



NSF Survey of Federal Funds for Research and Development

Volume 66 (FYs 2016–17)

DOD version

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National Science Foundation
WHERE DISCOVERIES BEGIN



Instructions

Agency Code and Name

Your USER ID and password will be used to access the online survey system.

Contact Information

Please provide complete contact information for both the survey respondent and associated supervisor. You can also enter contact information for an alternate respondent.

Before You Start

Please note that the table numbering has changed from Roman numerals I–XI and, for selected agencies, the letters A–E, to Arabic numerals 1–16. The order of tables remains the same, and when you complete the online survey you will still see only the tables you need to complete.

Development obligations are now being specifically collected for

- Advanced Technology Development (Budget Activity [BA] 3),
- Major Systems Development (BA 4–6), and
- Operational Systems Development (BA 7).

Therefore, there are now additional rows or columns on Tables 1, 2, 6, 7, 8, 9, and 10, and one new table—Table 12C.

Please give special attention to the following items when completing the Survey of Federal Funds for Research and Development, Volume 66, FYs 2016–17. Estimates for FY 2018 are not requested in Volume 66. Tables and columns which have traditionally asked for the third-year budget estimates will be inoperable.

1. The data that you submit to the survey should be consistent with the data that your agency submitted to the Office of Management and Budget (OMB) for FY 2016 and FY 2017. Do not wait for later markups or revisions. **Complete your submission prior to the September 29, 2017, deadline.**
2. Report actual dollars for all amounts.
3. In the Table 1 narrative statements, explain any differences between outlays reported in this survey and those reported to OMB.
4. Verify that all research and development activities are included in your Federal Funds Survey data submission, whether they are represented by a specific R&D appropriation or as parts of other appropriations.
5. If you report any extramural funds on Tables 6, 7, and 8, then you may also have some federal intramural funds to report on these tables if your agency spends funds, at least for staff time, to administer the extramural R&D contract programs. The management and distribution of funds for R&D grants to extramural performers should not be included as R&D.



6. In the comment boxes for the appropriate tables, provide the reasons for **ANY** changes in your obligation levels from those reported in the previous cycle’s survey for type of RDT&E (basic research, applied research, advanced technology development, major systems development, and operational systems development), R&D plant, fields of science and engineering, or performers.
7. If your agency sponsors a Federally Funded Research and Development Center (FFRDC), report data on Table 9. If no RDT&E funds were obligated for your FFRDC for FY 2016, please provide an explanation in the comment box.
8. If your agency is required to provide obligations by state and performer (Tables 12, 12A, 12B, and 13—formerly A, A1, A2, or B—plus new table 12C), you will be asked to break out obligations reported to “outlying areas” into “Puerto Rico” and “other areas.” The sum of these two items must equal the total reported for “outlying areas.”

Completing the Tables

Table 1 (formerly Table I) is for reporting outlays only.

- **Outlays** reported in this survey should be consistent with amounts in The Budget of the United States Government. The same definitions are used for both.

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

The amounts shown for each year reflect outlays for that year regardless of when the funds were originally authorized or received and regardless of whether or not they were originally appropriated, received, or identified in the agency’s budget specifically for research, development, or R&D plant.

- Outlays cover all transactions that occurred in a given fiscal year, and those estimated for the next two fiscal years (for Volume 66, only the next fiscal year).
- Include all federal funds available to an agency that the agency received or expects to receive from direct appropriations, trust funds, and special account receipts, corporate income, fees and charges, funds appropriated by the Congress, and other federal sources.
- Include the full costs of R&D, both specific project costs and overhead costs. Include for both intramural and extramural R&D programs: costs of planning and administering of R&D, laboratory overhead, pay of military personnel, and departmental administration, **and include funds your agency transferred to other agencies for R&D.**
- Outlays for R&D performed for an agency in foreign countries include all funds available to the agency for this purpose, including funds separately appropriated for special foreign currency programs.
- **Do not include funds your agency received from another federal agency.** The transferring agency will report those funds. Similarly, a subdivision of an agency reports the funds it transfers to another subdivision within that agency as its own.

- **R&D:** Research and experimental development (R&D) activities are defined as creative and systematic work undertaken in order to increase the stock of knowledge—including knowledge of people, culture, and society—and to devise new applications using available knowledge.



For reporting R&D activities, include the following:

- Administrative expenses for R&D, such as the operating costs of research facilities and equipment and other overhead costs.

Exclude:

- Investments in physical assets such as major equipment and facilities that support R&D programs. These investments should generally be reported under R&D Plant (see Tables 1, 1B, 2, 9, and 13).
- Routine product testing, quality control, collection of general-purpose statistics, routine monitoring, and evaluation of an operational program (when that program is not R&D).
- Training of scientific and technical personnel should be reported as conduct of education and training.

- **RDT&E:** The Department of Defense’s Research, Development, Test, and Evaluation (RDT&E) can be both (1) activities for the development of a new system, or to expand the performance of fielded systems, and (2) an appropriation. The RDT&E budget activities are broad categories reflecting different types of RDT&E efforts, which include Basic Research (BA 1); Applied Research (BA 2); Advanced Technology Development (ATD) (BA 3); Major Systems Development, which includes Advanced Component Development and Prototypes (ACD&P) (BA 4), System Development and Demonstration (SDD) (BA 5), and RDT&E Management Support (BA 6); and Operational Systems Development (BA 7). The definitions of these categories are established by Department of Defense Instruction 5000.02, “Operation of the Defense Acquisition System.” For more information, see Budget Activities 1 through 7 in the DOD Financial Management Regulation (FMR), Volume 2B, Chapter 5, pages 5-4, 5-5, and 5-6 at –

http://comptroller.defense.gov/Portals/45/documents/fmr/Volume_02b.pdf.

- **R&D plant:** R&D plant is defined as spending on both R&D facilities and major equipment as defined in Office of Management and Budget (OMB) Circular A-11 Section 84 (Schedule C) and includes physical assets, such as land, structures, equipment, and intellectual property (e.g., software or applications) that have an estimated useful life of two years or more. Reporting for R&D plant includes the purchase, construction, manufacture, rehabilitation, or major improvement of physical assets regardless of whether the assets are owned or operated by the Federal Government, States, municipalities, or private individuals. The cost of the asset includes both its purchase price and all other costs incurred to bring it to a form and location suitable for use.

For reporting construction of R&D facilities and major moveable R&D equipment, include the following:

- Construction of facilities that are necessary for the execution of an R&D program. This may include land, major fixed equipment, and supporting infrastructure such as a sewer line, or housing at a remote location. Many laboratory buildings will include a mixture of R&D facilities and office space. The fraction of the building that is considered to be R&D may be calculated based on the percentage of square footage that is used for R&D.
- Acquisition, design, or production of major moveable equipment, such as mass spectrometers, research vessels, DNA sequencers, and other moveable major instrumentation for use in R&D activities.
- Programs of \$1 million or more that are devoted to the purchase or construction of R&D major equipment.



Exclude the following:

- Construction of other non-R&D facilities
- Minor equipment purchases, such as personal computers, standard microscopes, and simple spectrometers (report these costs under total R&D, not R&D Plant)

Obligations for **foreign R&D plant** are limited to federal funds for facilities that are located abroad and used in support of foreign R&D.

Tables 1A and 1B—Narratives for Reconciliation of R&D Outlays and R&D Plant Outlays with Amounts Reported to OMB (formerly Table I Narratives I and II)

Office of Management and Budget (OMB) Circular A-11, also called MAX Schedule C, is a mandatory report that collects data from federal agencies for the Budget of the U.S. Government. In this report, federal agencies provide OMB with data on their outlays for R&D by type of R&D and R&D plant. However, the information provided does not provide as much detail on type of R&D or performers as the Federal Funds Survey, and it provides no information on fields of science and engineering or geographic distribution. Because the Federal Funds Survey and the OMB report use the same definitions and guidelines, certain items, such as Total Outlays for R&D and Total Outlays for R&D Plant or Facilities, should be the same.

If there are differences between the data submitted for the Federal Funds Survey and for the OMB report, each reporting agency or subdivision should provide an explanation for differences in total R&D and total R&D plant outlays.

Table 2 (formerly Table II) is for reporting obligations only.

- **RDT&E, by Type of RDT&E:** If you cannot assign a project's obligations precisely across the available categories, please use your best judgment to allocate the obligations. Or, assign the obligations to the category most appropriate to the type of work you are funding.

Type of R&D has three components for non-DOD respondents: basic research, applied research, and development.

- **Basic research:** Basic research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts. Basic research may include activities with broad or general applications in mind, such as the study of how plant genomes change, but should exclude research directed towards a specific application or requirement, such as the optimization of the genome of a specific crop species. Basic research represents Department of Defense Budget Activity 1.
- **Applied research:** Applied research is defined as original investigation undertaken in order to acquire new knowledge. Applied research is, however, directed primarily towards a specific practical aim or objective. Applied research represents Department of Defense Budget Activity 2.
- **Experimental development:** Experimental development is defined as creative and systematic work, drawing on knowledge gained from research and practical experience, which is directed at producing new products or processes or improving existing products or processes. Like research, experimental development will result in gaining additional knowledge.

For reporting experimental development activities, include the following:



- The production of materials, devices, and systems or methods, including the design, construction, and testing of experimental prototypes.
- Technology demonstrations, in cases where a system or component is being demonstrated at scale for the first time, and it is realistic to expect additional refinements to the design (feedback R&D) following the demonstration. However, not all activities that are identified as “technology demonstrations” are R&D.

