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WHERE DISCOVERIES BEGIN



Federal R&D Funding by Budget Function: Fiscal Years 2006–08

Detailed Statistical Tables | NSF 07-332 | August 2007

Erratum (May 2008): Agency amounts were transposed within the funding categories reported in table 29; see next page for the corrected version of table 29.

TABLE 29 (corrected May 2008). Total obligational authority for Department of Defense research, development, test, and evaluation budget, by DOD budget activity: FY 2006-08

(Millions of dollars)

Budget activity	Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007-08 (% change)
	Total RDT&E (budget authority)	72,855	76,782	77,975	1.6
	Total RDT&E (TOA) ^a	72,691	77,053	77,975	1.2
1	Basic research	1,457	1,564	1,428	-8.7
	Defense agencies	252	298	280	-6.1
	Department of the Air Force	374	409	375	-8.3
	Department of the Army	364	366	306	-16.4
	Department of the Navy	467	492	467	-5.0
2	Applied research	4,948	5,329	4,357	-18.2
	Defense agencies	1,963	2,184	1,982	-9.2
	Department of the Air Force	1,039	1,156	1,011	-12.5
	Department of the Army	1,184	1,204	686	-43.0
	Department of the Navy	762	786	678	-13.7
3	Advanced technology development	6,866	6,436	5,003	-22.3
	Defense agencies	3,033	3,363	3,152	-6.3
	Department of the Air Force	975	1,038	580	-44.1
	Department of the Army	1,847	1,267	736	-41.9
	Department of the Navy	1,012	768	535	-30.3
	Operational test and evaluation	0	0	0	na
4	Advanced component development and prototypes	13,789	15,826	15,760	-0.4
	Defense agencies	7,609	9,407	8,854	-5.9
	Department of the Air Force	2,179	2,549	2,939	15.3
	Department of the Army	509	565	902	59.6
	Department of the Navy	3,493	3,305	3,065	-7.3
5	System development and demonstration	18,955	19,356	18,591	-4.0
	Defense agencies	619	646	708	9.6
	Department of the Air Force	4,593	4,691	4,593	-2.1
	Department of the Army	5,146	5,087	5,296	4.1
	Department of the Navy	8,597	8,932	7,994	-10.5
6	Management support	5,263	4,226	4,187	-0.9
	Defense agencies	1,223	933	923	-1.1
	Department of the Air Force	1,376	1,060	1,078	1.7
	Department of the Army	1,360	1,210	1,140	-5.8
	Department of the Navy	1,138	839	865	3.1
	Operational test and evaluation	166	184	180	-2.2
7	Operational systems development	21,412	24,317	28,649	17.8
	Defense agencies	4,983	5,189	5,388	3.8
	Department of the Air Force	11,655	13,706	17,505	27.7
	Department of the Army	1,273	1,365	1,665	22.0
	Department of the Navy	3,502	4,057	4,090	0.8
	Adjustment for RDT&E budget authority ^a	164	-271	0	na

na = not applicable.

RDT&E = research, development, test, and evaluation.

TOA = total obligational authority.

^a Detailed budget information on Department of Defense (DOD) RDT&E activities is available only in TOA, which is the sum of new budget authority, unobligated budget authority from previous years, and other authorized credits. Adjustment converts TOA to budget authority by subtracting unobligated budget from authority from previous years and other authorized credits from TOA.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2008 reflect requested supplemental appropriations; data for 2007 reflect supplementals in conference report of HR 1591.

SOURCES: Data derived from DOD, RDT&E Programs (R-1); and Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2008* (Washington, DC: U.S. Government Printing Office, 2007).



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General Notes

This annual report contains information on federal funding of the research and development and R&D plant components of U.S. federal agency programs, as proposed by the administration for FY 2008. R&D data in this report are classified into the same federal budget function categories used in the *Budget of the United States Government, Fiscal Year 2008*, prepared by the Office of Management and Budget (OMB). Proposed FY 2008 funding levels are for budget authority (defined below), which is the basis for initial congressional action. Data reported here as preliminary or proposed will be revised in future budget function reports to reflect congressional appropriation and actual program-funding decisions.

Detailed data are included on preliminary estimates of federal funding of R&D for FY 2007. This report also includes detailed data (by subfunction) on actual budget authorizations of R&D by federal agencies in FY 2006 and aggregate data (by broad function) on actual R&D budget authorizations in FY 2005 and earlier years.

Definitions

Research, Development, and R&D Plant

In this report, *R&D* refers to research (both basic and applied) and development activities in the sciences and engineering.

Research is systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied according to the objective of the sponsoring agency.

- *Basic research* is defined as systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.
- *Applied research* is defined as systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.

Development is defined as systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements. It excludes quality control, routine product testing, and production.

Funds for conducting R&D include those for personnel, program supervision, and administrative support directly associated with R&D activities. Expendable or movable equipment needed to conduct R&D, for example, microscopes or spectrometers, is also included.

R&D plant includes such R&D facilities as reactors, wind tunnels, or particle accelerators or the construction, repair, or alteration of such facilities.

This report excludes all non-R&D activities performed within budget functions that conduct R&D and all functions in which no R&D is conducted.

Budget Authority, Obligations, and Outlays

The federal R&D funding data presented here, with a few noted exceptions, are provided in budget authority. Budget authority is used because it is the initial budget parameter for congressional action on the President's proposed budget. Budget authority imposes a ceiling on obligations and outlays; obligations and outlays flow from budget authority.

Budget authority is the primary source of legal authorization to enter into obligations that will result in outlays. Budget authority is most commonly granted in the form of appropriations by the congressional committees assigned to determine the budget for each function.

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 the future payment of money is required.

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

Budget Functions

All activities covered by the federal budget, including R&D, are classified into 20 broad functional categories. The federal budget total comprises funding for these 20 functions. An agency's activities are not necessarily included in only one function. Instead, the programs of one agency typically are distributed across functions, and each function often includes programs from multiple agencies. No overlap occurs among functions or among the various agency programs within those functions. In a few cases, components of a major national effort are funded through multiple functions, such as the human genome activities, which are funded under the health and general science categories.

Notably, each specific R&D activity is assigned to only one function area, consistent with the official codes used in budget documents, even though the R&D activity may address several functional concerns. For example, except for those of the U.S. Army Corps of Engineers, all R&D activities sponsored by the Department of Defense (DOD) are classified as defense, even though some activities have secondary objectives, such as space or health. Moreover, only R&D activities funded by the Department of Health and Human Services and the Department of Labor are classified in the health function category. Yet some R&D funding from at least three additional agencies—the Departments of Defense, Energy, and Veterans Affairs—has a major health component.

The functional categories and definitions used in this report are the same as those used in the federal budget, with one exception. R&D activities categorized as general science, space, and technology (function 250) are reported separately here.

Subfunction 251 contains R&D activities for general science and basic research, and subfunction 252 contains R&D activities for space research and technology. However, not all federally sponsored basic research is categorized in function 251; some basic research is included in 11 of the remaining 19 functional categories.

Five federal budget functions—Medicare (function 570), Social Security (function 650), net interest (function 900), allowances (function 920), and undistributed offsetting receipts (function 950)—have no R&D components. Consequently, they are not discussed in this report, except where R&D is described as a proportion of total federal budget authority.

For FY 2006–08, no R&D was authorized for general government (function 800), as was the case in the last report. In previous years, small amounts of R&D were authorized for this budget function.

Appendix A lists (by name and function code) the 15 individual R&D functions funded by federal agencies.

Data Sources

Within the overall federal budget, there is no separately identified R&D budget as such nor are most appropriations for R&D so labeled except in the case of certain program areas, such as defense, energy, health, and environment. Consequently, most funds for R&D are not line items in agency budget submissions but are included within general program funding. To determine funding for federal R&D, OMB requires agencies with annual R&D funding greater than \$10 million to submit data on their R&D programs as part of their annual budget submissions. Specifically, the agencies provide data on funding levels for basic research, applied research, development, R&D facilities, and capital equipment for R&D, reported in accordance with OMB Circular A-11, MAX Schedule C, "Research and Development Activities."

The data in this report represent agencies' best estimates of actual and proposed federal funding for R&D collected during the period between February and April 2007. These data are based primarily on information provided to OMB by 24 agencies and account for an estimated 99% of all federally sponsored R&D activities. Also included in this report is R&D information that became available from individual agencies after the administration's budget was prepared and reported in the *Budget of the United States Government*. This information consists of budget justification documents that agencies submit to Congress and supplemental, program-specific information obtained from agency budget and program staff through late April 2007.

The FY 2007 data reflect the most recent estimates of final 2007 appropriations. The 2007 data reflect supplemental 2007 appropriations for the Department of Defense and several other agencies in the conference report of the 2007 supplemental bill (HR 2206 and HR 2207; Public Law 110-28) approved by Congress on 24 May 2007 and enacted on 25 May 2007. Supplemental R&D totals are subject to further change. Therefore, budget numbers for individual activities, programs, or agencies may differ slightly from those published in the President's budget or in agency budget documents.

