GEOLOGICAL SURVEY.....	35,564	37,555	37,660
DEPARTMENT OF JUSTICE, TOTAL.....	742	793	859
FEDERAL BUREAU OF INVESTIGATION.....	515	573	632
IMMIGRATION AND NATURALIZATION SERVICE.....	227	220	227
DEPARTMENT OF LABOR, TOTAL.....	16,261	16,788	17,393
BUREAU OF EMPLOYMENT SECURITY.....	119	124	136
BUREAU OF LABOR STATISTICS.....	16,142	16,664	17,257
DEPARTMENT OF STATE, TOTAL.....	3,534	7,377	7,338
DEPARTMENTAL FUNDS.....	89	99	99
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	3,445	7,278	7,239
DEPARTMENT OF THE TREASURY, TOTAL.....	9,591	8,540	8,820
INTERNAL REVENUE SERVICE.....	5,301	4,175	4,343
UNITED STATES COAST GUARD.....	4,290	4,365	4,477
OTHER AGENCIES			
FEDERAL AVIATION AGENCY.....	921	961	974
FEDERAL COMMUNICATIONS COMMISSION.....	16	20	20
FEDERAL HOME LOAN BANK BOARD.....	701	760	855
FEDERAL POWER COMMISSION.....	882	879	911
FEDERAL TRADE COMMISSION.....	296	296	301
HOUSING AND HOME FINANCE AGENCY.....	285	.....	.....
NATIONAL SCIENCE FOUNDATION.....	2,091	1,763	1,814
OFFICE OF ECONOMIC OPPORTUNITY.....	75	5,165	9,199
SECURITIES AND EXCHANGE COMMISSION.....	321	322	334
SMALL BUSINESS ADMINISTRATION.....	.....	150	935
TENNESSEE VALLEY AUTHORITY.....	309	405	397
UNITED STATES TARIFF COMMISSION.....	94	104	117
VETERANS ADMINISTRATION.....	9	9	9