Exclude:

- User demonstrations where the cost and benefits of a system are being validated for a specific use case. This includes low-rate initial production activities.
- Pre-production development, which is defined as non-experimental work on a product or system before it goes into full production, including activities such as tooling and development of production facilities. These obligations are requested separately in this survey as Operational Systems Development from DOD’s Budget Activity 7 as part of data collection on RDT&E, but excluded from Total R&D Budget Activities 1–6 (see below).

For DOD Agencies, development itself is divided into three categories: advanced technology development, major systems development, and operational systems development.

Advanced technology development: This category is used for activities in DOD’s Budget Activity 3. For more information, see Budget Activity 3 on pages 5-4 and 5-5 of the DOD Financial Management Regulation (FMR), Volume 2B, Chapter 5, at –

http://comptroller.defense.gov/Portals/45/documents/fmr/Volume_02b.pdf.

Major systems development: This category is used for activities in DOD’s Budget Activities 4 through 6. For more information, see Budget Activities 4 through 6 on page 5-5 of the DOD Financial Management Regulation (FMR), Volume 2B, Chapter 5 at –

http://comptroller.defense.gov/Portals/45/documents/fmr/Volume_02b.pdf.

NOTE: As of this FY 2016 data collection, major systems development no longer includes Budget Activity 7.

Operational systems development: This category is used for activities in DOD’s Budget Activity 7. For more information, see Budget Activity 7 on page 5-6 of the DOD Financial Management Regulation (FMR), Volume 2B, Chapter 5 at

http://comptroller.defense.gov/Portals/45/documents/fmr/Volume_02b.pdf.

- **Obligations** reported in this survey should be consistent with amounts in The Budget of the United States Government. The same definitions are used for both.

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.

- Include direct appropriations, trust funds, special account receipts, corporate income, fees and charges, funds appropriated by the Congress, and other federal sources.



- Report the year of the obligation regardless of when the funds were originally authorized, received, appropriated, or identified as R&D or R&D plant.
- Include the full costs of R&D, both specific project costs and overhead costs. Include for both intramural and extramural R&D programs: costs of planning and administering R&D, laboratory overhead, pay of military personnel, departmental administration, **and include funds your agency transferred to other agencies for R&D.**
- **Do not include funds your agency received from another federal agency.** The transferring agency will report those funds. Similarly, a subdivision of an agency reports the funds it transfers to another subdivision within that agency as its own.

■ See other definitions under Table 1.

Tables 3, 4, and 5 (formerly Tables III, IV, and V) are for reporting obligations for research by fields of science and engineering.

Every effort should be made to allocate obligations to a specific discipline rather than to the “other” category. If specific allocation is not feasible, however, obligations reported under the other category should be identified in an explanatory note. In reporting obligations for activities concerned with interdisciplinary studies, funds must not be double-counted.

- **Fields of Science and Engineering** in this survey consist of eight broad field categories, each consisting of a number of detailed fields. The broad fields are computer sciences and mathematics, engineering, environmental sciences, life sciences, physical sciences, psychology, social sciences, and other sciences not elsewhere classified. The following list presents the detailed fields grouped under each of the broad fields, together with illustrative disciplines of detailed fields.

“Other” includes

- projects within a broad field
- single-discipline projects for which a separate field has not been assigned

The illustrative disciplines are intended to be guidelines, not sharp definitions. Research in biochemistry, for example, might be reported as biological, agricultural, or medical, depending on the focus of the project. Human biochemistry would be classified under biological, but animal biochemistry or plant biochemistry would fall under agricultural.

Do not report research under more than one field. No double counting is intended or allowed.

■ **Computer sciences and mathematics**

- **Computer sciences:** Computer sciences, data manipulation, data storage, design or development of computer capabilities, information sciences, information systems, programming languages, systems analysis
- **Mathematics:** Algebra, analysis, applied mathematics, foundations, geometry, logic, numerical analysis, statistics, topology
- **Other computer sciences and mathematics**

■ **Engineering**

- **Aeronautical engineering:** Aerodynamics
- **Astronautical engineering:** Aerospace, space technology
- **Chemical engineering:** Petroleum, petroleum refining process



- **Civil engineering:** Architectural engineering, environmental engineering, hydraulic engineering, hydrologic engineering, marine engineering, sanitary engineering, structural engineering, transportation
- **Electrical engineering:** Communications engineering, electronic engineering, power engineering
- **Mechanical engineering:** Engineering mechanics
- **Metallurgy and materials engineering:** Ceramic engineering, mining, textile engineering, welding
- **Other engineering:** Agricultural engineering, bioengineering, biomedical engineering, industrial engineering, management engineering, nuclear engineering, ocean engineering, systems engineering

■ **Environmental sciences**

- **Atmospheric sciences:** Aeronomy, extraterrestrial atmospheres, meteorology, solar science, terrestrial atmospheres, weather modification
- **Geological sciences:** Cartography, engineering geophysics, general geology, geodesy, geomagnetism, gravity, hydrology, inorganic geochemistry, isotopic geochemistry, laboratory geophysics, organic geochemistry, paleomagnetism, paleontology, physical geography, seismology
- **Oceanography:** Biological oceanography, chemical oceanography, marine geophysics, physical oceanography
- **Other environmental sciences**

■ **Life sciences**

Report under oceanography if study is about life in the sea or other bodies of water.

- **Agricultural sciences:** Agronomy, animal sciences, fish and wildlife, food science and technology, forestry, general agriculture, horticulture, phytopathology, phytoproduction, plant sciences, soils and soil science
- **Biological sciences (excluding environmental):** Anatomy, biochemistry, biology, biometry, biophysics, biostatistics, botany, cell biology, entomology, genetics, microbiology, neuroscience (biological), nutrition, parasitology, physiology, zoology
- **Environmental biology:** Biotic community, ecosystem sciences, evolutionary biology, limnology, physiological ecology, population biology, population ecology, systematic biology
- **Medical sciences:** Dentistry, internal medicine, neurology, obstetrics and gynecology, ophthalmology, otolaryngology, pathology, pediatrics, pharmacology, pharmacy, preventive medicine, psychiatry, radiology, surgery, veterinary medicine
- **Other life sciences**

■ **Physical sciences**

- **Astronomy:** Gamma-ray astronomy, laboratory astrophysics, neutrino astronomy, optical astronomy, radio astronomy, theoretical astrophysics, X-ray astronomy
- **Chemistry:** Inorganic chemistry, organic chemistry, organometallic chemistry, physical chemistry
- **Physics:** Acoustics, atomic physics, condensed-matter physics, elementary particle physics, molecular physics, nuclear structure, optics, plasma physics



- **Other physical sciences**
- **Psychology** deals with behavior, mental processes, and individual and group characteristics and abilities. Psychology in this survey is divided into three categories: biological aspects, social aspects, and other psychological sciences. Examples of the disciplines under each of these fields are as follows:
 - **Biological aspects:** Animal behavior, clinical psychology, comparative psychology, ethology, experimental psychology
 - **Social aspects:** Development, educational, engineering psychology, industrial psychology, personality, personnel, social psychology, testing, vocational psychology
 - **Other psychological sciences**
- **Social sciences**
 - **Anthropology:** Applied anthropology, archaeology, cultural anthropology, ethnology, personality, social anthropology
 - **Economics:** Agricultural economics, econometrics, economic statistics, economic systems and development, economic theory, history of economic thought, industrial economics, international economics, labor economics, macroeconomics, microeconomics, public finance and fiscal policy
 - **Political science:** Area studies, regional studies, comparative government, history of political ideas, international law, international relations, national political and legal systems, political theory, public administration
 - **Sociology:** Comparative sociology, complex organizations, culture and social structure, demography, group interactions, historical sociology, social problems, social welfare, sociological theory
 - **Other social sciences:** Linguistics, research in education, research in history, research in law (e.g., how legal systems and practices impact society), socioeconomic geography
- **Other sciences not elsewhere classified:** Interdisciplinary studies, multidisciplinary studies, studies that cannot be classified in one of the fields of science above

Tables 6, 7, and 8 (formerly Tables VI, VII, and VIII) cover reporting obligations by performer and type of RDT&E. Personnel costs are for identification of obligations for intramural personnel services and related allowances. Such obligations cover salaries for scientists, engineers, and other intramural support personnel, including planning and administrative personnel.

(NOTE: The instructions for Table 6A—formerly Table VI.A—follow this section.)

- Under Federal Intramural, report obligations for RDT&E that are provided to support RDT&E performed intramurally.
- Under Businesses Excluding FFRDCs, report obligations for RDT&E that are provided to support RDT&E by businesses or industrial firms excluding FFRDCs.
- Under FFRDCs Administered by Industrial Firms, report the amount obligated for RDT&E that is provided to support RDT&E performed by FFRDCs administered by businesses or industrial firms.
- Under Universities and Colleges Excluding FFRDCs, report obligations for RDT&E that are provided to support RDT&E by universities and colleges excluding FFRDCs.