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14	R&D
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17	R&D and R&D plant
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TABLE 1. Federal research and development and R&D plant budget authority, by budget function: FY 2006–08

2008 rank	Budget function	2006 actual	2007 preliminary	2008 proposed	2006–07	2007–08
		\$millions			% change	
	All functions conducting R&D	136,019	141,047	143,095	3.7	1.5
1	National defense	78,737	82,209	82,967	4.4	0.9
2	Health	28,932	29,604	29,395	2.3	-0.7
3	Space research and technology	10,401	11,111	12,040	6.8	8.4
4	General science and basic research	7,539	7,993	8,908	6.0	11.4
5	Natural resources and environment	2,219	2,010	2,004	-9.4	-0.3
6	Agriculture	2,118	1,934	1,706	-8.7	-11.8
7	Energy	1,244	1,617	1,485	30.0	-8.2
8	Transportation	1,730	1,509	1,387	-12.8	-8.0
9	Administration of justice	1,008	813	897	-19.4	10.4
10	Veterans benefits and services	769	851	822	10.5	-3.4
11	Education, training, employment, and social services	523	550	594	5.2	8.0
12	Commerce and housing credit	461	516	543	11.7	5.2
13	International affairs	255	255	255	0.0	0.0
14	Community and regional development	55	50	65	-8.9	29.8
15	Income security	27	27	27	0.0	0.0

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 2. Federal research and development budget authority, by budget function: FY 2006–08

2008 rank	Budget function	2006 actual	2007 preliminary	2008 proposed	2006–07	2007–08
		\$millions			% change	
	All functions conducting R&D	131,624	137,026	138,332	4.1	1.0
1	National defense	78,037	81,667	82,383	4.7	0.9
2	Health	28,797	29,481	29,242	2.4	-0.8
3	Space research and technology	8,204	8,933	9,506	8.9	6.4
4	General science and basic research	6,691	7,185	7,752	7.4	7.9
5	Natural resources and environment	2,120	1,932	1,944	-8.9	0.6
6	Agriculture	1,869	1,824	1,629	-2.4	-10.7
7	Energy	1,195	1,581	1,468	32.3	-7.1
8	Transportation	1,711	1,490	1,368	-13.0	-8.1
9	Administration of justice	1,008	813	897	-19.4	10.4
10	Veterans benefits and services	769	851	822	10.5	-3.4
11	Education, training, employment, and social services	495	504	548	1.8	8.7
12	Commerce and housing credit	390	433	425	11.2	-1.9
13	International affairs	255	255	255	0.0	0.0
14	Community and regional development	55	50	65	-8.9	29.8
15	Income security	27	27	27	0.0	0.0

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 3. Distribution of total federal research and development and R&D plant budget authority, by budget function: FY 2006–08

(Percent distribution)

2008 rank	Budget function	2006	2007	2008
		actual	preliminary	proposed
	All functions conducting R&D	100.0	100.0	100.0
1	National defense	57.9	58.3	58.0
2	Health	21.3	21.0	20.5
3	Space research and technology	7.6	7.9	8.4
4	General science and basic research	5.5	5.7	6.2
5	Natural resources and environment	1.6	1.4	1.4
6	Agriculture	1.6	1.4	1.2
7	Energy	0.9	1.1	1.0
8	Transportation	1.3	1.1	1.0
9	Administration of justice	0.7	0.6	0.6
10	Veterans benefits and services	0.6	0.6	0.6
11	Education, training, employment, and social services	0.4	0.4	0.4
12	Commerce and housing credit	0.3	0.4	0.4
13	International affairs	0.2	0.2	0.2
14	Community and regional development	*	*	*
15	Income security	*	*	*

* = less than 0.05%.

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

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 4. Distribution of total federal research and development budget authority, by budget function: FY 2006–08
(Percent distribution)

2008 rank	Budget function	2006 actual	2007 preliminary	2008 proposed
	All functions conducting R&D	100.0	100.0	100.0
1	National defense	59.3	59.6	59.6
2	Health	21.9	21.5	21.1
3	Space research and technology	6.2	6.5	6.9
4	General science and basic research	5.1	5.2	5.6
5	Natural resources and environment	1.6	1.4	1.4
6	Agriculture	1.4	1.3	1.2
7	Energy	0.9	1.2	1.1
8	Transportation	1.3	1.1	1.0
9	Administration of justice	0.8	0.6	0.6
10	Veterans benefits and services	0.6	0.6	0.6
11	Education, training, employment, and social services	0.4	0.4	0.4
12	Commerce and housing credit	0.3	0.3	0.3
13	International affairs	0.2	0.2	0.2
14	Community and regional development	*	*	*
15	Income security	*	*	*

* = less than 0.05%.

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

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 5. Federal budget authority for basic research, by budget function: FY 2006–08

2008 rank	Budget function	2006	2007	2008	2006–07	2007–08
		actual	preliminary	proposed		
		\$millions			% change	
	All functions conducting R&D	27,336	28,311	28,230	3.6	-0.3
4	National defense	1,490	1,601	1,458	7.4	-9.0
1	Health	15,532	15,944	15,554	2.7	-2.5
3	Space research and technology	2,299	2,259	2,226	-1.7	-1.5
2	General science and basic research	6,406	6,879	7,371	7.4	7.2
7	Natural resources and environment	195	168	162	-13.9	-3.7
5	Agriculture	805	784	740	-2.6	-5.7
12	Energy	8	33	9	312.5	-72.7
-	Transportation	0	0	0	-	-
9	Administration of justice	68	81	114	19.3	40.8
6	Veterans benefits and services	318	328	330	3.1	0.6
8	Education, training, employment, and social services	131	137	145	4.6	5.8
10	Commerce and housing credit	66	78	102	18.8	31.1
11	International affairs	18	18	18	0.0	0.0
-	Community and regional development	0	0	0	-	-
-	Income security	0	0	0	-	-

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Order of budget functions is same as order for federal R&D budget authority by budget function shown in table 2.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

TABLE 6. Federal research and development and R&D plant budget authority as percentage of total budget authority, by budget function: FY 2006–08

2008 rank	Budget function	2006 actual	2007 preliminary	2008 proposed
	All functions conducting R&D	7.8	8.6	8.2
4	National defense	12.8	13.2	12.8
5	Health	9.8	12.2	10.4
3	Space research and technology	66.0	71.2	72.6
2	General science and basic research	81.1	86.1	81.8
7	Natural resources and environment	5.8	6.8	6.6
6	Agriculture	8.3	10.1	8.6
1	Energy ^a	413.3	138.7	92.5
10	Transportation	2.3	1.9	1.7
11	Administration of justice	1.4	1.1	1.1
9	Veterans benefits and services	1.8	1.9	1.8
12	Education, training, employment, and social services	0.4	0.6	0.7
8	Commerce and housing credit	3.2	4.6	5.2
13	International affairs	0.8	0.7	0.7
14	Community and regional development	0.2	0.3	0.6
15	Income security	*	*	*

* = less than 0.05%.

^a R&D as percentage of total budget authority can be greater than 100% because gross budget authority has been reduced by offsetting receipts.

NOTES: Total budget authority includes discretionary and mandatory budget authority, less offsets. Order of budget functions is same as order for federal R&D and R&D plant budget authority by budget function shown in table 1.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, supplemental data obtained from agencies' budget offices, and Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2008* (Washington, DC: U.S. Government Printing Office, 2007).

TABLE 7. Federal research and development budget authority as percentage of total budget authority, by budget function:
FY 2006–08

2008 rank	Budget function	2006 actual	2007 preliminary	2008 proposed
	All functions conducting R&D	7.5	8.3	8.0
4	National defense	12.6	13.1	12.7
5	Health	9.8	12.2	10.4
3	Space research and technology	52.0	57.2	57.3
2	General science and basic research	72.0	77.4	71.2
7	Natural resources and environment	5.6	6.5	6.4
6	Agriculture	7.3	9.6	8.2
1	Energy ^a	397.0	135.6	91.5
10	Transportation	2.3	1.9	1.7
11	Administration of justice	1.4	1.1	1.1
9	Veterans benefits and services	1.8	1.9	1.8
13	Education, training, employment, and social services	0.4	0.6	0.6
8	Commerce and housing credit	2.7	3.9	4.1
12	International affairs	0.8	0.7	0.7
14	Community and regional development	0.2	0.3	0.6
15	Income security	*	*	*

* = less than 0.05%.

^a R&D as percentage of total budget authority can be greater than 100% because gross budget authority has been reduced by offsetting receipts.

