



National Center for Science and
Engineering Statistics

Federal Funds for Research and Development: Fiscal Years 2020–21

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Contents

General Notes	2
Data Tables	3
Technical Notes	388
Technical Tables	400
Acknowledgments and Suggested Citation	420
Contact Us	421

General Notes

These tables present the results of volume 70 (FYs 2020–21) of the Survey of Federal Funds for Research and Development. This annual census, completed by the federal agencies that conduct R&D programs, is the primary source of information about federal funding for R&D in the United States. Actual data are collected for the fiscal year just completed; estimates are obtained for the current fiscal year.

Data Tables

Research, development, and R&D plant

Table	Title
1	Federal obligations for research and development, by type of R&D, and for R&D plant: FYs 1951–2021
2	Summary of federal obligations and outlays for research, experimental development, and R&D plant, by type of R&D, performer, and field of science and engineering: FYs 2019–21
3	Federal obligations and outlays for research, experimental development, and R&D plant, by agency: FYs 2020–21

Research and development

Table	Title
4	Federal obligations and outlays for research and experimental development, by agency: FYs 2020–21
5	Federal obligations for research and experimental development, by agency and type of R&D: FY 2020
6	Preliminary federal obligations for research and experimental development, by agency and type of R&D: FY 2021
7	Federal obligations for research and experimental development, by agency and performer: FY 2020
8	Preliminary federal obligations for research and experimental development, by agency and performer: FY 2021

Research, development, test, and evaluation (RDT&E)

Table	Title
9	Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020
10	Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2021

Obligations to federally funded research and development centers (FFRDCs)

Table	Title
11	Federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2020

Table	Title
12	Preliminary federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2021
13	Federal obligations for research and experimental development to federally funded research and development centers, by FFRDC and agency: FY 2020
14	Federal obligations for R&D plant to federally funded research and development centers, by FFRDC and agency: FY 2020

Research obligations

Table	Title
15	Federal obligations for research, by agency and performer: FY 2020
16	Preliminary federal obligations for research, by agency and performer: FY 2021
17	Federal obligations for research, by detailed field of science and engineering: FYs 2020–21
18	Federal obligations for research, by agency and field of science and engineering: FY 2020
19	Preliminary federal obligations for research, by agency and field of science and engineering: FY 2021
20	Federal obligations for research in computer sciences and mathematics, by agency and detailed field: FY 2020
21	Federal obligations for research in engineering, by agency and detailed field: FY 2020
22	Federal obligations for research in environmental sciences, by agency and detailed field: FY 2020
23	Federal obligations for research in life sciences, by agency and detailed field: FY 2020
24	Federal obligations for research in physical sciences, by agency and detailed field: FY 2020
25	Federal obligations for research in psychology, by agency and detailed field: FY 2020
26	Federal obligations for research in social sciences, by agency and detailed field: FY 2020

Basic research obligations

Table	Title
27	Federal obligations for basic research, by agency and performer: FY 2020
28	Preliminary federal obligations for basic research, by agency and performer: FY 2021

Table	Title
29	Federal obligations for basic research, by detailed field of science and engineering: FYs 2020–21
30	Federal obligations for basic research, by agency and field of science and engineering: FY 2020
31	Preliminary federal obligations for basic research, by agency and field of science and engineering: FY 2021
32	Federal obligations for basic research in computer sciences and mathematics, by agency and detailed field: FY 2020
33	Federal obligations for basic research in engineering, by agency and detailed field: FY 2020
34	Federal obligations for basic research in environmental sciences, by agency and detailed field: FY 2020
35	Federal obligations for basic research in life sciences, by agency and detailed field: FY 2020
36	Federal obligations for basic research in physical sciences, by agency and detailed field: FY 2020
37	Federal obligations for basic research in psychology, by agency and detailed field: FY 2020
38	Federal obligations for basic research in social sciences, by agency and detailed field: FY 2020

Applied research obligations

Table	Title
39	Federal obligations for applied research, by agency and performer: FY 2020
40	Preliminary federal obligations for applied research, by agency and performer: FY 2021
41	Federal obligations for applied research, by detailed field of science and engineering: FYs 2020–21
42	Federal obligations for applied research, by agency and field of science and engineering: FY 2020
43	Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2021
44	Federal obligations for applied research in computer sciences and mathematics, by agency and detailed field: FY 2020
45	Federal obligations for applied research in engineering, by agency and detailed field: FY 2020
46	Federal obligations for applied research in environmental sciences, by agency and detailed field: FY 2020
47	Federal obligations for applied research in life sciences, by agency and detailed field: FY 2020
48	Federal obligations for applied research in physical sciences, by agency and detailed field: FY 2020

Table	Title
49	Federal obligations for applied research in psychology, by agency and detailed field: FY 2020
50	Federal obligations for applied research in social sciences, by agency and detailed field: FY 2020

Development obligations, by agency and performer

Table	Title
51	Federal obligations for experimental development, by agency and performer: FY 2020
52	Preliminary federal obligations for experimental development, by agency and performer: FY 2021

R&D plant

Table	Title
53	Federal obligations and outlays for R&D plant, by agency: FYs 2020–21
54	Federal obligations for R&D plant, by agency and R&D performer: FY 2020
55	Preliminary federal obligations for R&D plant, by agency and R&D performer: FY 2021

Research obligations to university and college performers, selected agencies

Table	Title
56	Federal obligations for research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2020–21
57	Federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020
58	Preliminary federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021
59	Federal obligations for research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2020
60	Federal obligations for research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2020
61	Federal obligations for research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2020

Table	Title
62	Federal obligations for research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2020
63	Federal obligations for research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2020
64	Federal obligations for research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2020
65	Federal obligations for research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2020

Basic research obligations to university and college performers, selected agencies

Table	Title
66	Federal obligations for basic research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2020–21
67	Federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020
68	Preliminary federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021
69	Federal obligations for basic research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2020
70	Federal obligations for basic research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2020
71	Federal obligations for basic research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2020
72	Federal obligations for basic research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2020
73	Federal obligations for basic research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2020
74	Federal obligations for basic research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2020
75	Federal obligations for basic research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2020

Applied research obligations to university and college performers, selected agencies

Table	Title
76	Federal obligations for applied research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2020–21
77	Federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020
78	Preliminary federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021
79	Federal obligations for applied research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2020
80	Federal obligations for applied research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2020
81	Federal obligations for applied research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2020
82	Federal obligations for applied research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2020
83	Federal obligations for applied research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2020
84	Federal obligations for applied research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2020
85	Federal obligations for applied research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2020

Foreign performer obligations, by region, country or economy, and agency

Table	Title
86	Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2020
87	Federal obligations for basic research to foreign performers, by region, country, or economy, and agency: FY 2020

Geographic distribution of obligations for selected agencies

Table	Title
88	Federal obligations for research and experimental development and for R&D plant for selected agencies, by state or location: FY 2020
89	Federal obligations for research and experimental development for selected agencies, by state or location and performer: FY 2020
90	Federal obligations for R&D plant for selected agencies, by state or location and performer: FY 2020
91	Federal obligations for research and experimental development, by state or location and selected agency: FY 2020
92	Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020
93	Federal obligations for R&D plant, by state or location and selected agency: FY 2020

Geographic distribution of Department of Defense RDT&E obligations

Table	Title
94	Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

Obligations to intramural performers for personnel costs, by agency: FYs 2020–21

Table	Title
95	Federal obligations for research and experimental development to intramural performers for personnel costs, by agency: FYs 2020–21

Outlays, by agency

Table	Title
96	Federal outlays for research, development, and R&D plant, by agency: FYs 2001–11
97	Federal outlays for research, development, and R&D plant, by agency: FYs 2012–21
98	Federal outlays for research and development, by agency: FYs 2001–11
99	Federal outlays for research and development, by agency: FYs 2012–21

Table	Title
100	Federal outlays for R&D plant, by agency: FYs 2001–11
101	Federal outlays for R&D plant, by agency: FYs 2012–21

Obligations, by agency

Table	Title
102	Federal obligations for research, development, and R&D plant, by agency: FYs 2001–11
103	Federal obligations for research, development, and R&D plant, by agency: FYs 2012–21
104	Federal obligations for research and development, by agency: FYs 2001–11
105	Federal obligations for research and development, by agency: FYs 2012–21
106	Federal obligations for R&D plant, by agency: FYs 2001–11
107	Federal obligations for R&D plant, by agency: FYs 2012–21
108	Federal obligations for research, by agency: FYs 2001–11
109	Federal obligations for research, by agency: FYs 2012–21
110	Federal obligations for basic research, by agency: FYs 2001–11
111	Federal obligations for basic research, by agency: FYs 2012–21
112	Federal obligations for applied research, by agency: FYs 2001–11
113	Federal obligations for applied research, by agency: FYs 2012–21
114	Federal obligations for development, by agency: FYs 2001–11
115	Federal obligations for development, by agency: FYs 2012–21

Obligations, by performer: FYs 1967–2021

Table	Title
116	Federal obligations for research and development, by performer: FYs 1967–2021
117	Federal obligations for research, by performer: FYs 1967–2021

Table	Title
118	Federal obligations for basic research, by performer: FYs 1967–2021
119	Federal obligations for applied research, by performer: FYs 1967–2021
120	Federal obligations for development, by performer: FYs 1967–2021
121	Federal obligations for R&D plant, by performer: FYs 1967–2021

Obligations, by detailed field of science and engineering

Table	Title
122	Federal obligations for research, by detailed field of science and engineering: FYs 2001–11
123	Federal obligations for research, by detailed field of science and engineering: FYs 2012–21
124	Federal obligations for basic research, by detailed field of science and engineering: FYs 2001–11
125	Federal obligations for basic research, by detailed field of science and engineering: FYs 2012–21
126	Federal obligations for applied research, by detailed field of science and engineering: FYs 2001–11
127	Federal obligations for applied research, by detailed field of science and engineering: FYs 2012–21

Obligations for selected agencies, by state or location

Table	Title
128	Federal obligations for research and development for selected agencies, by state or location: FYs 2001–11
129	Federal obligations for research and development for selected agencies, by state or location: FYs 2012–20
130	Federal obligations for R&D plant for selected agencies, by state or location: FYs 2001–11
131	Federal obligations for R&D plant for selected agencies, by state or location: FYs 2012–20

Obligations for COVID-related R&D

Table	Title
132	Federal obligations for COVID-19 related R&D and all other R&D, by agency: FY 2020

TABLE 1

Federal obligations for research and development, by type of R&D, and for R&D plant: FYs 1951–2021

(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
1951	1,851,571.0	1,521,527.0	NA	NA	NA	NA	330,044.0
1952	2,216,848.0	1,909,665.0	NA	120,945.0	NA	NA	307,183.0
1953	2,167,456.0	1,919,543.0	NA	115,997.0	NA	NA	247,913.0
1954	1,918,046.0	1,761,840.0	NA	116,033.0	NA	NA	156,206.0
1955	2,251,894.0	2,044,593.0	NA	130,068.0	NA	NA	207,301.0
1956	3,266,903.0	2,988,203.0	851,947.0	206,441.0	645,506.0	2,136,256.0	278,700.0
1957	4,389,237.0	3,932,001.0	924,547.0	262,348.0	662,199.0	3,007,454.0	457,236.0
1958	4,906,015.0	4,569,722.0	1,078,807.0	334,543.0	744,264.0	3,490,915.0	336,293.0
1959	7,122,610.0	6,693,510.0	1,340,253.0	465,981.0	874,272.0	5,353,257.0	429,100.0
1960	8,080,015.0	7,551,746.0	1,872,509.0	590,374.0	1,282,135.0	5,679,237.0	528,269.0
1961	9,607,023.0	9,058,623.0	2,477,944.0	814,513.0	1,663,431.0	6,580,679.0	548,400.0
1962	11,069,059.0	10,289,947.0	3,004,795.0	986,314.0	2,018,481.0	7,285,152.0	779,112.0
1963	13,662,879.0	12,494,611.0	3,507,903.0	1,151,753.0	2,356,150.0	8,986,708.0	1,168,268.0
1964	15,323,870.0	14,225,354.0	3,874,452.0	1,303,000.0	2,571,452.0	10,350,902.0	1,098,516.0
1965	15,745,852.0	14,614,249.0	4,247,230.0	1,435,469.0	2,811,761.0	10,367,019.0	1,131,603.0
1966	16,178,640.0	15,320,334.0	4,660,247.0	1,579,181.0	3,081,066.0	10,660,087.0	858,306.0
1967	17,149,186.0	16,529,099.0	4,631,390.0	1,845,847.0	2,785,543.0	11,897,709.0	620,087.0
1968	16,525,038.0	15,921,208.0	4,781,062.0	1,840,562.0	2,940,500.0	11,140,146.0	603,830.0
1969	16,309,900.0	15,640,888.0	4,644,890.0	1,944,773.0	2,700,117.0	10,995,998.0	669,012.0
1970	15,863,385.0	15,338,937.0	4,900,798.0	1,925,908.0	2,974,890.0	10,438,139.0	524,448.0
1971	16,153,756.0	15,542,512.0	5,123,171.0	1,980,141.0	3,143,030.0	10,419,341.0	611,244.0
1972	17,097,951.0	16,495,895.0	5,547,696.0	2,186,937.0	3,360,759.0	10,948,199.0	602,056.0
1973	17,574,486.0	16,800,153.0	5,581,429.0	2,232,006.0	3,349,423.0	11,218,724.0	774,333.0
1974	18,176,457.0	17,410,128.0	6,175,240.0	2,387,681.0	3,787,559.0	11,234,888.0	766,329.0
1975	19,859,548.0	19,038,818.0	6,729,708.0	2,588,427.0	4,141,281.0	12,309,110.0	820,730.0
1976	21,616,382.0	20,779,658.0	7,619,332.0	2,767,454.0	4,851,878.0	13,160,326.0	836,724.0
1977	24,817,577.0	23,450,377.0	8,514,115.0	3,258,640.0	5,255,475.0	14,936,262.0	1,367,200.0
1978	27,140,849.0	25,845,137.0	9,606,758.0	3,698,604.0	5,908,154.0	16,238,379.0	1,295,712.0
1979	29,620,597.0	28,145,142.0	10,535,005.0	4,192,665.0	6,342,340.0	17,610,137.0	1,475,455.0
1980	31,386,095.0	29,830,432.0	11,597,378.0	4,674,156.0	6,923,222.0	18,233,054.0	1,555,663.0
1981	34,589,634.0	33,103,924.0	12,212,780.0	5,041,295.0	7,171,485.0	20,891,144.0	1,485,710.0
1982	37,822,363.0	36,432,589.0	13,022,185.0	5,481,605.0	7,540,580.0	23,410,404.0	1,389,774.0
1983	40,009,032.0	38,711,537.0	14,253,525.0	6,260,131.0	7,993,394.0	24,458,012.0	1,297,495.0
1984	44,012,149.0	42,224,865.0	14,978,773.0	7,067,359.0	7,911,414.0	27,246,092.0	1,787,284.0
1985	50,180,369.0	48,359,565.0	16,133,421.0	7,818,682.0	8,314,739.0	32,226,144.0	1,820,804.0
1986	52,951,181.0	51,412,364.0	16,502,199.0	8,153,076.0	8,349,123.0	34,910,165.0	1,538,817.0
1987	57,099,656.0	55,253,693.0	17,940,521.0	8,942,425.0	8,998,096.0	37,313,172.0	1,845,963.0
1988	58,826,512.0	56,769,425.0	18,650,145.0	9,473,618.0	9,176,527.0	38,119,280.0	2,057,087.0
1989	63,571,605.0	61,406,484.0	20,765,531.0	10,602,011.0	10,163,520.0	40,640,953.0	2,165,121.0
1990	65,831,189.0	63,559,471.0	21,622,364.0	11,285,593.0	10,336,771.0	41,937,107.0	2,271,718.0
1991	64,147,951.0	61,295,152.0	23,968,377.0	12,170,794.0	11,797,583.0	37,326,775.0	2,852,799.0
1992	68,577,184.0	65,592,590.0	24,490,598.0	12,489,864.0	12,000,734.0	41,101,992.0	2,984,594.0
1993	70,414,697.0	67,314,025.0	26,890,497.0	13,399,121.0	13,491,376.0	40,423,528.0	3,100,672.0
1994	69,450,776.0	67,235,390.0	27,411,209.0	13,523,476.0	13,887,733.0	39,824,181.0	2,215,386.0
1995	70,442,935.0	68,186,798.0	28,434,396.0	13,877,031.0	14,557,365.0	39,752,402.0	2,256,137.0
1996	69,399,164.0	67,653,047.0	28,259,764.0	14,464,035.0	13,795,729.0	39,393,283.0	1,746,117.0
1997	71,753,430.0	69,826,779.0	29,365,289.0	14,941,892.0	14,423,397.0	40,461,490.0	1,926,651.0
1998	73,913,988.0	72,100,724.0	30,922,269.0	15,613,012.0	15,309,257.0	41,178,455.0	1,813,264.0
1999	77,386,368.0	75,340,622.0	33,527,514.0	17,443,653.0	16,083,861.0	41,813,108.0	2,045,746.0
2000	80,403,169.0	75,910,322.0	38,470,630.0	19,569,849.0	18,900,781.0	37,439,692.0	4,492,847.0

TABLE 1

Federal obligations for research and development, by type of R&D, and for R&D plant: FYs 1951–2021

(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
2001	88,562,350.0	84,492,522.0	44,713,736.0	21,958,136.0	22,755,600.0	39,778,786.0	4,069,828.0
2002	98,013,347.0	93,708,604.0	48,006,711.0	23,668,345.0	24,338,366.0	45,701,893.0	4,304,743.0
2003	107,794,188.0	103,527,670.0	51,071,843.0	24,751,441.0	26,320,402.0	52,455,827.0	4,266,518.0
2004	116,068,604.0	112,074,452.0	53,357,811.0	26,120,663.0	27,237,148.0	58,716,641.0	3,994,152.0
2005	122,619,584.0	118,848,457.0	53,738,245.0	27,140,335.0	26,597,910.0	65,110,212.0	3,771,127.0
2006	123,854,731.0	121,729,949.0	53,535,650.0	26,584,592.0	26,951,058.0	68,194,299.0	2,124,782.0
2007	129,431,246.0	127,262,861.0	54,093,565.0	26,865,786.0	27,227,779.0	73,169,296.0	2,168,385.0
2008	129,049,945.3	127,106,084.3	53,893,678.0	27,153,966.0	26,739,712.0	73,212,406.3	1,943,861.0
2009	144,758,102.7	141,090,090.7	63,691,871.9	32,879,356.9	30,812,515.0	77,398,218.9	3,668,012.0
2010	146,967,799.9	140,354,521.1	63,727,973.3	31,795,342.2	31,932,631.1	76,626,547.9	6,613,278.8
2011	139,703,280.6	135,532,585.2	58,064,824.1	29,313,593.3	28,751,230.8	77,467,761.2	4,170,695.4
2012	140,670,243.1	138,524,567.5	61,986,309.8	30,958,892.9	31,027,416.9	76,538,257.7	2,145,675.6
2013	127,625,543.8	125,720,395.1	59,532,626.3	29,779,403.8	29,753,222.4	66,187,768.9	1,905,148.7
2014	132,778,961.6	130,561,319.9	63,191,428.1	31,587,903.1	31,603,525.0	67,369,891.9	2,217,641.6
2015	131,578,340.7	128,753,285.5	63,825,444.2	31,527,071.3	32,298,372.9	64,927,841.2	2,825,055.2
2016	118,273,783.6	115,832,794.4	67,104,649.2	32,292,658.7	34,811,990.4	48,728,145.3	2,440,989.2
2017	121,626,565.0	118,974,798.7	69,871,308.0	33,271,489.9	36,599,818.1	49,103,490.7	2,651,766.3
2018	133,277,539.6	129,424,802.5	74,587,572.8	36,195,127.6	38,392,445.2	54,837,229.7	3,852,737.1
2019	146,800,654.4	142,424,206.6	81,117,784.1	40,017,257.6	41,100,526.5	61,306,422.5	4,376,447.8
2020	173,552,851.5	167,402,781.5	85,304,757.4	41,546,622.0	43,758,135.4	82,098,024.1	6,150,070.1
2021 (preliminary)	185,408,110.0	179,465,235.7	85,155,455.8	41,231,293.0	43,924,162.8	94,309,779.9	5,942,874.4

NA = not available; data were not collected at this level of detail.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 2

Summary of federal obligations and outlays for research, experimental development, and R&D plant, by type of R&D, performer, and field of science and engineering: FYs 2019–21

(Dollars in millions)

Type of R&D, performer, and field	2019	2020	Preliminary	
			2021	% change 2020–21
Outlays for R&D and R&D plant	128,141.5	149,705.6	173,169.3	15.7
R&D	124,854.5	144,919.9	166,468.4	14.9
R&D plant	3,287.0	4,785.8	6,700.9	40.0
Obligations for R&D and R&D plant	146,800.7	173,552.9	185,408.1	6.8
R&D	142,424.2	167,402.8	179,465.2	7.2
Performer				
Intramural ^a	39,312.8	51,471.7	64,209.1	24.7
Industry	44,446.0	51,428.0	52,019.1	1.1
Industry-administered FFRDCs	6,077.6	4,118.7	4,564.1	10.8
Universities and colleges	34,000.5	38,540.9	37,749.6	-2.1
University-administered FFRDCs	5,351.9	5,355.2	5,236.7	-2.2
Other nonprofit institutions	8,450.2	10,698.9	10,469.1	-2.1
Nonprofit-administered FFRDCs	3,261.5	3,676.0	3,792.0	3.2
State and local governments	586.5	720.1	669.5	-7.0
Foreign	937.2	1,393.3	755.9	-45.7
Research	81,117.8	85,304.8	85,155.5	-0.2
Performer				
Intramural ^a	18,298.2	19,572.3	20,768.8	6.1
Industry	10,738.9	10,028.4	9,988.4	-0.4
Industry-administered FFRDCs	3,666.7	3,512.5	3,579.9	1.9
Universities and colleges	32,381.0	35,473.7	34,328.0	-3.2
University-administered FFRDCs	4,882.4	3,863.2	3,908.2	1.2
Other nonprofit institutions	7,891.5	9,190.7	8,871.1	-3.5
Nonprofit-administered FFRDCs	2,270.9	2,516.4	2,602.4	3.4
State and local governments	500.4	644.7	605.9	-6.0
Foreign	487.7	502.9	502.7	*
Field of science and engineering				
Computer sciences and mathematics	4,330.0	5,912.4	6,063.3	2.6
Engineering	15,279.3	13,222.0	14,238.1	7.7
Environmental sciences	5,074.7	5,039.5	4,631.7	-8.1
Life sciences	38,303.7	42,524.8	42,013.9	-1.2
Physical sciences	9,816.1	8,419.9	8,775.4	4.2
Psychology	2,753.6	3,275.8	3,265.0	-0.3
Social sciences	1,155.7	1,137.4	1,266.3	11.3
Other sciences nec	4,404.8	5,772.9	4,901.8	-15.1
Basic research	40,017.3	41,546.6	41,231.3	-0.8
Performer				
Intramural ^a	7,240.4	7,688.1	8,291.8	7.9
Industry	3,636.6	3,146.8	2,714.8	-13.7
Industry-administered FFRDCs	555.7	799.9	780.8	-2.4
Universities and colleges	18,626.5	20,128.2	19,526.2	-3.0
University-administered FFRDCs	4,419.7	3,455.5	3,527.1	2.1
Other nonprofit institutions	3,724.6	4,325.6	4,276.1	-1.1
Nonprofit-administered FFRDCs	1,478.1	1,667.7	1,781.3	6.8
State and local governments	86.0	114.3	113.7	-0.5
Foreign	249.5	220.6	219.5	-0.5
Field of science and engineering				
Computer sciences and mathematics	2,305.9	2,524.5	2,591.1	2.6