TABLE E-3. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1965

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	NATURAL PHENOMENA					SOCIAL PHENOMENA				
	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLICATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLICATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING
TOTAL, ALL AGENCIES.....	252,089	123,578	23,856	42,158	62,497	90,723	74,611	10,004	2,877	3,231
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL...	21,928	19,428	677	1,738	85	11,327	7,859	2,527	554	377
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE.....	.....	.....	.....	.....	.....	27	6	13	8	.....
FARMER COOPERATIVE SERVICE.....	.....	.....	.....	.....	.....	52	25	23	2	2
SOIL CONSERVATION SERVICE.....	21,928	19,428	677	1,738	85	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	.....	.....	.....	.....	.....	11,248	7,828	2,501	544	375
DEPARTMENT OF COMMERCE, TOTAL.....	126,014	58,844	16,932	16,737	33,502	35,762	34,452	436	430	444
BUREAU OF THE CENSUS.....	.....	.....	.....	.....	.....	35,692	34,382	436	430	444
COAST AND GEODETIC SURVEY.....	22,134	16,228	785	3,172	1,949	.....	.....	.....	.....	.....
ECONOMIC DEVELOPMENT ADMINISTRATION.....	.....	.....	.....	.....	.....	70	70	.....	.....	.....
WEATHER BUREAU.....	103,880	42,616	16,147	13,565	31,552	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	59,203	11,789	1,576	19,501	26,337	1,045	732	125	115	73
DEPARTMENT OF THE ARMY-CIVIL FUNCTIONS.....	1,848	1,294	222	203	129	1,045	732	125	115	73
DEPARTMENT OF THE NAVY.....	57,355	10,495	1,354	19,298	26,208	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	1,855	1,295	225	235	100	10,282	7,679	1,796	404	403
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	1,120	1,048	56	16	.....	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	.....	.....	.....	.....	.....	1,536	1,106	207	69	154
PUBLIC HEALTH SERVICE.....	735	247	169	219	100	7,466	5,479	1,447	296	244
NATIONAL INSTITUTES OF HEALTH.....	.....	.....	.....	.....	.....	/914/	/634/	/272/	/8/	.....
SOCIAL SECURITY ADMINISTRATION.....	.....	.....	.....	.....	.....	985	978	.....	2	5
WELFARE ADMINISTRATION.....	.....	.....	.....	.....	.....	295	116	142	37	.....
DEPARTMENT OF THE INTERIOR, TOTAL..	35,593	24,921	4,390	3,808	2,474	3,673	2,824	402	381	66
BUREAU OF COMMERCIAL FISHERIES.....	.....	.....	.....	.....	.....	1,470	1,062	125	262	21
BUREAU OF LAND MANAGEMENT.....	29	25	.....	4	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	.....	.....	.....	.....	.....	2,203	1,762	277	119	45
GEOLOGICAL SURVEY.....	35,564	24,896	4,390	3,804	2,474	.....	.....	.....	.....	.....
DEPARTMENT OF JUSTICE, TOTAL.....	.....	.....	.....	.....	.....	742	502	92	69	79
FEDERAL BUREAU OF INVESTIGATION.....	.....	.....	.....	.....	.....	515	304	76	68	67
IMMIGRATION & NATURALIZATION SERV..	.....	.....	.....	.....	.....	227	198	16	1	12
DEPARTMENT OF LABOR, TOTAL.....	.....	.....	.....	.....	.....	16,261	11,973	3,248	588	452
BUREAU OF EMPLOYMENT SECURITY.....	.....	.....	.....	.....	.....	119	91	22	6	.....
BUREAU OF LABOR STATISTICS.....	.....	.....	.....	.....	.....	16,142	11,882	3,226	582	452
DEPARTMENT OF STATE, TOTAL.....	2,897	2,897	.....	.....	.....	637	622	.....	15	.....
DEPARTMENTAL FUNDS.....	.....	.....	.....	.....	.....	89	74	.....	15	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	2,897	2,897	.....	.....	.....	548	548	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL..	4,290	4,290	.....	.....	.....	5,301	3,441	498	87	1,275
INTERNAL REVENUE SERVICE.....	.....	.....	.....	.....	.....	5,301	3,441	498	87	1,275
UNITED STATES COAST GUARD.....	4,290	4,290	.....	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES										
FEDERAL AVIATION AGENCY.....	.....	.....	.....	.....	.....	921	830	46	22	23
FEDERAL COMMUNICATIONS COMMISSION..	.....	.....	.....	.....	.....	18	14	2	2	.....
FEDERAL HOME LOAN BANK BOARD.....	.....	.....	.....	.....	.....	701	511	128	62	.....
FEDERAL POWER COMMISSION.....	.....	.....	.....	.....	.....	882	541	232	86	23
FEDERAL TRADE COMMISSION.....	.....	.....	.....	.....	.....	296	288	4	4	.....
HOUSING AND HOME FINANCE AGENCY....	.....	.....	.....	.....	.....	285	285	.....	.....	.....
NATIONAL SCIENCE FOUNDATION.....	.....	.....	.....	.....	.....	2,091	1,642	411	38	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	.....	.....	.....	.....	.....	75	75	.....	.....	.....
SECURITIES AND EXCHANGE COMMISSION.	.....	.....	.....	.....	.....	321	298	.....	7	16
TENNESSEE VALLEY AUTHORITY.....	309	114	56	139	.....	.....	.....	.....	.....	.....
UNITED STATES TARIFF COMMISSION.....	.....	.....	.....	.....	.....	94	40	41	13	.....
VETERANS ADMINISTRATION.....	.....	.....	.....	.....	.....	9	3	6	.....	.....