NOTES: Total budget authority includes discretionary and mandatory budget authority, less offsets. Order of budget functions is same as order for federal R&D budget authority by budget function shown in table 2.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, supplemental data obtained from agencies' budget offices, and Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2008* (Washington, DC: U.S. Government Printing Office, 2007).

TABLE 8. Federal research and development and R&D plant budget authority for administration of justice (750): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	1,008	813	897	10.4
Department of Homeland Security (DHS) (751)	905	713	801	12.5
Department of Justice (DOJ)	103	100	96	-4.0
Federal Bureau of Investigation (751)	33	33	33	0.0
Federal Prison System (753)	12	12	11	-8.3
Office of Justice Programs (754)	58	55	52	-5.5

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from DOJ and DHS budget offices.

TABLE 9. Federal research and development budget authority for administration of justice (750): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	1,008	813	897	10.4
Department of Homeland Security (DHS) (751)	905	713	801	12.5
Department of Justice (DOJ)	103	100	96	-4.0
Federal Bureau of Investigation (751)	33	33	33	0.0
Federal Prison System (753)	12	12	11	-8.3
Office of Justice Programs (754)	58	55	52	-5.5

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from DOJ and DHS budget offices.

TABLE 10. Federal research and development and R&D plant budget authority for agriculture (350): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	2,118	1,934	1,706	-11.8
Agricultural research and services (352)				
Department of Agriculture (USDA)				
Agricultural Marketing Service	3	4	4	0.0
Agricultural Research Service	1,323	1,149	1,042	-9.3
Animal and Plant Health Inspection Service	25	27	27	0.0
Cooperative State Research, Education, and Extension Service				
McEntire-Stennis Cooperative Forestry	667	654	534	-18.3
National Research Initiative	22	30	20	-31.7
Payments to 1890 colleges and Tuskegee Institute	181	190	257	34.8
Payments under the Hatch Act	37	41	38	-5.8
Special research grants	177	323	164	-49.0
Other research programs	127	0	3	-
Economic Research Service	123	70	51	-27.3
Federal Grain Inspection Service	75	75	83	10.9
Foreign Agricultural Service	7	7	8	14.3
National Agricultural Statistics Service	1	1	1	0.0
Natural Resources Conservation Service	5	5	7	40.0
	12	12	0	-100.0

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: USDA submission to Office of Management and Budget per MAX Schedule C, USDA budget justification documents, and supplemental data obtained from USDA budget office.

TABLE 11. Federal research and development budget authority for agriculture (350): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	1,869	1,824	1,629	-10.7
Agricultural research and services (352)				
Department of Agriculture (USDA)				
Agricultural Marketing Service	3	4	4	0.0
Agricultural Research Service	1,074	1,040	965	-7.2
Animal and Plant Health Inspection Service	25	27	27	0.0
Cooperative State Research, Education, and Extension Service	667	654	534	-18.3
McEntire-Stennis Cooperative Forestry	22	30	20	-31.7
National Research Initiative	181	190	257	34.8
Payments to 1890 colleges and Tuskegee Institute	37	41	38	-5.8
Payments under the Hatch Act	177	323	164	-49.0
Special research grants	127	0	3	-
Other research programs	123	70	51	-27.3
Economic Research Service	75	75	83	10.9
Federal Grain Inspection Service	7	7	8	14.3
Foreign Agricultural Service	1	1	1	0.0
National Agricultural Statistics Service	5	5	7	40.0
Natural Resources Conservation Service	12	12	0	-100.0

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: USDA submission to Office of Management and Budget per MAX Schedule C, USDA budget justification documents, and supplemental data obtained from USDA budget office.

TABLE 12. Federal research and development and R&D plant budget authority for commerce and housing credit (370): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	461	516	543	5.2
Other advancement of commerce (376)				
Department of Commerce				
Bureau of the Census	22	22	26	18.2
National Institute of Standards and Technology	436	491	514	4.7
Construction of research facilities	48	59	94	60.0
Industrial technology services				
Advanced Technology Program	60	60	0	-100.0
Scientific and technical research and services	328	372	420	12.8
National Telecommunications and Information Administration	2	2	2	0.0
Departmental administration	1	1	1	0.0

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Department of Commerce (DOC) submission to Office of Management and Budget per MAX Schedule C and supplemental data obtained from DOC budget office.

TABLE 13. Federal research and development budget authority for commerce and housing credit (370): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	390	433	425	-1.9
Other advancement of commerce (376)				
Department of Commerce				
Bureau of the Census	22	22	26	18.2
National Institute of Standards and Technology	366	409	397	-3.0
Industrial technology services				
Advanced Technology Program	60	60	0	-100.0
Scientific and technical research and services	306	350	397	13.6
National Telecommunications and Information Administration	2	2	2	0.0

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Department of Commerce (DOC) submission to Office of Management and Budget per MAX Schedule C and supplemental data obtained from DOC budget office.

TABLE 14. Federal research and development budget authority for community and regional development (450): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007-08 (% change)
Total	55	50	65	29.8
Department of Housing and Urban Development (451)	55	50	65	29.8

NOTES: Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Department of Housing and Urban Development submission to Office of Management and Budget per MAX Schedule C.

TABLE 15. Federal research and development and R&D plant budget authority for education, training, employment, and social services (500): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	523	550	594	8.0
Research and general education aids (501, 502, 503)	394	412	416	1.0
Department of Education programs	241	237	233	-1.7
Smithsonian Institution programs	153	175	183	4.6
Social services (506)	129	138	178	29.0
Administration for Children and Families (DHHS)	44	57	94	64.9
Administration on Aging (DHHS)	3	0	0	-
Rehabilitation services (ED)	82	81	84	3.7
Training and employment (504)				
Employment and Training Administration (DOL)	0	0	0	-

DHHS = Department of Health and Human Services.

DOL = Department of Labor.

ED = Department of Education.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from agencies' budget offices.

TABLE 16. Federal research and development budget authority for education, training, employment, and social services (500): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	495	504	548	8.7
Research and general education aids (501, 502, 503)	366	366	370	1.1
Department of Education programs	241	237	233	-1.7
Smithsonian Institution programs	125	129	137	6.2
Social services (506)	129	138	178	29.0
Administration for Children and Families (DHHS)	44	57	94	64.9
Administration on Aging (DHHS)	3	0	0	-
Rehabilitation services (ED)	82	81	84	3.7
Training and employment (504)				
Employment and Training Administration (DOL)	0	0	0	-

DHHS = Department of Health and Human Services.

DOL = Department of Labor.

ED = Department of Education.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from agencies' budget offices.

TABLE 17. Federal research and development and R&D plant budget authority for energy (270): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	1,244	1,617	1,485	-8.2
Department of Energy	1,156	1,522	1,386	-8.9
Energy conservation ^a (272)	0	0	0	-
Energy supply ^a (271)	682	969	974	0.5
Efficiency and renewables ^a	459	760	761	0.1
Electricity transmission and distribution	130	99	88	-11.1
Nuclear energy	93	110	125	13.6
Fossil energy (271)	433	493	359	-27.2
Clean coal technology ^b	0	0	0	-
Cooperative R&D	6	6	0	-100.0
Petroleum, coal, and gas program ^b	427	487	359	-26.0
Radioactive waste management (271)	41	60	53	-11.7
Nuclear Regulatory Commission (276)	68	74	77	4.1
Tennessee Valley Authority (271)	20	21	22	4.8

^a Energy conservation and solar and renewables programs have been consolidated as the efficiency and renewables program, in energy supply (271).

^b Clean coal technology has been merged with the petroleum, coal, and gas program.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, Department of Energy budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 18. Federal research and development budget authority for energy (270): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	1,195	1,581	1,468	-7.1
Department of Energy	1,107	1,486	1,369	-7.9
Energy conservation ^a (272)	0	0	0	-
Energy supply ^a (271)	651	952	957	0.5
Efficiency and renewables ^a	428	743	744	0.1
Electricity transmission and distribution	130	99	88	-11.1
Nuclear energy	93	110	125	13.6
Fossil energy (271)	415	474	359	-24.3
Clean coal technology ^b	0	0	0	-
Cooperative R&D	6	6	0	-100.0
Petroleum, coal, and gas program ^b	409	468	359	-23.4
Radioactive waste management (271)	41	60	53	-11.7
Nuclear Regulatory Commission (276)	68	74	77	4.1
Tennessee Valley Authority (271)	20	21	22	4.8

^a Energy conservation and solar and renewables programs have been consolidated as the efficiency and renewables program in energy supply (271).