- Under FFRDCs Administered by Universities and Colleges, report the amount obligated for RDT&E that is provided to support RDT&E performed by university-administered FFRDCs.
- Under Nonprofit Institutions Excluding FFRDCs, report obligations for RDT&E that are provided to support RDT&E by nonprofit institutions excluding FFRDCs.
- Under FFRDCs Administered by Nonprofit Institutions, report obligations for RDT&E that are provided to support RDT&E by FFRDCs administered by nonprofit institutions.
- Under State and Local Governments, report obligations for RDT&E that are provided to support RDT&E performed by state and local governments.
- Under Foreign, report obligations for RDT&E located abroad that are provided to support foreign RDT&E.

Definitions for these tables include:

- **Federally Funded Research and Development Centers (FFRDCs)** are R&D-performing organizations that are exclusively or substantially financed by the federal government. Your department/agency may sponsor or otherwise support an FFRDC in support of R&D that furthers your mission. The survey requests that you report FFRDC obligations separately for the type of organization that administers the FFRDC—industrial firm, university or college, or nonprofit institution. To view the list of current FFRDCs, please see the Master list of FFRDCs at <https://www.nsf.gov/statistics/ffrdclist/#ffrdc>, and for more information, the FFRDC general notes at <https://www.nsf.gov/statistics/ffrdclist/#gennotes>. (Additional information concerning FFRDCs is found in the reporting guidelines for Table 9.)
- **Foreign performers:** This category includes citizens, organizations, universities and colleges, and governments of other nations. Also, include international organizations located outside the United States who are performing R&D. This category does NOT include R&D performed by U.S. organizations or citizens in other nations. In most cases, foreigners performing R&D in the United States are not reported here. Exception: Include U.S. citizens performing R&D abroad under "special foreign currency funds." (See Public Law 480, sections 104 (a), (k), and (n), the Agricultural Trade Development and Assistance Act of 1954 as amended in 1959.) Examples of foreign performers include: North Atlantic Treaty Organization (NATO), United Nations Educational, Scientific, and Cultural Organization (UNESCO), World Health Organization (WHO).

Care should be taken to report foreign performance only once. For example, if a foreign performer is an educational institution, obligations to that institution should be reported only under foreign performance and not also under universities and colleges.
- **Businesses or industrial firms:** This category of performer includes business (for-profit). Federally funded research and development centers (FFRDCs) administered by businesses or industrial firms should be reported under the separate category for R&D performers, "FFRDCs administered by industrial firms."
- **Intramural performers:** This category includes obligations for RDT&E performed by federal employees either in your federal department or agency or elsewhere. This category also includes costs associated with your department's or agency's planning and administration of RDT&E for your intramural programs and extramural contract programs (i.e., programs conducted by nonfederal RDT&E performers). The management and distribution of funds for R&D grants to extramural performers should not be included as R&D. For the RDT&E funds transferred to another federal



agency, try to report the funds where they will ultimately be performed—inside or outside the federal government. Use this category if the other federal agency’s employees are expected to perform the RDT&E. If the RDT&E will eventually be conducted at university and colleges, nonprofit institutions, or businesses, use the appropriate category for these extramural RDT&E performers. This category also includes the costs of supplies and equipment for the intramural RDT&E.

- **Nonprofit institution performers:** This category includes private organizations, other than educational institutions, whose net earnings do not benefit either private stockholders or individuals. Examples of nonprofit institutions include foundations, trade associations, charities, and research organizations. Federally funded research and development centers (FFRDCs) administered by nonprofit institutions should be reported under the separate category, “FFRDCs administered by nonprofit institutions.”
- **Performer:** A performer is the group, organization, or individual who conducts the R&D/RDT&E activities.

- **Personnel costs:** The survey items on performers ask you to break out the portion of federal intramural obligations for personnel costs. Personnel costs include salaries of both federal employees who perform RDT&E as well as federal employees who monitor or oversee RDT&E projects, both intramural and extramural R&D contracts.

If your budget does not include personnel costs as a line item, please estimate these RDT&E personnel costs and include them in your federal intramural RDT&E obligations.

Examples of RDT&E personnel include the following: scientists, engineers, lab technicians, computer programmers, and dedicated planning and administrative personnel.

- **State and local government:** This category of performer includes RDT&E obligations to state and local government agencies regardless of who actually performs the RDT&E. That is, use this category to report both RDT&E performed by state and local agencies and RDT&E subcontracted by a state or local agency to another organization. Exceptions:
 - Report state and local universities and colleges under Universities and colleges.
 - Report agricultural experiment stations under Universities and colleges.

- **Universities and colleges:** This category includes institutions that engage primarily in providing resident and/or accredited instruction for a not less than a 2-year program above the secondary school level that is acceptable for full credit toward a bachelor’s degree or that provide not less than a 1-year program of training above the secondary school level that prepares students for gainful employment in a recognized occupation. Included are colleges of liberal arts; schools of arts and sciences; professional schools, as in engineering and medicine, including affiliated hospitals and associated research institutes; and agricultural experiment stations. Other examples of universities and colleges include community colleges, four-year colleges, universities, and freestanding professional schools (medical schools, law schools, etc.).

Table 6A provides for reporting additional information on the obligations to federal intramural performers for RDT&E during FY 2016. This table requires the breakdown of federal intramural obligations into three types of obligations: planning and administration of intramural and extramural RDT&E programs, interagency transfers, and federal laboratories. These categories are to be considered mutually exclusive; if any obligations fall in multiple categories or cannot be disaggregated, estimate the amount of the total that should be



allocated to each category. The total should match the last column in the first line of Table 6. Do not double-count obligations between multiple categories.

- **Planning and Administration of Intramural and Extramural RDT&E Programs:** Include the costs of intramural staff within your agency or department for the planning and administration of RDT&E projects, regardless of whether the RDT&E projects themselves are intramural or extramural. Exclude the costs of extramural staff for planning and administration of extramural RDT&E projects funded by your agency or department. The costs associated with the management and distribution of funds for R&D grants to extramural performers should not be included as R&D.
- **Interagency Transfers:** Include all obligations for which the initial recipient of the transfer was either a laboratory operating under the oversight of another federal agency or another federal agency for use by a specific federal laboratory under that agency's oversight.
- **Federal Laboratories:** A federal laboratory is a facility or group of facilities owned, leased, or otherwise used by a federal agency, a substantial purpose of which is the performance of R&D by employees of the federal government. Each agency should report its total obligations for all federal laboratories that the agency supports. If any of the entities to which your agency obligated federal intramural RDT&E funds can be considered a part of multiple laboratories (e.g., entities that receive funding from multiple accounting units or operate across multiple laboratory sites or as virtual entities), categorize the entity as a part of only one laboratory using the selection criteria of your choice. Do not double-count obligations to these entities by listing the same obligations under multiple laboratories.

Table 9 (formerly Table IX) provides for reporting additional information on FY 2016 RDT&E and R&D plant obligations to FFRDCs. This table requires the breakdown of obligations for RDT&E (Table 6) and R&D Plant (Table 11) reported to individual FFRDCs administered by industrial firms or businesses, FFRDCs administered by universities and colleges, and FFRDCs administered by nonprofit institutions, by each FFRDC listed. Each agency should report obligations to each FFRDC it supports, even if the FFRDC is sponsored by another agency. Agencies may not unilaterally delete organizations classified as FFRDCs from the list or add organizations to it.

Table 10 (formerly Table X) provides for reporting obligations for basic research, operational systems development, and total RDT&E to foreign performers by geographic area and country.

Table 11 (formerly Table XI) provides for reporting obligations for R&D plant by the performer of RDT&E that the R&D plant supports, regardless of the plant's ownership or location.

- Under Federal Intramural, report obligations for R&D plant that are provided to support RDT&E performed intramurally.
- Under Businesses Excluding FFRDCs, report obligations for R&D plant that are provided to support RDT&E by businesses or industrial firms excluding FFRDCs.
- Under FFRDCs Administered by Industrial Firms, report the amount obligated for R&D plant that is provided to support RDT&E performed by FFRDCs administered by businesses or industrial firms.



- Under Universities and Colleges Excluding FFRDCs, report obligations for R&D plant that are provided to support RDT&E performed by universities and colleges excluding FFRDCs.
- Under FFRDCs Administered by Universities and Colleges, report the amount obligated for R&D plant that is provided to support RDT&E performed by university-administered FFRDCs.
- Under Nonprofit Institutions Excluding FFRDCs, report obligations for R&D plant that are provided to support RDT&E performed by nonprofit institutions excluding FFRDCs.
- Under FFRDCs Administered by Nonprofit Institutions, report obligations for R&D plant that are provided to support RDT&E performed by FFRDCs administered by nonprofit institutions.
- Under State and Local Governments, report obligations for R&D plant that are provided to support RDT&E performed by state and local governments.
- Under Foreign, report obligations for R&D plant located abroad that are provided to support foreign RDT&E.

NOTE: The performer of RDT&E determines the classification of R&D plant obligations.

Tables 12A, 12B, 12, and 13 (formerly Tables A1, A2, A, and B) and new Table 12C: Definitions that were provided earlier in these instructions for R&D, RDT&E, R&D plant, and performers apply to these tables.

General instructions include:

- State locations are requested only for the 11 largest R&D departments/agencies: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Report the principal location where the work is performed by the primary contractor, grantee, or intramural organization. If location information is not available, assign the obligations to the state, other area, or office abroad where the headquarters of the U.S. primary contractor, grantee, or intramural organization is located. If location information cannot be reported, assign the R&D obligations to undistributed.
- Both intramural and extramural obligations are required. The extramural obligations are to be reported in terms of prime contracts or grants.
- The amounts reported in these tables for each performer should add to the totals reported for Tables 6 and 11.
- RDT&E obligations to foreign performers or R&D plant obligations in support of foreign performers should not be reported here. See Table 10.