PART III, STATISTICAL TABLES

TABLE E-4. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1966--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	NATURAL PHENOMENA					SOCIAL PHENOMENA				
	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLICATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING	TOTAL	GATHERING PROCESSING COLLATION	ANALYSIS	PUBLICATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING
TOTAL, ALL AGENCIES.....	240,898	125,785	26,481	32,077	56,555	92,103	72,265	11,246	3,565	5,027
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL...	23,634	19,981	704	1,864	85	13,931	8,569	2,777	611	1,974
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE.....	.....	.....	.....	.....	.....	29	6	12	11	.....
FARMER COOPERATIVE SERVICE.....	.....	.....	.....	.....	.....	51	24	23	2	2
SOIL CONSERVATION SERVICE.....	22,634	19,981	704	1,864	85	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	.....	.....	.....	.....	.....	13,851	8,539	2,742	598	1,972
DEPARTMENT OF COMMERCE, TOTAL.....	122,870	62,636	18,113	17,435	24,686	26,250	23,958	665	768	859
BUREAU OF THE CENSUS.....	.....	.....	.....	.....	.....	25,950	23,658	665	768	859
ECONOMIC DEVELOPMENT ADMINISTRATION	.....	.....	.....	.....	.....	300	300	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	122,870	62,636	18,113	17,435	24,686	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	44,444	4,613	2,511	8,307	29,013	1,145	802	137	126	80
DEPARTMENT OF THE ARMY-CIVIL FUNCTIONS.....	1,850	1,295	222	204	129	1,145	802	137	126	80
DEPARTMENT OF THE NAVY.....	42,594	3,318	2,289	8,103	28,884	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	2,066	1,389	294	283	100	13,089	9,547	2,431	509	562
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	1,258	1,140	93	25	.....	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	.....	.....	.....	.....	.....	2,612	1,881	353	118	260
PUBLIC HEALTH SERVICE.....	808	249	201	258	100	8,980	6,412	1,904	352	312
NATIONAL INSTITUTES OF HEALTH.....	.....	.....	.....	.....	.....	795	633	272	10	.....
SOCIAL SECURITY ADMINISTRATION.....	.....	.....	.....	.....	.....	1,147	1,132	.....	5	10
WELFARE ADMINISTRATION.....	.....	.....	.....	.....	.....	350	142	174	34	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	.....	.....	.....	.....	.....	610	610	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL..	37,584	26,102	4,796	4,015	2,671	4,046	3,117	420	428	81
BUREAU OF COMMERCIAL FISHERIES.....	.....	.....	.....	.....	.....	1,476	1,029	130	296	21
BUREAU OF LAND MANAGEMENT.....	29	25	.....	4	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	.....	.....	.....	.....	.....	2,565	2,085	290	130	60
BUREAU OF OUTDOOR RECREATION.....	.....	.....	.....	.....	.....	5	3	.....	2	.....
GEOLOGICAL SURVEY.....	37,555	26,077	4,796	4,011	2,671	.....	.....	.....	.....	.....
DEPARTMENT OF JUSTICE, TOTAL.....	.....	.....	.....	.....	.....	793	532	103	78	80
FEDERAL BUREAU OF INVESTIGATION.....	.....	.....	.....	.....	.....	573	345	86	77	67
IMMIGRATION & NATURALIZATION SERV..	.....	.....	.....	.....	.....	220	189	17	1	13
DEPARTMENT OF LABOR, TOTAL.....	.....	.....	.....	.....	.....	16,788	12,898	2,796	569	525
BUREAU OF EMPLOYMENT SECURITY.....	.....	.....	.....	.....	.....	124	94	23	7	.....
BUREAU OF LABOR STATISTICS.....	.....	.....	.....	.....	.....	16,664	12,804	2,773	562	525
DEPARTMENT OF STATE, TOTAL.....	6,530	6,530	.....	.....	.....	847	828	.....	19	.....
DEPARTMENTAL FUNDS.....	.....	.....	.....	.....	.....	99	80	.....	19	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	6,530	6,530	.....	.....	.....	748	748	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL..	4,365	4,365	.....	.....	.....	4,175	3,260	530	100	285
INTERNAL REVENUE SERVICE.....	.....	.....	.....	.....	.....	4,175	3,260	530	100	285
UNITED STATES COAST GUARD.....	4,365	4,365	.....	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES										
FEDERAL AVIATION AGENCY.....	.....	.....	.....	.....	.....	961	866	47	24	24
FEDERAL COMMUNICATIONS COMMISSION..	.....	.....	.....	.....	.....	20	16	2	2	.....
FEDERAL HOME LOAN BANK BOARD.....	.....	.....	.....	.....	.....	740	554	138	68	.....
FEDERAL POWER COMMISSION.....	.....	.....	.....	.....	.....	879	535	227	87	30
FEDERAL TRADE COMMISSION.....	.....	.....	.....	.....	.....	296	288	4	4	.....
NATIONAL SCIENCE FOUNDATION.....	.....	.....	.....	.....	.....	1,763	1,306	407	50	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	.....	.....	.....	.....	.....	5,165	4,103	482	97	483
SECURITIES AND EXCHANGE COMMISSION..	.....	.....	.....	.....	.....	322	291	.....	7	24
SMALL BUSINESS ADMINISTRATION.....	.....	.....	.....	.....	.....	150	120	30	.....	.....
TENNESSEE VALLEY AUTHORITY.....	405	169	63	173	.....	.....	.....	.....	.....	.....
UNITED STATES TARIFF COMMISSION.....	.....	.....	.....	.....	.....	104	42	44	18	.....
VETERANS ADMINISTRATION.....	.....	.....	.....	.....	.....	9	3	6	.....	.....