^b Clean coal technology has been merged with the petroleum, coal, and gas program.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, Department of Energy budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 19. Federal research and development and R&D plant budget authority for general science and basic research (251): FY 2006–08
(Millions of dollars)

Agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	7,539	7,993	8,908	11.4
Department of Energy (DOE)	3,356	3,511	4,052	15.4
Advanced scientific computing research	228	283	340	20.0
Basic energy sciences	1,110	1,250	1,498	19.9
Biological and environmental research	564	483	532	10.0
Human genome	61	75	73	-2.5
All other research	503	409	459	12.3
Fusion energy sciences	281	319	428	34.1
High energy physics	698	752	782	4.1
Nuclear physics	358	423	471	11.5
Small business innovation research ^a	117	0	0	-
National Science Foundation (NSF)	4,183	4,482	4,856	8.3
Biological sciences	585	629	683	8.7
Computer and information science and engineering	496	527	574	9.0
Education and human resources	63	63	69	10.2
Engineering	581	608	633	4.1
Geosciences	704	745	792	6.3
Integrative activities	233	230	263	14.6
Major research equipment	191	191	245	28.2
Mathematical and physical sciences	1,087	1,150	1,253	8.9
Office of cyberinfrastructure	127	182	200	9.6
Social, behavioral, and economic sciences	201	214	222	3.9
U.S. polar research programs	391	438	465	6.1
Budget authority adjustment ^b	-476	-494	-544	na

na = not applicable.

^a DOE treats this activity as a budget execution program (i.e., funds are collected from existing appropriations and are not allocated until three-quarters into the fiscal year).

^b Budget authority adjustment subtracts costs for research facilities, major equipment support, and other non-R&D from total NSF budget authority.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Not all federally sponsored basic research is categorized in subfunction 251. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 20. Federal research and development budget authority for general science and basic research (251): FY 2006–08
(Millions of dollars)

Agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	6,691	7,185	7,752	7.9
Department of Energy (DOE)	2,914	3,128	3,394	8.5
Advanced scientific computing research	222	273	327	19.7
Basic energy sciences	848	1,046	1,188	13.6
Biological and environmental research	541	460	504	9.4
Human genome	61	75	73	-2.5
All other research	480	386	431	11.7
Fusion energy sciences	240	274	257	-6.2
High energy physics	625	693	714	3.1
Nuclear physics	321	381	403	5.9
Small business innovation research ^a	117	0	0	-
National Science Foundation (NSF)	3,777	4,058	4,358	7.4
Biological sciences	585	629	683	8.7
Computer and information science and engineering	496	527	574	9.0
Education and human resources	63	63	69	10.2
Engineering	581	608	633	4.1
Geosciences	704	745	792	6.3
Integrative activities	233	230	263	14.6
Mathematical and physical sciences	1,087	1,150	1,253	8.9
Office of cyberinfrastructure	127	182	200	9.6
Social, behavioral, and economic sciences	201	214	222	3.9
U.S. polar research programs	391	438	465	6.1
Budget authority adjustment ^b	-692	-728	-797	na

na = not applicable.

^a DOE treats this activity as a budget execution program (i.e., funds are collected from existing appropriations and are not allocated until three-quarters into the fiscal year).

^b Budget authority adjustment subtracts costs for research facilities, major equipment support, and other non-R&D from total NSF budget authority.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Not all federally sponsored basic research is categorized in subfunction 251. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 21. Federal research and development and R&D plant budget authority for health (550): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	28,932	29,604	29,395	-0.7
Consumer and occupational health and safety (554)	151	148	143	-3.4
Food and Drug Administration (DHHS)	148	144	139	-3.5
Occupational Safety and Health Administration (DOL)	3	4	4	0.0
Health care services and health research and training (551, 552)	28,781	29,456	29,252	-0.7
Department of Health and Human Services				
Agency for Healthcare Research and Quality	346	346	357	3.2
Centers for Disease Control and Prevention	546	547	534	-2.4
Centers for Medicare and Medicaid Services	28	42	42	0.0
Health Resources and Services Administration	12	12	12	0.0
National Institutes of Health	27,747	28,399	28,066	-1.2
Departmental management (other)	102	110	241	119.1

DHHS = Department of Health and Human Services.

DOL = Department of Labor.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from agencies' budget offices.

TABLE 22. Federal research and development budget authority for health (550): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	28,797	29,481	29,242	-0.8
Consumer and occupational health and safety (554)	139	139	134	-3.6
Food and Drug Administration (DHHS)	136	135	130	-3.7
Occupational Safety and Health Administration (DOL)	3	4	4	0.0
Health care services and health research and training (551, 552)	28,658	29,342	29,108	-0.8
Department of Health and Human Services				
Agency for Healthcare Research and Quality	346	346	357	3.2
Centers for Disease Control and Prevention	546	547	534	-2.4
Centers for Medicare and Medicaid Services	28	42	42	0.0
Health Resources and Services Administration	12	12	12	0.0
National Institutes of Health	27,624	28,285	27,922	-1.3
Departmental management (other)	102	110	241	119.1

DHHS = Department of Health and Human Services.

DOL = Department of Labor.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from agencies' budget offices.

TABLE 23. Federal research and development and R&D plant budget authority for the National Institutes of Health: FY 2006–08
(Millions of dollars)

Agency, by 2008 rank	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	27,747	28,399	28,066	-1.2
National Cancer Institute	4,725	4,723	4,712	-0.2
National Institute of Allergy and Infectious Diseases	4,317	4,323	4,533	4.8
National Heart, Lung, and Blood Institute	2,823	2,829	2,832	0.1
National Institute of Diabetes and Digestive and Kidney Diseases	1,796	1,798	1,801	0.1
National Institute of General Medical Sciences	1,743	1,742	1,747	0.3
National Institute of Neurological Disorders and Stroke	1,504	1,500	1,502	0.1
National Institute of Mental Health	1,343	1,345	1,346	0.1
National Institute of Child Health and Human Development	1,226	1,215	1,225	0.8
National Center for Research Resources	1,104	1,127	1,107	-1.8
National Institute on Aging	1,021	1,022	1,022	0.0
National Institute on Drug Abuse	974	975	976	0.1
National Institute of Environmental Health Sciences ^a	695	700	696	-0.6
National Eye Institute	656	657	658	0.1
Office of the Director	478	1,096	517	-52.8
National Institute of Arthritis and Musculoskeletal and Skin Diseases	492	492	492	0.0
National Human Genome Research Institute	478	478	477	-0.4
National Institute on Alcohol Abuse and Alcoholism	424	424	424	0.1
National Institute on Deafness and Other Communication Disorders	380	380	380	0.0
National Institute of Dental and Cranofacial Research	373	373	374	0.2
National Library of Medicine	314	320	313	-2.3
National Institute of Biomedical Imaging and Bioengineering	289	286	290	1.4
National Center for Minority Health and Health Disparities	195	199	194	-2.5
Buildings and Facilities	86	81	136	67.7
National Institute of Nursing Research	127	126	127	0.2
National Center for Complementary and Alternative Medicine	118	118	118	0.1
John E. Fogarty International Center	66	66	67	0.3

^a Includes funding from Superfund-related transfers and appropriations.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Institute totals exclude non-R&D components of institute budgets. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Departmental submission to Office of Management and Budget per MAX Schedule C and supplemental data obtained from National Institutes of Health budget office.

TABLE 24. Federal research and development budget authority for the National Institutes of Health: FY 2006–08

(Millions of dollars)

Agency, by 2008 rank	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	27,624	28,285	27,922	-1.3
National Cancer Institute	4,717	4,715	4,704	-0.2
National Institute of Allergy and Infectious Diseases	4,287	4,298	4,533	5.4
National Heart, Lung, and Blood Institute	2,823	2,829	2,832	0.1
National Institute of Diabetes and Digestive and Kidney Diseases	1,796	1,798	1,801	0.1
National Institute of General Medical Sciences	1,743	1,742	1,747	0.3
National Institute of Neurological Disorders and Stroke	1,504	1,500	1,502	0.1
National Institute of Mental Health	1,343	1,345	1,346	0.1
National Institute of Child Health and Human Development	1,226	1,215	1,225	0.8
National Center for Research Resources	1,104	1,127	1,107	-1.8
National Institute on Aging	1,021	1,022	1,022	0.0
National Institute on Drug Abuse	974	975	976	0.1
National Institute of Environmental Health Sciences ^a	695	700	696	-0.6
National Eye Institute	656	657	658	0.1
Office of the Director	478	1,096	517	-52.8
National Institute of Arthritis and Musculoskeletal and Skin Diseases	492	492	492	0.0
National Human Genome Research Institute	478	478	477	-0.4
National Institute on Alcohol Abuse and Alcoholism	424	424	424	0.1
National Institute on Deafness and Other Communication Disorders	380	380	380	0.0
National Institute of Dental and Cranofacial Research	373	373	374	0.2
National Library of Medicine	314	320	313	-2.3
National Institute of Biomedical Imaging and Bioengineering	289	286	290	1.4
National Center for Minority Health and Health Disparities	195	199	194	-2.5
National Institute of Nursing Research	127	126	127	0.2
National Center for Complementary and Alternative Medicine	118	118	118	0.1
John E. Fogarty International Center	66	66	67	0.3

^a Includes funding from Superfund-related transfers and appropriations.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Institute totals exclude non-R&D and R&D facilities components of institute budgets. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Departmental submission to Office of Management and Budget per MAX Schedule C and supplemental data obtained from National Institutes of Health budget office.