Specific instructions include:

- **Tables 12A, 12B, and 12C:** Definitions for research, development, performers, basic research, applied research, total research, universities and colleges, and fields of science and engineering that were provided earlier in these instructions apply to these tables also.
 - Table 12A is to be used to report the geographic distribution of FY 2016 obligations for basic and applied research by state and performer. The performer categories are provided in the table.



- Table 12B is to be used to report the geographic distribution of FY 2016 obligations for advanced technology development and major systems development by state and performer. The performer categories are provided in the table.
- Table 12C is to be used to report the geographic distribution of FY 2016 obligations for operational systems development by state and performer. The performer categories are provided in the table.
- **Table 12** presents the combined obligations for RDT&E that are reported in Tables 12A, 12B, and 12C. The online Table 12 is read-only.
- **Table 13** is to be used to report the geographic distribution of FY 2016 obligations for R&D plant by state or other area and performer.

Tables 14, 15, and 16 (formerly Tables C, D, and E): Definitions for basic research, applied research, total research, universities and colleges, and fields of science and engineering that were provided for Tables 3, 4, and 5 in these instructions apply to these tables also.

- Obligations for basic, applied, and total research performed at universities and colleges (excluding FFRDCs) by field of science and engineering are requested only for 7 departments/agencies: the Departments of Agriculture, Defense, Energy, Health and Human Services, Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation.
- The total obligations reported in Tables 14, 15, and 16 must equal obligations for basic research, applied research, and the combined obligations for basic and applied research reported for universities and colleges, excluding FFRDCs, of Tables 6, 7, and 8.

■ To Get Help

Contact us by e-mail at NSFFedFunds@smdi.com or at 703-312-5379 for additional help.



Contact Information

NOTE: If you enter alternate point of contact information, First name, Last name, Telephone, and E-mail are required.

* Required

Primary Point of Contact		
First name:*		Middle initial:
Last name:*		
Title:		
Telephone:*		Ext.:
Fax:		
E-mail address:*		
Street address 1:		
Street address 2:		
City:		State:
Zip:		
Alternate Point of Contact (Optional)		
First name:		Middle initial:
Last name:		
Title:		
Telephone:		Ext.:
Fax:		
E-mail address:		
Supervisor Information		
First name:*		Middle initial:
Last name:*		
Title:		
Telephone:*		Ext.:
E-mail address*		



Table 1 - Outlays for R&D, RDT&E, and R&D Plant: FYs 2016 and 2017

Agency Code:

Agency Name:

NOTE: Please DO NOT report for FY 2018.

Please report actual dollar amounts.

R&D, RDT&E, and R&D Plant	FY 2016	FY 2017	FY 2018
R&D (BA 1–6)			
Operational Systems Development (BA 7)			
R&D Plant			
TOTAL RDT&E and R&D Plant (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; RDT&E = Research, Development, Test, and Evaluation.



Table 1A - Comparison with OMB MAX Schedule C for Federal R&D Programs: FYs 2016 and 2017

Agency Code:

Agency Name:

This is the 1st of 2 narratives for Table 1.

NOTE: Please DO NOT report for FY 2018.

Please report actual dollar amounts.

Total R&D Outlays	FY 2016	FY 2017	FY 2018
Outlays for Total RDT&E Reported in Table 1 (Read Only)			
Outlays for Total R&D (BA 1-6) Reported in Table 1 (Read Only)			
Outlays for Total R&D Reported to OMB in Response to Circular A-11 (Max Schedule C)			
Difference in R&D Outlays Reported in Table 1 and R&D Outlays Reported to OMB (Read Only)			

Please explain any differences in Outlays between the two reports.

Key: BA = Budget Activity; RDT&E = Research, Development, Test, and Evaluation.



Table 1B - Comparison with OMB MAX Schedule C for R&D Facilities plus Major Moveable R&D Equipment (R&D Plant): FYs 2016 and 2017

Agency Code:

Agency Name:

This is the 2nd of 2 narratives for Table 1.

NOTE: Please DO NOT report for FY 2018.

Please report actual dollar amounts.

Total R&D Plant Outlays	FY 2016	FY 2017	FY 2018
Outlays for Total R&D Plant Reported in Table 1 (Read Only)			
Outlays for Total R&D Facilities plus Major Moveable R&D Equipment Reported to OMB in Response to Circular A-11 (Max Schedule C)			
Difference in Outlays Reported in Table 1 and Outlays Reported to OMB (Read Only)			

Please explain any differences in Outlays between the two reports.



Table 2 - Summary of Obligations for RDT&E and R&D Plant: FYs 2016 and 2017

Agency Code:

Agency Name:

NOTE: Please DO NOT report for FY 2018.

Please report actual dollar amounts.

RDT&E	FY 2016	FY 2017	FY 2018
Research			
Basic Research (BA 1)			
Applied Research (BA 2)			
Total Research ¹ (Read Only)			
Development			
Advanced Technology Development (BA 3)			
Major Systems Development (BA 4–6)			
Operational Systems Development (BA 7)			
Total DT&E ² (BA 3–7) (Read Only)			
Total RDT&E (Read Only)			
R&D Plant			
R&D Plant			
TOTAL RDT&E and R&D Plant (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; RDT&E = Research, Development, Test, and Evaluation.

Footnotes:	
1	Basic Research + Applied Research = Total Research.
2	Advanced Technology Development + Major Systems Development + Operational Systems Development = Total Development, Testing, and Evaluation (DT&E).



Table 3 - Obligations for Basic, Applied, and Total Research by Detailed Field of Science and Engineering: FY 2016

Agency Code:

Agency Name:

Please report actual dollar amounts.

Field of Science and Engineering	Basic Research (BA 1)	Applied Research (BA 2)	Total Research ¹ (Read Only)
	FY 2016	FY 2016	FY 2016
Computer Sciences and Mathematics			
Computer Sciences			
Mathematics			
Other Computer Sciences and Mathematics			
Total Computer Sciences and Mathematics (Read Only)			
Engineering			
Aeronautical Engineering			
Astronautical Engineering			
Chemical Engineering			
Civil Engineering			
Electrical Engineering			
Mechanical Engineering			
Metallurgy and Materials Engineering			
Other Engineering			
Total Engineering (Read Only)			
Environmental Sciences			
Atmospheric Sciences			
Geological Sciences			
Oceanography			
Other Environmental Sciences			
Total Environmental Sciences (Read Only)			
Life Sciences			
Agricultural Sciences			
Biological Sciences (excluding Environmental)			
Environmental Biology			
Medical Sciences			
Other Life Sciences			



Field of Science and Engineering	Basic Research (BA 1)	Applied Research (BA 2)	Total Research ¹ (Read Only)
	FY 2016	FY 2016	FY 2016
Total Life Sciences (Read Only)			
Physical Sciences			
Astronomy			
Chemistry			
Physics			
Other Physical Sciences			
Total Physical Sciences (Read Only)			
Psychology			
Biological Aspects			
Social Aspects			
Other Psychological Sciences			
Total Psychology (Read Only)			
Social Sciences			
Anthropology			
Economics			
Political Science			
Sociology			
Other Social Sciences			
Total Social Sciences (Read Only)			
Other Sciences not elsewhere classified			
TOTAL All Fields ² (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity.

Footnotes:

- 1 Basic Research + Applied Research = Total Research.
- 2 The TOTAL All Fields amount for Basic Research FY 2016 (column 1) should equal the amount reported for FY 2016 Basic Research in Table 2. The TOTAL All Fields amount for Applied Research FY 2016 (column 2) should equal the amount reported for FY 2016 Applied Research in Table 2.



Table 4 - Obligations for Basic, Applied, and Total Research by Field of Science and Engineering: FY 2017

Agency Code:

Agency Name:

Please report actual dollar amounts.

Field of Science and Engineering	Basic Research (BA 1)	Applied Research (BA 2)	Total Research ¹ (Read Only)
	FY 2017	FY 2017	FY 2017
Computer Sciences and Mathematics			
Engineering			
Environmental Sciences			
Life Sciences			
Physical Sciences			
Psychology			
Social Sciences			
Other Sciences not elsewhere classified			
TOTAL All Fields ² (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity.

Footnotes:	
1	Basic Research + Applied Research = Total Research.
2	The TOTAL All Fields amount for Basic Research FY 2017 (column 1) should equal the amount reported for FY 2017 Basic Research in Table 2. The TOTAL All Fields amount for Applied Research FY 2017 (column 2) should equal the amount reported for FY 2017 Applied Research in Table 2.



Table 5 - Obligations for Basic, Applied, and Total Research by Field of Science and Engineering: FY 2018

Agency Code:

Agency Name:

NOTE: Please DO NOT report for FY 2018.

Field of Science and Engineering	Basic Research (BA 1)	Applied Research (BA 2)	Total Research ¹ (Read Only)
	FY 2018	FY 2018	FY 2018
Computer Sciences and Mathematics			
Engineering			
Environmental Sciences			
Life Sciences			
Physical Sciences			
Psychology			
Social Sciences			
Other Sciences not elsewhere classified			
TOTAL All Fields ² (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity.