APPENDIX E

TABLE E-5. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1967--ESTIMATED

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISION	NATURAL PHENOMENA					SOCIAL PHENOMENA				
	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLICATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLICATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING
TOTAL, ALL AGENCIES.....	278,315	142,027	28,249	33,785	74,253	102,889	75,325	13,443	3,957	10,164
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL...	19,427	16,596	755	1,991	85	13,345	9,160	2,934	638	613
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE.....	.....	.....	.....	.....	.....	26	7	11	8	.....
FARMER COOPERATIVE SERVICE.....	.....	.....	.....	.....	.....	51	24	23	2	2
SOIL CONSERVATION SERVICE.....	19,427	16,596	755	1,991	85	.....	.....	.....	.....	.....
STATISTICAL REPORTING SERVICE.....	.....	.....	.....	.....	.....	13,268	9,129	2,900	628	611
DEPARTMENT OF COMMERCE, TOTAL.....	139,606	69,368	19,909	17,969	32,360	25,767	22,254	602	530	2,381
BUREAU OF THE CENSUS.....	.....	.....	.....	.....	.....	25,467	21,954	602	530	2,381
ECONOMIC DEVELOPMENT ADMINISTRATION	.....	.....	.....	.....	.....	300	300	.....	.....	.....
ENVIRONMENTAL SCIENCES SERVICES ADMINISTRATION.....	139,606	69,368	19,909	17,969	32,360	.....	.....	.....	.....	.....
DEPARTMENT OF DEFENSE, TOTAL.....	67,699	17,162	2,241	9,310	38,986	1,074	752	129	118	75
DEPARTMENT OF THE ARMY-CIVIL FUNCTIONS.....	3,252	2,276	390	358	228	1,074	752	129	118	75
DEPARTMENT OF THE NAVY.....	64,447	14,886	1,851	8,952	38,758	.....	.....	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	2,370	1,586	360	324	100	19,056	12,983	3,412	703	1,958
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION.....	1,510	1,350	130	30	.....	.....	.....	.....	.....	.....
OFFICE OF EDUCATION.....	.....	.....	.....	.....	.....	5,720	4,118	772	257	573
PUBLIC HEALTH SERVICE.....	860	236	230	294	100	11,577	7,359	2,436	403	1,379
NATIONAL INSTITUTES OF HEALTH	.....	.....	.....	.....	.....	/915/	/633/	/272/	/10/	.....
SOCIAL SECURITY ADMINISTRATION.....	.....	.....	.....	.....	.....	1,351	1,340	.....	5	6
WELFARE ADMINISTRATION.....	.....	.....	.....	.....	.....	408	166	204	38	.....
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....	.....	.....	.....	.....	.....	530	530	.....	.....	.....
DEPARTMENT OF THE INTERIOR, TOTAL..	37,689	26,023	4,921	4,023	2,722	4,365	3,117	666	461	121
BUREAU OF COMMERCIAL FISHERIES.....	.....	.....	.....	.....	.....	1,525	1,052	136	316	21
BUREAU OF LAND MANAGEMENT.....	29	25	.....	4	.....	.....	.....	.....	.....	.....
BUREAU OF MINES.....	.....	.....	.....	.....	.....	2,820	2,050	530	140	100
BUREAU OF OUTDOOR RECREATION.....	.....	.....	.....	.....	.....	20	15	.....	5	.....
GEOLOGICAL SURVEY.....	37,660	25,998	4,921	4,019	2,722	.....	.....	.....	.....	.....
DEPARTMENT OF JUSTICE, TOTAL.....	.....	.....	.....	.....	.....	859	576	116	86	81
FEDERAL BUREAU OF INVESTIGATION...	.....	.....	.....	.....	.....	632	379	99	85	69
IMMIGRATION & NATURALIZATION SERV..	.....	.....	.....	.....	.....	227	197	17	1	12
DEPARTMENT OF LABOR, TOTAL.....	.....	.....	.....	.....	.....	17,393	13,017	2,941	874	561
BUREAU OF EMPLOYMENT SECURITY.....	.....	.....	.....	.....	.....	136	106	23	7	.....
BUREAU OF LABOR STATISTICS.....	.....	.....	.....	.....	.....	17,257	12,911	2,918	867	561
DEPARTMENT OF STATE, TOTAL.....	6,650	6,650	.....	.....	.....	688	669	.....	19	.....
DEPARTMENTAL FUNDS.....	.....	.....	.....	.....	.....	99	80	.....	19	.....
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	6,650	6,650	.....	.....	.....	589	589	.....	.....	.....
DEPARTMENT OF THE TREASURY, TOTAL..	4,477	4,477	.....	.....	.....	4,343	3,398	560	100	285
INTERNAL REVENUE SERVICE.....	.....	.....	.....	.....	.....	4,343	3,398	560	100	285
UNITED STATES COAST GUARD.....	4,477	4,477	.....	.....	.....	.....	.....	.....	.....	.....
OTHER AGENCIES										
FEDERAL AVIATION AGENCY.....	.....	.....	.....	.....	.....	974	877	50	24	23
FEDERAL COMMUNICATIONS COMMISSION..	.....	.....	.....	.....	.....	20	16	2	2	.....
FEDERAL HOME LOAN BANK BOARD.....	.....	.....	.....	.....	.....	855	623	156	76	.....
FEDERAL POWER COMMISSION.....	.....	.....	.....	.....	.....	911	558	240	93	20
FEDERAL TRADE COMMISSION.....	.....	.....	.....	.....	.....	301	299	4	4	.....
NATIONAL SCIENCE FOUNDATION.....	.....	.....	.....	.....	.....	1,814	1,331	433	50	.....
OFFICE OF ECONOMIC OPPORTUNITY.....	.....	.....	.....	.....	.....	9,199	4,500	928	150	3,621
SECURITIES AND EXCHANGE COMMISSION.	.....	.....	.....	.....	.....	334	302	.....	7	25
SMALL BUSINESS ADMINISTRATION.....	.....	.....	.....	.....	.....	935	319	216	.....	400
TENNESSEE VALLEY AUTHORITY.....	397	165	63	169	.....	.....	.....	.....	.....	.....
UNITED STATES TARIFF COMMISSION....	.....	.....	.....	.....	.....	117	47	48	22	.....
VETERANS ADMINISTRATION.....	.....	.....	.....	.....	.....	9	3	6	.....	.....