TABLE 2

Summary of federal obligations and outlays for research, experimental development, and R&D plant, by type of R&D, performer, and field of science and engineering: FYs 2019–21

(Dollars in millions)

Type of R&D, performer, and field	2019	2020	Preliminary	
			2021	% change 2020–21
Engineering	3,618.0	2,897.9	2,871.3	-0.9
Environmental sciences	3,251.8	3,166.9	2,743.6	-13.4
Life sciences	18,880.6	20,804.8	20,887.1	0.4
Physical sciences	7,907.0	6,513.0	7,444.4	14.3
Psychology	1,366.1	1,611.7	1,637.9	1.6
Social sciences	451.2	439.5	439.2	-0.1
Other sciences nec	2,236.8	3,588.3	2,616.8	-27.1
Applied research	41,100.5	43,758.1	43,924.2	0.4
Performer				
Intramural ^a	11,057.9	11,884.2	12,477.0	5.0
Industry	7,102.3	6,881.6	7,273.6	5.7
Industry-administered FFRDCs	3,110.9	2,712.6	2,799.1	3.2
Universities and colleges	13,754.5	15,345.5	14,801.8	-3.5
University-administered FFRDCs	462.7	407.8	381.1	-6.5
Other nonprofit institutions	4,166.9	4,865.0	4,595.0	-5.6
Nonprofit-administered FFRDCs	792.8	848.7	821.1	-3.2
State and local governments	414.4	530.4	492.1	-7.2
Foreign	238.2	282.3	283.3	0.4
Field of science and engineering				
Computer sciences and mathematics	2,024.0	3,387.9	3,472.2	2.5
Engineering	11,661.4	10,324.1	11,366.7	10.1
Environmental sciences	1,822.9	1,872.5	1,888.1	0.8
Life sciences	19,423.1	21,720.0	21,126.8	-2.7
Physical sciences	1,909.2	1,906.9	1,331.0	-30.2
Psychology	1,387.5	1,664.2	1,627.1	-2.2
Social sciences	704.5	697.9	827.1	18.5
Other sciences nec	2,168.0	2,184.6	2,285.0	4.6
Experimental development	61,306.4	82,098.0	94,309.8	14.9
Performer				
Intramural ^a	21,014.5	31,899.4	43,440.3	36.2
Industry	33,707.1	41,399.5	42,030.6	1.5
Industry-administered FFRDCs	2,410.9	606.2	984.2	62.3
Universities and colleges	1,619.5	3,067.3	3,421.6	11.6
University-administered FFRDCs	469.5	1,492.0	1,328.6	-11.0
Other nonprofit institutions	558.7	1,508.2	1,598.0	6.0
Nonprofit-administered FFRDCs	990.6	1,159.5	1,189.6	2.6
State and local governments	86.1	75.4	63.6	-15.6
Foreign	449.5	890.5	253.2	-71.6
R&D plant	4,376.4	6,150.1	5,942.9	-3.4
Performer				
Intramural ^a	1,092.7	3,106.0	1,088.4	-65.0
Industry	354.0	677.5	2,720.4	301.5
Industry-administered FFRDCs	428.3	222.1	30.5	-86.3
Universities and colleges	514.0	350.6	343.4	-2.1
University-administered FFRDCs	850.0	867.8	809.8	-6.7
Other nonprofit institutions	169.8	125.3	151.4	20.8
Nonprofit-administered FFRDCs	956.2	793.7	792.6	-0.1
State and local governments	1.2	6.7	6.0	-9.8

TABLE 2

Summary of federal obligations and outlays for research, experimental development, and R&D plant, by type of R&D, performer, and field of science and engineering: FYs 2019–21

(Dollars in millions)

Type of R&D, performer, and field	2019	2020	Preliminary	
			2021	% change 2020–21
Foreign	10.3	0.4	0.5	20.8

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center; nec = not elsewhere classified.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Percentages are computed using actual dollars reported. FYs 2020 and 2021 data include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 3

Federal obligations and outlays for research, experimental development, and R&D plant, by agency: FYs 2020–21

(Dollars in millions)

Agency	Obligations		Outlays	
	2020	2021 (preliminary)	2020	2021 (preliminary)
All agencies	173,552.9	185,408.1	149,705.6	173,169.3
Departments				
Department of Agriculture	3,433.5	2,769.7	2,534.2	2,698.4
Agricultural Marketing Service	7.0	7.0	7.0	7.0
Agricultural Research Service	2,203.9	1,607.0	1,330.0	1,436.0
Animal and Plant Health Inspection Service	39.8	41.9	39.5	41.5
Economic Research Service	81.7	87.0	81.7	87.0
Forest Service	351.4	276.6	326.4	376.7
National Agricultural Statistics Service	9.0	9.5	9.0	9.5
National Institute of Food and Agriculture	737.9	737.9	737.9	737.9
Rural Business-Cooperative Service	2.8	2.8	2.8	2.8
Department of Commerce	1,980.9	2,432.7	1,807.8	2,025.8
National Institute of Standards and Technology	877.8	1,276.1	773.9	937.1
National Oceanic and Atmospheric Administration	984.3	1,024.9	915.1	957.0
National Telecommunications and Information Administration	7.7	11.2	7.7	11.2
U.S. Census Bureau	111.1	120.5	111.1	120.5
Department of Defense	67,006.8	69,456.0	56,339.3	60,791.4
Defense Advanced Research Projects Agency	3,664.3	3,608.2	3,465.8	3,505.4
Defense Health Agency	2,885.9	2,718.0	2,016.5	2,521.4
Department of the Air Force	11,923.9	11,539.8	9,242.6	9,887.6
Department of the Army	10,786.4	12,222.1	10,867.8	11,542.5
Department of the Navy	19,158.5	18,840.9	15,071.9	14,556.5
U.S. Space Force	4,385.7	5,038.9	4,337.8	4,962.7
Other defense agencies	14,202.1	15,488.1	11,336.9	13,815.2
Department of Education	240.1	379.2	227.2	260.4
Department of Energy	15,778.0	17,241.2	12,600.0	16,385.8
Advanced Research Projects Agency—Energy	438.0	427.0	269.8	365.0
Electricity Delivery and Energy Reliability	139.8	133.8	142.1	134.4
Energy Efficiency and Renewable Energy	2,149.5	2,015.3	1,501.7	1,643.7
Environmental Management	22.2	29.3	31.4	20.9
Fossil Energy	708.0	714.0	608.0	705.7
National Nuclear Security Administration	4,557.6	6,435.2	3,987.1	6,505.2
Defense Programs	2,625.0	4,299.7	2,326.2	4,660.8
Naval Nuclear Propulsion Program	1,634.4	1,774.4	1,360.1	1,471.3
Office of Defense Nuclear Nonproliferation	298.1	361.0	300.7	373.1
Nuclear Energy	573.2	517.6	1.2	0.7
Office of Cybersecurity, Energy Security, and Emergency Response	50.7	51.1	50.7	51.1
Office of Science	7,139.0	6,918.0	6,008.0	6,959.1
Department of Health and Human Services	61,774.8	71,189.0	54,909.7	70,265.1
Administration for Children and Families	1.6	3.1	1.6	3.1
Administration for Community Living	90.4	91.9	91.8	92.9
Agency for Healthcare Research and Quality	338.0	308.1	338.0	338.0
Agency for Toxic Substances and Disease Registry	9.6	9.6	*	*
Biomedical Advanced Research and Development Authority	16,962.2	27,478.7	18,736.7	29,096.1
Centers for Disease Control and Prevention	496.8	543.1	217.7	239.2
Centers for Medicare and Medicaid Services	223.6	228.0	31.3	31.9
Food and Drug Administration	484.3	519.8	443.2	540.5
Health Resources and Services Administration	34.9	33.8	25.0	16.4
National Institutes of Health	43,117.0	41,956.0	35,008.0	39,890.0

TABLE 3

Federal obligations and outlays for research, experimental development, and R&D plant, by agency: FYs 2020–21

(Dollars in millions)

Agency	Obligations		Outlays	
	2020	2021 (preliminary)	2020	2021 (preliminary)
Office of the Secretary of Health and Human Services	16.5	16.9	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	16.5	16.9	16.5	16.9
Department of Homeland Security	507.5	541.0	936.4	937.1
Countering Weapons of Mass Destruction Office	37.5	35.9	85.0	77.0
Cybersecurity and Infrastructure Security Agency	7.7	9.4	7.7	9.4
Science and Technology Directorate	421.8	444.0	806.0	799.0
Transportation Security Administration	22.9	29.5	22.9	29.5
U.S. Coast Guard	4.9	10.3	4.9	10.3
U.S. Secret Service	12.7	11.9	9.9	11.9
Department of the Interior	844.4	891.1	826.6	861.5
Bureau of Indian Affairs	*	*	*	*
Bureau of Land Management	20.8	15.8	20.8	15.8
Bureau of Ocean Energy Management	72.9	81.7	73.3	72.5
Bureau of Reclamation	29.2	27.5	29.2	27.5
Bureau of Safety and Environmental Enforcement	13.4	29.7	11.2	23.6
National Park Service	10.2	10.2	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	0.6	2.2	0.7	0.8
U.S. Fish and Wildlife Service	32.7	32.7	25.8	29.2
U.S. Geological Survey	664.8	691.3	664.8	691.3
Department of Justice	96.4	99.5	23.9	20.6
Bureau of Prisons	8.1	8.7	8.1	8.7
Federal Bureau of Investigation	4.7	0.9	4.7	0.9
Office of Justice Programs	83.6	89.9	11.0	11.0
Department of Labor	4.7	4.3	3.0	2.5
Employee Benefits Security Administration	2.7	2.3	1.0	0.5
Occupational Safety and Health Administration	2.0	2.0	2.0	2.0
Department of State	40.0	43.0	40.0	43.0
Department of Transportation	1,224.5	1,180.6	702.7	757.6
Federal Aviation Administration	470.3	563.2	245.0	324.0
Federal Highway Administration	512.2	376.6	278.4	233.7
Federal Motor Carrier Safety Administration	8.9	11.4	6.9	8.5
Federal Railroad Administration	48.3	49.4	43.3	49.0
Federal Transit Administration	40.2	54.0	19.5	23.0
National Highway Traffic Safety Administration	68.9	66.0	67.2	63.4
Office of the Secretary of Transportation	34.4	41.0	24.3	27.7
Pipeline and Hazardous Materials Safety Administration	41.4	19.0	18.1	28.2
Department of the Treasury	60.6	63.4	46.9	52.9
Bureau of Engraving and Printing	60.4	63.3	46.4	52.4
U.S. Mint	0.2	0.1	0.5	0.6
Department of Veterans Affairs	1,565.1	1,689.4	778.0	762.0
Other agencies				
Administrative Office of the U.S. Courts	5.0	6.4	5.0	6.4
Agency for International Development	194.3	194.3	194.3	194.3
Appalachian Regional Commission	0.7	*	0.9	0.5
Consumer Product Safety Commission	0.4	0.4	0.4	0.4
Environmental Protection Agency	493.0	524.1	493.0	524.1
Federal Communications Commission	1.8	2.6	1.8	2.6
Federal Trade Commission	6.0	7.5	6.0	7.5
Library of Congress	2.8	2.7	2.8	2.7

TABLE 3

Federal obligations and outlays for research, experimental development, and R&D plant, by agency: FYs 2020–21

(Dollars in millions)

Agency	Obligations		Outlays	
	2020	2021 (preliminary)	2020	2021 (preliminary)
National Aeronautics and Space Administration	10,573.6	8,833.5	10,508.4	9,117.9
National Archives and Records Administration	0.0	0.0	*	*
National Science Foundation	6,792.5	6,938.9	5,793.0	6,531.0
Nuclear Regulatory Commission	69.2	76.3	70.0	76.5
Patient-Centered Outcomes Research Trust Fund	469.7	390.9	469.8	390.9
RESTORE Act Centers of Excellence Research Grants Program	9.2	5.0	7.1	5.0
Smithsonian Institution	276.0	281.0	276.0	281.0
Social Security Administration	69.7	129.4	69.7	129.4
Tennessee Valley Authority	8.4	11.1	8.4	11.1
U.S. Agency for Global Media	4.8	4.8	4.8	4.8
U.S. Postal Service	18.2	19.0	18.2	19.0

* = amount greater than \$0 but less than \$50,000.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations or outlays in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 4

Federal obligations and outlays for research and experimental development, by agency: FYs 2020–21

(Dollars in millions)

Agency	Obligations		Outlays	
	2020	2021 (preliminary)	2020	2021 (preliminary)
All agencies	167,402.8	179,465.2	144,919.9	166,468.4
Departments				
Department of Agriculture	2,643.6	2,738.0	2,458.8	2,538.7
Agricultural Marketing Service	7.0	7.0	7.0	7.0
Agricultural Research Service	1,423.5	1,587.0	1,263.9	1,288.0
Animal and Plant Health Inspection Service	39.8	41.9	39.5	41.5
Economic Research Service	81.7	87.0	81.7	87.0
Forest Service	342.0	264.9	317.0	365.0
National Agricultural Statistics Service	9.0	9.5	9.0	9.5
National Institute of Food and Agriculture	737.9	737.9	737.9	737.9
Rural Business-Cooperative Service	2.8	2.8	2.8	2.8
Department of Commerce	1,621.7	1,884.1	1,546.4	1,681.1
National Institute of Standards and Technology	734.9	966.4	679.6	773.5
National Oceanic and Atmospheric Administration	768.1	786.1	748.0	776.0
National Telecommunications and Information Administration	7.7	11.2	7.7	11.2
U.S. Census Bureau	111.1	120.5	111.1	120.5
Department of Defense	66,695.0	69,297.4	55,832.5	60,085.1
Defense Advanced Research Projects Agency	3,664.3	3,608.2	3,465.8	3,505.4
Defense Health Agency	2,870.4	2,718.0	2,001.0	2,521.4
Department of the Air Force	11,683.2	11,429.3	9,049.8	9,755.4
Department of the Army	10,786.4	12,222.1	10,867.8	11,542.5
Department of the Navy	19,113.8	18,803.4	14,787.5	13,994.5
U.S. Space Force	4,385.7	5,038.9	4,337.8	4,962.7
Other defense agencies	14,191.2	15,477.5	11,322.7	13,803.2
Department of Education	240.1	379.2	227.2	260.4
Department of Energy	13,453.0	15,070.0	10,810.2	13,978.7
Advanced Research Projects Agency—Energy	438.0	427.0	269.8	365.0
Electricity Delivery and Energy Reliability	139.8	133.8	142.1	134.4
Energy Efficiency and Renewable Energy	2,096.2	1,976.6	1,447.2	1,612.1
Environmental Management	22.2	29.3	31.4	20.9
Fossil Energy	679.3	685.0	584.1	678.0
National Nuclear Security Administration	3,983.7	5,914.3	3,475.2	5,765.8
Defense Programs	2,298.1	4,109.9	2,070.3	4,263.9
Naval Nuclear Propulsion Program	1,387.4	1,443.4	1,113.2	1,140.3
Office of Defense Nuclear Nonproliferation	298.1	361.0	291.7	361.7
Nuclear Energy	573.2	517.6	1.2	0.7
Office of Cybersecurity, Energy Security, and Emergency Response	50.7	51.1	50.7	51.1
Office of Science	5,470.0	5,335.3	4,808.5	5,350.6
Department of Health and Human Services	60,005.7	68,834.2	53,408.1	67,823.0
Administration for Children and Families	1.6	3.1	1.6	3.1
Administration for Community Living	90.4	91.9	91.8	92.9
Agency for Healthcare Research and Quality	338.0	308.1	338.0	338.0
Agency for Toxic Substances and Disease Registry	9.6	9.6	*	*
Biomedical Advanced Research and Development Authority	15,666.4	25,378.6	17,441.0	26,996.1
Centers for Disease Control and Prevention	496.8	543.1	217.7	239.2
Centers for Medicare and Medicaid Services	223.6	228.0	31.3	31.9
Food and Drug Administration	464.0	495.0	415.3	506.5
Health Resources and Services Administration	34.9	33.8	25.0	16.4
National Institutes of Health	42,664.0	41,726.0	34,830.0	39,582.0

TABLE 4

Federal obligations and outlays for research and experimental development, by agency: FYs 2020–21

(Dollars in millions)

Agency	Obligations		Outlays	
	2020	2021 (preliminary)	2020	2021 (preliminary)
Office of the Secretary of Health and Human Services	16.5	16.9	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	16.5	16.9	16.5	16.9
Department of Homeland Security	507.5	541.0	866.7	927.1
Countering Weapons of Mass Destruction Office	37.5	35.9	85.0	77.0
Cybersecurity and Infrastructure Security Agency	7.7	9.4	7.7	9.4
Science and Technology Directorate	421.8	444.0	736.3	789.0
Transportation Security Administration	22.9	29.5	22.9	29.5
U.S. Coast Guard	4.9	10.3	4.9	10.3
U.S. Secret Service	12.7	11.9	9.9	11.9
Department of the Interior	837.2	879.1	821.6	852.4
Bureau of Indian Affairs	*	*	*	*
Bureau of Land Management	20.8	15.8	20.8	15.8
Bureau of Ocean Energy Management	72.9	81.7	73.3	72.5
Bureau of Reclamation	27.5	26.4	27.5	26.4
Bureau of Safety and Environmental Enforcement	7.9	18.9	7.9	15.6
National Park Service	10.2	10.2	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	0.6	2.2	0.7	0.8
U.S. Fish and Wildlife Service	32.7	32.7	25.8	29.2
U.S. Geological Survey	664.8	691.3	664.8	691.3
Department of Justice	96.4	99.5	23.9	20.6
Bureau of Prisons	8.1	8.7	8.1	8.7
Federal Bureau of Investigation	4.7	0.9	4.7	0.9
Office of Justice Programs	83.6	89.9	11.0	11.0
Department of Labor	4.7	4.3	3.0	2.5
Employee Benefits Security Administration	2.7	2.3	1.0	0.5
Occupational Safety and Health Administration	2.0	2.0	2.0	2.0
Department of State	40.0	43.0	40.0	43.0
Department of Transportation	1,184.2	1,151.8	650.8	720.9
Federal Aviation Administration	431.9	536.4	195.0	289.0
Federal Highway Administration	512.2	376.6	278.4	233.7
Federal Motor Carrier Safety Administration	8.9	11.4	6.9	8.5
Federal Railroad Administration	46.4	47.4	41.4	47.2
Federal Transit Administration	40.2	54.0	19.5	23.0
National Highway Traffic Safety Administration	68.9	66.0	67.2	63.4
Office of the Secretary of Transportation	34.4	41.0	24.3	27.7
Pipeline and Hazardous Materials Safety Administration	41.4	19.0	18.1	28.2
Department of the Treasury	60.6	63.4	44.7	52.6
Bureau of Engraving and Printing	60.4	63.3	44.5	52.4
U.S. Mint	0.2	0.1	0.2	0.2
Department of Veterans Affairs	1,565.1	1,689.4	778.0	762.0
Other agencies				
Administrative Office of the U.S. Courts	5.0	6.4	5.0	6.4
Agency for International Development	194.3	194.3	194.3	194.3
Appalachian Regional Commission	0.7	*	0.9	0.5
Consumer Product Safety Commission	0.4	0.4	0.4	0.4
Environmental Protection Agency	488.5	521.8	488.5	521.8
Federal Communications Commission	1.8	2.6	1.8	2.6
Federal Trade Commission	6.0	7.5	6.0	7.5
Library of Congress	2.8	2.7	2.8	2.7

TABLE 4

Federal obligations and outlays for research and experimental development, by agency: FYs 2020–21

(Dollars in millions)

Agency	Obligations		Outlays	
	2020	2021 (preliminary)	2020	2021 (preliminary)
National Aeronautics and Space Administration	10,537.8	8,799.4	10,481.0	9,103.9
National Archives and Records Administration	0.0	0.0	*	*
National Science Foundation	6,351.2	6,405.6	5,370.0	6,030.0
Nuclear Regulatory Commission	69.2	76.3	69.2	76.3
Patient-Centered Outcomes Research Trust Fund	469.7	390.9	469.8	390.9
RESTORE Act Centers of Excellence Research Grants Program	9.2	5.0	7.1	5.0
Smithsonian Institution	209.8	213.6	209.8	213.6
Social Security Administration	69.7	129.4	69.7	129.4
Tennessee Valley Authority	8.4	11.1	8.4	11.1
U.S. Agency for Global Media	4.8	4.8	4.8	4.8
U.S. Postal Service	18.2	19.0	18.2	19.0

* = amount greater than \$0 but less than \$50,000.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations or outlays in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 5

Federal obligations for research and experimental development, by agency and type of R&D: FY 2020