TABLE 25. Federal research and development budget authority for income security (600): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	27	27	27	0.0
Social Security Administration (650)	27	27	27	0.0

NOTE: Percent change derived from unrounded data.

SOURCES: Social Security Administration submission to Office of Management and Budget per MAX Schedule C.

TABLE 26. Federal research and development budget authority for international affairs (150): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	255	255	255	0.0
Agency for International Development (151)	223	223	223	0.0
International Security Assistance (152)	32	32	32	0.0

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from agencies' budget offices.

TABLE 27. Federal research and development and R&D plant budget authority for national defense (050): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	78,737	82,209	82,967	0.9
Department of Defense, military (051) (DOD)	74,289	78,214	78,996	1.0
RDT&E	72,855	76,782	77,975	1.6
Defense agencies	19,803	21,899	21,287	-2.8
Defense Advanced Research Projects Agency	2,871	3,115	3,086	-1.0
Missile Defense Agency	7,682	9,381	8,796	-6.2
Other defense agencies	9,250	9,402	9,406	0.0
Department of the Air Force	22,220	24,514	28,082	14.6
Department of the Army	11,693	11,042	10,732	-2.8
Department of the Navy	18,973	19,143	17,694	-7.6
Operational test and evaluation	166	184	180	-2.2
Other military funding ^a	1,434	1,432	1,021	-28.7
Department of Energy, atomic energy defense activities (053) (DOE)	4,072	3,699	3,796	2.6
Environmental restoration and waste management	34	21	21	0.0
Naval reactors development	752	750	776	3.5
Nonproliferation	314	270	266	-1.6
Weapons activities	2,968	2,655	2,730	2.8
Other defense activities	4	3	3	0.0
Department of Homeland Security (DHS)	376	296	175	-40.9

RDT&E = research, development, test, and evaluation.

^a This item includes appropriate personnel costs in direct support of conduct of R&D, other appropriations funding certain DOD programs, and medical research funded outside RDT&E accounts.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2008 reflect requested supplemental appropriations; data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: DOD, DOE, and DHS submissions to Office of Management and Budget per MAX Schedule C; DOD, RDT&E Programs (R-1).

TABLE 28. Federal research and development budget authority for national defense (050): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	78,037	81,667	82,383	0.9
Department of Defense, military (051) (DOD)	74,125	78,154	78,792	0.8
RDT&E	72,855	76,782	77,975	1.6
Defense agencies	19,803	21,899	21,287	-2.8
Defense Advanced Research Projects Agency	2,871	3,115	3,086	-1.0
Missile Defense Agency	7,682	9,381	8,796	-6.2
Other defense agencies	9,250	9,402	9,406	0.0
Department of the Air Force	22,220	24,514	28,082	14.6
Department of the Army	11,693	11,042	10,732	-2.8
Department of the Navy	18,973	19,143	17,694	-7.6
Operational test and evaluation	166	184	180	-2.2
Other military funding ^a	1,270	1,372	817	-40.4
Department of Energy, atomic energy defense activities (053) (DOE)	3,536	3,217	3,416	6.2
Environmental restoration and waste management	34	21	21	0.0
Naval reactors development	692	690	705	2.2
Nonproliferation	244	128	155	20.7
Weapons activities	2,562	2,375	2,532	6.6
Other defense activities	4	3	3	0.0
Department of Homeland Security (DHS)	376	296	175	-40.9

RDT&E = research, development, test, and evaluation.

^a This item includes appropriate personnel costs in direct support of conduct of R&D, other appropriations funding certain DOD programs, and medical research funded outside RDT&E accounts.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2008 reflect requested supplemental appropriations; data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: DOD, DOE, and DHS submissions to Office of Management and Budget per MAX Schedule C; DOD, RDT&E Programs (R-1).

TABLE 29. Total obligational authority for Department of Defense research, development, test, and evaluation budget, by DOD budget activity: FY 2006–08

(Millions of dollars)

Budget activity	Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
	Total RDT&E (budget authority)	72,855	76,782	77,975	1.6
	Total RDT&E (TOA) ^a	72,691	77,053	77,975	1.2
1	Basic research	1,457	1,564	1,428	-8.7
	Defense agencies	364	366	306	-16.4
	Department of the Air Force	467	492	467	-5.0
	Department of the Army	374	409	375	-8.2
	Department of the Navy	252	298	280	-5.9
2	Applied research	4,948	5,329	4,357	-18.2
	Defense agencies	1,184	1,204	686	-43.0
	Department of the Air Force	762	786	678	-13.8
	Department of the Army	1,039	1,156	1,011	-12.5
	Department of the Navy	1,963	2,184	1,982	-9.3
3	Advanced technology development	6,866	6,436	5,003	-22.3
	Defense agencies	1,847	1,267	736	-41.9
	Department of the Air Force	1,012	768	535	-30.4
	Department of the Army	975	1,038	580	-44.1
	Department of the Navy	3,033	3,363	3,152	-6.3
	Operational test and evaluation	0	0	0	-
4	Advanced component development and prototypes	13,789	15,826	15,760	-0.4
	Defense agencies	509	565	902	59.6
	Department of the Air Force	3,493	3,305	3,065	-7.3
	Department of the Army	2,179	2,549	2,939	15.3
	Department of the Navy	7,609	9,407	8,854	-5.9
5	System development and demonstration	18,955	19,356	18,591	-4.0
	Defense agencies	5,146	5,087	5,296	4.1
	Department of the Air Force	8,597	8,932	7,994	-10.5
	Department of the Army	4,593	4,691	4,593	-2.1
	Department of the Navy	619	646	708	9.7
6	RDT&E management support	5,263	4,226	4,187	-0.9
	Defense agencies	1,360	1,210	1,140	-5.7
	Department of the Air Force	1,138	839	865	3.2
	Department of the Army	1,376	1,060	1,078	1.6
	Department of the Navy	1,223	933	923	-1.0
	Operational test and evaluation	166	184	180	-2.1
7	Operational system development	21,412	24,317	28,649	17.8
	Defense agencies	1,273	1,365	1,665	22.0
	Department of the Air Force	3,502	4,057	4,090	0.8
	Department of the Army	11,655	13,706	17,505	27.7
	Department of the Navy	4,983	5,189	5,388	3.8
	Adjustment for RDT&E budget authority ^a	164	-271	0	na

na = not applicable.

RDT&E = research, development, test, and evaluation.

TOA = total obligational authority.

^a Detailed budget information on Department of Defense (DOD) RDT&E activities is available only in TOA, which is the sum of new budget authority, unobligated budget authority from previous years, and other authorized credits. Adjustment converts TOA to budget authority by subtracting unobligated budget from authority from previous years and other authorized credits from TOA.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2008 reflect requested supplemental appropriations; data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Data derived from DOD, RDT&E Programs (R-1); and Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2008* (Washington, DC: U.S. Government Printing Office, 2007).

TABLE 30. Federal research and development and R&D plant budget authority for natural resources and environment (300): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	2,219	2,010	2,004	-0.3
Conservation and land management (302)	361	360	346	-3.9
Department of the Interior ^a	41	38	41	7.9
Forest Service (USDA)	320	322	305	-5.3
Pollution control and abatement (304)				
Environmental Protection Agency	622	557	540	-3.1
Science and technology	585	528	512	-3.0
Leaking underground storage tanks	1	1	1	0.0
Oil spill response research	1	1	1	0.0
Superfund	33	28	26	-6.1
Other accounts	3	0	0	-
Recreational resources (303)	199	199	201	0.8
National Park Service (DOI)	19	19	20	5.3
U.S. Geological Survey (DOI)	180	180	181	0.4
Water resources (301)	55	24	24	0.0
Army Corps of Engineers (DOD)	37	11	11	0.0
Bureau of Reclamation (DOI)	18	13	13	0.0
Other natural resources (306)	982	870	894	2.7
National Oceanic and Atmospheric Administration (DOC)	601	480	528	9.9
National environmental satellite, data, and information service	34	24	27	13.5
National marine fisheries service	52	36	42	16.8
National ocean service	57	26	36	37.8
National weather service	22	23	23	1.3
Oceanic and atmospheric research	311	271	300	10.7
Climate research	153	168	176	5.2
All other research	158	103	124	19.6
All other NOAA	126	101	100	-1.3
U.S. Geological Survey	381	389	366	-6.0
Enterprise information	1	5	7	37.5
Geologic and mineral resource surveys and mapping	214	214	198	-7.3
National mapping, geography, and survey	39	44	42	-4.0
Water resources investigations	127	126	119	-6.2

DOC = Department of Commerce; DOD = Department of Defense; DOI = Department of the Interior; NOAA = National Oceanic and Atmospheric Administration; USDA = U.S. Department of Agriculture.