Footnotes:	
1	Basic Research + Applied Research = Total Research.
2	The TOTAL All Fields amount for Basic Research FY 2018 (column 1) should equal the amount reported for FY 2018 Basic Research in Table 2. The TOTAL All Fields amount for Applied Research FY 2018 (column 2) should equal the amount reported for FY 2018 Applied Research in Table 2.



Table 6 - RDT&E Obligations by Performer and Type of RDT&E: FY 2016

Agency Code:
Agency Name:

Please report actual dollar amounts.

Performer	Basic Research (BA 1)	Applied Research (BA 2)	Advanced Technology Development (BA 3)	Major Systems Development (BA 4–6)	Operational Systems Development (BA 7)	Total RDT&E (Read Only)
	FY 2016	FY 2016	FY 2016	FY 2016	FY 2016	FY 2016
Federal Intramural ¹						
Portion of Federal Intramural for Personnel Costs ²	()	()	()	()	()	()
Businesses Excluding FFRDCs						
FFRDCs Administered by Industrial Firms						
Universities and Colleges Excluding FFRDCs						
FFRDCs Administered by Universities and Colleges						
Nonprofit Institutions Excluding FFRDCs						
FFRDCs Administered by Nonprofit Institutions						
State and Local Governments						
Total All Domestic Performers (Read Only)						
Foreign						
TOTAL All Performers ³ (Read Only)						

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity. FFRDCs = Federally funded research and development centers; RDT&E = Research, Development, Test, and Evaluation.

- Footnotes:
- 1 Include (1) RDT&E conducted by federal agencies and (2) your agency’s costs for monitoring RDT&E contracts, grants, and cooperative agreements.
 - 2 Include the portion of federal intramural costs (reported above) associated with (1) personnel costs for performing federal intramural research projects and (2) costs of dedicated personnel for the planning and administration of extramural RDT&E contracts.



- 3 The TOTAL All Performers amounts for Basic Research, Applied Research, Advanced Technology Development, Major Systems Development, and Operational Systems Development should equal the amounts reported for Basic Research, Applied Research, Advanced Technology Development, Major Systems Development, and Operational Systems Development in Table 2 for FY 2016.



Table 6A - Federal Intramural RDT&E Obligations: FY 2016

Agency Code:
Agency Name:

Please report actual dollar amounts.

Type of Obligation	Federal Intramural RDT&E Obligations ¹ FY 2016
Planning and administration of intramural and extramural RDT&E programs	
Interagency transfers	
Total Federal laboratories ²	
TOTAL Federal Intramural RDT&E ³	

If you experienced difficulty categorizing any of the obligations in Table 6A, or if you would like to provide additional information about your responses, please share them with us here:

Key: RDT&E = Research, Development, Test, and Evaluation.

Footnotes:	
1	Include (1) RDT&E conducted by federal agencies and (2) your agency’s costs for monitoring RDT&E contracts, grants, and cooperative agreements.
2	Include all of your agency’s federal laboratories to which your agency obligated RDT&E funds in FY 2016.
3	The TOTAL Federal Intramural RDT&E amount should equal the amount reported for Federal Intramural TOTAL RDT&E in Table 6.



Table 7 - RDT&E Obligations by Performer and Type of RDT&E: FY 2017

Agency Code:
Agency Name:

Please report actual dollar amounts.

Performer	Basic Research (BA 1)	Applied Research (BA 2)	Advanced Technology Development (BA 3)	Major Systems Development (BA 4–6)	Operational Systems Development (BA 7)	Total RDT&E (Read Only)
	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017
Federal Intramural ¹						
Portion of Federal Intramural for Personnel Costs ²	()	()	()	()		()
Businesses Excluding FFRDCs						
FFRDCs Administered by Industrial Firms						
Universities and Colleges Excluding FFRDCs						
FFRDCs Administered by Universities and Colleges						
Nonprofit Institutions Excluding FFRDCs						
FFRDCs Administered by Nonprofit Institutions						
State and Local Governments						
Total All Domestic Performers (Read Only)						
Foreign						
TOTAL All Performers ³ (Read Only)						

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers; RDT&E = Research, Development, Test, and Evaluation.

Footnotes:

- 1 Include (1) RDT&E conducted by federal agencies and (2) your agency’s costs for monitoring RDT&E contracts, grants, and cooperative agreements.
- 2 Include the portion of federal intramural costs (reported above) associated with (1) personnel costs for performing federal intramural research projects and (2) costs of dedicated personnel for the planning and administration of extramural RDT&E contracts.



- 3 The TOTAL All Performers amounts for Basic Research, Applied Research, Advanced Technology Development, Major Systems Development, and Operational Systems Development should equal the amounts reported for Basic Research, Applied Research, Advanced Technology Development, Major Systems Development, and Operational Systems Development in Table 2 for FY 2017.



Table 8 - RDT&E Obligations by Performer and Type of RDT&E: FY 2018

Agency Code:
Agency Name:

NOTE: Please DO NOT report for FY 2018.

Performer	Basic Research (BA 1)	Applied Research (BA 2)	Advanced Technology Development (BA 3)	Major Systems Development (BA 4–6)	Operational Systems Development (BA 7)	Total RDT&E (Read Only)
	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
Federal Intramural ¹						
Portion of Federal Intramural for Personnel Costs ²	()	()	()	()		()
Businesses Excluding FFRDCs						
FFRDCs Administered by Industrial Firms						
Universities and Colleges Excluding FFRDCs						
FFRDCs Administered by Universities and Colleges						
Nonprofit Institutions Excluding FFRDCs						
FFRDCs Administered by Nonprofit Institutions						
State and Local Governments						
Total All Domestic Performers (Read Only)						
Foreign						
TOTAL All Performers ³ (Read Only)						

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers; RDT&E = Research, Development, Test, and Evaluation.

Footnotes:

- 1 Include (1) RDT&E conducted by federal agencies and (2) your agency’s costs for monitoring RDT&E contracts, grants, and cooperative agreements.
- 2 Include the portion of federal intramural costs (reported above) associated with (1) personnel costs for performing federal intramural research projects and (2) costs of dedicated personnel for the planning and administration of extramural RDT&E contracts.



- 3 The TOTAL All Performers amounts for Basic Research, Applied Research, Advanced Technology Development, Major Systems Development, and Operational Systems Development should equal the amounts reported for Basic Research, Applied Research, Advanced Technology Development, Major Systems Development, and Operational Systems Development in Table 2 for FY 2018.



Table 9 - Obligations for RDT&E and R&D Plant at Individual Federally Funded Research and Development Centers (FFRDCs): FY 2016

Agency Code:

Agency Name:

Please report actual dollar amounts.

Administered by Industrial Firms	R&D Obligations (BA 1–6)	Operational Systems Development (BA 7)	R&D Plant Obligations
Frederick National Laboratory for Cancer Research (Leidos Biomedical Research, Inc. [formerly known as SAIC-Frederick Inc.]) Frederick, MD			
Idaho National Laboratory (Battelle Energy Alliance, LLC) Idaho Falls, ID			
Lawrence Livermore National Laboratory (Lawrence Livermore National Security, LLC) Livermore, CA			
Los Alamos National Laboratory (Los Alamos National Security, LLC) Los Alamos, NM			
Sandia National Laboratories (National Technology and Engineering Solutions of Sandia, LLC) Albuquerque, NM			
Savannah River National Laboratory (Savannah River Nuclear Solutions, LLC) Aiken, SC			
TOTAL Industrial-Administered FFRDCs ^{1, 2} (Read Only)			

Administered by Universities and Colleges³	R&D Obligations (BA 1–6)	Operational Systems Development (BA 7)	R&D Plant Obligations
Ames Laboratory (Iowa State University) Ames, IA			
Argonne National Laboratory (UChicago Argonne, LLC) Argonne, IL			
Fermi National Accelerator Laboratory (Fermi Research Alliance, LLC) Batavia, IL			
Jet Propulsion Laboratory (California Institute of Technology) Pasadena, CA			
Lawrence Berkeley National Laboratory (University of California) Berkeley, CA			
Lincoln Laboratory (Massachusetts Institute of Technology) Lexington, MA			



Administered by Universities and Colleges ³	R&D Obligations (BA 1–6)	Operational Systems Development (BA 7)	R&D Plant Obligations
National Center for Atmospheric Research (University Corp. for Atmospheric Research) Boulder, CO			
National Optical Astronomy Observatory (Association of Universities for Research in Astronomy, Inc.) Tucson, AZ			
National Radio Astronomy Observatory (Associated Universities, Inc.) Charlottesville, VA			
National Solar Observatory (Association of Universities for Research in Astronomy, Inc.) Sunspot, NM			
Princeton Plasma Physics Laboratory (Princeton University) Princeton, NJ			
SLAC National Accelerator Laboratory (Stanford University) Menlo Park, CA			
Software Engineering Institute (Carnegie Mellon University) Pittsburgh, PA			
Thomas Jefferson National Accelerator Facility (Jefferson Science Associates, LLC) Newport News, VA			
TOTAL University and College-Administered FFRDCs ^{4, 5} (Read Only)			

Administered by Nonprofit Institutions ⁶	R&D Obligations (BA 1–6)	Operational Systems Development (BA 7)	R&D Plant Obligations
Aerospace Federally Funded Research and Development Center (The Aerospace Corp.) El Segundo, CA			
Arroyo Center (RAND Corp.) Santa Monica, CA			
Brookhaven National Laboratory (Brookhaven Science Associates, LLC) Upton, NY			
Center for Advanced Aviation System Development (MITRE Corp.) McLean, VA			
Center for Communications and Computing (Institute for Defense Analyses) Alexandria, VA			
Center for Enterprise Modernization (MITRE Corp.) McLean, VA			