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
All agencies	167,402,781.5	41,546,622.0	43,758,135.4	82,098,024.1	na	na
Departments						
Department of Agriculture	2,643,630.0	1,163,827.8	1,224,571.1	255,231.2	na	na
Agricultural Marketing Service	6,952.5	0.0	3,476.3	3,476.3	na	na
Agricultural Research Service	1,423,528.8	711,764.4	569,411.5	142,352.9	na	na
Animal and Plant Health Inspection Service	39,761.1	19,082.1	0.0	20,679.0	na	na
Economic Research Service	81,718.0	0.0	81,718.0	0.0	na	na
Forest Service	342,010.7	84,828.8	172,456.5	84,725.4	na	na
National Agricultural Statistics Service	8,996.0	0.0	4,998.3	3,997.7	na	na
National Institute of Food and Agriculture	737,863.1	348,152.5	389,710.6	0.0	na	na
Rural Business-Cooperative Service	2,800.0	0.0	2,800.0	0.0	na	na
Department of Commerce	1,621,746.1	251,170.4	1,109,644.1	260,931.6	na	na
National Institute of Standards and Technology	734,875.4	251,170.4	466,253.3	17,451.8	na	na
National Oceanic and Atmospheric Administration	768,061.6	0.0	597,771.6	170,290.0	na	na
National Telecommunications and Information Administration	7,692.0	0.0	7,692.0	0.0	na	na
U.S. Census Bureau	111,117.0	0.0	37,927.3	73,189.8	na	na
Department of Defense	66,695,019.2	2,499,140.7	6,416,163.1	57,779,715.3	8,600,278.9	49,179,436.4
Defense Advanced Research Projects Agency	3,664,293.0	482,126.0	1,524,182.0	1,657,985.0	1,489,154.0	168,831.0
Defense Health Agency	2,870,444.1	10,689.1	153,364.3	2,706,390.7	1,706,000.9	1,000,389.8
Department of the Air Force	11,683,168.9	520,275.5	1,728,512.4	9,434,381.0	952,223.4	8,482,157.6
Department of the Army	10,786,387.9	523,981.7	1,382,705.8	8,879,700.4	1,487,372.0	7,392,328.4
Department of the Navy	19,113,840.9	640,949.7	1,056,743.3	17,416,147.9	883,034.3	16,533,113.6
U.S. Space Force	4,385,666.9	0.0	0.0	4,385,666.9	0.0	4,385,666.9
Other defense agencies	14,191,217.5	321,118.7	570,655.3	13,299,443.5	2,082,494.3	11,216,949.2
Department of Education	240,144.8	53,666.0	135,827.0	50,651.8	na	na
Department of Energy	13,453,045.1	5,501,609.3	5,023,578.5	2,927,857.4	na	na
Advanced Research Projects Agency—Energy	437,999.3	0.0	218,999.6	218,999.6	na	na
Electricity Delivery and Energy Reliability	139,788.5	13,038.1	65,313.5	61,436.9	na	na
Energy Efficiency and Renewable Energy	2,096,218.0	0.0	1,248,343.0	847,875.0	na	na
Environmental Management	22,179.3	0.0	7,319.2	14,860.1	na	na
Fossil Energy	679,345.0	33,967.0	645,378.0	0.0	na	na
National Nuclear Security Administration	3,983,652.3	114,311.8	2,279,290.3	1,590,050.3	na	na
Defense Programs	2,298,084.2	0.0	2,154,972.6	143,111.6	na	na
Naval Nuclear Propulsion Program	1,387,442.2	0.0	0.0	1,387,442.2	na	na
Office of Defense Nuclear Nonproliferation	298,126.0	114,311.8	124,317.7	59,496.5	na	na
Nuclear Energy	573,159.6	0.0	392,343.2	180,816.4	na	na
Office of Cybersecurity, Energy Security, and Emergency Response	50,731.0	1,153.0	35,759.0	13,819.0	na	na
Office of Science	5,469,972.1	5,339,139.4	130,832.7	0.0	na	na
Department of Health and Human Services	60,005,740.4	21,808,980.1	22,424,756.9	15,772,003.4	na	na
Administration for Children and Families	1,574.4	0.0	1,574.4	0.0	na	na
Administration for Community Living	90,413.3	0.0	70,814.9	19,598.4	na	na

TABLE 5

Federal obligations for research and experimental development, by agency and type of R&D: FY 2020

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Agency for Healthcare Research and Quality	338,000.0	0.0	308,145.0	29,855.0	na	na
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	9,602.3	0.0	na	na
Biomedical Advanced Research and Development Authority	15,666,447.5	0.0	0.0	15,666,447.5	na	na
Centers for Disease Control and Prevention	496,836.6	69,564.7	371,169.4	56,102.6	na	na
Centers for Medicare and Medicaid Services	223,561.9	0.0	223,561.9	0.0	na	na
Food and Drug Administration	463,951.7	0.0	463,951.7	0.0	na	na
Health Resources and Services Administration	34,897.0	2,415.4	32,481.5	0.0	na	na
National Institutes of Health	42,664,000.0	21,737,000.0	20,927,000.0	0.0	na	na
Office of the Secretary of Health and Human Services	16,455.8	0.0	16,455.8	0.0	na	na
Office of the Assistant Secretary for Planning and Evaluation	16,455.8	0.0	16,455.8	0.0	na	na
Department of Homeland Security	507,458.4	47,365.5	177,854.9	282,238.0	na	na
Countering Weapons of Mass Destruction Office	37,479.0	6,114.3	17,846.6	13,518.1	na	na
Cybersecurity and Infrastructure Security Agency	7,657.2	0.0	6,954.5	702.8	na	na
Science and Technology Directorate	421,757.1	41,251.1	151,568.8	228,937.2	na	na
Transportation Security Administration	22,900.0	0.0	0.0	22,900.0	na	na
U.S. Coast Guard	4,949.0	0.0	1,485.0	3,464.0	na	na
U.S. Secret Service	12,716.0	0.0	0.0	12,716.0	na	na
Department of the Interior	837,240.9	83,859.9	614,455.3	138,925.7	na	na
Bureau of Indian Affairs	*	0.0	*	0.0	na	na
Bureau of Land Management	20,756.0	0.0	13,724.0	7,032.0	na	na
Bureau of Ocean Energy Management	72,851.0	0.0	59,254.3	13,596.7	na	na
Bureau of Reclamation	27,453.4	0.0	19,147.1	8,306.3	na	na
Bureau of Safety and Environmental Enforcement	7,922.5	1,017.1	4,205.7	2,699.7	na	na
National Park Service	10,231.0	865.9	9,365.1	0.0	na	na
Office of Surface Mining Reclamation and Enforcement	562.0	0.0	562.0	0.0	na	na
U.S. Fish and Wildlife Service	32,650.0	0.0	32,650.0	0.0	na	na
U.S. Geological Survey	664,815.0	81,977.0	475,547.0	107,291.0	na	na
Department of Justice	96,421.6	711.9	83,797.4	11,912.3	na	na
Bureau of Prisons	8,137.0	0.0	1,804.0	6,333.0	na	na
Federal Bureau of Investigation	4,732.7	0.0	4,732.7	0.0	na	na
Office of Justice Programs	83,551.9	711.9	77,260.7	5,579.3	na	na
Department of Labor	4,748.3	0.0	4,748.3	0.0	na	na
Employee Benefits Security Administration	2,745.6	0.0	2,745.6	0.0	na	na
Occupational Safety and Health Administration	2,002.7	0.0	2,002.7	0.0	na	na
Department of State	40,000.0	0.0	30,000.0	10,000.0	na	na
Department of Transportation	1,184,168.1	0.0	900,214.7	283,953.4	na	na
Federal Aviation Administration	431,897.3	0.0	246,975.5	184,921.8	na	na

TABLE 5

Federal obligations for research and experimental development, by agency and type of R&D: FY 2020

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Federal Highway Administration	512,232.7	0.0	471,854.8	40,377.9	na	na
Federal Motor Carrier Safety Administration	8,918.1	0.0	8,918.1	0.0	na	na
Federal Railroad Administration	46,350.5	0.0	34,762.8	11,587.6	na	na
Federal Transit Administration	40,153.8	0.0	40,153.8	0.0	na	na
National Highway Traffic Safety Administration	68,862.5	0.0	68,862.5	0.0	na	na
Office of the Secretary of Transportation	34,374.9	0.0	12,139.9	22,235.0	na	na
Pipeline and Hazardous Materials Safety Administration	41,378.3	0.0	16,547.3	24,831.0	na	na
Department of the Treasury	60,614.1	5,625.1	44,022.9	10,966.1	na	na
Bureau of Engraving and Printing	60,394.8	5,521.0	43,907.7	10,966.1	na	na
U.S. Mint	219.3	104.1	115.2	0.0	na	na
Department of Veterans Affairs	1,565,108.2	617,719.0	918,056.7	29,332.5	na	na
Other agencies						
Administrative Office of the U.S. Courts	5,045.5	0.0	5,045.5	0.0	na	na
Agency for International Development	194,332.7	100.0	134,794.6	59,438.1	na	na
Appalachian Regional Commission	684.3	0.0	684.3	0.0	na	na
Consumer Product Safety Commission	385.0	0.0	385.0	0.0	na	na
Environmental Protection Agency	488,501.0	0.0	411,947.5	76,553.5	na	na
Federal Communications Commission	1,800.0	0.0	1,800.0	0.0	na	na
Federal Trade Commission	5,974.3	0.0	5,974.3	0.0	na	na
Library of Congress	2,821.2	0.0	1,215.2	1,606.0	na	na
National Aeronautics and Space Administration	10,537,844.9	3,839,375.2	2,554,761.5	4,143,708.3	na	na
National Science Foundation	6,351,154.7	5,461,915.4	889,239.3	0.0	na	na
Nuclear Regulatory Commission	69,194.9	1,795.7	66,399.3	999.9	na	na
Patient-Centered Outcomes Research Trust Fund	469,730.1	0.0	469,730.1	0.0	na	na
RESTORE Act Centers of Excellence Research Grants Program	9,220.3	0.0	9,220.3	0.0	na	na
Smithsonian Institution	209,760.0	209,760.0	0.0	0.0	na	na
Social Security Administration	69,740.0	0.0	69,740.0	0.0	na	na
Tennessee Valley Authority	8,444.6	0.0	6,444.9	1,999.7	na	na
U.S. Agency for Global Media	4,828.7	0.0	4,828.7	0.0	na	na
U.S. Postal Service	18,234.2	0.0	18,234.2	0.0	na	na

* = amount greater than \$0 but less than \$50.

na = not applicable; data were not collected at this level of detail for this agency or subagency.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 6

Preliminary federal obligations for research and experimental development, by agency and type of R&D: FY 2021

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
All agencies	179,465,235.7	41,231,293.0	43,924,162.8	94,309,779.9	na	na
Departments						
Department of Agriculture	2,738,037.5	1,236,053.6	1,272,905.4	229,078.5	na	na
Agricultural Marketing Service	7,000.5	0.0	3,500.3	3,500.3	na	na
Agricultural Research Service	1,587,000.0	793,500.0	634,800.0	158,700.0	na	na
Animal and Plant Health Inspection Service	41,930.0	21,046.0	0.0	20,884.0	na	na
Economic Research Service	87,000.0	0.0	87,000.0	0.0	na	na
Forest Service	264,915.0	73,307.6	149,933.1	41,674.2	na	na
National Agricultural Statistics Service	9,492.0	0.0	5,172.0	4,320.0	na	na
National Institute of Food and Agriculture	737,900.0	348,200.0	389,700.0	0.0	na	na
Rural Business-Cooperative Service	2,800.0	0.0	2,800.0	0.0	na	na
Department of Commerce	1,884,118.2	275,172.5	1,248,604.3	360,341.5	na	na
National Institute of Standards and Technology	966,371.4	275,172.5	526,900.1	164,298.9	na	na
National Oceanic and Atmospheric Administration	786,097.0	0.0	640,393.0	145,704.0	na	na
National Telecommunications and Information Administration	11,180.0	0.0	11,180.0	0.0	na	na
U.S. Census Bureau	120,469.8	0.0	70,131.2	50,338.6	na	na
Department of Defense	69,297,425.1	2,667,604.9	6,582,063.9	60,047,756.2	9,363,569.3	50,684,186.9
Defense Advanced Research Projects Agency	3,608,159.0	524,282.0	1,378,670.0	1,705,207.0	1,544,961.0	160,246.0
Defense Health Agency	2,718,049.0	10,415.6	189,074.1	2,518,559.3	1,759,098.5	759,460.8
Department of the Air Force	11,429,305.5	496,355.3	1,829,506.6	9,103,443.6	917,430.6	8,186,013.0
Department of the Army	12,222,064.2	552,996.5	1,489,792.3	10,179,275.4	1,895,199.2	8,284,076.2
Department of the Navy	18,803,425.0	719,171.6	1,140,642.7	16,943,610.7	965,001.4	15,978,609.3
U.S. Space Force	5,038,943.1	0.0	0.0	5,038,943.1	0.0	5,038,943.1
Other defense agencies	15,477,479.2	364,383.9	554,378.2	14,558,717.1	2,281,878.6	12,276,838.5
Department of Education	379,217.7	42,137.3	219,624.4	117,456.0	na	na
Department of Energy	15,069,975.8	5,477,355.7	5,992,756.4	3,599,863.7	na	na
Advanced Research Projects Agency—Energy	427,000.0	0.0	213,500.0	213,500.0	na	na
Electricity Delivery and Energy Reliability	133,757.0	12,943.0	51,654.0	69,160.0	na	na
Energy Efficiency and Renewable Energy	1,976,564.0	0.0	1,276,114.0	700,450.0	na	na
Environmental Management	29,278.0	0.0	9,659.0	19,619.0	na	na
Fossil Energy	684,993.0	1,701.0	683,292.0	0.0	na	na
National Nuclear Security Administration	5,914,311.1	125,502.7	3,344,271.5	2,444,536.9	na	na
Defense Programs	4,109,867.2	0.0	3,194,671.9	915,195.3	na	na
Naval Nuclear Propulsion Program	1,443,427.0	0.0	0.0	1,443,427.0	na	na
Office of Defense Nuclear Nonproliferation	361,016.9	125,502.7	149,599.6	85,914.6	na	na
Nuclear Energy	517,640.7	0.0	387,473.9	130,166.9	na	na
Office of Cybersecurity, Energy Security, and Emergency Response	51,093.0	1,870.0	26,792.0	22,431.0	na	na
Office of Science	5,335,339.0	5,335,339.0	0.0	0.0	na	na
Department of Health and Human Services	68,834,181.9	21,759,200.3	21,620,702.8	25,454,278.8	na	na
Administration for Children and Families	3,084.9	0.0	3,084.9	0.0	na	na
Administration for Community Living	91,902.5	0.0	72,304.2	19,598.4	na	na

TABLE 6

Preliminary federal obligations for research and experimental development, by agency and type of R&D: FY 2021

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Agency for Healthcare Research and Quality	308,145.0	0.0	308,145.0	0.0	na	na
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	9,602.3	0.0	na	na
Biomedical Advanced Research and Development Authority	25,378,577.8	0.0	0.0	25,378,577.8	na	na
Centers for Disease Control and Prevention	543,119.2	56,766.4	430,250.2	56,102.6	na	na
Centers for Medicare and Medicaid Services	228,033.2	0.0	228,033.2	0.0	na	na
Food and Drug Administration	495,000.0	0.0	495,000.0	0.0	na	na
Health Resources and Services Administration	33,817.0	2,433.9	31,383.1	0.0	na	na
National Institutes of Health	41,726,000.0	21,700,000.0	20,026,000.0	0.0	na	na
Office of the Secretary of Health and Human Services	16,900.0	0.0	16,900.0	0.0	na	na
Office of the Assistant Secretary for Planning and Evaluation	16,900.0	0.0	16,900.0	0.0	na	na
Department of Homeland Security	541,027.6	53,393.8	187,035.4	300,598.4	na	na
Countering Weapons of Mass Destruction Office	35,878.6	8,393.8	16,647.4	10,837.4	na	na
Cybersecurity and Infrastructure Security Agency	9,431.0	0.0	8,305.2	1,125.8	na	na
Science and Technology Directorate	444,000.0	45,000.0	159,000.0	240,000.0	na	na
Transportation Security Administration	29,500.0	0.0	0.0	29,500.0	na	na
U.S. Coast Guard	10,276.0	0.0	3,082.8	7,193.2	na	na
U.S. Secret Service	11,942.0	0.0	0.0	11,942.0	na	na
Department of the Interior	879,089.2	86,260.8	649,452.2	143,376.2	na	na
Bureau of Indian Affairs	*	0.0	*	0.0	na	na
Bureau of Land Management	15,848.0	0.0	12,247.0	3,601.0	na	na
Bureau of Ocean Energy Management	81,700.6	0.0	65,183.2	16,517.4	na	na
Bureau of Reclamation	26,350.0	0.0	18,000.0	8,350.0	na	na
Bureau of Safety and Environmental Enforcement	18,878.6	1,071.0	14,964.9	2,842.8	na	na
National Park Service	10,231.0	865.9	9,365.1	0.0	na	na
Office of Surface Mining Reclamation and Enforcement	2,161.0	0.0	2,161.0	0.0	na	na
U.S. Fish and Wildlife Service	32,650.0	0.0	32,650.0	0.0	na	na
U.S. Geological Survey	691,270.0	84,324.0	494,881.0	112,065.0	na	na
Department of Justice	99,526.8	783.1	85,871.5	12,872.2	na	na
Bureau of Prisons	8,663.0	0.0	1,928.0	6,735.0	na	na
Federal Bureau of Investigation	948.9	0.0	948.9	0.0	na	na
Office of Justice Programs	89,914.9	783.1	82,994.6	6,137.2	na	na
Department of Labor	4,297.2	0.0	4,297.2	0.0	na	na
Employee Benefits Security Administration	2,256.5	0.0	2,256.5	0.0	na	na
Occupational Safety and Health Administration	2,040.7	0.0	2,040.7	0.0	na	na
Department of State	43,000.0	0.0	30,000.0	13,000.0	na	na
Department of Transportation	1,151,767.4	0.0	848,503.4	303,264.0	na	na
Federal Aviation Administration	536,439.7	0.0	297,422.6	239,017.1	na	na

TABLE 6

Preliminary federal obligations for research and experimental development, by agency and type of R&D: FY 2021

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Federal Highway Administration	376,645.4	0.0	355,765.3	20,880.1	na	na
Federal Motor Carrier Safety Administration	11,373.6	0.0	11,373.6	0.0	na	na
Federal Railroad Administration	47,391.2	0.0	35,543.4	11,847.8	na	na
Federal Transit Administration	54,000.0	0.0	54,000.0	0.0	na	na
National Highway Traffic Safety Administration	65,982.6	0.0	65,982.6	0.0	na	na
Office of the Secretary of Transportation	40,956.0	0.0	22,800.0	18,156.0	na	na
Pipeline and Hazardous Materials Safety Administration	18,979.0	0.0	5,616.0	13,363.0	na	na
Department of the Treasury	63,432.6	0.0	52,466.5	10,966.1	na	na
Bureau of Engraving and Printing	63,339.4	0.0	52,373.3	10,966.1	na	na
U.S. Mint	93.2	0.0	93.2	0.0	na	na
Department of Veterans Affairs	1,689,396.7	669,822.6	987,767.4	31,806.7	na	na
Other agencies						
Administrative Office of the U.S. Courts	6,404.3	0.0	6,404.3	0.0	na	na
Agency for International Development	194,332.7	100.0	134,794.6	59,438.1	na	na
Appalachian Regional Commission	2.5	0.0	2.5	0.0	na	na
Consumer Product Safety Commission	390.6	0.0	390.6	0.0	na	na
Environmental Protection Agency	521,778.0	0.0	404,397.7	117,380.3	na	na
Federal Communications Commission	2,625.0	0.0	2,625.0	0.0	na	na
Federal Trade Commission	7,496.6	0.0	7,496.6	0.0	na	na
Library of Congress	2,685.8	0.0	1,216.3	1,469.5	na	na
National Aeronautics and Space Administration	8,799,396.0	3,241,916.9	2,055,632.6	3,501,846.6	na	na
National Science Foundation	6,405,641.9	5,505,381.4	900,260.5	0.0	na	na
Nuclear Regulatory Commission	76,346.0	2,550.1	71,396.0	2,399.9	na	na
Patient-Centered Outcomes Research Trust Fund	390,870.7	0.0	390,870.7	0.0	na	na
RESTORE Act Centers of Excellence Research Grants Program	5,000.0	0.0	5,000.0	0.0	na	na
Smithsonian Institution	213,560.0	213,560.0	0.0	0.0	na	na
Social Security Administration	129,366.1	0.0	129,366.1	0.0	na	na
Tennessee Valley Authority	11,062.2	0.0	8,474.9	2,587.3	na	na
U.S. Agency for Global Media	4,777.7	0.0	4,777.7	0.0	na	na
U.S. Postal Service	19,006.0	0.0	19,006.0	0.0	na	na

* = amount greater than \$0 but less than \$50.

na = not applicable; data were not collected at this level of detail for this agency or subagency.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	167,402.8	51,471.7	51,428.0	4,118.7	38,540.9	5,355.2	10,698.9	3,676.0	720.1	1,393.3
Departments										
Department of Agriculture	2,643.6	1,689.8	4.6	0.0	883.7	0.0	51.9	0.0	8.6	5.1
Agricultural Marketing Service	7.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,423.5	1,247.9	0.0	0.0	156.6	0.0	14.3	0.0	0.3	4.4
Animal and Plant Health Inspection Service	39.8	27.6	0.0	0.0	12.1	0.0	0.0	0.0	0.0	0.0
Economic Research Service	81.7	74.6	1.8	0.0	4.1	0.0	1.2	0.0	*	0.0
Forest Service	342.0	305.0	1.4	0.0	25.0	0.0	4.1	0.0	5.9	0.6
National Agricultural Statistics Service	9.0	8.4	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0
National Institute of Food and Agriculture	737.9	19.3	1.5	0.0	683.0	0.0	31.7	0.0	2.4	0.0
Rural Business-Cooperative Service	2.8	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0
Department of Commerce	1,621.7	1,193.0	50.5	0.0	313.8	4.2	31.0	19.9	5.1	4.4
National Institute of Standards and Technology	734.9	622.1	34.2	0.0	48.6	0.0	6.0	19.6	0.1	4.4
National Oceanic and Atmospheric Administration	768.1	452.1	16.3	0.0	265.2	4.2	25.0	0.3	4.9	*
National Telecommunications and Information Administration	7.7	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	111.1	111.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	66,695.0	22,666.6	35,233.5	442.2	4,524.9	463.1	1,473.9	916.8	8.8	965.3
Defense Advanced Research Projects Agency	3,664.3	317.3	2,383.2	38.6	647.5	39.3	163.1	33.8	0.3	41.3
Defense Health Agency	2,870.4	1,097.6	400.1	0.0	703.4	0.3	627.6	3.5	0.3	37.6
Department of the Air Force	11,683.2	4,675.7	6,133.8	135.4	551.9	27.1	9.0	126.2	0.8	23.3
Department of the Army	10,786.4	3,447.7	5,749.4	2.3	1,005.7	25.6	258.4	234.1	0.0	63.3
Department of the Navy	19,113.8	7,339.1	10,154.3	73.0	1,025.2	38.4	311.3	112.2	0.6	59.7
U.S. Space Force	4,385.7	134.8	3,872.3	9.2	17.7	49.0	1.2	188.6	5.2	107.7
Other defense agencies	14,191.2	5,654.5	6,540.3	183.8	573.5	283.4	103.4	218.4	1.5	632.4
Department of Education	240.1	10.5	15.1	0.0	158.2	0.0	46.2	0.0	10.2	0.0
Department of Energy	13,453.0	871.8	2,973.7	2,771.1	1,837.1	2,375.1	148.4	2,419.9	55.6	0.3