^a Includes Bureau of Land Management, Office of Surface Mining and Reclamation, and Minerals Management Service.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 31. Federal research and development budget authority for natural resources and environment (300): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	2,120	1,932	1,944	0.6
Conservation and land management (302)	338	337	324	-3.9
Department of the Interior ^a	38	35	39	11.4
Forest Service (USDA)	300	302	285	-5.6
Pollution control and abatement (304)				
Environmental Protection Agency	622	557	540	-3.1
Science and technology	585	528	512	-30.4
Leaking underground storage tanks	1	1	1	0.0
Oil spill response research	1	1	1	0.0
Superfund	33	28	26	72.8
Other accounts	3	0	0	-
Recreational resources (303)	199	199	201	0.8
National Park Service (DOI)	19	19	20	5.3
U.S. Geological Survey (DOI)	180	180	181	0.4
Water resources (301)	53	20	24	20.0
Army Corps of Engineers (DOD)	37	11	11	0.0
Bureau of Reclamation (DOI)	16	9	13	44.4
Other natural resources (306)	908	819	856	4.5
National Oceanic and Atmospheric Administration (DOC)	527	429	490	14.0
National environmental satellite, data, and information service	34	24	27	13.5
National marine fisheries service	52	36	42	16.8
National ocean service	57	26	36	37.8
National weather service	22	23	23	1.3
Oceanic and atmospheric research	311	271	300	10.7
Climate research	153	168	176	5.2
All other research	158	103	124	19.6
All other NOAA	52	50	62	23.6
U.S. Geological Survey	381	389	366	-6.0
Enterprise information	1	5	7	37.5
Geologic and mineral resource surveys and mapping	214	214	198	-7.3
National mapping, geography, and survey	39	44	42	-4.0
Water resources investigations	127	126	119	-6.2

DOC = Department of Commerce; DOD = Department of Defense; DOI = Department of the Interior; NOAA = National Oceanic and Atmospheric Administration; USDA = U.S. Department of Agriculture.

^a Includes Bureau of Land Management, Office of Surface Mining and Reclamation, and Minerals Management Service.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 32. Federal research and development and R&D plant budget authority for space research and technology (252): FY 2006–08
(Millions of dollars)

Agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	10,401	11,111	12,040	8.4
National Aeronautics and Space Administration (NASA)				
Advanced capabilities	1,317	792	856	8.0
Astrophysics	1,553	1,540	1,566	1.6
Constellation systems	1,734	2,784	3,068	10.2
Earth science	1,326	1,443	1,497	3.7
Education	139	156	129	-17.4
Heliophysics	1,067	1,013	1,057	4.3
Innovative partnerships	215	232	198	-14.7
Planetary science	1,299	1,391	1,396	0.4
Shared capabilities	0	24	34	43.7
Space station	1,753	1,735	2,239	29.0

NOTES: Includes funds for research and research program management but excludes fixed capital equipment costs. Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: NASA submissions to Office of Management and Budget per MAX Schedule C, NASA budget justification documents, and supplemental data obtained from NASA budget and NASA budget office.

TABLE 33. Federal research and development budget authority for space research and technology (252): FY 2006–08
(Millions of dollars)

Agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	8,204	8,933	9,506	6.4
National Aeronautics and Space Administration (NASA)				
Advanced capabilities	1,317	792	856	8.0
Astrophysics	1,553	1,540	1,566	1.6
Constellation systems	1,290	2,341	2,773	18.4
Earth science	1,326	1,443	1,497	3.7
Education	139	156	129	-17.4
Heliophysics	1,067	1,013	1,057	4.3
Innovative partnerships	215	232	198	-14.7
Planetary science	1,299	1,391	1,396	0.4
Shared capabilities	0	24	34	43.7
Space station	0	0	0	-

NOTES: Includes funds for research and research program management but excludes fixed capital equipment costs. Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: NASA submissions to Office of Management and Budget per MAX Schedule C, NASA budget justification documents, and supplemental data obtained from NASA budget and NASA budget office.

TABLE 34. Federal research and development and R&D plant budget authority for transportation (400): FY 2006–08
(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	1,730	1,509	1,387	-8.0
Air transportation (402)	1,203	999	812	-18.7
Federal Aviation Administration (DOT)	310	303	258	-15.0
National Aeronautics and Space Administration, aeronautics ^a	893	695	554	-20.3
Transportation Security Administration (DHS)	0	0	0	-
Ground transportation (401) (DOT)	479	473	531	12.2
Federal Highway Administration	347	361	410	13.7
Federal Motor Carrier Safety Administration	9	9	7	-24.4
Federal Railroad Administration	48	36	36	-0.4
Federal Transit Administration	18	10	13	24.7
National Highway Traffic Safety Administration	58	58	66	14.2
Water transportation (403)	19	19	20	5.3
U.S. Coast Guard (DHS)	19	19	20	5.3
Other transportation (407) ^b (DOT)	29	18	24	36.6

DHS = Department of Homeland Security.

DOT = Department of Transportation.

^a Includes funds for research and research program management.

^b Includes Office of the Secretary, Pipeline and Hazardous Materials Safety Administration, and the Research and Innovative Technology Administration.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect final 2007 appropriations enacted in Public Law 110-5.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from agencies' budget offices.

TABLE 35. Federal research and development budget authority for transportation (400): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	1,711	1,490	1,368	-8.1
Air transportation (402)	1,186	981	795	-19.0
Federal Aviation Administration (DOT)	293	286	241	-15.9
National Aeronautics and Space Administration, aeronautics ^a	893	695	554	-20.3
Transportation Security Administration (DHS)	0	0	0	-
Ground transportation (401) (DOT)	477	472	530	12.3
Federal Highway Administration	347	361	410	13.7
Federal Motor Carrier Safety Administration	9	9	7	-24.4
Federal Railroad Administration	47	35	34	-0.2
Federal Transit Administration	18	10	13	24.7
National Highway Traffic Safety Administration	58	58	66	14.2
Water transportation (403)	19	19	20	5.3
U.S. Coast Guard (DHS)	19	19	20	5.3
Other transportation (407) ^b (DOT)	29	18	24	36.6

DOT = Department of Transportation.

DHS = Department of Homeland Security.

^aIncludes funds for research and research program management.^bIncludes Office of the Secretary, Pipeline and Hazardous Materials Safety

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C and supplemental data obtained from agencies' budget offices.

TABLE 36. Federal research and development budget authority for veterans benefits and services (700): FY 2006–08

(Millions of dollars)

Funding category and agency	2006 actual	2007 preliminary	2008 proposed	2007–08 (% change)
Total	769	851	822	-3.4
Department of Veterans Affairs				
Medical and prosthetic research (703)	769	851	822	-3.4

NOTES: Includes administration and operating expenses related to Department of Veterans Affairs research. Data for 2007 reflect appropriations enacted in Public Laws 110-5 and 110-28.

SOURCE: Department of Veterans Affairs submission to Office of Management and Budget per MAX Schedule C.

TABLE 37. Federal research and development obligations, budget authority, and budget authority for basic research, by budget function: FY 1955–2008
(Millions of dollars)