Administered by Nonprofit Institutions ⁶	R&D Obligations (BA 1–6)	Operational Systems Development (BA 7)	R&D Plant Obligations
Center for Naval Analyses (The CNA Corporation) Alexandria, VA			
Center for Nuclear Waste Regulatory Analyses (Southwest Research Institute) San Antonio, TX			
CMS Alliance to Modernize Healthcare (MITRE Corp.) Baltimore, MD			
Homeland Security Operational Analysis Center (RAND Corp.) Arlington, VA			
Homeland Security Systems Engineering and Development Institute (MITRE Corp.) McLean, VA			
Judiciary Engineering and Modernization Center (MITRE Corp.) McLean, VA			
National Biodefense Analysis and Countermeasures Center (Battelle National Biodefense Institute) Frederick, MD			
National Cybersecurity Center of Excellence (MITRE Corp.) Rockville, MD			
National Defense Research Institute (RAND Corp.) Santa Monica, CA			
National Renewable Energy Laboratory (Alliance for Sustainable Energy, LLC) Golden, CO			
National Security Engineering Center (MITRE Corp.) Bedford, MA, and McLean, VA (Read Only)			
NSEC -- Bedford, MA Laboratory Bedford, MA			
NSEC -- McLean, VA Laboratory McLean, VA			
Oak Ridge National Laboratory (UT-Battelle, LLC) Oak Ridge, TN			
Pacific Northwest National Laboratory (Battelle Memorial Institute) Richland, WA			
Project Air Force (RAND Corp.) Santa Monica, CA			
Science and Technology Policy Institute (Institute for Defense Analyses) Washington, DC			
Systems and Analyses Center (Institute for Defense Analyses) Alexandria, VA			



Administered by Nonprofit Institutions⁶	R&D Obligations (BA 1–6)	Operational Systems Development (BA 7)	R&D Plant Obligations
TOTAL Nonprofit-Administered FFRDCs ^{7, 8} (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers; RDT&E = Research, Development, Test, and Evaluation.

NOTES: Each supporting agency should report obligations to each FFRDC it uses even though the FFRDC may be under the sponsorship of another agency. See NSF's website for a list of FFRDCs shown by sponsoring agency and administering organization.

Footnotes:	
1	The TOTAL Industrial-Administered FFRDCs amount for R&D Obligations (column 1) and Operational Systems Development (column 2) should equal the Total RDT&E amount for FFRDCs Administered by Industrial Firms in Table 6.
2	The TOTAL Industrial-Administered FFRDCs amount for R&D Plant Obligations (column 3) should equal the amount reported for FFRDCs Administered by Industrial Firms in Table 11 for FY 2016.
3	Includes university consortia.
4	The TOTAL University and College-Administered FFRDCs amount for R&D Obligations (column 1) and Operational Systems Development (column 2) should equal the Total RDT&E amount for FFRDCs Administered by Universities and Colleges in Table 6.
5	The TOTAL University and College-Administered FFRDCs amount for R&D Plant Obligations (column 3) should equal the amount reported for FFRDCs Administered by Universities and Colleges in Table 11 for FY 2016.
6	Other than universities and colleges.
7	The TOTAL Nonprofit-Administered FFRDCs amount for R&D Obligations (column 1) and Operational Systems Development (column 2) should equal the Total RDT&E amount for FFRDCs Administered by Nonprofit Institutions in Table 6.
8	The TOTAL Nonprofit-Administered FFRDCs amount for R&D Plant Obligations (column 3) should equal the amount reported for FFRDCs Administered by Nonprofit Institutions in Table 11 for FY 2016.



Table 10 - Obligations to Foreign Performers by Country for Basic Research, Operational Systems Development, and RDT&E: FY 2016

Agency Code:

Agency Name:

Please report actual dollar amounts.

Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
Africa			
Algeria			
Angola			
Benin			
Botswana			
Burkina Faso			
Burundi			
Cabo Verde			
Cameroon			
Central African Republic			
Chad			
Comoros			
Congo, Democratic Republic of the			
Congo, Republic of the			
Côte d'Ivoire			
Djibouti			
Egypt			
Equatorial Guinea			
Eritrea			
Ethiopia			
Gabon			
Gambia, The			
Ghana			
Guinea			
Guinea-Bissau			
Kenya			
Lesotho			
Liberia			
Libya			
Madagascar			



Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
Malawi			
Mali			
Mauritania			
Mauritius			
Morocco			
Mozambique			
Namibia			
Niger			
Nigeria			
Reunion			
Rwanda			
Saint Helena			
Sao Tome and Principe			
Senegal			
Seychelles			
Sierra Leone			
Somalia			
South Africa			
South Sudan			
Sudan			
Swaziland			
Tanzania			
Togo			
Tunisia			
Uganda			
Western Sahara			
Zambia			
Zimbabwe			
African countries, other			
Africa, Total (Read Only)			
Asia			
Afghanistan			
Armenia			
Azerbaijan			



Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
Bahrain			
Bangladesh			
Bhutan			
Brunei			
Cambodia			
China			
Cyprus			
Gaza Strip			
Georgia			
Hong Kong			
India			
Indonesia			
Iran			
Iraq			
Israel			
Japan			
Jordan			
Kazakhstan			
Korea, North			
Korea, South			
Kuwait			
Kyrgyzstan			
Laos			
Lebanon			
Macau			
Malaysia			
Maldives			
Mongolia			
Myanmar/Burma			
Nepal			
Oman			
Pakistan			
Palestine			
Philippines			
Qatar			



Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
Saudi Arabia			
Singapore			
Sri Lanka			
Syria			
Taiwan			
Tajikistan			
Thailand			
Timor-Leste			
Turkey			
Turkmenistan			
United Arab Emirates			
Uzbekistan			
Vietnam			
West Bank			
Yemen			
Asian countries, other			
Asia, Total (Read Only)			
Europe			
Albania			
Andorra			
Austria			
Belarus			
Belgium			
Bosnia and Herzegovina			
Bulgaria			
Croatia			
Czechia			
Denmark			
Estonia			
Faroe Islands			
Finland			
France			
Germany			
Gibraltar			



Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
Greece			
Holy See			
Hungary			
Iceland			
Ireland			
Italy			
Kosovo			
Latvia			
Liechtenstein			
Lithuania			
Luxembourg			
Macedonia			
Malta			
Moldova			
Monaco			
Montenegro			
Netherlands			
Norway			
Poland			
Portugal			
Romania			
Russia			
San Marino			
Serbia			
Slovakia			
Slovenia			
Spain			
Sweden			
Switzerland			
Ukraine			
United Kingdom			
European countries, other			
Europe, Total (Read Only)			
North America			



Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
Anguilla			
Antigua and Barbuda			
Aruba			
Bahamas, The			
Barbados			
Belize			
Bermuda			
Canada			
Cayman Islands			
Costa Rica			
Cuba			
Curaçao			
Dominica			
Dominican Republic			
El Salvador			
Greenland			
Grenada			
Guadeloupe			
Guatemala			
Haiti			
Honduras			
Jamaica			
Martinique			
Mexico			
Montserrat			
Nicaragua			
Panama			
Saint Kitts and Nevis			
Saint Lucia			
Saint Pierre and Miquelon			
Saint Vincent and the Grenadines			
Sint Maarten			
Trinidad and Tobago			
Turks and Caicos Islands			
Virgin Islands, British			



Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
North American countries, other			
North America, Total (Read Only)			
Oceania			
Australia			
Cook Islands			
Fiji			
French Polynesia			
Kiribati			
Marshall Islands			
Micronesia, Federated States of			
Nauru			
New Caledonia			
New Zealand			
Niue			
Palau			
Papua New Guinea			
Samoa			
Solomon Islands			
Tokelau			
Tonga			
Tuvalu			
Vanuatu			
Oceanic countries, other			
Oceania, Total (Read Only)			
South America			
Argentina			
Bolivia			
Brazil			
Chile			
Colombia			
Ecuador			
Falkland Islands (Islas Malvinas)			



Geographic Area and Country	Basic Research Only (BA 1)	Operational Systems Development (BA 7)	RDT&E
French Guiana			
Guyana			
Paraguay			
Peru			
Suriname			
Uruguay			
Venezuela			
South American countries, other			
South America, Total (Read Only)			
Other			
International Organizations			
Total			
TOTAL, all foreign performers ^{1, 2, 3} (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; RDT&E = Research, Development, Test, and Evaluation.

Footnotes:	
1	The TOTAL, all foreign performers amount for Basic Research Only (column 1) should equal the amount reported for Basic Research in the "Foreign" category of Table 6.
2	The TOTAL, all foreign performers amount for Operational Systems Development (column 2) should equal the amount reported for Operational Systems Development in the "Foreign" category of Table 6.
3	The TOTAL, all foreign performers amount for RDT&E (column 3) should equal the Total RDT&E amount in the "Foreign" category of Table 6.



Table 11 - Obligations for R&D Plant by Performer of RDT&E: FYs 2016 and 2017

Agency Code:

Agency Name:

NOTE: Please DO NOT report for FY 2018.