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency--Energy	438.0	0.0	165.4	18.4	181.5	16.0	26.8	29.9	0.0	0.0
Electricity Delivery and Energy Reliability	139.8	3.2	9.2	38.2	16.6	8.4	9.8	54.0	0.4	0.0
Energy Efficiency and Renewable Energy	2,096.2	0.0	645.6	140.1	520.8	170.8	0.0	593.2	25.7	0.0
Environmental Management	22.2	0.0	8.0	12.5	1.0	0.0	0.8	0.0	0.0	0.0
Fossil Energy	679.3	411.6	0.0	23.8	200.9	8.9	0.0	34.2	0.0	0.0
National Nuclear Security Administration	3,983.7	234.6	1,544.8	2,033.3	14.9	16.3	69.7	70.0	0.1	0.0
Defense Programs	2,298.1	172.2	182.8	1,867.0	1.2	3.9	69.7	1.3	0.0	0.0
Naval Nuclear Propulsion Program	1,387.4	50.3	1,336.1	0.9	0.0	0.0	0.0	0.1	0.0	0.0
Office of Defense Nuclear Nonproliferation	298.1	12.1	25.8	165.4	13.8	12.5	0.0	68.6	0.1	0.0
Nuclear Energy	573.2	2.3	144.4	232.1	81.6	39.3	0.0	73.4	0.0	0.2
Office of Cybersecurity, Energy Security, and Emergency Response	50.7	14.1	3.0	7.7	3.9	1.8	12.5	7.7	0.0	0.0
Office of Science	5,470.0	206.0	453.4	265.1	815.9	2,113.6	28.8	1,557.5	29.4	0.2
Department of Health and Human Services	60,005.7	19,300.3	7,580.9	862.1	23,928.3	20.3	7,608.4	48.1	368.3	288.9
Administration for Children and Families	1.6	0.6	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Administration for Community Living	90.4	0.0	3.0	0.0	67.6	0.0	19.4	0.0	0.5	0.0
Agency for Healthcare Research and Quality	338.0	76.8	130.3	0.0	100.7	0.0	30.1	0.0	0.1	0.0
Agency for Toxic Substances and Disease Registry	9.6	0.0	0.0	0.0	2.1	0.0	0.5	0.0	7.0	0.0
Biomedical Advanced Research and Development Authority	15,666.4	9,930.0	5,270.6	0.0	273.5	0.0	173.6	11.9	6.9	0.0
Centers for Disease Control and Prevention	496.8	113.0	37.4	0.0	209.6	0.0	74.7	0.4	25.6	36.1
Centers for Medicare and Medicaid Services	223.6	0.0	0.0	0.0	14.4	0.0	0.0	*	209.1	0.0
Food and Drug Administration	464.0	333.7	10.4	0.0	75.2	0.0	39.4	0.0	1.9	3.4

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Employee Benefits Security Administration	2.7	1.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Occupational Safety and Health Administration	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of State	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	1,184.2	222.0	344.8	0.0	275.8	0.3	54.5	70.0	216.5	0.2
Federal Aviation Administration	431.9	85.7	157.3	0.0	94.5	0.0	25.2	69.3	0.0	0.0
Federal Highway Administration	512.2	71.9	80.2	0.0	145.7	0.0	20.8	0.0	193.6	0.1
Federal Motor Carrier Safety Administration	8.9	5.9	1.1	0.0	1.5	0.0	0.0	0.4	0.0	0.0
Federal Railroad Administration	46.4	12.0	25.5	0.0	7.0	0.0	1.4	0.4	0.0	0.1
Federal Transit Administration	40.2	0.0	6.8	0.0	8.2	0.0	5.5	0.0	19.7	0.0
National Highway Traffic Safety Administration	68.9	10.1	53.2	0.0	5.3	0.3	*	0.0	0.0	0.0
Office of the Secretary of Transportation	34.4	26.2	0.0	0.0	5.0	0.0	0.0	0.0	3.2	0.0
Pipeline and Hazardous Materials Safety Administration	41.4	10.2	20.7	0.0	8.7	0.0	1.7	0.0	0.0	0.0
Department of the Treasury	60.6	2.5	30.5	4.4	0.0	0.0	0.7	2.9	0.0	19.6
Bureau of Engraving and Printing	60.4	2.4	30.5	4.3	0.0	0.0	0.7	2.9	0.0	19.6
U.S. Mint	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,565.1	1,495.0	0.0	0.0	0.0	0.0	0.0	70.2	0.0	0.0
Other agencies										
Administrative Office of the U.S. Courts	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
Agency for International Development	194.3	19.7	22.4	0.0	51.0	0.0	50.1	0.0	0.0	51.1
Appalachian Regional Commission	0.7	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Consumer Product Safety Commission	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	488.5	244.4	190.9	0.1	51.6	1.1	0.0	0.3	0.0	0.0
Federal Communications Commission	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	10,537.8	2,551.9	4,195.5	10.2	1,107.7	2,220.4	384.2	35.0	3.5	29.4

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
National Science Foundation	6,351.2	9.4	458.4	0.0	5,237.9	262.4	344.5	4.7	14.8	19.1
Nuclear Regulatory Commission	69.2	29.7	7.9	11.3	3.5	3.0	0.6	13.0	0.0	0.3
Patient-Centered Outcomes Research Trust Fund	469.7	0.0	0.0	0.0	0.0	0.0	469.7	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0
Smithsonian Institution	209.8	209.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	69.7	37.2	20.1	0.0	9.5	0.0	2.9	0.0	0.0	0.1
Tennessee Valley Authority	8.4	0.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4.8	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	18.2	0.0	16.2	0.0	2.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 8

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	179,465.2	64,209.1	52,019.1	4,564.1	37,749.6	5,236.7	10,469.1	3,792.0	669.5	755.9
Departments										
Department of Agriculture	2,738.0	1,827.9	4.6	0.0	844.6	0.0	48.4	0.0	8.5	4.0
Agricultural Marketing Service	7.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,587.0	1,455.3	0.0	0.0	117.4	0.0	10.7	0.0	0.2	3.3
Animal and Plant Health Inspection Service	41.9	29.8	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0
Economic Research Service	87.0	79.9	1.8	0.0	4.1	0.0	1.2	0.0	*	0.0
Forest Service	264.9	227.9	1.4	0.0	25.0	0.0	4.1	0.0	5.9	0.6
National Agricultural Statistics Service	9.5	8.8	0.0	0.0	0.1	0.0	0.6	0.0	0.0	0.0
National Institute of Food and Agriculture	737.9	19.3	1.5	0.0	683.0	0.0	31.7	0.0	2.4	0.0
Rural Business-Cooperative Service	2.8	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0
Department of Commerce	1,884.1	1,298.3	50.5	0.0	374.4	13.8	117.9	21.2	2.3	5.9
National Institute of Standards and Technology	966.4	711.0	36.4	0.0	130.9	0.0	60.9	21.2	0.1	5.9
National Oceanic and Atmospheric Administration	786.1	455.6	14.0	0.0	243.5	13.8	57.1	0.0	2.1	*
National Telecommunications and Information Administration	11.2	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	120.5	120.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	69,297.4	23,153.3	37,261.3	517.8	4,898.3	366.9	1,774.0	978.7	9.2	338.0
Defense Advanced Research Projects Agency	3,608.2	312.9	2,346.0	37.6	641.0	38.6	158.8	33.2	0.3	39.7
Defense Health Agency	2,718.0	715.9	454.0	0.0	806.7	0.0	692.7	4.2	0.3	44.2
Department of the Air Force	11,429.3	4,668.2	5,817.1	222.9	541.0	23.2	9.0	124.5	0.8	22.6
Department of the Army	12,222.1	3,916.8	6,500.8	2.6	1,151.9	27.9	290.2	260.4	0.0	71.6
Department of the Navy	18,803.4	7,463.8	9,731.8	36.1	1,042.9	36.5	319.5	110.3	0.7	61.8
U.S. Space Force	5,038.9	217.9	4,526.5	5.1	14.5	34.8	9.2	209.7	6.0	15.3
Other defense agencies	15,477.5	5,857.8	7,885.1	213.5	700.2	206.0	294.8	236.3	1.0	82.8
Department of Education	379.2	11.3	30.7	0.0	219.1	0.0	78.0	0.0	40.0	0.0
Department of Energy	15,070.0	1,784.8	3,701.8	3,159.8	1,265.4	2,543.5	64.0	2,494.9	55.7	0.1

TABLE 8
Preliminary federal obligations for research and experimental development, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency—Energy	427.0	0.0	161.2	17.9	177.0	15.6	26.2	29.2	0.0	0.0
Electricity Delivery and Energy Reliability	133.8	3.1	8.8	31.2	15.9	13.4	9.3	51.7	0.4	0.0
Energy Efficiency and Renewable Energy	1,976.6	0.0	608.8	132.1	491.1	161.1	0.0	559.3	24.3	0.0
Environmental Management	29.3	0.0	8.1	6.2	12.1	1.5	0.0	1.3	0.0	0.0
Fossil Energy	685.0	514.0	0.0	18.8	124.2	11.0	0.0	16.9	0.0	0.0
National Nuclear Security Administration	5,914.3	675.3	2,571.7	2,542.4	10.1	16.2	1.9	96.7	0.0	0.1
Defense Programs	4,109.9	623.1	1,152.2	2,331.8	0.0	0.1	1.3	1.3	0.0	0.0
Naval Nuclear Propulsion Program	1,443.4	51.9	1,390.5	0.9	0.0	0.0	0.0	0.1	0.0	0.0
Office of Defense Nuclear Nonproliferation	361.0	0.3	28.9	209.7	10.1	16.1	0.6	95.3	0.0	0.1
Nuclear Energy	517.6	0.3	195.5	173.1	48.9	28.7	0.0	71.2	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	51.1	5.5	18.0	0.0	17.6	0.0	10.0	0.0	0.0	0.0
Office of Science	5,335.3	586.5	129.7	238.2	368.7	2,296.0	16.6	1,668.7	31.1	0.0
Department of Health and Human Services	68,834.2	30,267.9	6,180.3	843.2	23,530.9	19.9	7,283.7	35.0	385.4	287.8
Administration for Children and Families	3.1	*	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
Administration for Community Living	91.9	0.0	3.0	0.0	69.1	0.0	19.4	0.0	0.5	0.0
Agency for Healthcare Research and Quality	308.1	48.3	131.5	0.0	98.7	0.0	29.6	0.0	0.1	0.0
Agency for Toxic Substances and Disease Registry	9.6	0.0	0.0	0.0	2.1	0.0	0.5	0.0	7.0	0.0
Biomedical Advanced Research and Development Authority	25,378.6	21,092.1	3,887.7	0.0	387.3	0.0	11.5	0.0	0.0	0.0
Centers for Disease Control and Prevention	543.1	119.7	64.5	0.0	203.7	0.0	67.1	0.0	47.9	40.3
Centers for Medicare and Medicaid Services	228.0	0.0	0.0	0.0	14.7	0.0	0.0	0.0	213.3	0.0
Food and Drug Administration	495.0	356.0	11.1	0.0	80.2	0.0	42.0	0.0	2.0	3.6

TABLE 8

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Employee Benefits Security Administration	2.3	1.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Occupational Safety and Health Administration	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of State	43.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	1,151.8	258.3	398.0	0.0	231.9	1.6	46.6	91.6	122.7	1.1
Federal Aviation Administration	536.4	110.8	194.8	0.0	112.3	0.0	29.7	88.9	0.0	0.0
Federal Highway Administration	376.6	70.7	101.8	0.0	76.7	1.6	11.4	0.6	113.8	0.0
Federal Motor Carrier Safety Administration	11.4	3.3	4.8	0.0	2.2	0.0	0.1	1.0	0.0	0.0
Federal Railroad Administration	47.4	15.1	22.3	0.0	6.6	0.0	2.3	0.0	0.0	1.1
Federal Transit Administration	54.0	0.0	22.2	0.0	19.8	0.0	3.1	0.0	9.0	0.0
National Highway Traffic Safety Administration	66.0	10.0	40.6	0.0	14.2	0.0	0.0	1.0	0.0	0.0
Office of the Secretary of Transportation	41.0	41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	19.0	7.5	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	63.4	2.0	36.4	0.1	0.0	0.0	0.0	8.4	0.0	16.6
Bureau of Engraving and Printing	63.3	2.0	36.4	0.0	0.0	0.0	0.0	8.4	0.0	16.6
U.S. Mint	0.1	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,689.4	1,621.1	0.0	0.0	0.0	0.0	0.0	68.3	0.0	0.0
Other agencies										
Administrative Office of the U.S. Courts	6.4	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0
Agency for International Development	194.3	19.7	22.4	0.0	51.0	0.0	50.1	0.0	0.0	51.1
Appalachian Regional Commission	*	0.0	0.0	0.0	*	0.0	0.0	0.0	0.0	0.0
Consumer Product Safety Commission	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	521.8	262.4	204.7	0.0	54.7	0.0	0.0	0.0	0.0	0.0
Federal Communications Commission	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	7.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	8,799.4	2,413.6	3,258.6	10.5	802.8	2,022.3	229.1	32.2	3.0	27.3

TABLE 8

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
National Science Foundation	6,405.6	9.4	462.9	0.0	5,282.3	264.5	347.6	4.8	14.9	19.2
Nuclear Regulatory Commission	76.3	31.6	8.4	12.0	7.0	3.2	0.6	13.1	0.0	0.4
Patient-Centered Outcomes Research Trust Fund	390.9	0.0	0.0	0.0	0.0	0.0	390.9	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Smithsonian Institution	213.6	213.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	129.4	68.7	47.3	0.0	10.2	0.0	3.1	0.0	0.0	0.0
Tennessee Valley Authority	11.1	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4.8	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	19.0	0.0	17.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Federal intramural amounts for the Biomedical Advanced Research and Development Authority are transfers to the other agencies in support of Operation Warp Speed. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 9

Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Defense										
RDT&E	103,760.1	31,058.6	63,351.3	538.6	4,622.2	490.7	1,571.4	1,143.5	8.8	975.0
Total research	8,915.3	2,455.0	3,177.6	84.9	2,427.1	81.8	412.1	165.8	1.5	109.5
Basic research	2,499.1	401.9	364.5	17.8	1,490.8	19.8	102.1	35.6	0.1	66.4
Applied research	6,416.2	2,053.0	2,813.1	67.0	936.3	62.0	310.0	130.2	1.3	43.2
Total experimental development ^b	57,779.7	20,211.7	32,055.8	357.3	2,097.8	381.2	1,061.8	751.0	7.3	855.8
Advanced technology	8,600.3	2,367.2	4,025.7	61.4	1,059.1	72.1	779.2	123.5	1.8	110.2
Major systems	49,179.4	17,844.4	28,030.1	295.9	1,038.6	309.1	282.6	627.5	5.5	745.6
Total operational systems development ^c	37,065.1	8,391.9	28,117.8	96.4	97.3	27.6	97.5	226.7	0.0	9.8
Defense Advanced Research Projects Agency										
RDT&E	3,664.3	317.3	2,383.2	38.6	647.5	39.3	163.1	33.8	0.3	41.3
Total research	2,006.3	96.3	1,067.0	33.5	584.2	24.8	140.9	24.9	0.3	34.5
Basic research	482.1	13.0	133.5	11.1	256.7	6.0	45.7	8.1	0.0	8.0
Applied research	1,524.2	83.3	933.5	22.4	327.4	18.8	95.2	16.8	0.3	26.4
Total experimental development ^b	1,658.0	221.0	1,316.2	5.1	63.3	14.5	22.2	8.9	0.0	6.8
Advanced technology	1,489.2	154.9	1,214.0	5.1	63.3	14.5	21.6	8.9	0.0	6.8
Major systems	168.8	66.1	102.2	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total operational systems development ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Defense Health Agency										
RDT&E	2,883.9	1,104.5	405.0	0.0	703.9	0.3	628.7	3.5	0.3	37.6
Total research	164.1	33.3	38.8	0.0	41.6	0.0	46.5	1.9	0.0	1.9
Basic research	10.7	4.3	0.6	0.0	0.3	0.0	5.5	*	0.0	0.0
Applied research	153.4	29.0	38.2	0.0	41.3	0.0	41.1	1.9	0.0	1.9

TABLE 9

Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Total experimental development ^b	2,706.4	1,064.3	361.4	0.0	661.8	0.3	581.0	1.6	0.3	35.7
Advanced technology	1,706.0	250.6	226.4	0.0	647.8	0.3	547.4	1.6	0.3	31.5
Major systems	1,000.4	813.7	134.9	0.0	14.0	0.0	33.6	0.0	0.0	4.1
Total operational systems development ^c	13.4	6.9	4.9	0.0	0.5	0.0	1.2	*	0.0	0.0
Department of the Air Force										
RDT&E	38,844.6	6,522.0	31,346.4	169.5	553.7	34.0	9.0	183.3	0.8	26.1
Total research	2,248.8	1,101.3	596.2	2.3	467.6	1.6	8.9	46.7	0.8	23.3
Basic research	520.3	76.3	32.9	0.1	383.4	0.4	5.6	0.6	*	21.0
Applied research	1,728.5	1,025.0	563.4	2.2	84.2	1.1	3.4	46.2	0.7	2.3
Total experimental development ^b	9,434.4	3,574.4	5,537.6	133.1	84.3	25.5	*	79.5	*	0.1
Advanced technology	952.2	176.0	734.5	3.1	29.9	0.7	*	8.1	*	0.0
Major systems	8,482.2	3,398.3	4,803.1	130.0	54.4	24.9	0.0	71.4	0.0	0.1
Total operational systems development ^c	27,161.4	1,846.3	25,212.6	34.1	1.8	6.9	0.0	57.1	0.0	2.7
Department of the Army										
RDT&E	12,338.9	4,111.9	6,585.0	2.3	1,007.9	26.5	295.9	245.9	0.0	63.5
Total research	1,906.7	292.0	939.3	1.5	495.7	14.5	81.6	61.1	0.0	21.0
Basic research	524.0	31.1	102.9	*	328.0	10.9	12.1	20.4	0.0	18.5
Applied research	1,382.7	260.9	836.5	1.5	167.7	3.5	69.5	40.7	0.0	2.5
Total experimental development ^b	8,879.7	3,155.7	4,810.0	0.8	510.0	11.1	176.8	173.0	0.0	42.3
Advanced technology	1,487.4	405.9	803.2	0.2	127.9	3.8	56.1	71.7	0.0	18.7
Major systems	7,392.3	2,749.8	4,006.8	0.6	382.2	7.3	120.7	101.3	0.0	23.6
Total operational systems development ^c	1,552.5	664.3	835.6	0.0	2.2	0.9	37.5	11.8	0.0	0.3

TABLE 9

Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of the Navy										
RDT&E	20,117.5	7,683.3	10,673.2	93.1	1,095.4	38.9	341.1	132.0	0.6	59.8
Total research	1,697.7	565.9	331.4	9.7	640.9	1.2	107.0	13.2	0.4	28.0
Basic research	640.9	192.7	28.1	1.5	369.9	0.0	30.3	0.3	0.1	18.0
Applied research	1,056.7	373.2	303.3	8.2	271.0	1.2	76.7	12.9	0.3	10.0
Total experimental development ^b	17,416.1	6,773.2	9,822.9	63.3	384.3	37.2	204.3	99.0	0.2	31.6
Advanced technology	883.0	304.3	363.9	3.1	86.8	1.0	117.8	4.8	0.0	1.4
Major systems	16,533.1	6,468.9	9,459.1	60.2	297.6	36.2	86.5	94.2	0.2	30.3
Total operational systems development ^c	1,003.7	344.2	518.9	20.1	70.2	0.5	29.8	19.8	0.0	0.2
U.S. Space Force										
RDT&E	5,436.2	182.1	4,699.8	49.4	20.1	68.4	4.9	298.5	5.2	107.7
Total research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Basic research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Applied research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total experimental development ^b	4,385.7	134.8	3,872.3	9.2	17.7	49.0	1.2	188.6	5.2	107.7
Advanced technology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Major systems	4,385.7	134.8	3,872.3	9.2	17.7	49.0	1.2	188.6	5.2	107.7
Total operational systems development ^c	1,050.5	47.4	827.5	40.2	2.5	19.3	3.7	109.9	0.0	0.0
Other defense agencies										
RDT&E	20,474.7	11,137.4	7,258.7	185.8	593.6	283.4	128.7	246.5	1.5	639.0
Total research	891.8	366.2	204.9	37.9	197.2	39.9	27.0	17.9	0.0	0.9
Basic research	321.1	84.7	66.5	5.1	152.5	2.4	2.8	6.2	0.0	0.8
Applied research	570.7	281.5	138.3	32.7	44.7	37.4	24.2	11.7	0.0	0.1

TABLE 9

Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Total experimental development ^b	13,299.4	5,288.3	6,335.4	145.9	376.3	243.6	76.4	200.5	1.5	631.6
Advanced technology	2,082.5	1,075.5	683.7	50.0	103.4	51.8	36.3	28.6	1.5	51.7
Major systems	11,216.9	4,212.8	5,651.7	95.9	272.9	191.7	40.1	172.0	0.1	579.8
Total operational systems development ^c	6,283.5	5,482.9	718.4	2.1	20.2	0.0	25.3	28.0	0.0	6.6

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center; RDT&E = research, development, test, and evaluation.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.^c Funding for DOD's Operational Systems Development (Budget Activity 7) was first reported as a separate category for volume 66.**Note(s):**Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 10

Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Defense										
RDT&E	105,815.2	30,506.7	65,954.8	542.5	5,001.8	394.7	1,884.6	1,174.1	9.2	346.8
Total research	9,249.7	2,549.0	3,262.8	89.7	2,535.7	82.0	436.0	180.0	1.5	113.0
Basic research	2,667.6	447.2	375.9	17.2	1,594.5	19.6	105.6	39.1	0.2	68.4
Applied research	6,582.1	2,101.7	2,887.0	72.5	941.2	62.4	330.4	140.9	1.4	44.6
Total experimental development ^b	60,047.8	20,604.3	33,998.5	428.0	2,362.6	284.9	1,338.0	798.7	7.6	225.0
Advanced technology	9,363.6	2,380.3	4,364.0	69.4	1,201.9	40.7	1,038.2	133.4	1.4	134.3
Major systems	50,684.2	18,224.0	29,634.5	358.6	1,160.7	244.2	299.8	665.3	6.2	90.8
Total operational systems development ^c	36,517.8	7,353.4	28,693.4	24.7	103.5	27.8	110.6	195.4	0.0	8.8
Defense Advanced Research Projects Agency										
RDT&E	3,608.2	312.9	2,346.0	37.6	641.0	38.6	158.8	33.2	0.3	39.7
Total research	1,903.0	89.5	989.6	32.3	575.4	23.5	135.8	24.0	0.3	32.6
Basic research	524.3	14.1	145.2	12.0	279.2	6.5	49.7	8.8	0.0	8.7
Applied research	1,378.7	75.4	844.4	20.3	296.2	17.0	86.1	15.2	0.3	23.9
Total experimental development ^b	1,705.2	223.5	1,356.5	5.3	65.7	15.1	23.0	9.2	0.0	7.1
Advanced technology	1,545.0	160.7	1,259.5	5.3	65.7	15.1	22.4	9.2	0.0	7.1
Major systems	160.2	62.8	97.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total operational systems development ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Defense Health Agency										
RDT&E	2,733.9	723.4	460.3	0.0	807.2	0.0	694.2	4.3	0.3	44.2
Total research	199.5	42.9	46.9	0.0	52.0	0.0	52.5	2.5	0.0	2.8
Basic research	10.4	4.8	1.5	0.0	0.5	0.0	3.6	*	0.0	0.0
Applied research	189.1	38.1	45.4	0.0	51.4	0.0	48.9	2.5	0.0	2.8