Federal R&D obligations and authority	All functions	Budget function																
		Administration of justice	Agriculture	Commerce and housing credit	Community and regional development	Education, training, employment, and social services	Energy	General government	General science and basic research	Health	Income security	International affairs	National defense	Natural resources and environment	Space research and technology	Transportation	Veterans benefits and services	Other ^a
All R&D obligations																		
1955	2,533	NA	NA	NA	NA	NA	NA	NA	NA	67	NA	NA	2,151	NA	NA	NA	NA	315
1956	2,988	NA	NA	NA	NA	NA	NA	NA	NA	83	NA	NA	2,535	NA	NA	NA	NA	370
1957	3,932	NA	NA	NA	NA	NA	NA	NA	NA	140	NA	NA	3,327	NA	NA	NA	NA	465
1958	4,570	NA	NA	NA	NA	NA	NA	NA	NA	177	NA	NA	3,801	NA	NA	NA	NA	592
1959	6,694	NA	NA	NA	NA	NA	NA	NA	NA	233	NA	NA	5,556	NA	NA	NA	NA	904
1960	7,552	NA	NA	NA	NA	NA	NA	NA	NA	305	NA	NA	6,107	NA	NA	NA	NA	1,140
1961	9,059	NA	125	NA	NA	NA	373	NA	137	405	NA	NA	7,005	73	777	55	NA	108
1962	10,290	NA	136	NA	NA	NA	448	NA	187	551	NA	NA	7,238	108	1,413	101	NA	107
1963	12,495	NA	146	NA	NA	NA	515	NA	246	626	NA	NA	7,764	120	2,812	142	NA	125
1964	14,225	NA	165	NA	NA	NA	571	NA	277	728	NA	NA	7,829	134	4,241	122	NA	160
1965	14,614	NA	195	NA	NA	NA	585	NA	304	792	NA	NA	7,342	159	4,887	147	NA	203
1966	15,320	NA	201	NA	NA	NA	575	NA	377	900	NA	NA	7,536	189	4,976	251	NA	315
1967	16,529	*	218	43	37	154	600	3	409	915	48	18	8,566	320	4,778	380	41	na
1968	15,921	1	217	48	44	166	657	5	437	1,021	50	17	8,275	331	4,304	304	45	na
1969	15,641	5	221	54	32	169	597	5	433	1,088	78	26	8,356	323	3,799	404	50	na
1970	15,339	9	238	79	47	164	574	6	452	1,084	136	32	7,981	340	3,606	535	59	na
1971	15,543	10	259	90	65	215	556	7	513	1,288	145	32	8,110	416	3,048	728	63	na
1972	16,496	23	294	50	66	235	574	8	625	1,547	106	29	8,902	479	2,932	558	69	na
1973	16,800	33	308	50	78	290	630	7	658	1,585	106	28	9,002	554	2,824	572	74	na
1974	17,410	35	313	51	82	236	759	9	749	2,069	71	24	9,016	516	2,702	693	85	na
1975	19,039	44	342	65	93	239	1,363	12	813	2,170	72	29	9,679	624	2,764	635	95	na
1976	20,780	35	383	69	109	255	1,649	12	858	2,351	48	42	10,430	683	3,130	631	98	na
1977	23,450	30	457	71	101	230	2,562	13	974	2,629	55	66	11,864	753	2,832	708	107	na
All R&D authority																		
1978	25,976	44	501	77	92	345	3,134	20	1,050	2,968	67	57	12,899	904	2,939	768	111	na
1979	28,208	47	552	93	127	354	3,461	23	1,119	3,401	57	117	13,791	1,010	3,136	798	123	na
1980	29,739	45	585	101	119	468	3,603	22	1,233	3,694	47	125	14,946	999	2,738	887	126	na
1981	33,735	34	659	106	104	298	3,501	22	1,340	3,871	43	160	18,413	1,061	3,111	869	143	na
1982	36,115	31	693	104	63	228	3,012	10	1,359	3,869	32	165	22,070	965	2,584	791	139	na
1983	38,768	37	745	107	44	189	2,578	6	1,502	4,298	32	177	24,936	952	2,134	876	157	na
1984	44,214	24	762	110	46	200	2,581	8	1,676	4,779	26	192	29,287	963	2,300	1,040	218	na
1985	49,887	47	836	114	50	220	2,389	17	1,862	5,418	21	210	33,698	1,059	2,725	1,030	193	na
1986	53,249	41	815	111	88	248	2,286	14	1,873	5,565	14	211	36,926	1,062	2,894	917	183	na
1987	57,069	49	822	110	99	267	2,053	17	2,042	6,556	25	223	39,152	1,133	3,398	908	215	na
1988	59,106	51	882	122	108	285	2,126	17	2,160	7,076	23	224	40,099	1,160	3,683	896	195	na
1989	62,115	45	907	128	74	347	2,419	15	2,373	7,773	27	279	40,642	1,255	4,555	1,064	212	na
1990	63,781	44	950	140	67	374	2,726	17	2,410	8,308	33	375	39,925	1,386	5,765	1,045	216	na
1991	65,898	51	1,052	178	88	433	2,953	4	2,635	9,226	30	378	39,328	1,582	6,511	1,231	219	na

TABLE 37. Federal research and development obligations, budget authority, and budget authority for basic research, by budget function: FY 1955–2008
(Millions of dollars)

Federal R&D obligations and authority	All functions	Budget function																
		Administration of justice	Agriculture	Commerce and housing credit	Community and regional development	Education, training, employment, and social services	Energy	General government	General science and basic research	Health	Income security	International affairs	National defense	Natural resources and environment	Space research and technology	Transportation	Veterans benefits and services	Other ^a
1992	68,398	51	1,155	192	127	365	3,099	4	2,659	10,055	37	371	40,083	1,688	6,744	1,523	245	na
1993	69,884	49	1,152	220	57	348	2,677	*	2,691	10,280	36	382	41,249	1,802	6,988	1,703	250	na
1994	68,331	46	1,193	380	68	373	2,873	0	2,712	10,993	45	254	37,764	2,062	7,414	1,888	265	na
1995	68,791	59	1,194	525	70	369	2,844	1	2,794	11,407	43	287	37,204	1,988	7,916	1,833	257	na
1996	69,049	56	1,176	432	50	331	2,521	2	2,846	11,867	16	252	37,801	1,802	7,844	1,795	259	na
1997	71,653	59	1,203	409	48	373	2,372	2	2,944	12,670	9	190	39,591	1,886	7,844	1,785	267	na
1998	73,569	72	1,249	398	42	444	948	2	4,360	13,576	18	163	39,823	1,855	8,198	1,833	587	na
1999	77,637	88	1,288	432	59	403	1,131	3	4,690	15,553	38	190	41,306	1,842	8,245	1,725	644	na
2000	78,664	73	1,426	406	46	418	996	6	4,977	17,869	25	200	42,580	1,999	5,363	1,636	645	na
2001	86,756	88	1,657	429	54	411	1,314	3	5,468	20,758	30	252	45,713	2,096	6,126	1,640	719	na
2002	97,624	91	1,606	467	50	411	1,327	3	5,753	23,560	37	279	53,016	2,160	6,270	1,838	756	na
2003	112,544	299	1,708	463	48	430	1,403	0	6,129	26,517	38	269	63,048	2,151	7,355	1,869	817	na
2004	121,867	684	1,750	454	47	459	1,343	0	6,466	28,251	47	264	69,593	2,168	7,612	1,863	866	na
2005	126,601	758	1,820	423	45	470	1,296	0	6,570	28,824	35	255	74,047	2,168	7,300	1,847	742	na
2006	131,624	1,008	1,869	390	55	495	1,195	0	6,691	28,797	27	255	78,037	2,120	8,204	1,711	769	na
2007 preliminary	137,026	813	1,824	433	50	504	1,581	0	7,185	29,481	27	255	81,667	1,932	8,933	1,490	851	na
2008 proposed	138,332	897	1,629	425	65	548	1,468	0	7,752	29,242	27	255	82,383	1,944	9,506	1,368	822	na
Authority for basic research																		
1978	3,665	10	197	9	8	57	157	0	962	1,246	2	*	320	207	412	70	9	na
1979	4,108	10	222	10	8	59	172	*	1,026	1,579	1	0	365	131	440	75	10	na
1980	4,716	9	246	15	8	61	200	*	1,152	1,761	1	0	552	136	482	79	14	na
1981	5,107	5	281	17	5	66	220	3	1,256	1,951	3	12	610	131	445	89	15	na
1982	5,305	4	295	17	7	78	260	2	1,296	1,953	0	10	696	139	434	102	13	na
1983	6,247	4	326	19	6	70	320	3	1,439	2,475	0	10	788	156	501	117	14	na
1984	7,072	5	353	20	5	77	365	3	1,606	2,813	0	3	845	192	646	125	15	na
1985	7,810	4	406	23	6	86	428	4	1,779	3,243	0	4	856	206	498	255	15	na
1986	8,193	5	390	26	6	83	456	5	1,795	3,324	0	5	960	204	737	184	15	na
1987	9,021	8	397	26	4	78	511	4	1,942	3,851	0	3	900	206	843	231	17	na
1988	9,553	8	428	28	7	83	571	5	2,061	4,087	0	3	905	210	944	197	17	na
1989	10,648	7	433	29	3	92	703	3	2,265	4,413	0	3	965	331	1,099	287	16	na
1990	11,288	9	456	31	3	106	761	3	2,306	4,661	0	4	964	336	1,389	242	16	na
1991	12,405	6	486	39	10	115	878	0	2,526	5,021	0	6	1,188	389	1,479	246	16	na
1992	12,973	5	528	35	11	118	921	0	2,532	5,506	0	6	1,147	383	1,499	266	16	na
1993	13,440	5	553	34	10	121	917	0	2,553	5,700	0	8	1,323	376	1,588	238	16	na
1994	13,552	5	567	38	9	145	921	0	2,542	5,889	0	6	1,174	224	1,796	220	16	na
1995	13,772	9	565	35	3	153	930	0	2,622	6,068	0	0	1,181	187	1,614	389	16	na
1996	14,442	12	547	37	0	140	1,182	0	2,662	6,395	0	2	1,165	147	1,685	456	13	na
1997	14,961	13	548	34	0	142	1,288	0	2,753	6,852	0	2	1,090	153	1,653	420	14	na