Please report actual dollar amounts.

Performer	FY 2016	FY 2017	FY 2018
Federal Intramural ¹			
Businesses Excluding FFRDCs			
FFRDCs Administered by Industrial Firms			
Universities and Colleges Excluding FFRDCs			
FFRDCs Administered by Universities and Colleges			
Nonprofit Institutions Excluding FFRDCs			
FFRDCs Administered by Nonprofit Institutions			
State and Local Governments			
Total All Domestic Performers (Read Only)			
Foreign			
TOTAL All Performers ² (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: FFRDCs = Federally funded research and development centers; RDT&E = Research, Development, Test, and Evaluation.

Footnotes:	
1	Include (1) RDT&E conducted by federal agencies and (2) your agency's costs for monitoring RDT&E contracts, grants, and cooperative agreements.
2	The TOTAL All Performers amounts should equal the Total R&D Plant amounts in Table 2 for the corresponding years.



Table 12A - Obligations for Basic Research (BA 1) plus Applied Research (BA 2) by State and Performer: FY 2016

Agency Code:

Agency Name:

Please report actual dollar amounts.

State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Alabama								
Alaska								
Arizona								
Arkansas								
California								
Colorado								
Connecticut								
Delaware								
District of Columbia								
Florida								
Georgia								
Hawaii								
Idaho								
Illinois								
Indiana								
Iowa								
Kansas								
Kentucky								
Louisiana								
Maine								
Maryland								
Massachusetts								
Michigan								
Minnesota								
Mississippi								
Missouri								



State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Montana								
Nebraska								
Nevada								
New Hampshire								
New Jersey								
New Mexico								
New York								
North Carolina								
North Dakota								
Ohio								
Oklahoma								
Oregon								
Pennsylvania								
Rhode Island								
South Carolina								
South Dakota								
Tennessee								
Texas								
Utah								
Vermont								
Virginia								
Washington								
West Virginia								
Wisconsin								
Wyoming								
Offices abroad								
Puerto Rico								
Other areas								
Undistributed								
TOTAL (Read Only)								



Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers.

"Other areas" includes U.S. territories other than Puerto Rico.

"Offices abroad" includes R&D performed or administered in foreign countries by the U.S. government.

"Undistributed" includes Department of Defense obligations for which location of performance cannot be reported.

Footnotes:

- 1 The Federal Intramural column total should equal the combined amount reported for Basic Research and Applied Research for Federal Intramural in Table 6.
- 2 The Businesses Excluding FFRDCs column total should equal the combined amount reported for Basic Research and Applied Research for Businesses Excluding FFRDCs in Table 6.
- 3 The FFRDCs Administered by Industrial Firms column total should equal the combined amount reported for Basic Research and Applied Research for FFRDCs Administered by Industrial Firms in Table 6.
- 4 The Universities and Colleges Excluding FFRDCs column total should equal the combined amount reported for Basic Research and Applied Research for Universities and Colleges Excluding FFRDCs in Table 6.
- 5 The FFRDCs Administered by Universities and Colleges column total should equal the combined amount reported for Basic Research and Applied Research for FFRDCs Administered by Universities and Colleges in Table 6.
- 6 The Nonprofit Institutions Excluding FFRDCs column total should equal the combined amount reported for Basic Research and Applied Research for Nonprofit Institutions Excluding FFRDCs in Table 6.
- 7 The FFRDCs Administered by Nonprofit Institutions column total should equal the combined amount reported for Basic Research and Applied Research for FFRDCs Administered by Nonprofit Institutions in Table 6.
- 8 The State and Local Governments column total should equal the combined amount reported for Basic Research and Applied Research for State and Local Governments in Table 6.



Table 12B - Obligations for Advanced Technology Development (BA 3) plus Major Systems Development (BA 4–6) by State and Performer: FY 2016

Agency Code:

Agency Name:

Please report actual dollar amounts.

State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Alabama								
Alaska								
Arizona								
Arkansas								
California								
Colorado								
Connecticut								
Delaware								
District of Columbia								
Florida								
Georgia								
Hawaii								
Idaho								
Illinois								
Indiana								
Iowa								
Kansas								
Kentucky								
Louisiana								
Maine								
Maryland								
Massachusetts								
Michigan								
Minnesota								
Mississippi								
Missouri								



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State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Montana								
Nebraska								
Nevada								
New Hampshire								
New Jersey								
New Mexico								
New York								
North Carolina								
North Dakota								
Ohio								
Oklahoma								
Oregon								
Pennsylvania								
Rhode Island								
South Carolina								
South Dakota								
Tennessee								
Texas								
Utah								
Vermont								
Virginia								
Washington								
West Virginia								
Wisconsin								
Wyoming								
Offices abroad								
Puerto Rico								
Other areas								
Undistributed								
TOTAL (Read Only)								



Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers.

"Other areas" includes U.S. territories other than Puerto Rico.

"Offices abroad" includes R&D performed or administered in foreign countries by the U.S. government.

"Undistributed" includes Department of Defense obligations for which location of performance cannot be reported.

Footnotes:

- 1 The Federal Intramural column total should equal the combined amount reported for Advanced Technology Development and Major Systems Development for Federal Intramural in Table 6.
- 2 The Businesses Excluding FFRDCs column total should equal the combined amount reported for Advanced Technology Development and Major Systems Development for Businesses Excluding FFRDCs in Table 6.
- 3 The FFRDCs Administered by Industrial Firms column total should equal the combined amount reported for Advanced Technology Development and Major Systems Development for FFRDCs Administered by Industrial Firms in Table 6.
- 4 The Universities and Colleges Excluding FFRDCs column total should equal the combined amount reported for Advanced Technology Development and Major Systems Development for Universities and Colleges Excluding FFRDCs in Table 6.
- 5 The FFRDCs Administered by Universities and Colleges column total should equal the combined amount reported for Advanced Technology Development and Major Systems Development for FFRDCs Administered by Universities and Colleges in Table 6.
- 6 The Nonprofit Institutions Excluding FFRDCs column total should equal the combined amount reported for Advanced Technology Development and Major Systems Development for Nonprofit Institutions Excluding FFRDCs in Table 6.
- 7 The FFRDCs Administered by Nonprofit Institutions column total should equal the combined amount reported for Advanced Technology Development and Major Systems Development for FFRDCs Administered by Nonprofit Institutions in Table 6.
- 8 The State and Local Governments column total should equal the combined amount reported for Advanced Technology Development + Major Systems Development for State and Local Governments in Table 6.



Table 12C - Obligations for Operational Systems Development (BA 7) by State and Performer: FY 2016

Agency Code:

Agency Name:

Please report actual dollar amounts.

State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Alabama								
Alaska								
Arizona								
Arkansas								
California								
Colorado								
Connecticut								
Delaware								
District of Columbia								
Florida								
Georgia								
Hawaii								
Idaho								
Illinois								
Indiana								
Iowa								
Kansas								
Kentucky								
Louisiana								
Maine								
Maryland								
Massachusetts								
Michigan								
Minnesota								
Mississippi								
Missouri								



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State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Montana								
Nebraska								
Nevada								
New Hampshire								
New Jersey								
New Mexico								
New York								
North Carolina								
North Dakota								
Ohio								
Oklahoma								
Oregon								
Pennsylvania								
Rhode Island								
South Carolina								
South Dakota								
Tennessee								
Texas								
Utah								
Vermont								
Virginia								
Washington								
West Virginia								
Wisconsin								
Wyoming								
Offices abroad								
Puerto Rico								
Other areas								
Undistributed								
TOTAL (Read Only)								



Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers.

"Other areas" includes U.S. territories other than Puerto Rico.

"Offices abroad" includes R&D performed or administered in foreign countries by the U.S. government.

"Undistributed" includes Department of Defense obligations for which location of performance cannot be reported.

Footnotes:

- 1 The Federal Intramural column total should equal the amount reported for Operational Systems Development for Federal Intramural in Table 6.
- 2 The Businesses Excluding FFRDCs column total should equal the amount reported for Operational Systems Development for Businesses Excluding FFRDCs in Table 6.
- 3 The FFRDCs Administered by Industrial Firms column total should equal the amount reported for Operational Systems Development for FFRDCs Administered by Industrial Firms in Table 6.
- 4 The Universities and Colleges Excluding FFRDCs column total should equal the amount reported for Operational Systems Development for Universities and Colleges Excluding FFRDCs in Table 6.
- 5 The FFRDCs Administered by Universities and Colleges column total should equal the amount reported for Operational Systems Development for FFRDCs Administered by Universities and Colleges in Table 6.
- 6 The Nonprofit Institutions Excluding FFRDCs column total should equal the amount reported for Operational Systems Development for Nonprofit Institutions Excluding FFRDCs in Table 6.
- 7 The FFRDCs Administered by Nonprofit Institutions column total should equal the amount reported for Operational Systems Development for FFRDCs Administered by Nonprofit Institutions in Table 6.
- 8 The State and Local Governments column total should the amount reported for Operational Systems Development for State and Local Governments in Table 6.



Table 12 - RDT&E Obligations by State and Performer: FY 2016

Agency Code:

Agency Name:

The online version is read-only and carries the following notice:

READ-ONLY VERSION TABLE
The RDT&E obligations data entered in Tables 12A, 12B, and 12C are combined below. If you have warnings, please enter the explanations on Tables 12A, 12B, and 12C.

Please report actual dollar amounts.