TABLE 10

Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Total experimental development ^b	2,518.6	673.0	407.1	0.0	754.7	0.0	640.2	1.8	0.3	41.4
Advanced technology	1,759.1	150.6	246.8	0.0	737.5	0.0	585.7	1.8	0.3	36.4
Major systems	759.5	522.4	160.4	0.0	17.2	0.0	54.5	0.0	0.0	5.1
Total operational systems development ^c	15.8	7.6	6.3	0.0	0.5	0.0	1.5	*	0.0	0.0
Department of the Air Force										
RDT&E	35,094.4	6,460.7	27,601.2	246.0	541.6	26.6	12.2	180.4	0.8	24.9
Total research	2,325.9	1,155.1	627.9	2.6	457.2	1.6	8.9	49.1	0.8	22.6
Basic research	496.4	70.0	31.6	0.1	368.1	0.4	5.3	0.5	*	20.2
Applied research	1,829.5	1,085.1	596.4	2.5	89.0	1.2	3.6	48.6	0.8	2.4
Total experimental development ^b	9,103.4	3,513.0	5,189.2	220.3	83.9	21.6	*	75.4	*	*
Advanced technology	917.4	169.6	707.6	2.9	28.8	0.6	*	7.8	*	0.0
Major systems	8,186.0	3,343.4	4,481.5	217.3	55.1	20.9	0.0	67.7	0.0	*
Total operational systems development ^c	23,665.1	1,792.5	21,784.1	23.1	0.5	3.5	3.2	55.9	0.0	2.3
Department of the Army										
RDT&E	13,948.4	4,655.4	7,429.9	2.6	1,154.3	28.9	331.8	273.5	0.0	71.9
Total research	2,042.8	313.9	1,009.8	1.6	526.8	15.3	87.7	65.4	0.0	22.2
Basic research	553.0	32.8	108.6	*	346.2	11.5	12.8	21.6	0.0	19.5
Applied research	1,489.8	281.1	901.2	1.6	180.7	3.8	74.9	43.8	0.0	2.7
Total experimental development ^b	10,179.3	3,602.9	5,490.9	1.0	625.1	12.5	202.4	195.0	0.0	49.5
Advanced technology	1,895.2	517.2	1,023.4	0.2	162.9	4.8	71.5	91.3	0.0	23.9
Major systems	8,284.1	3,085.7	4,467.5	0.8	462.1	7.7	131.0	103.7	0.0	25.6
Total operational systems development ^c	1,726.3	738.6	929.2	0.0	2.4	1.0	41.7	13.1	0.0	0.3

TABLE 10

Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of the Navy										
RDT&E	20,135.8	7,994.1	10,421.8	36.1	1,099.8	36.8	354.6	130.0	0.7	61.9
Total research	1,859.8	644.3	354.2	10.4	690.3	1.3	114.4	14.3	0.4	30.2
Basic research	719.2	241.6	26.3	1.6	398.0	0.0	31.7	0.4	0.1	19.4
Applied research	1,140.6	402.7	327.9	8.8	292.3	1.3	82.7	13.9	0.3	10.8
Total experimental development ^b	16,943.6	6,819.6	9,377.6	25.7	352.6	35.2	205.0	96.1	0.3	31.5
Advanced technology	965.0	332.6	401.9	3.3	93.6	0.1	127.0	4.9	0.0	1.5
Major systems	15,978.6	6,487.0	8,975.7	22.3	259.0	35.1	78.0	91.1	0.3	30.1
Total operational systems development ^c	1,332.4	530.3	690.0	0.0	56.9	0.2	35.2	19.7	0.0	0.1
U.S. Space Force										
RDT&E	9,913.1	266.9	9,204.3	6.3	42.2	57.9	14.0	300.3	6.0	15.3
Total research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Basic research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Applied research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total experimental development ^b	5,038.9	217.9	4,526.5	5.1	14.5	34.8	9.2	209.7	6.0	15.3
Advanced technology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Major systems	5,038.9	217.9	4,526.5	5.1	14.5	34.8	9.2	209.7	6.0	15.3
Total operational systems development ^c	4,874.1	49.0	4,677.8	1.1	27.6	23.1	4.8	90.6	0.0	0.0
Other defense agencies										
RDT&E	20,381.4	10,093.2	8,491.1	214.0	715.8	206.0	319.0	252.4	1.0	88.9
Total research	918.8	303.3	234.4	42.8	234.1	40.2	36.6	24.7	0.0	2.6
Basic research	364.4	83.9	62.7	3.5	202.5	1.1	2.3	7.8	0.0	0.6
Applied research	554.4	219.4	171.7	39.3	31.6	39.2	34.3	16.9	0.0	2.0

TABLE 10

Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2021

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
Total experimental development ^b	14,558.7	5,554.6	7,650.6	170.7	466.1	165.7	258.2	211.5	1.0	80.2
Advanced technology	2,281.9	1,049.7	724.7	57.6	113.3	20.1	231.6	18.3	1.0	65.5
Major systems	12,276.8	4,504.8	6,925.9	113.1	352.8	145.7	26.6	193.2	0.0	14.7
Total operational systems development ^c	4,904.0	4,235.4	606.1	0.5	15.6	0.0	24.2	16.1	0.0	6.1

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center; RDT&E = research, development, test, and evaluation.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.^c Funding for DOD's Operational Systems Development (Budget Activity 7) was first reported as a separate category for volume 66.**Note(s):**Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 11

Federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2020

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
All agencies	13,149,898.4	4,118,731.7	5,355,210.2	3,675,956.5	1,883,642.4	222,083.8	867,811.2	793,747.5
Departments								
Department of Commerce	24,018.5	0.0	4,167.5	19,851.0	0.0	0.0	0.0	0.0
National Institute of Standards and Technology	19,558.0	0.0	0.0	19,558.0	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	4,460.5	0.0	4,167.5	293.0	0.0	0.0	0.0	0.0
Department of Defense	1,822,049.2	442,165.3	463,067.9	916,816.1	0.0	0.0	0.0	0.0
Defense Advanced Research Projects Agency	111,668.9	38,570.8	39,285.6	33,812.5	0.0	0.0	0.0	0.0
Defense Health Agency	3,793.7	0.0	308.0	3,485.7	0.0	0.0	0.0	0.0
Department of the Air Force	288,649.6	135,366.6	27,085.7	126,197.4	0.0	0.0	0.0	0.0
Department of the Army	261,922.9	2,268.7	25,553.9	234,100.3	0.0	0.0	0.0	0.0
Department of the Navy	223,572.4	72,998.9	38,368.8	112,204.7	0.0	0.0	0.0	0.0
U.S. Space Force	246,805.4	9,199.5	49,028.8	188,577.1	0.0	0.0	0.0	0.0
Other defense agencies	685,636.2	183,760.8	283,437.1	218,438.3	0.0	0.0	0.0	0.0
Department of Energy	7,566,095.5	2,771,094.8	2,375,117.2	2,419,883.5	1,866,442.4	222,083.8	850,611.2	793,747.5
Advanced Research Projects Agency—Energy	64,261.5	18,392.3	15,959.6	29,909.6	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	100,599.1	38,188.1	8,409.7	54,001.3	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	904,050.6	140,050.1	170,844.2	593,156.3	53,288.0	0.0	0.0	53,288.0
Environmental Management	12,484.9	12,484.9	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	66,874.1	23,803.6	8,853.9	34,216.7	0.0	0.0	0.0	0.0
National Nuclear Security Administration	2,119,606.3	2,033,290.9	16,322.0	69,993.4	208,083.8	203,883.8	0.0	4,200.0
Defense Programs	1,872,155.0	1,866,968.0	3,862.0	1,325.0	208,083.8	203,883.8	0.0	4,200.0
Naval Nuclear Propulsion Program	980.0	890.0	0.0	90.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	246,471.3	165,432.9	12,460.0	68,578.4	0.0	0.0	0.0	0.0
Nuclear Energy	344,743.0	232,081.5	39,296.9	73,364.7	0.0	0.0	0.0	0.0

TABLE 11

Federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2020

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
Office of Cybersecurity, Energy Security, and Emergency Response	17,236.6	7,713.0	1,800.0	7,723.6	0.0	0.0	0.0	0.0
Office of Science	3,936,239.4	265,090.6	2,113,630.9	1,557,517.9	1,605,070.6	18,199.9	850,611.2	736,259.5
Department of Health and Human Services	930,545.7	862,133.3	20,303.2	48,109.2	0.0	0.0	0.0	0.0
Biomedical Advanced Research and Development Authority	11,856.9	0.0	0.0	11,856.9	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	421.8	0.0	0.0	421.8	0.0	0.0	0.0	0.0
Centers for Medicare and Medicaid Services	*	0.0	0.0	*	0.0	0.0	0.0	0.0
National Institutes of Health	918,267.0	862,133.3	20,303.2	35,830.4	0.0	0.0	0.0	0.0
Department of Homeland Security	91,608.3	17,280.1	4,788.0	69,540.3	0.0	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	12,202.1	5,800.1	4,788.0	1,614.1	0.0	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	7,657.2	2,285.5	0.0	5,371.7	0.0	0.0	0.0	0.0
Science and Technology Directorate	71,748.9	9,194.4	0.0	62,554.5	0.0	0.0	0.0	0.0
Department of the Interior	1,051.4	0.0	542.3	509.2	0.0	0.0	0.0	0.0
Bureau of Reclamation	542.3	0.0	542.3	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	509.2	0.0	0.0	509.2	0.0	0.0	0.0	0.0
Department of Transportation	70,290.8	0.0	265.0	70,025.8	0.0	0.0	0.0	0.0
Federal Aviation Administration	69,271.7	0.0	0.0	69,271.7	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	400.0	0.0	0.0	400.0	0.0	0.0	0.0	0.0
Federal Railroad Administration	354.1	0.0	0.0	354.1	0.0	0.0	0.0	0.0
National Highway Traffic Safety Administration	265.0	0.0	265.0	0.0	0.0	0.0	0.0	0.0

TABLE 11

Federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2020

(Dollars in thousands)

Agency	R&D			R&D plant				
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
Department of the Treasury	7,313.1	4,397.1	0.0	2,916.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	7,216.0	4,300.0	0.0	2,916.0	0.0	0.0	0.0	0.0
U.S. Mint	97.1	97.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	70,155.1	0.0	0.0	70,155.1	0.0	0.0	0.0	0.0
Other agencies								
Administrative Office of the U.S. Courts	5,045.5	0.0	0.0	5,045.5	0.0	0.0	0.0	0.0
Environmental Protection Agency	1,572.5	149.2	1,100.0	323.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,265,696.9	10,204.4	2,220,445.9	35,046.7	17,200.0	0.0	17,200.0	0.0
National Science Foundation	267,164.9	0.0	262,424.9	4,740.0	0.0	0.0	0.0	0.0
Nuclear Regulatory Commission	27,291.0	11,307.5	2,988.4	12,995.1	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 12

Preliminary federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2021

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
All agencies	13,592,916.5	4,564,149.1	5,236,725.2	3,792,042.2	1,632,873.5	30,521.9	809,760.0	792,591.6
Departments								
Department of Commerce	34,966.7	0.0	13,762.2	21,204.5	0.0	0.0	0.0	0.0
National Institute of Standards and Technology	21,204.5	0.0	0.0	21,204.5	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	13,762.2	0.0	13,762.2	0.0	0.0	0.0	0.0	0.0
Department of Defense	1,863,343.3	517,780.1	366,868.7	978,694.4	0.0	0.0	0.0	0.0
Defense Advanced Research Projects Agency	109,393.0	37,586.8	38,562.4	33,243.7	0.0	0.0	0.0	0.0
Defense Health Agency	4,239.1	0.0	0.0	4,239.1	0.0	0.0	0.0	0.0
Department of the Air Force	370,584.0	222,859.3	23,198.5	124,526.2	0.0	0.0	0.0	0.0
Department of the Army	290,837.4	2,576.6	27,863.9	260,397.0	0.0	0.0	0.0	0.0
Department of the Navy	182,928.1	36,112.3	36,505.3	110,310.5	0.0	0.0	0.0	0.0
U.S. Space Force	249,630.5	5,139.7	34,765.1	209,725.8	0.0	0.0	0.0	0.0
Other defense agencies	655,731.2	213,505.5	205,973.6	236,252.1	0.0	0.0	0.0	0.0
Department of Energy	8,198,274.6	3,159,836.9	2,543,495.2	2,494,942.5	1,629,498.5	30,521.9	806,385.0	792,591.6
Advanced Research Projects Agency—Energy	62,647.7	17,930.4	15,558.9	29,158.5	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	96,258.5	31,190.1	13,397.1	51,671.3	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	852,446.6	132,055.9	161,092.3	559,298.4	38,707.0	0.0	0.0	38,707.0
Environmental Management	9,046.4	6,199.6	1,518.3	1,328.5	0.0	0.0	0.0	0.0
Fossil Energy	46,791.5	18,814.4	11,036.8	16,940.3	0.0	0.0	0.0	0.0
National Nuclear Security Administration	2,655,240.0	2,542,400.8	16,171.6	96,667.6	29,200.0	29,200.0	0.0	0.0
Defense Programs	2,333,171.5	2,331,821.5	100.0	1,250.0	29,200.0	29,200.0	0.0	0.0
Naval Nuclear Propulsion Program	980.0	890.0	0.0	90.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	321,088.5	209,689.3	16,071.6	95,327.6	0.0	0.0	0.0	0.0
Nuclear Energy	272,958.0	173,095.0	28,673.0	71,190.0	0.0	0.0	0.0	0.0

TABLE 12

Preliminary federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2021

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
Office of Science	4,202,886.0	238,150.8	2,296,047.3	1,668,687.9	1,561,591.5	1,321.9	806,385.0	753,884.6
Department of Health and Human Services	898,097.4	843,196.7	19,857.3	35,043.4	0.0	0.0	0.0	0.0
National Institutes of Health	898,097.4	843,196.7	19,857.3	35,043.4	0.0	0.0	0.0	0.0
Department of Homeland Security	58,147.4	20,732.6	656.4	36,758.4	0.0	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	9,009.4	5,947.1	656.4	2,405.9	0.0	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	8,638.0	2,285.5	0.0	6,352.5	0.0	0.0	0.0	0.0
Science and Technology Directorate	40,500.0	12,500.0	0.0	28,000.0	0.0	0.0	0.0	0.0
Department of the Interior	1,036.1	0.0	500.0	536.1	0.0	0.0	0.0	0.0
Bureau of Reclamation	500.0	0.0	500.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	536.1	0.0	0.0	536.1	0.0	0.0	0.0	0.0
Department of Transportation	93,225.0	0.0	1,622.1	91,603.0	0.0	0.0	0.0	0.0
Federal Aviation Administration	88,901.8	0.0	0.0	88,901.8	0.0	0.0	0.0	0.0
Federal Highway Administration	2,248.0	0.0	1,622.1	625.9	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	1,026.1	0.0	0.0	1,026.1	0.0	0.0	0.0	0.0
National Highway Traffic Safety Administration	1,049.2	0.0	0.0	1,049.2	0.0	0.0	0.0	0.0
Department of the Treasury	8,425.0	75.0	0.0	8,350.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	8,350.0	0.0	0.0	8,350.0	0.0	0.0	0.0	0.0
U.S. Mint	75.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	68,346.7	0.0	0.0	68,346.7	0.0	0.0	0.0	0.0
Other agencies								
Administrative Office of the U.S. Courts	6,404.3	0.0	0.0	6,404.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,064,986.1	10,483.0	2,022,266.9	32,236.3	3,375.0	0.0	3,375.0	0.0

TABLE 12

Preliminary federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2021

(Dollars in thousands)

Agency	R&D			R&D plant				
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
National Science Foundation	269,291.0	0.0	264,513.3	4,777.7	0.0	0.0	0.0	0.0
Nuclear Regulatory Commission	28,372.8	12,044.8	3,183.2	13,144.8	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 13

Federal obligations for research and experimental development to federally funded research and development centers, by FFRDC and agency: FY 2020

(Dollars in thousands)

FFRDC	Total	DHS	DOC	DOD	DOE	HHS	NASA	NSF	Other ^a
All FFRDCs	13,149,898.4	91,608.3	24,018.5	1,822,049.2	7,566,095.5	930,545.7	2,265,696.9	267,164.9	182,719.4
Administered by industrial firms	4,118,731.7	17,280.1	0.0	442,165.3	2,771,094.8	862,133.3	10,204.4	0.0	15,853.8
Frederick National Laboratory for Cancer Research	856,993.0	0.0	0.0	1,641.8	0.0	855,351.2	0.0	0.0	0.0
Idaho National Laboratory	306,498.7	5,837.6	0.0	21,440.1	273,751.1	0.0	0.0	0.0	5,469.8
Lawrence Livermore National Laboratory	1,111,769.5	9,161.3	0.0	125,631.9	972,770.2	1,406.0	0.0	0.0	2,800.0
Los Alamos National Laboratory	800,178.4	1,327.0	0.0	28,032.2	755,170.6	3,944.2	10,204.4	0.0	1,500.0
Sandia National Laboratories	1,016,903.2	440.0	0.0	264,735.7	744,211.7	1,431.9	0.0	0.0	6,084.0
Savannah River National Laboratory	26,388.9	514.2	0.0	683.5	25,191.2	0.0	0.0	0.0	0.0
Administered by universities and colleges ^b	5,355,210.2	4,788.0	4,167.5	463,067.9	2,375,117.2	20,303.2	2,220,445.9	262,424.9	4,895.7
Ames Laboratory	34,595.1	0.0	0.0	199.1	34,396.1	0.0	0.0	0.0	0.0
Argonne National Laboratory	696,155.6	0.0	0.0	4,694.8	682,801.4	3,876.8	0.0	0.0	4,782.6
Fermi National Accelerator Laboratory	301,527.3	0.0	0.0	0.0	301,527.3	0.0	0.0	0.0	0.0
Jet Propulsion Laboratory	2,207,774.4	0.0	0.0	5,853.5	0.0	0.0	2,201,920.9	0.0	0.0
Lawrence Berkeley National Laboratory	813,185.1	0.0	0.0	23,423.0	773,335.7	16,426.4	0.0	0.0	0.0
Lincoln Laboratory	390,498.8	3,107.8	0.0	387,391.0	0.0	0.0	0.0	0.0	0.0
National Center for Atmospheric Research	122,519.3	0.0	4,167.5	13.8	0.0	0.0	18,524.9	99,700.0	113.0
National Optical Astronomy Observatory	45,765.4	0.0	0.0	0.0	0.0	0.0	0.0	45,765.4	0.0
National Radio Astronomy Observatory	95,168.7	0.0	0.0	0.0	0.0	0.0	0.0	95,168.7	0.0
National Solar Observatory	21,790.8	0.0	0.0	0.0	0.0	0.0	0.0	21,790.8	0.0
Princeton Plasma Physics Laboratory	118,966.1	0.0	0.0	2,992.5	115,973.6	0.0	0.0	0.0	0.0
SLAC National Accelerator Laboratory	336,317.3	1,680.2	0.0	4,437.5	330,199.6	0.0	0.0	0.0	0.0
Software Engineering Institute	34,062.8	0.0	0.0	34,062.8	0.0	0.0	0.0	0.0	0.0
Thomas Jefferson National Accelerator Facility	136,883.5	0.0	0.0	0.0	136,883.5	0.0	0.0	0.0	0.0
Administered by nonprofit institutions ^c	3,675,956.5	69,540.3	19,851.0	916,816.1	2,419,883.5	48,109.2	35,046.7	4,740.0	161,969.9
Aerospace FFRDC	252,366.8	0.0	0.0	225,665.4	0.0	0.0	26,701.3	0.0	0.0
Arroyo Center	59,189.6	0.0	0.0	59,189.6	0.0	0.0	0.0	0.0	0.0
Brookhaven National Laboratory	531,554.4	0.0	0.0	3,599.6	515,506.4	3,600.0	8,068.4	0.0	780.0
Center for Advanced Aviation System Development	200,440.1	0.0	0.0	131,168.4	0.0	0.0	0.0	0.0	69,271.7
Center for Communications and Computing	48,438.4	0.0	0.0	48,438.4	0.0	0.0	0.0	0.0	0.0
Center for Enterprise Modernization	121,255.0	0.0	0.0	37,327.0	0.0	11,856.9	0.0	0.0	72,071.1
Center for Naval Analyses	71,228.0	0.0	0.0	71,228.0	0.0	0.0	0.0	0.0	0.0

TABLE 13

Federal obligations for research and experimental development to federally funded research and development centers, by FFRDC and agency: FY 2020

(Dollars in thousands)

FFRDC	Total	DHS	DOC	DOD	DOE	HHS	NASA	NSF	Other ^a
Center for Nuclear Waste Regulatory Analyses	2,723.9	0.0	0.0	272.2	0.0	0.0	0.0	0.0	2,451.7
CMS Alliance to Modernize Healthcare	14,420.5	0.0	0.0	0.0	0.0	14,420.5	0.0	0.0	0.0
Homeland Security Operational Analysis Center	3,561.6	3,561.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Homeland Security Systems Engineering and Development Institute	31,329.6	27,259.9	0.0	4,069.7	0.0	0.0	0.0	0.0	0.0
Judiciary Engineering and Modernization Center	5,045.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,045.5
National Biodefense Analysis and Countermeasures Center	37,381.6	37,104.7	0.0	0.0	0.0	0.0	276.9	0.0	0.0
National Cybersecurity Center of Excellence	21,158.4	0.0	19,558.0	1,600.4	0.0	0.0	0.0	0.0	0.0
National Defense Research Institute	66,337.2	0.0	0.0	66,337.2	0.0	0.0	0.0	0.0	0.0
National Renewable Energy Laboratory	423,632.9	0.0	0.0	1,401.8	422,231.1	0.0	0.0	0.0	0.0
National Security Engineering Center	143,348.6	0.0	0.0	143,348.6	0.0	0.0	0.0	0.0	0.0
Oak Ridge National Laboratory	1,089,869.2	279.9	0.0	11,344.7	1,069,652.9	421.8	0.0	0.0	8,170.0
Pacific Northwest National Laboratory	466,309.4	1,334.2	293.0	30,199.1	412,493.1	17,809.9	0.0	0.0	4,180.0
Project Air Force	46,982.6	0.0	0.0	46,982.6	0.0	0.0	0.0	0.0	0.0
Science and Technology Policy Institute	9,939.0	0.0	0.0	5,199.0	0.0	0.0	0.0	4,740.0	0.0
Systems and Analyses Center	29,444.5	0.0	0.0	29,444.5	0.0	0.0	0.0	0.0	0.0

DHS = Department of Homeland Security; DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; FFRDC = federally funded research and development center; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation.

^a Includes data for the Departments of the Interior, Transportation, the Treasury, and Veterans Affairs; the Administrative Office of the U.S. Courts; the Environmental Protection Agency; and the Nuclear Regulatory Commission.

^b Includes university consortia.