TABLE 37. Federal research and development obligations, budget authority, and budget authority for basic research, by budget function: FY 1955–2008
(Millions of dollars)

Federal R&D obligations and authority	All functions	Budget function																
		Administration of justice	Agriculture	Commerce and housing credit	Community and regional development	Education, training, employment, and social services	Energy	General government	General science and basic research	Health	Income security	International affairs	National defense	Natural resources and environment	Space research and technology	Transportation	Veterans benefits and services	Other ^a
1998	15,523	16	571	35	0	133	34	0	4,121	7,356	0	1	1,067	145	1,610	411	23	na
1999	17,433	18	602	41	0	99	36	0	4,464	8,634	0	0	1,110	142	1,667	358	263	na
2000	19,470	20	651	39	0	107	36	0	4,722	10,099	0	42	1,184	146	1,616	542	266	na
2001	21,376	27	749	50	0	112	40	0	5,187	11,642	0	50	1,303	215	1,695	17	289	na
2002	23,848	30	762	56	0	115	45	0	5,561	12,957	0	53	1,404	471	1,912	17	465	na
2003	25,323	42	824	53	1	125	40	0	5,907	14,162	0	18	1,409	185	2,206	23	327	na
2004	26,529	58	780	46	0	125	32	0	6,198	14,850	0	18	1,380	201	2,473	20	347	na
2005	27,678	42	789	53	0	130	31	0	6,238	15,826	0	18	1,508	195	2,486	65	297	na
2006	27,336	68	805	66	0	131	8	0	6,406	15,532	0	18	1,490	195	2,299	0	318	na
2007 preliminary	28,311	81	784	78	0	137	33	0	6,879	15,944	0	18	1,601	168	2,259	0	328	na
2008 proposed	28,230	114	740	102	0	145	9	0	7,371	15,554	0	18	1,458	162	2,226	0	330	na

* = less than \$500,000.

na = not applicable.

NA = not available; data were not collected for all budget functions in all years.

^aIncludes amounts for all functions for which data were not explicitly collected.

NOTES: Detail may not add to total because of rounding. In FY 2004 the Department of Homeland Security changed its R&D portfolio to reclassify funding in general science and basic research and in agriculture as administration of justice. In FY 2000 the National Aeronautics and Space Administration transferred funding for the space station program from R&D to R&D plant; this change reflected in the budget authority for space research and technology. In FY 2000 the National Institutes of Health in the Department of Health and Human Services classified all of its previous development activities as basic research or applied research, which resulted in an increase in health basic research. In FY 1998 many Department of Energy programs were reclassified from energy to general science and basic research, and the Department of Veterans Affairs began reporting medical care support funds as part of its total research budgetary resources; this change reflected in budget authority for veteran benefits and services.

SOURCES: 1955–94 data are from agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities," and supplemental data obtained from agencies' budget offices. 1995–2008 data are from agencies' submissions to Office of Management and Budget per MAX Schedule C, budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 38. Federal research and development for national defense and civilian functions: FY 1955–2008

Fiscal year	Total	National defense	Civilian functions	Total	National defense	Civilian functions
	Current \$millions			% distribution		
R&D obligations						
1955	2,533	2,151	382	100.0	84.9	15.1
1956	2,988	2,535	453	100.0	84.8	15.2
1957	3,932	3,327	605	100.0	84.6	15.4
1958	4,570	3,801	769	100.0	83.2	16.8
1959	6,694	5,556	1,138	100.0	83.0	17.0
1960	7,552	6,107	1,445	100.0	80.9	19.1
1961	9,059	7,005	2,054	100.0	77.3	22.7
1962	10,290	7,238	3,052	100.0	70.3	29.7
1963	12,495	7,764	4,731	100.0	62.1	37.9
1964	14,225	7,829	6,396	100.0	55.0	45.0
1965	14,614	7,342	7,272	100.0	50.2	49.8
1966	15,320	7,536	7,784	100.0	49.2	50.8
1967	16,529	8,566	7,963	100.0	51.8	48.2
1968	15,921	8,275	7,646	100.0	52.0	48.0
1969	15,641	8,356	7,285	100.0	53.4	46.6
1970	15,339	7,981	7,358	100.0	52.0	48.0
1971	15,543	8,110	7,433	100.0	52.2	47.8
1972	16,496	8,902	7,594	100.0	54.0	46.0
1973	16,800	9,002	7,798	100.0	53.6	46.4
1974	17,410	9,016	8,394	100.0	51.8	48.2
1975	19,039	9,679	9,360	100.0	50.8	49.2
1976	20,780	10,430	10,350	100.0	50.2	49.8
1977	23,450	11,864	11,586	100.0	50.6	49.4
R&D authority						
1978	25,976	12,899	13,077	100.0	49.7	50.3
1979	28,208	13,791	14,417	100.0	48.9	51.1
1980	29,739	14,946	14,793	100.0	50.3	49.7
1981	33,735	18,413	15,322	100.0	54.6	45.4
1982	36,115	22,070	14,045	100.0	61.1	38.9
1983	38,768	24,936	13,832	100.0	64.3	35.7
1984	44,214	29,287	14,927	100.0	66.2	33.8
1985	49,887	33,698	16,189	100.0	67.5	32.5
1986	53,249	36,926	16,323	100.0	69.3	30.7
1987	57,069	39,152	17,917	100.0	68.6	31.4
1988	59,106	40,099	19,007	100.0	67.8	32.2
1989	62,115	40,642	21,473	100.0	65.5	34.5
1990	63,781	39,925	23,856	100.0	62.6	37.4
1991	65,898	39,328	26,570	100.0	59.7	40.3
1992	68,398	40,083	28,315	100.0	58.6	41.4
1993	69,884	41,249	28,635	100.0	59.0	41.0
1994	68,331	37,764	30,566	100.0	55.3	44.7
1995	68,791	37,204	31,587	100.0	54.1	45.9
1996	69,049	37,801	31,248	100.0	54.7	45.3
1997	71,653	39,591	32,062	100.0	55.3	44.7
1998	73,569	39,823	33,746	100.0	54.1	45.9
1999	77,637	41,306	36,332	100.0	53.2	46.8
2000	78,664	42,580	36,084	100.0	54.1	45.9
2001	86,756	45,713	41,043	100.0	52.7	47.3
2002	97,624	53,016	44,608	100.0	54.3	45.7

TABLE 38. Federal research and development for national defense and civilian functions: FY 1955–2008

Fiscal year	Total	National defense	Civilian functions	Total	National defense	Civilian functions
	Current \$millions			% distribution		
2003	112,544	63,048	49,495	100.0	56.0	44.0
2004	121,867	69,593	52,274	100.0	57.1	42.9
2005	126,601	74,047	52,554	100.0	58.5	41.5
2006	131,624	78,037	53,586	100.0	59.3	40.7
2007 preliminary	137,026	81,667	55,359	100.0	59.6	40.4
2008 proposed	138,332	82,383	55,949	100.0	59.6	40.4

NOTES: National defense function includes Department of Defense military activities, Department of Energy atomic energy defense program, and defense-related R&D of Department of Homeland Security. Civilian functions include all other federally funded R&D activities.

SOURCES: Agencies' submissions to Office of Management and Budget, MAX Schedule C; budget justification documents; and supplemental data obtained from agencies' budget offices.

Appendix A. Agency and Budget Function Crosswalk

Agency	Budget function														
	Administration of justice (750)	Agriculture (350)	Commerce and housing credit (370)	Community and regional development (450)	Education, training, employment, and social services (500)	Energy (270)	General science and basic research (251)	Health (556)	Income security (600)	International affairs (150)	National defense (050)	Natural resources and environment (300)	Space research and technology (252)	Transportation (400)	Veterans benefits and services (700)
Agency for International Development										●					
Army Corps of Engineers (Civil)												●			
Department of Agriculture		●										●			
Department of Commerce			●									●			
Department of Defense (Military)										●					
Department of Education					●										
Department of Energy						●	●				●				
Department of Health and Human Services					●			●							
Department of Homeland Security	●									●					
Department of Housing and Urban Development				●										●	
Department of Justice	●														
Department of Labor					●			●							
Department of the Interior												●			
Department of Transportation														●	
Department of Veterans Affairs															●
Environmental Protection Agency												●			
National Aeronautics and Space Administration													●	●	
National Science Foundation							●								
Nuclear Regulatory Commission						●									
Smithsonian Institution					●										
Social Security Administration									●						
Tennessee Valley Authority						●									

● = R&D function funded by specified agency.

SOURCES: Agencies' submission to Office of Management and Budget, Circular No. A-11, Max Schedule C, "Research and Development Activities"; budget justification documents; and supplemental data from agencies' budget offices.

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