State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Alabama								
Alaska								
Arizona								
Arkansas								
California								
Colorado								
Connecticut								
Delaware								
District of Columbia								
Florida								
Georgia								
Hawaii								
Idaho								
Illinois								
Indiana								
Iowa								
Kansas								
Kentucky								
Louisiana								
Maine								
Maryland								
Massachusetts								
Michigan								
Minnesota								



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State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Mississippi								
Missouri								
Montana								
Nebraska								
Nevada								
New Hampshire								
New Jersey								
New Mexico								
New York								
North Carolina								
North Dakota								
Ohio								
Oklahoma								
Oregon								
Pennsylvania								
Rhode Island								
South Carolina								
South Dakota								
Tennessee								
Texas								
Utah								
Vermont								
Virginia								
Washington								
West Virginia								
Wisconsin								
Wyoming								
Offices abroad								
Puerto Rico								
Other areas								
Undistributed								
TOTAL								



Key: FFRDCs = Federally funded research and development centers; RDT&E = Research, Development, Test, and Evaluation.

"Other areas" includes U.S. territories other than Puerto Rico.

"Offices abroad" includes R&D performed or administered in foreign countries by the U.S. government.

"Undistributed" includes Department of Defense obligations for which location of performance cannot be reported.

Footnotes:

- 1 The Federal Intramural column total should equal the Total RDT&E amount for Federal Intramural in Table 6.
- 2 The Businesses Excluding FFRDCs column total should equal the Total RDT&E amount for Businesses Excluding FFRDCs in Table 6.
- 3 The FFRDCs Administered by Industrial Firms column total should equal the Total RDT&E amount for FFRDCs Administered by Industrial Firms in Table 6.
- 4 The Universities and Colleges Excluding FFRDCs column total should equal the Total RDT&E amount for Universities and Colleges Excluding FFRDCs in Table 6.
- 5 The FFRDCs Administered by Universities and Colleges column total should equal the Total RDT&E amount for FFRDCs Administered by Universities and Colleges in Table 6.
- 6 The Nonprofit Institutions Excluding FFRDCs column total should equal the Total RDT&E amount for Nonprofit Institutions Excluding FFRDCs in Table 6.
- 7 The FFRDCs Administered by Nonprofit Institutions column total should equal the Total RDT&E amount for FFRDCs Administered by Nonprofit Institutions in Table 6.
- 8 The State and Local Governments column total should equal Total RDT&E amount for State and Local Governments in Table 6.



Table 13 - R&D Plant Obligations by State and Performer: FY 2016

Agency Code:
Agency Name:

Please report actual dollar amounts.

State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Alabama								
Alaska								
Arizona								
Arkansas								
California								
Colorado								
Connecticut								
Delaware								
District of Columbia								
Florida								
Georgia								
Hawaii								
Idaho								
Illinois								
Indiana								
Iowa								
Kansas								
Kentucky								
Louisiana								
Maine								
Maryland								
Massachusetts								
Michigan								
Minnesota								
Mississippi								
Missouri								
Montana								



State	Federal Intra-mural ¹	Businesses Excluding FFRDCs ²	FFRDCs Administered by Industrial Firms ³	Universities and Colleges Excluding FFRDCs ⁴	FFRDCs Administered by Universities and Colleges ⁵	Nonprofit Institutions Excluding FFRDCs ⁶	FFRDCs Administered by Nonprofit Institutions ⁷	State and Local Governments ⁸
Nebraska								
Nevada								
New Hampshire								
New Jersey								
New Mexico								
New York								
North Carolina								
North Dakota								
Ohio								
Oklahoma								
Oregon								
Pennsylvania								
Rhode Island								
South Carolina								
South Dakota								
Tennessee								
Texas								
Utah								
Vermont								
Virginia								
Washington								
West Virginia								
Wisconsin								
Wyoming								
Offices abroad								
Puerto Rico								
Other areas								
TOTAL (Read Only)								

Please use the space below to add explanations for data reported in this table.



Key: FFRDCs = Federally funded research and development centers.

"Other areas" includes U.S. territories other than Puerto Rico.

"Offices abroad" includes R&D performed or administered in foreign countries by the U.S. government.

Footnotes:

- 1 The Federal Intramural column total should equal the amount reported for Federal Intramural for FY 2016 in Table 11.
- 2 The Businesses Excluding FFRDCs column total should equal the amount reported for Businesses Excluding FFRDCs for FY 2016 in Table 11.
- 3 The FFRDCs Administered by Industrial Firms column total should equal the amount reported for FFRDCs Administered by Industrial Firms for FY 2016 in Table 11.
- 4 The Universities and Colleges Excluding FFRDCs column total should equal the amount reported for Universities and Colleges Excluding FFRDCs for FY 2016 in Table 11.
- 5 The FFRDCs Administered by Universities and Colleges column total should equal the amount reported for FFRDCs Administered by Universities and Colleges for FY 2016 in Table 11.
- 6 The Nonprofit Institutions Excluding FFRDCs column total should equal the amount reported for Nonprofit Institutions Excluding FFRDCs for FY 2016 in Table 11.
- 7 The FFRDCs Administered by Nonprofit Institutions column total should equal the amount reported for FFRDCs Administered by Nonprofit Institutions for FY 2016 in Table 11.
- 8 The State and Local Governments column total should equal the amount reported for State and Local Governments for FY 2016 in Table 11.



Table 14 - Obligations for Basic, Applied, and Total Research Performed at Universities and Colleges Excluding FFRDCs, by Detailed Field of Science and Engineering: FY 2016

Agency Code:

Agency Name:

Please report actual dollar amounts.

Field of Science and Engineering	Basic Research (BA 1)	Applied Research (BA 2)	Total Research ¹ (Read Only)
	FY 2016	FY 2016	FY 2016
Computer Sciences and Mathematics			
Computer Sciences			
Mathematics			
Other Computer Sciences and Mathematics			
Total Computer Sciences and Mathematics (Read Only)			
Engineering			
Aeronautical Engineering			
Astronautical Engineering			
Chemical Engineering			
Civil Engineering			
Electrical Engineering			
Mechanical Engineering			
Metallurgy and Materials Engineering			
Other Engineering			
Total Engineering (Read Only)			
Environmental Sciences			
Atmospheric Sciences			
Geological Sciences			
Oceanography			
Other Environmental Sciences			
Total Environmental Sciences (Read Only)			
Life Sciences			
Agricultural Sciences			
Biological Sciences (excluding Environmental)			
Environmental Biology			



Field of Science and Engineering	Basic Research (BA 1)	Applied Research (BA 2)	Total Research ¹ (Read Only)
	FY 2016	FY 2016	FY 2016
Medical Sciences			
Other Life Sciences			
Total Life Sciences (Read Only)			
Physical Sciences			
Astronomy			
Chemistry			
Physics			
Other Physical Sciences			
Total Physical Sciences (Read Only)			
Psychology			
Biological Aspects			
Social Aspects			
Other Psychological Sciences			
Total Psychology (Read Only)			
Social Sciences			
Anthropology			
Economics			
Political Science			
Sociology			
Other Social Sciences			
Total Social Sciences (Read Only)			
Other Sciences not elsewhere classified			
TOTAL All Fields ² (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers.



Footnotes:

- 1 Basic Research + Applied Research = Total Research.
- 2 The TOTAL All Fields amounts for Basic Research and Applied Research should equal the amounts reported for Basic Research and Applied Research in Universities and Colleges Excluding FFRDCs in Table 6.



Table 15 - Obligations for Basic, Applied, and Total Research Performed at Universities and Colleges Excluding FFRDCs, by Field of Science and Engineering: FY 2017

Agency Code:

Agency Name:

Please report actual dollar amounts.

Field of Science and Engineering	Basic Research (BA 1)	Applied Research (BA 2)	Total Research ¹ (Read Only)
	FY 2017	FY 2017	FY 2017
Computer Sciences and Mathematics			
Engineering			
Environmental Sciences			
Life Sciences			
Physical Sciences			
Psychology			
Social Sciences			
Other Sciences not elsewhere classified			
TOTAL All Fields ² (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers.

Footnotes:	
1	Basic Research + Applied Research = Total Research.
2	The TOTAL All Fields amounts for Basic Research and Applied Research should equal the amounts reported for Basic Research and Applied Research in Universities and Colleges Excluding FFRDCs in Table 7.



Table 16 - Obligations for Basic, Applied, and Total Research Performed at Universities and Colleges Excluding FFRDCs, by Field of Science and Engineering: FY 2018

Agency Code:

Agency Name:

NOTE: Please DO NOT report for FY 2018.

	Basic Research (BA 1)	Applied Research (BA 2)	Total Research¹ (Read Only)
Field of Science and Engineering	FY 2018	FY 2018	FY 2018
Computer Sciences and Mathematics			
Engineering			
Environmental Sciences			
Life Sciences			
Physical Sciences			
Psychology			
Social Sciences			
Other Sciences not elsewhere classified			
TOTAL All Fields² (Read Only)			

Please use the space below to add explanations for data reported in this table.

Key: BA = Budget Activity; FFRDCs = Federally funded research and development centers.

Footnotes:	
1	Basic Research + Applied Research = Total Research.
2	The TOTAL All Fields amounts for Basic Research and Applied Research should equal the amounts reported for Basic Research and Applied Research in Universities and Colleges Excluding FFRDCs in Table 8.