^c Other than universities and colleges.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 14

Federal obligations for R&D plant to federally funded research and development centers, by FFRDC and agency: FY 2020

(Dollars in thousands)

FFRDC	Total	DOE	NASA
All FFRDCs	1,883,642.4	1,866,442.4	17,200.0
Administered by industrial firms	222,083.8	222,083.8	0.0
Idaho National Laboratory	2,060.0	2,060.0	0.0
Lawrence Livermore National Laboratory	151,171.4	151,171.4	0.0
Los Alamos National Laboratory	38,421.0	38,421.0	0.0
Sandia National Laboratories	30,431.3	30,431.3	0.0
Administered by universities and colleges ^a	867,811.2	850,611.2	17,200.0
Ames Laboratory	2,000.0	2,000.0	0.0
Argonne National Laboratory	225,689.7	225,689.7	0.0
Fermi National Accelerator Laboratory	327,979.2	327,979.2	0.0
Jet Propulsion Laboratory	17,200.0	0.0	17,200.0
Lawrence Berkeley National Laboratory	147,334.1	147,334.1	0.0
Princeton Plasma Physics Laboratory	20,750.0	20,750.0	0.0
SLAC National Accelerator Laboratory	103,233.1	103,233.1	0.0
Thomas Jefferson National Accelerator Facility	23,625.0	23,625.0	0.0
Administered by nonprofit institutions ^b	793,747.5	793,747.5	0.0
Brookhaven National Laboratory	112,165.2	112,165.2	0.0
National Renewable Energy Laboratory	53,288.0	53,288.0	0.0
Oak Ridge National Laboratory	595,185.0	595,185.0	0.0
Pacific Northwest National Laboratory	33,109.3	33,109.3	0.0

DOE = Department of Energy; FFRDC = federally funded research and development center; NASA = National Aeronautics and Space Administration.

^a Includes university consortia.^b Other than universities and colleges.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 15

Federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	85,304,757.4	19,572,277.8	10,028,436.7	3,512,486.0	35,473,664.3	3,863,244.2	9,190,668.2	2,516,415.6	644,704.3	502,860.2
Departments										
Department of Agriculture	2,388,398.9	1,458,675.0	4,633.2	0.0	861,682.5	0.0	50,230.9	0.0	8,552.6	4,624.6
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,281,175.9	1,123,107.6	0.0	0.0	140,935.1	0.0	12,880.4	0.0	269.2	3,983.6
Animal and Plant Health Inspection Service	19,082.1	13,253.9	0.0	0.0	5,828.2	0.0	0.0	0.0	0.0	0.0
Economic Research Service	81,718.0	74,618.9	1,753.9	0.0	4,095.9	0.0	1,240.8	0.0	8.4	0.0
Forest Service	257,285.3	220,274.6	1,386.4	0.0	24,950.8	0.0	4,143.4	0.0	5,889.1	641.0
National Agricultural Statistics Service	4,998.3	4,672.7	0.0	0.0	67.2	0.0	258.4	0.0	0.0	0.0
National Institute of Food and Agriculture	737,863.1	19,271.0	1,492.9	0.0	683,005.3	0.0	31,708.0	0.0	2,385.9	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	1,360,814.5	1,021,921.6	45,552.0	0.0	258,134.1	30.3	7,502.3	19,558.0	3,737.6	4,378.6
National Institute of Standards and Technology	717,423.6	614,743.3	33,720.2	0.0	40,162.6	0.0	4,751.5	19,558.0	113.7	4,374.3
National Oceanic and Atmospheric Administration	597,771.6	361,559.1	11,831.8	0.0	217,971.5	30.3	2,750.8	0.0	3,623.9	4.2
National Telecommunications and Information Administration	7,692.0	7,692.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	37,927.3	37,927.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	8,915,303.8	2,454,961.7	3,177,628.5	84,854.4	2,427,132.1	81,840.4	412,068.7	165,811.2	1,476.3	109,530.5
Defense Advanced Research Projects Agency	2,006,308.0	96,284.7	1,067,003.9	33,492.8	584,166.1	24,765.2	140,919.5	24,922.7	297.5	34,455.6
Defense Health Agency	164,053.4	33,271.3	38,781.3	0.0	41,595.0	0.0	46,546.5	1,919.2	0.0	1,940.1
Department of the Air Force	2,248,787.9	1,101,298.1	596,234.5	2,309.7	467,636.5	1,579.8	8,948.3	46,720.4	761.8	23,298.8
Department of the Army	1,906,687.5	291,984.7	939,341.5	1,507.9	495,695.9	14,450.8	81,648.8	61,107.8	0.0	20,950.2
Department of the Navy	1,697,693.0	565,922.9	331,400.6	9,678.5	640,857.3	1,190.0	107,004.4	13,215.8	417.0	28,006.5
Other defense agencies	891,774.0	366,200.1	204,866.8	37,865.5	197,181.3	39,854.7	27,001.0	17,925.3	0.0	879.3
Department of Education	189,493.0	8,405.0	4,032.5	0.0	125,380.7	0.0	42,505.0	0.0	9,169.8	0.0
Department of Energy	10,525,187.8	811,961.2	1,131,145.2	2,527,995.8	1,489,644.6	2,287,152.2	117,635.4	2,114,355.0	45,033.9	264.5

TABLE 15

Federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency—Energy	218,999.6	0.0	82,684.5	9,196.1	90,770.6	7,979.8	13,413.7	14,954.8	0.0	0.0
Electricity Delivery and Energy Reliability	78,351.6	1,791.2	5,163.4	21,404.5	9,292.5	4,713.6	5,476.8	30,267.8	241.9	0.0
Energy Efficiency and Renewable Energy	1,248,343.0	0.0	384,477.1	83,402.8	310,154.7	101,741.4	0.0	353,237.3	15,329.6	0.0
Environmental Management	7,319.2	0.0	2,624.9	4,120.0	318.5	0.0	255.8	0.0	0.0	0.0
Fossil Energy	679,345.0	411,610.4	0.0	23,803.6	200,860.5	8,853.9	0.0	34,216.7	0.0	0.0
National Nuclear Security Administration	2,393,602.0	177,738.6	128,961.7	1,933,110.4	14,925.0	12,759.0	69,664.9	56,392.4	50.0	0.0
Defense Programs	2,154,972.6	165,677.8	117,974.9	1,796,608.0	1,175.0	3,862.0	69,664.9	10.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	238,629.4	12,060.8	10,986.8	136,502.4	13,750.0	8,897.0	0.0	56,382.4	50.0	0.0
Nuclear Energy	392,343.2	2,044.7	70,810.8	180,154.9	43,516.8	35,673.6	0.0	60,044.5	0.0	98.0
Office of Cybersecurity, Energy Security, and Emergency Response	36,912.0	12,755.5	2,999.9	7,713.0	3,920.0	1,800.0	0.0	7,723.6	0.0	0.0
Office of Science	5,469,972.1	206,020.8	453,422.8	265,090.6	815,886.1	2,113,630.9	28,824.2	1,557,517.9	29,412.3	166.5
Department of Health and Human Services	44,233,737.0	9,334,369.7	2,306,427.0	862,133.3	23,603,453.9	20,303.2	7,421,374.5	36,252.2	360,546.0	288,877.1
Administration for Children and Families	1,574.4	575.0	0.0	0.0	0.0	0.0	999.4	0.0	0.0	0.0
Administration for Community Living	70,814.9	0.0	574.8	0.0	53,372.5	0.0	16,495.1	0.0	372.5	0.0
Agency for Healthcare Research and Quality	308,145.0	46,928.1	130,303.0	0.0	100,708.7	0.0	30,110.2	0.0	95.0	0.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	0.0	2,102.3	0.0	500.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	440,734.1	106,926.0	35,928.2	0.0	172,437.0	0.0	64,097.6	421.8	24,853.0	36,070.4
Centers for Medicare and Medicaid Services	223,561.9	0.0	0.0	0.0	14,414.5	0.0	0.0	*	209,147.4	0.0
Food and Drug Administration	463,951.7	333,666.7	10,423.3	0.0	75,216.2	0.0	39,376.2	0.0	1,880.8	3,388.4
Health Resources and Services Administration	34,897.0	4,918.9	0.0	0.0	29,003.1	0.0	975.0	0.0	0.0	0.0

TABLE 15

Federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
National Aeronautics and Space Administration	6,394,136.7	1,611,993.1	2,335,182.2	10,204.4	980,801.5	1,202,238.7	208,007.9	25,065.4	3,508.4	17,135.0
National Science Foundation	6,351,154.7	9,357.9	458,413.2	0.0	5,237,855.3	262,424.9	344,506.3	4,740.0	14,780.5	19,076.6
Nuclear Regulatory Commission	68,195.0	29,671.8	7,865.6	11,307.5	2,464.6	2,988.4	553.3	12,995.1	0.0	348.8
Patient-Centered Outcomes Research Trust Fund	469,730.1	0.0	0.0	0.0	0.0	0.0	469,730.1	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	9,220.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9,220.3	0.0
Smithsonian Institution	209,760.0	209,760.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	69,740.0	37,215.6	20,070.6	0.0	9,451.4	0.0	2,883.6	0.0	0.0	118.8
Tennessee Valley Authority	6,444.9	0.0	6,444.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,828.7	0.0	4,828.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	18,234.2	0.0	16,234.2	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	85,155,455.8	20,768,819.0	9,988,426.2	3,579,914.1	34,328,028.2	3,908,169.3	8,871,058.4	2,602,436.7	605,859.2	502,744.5
Departments										
Department of Agriculture	2,508,959.0	1,618,219.3	4,633.3	0.0	826,908.9	0.0	47,083.4	0.0	8,485.4	3,628.7
Agricultural Marketing Service	3,500.3	3,500.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,428,300.0	1,309,748.8	0.0	0.0	105,701.3	0.0	9,660.3	0.0	201.9	2,987.7
Animal and Plant Health Inspection Service	21,046.0	14,803.1	0.0	0.0	6,242.9	0.0	0.0	0.0	0.0	0.0
Economic Research Service	87,000.0	79,901.0	1,753.9	0.0	4,095.9	0.0	1,240.8	0.0	8.4	0.0
Forest Service	223,240.8	186,230.1	1,386.4	0.0	24,950.8	0.0	4,143.4	0.0	5,889.1	641.0
National Agricultural Statistics Service	5,172.0	4,764.2	0.0	0.0	78.5	0.0	329.3	0.0	0.0	0.0
National Institute of Food and Agriculture	737,900.0	19,272.0	1,493.0	0.0	683,039.5	0.0	31,709.5	0.0	2,386.0	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	1,523,776.8	1,151,997.1	47,319.1	0.0	276,591.0	10,546.2	8,859.8	21,204.5	1,387.0	5,872.0
National Institute of Standards and Technology	802,072.6	690,486.9	35,813.2	0.0	43,199.0	0.0	5,387.8	21,204.5	113.7	5,867.5
National Oceanic and Atmospheric Administration	640,393.0	380,199.0	11,505.9	0.0	233,392.0	10,546.2	3,472.0	0.0	1,273.3	4.5
National Telecommunications and Information Administration	11,180.0	11,180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	70,131.2	70,131.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	9,249,668.9	2,548,960.4	3,262,827.9	89,739.6	2,535,707.3	81,969.0	435,987.5	180,001.6	1,523.8	112,951.7
Defense Advanced Research Projects Agency	1,902,952.0	89,463.0	989,560.0	32,318.5	575,355.3	23,497.8	135,834.0	24,020.8	269.1	32,633.6
Defense Health Agency	199,489.7	42,875.7	46,899.5	0.0	51,988.5	0.0	52,497.0	2,476.1	0.0	2,753.0
Department of the Air Force	2,325,861.9	1,155,138.3	627,934.7	2,564.4	457,156.7	1,628.2	8,925.6	49,112.7	804.9	22,596.4
Department of the Army	2,042,788.8	313,912.2	1,009,819.6	1,624.5	526,845.8	15,328.6	87,704.3	65,389.2	0.0	22,164.6
Department of the Navy	1,859,814.4	644,274.5	354,179.8	10,440.0	690,289.4	1,283.6	114,431.4	14,255.7	449.8	30,210.2
Other defense agencies	918,762.1	303,296.8	234,434.3	42,792.2	234,071.6	40,230.8	36,595.2	24,747.1	0.0	2,593.9
Department of Education	261,761.7	8,526.9	16,128.2	0.0	153,531.8	0.0	61,997.6	0.0	21,577.2	0.0
Department of Energy	11,470,112.1	1,656,948.8	1,473,517.4	2,609,992.4	962,644.3	2,463,470.4	35,278.2	2,221,279.1	46,931.5	50.0

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency—Energy	213,500.0	0.0	80,608.1	8,965.2	88,491.2	7,779.4	13,076.9	14,579.2	0.0	0.0
Electricity Delivery and Energy Reliability	64,597.0	1,476.7	4,256.9	15,063.0	7,661.2	6,470.0	4,515.3	24,954.3	199.5	0.0
Energy Efficiency and Renewable Energy	1,276,114.0	0.0	393,030.3	85,258.3	317,054.5	104,004.8	0.0	361,095.6	15,670.6	0.0
Environmental Management	9,659.0	0.0	2,667.3	2,045.3	4,007.2	500.9	0.0	438.3	0.0	0.0
Fossil Energy	684,993.0	514,036.0	0.0	18,814.4	124,165.5	11,036.8	0.0	16,940.3	0.0	0.0
National Nuclear Security Administration	3,469,774.2	550,803.3	729,502.1	2,091,428.1	10,068.6	12,311.0	1,131.0	74,480.1	0.0	50.0
Defense Programs	3,194,671.9	550,543.3	717,541.8	1,924,555.9	0.0	100.0	681.0	1,250.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	275,102.3	260.0	11,960.4	166,872.2	10,068.6	12,211.0	450.0	73,230.1	0.0	50.0
Nuclear Energy	387,473.9	281.4	115,766.4	150,267.4	35,734.9	25,320.2	0.0	60,103.4	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	28,662.0	3,857.0	18,000.0	0.0	6,805.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,335,339.0	586,494.3	129,686.1	238,150.8	368,656.2	2,296,047.3	16,555.0	1,668,687.9	31,061.4	0.0
Department of Health and Human Services	43,379,903.1	9,169,706.6	2,288,706.3	843,196.7	23,092,183.4	19,857.3	7,258,802.8	35,043.4	384,586.0	287,820.5
Administration for Children and Families	3,084.9	35.0	0.0	0.0	0.0	0.0	3,049.9	0.0	0.0	0.0
Administration for Community Living	72,304.2	0.0	574.8	0.0	54,861.8	0.0	16,495.1	0.0	372.5	0.0
Agency for Healthcare Research and Quality	308,145.0	48,270.0	131,483.0	0.0	98,720.2	0.0	29,580.0	0.0	91.8	0.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	0.0	2,102.3	0.0	500.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	487,016.6	113,629.1	62,987.4	0.0	166,493.5	0.0	56,479.5	0.0	47,161.6	40,265.5
Centers for Medicare and Medicaid Services	228,033.2	0.0	0.0	0.0	14,702.8	0.0	0.0	0.0	213,330.3	0.0
Food and Drug Administration	495,000.0	355,996.2	11,120.8	0.0	80,249.7	0.0	42,011.3	0.0	2,006.7	3,615.2
Health Resources and Services Administration	33,817.0	5,462.1	0.0	0.0	27,379.9	0.0	975.0	0.0	0.0	0.0

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
National Aeronautics and Space Administration	5,297,549.4	1,512,165.2	1,771,618.8	10,483.0	728,941.1	1,062,351.5	172,206.2	20,798.8	2,974.1	16,010.8
National Science Foundation	6,405,641.9	9,437.2	462,941.9	0.0	5,282,267.6	264,513.3	347,566.7	4,777.7	14,907.6	19,230.0
Nuclear Regulatory Commission	73,946.1	31,606.4	8,378.5	12,044.8	4,627.6	3,183.2	589.3	13,144.8	0.0	371.5
Patient-Centered Outcomes Research Trust Fund	390,870.7	0.0	0.0	0.0	0.0	0.0	390,870.7	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	5,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0	0.0
Smithsonian Institution	213,560.0	213,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	129,366.1	68,680.8	47,324.4	0.0	10,220.9	0.0	3,140.0	0.0	0.0	0.0
Tennessee Valley Authority	8,474.9	0.0	8,474.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,777.7	0.0	4,777.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	19,006.0	0.0	17,006.0	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 17

Federal obligations for research, by detailed field of science and engineering: FYs 2020–21

(Dollars in thousands)

Field	2020	2021 (preliminary)
All fields	85,304,757.4	85,155,455.8
Computer sciences and mathematics	5,912,385.2	6,063,316.7
Computer sciences	4,280,495.2	NA
Mathematics	681,446.8	NA
Other computer sciences and mathematics	950,443.2	NA
Engineering	13,222,044.8	14,238,054.0
Aeronautical engineering	1,093,479.7	NA
Astronautical engineering	915,907.0	NA
Chemical engineering	788,211.4	NA
Civil engineering	475,684.1	NA
Electrical engineering	880,629.5	NA
Mechanical engineering	522,834.4	NA
Metallurgy and materials engineering	704,470.0	NA
Other engineering	7,840,828.8	NA
Environmental sciences	5,039,457.8	4,631,699.6
Atmospheric sciences	908,063.5	NA
Geological sciences	306,030.2	NA
Oceanography	946,188.4	NA
Other environmental sciences	2,879,175.7	NA
Life sciences	42,524,844.3	42,013,903.5
Agricultural sciences	1,412,605.2	NA
Biological sciences (excluding environmental biology)	20,165,399.3	NA
Environmental biology	901,919.9	NA
Medical sciences	16,182,200.3	NA
Other life sciences	3,862,719.5	NA
Physical sciences	8,419,870.0	8,775,432.2
Astronomy	871,340.8	NA
Chemistry	1,143,827.0	NA
Physics	3,577,082.3	NA
Other physical sciences	2,827,620.0	NA
Psychology	3,275,830.0	3,264,983.5
Biological aspects	13,529.5	NA
Social aspects	41,845.9	NA
Other psychological sciences	3,220,454.7	NA
Social sciences	1,137,411.4	1,266,266.4
Anthropology	19,326.2	NA
Economics	202,700.9	NA
Political science	12,470.1	NA
Sociology	152,391.5	NA
Other social sciences	750,522.8	NA
Other sciences nec	5,772,913.8	4,901,799.8

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	85,304,757.4	5,912,385.2	13,222,044.8	5,039,457.8	42,524,844.3	8,419,870.0	3,275,830.0	1,137,411.4	5,772,913.8
Departments									
Department of Agriculture	2,388,398.9	7,353.4	117,701.9	17,878.8	1,992,333.7	100,224.6	*	152,906.5	0.0
Agricultural Marketing Service	3,476.3	0.0	0.0	0.0	3,476.3	0.0	0.0	0.0	0.0
Agricultural Research Service	1,281,175.9	1,665.5	11,530.6	5,637.2	1,177,016.3	82,251.5	0.0	3,074.8	0.0
Animal and Plant Health Inspection Service	19,082.1	0.0	0.0	0.0	19,082.1	0.0	0.0	0.0	0.0
Economic Research Service	81,718.0	0.0	0.0	0.0	0.0	0.0	0.0	81,718.0	0.0
Forest Service	257,285.3	689.6	8,621.2	7,144.3	200,758.7	4,779.7	*	35,291.9	0.0
National Agricultural Statistics Service	4,998.3	4,998.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	737,863.1	0.0	97,550.2	5,097.4	589,200.3	13,193.4	0.0	32,821.8	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	1,360,814.5	171,181.1	264,582.4	484,136.8	89,999.5	263,059.8	311.6	46,690.2	40,853.2
National Institute of Standards and Technology	717,423.6	159,217.4	247,572.4	8,966.7	35,938.4	238,872.8	140.1	482.4	26,233.5
National Oceanic and Atmospheric Administration	597,771.6	5,582.0	9,318.0	475,170.1	54,061.1	24,187.0	0.0	14,833.8	14,619.7
National Telecommunications and Information Administration	7,692.0	0.0	7,692.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	37,927.3	6,381.7	0.0	0.0	0.0	0.0	171.5	31,374.1	0.0
Department of Defense	8,915,303.8	2,598,689.2	2,825,723.9	386,015.7	1,084,723.0	688,787.7	95,548.2	130,770.4	1,105,045.6
Defense Advanced Research Projects Agency	2,006,308.0	1,069,719.7	466,983.9	58,543.9	328,148.3	59,945.5	8,045.2	0.0	14,921.6
Defense Health Agency	164,053.4	0.0	2,050.3	823.0	160,122.0	0.0	167.8	235.0	655.4
Department of the Air Force	2,248,787.9	857,476.8	896,035.4	5,104.6	25,192.5	237,569.0	2,168.7	58,753.8	166,487.2
Department of the Army	1,906,687.5	232,546.2	672,190.2	13,480.1	318,455.8	44,603.1	70,912.5	2,510.7	551,988.9
Department of the Navy	1,697,693.0	269,368.9	584,635.5	299,125.3	112,077.5	84,111.3	6,337.1	48,737.1	293,300.3
Other defense agencies	891,774.0	169,577.6	203,828.7	8,938.8	140,726.9	262,558.7	7,917.1	20,533.9	77,692.4
Department of Education	189,493.0	0.0	0.0	0.0	0.0	0.0	0.0	189,493.0	0.0
Department of Energy	10,525,187.8	1,541,329.3	3,181,435.0	436,246.8	509,108.0	4,473,509.1	0.0	77.9	383,481.8
Advanced Research Projects Agency—Energy	218,999.6	28,152.0	116,395.2	955.6	37,004.8	36,414.2	0.0	77.9	0.0
Electricity Delivery and Energy Reliability	78,351.6	0.0	78,351.6	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,248,343.0	0.0	1,248,343.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	7,319.2	0.0	0.0	7,319.2	0.0	0.0	0.0	0.0	0.0
Fossil Energy	679,345.0	0.0	481,865.8	61,135.0	0.0	136,344.2	0.0	0.0	0.0
National Nuclear Security Administration	2,393,602.0	698,321.5	733,047.4	7,073.0	547.0	954,613.2	0.0	0.0	0.0
Defense Programs	2,154,972.6	681,075.8	715,094.3	0.0	0.0	758,802.5	0.0	0.0	0.0