TABLE E-6. FEDERAL EXTRAMURAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY
FISCAL YEARS 1965, 1966, AND 1967

-THOUSANDS OF DOLLARS-

AGENCY AND SUBDIVISIONS	NATURAL PHENOMENA			SOCIAL PHENOMENA		
	ACTUAL 1965	ESTIMATES		ACTUAL 1965	ESTIMATES	
		1966	1967		1966	1967
TOTAL, ALL AGENCIES.....	4,756	2,747	12,253	3,166	6,986	7,239
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL.....	328	421	461	.....	.....	.....
SOIL CONSERVATION SERVICE.....	328	421	461	.....	.....	.....
DEPARTMENT OF COMMERCE, TOTAL.....	.....	.....	.....	374	530	562
BUREAU OF THE CENSUS.....	.....	.....	.....	304	230	262
ECONOMIC DEVELOPMENT ADMINISTRATION.....	.....	.....	.....	70	300	300
DEPARTMENT OF DEFENSE, TOTAL.....	4,063	2,127	11,645	.....	.....	.....
DEPARTMENT OF THE NAVY.....	4,063	2,127	11,645	.....	.....	.....
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....	12	19	20	1,470	1,690	2,130
PUBLIC HEALTH SERVICE.....	12	19	20	1,470	1,690	2,130
NATIONAL INSTITUTES OF HEALTH.....	.....	.....	.....	/179/	/180/	/180/
DEPARTMENT OF THE INTERIOR, TOTAL.....	.....	.....	.....	.....	5	20
BUREAU OF OUTDOOR RECREATION.....	.....	.....	.....	.....	5	20
DEPARTMENT OF JUSTICE, TOTAL.....	.....	.....	.....	23	14	12
IMMIGRATION AND NATURALIZATION SERVICE.....	.....	.....	.....	23	14	12
DEPARTMENT OF LABOR, TOTAL.....	.....	.....	.....	45	45	56
BUREAU OF EMPLOYMENT SECURITY.....	.....	.....	.....	45	45	56
DEPARTMENT OF STATE, TOTAL.....	353	180	127	72	408	145
AGENCY FOR INTERNATIONAL DEVELOPMENT.....	353	180	127	72	408	145
OTHER AGENCIES						
FEDERAL AVIATION AGENCY.....	.....	.....	.....	3	3	1
FEDERAL TRADE COMMISSION.....	.....	.....	.....	3	3	3
NATIONAL SCIENCE FOUNDATION.....	.....	.....	.....	1,176	920	955
OFFICE OF ECONOMIC OPPORTUNITY.....	.....	.....	.....	.....	3,368	3,010
SMALL BUSINESS ADMINISTRATION.....	.....	.....	.....	.....	.....	345