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Defense Nuclear Nonproliferation	238,629.4	17,245.6	17,953.1	7,073.0	547.0	195,810.7	0.0	0.0	0.0
Nuclear Energy	392,343.2	0.0	392,343.2	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	36,912.0	36,912.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,469,972.1	777,943.8	131,088.7	359,764.0	471,556.2	3,346,137.5	0.0	0.0	383,481.8
Department of Health and Human Services	44,233,737.0	338,112.5	2,542,771.2	546,810.8	35,569,503.7	109,264.6	2,956,394.2	247,556.9	1,923,323.1
Administration for Children and Families	1,574.4	0.0	0.0	0.0	0.0	0.0	0.0	1,574.4	0.0
Administration for Community Living	70,814.9	0.0	0.0	0.0	0.0	0.0	0.0	70,814.9	0.0
Agency for Healthcare Research and Quality	308,145.0	43,388.9	803.0	0.0	172,573.6	0.0	7,799.5	20,813.1	62,767.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	9,602.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	440,734.1	0.0	0.0	134,534.9	277,307.1	0.0	0.0	532.0	28,360.1
Centers for Medicare and Medicaid Services	223,561.9	0.0	0.0	0.0	223,561.9	0.0	0.0	0.0	0.0
Food and Drug Administration	463,951.7	0.0	0.0	0.0	463,951.7	0.0	0.0	0.0	0.0
Health Resources and Services Administration	34,897.0	0.0	0.0	0.0	18,864.7	0.0	0.0	1,188.7	14,843.6
National Institutes of Health	42,664,000.0	294,723.6	2,541,968.2	402,673.7	34,413,244.6	109,264.6	2,948,594.7	136,178.1	1,817,352.5
Office of the Secretary of Health and Human Services	16,455.8	0.0	0.0	0.0	0.0	0.0	0.0	16,455.8	0.0
Office of the Assistant Secretary for Planning and Evaluation	16,455.8	0.0	0.0	0.0	0.0	0.0	0.0	16,455.8	0.0
Department of Homeland Security	225,220.4	13,557.9	77,760.5	7,902.0	71,061.2	27,590.9	14.5	0.0	27,333.3
Countering Weapons of Mass Destruction Office	23,960.9	10,542.0	0.0	0.0	1,055.4	12,363.5	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	6,954.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,954.5
Science and Technology Directorate	192,820.0	2,870.8	76,638.2	7,699.0	70,005.8	15,227.4	0.0	0.0	20,378.9
U.S. Coast Guard	1,485.0	145.1	1,122.4	203.1	0.0	0.0	14.5	0.0	0.0
Department of the Interior	698,315.2	3,051.9	11,661.5	460,506.0	212,676.1	951.5	0.0	8,679.2	788.9
Bureau of Indian Affairs	*	0.0	0.0	*	0.0	0.0	0.0	0.0	0.0
Bureau of Land Management	13,724.0	0.0	0.0	0.0	13,724.0	0.0	0.0	0.0	0.0
Bureau of Ocean Energy Management	59,254.3	3,051.9	0.0	47,686.9	0.0	0.0	0.0	7,984.7	530.8
Bureau of Reclamation	19,147.1	0.0	9,573.6	9,573.6	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	5,222.8	0.0	2,087.9	2,169.4	0.0	707.3	0.0	0.0	258.1
National Park Service	10,231.0	0.0	0.0	4,766.2	4,526.1	244.2	0.0	694.5	0.0

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Surface Mining Reclamation and Enforcement	562.0	0.0	0.0	562.0	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	0.0	0.0	0.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	557,524.0	0.0	0.0	395,748.0	161,776.0	0.0	0.0	0.0	0.0
Department of Justice	84,509.3	5,485.4	1,757.7	871.4	11,948.3	6,403.9	1,641.2	51,380.4	5,021.1
Bureau of Prisons	1,804.0	0.0	0.0	0.0	0.0	0.0	0.0	1,804.0	0.0
Federal Bureau of Investigation	4,732.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,732.7
Office of Justice Programs	77,972.7	5,485.4	1,757.7	871.4	11,948.3	6,403.9	1,641.2	49,576.4	288.4
Department of Labor	4,748.3	0.0	0.0	0.0	0.0	0.0	0.0	4,748.3	0.0
Employee Benefits Security Administration	2,745.6	0.0	0.0	0.0	0.0	0.0	0.0	2,745.6	0.0
Occupational Safety and Health Administration	2,002.7	0.0	0.0	0.0	0.0	0.0	0.0	2,002.7	0.0
Department of State	30,000.0	0.0	0.0	0.0	28,000.0	0.0	0.0	2,000.0	0.0
Department of Transportation	900,214.7	37,039.1	725,884.4	34,727.1	7,923.9	2,627.9	17,585.1	1,738.1	72,689.1
Federal Aviation Administration	246,975.5	16,494.3	176,734.7	21,759.3	7,923.9	0.0	17,585.1	0.0	6,478.3
Federal Highway Administration	471,854.8	0.0	471,854.8	0.0	0.0	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	8,918.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,918.1
Federal Railroad Administration	34,762.8	0.0	33,024.7	0.0	0.0	0.0	0.0	1,738.1	0.0
Federal Transit Administration	40,153.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40,153.8
National Highway Traffic Safety Administration	68,862.5	20,235.2	19,066.4	12,967.8	0.0	0.0	0.0	0.0	16,593.0
Office of the Secretary of Transportation	12,139.9	0.0	12,139.9	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	16,547.3	309.6	13,063.9	0.0	0.0	2,627.9	0.0	0.0	546.0
Department of the Treasury	49,648.0	0.0	219.3	0.0	0.0	49,428.7	0.0	0.0	0.0
Bureau of Engraving and Printing	49,428.7	0.0	0.0	0.0	0.0	49,428.7	0.0	0.0	0.0
U.S. Mint	219.3	0.0	219.3	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,535,775.7	0.0	67,668.2	0.0	1,230,832.2	0.0	167,120.2	0.0	70,155.1
Other agencies									
Administrative Office of the U.S. Courts	5,045.5	5,045.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	134,894.6	0.0	0.0	0.0	125,314.9	0.0	0.0	9,579.7	0.0
Appalachian Regional Commission	684.3	0.0	0.0	0.0	0.0	0.0	0.0	684.3	0.0
Consumer Product Safety Commission	385.0	0.0	0.0	365.7	0.0	19.2	0.0	0.0	0.0
Environmental Protection Agency	411,947.5	8,775.0	58,423.4	169,788.1	162,744.7	9,836.6	0.0	2,379.7	0.0
Federal Communications Commission	1,800.0	300.0	1,050.0	0.0	0.0	450.0	0.0	0.0	0.0

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Federal Trade Commission	5,974.3	0.0	0.0	0.0	0.0	0.0	0.0	5,974.3	0.0
Library of Congress	1,215.2	0.0	0.0	0.0	0.0	1,215.2	0.0	0.0	0.0
National Aeronautics and Space Administration	6,394,136.7	0.0	2,085,963.7	1,512,537.2	125,229.5	1,653,184.1	0.0	0.0	1,017,222.2
National Science Foundation	6,351,154.7	1,182,465.2	1,167,363.2	950,623.6	751,761.6	1,031,550.9	37,215.1	208,173.5	1,022,001.6
Nuclear Regulatory Commission	68,195.0	0.0	67,399.3	0.0	0.0	0.0	0.0	0.0	795.7
Patient-Centered Outcomes Research Trust Fund	469,730.1	0.0	0.0	0.0	469,730.1	0.0	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	9,220.3	0.0	0.0	9,220.3	0.0	0.0	0.0	0.0	0.0
Smithsonian Institution	209,760.0	0.0	0.0	21,827.6	81,954.0	1,765.3	0.0	10.2	104,203.0
Social Security Administration	69,740.0	0.0	0.0	0.0	0.0	0.0	0.0	69,740.0	0.0
Tennessee Valley Authority	6,444.9	0.0	6,444.9	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,828.7	0.0	0.0	0.0	0.0	0.0	0.0	4,828.7	0.0
U.S. Postal Service	18,234.2	0.0	18,234.2	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 19

Preliminary federal obligations for research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	85,155,455.8	6,063,316.7	14,238,054.0	4,631,699.6	42,013,903.5	8,775,432.2	3,264,983.5	1,266,266.4	4,901,799.8
Departments									
Department of Agriculture	2,508,959.0	7,718.4	117,836.1	16,416.4	2,101,781.2	109,673.0	0.0	155,533.9	0.0
Agricultural Marketing Service	3,500.3	0.0	0.0	0.0	3,500.3	0.0	0.0	0.0	0.0
Agricultural Research Service	1,428,300.0	1,856.8	12,854.7	6,284.5	1,312,179.2	91,696.9	0.0	3,427.9	0.0
Animal and Plant Health Inspection Service	21,046.0	0.0	0.0	0.0	21,046.0	0.0	0.0	0.0	0.0
Economic Research Service	87,000.0	0.0	0.0	0.0	0.0	0.0	0.0	87,000.0	0.0
Forest Service	223,240.8	689.6	7,426.5	5,034.1	173,025.1	4,782.2	0.0	32,283.4	0.0
National Agricultural Statistics Service	5,172.0	5,172.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	737,900.0	0.0	97,555.0	5,097.8	589,230.6	13,194.0	0.0	32,822.6	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	1,523,776.8	191,546.1	305,305.6	527,093.3	94,426.2	284,385.4	234.2	76,198.0	44,588.0
National Institute of Standards and Technology	802,072.6	177,094.0	284,872.6	10,101.6	38,364.9	261,639.4	148.4	511.2	29,340.5
National Oceanic and Atmospheric Administration	640,393.0	5,249.0	9,253.0	516,991.8	56,061.3	22,746.0	0.0	14,844.5	15,247.5
National Telecommunications and Information Administration	11,180.0	0.0	11,180.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	70,131.2	9,203.1	0.0	0.0	0.0	0.0	85.7	60,842.4	0.0
Department of Defense	9,249,668.9	2,631,863.6	2,897,236.0	409,406.8	1,161,737.5	639,235.6	124,638.9	131,062.7	1,254,487.7
Defense Advanced Research Projects Agency	1,902,952.0	1,027,239.7	428,686.6	53,210.0	312,507.1	60,458.7	7,327.6	0.0	13,522.3
Defense Health Agency	199,489.7	0.0	0.0	404.0	196,160.4	0.0	543.2	0.0	2,382.1
Department of the Air Force	2,325,861.9	904,323.3	921,608.2	5,139.7	25,703.2	242,939.3	2,135.3	53,266.0	170,746.8
Department of the Army	2,042,788.8	248,809.0	723,328.6	14,414.8	340,815.9	47,175.0	75,990.5	2,649.7	589,605.1
Department of the Navy	1,859,814.4	292,024.6	629,927.2	322,661.3	148,686.3	90,729.5	6,835.7	52,571.8	316,377.9
Other defense agencies	918,762.1	159,467.0	193,685.3	13,576.9	137,864.5	197,933.2	31,806.6	22,575.1	161,853.4
Department of Education	261,761.7	0.0	0.0	0.0	0.0	0.0	0.0	204,503.7	57,258.0
Department of Energy	11,470,112.1	1,621,362.2	4,629,480.1	443,162.2	436,867.5	3,989,454.2	0.0	75.9	349,710.0
Advanced Research Projects Agency—Energy	213,500.0	27,445.0	113,472.2	931.6	36,075.5	35,499.7	0.0	75.9	0.0
Electricity Delivery and Energy Reliability	64,597.0	0.0	64,597.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,276,114.0	0.0	1,276,114.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	9,659.0	0.0	0.0	9,659.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	684,993.0	0.0	503,569.7	67,927.4	0.0	113,495.9	0.0	0.0	0.0
National Nuclear Security Administration	3,469,774.2	761,009.2	2,284,253.3	7,844.2	1,090.0	415,577.6	0.0	0.0	0.0
Defense Programs	3,194,671.9	737,171.1	2,271,346.6	0.0	0.0	186,154.2	0.0	0.0	0.0

TABLE 19

Preliminary federal obligations for research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Defense Nuclear Nonproliferation	275,102.3	23,838.0	12,906.7	7,844.2	1,090.0	229,423.4	0.0	0.0	0.0
Nuclear Energy	387,473.9	0.0	387,473.9	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	28,662.0	28,662.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,335,339.0	804,246.0	0.0	356,800.0	399,702.0	3,424,881.0	0.0	0.0	349,710.0
Department of Health and Human Services	43,379,903.1	331,632.7	2,486,884.1	557,230.1	34,876,802.0	106,862.4	2,891,567.1	246,818.3	1,882,106.5
Administration for Children and Families	3,084.9	0.0	0.0	0.0	0.0	0.0	0.0	3,084.9	0.0
Administration for Community Living	72,304.2	0.0	0.0	0.0	0.0	0.0	0.0	72,304.2	0.0
Agency for Healthcare Research and Quality	308,145.0	43,388.9	803.0	0.0	172,573.6	0.0	7,799.5	20,813.1	62,767.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	9,602.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	487,016.6	0.0	0.0	153,807.2	305,143.6	0.0	0.0	532.0	27,533.8
Centers for Medicare and Medicaid Services	228,033.2	0.0	0.0	0.0	228,033.2	0.0	0.0	0.0	0.0
Food and Drug Administration	495,000.0	0.0	0.0	0.0	495,000.0	0.0	0.0	0.0	0.0
Health Resources and Services Administration	33,817.0	0.0	0.0	0.0	19,407.9	0.0	0.0	0.0	14,409.1
National Institutes of Health	41,726,000.0	288,243.9	2,486,081.1	393,820.6	33,656,643.7	106,862.4	2,883,767.6	133,184.1	1,777,396.6
Office of the Secretary of Health and Human Services	16,900.0	0.0	0.0	0.0	0.0	0.0	0.0	16,900.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	16,900.0	0.0	0.0	0.0	0.0	0.0	0.0	16,900.0	0.0
Department of Homeland Security	240,429.2	18,641.5	97,330.0	9,421.6	35,130.5	35,570.3	30.1	0.0	44,305.2
Countering Weapons of Mass Destruction Office	25,041.2	9,340.4	0.0	0.0	3,130.5	12,570.3	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	8,305.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,305.2
Science and Technology Directorate	204,000.0	9,000.0	95,000.0	9,000.0	32,000.0	23,000.0	0.0	0.0	36,000.0
U.S. Coast Guard	3,082.8	301.1	2,330.0	421.6	0.0	0.0	30.1	0.0	0.0
Department of the Interior	735,713.0	3,103.3	21,352.5	415,635.7	282,662.5	988.9	0.0	11,099.0	871.0
Bureau of Indian Affairs	*	0.0	0.0	*	0.0	0.0	0.0	0.0	0.0
Bureau of Land Management	12,247.0	0.0	0.0	0.0	12,247.0	0.0	0.0	0.0	0.0
Bureau of Ocean Energy Management	65,183.2	3,103.3	0.0	51,073.0	0.0	0.0	0.0	10,407.7	599.2
Bureau of Reclamation	18,000.0	0.0	9,000.0	9,000.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	16,035.8	0.0	12,352.5	2,666.7	0.0	744.8	0.0	0.0	271.8
National Park Service	10,231.0	0.0	0.0	4,774.0	4,521.5	244.2	0.0	691.3	0.0

TABLE 19

Preliminary federal obligations for research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Surface Mining Reclamation and Enforcement	2,161.0	0.0	0.0	2,161.0	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	0.0	0.0	0.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	579,205.0	0.0	0.0	345,961.0	233,244.0	0.0	0.0	0.0	0.0
Department of Justice	86,654.6	6,033.9	1,933.5	958.5	13,143.1	7,044.3	1,805.3	54,469.8	1,266.1
Bureau of Prisons	1,928.0	0.0	0.0	0.0	0.0	0.0	0.0	1,928.0	0.0
Federal Bureau of Investigation	948.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	948.9
Office of Justice Programs	83,777.7	6,033.9	1,933.5	958.5	13,143.1	7,044.3	1,805.3	52,541.8	317.2
Department of Labor	4,297.2	0.0	0.0	0.0	0.0	0.0	0.0	4,297.2	0.0
Employee Benefits Security Administration	2,256.5	0.0	0.0	0.0	0.0	0.0	0.0	2,256.5	0.0
Occupational Safety and Health Administration	2,040.7	0.0	0.0	0.0	0.0	0.0	0.0	2,040.7	0.0
Department of State	30,000.0	0.0	0.0	0.0	25,000.0	0.0	0.0	5,000.0	0.0
Department of Transportation	848,503.4	43,043.6	630,658.9	28,993.6	12,980.9	4,020.0	27,979.9	1,777.2	99,049.3
Federal Aviation Administration	297,422.6	23,654.6	199,008.3	16,568.1	12,980.9	0.0	27,979.9	0.0	17,230.8
Federal Highway Administration	355,765.3	0.0	355,765.3	0.0	0.0	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	11,373.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11,373.6
Federal Railroad Administration	35,543.4	0.0	33,766.2	0.0	0.0	0.0	0.0	1,777.2	0.0
Federal Transit Administration	54,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54,000.0
National Highway Traffic Safety Administration	65,982.6	19,389.0	18,269.1	12,425.5	0.0	0.0	0.0	0.0	15,899.0
Office of the Secretary of Transportation	22,800.0	0.0	22,800.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	5,616.0	0.0	1,050.0	0.0	0.0	4,020.0	0.0	0.0	546.0
Department of the Treasury	52,466.5	0.0	93.2	0.0	0.0	52,373.3	0.0	0.0	0.0
Bureau of Engraving and Printing	52,373.3	0.0	0.0	0.0	0.0	52,373.3	0.0	0.0	0.0
U.S. Mint	93.2	0.0	93.2	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,657,590.0	0.0	73,375.9	0.0	1,334,650.9	0.0	181,216.6	0.0	68,346.7
Other agencies									
Administrative Office of the U.S. Courts	6,404.3	6,404.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	134,894.6	0.0	0.0	0.0	125,314.9	0.0	0.0	9,579.7	0.0
Appalachian Regional Commission	2.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0
Consumer Product Safety Commission	390.6	0.0	0.0	372.6	0.0	17.9	0.0	0.0	0.0
Environmental Protection Agency	404,397.7	8,614.2	57,352.7	166,676.3	159,762.1	9,656.3	0.0	2,336.1	0.0
Federal Communications Commission	2,625.0	675.0	1,350.0	0.0	0.0	600.0	0.0	0.0	0.0

TABLE 19

Preliminary federal obligations for research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Federal Trade Commission	7,496.6	0.0	0.0	0.0	0.0	0.0	0.0	7,496.6	0.0
Library of Congress	1,216.3	0.0	0.0	0.0	0.0	1,216.3	0.0	0.0	0.0
National Aeronautics and Space Administration	5,297,549.4	0.0	1,638,474.5	1,089,953.3	127,753.1	2,436,556.8	0.0	0.0	4,811.7
National Science Foundation	6,405,641.9	1,192,677.8	1,178,113.9	958,243.1	757,770.5	1,039,827.4	37,511.5	209,841.2	1,031,656.5
Nuclear Regulatory Commission	73,946.1	0.0	73,796.1	0.0	0.0	0.0	0.0	0.0	150.0
Patient-Centered Outcomes Research Trust Fund	390,870.7	0.0	0.0	0.0	390,870.7	0.0	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	5,000.0	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Smithsonian Institution	213,560.0	0.0	0.0	3,136.0	77,250.0	57,950.0	0.0	12,031.0	63,193.0
Social Security Administration	129,366.1	0.0	0.0	0.0	0.0	0.0	0.0	129,366.1	0.0
Tennessee Valley Authority	8,474.9	0.0	8,474.9	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,777.7	0.0	0.0	0.0	0.0	0.0	0.0	4,777.7	0.0
U.S. Postal Service	19,006.0	0.0	19,006.0	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 20

Federal obligations for research in computer sciences and mathematics, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies	5,912,385.2	4,280,495.2	681,446.8	950,443.2
Departments				
Department of Agriculture	7,353.4	2,207.8	5,145.6	0.0
Agricultural Research Service	1,665.5	1,665.5	0.0	0.0
Forest Service	689.6	542.3	147.3	0.0
National Agricultural Statistics Service	4,998.3	0.0	4,998.3	0.0
Department of Commerce	171,181.1	149,622.9	8,843.1	12,715.1
National Institute of Standards and Technology	159,217.4	144,862.1	2,581.0	11,774.3
National Oceanic and Atmospheric Administration	5,582.0	3,721.0	1,861.0	0.0
U.S. Census Bureau	6,381.7	1,039.8	4,401.1	940.8
Department of Defense	2,598,689.2	2,306,533.1	67,955.1	224,201.0
Defense Advanced Research Projects Agency	1,069,719.7	939,828.4	8,866.7	121,024.5
Department of the Air Force	857,476.8	820,070.3	7,932.4	29,474.1
Department of the Army	232,546.2	190,029.8	11,062.7	31,453.8
Department of the Navy	269,368.9	237,628.3	15,337.4	16,403.3
Other defense agencies	169,577.6	118,976.3	24,755.9	25,845.4
Department of Energy	1,541,329.3	787,288.6	44,319.1	709,721.5
Advanced Research Projects Agency—Energy	28,152.0	28,152.0	0.0	0.0
National Nuclear Security Administration	698,321.5	683,288.3	2,194.7	12,838.4
Defense Programs	681,075.8	681,075.8	0.0	0.0
Office of Defense Nuclear Nonproliferation	17,245.6	2,212.5	2,194.7	12,838.4
Office of Cybersecurity, Energy Security, and Emergency Response	36,912.0	36,912.0	0.0	0.0
Office of Science	777,943.8	38,936.3	42,124.4	696,883.1
Department of Health and Human Services	338,112.5	34,988.8	303,123.7	0.0
Agency for Healthcare Research and Quality	43,388.9	34,988.8	8,400.1	0.0
National Institutes of Health	294,723.6	0.0	294,723.6	0.0
Department of Homeland Security	13,557.9	11,438.3	0.0	2,119.6
Countering Weapons of Mass Destruction Office	10,542.0	8,422.5	0.0	2,119.6
Science and Technology Directorate	2,870.8	2,870.8	0.0	0.0
U.S. Coast Guard	145.1	145.1	0.0	0.0
Department of the Interior	3,051.9	3,051.9	0.0	0.0
Bureau of Ocean Energy Management	3,051.9	3,051.9	0.0	0.0
Department of Justice	5,485.4	4,454.8	160.1	870.5
Office of Justice Programs	5,485.4	4,454.8	160.1	870.5
Department of Transportation	37,039.1	32,052.9	4,986.2	0.0
Federal Aviation Administration	16,494.3	11,508.1	4,986.2	0.0
National Highway Traffic Safety Administration	20,235.2	20,235.2	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	309.6	309.6	0.0	0.0
Other agencies				
Administrative Office of the U.S. Courts	5,045.5	5,045.5	0.0	0.0
Environmental Protection Agency	8,775.0	4,826.9	3,132.7	815.4
Federal Communications Commission	300.0	300.0	0.0	0.0
National Science Foundation	1,182,465.2	938,683.8	243,781.3	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 21

Federal obligations for research in engineering, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
All agencies	13,222,044.8	1,093,479.7	915,907.0	788,211.4	475,684.1	880,629.5	522,834.4	704,470.0	7,840,828.8
Departments									
Department of Agriculture	117,701.9	0.0	0.0	93.0	0.0	0.0	0.0	0.0	117,608.9
Agricultural Research Service	11,530.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11,530.6
Forest Service	8,621.2	0.0	0.0	93.0	0.0	0.0	0.0	0.0	8,528.2
National Institute of Food and Agriculture	97,550.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97,550.2
Department of Commerce	264,582.4	140.0	0.0	223.6	54,482.8	108,755.5	2,751.8	56,354.0	41,874.7
National Institute of Standards and Technology	247,572.4	140.0	0.0	223.6	48,885.8	97,342.5	2,751.8	56,354.0	41,874.7
National Oceanic and Atmospheric Administration	9,318.0	0.0	0.0	0.0	5,597.0	3,721.0	0.0	0.0	0.0
National Telecommunications and Information Administration	7,692.0	0.0	0.0	0.0	0.0	7,692.0	0.0	0.0	0.0
Department of Defense	2,825,723.9	487,506.2	227,248.2	118,333.9	28,373.0	503,881.6	367,015.1	229,790.2	863,575.8
Defense Advanced Research Projects Agency	466,983.9	52,546.7	117.7	36,073.5	0.0	95,099.2	5,445.8	32,525.5	245,175.6
Defense Health Agency	2,050.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,050.3
Department of the Air Force	896,035.4	284,446.4	197,848.2	5,838.4	6,586.9	154,474.3	47,145.2	8,695.6	191,000.5
Department of the Army	672,190.2	84,469.5	18,009.1	58,564.6	10,064.7	49,731.0	235,325.9	66,864.1	149,161.2
Department of the Navy	584,635.5	51,563.3	0.0	730.9	0.0	151,935.4	47,807.0	103,180.7	229,418.3
Other defense agencies	203,828.7	14,480.4	11,273.2	17,126.6	11,721.4	52,641.8	31,291.2	18,524.3	46,770.0
Department of Energy	3,181,435.0	0.0	50.0	544,673.4	6,965.3	108,720.1	39,667.3	184,036.2	2,297,322.6
Advanced Research Projects Agency—Energy	116,395.2	0.0	0.0	47,653.3	0.0	14,536.8	25,160.5	21,034.2	8,010.3
Electricity Delivery and Energy Reliability	78,351.6	0.0	0.0	0.0	0.0	78,351.6	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,248,343.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,248,343.0
Fossil Energy	481,865.8	0.0	0.0	477,992.2	3,873.6	0.0	0.0	0.0	0.0
National Nuclear Security Administration	733,047.4	0.0	50.0	252.0	0.0	367.5	0.0	130,228.5	602,149.3
Defense Programs	715,094.3	0.0	0.0	0.0	0.0	0.0	0.0	127,533.3	587,561.0

TABLE 21

Federal obligations for research in engineering, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Environmental Protection Agency	58,423.4	0.0	0.0	21,242.7	2,452.2	0.0	697.6	528.5	33,502.4
Federal Communications Commission	1,050.0	0.0	0.0	0.0	0.0	1,050.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,085,963.7	591,635.9	688,608.8	0.0	0.0	0.0	0.0	0.0	805,718.9
National Science Foundation	1,167,363.2	0.0	0.0	77,636.2	4,775.1	122,158.0	68,519.8	168,616.5	725,657.5
Nuclear Regulatory Commission	67,399.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67,399.3
Tennessee Valley Authority	6,444.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,444.9
U.S. Postal Service	18,234.2	0.0	0.0	0.0	0.0	10,028.8	8,205.4	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 22

Federal obligations for research in environmental sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies	5,039,457.8	908,063.5	306,030.2	946,188.4	2,879,175.7
Departments					
Department of Agriculture	17,878.8	13,683.4	128.1	0.0	4,067.3
Agricultural Research Service	5,637.2	5,509.1	128.1	0.0	0.0
Forest Service	7,144.3	3,077.0	0.0	0.0	4,067.3
National Institute of Food and Agriculture	5,097.4	5,097.4	0.0	0.0	0.0
Department of Commerce	484,136.8	216,602.8	961.0	251,546.3	15,026.6
National Institute of Standards and Technology	8,966.7	8,471.7	495.0	0.0	0.0
National Oceanic and Atmospheric Administration	475,170.1	208,131.1	466.0	251,546.3	15,026.6
Department of Defense	386,015.7	65,174.6	2,182.0	263,267.0	55,392.1
Defense Advanced Research Projects Agency	58,543.9	12,830.6	0.0	13,905.9	31,807.4
Defense Health Agency	823.0	0.0	0.0	0.0	823.0
Department of the Air Force	5,104.6	3,525.6	13.1	0.0	1,565.9
Department of the Army	13,480.1	1,420.0	763.6	0.0	11,296.5
Department of the Navy	299,125.3	45,102.8	0.0	245,087.8	8,934.6
Other defense agencies	8,938.8	2,295.6	1,405.3	4,273.3	964.7
Department of Energy	436,246.8	252,981.4	26,735.9	955.6	155,574.0
Advanced Research Projects Agency—Energy	955.6	0.0	0.0	955.6	0.0
Environmental Management	7,319.2	0.0	0.0	0.0	7,319.2
Fossil Energy	61,135.0	0.0	0.0	0.0	61,135.0
National Nuclear Security Administration	7,073.0	600.0	4,933.0	0.0	1,540.0
Office of Defense Nuclear Nonproliferation	7,073.0	600.0	4,933.0	0.0	1,540.0
Office of Science	359,764.0	252,381.4	21,802.9	0.0	85,579.8
Department of Health and Human Services	546,810.8	0.0	0.0	0.0	546,810.8
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	0.0	9,602.3
Centers for Disease Control and Prevention	134,534.9	0.0	0.0	0.0	134,534.9
National Institutes of Health	402,673.7	0.0	0.0	0.0	402,673.7
Department of Homeland Security	7,902.0	0.0	0.0	4,451.4	3,450.6
Science and Technology Directorate	7,699.0	0.0	0.0	4,451.4	3,247.6
U.S. Coast Guard	203.1	0.0	0.0	0.0	203.1
Department of the Interior	460,506.0	1,786.9	39,091.5	29,731.8	389,895.8
Bureau of Indian Affairs	*	0.0	0.0	0.0	*
Bureau of Ocean Energy Management	47,686.9	452.1	9,136.7	29,391.6	8,706.5
Bureau of Reclamation	9,573.6	0.0	0.0	0.0	9,573.6
Bureau of Safety and Environmental Enforcement	2,169.4	0.0	0.0	30.9	2,138.5
National Park Service	4,766.2	1,334.8	96.4	309.3	3,025.7
Office of Surface Mining Reclamation and Enforcement	562.0	0.0	0.0	0.0	562.0
U.S. Geological Survey	395,748.0	0.0	29,858.3	0.0	365,889.6
Department of Justice	871.4	0.0	871.4	0.0	0.0
Office of Justice Programs	871.4	0.0	871.4	0.0	0.0
Department of Transportation	34,727.1	21,759.3	0.0	0.0	12,967.8

TABLE 22

Federal obligations for research in environmental sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
Federal Aviation Administration	21,759.3	21,759.3	0.0	0.0	0.0
National Highway Traffic Safety Administration	12,967.8	0.0	0.0	0.0	12,967.8
Other agencies					
Consumer Product Safety Commission	365.7	0.0	0.0	0.0	365.7
Environmental Protection Agency	169,788.1	59,432.0	2,676.5	14,358.1	93,321.4
National Aeronautics and Space Administration	1,512,537.2	0.0	0.0	0.0	1,512,537.2
National Science Foundation	950,623.6	276,643.2	212,301.8	381,132.5	80,546.1
RESTORE Act Centers of Excellence Research Grants Program	9,220.3	0.0	0.0	0.0	9,220.3
Smithsonian Institution	21,827.6	0.0	21,082.0	745.6	0.0

* = amount greater than \$0 but less than \$50.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 23

Federal obligations for research in life sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies	42,524,844.3	1,412,605.2	20,165,399.3	901,919.9	16,182,200.3	3,862,719.5
Departments						
Department of Agriculture	1,992,333.7	1,249,682.5	270,755.7	446,674.2	24,561.5	659.9
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0
Agricultural Research Service	1,177,016.3	914,375.2	81,995.3	159,762.6	20,883.2	0.0
Animal and Plant Health Inspection Service	19,082.1	19,082.1	0.0	0.0	0.0	0.0
Forest Service	200,758.7	28,549.6	14,206.3	157,343.0	0.0	659.9
National Institute of Food and Agriculture	589,200.3	281,399.3	174,554.1	129,568.6	3,678.4	0.0
Rural Business-Cooperative Service	2,800.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	89,999.5	8,396.0	48,354.3	15,589.7	5,131.0	12,528.5
National Institute of Standards and Technology	35,938.4	0.0	35,938.4	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	54,061.1	8,396.0	12,415.9	15,589.7	5,131.0	12,528.5
Department of Defense	1,084,723.0	2,295.6	222,487.0	29,807.2	780,552.7	49,580.5
Defense Advanced Research Projects Agency	328,148.3	0.0	132,513.6	29,807.2	165,827.4	0.0
Defense Health Agency	160,122.0	0.0	0.0	0.0	160,122.0	0.0
Department of the Air Force	25,192.5	0.0	6,572.2	0.0	56.8	18,563.5
Department of the Army	318,455.8	0.0	5,771.4	0.0	307,741.5	4,943.0
Department of the Navy	112,077.5	0.0	21,505.4	0.0	69,083.9	21,488.2
Other defense agencies	140,726.9	2,295.6	56,124.5	0.0	77,721.0	4,585.8
Department of Energy	509,108.0	34,750.2	387,794.3	31,742.1	51,754.7	3,066.6
Advanced Research Projects Agency—Energy	37,004.8	34,750.2	2,254.5	0.0	0.0	0.0
National Nuclear Security Administration	547.0	0.0	400.0	147.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	547.0	0.0	400.0	147.0	0.0	0.0
Office of Science	471,556.2	0.0	385,139.8	31,595.1	51,754.7	3,066.6
Department of Health and Human Services	35,569,503.7	0.0	18,369,528.9	0.0	13,535,760.8	3,664,213.9
Agency for Healthcare Research and Quality	172,573.6	0.0	0.0	0.0	171,307.5	1,266.1
Centers for Disease Control and Prevention	277,307.1	0.0	72,146.7	0.0	96,673.5	108,487.0
Centers for Medicare and Medicaid Services	223,561.9	0.0	0.0	0.0	223,561.9	0.0
Food and Drug Administration	463,951.7	0.0	463,951.7	0.0	0.0	0.0
Health Resources and Services Administration	18,864.7	0.0	0.0	0.0	18,864.7	0.0
National Institutes of Health	34,413,244.6	0.0	17,833,430.5	0.0	13,025,353.3	3,554,460.8
Department of Homeland Security	71,061.2	0.0	71,061.2	0.0	0.0	0.0

TABLE 23

Federal obligations for research in life sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
Countering Weapons of Mass Destruction Office	1,055.4	0.0	1,055.4	0.0	0.0	0.0
Science and Technology Directorate	70,005.8	0.0	70,005.8	0.0	0.0	0.0
Department of the Interior	212,676.1	32,650.0	89,060.5	90,965.7	0.0	0.0
Bureau of Land Management	13,724.0	0.0	0.0	13,724.0	0.0	0.0
National Park Service	4,526.1	0.0	3,319.2	1,206.9	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	161,776.0	0.0	85,741.3	76,034.7	0.0	0.0
Department of Justice	11,948.3	150.0	4,473.5	0.0	6,491.3	833.5
Office of Justice Programs	11,948.3	150.0	4,473.5	0.0	6,491.3	833.5
Department of State	28,000.0	0.0	0.0	0.0	28,000.0	0.0
Department of Transportation	7,923.9	0.0	0.0	0.0	7,923.9	0.0
Federal Aviation Administration	7,923.9	0.0	0.0	0.0	7,923.9	0.0
Department of Veterans Affairs	1,230,832.2	0.0	0.0	0.0	1,230,832.2	0.0
Other agencies						
Agency for International Development	125,314.9	84,094.6	0.0	0.0	41,220.3	0.0
Environmental Protection Agency	162,744.7	586.4	112,491.9	45,760.5	241.8	3,664.1
National Aeronautics and Space Administration	125,229.5	0.0	0.0	0.0	0.0	125,229.5
National Science Foundation	751,761.6	0.0	585,530.0	166,231.5	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	469,730.1	0.0	0.0	0.0	469,730.1	0.0
Smithsonian Institution	81,954.0	0.0	3,862.0	75,149.0	0.0	2,943.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 24

Federal obligations for research in physical sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies	8,419,870.0	871,340.8	1,143,827.0	3,577,082.3	2,827,620.0
Departments					
Department of Agriculture	100,224.6	0.0	97,149.8	3,074.8	0.0
Agricultural Research Service	82,251.5	0.0	79,176.7	3,074.8	0.0
Forest Service	4,779.7	0.0	4,779.7	0.0	0.0
National Institute of Food and Agriculture	13,193.4	0.0	13,193.4	0.0	0.0
Department of Commerce	263,059.8	142.9	48,071.1	210,782.0	4,063.9
National Institute of Standards and Technology	238,872.8	142.9	46,210.1	188,456.0	4,063.9
National Oceanic and Atmospheric Administration	24,187.0	0.0	1,861.0	22,326.0	0.0
Department of Defense	688,787.7	4,488.1	181,407.4	322,981.6	179,910.7
Defense Advanced Research Projects Agency	59,945.5	0.0	550.0	58,862.0	533.6
Department of the Air Force	237,569.0	3,822.9	13,551.2	144,937.2	75,257.7
Department of the Army	44,603.1	0.0	17,060.5	23,844.2	3,698.4
Department of the Navy	84,111.3	665.1	11,810.5	14,526.9	57,108.7
Other defense agencies	262,558.7	0.0	138,435.1	80,811.2	43,312.4
Department of Energy	4,473,509.1	0.0	424,544.3	2,732,596.9	1,316,368.0
Advanced Research Projects Agency—Energy	36,414.2	0.0	0.0	36,414.2	0.0
Fossil Energy	136,344.2	0.0	136,344.2	0.0	0.0
National Nuclear Security Administration	954,613.2	0.0	17,055.8	794,839.6	142,717.9
Defense Programs	758,802.5	0.0	0.0	727,446.4	31,356.1
Office of Defense Nuclear Nonproliferation	195,810.7	0.0	17,055.8	67,393.2	111,361.7
Office of Science	3,346,137.5	0.0	271,144.3	1,901,343.1	1,173,650.1
Department of Health and Human Services	109,264.6	0.0	107,915.1	1,349.5	0.0
National Institutes of Health	109,264.6	0.0	107,915.1	1,349.5	0.0
Department of Homeland Security	27,590.9	0.0	9,837.3	9,247.3	8,506.2
Countering Weapons of Mass Destruction Office	12,363.5	0.0	2,105.6	9,247.3	1,010.6
Science and Technology Directorate	15,227.4	0.0	7,731.7	0.0	7,495.6
Department of the Interior	951.5	0.0	376.9	330.4	244.2
Bureau of Safety and Environmental Enforcement	707.3	0.0	376.9	330.4	0.0
National Park Service	244.2	0.0	0.0	0.0	244.2
Department of Justice	6,403.9	0.0	5,240.5	0.0	1,163.5
Office of Justice Programs	6,403.9	0.0	5,240.5	0.0	1,163.5
Department of Transportation	2,627.9	0.0	1,899.1	0.0	728.8
Pipeline and Hazardous Materials Safety Administration	2,627.9	0.0	1,899.1	0.0	728.8
Department of the Treasury	49,428.7	0.0	0.0	0.0	49,428.7
Bureau of Engraving and Printing	49,428.7	0.0	0.0	0.0	49,428.7
Other agencies					
Consumer Product Safety Commission	19.2	0.0	0.0	0.0	19.2
Environmental Protection Agency	9,836.6	0.0	8,673.9	0.0	1,162.7
Federal Communications Commission	450.0	0.0	0.0	450.0	0.0
Library of Congress	1,215.2	0.0	1,215.2	0.0	0.0
National Aeronautics and Space Administration	1,653,184.1	612,490.2	0.0	9,076.8	1,031,617.1
National Science Foundation	1,031,550.9	252,454.3	257,496.6	287,193.0	234,407.1
Smithsonian Institution	1,765.3	1,765.3	0.0	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 25

Federal obligations for research in psychology, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies	3,275,830.0	13,529.5	41,845.9	3,220,454.7
Departments				
Department of Agriculture	*	*	0.0	0.0
Forest Service	*	*	0.0	0.0
Department of Commerce	311.6	140.1	171.5	0.0
National Institute of Standards and Technology	140.1	140.1	0.0	0.0
U.S. Census Bureau	171.5	0.0	171.5	0.0
Department of Defense	95,548.2	2,290.9	7,812.3	85,445.0
Defense Advanced Research Projects Agency	8,045.2	0.0	394.0	7,651.2
Defense Health Agency	167.8	0.0	0.0	167.8
Department of the Air Force	2,168.7	0.0	338.0	1,830.6
Department of the Army	70,912.5	0.0	0.0	70,912.5
Department of the Navy	6,337.1	0.0	4,789.3	1,547.8
Other defense agencies	7,917.1	2,290.9	2,291.1	3,335.1
Department of Health and Human Services	2,956,394.2	417.0	7,382.5	2,948,594.7
Agency for Healthcare Research and Quality	7,799.5	417.0	7,382.5	0.0
National Institutes of Health	2,948,594.7	0.0	0.0	2,948,594.7
Department of Homeland Security	14.5	0.0	0.0	14.5
U.S. Coast Guard	14.5	0.0	0.0	14.5
Department of Justice	1,641.2	0.0	0.0	1,641.2
Office of Justice Programs	1,641.2	0.0	0.0	1,641.2
Department of Transportation	17,585.1	0.0	17,585.1	0.0
Federal Aviation Administration	17,585.1	0.0	17,585.1	0.0
Department of Veterans Affairs	167,120.2	0.0	0.0	167,120.2
Other agencies				
National Science Foundation	37,215.1	10,681.5	8,894.5	17,639.1

* = amount greater than \$0 but less than \$50.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 26

Federal obligations for research in social sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies	1,137,411.4	19,326.2	202,700.9	12,470.1	152,391.5	750,522.8
Departments						
Department of Agriculture	152,906.5	0.0	131,109.3	0.0	19,333.2	2,464.0
Agricultural Research Service	3,074.8	0.0	3,074.8	0.0	0.0	0.0
Economic Research Service	81,718.0	0.0	81,718.0	0.0	0.0	0.0
Forest Service	35,291.9	0.0	23,889.2	0.0	8,938.7	2,464.0
National Institute of Food and Agriculture	32,821.8	0.0	22,427.3	0.0	10,394.5	0.0
Department of Commerce	46,690.2	0.0	18,791.4	1,866.0	12,979.3	13,053.6
National Institute of Standards and Technology	482.4	0.0	482.4	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	14,833.8	0.0	933.0	1,866.0	10,877.0	1,157.8
U.S. Census Bureau	31,374.1	0.0	17,376.0	0.0	2,102.3	11,895.8
Department of Defense	130,770.4	0.0	0.0	0.0	173.9	130,596.5
Defense Health Agency	235.0	0.0	0.0	0.0	0.0	235.0
Department of the Air Force	58,753.8	0.0	0.0	0.0	0.0	58,753.8
Department of the Army	2,510.7	0.0	0.0	0.0	0.0	2,510.7
Department of the Navy	48,737.1	0.0	0.0	0.0	0.0	48,737.1
Other defense agencies	20,533.9	0.0	0.0	0.0	173.9	20,359.9
Department of Education	189,493.0	0.0	0.0	0.0	0.0	189,493.0
Department of Energy	77.9	0.0	77.9	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	77.9	0.0	77.9	0.0	0.0	0.0
Department of Health and Human Services	247,556.9	36.1	9,956.5	0.0	0.0	237,564.3
Administration for Children and Families	1,574.4	0.0	0.0	0.0	0.0	1,574.4
Administration for Community Living	70,814.9	0.0	0.0	0.0	0.0	70,814.9
Agency for Healthcare Research and Quality	20,813.1	36.1	9,956.5	0.0	0.0	10,820.5
Centers for Disease Control and Prevention	532.0	0.0	0.0	0.0	0.0	532.0
Health Resources and Services Administration	1,188.7	0.0	0.0	0.0	0.0	1,188.7
National Institutes of Health	136,178.1	0.0	0.0	0.0	0.0	136,178.1
Office of the Secretary of Health and Human Services	16,455.8	0.0	0.0	0.0	0.0	16,455.8
Office of the Assistant Secretary for Planning and Evaluation	16,455.8	0.0	0.0	0.0	0.0	16,455.8
Department of the Interior	8,679.2	174.1	5,764.6	0.0	2,046.0	694.5
Bureau of Ocean Energy Management	7,984.7	174.1	5,764.6	0.0	2,046.0	0.0
National Park Service	694.5	0.0	0.0	0.0	0.0	694.5
Department of Justice	51,380.4	846.6	0.0	0.0	32,231.0	18,302.8
Bureau of Prisons	1,804.0	0.0	0.0	0.0	1,804.0	0.0
Office of Justice Programs	49,576.4	846.6	0.0	0.0	30,427.0	18,302.8
Department of Labor	4,748.3	0.0	2,745.6	0.0	0.0	2,002.7
Employee Benefits Security Administration	2,745.6	0.0	2,745.6	0.0	0.0	0.0
Occupational Safety and Health Administration	2,002.7	0.0	0.0	0.0	0.0	2,002.7
Department of State	2,000.0	0.0	0.0	0.0	2,000.0	0.0
Department of Transportation	1,738.1	0.0	0.0	0.0	0.0	1,738.1
Federal Railroad Administration	1,738.1	0.0	0.0	0.0	0.0	1,738.1
Other agencies						
Agency for International Development	9,579.7	0.0	404.7	6,050.0	0.0	3,125.0
Appalachian Regional Commission	684.3	0.0	684.3	0.0	0.0	0.0
Environmental Protection Agency	2,379.7	0.0	2,379.7	0.0	0.0	0.0
Federal Trade Commission	5,974.3	0.0	5,974.3	0.0	0.0	0.0
National Science Foundation	208,173.5	18,261.4	24,812.6	4,554.1	13,888.0	146,657.4

TABLE 26

Federal obligations for research in social sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
Smithsonian Institution	10.2	8.0	0.0	0.0	0.0	2.2
Social Security Administration	69,740.0	0.0	0.0	0.0	69,740.0	0.0
U.S. Agency for Global Media	4,828.7	0.0	0.0	0.0	0.0	4,828.7

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 27

Federal obligations for basic research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
All agencies	41,546,622.0	7,688,053.5	3,146,842.8	799,850.4	20,128,169.3	3,455,467.9	4,325,626.3	1,667,732.0	114,285.6	220,594.1
Departments										
Department of Agriculture	1,163,827.8	725,662.2	90.8	0.0	414,033.7	0.0	19,038.9	0.0	2,574.4	2,427.7
Agricultural Research Service	711,764.4	623,948.7	0.0	0.0	78,297.3	0.0	7,155.8	0.0	149.5	2,213.1
Animal and Plant Health Inspection Service	19,082.1	13,253.9	0.0	0.0	5,828.2	0.0	0.0	0.0	0.0	0.0
Forest Service	84,828.8	77,587.0	38.6	0.0	5,972.2	0.0	188.9	0.0	827.5	214.6
National Institute of Food and Agriculture	348,152.5	10,872.7	52.3	0.0	323,936.0	0.0	11,694.2	0.0	1,597.4	0.0
Department of Commerce	251,170.4	237,190.3	5,233.6	0.0	7,048.7	0.0	1,379.6	0.0	0.0	318.3
National Institute of Standards and Technology	251,170.4	237,190.3	5,233.6	0.0	7,048.7	0.0	1,379.6	0.0	0.0	318.3
Department of Defense	2,499,140.7	401,941.9	364,491.6	17,826.5	1,490,834.9	19,800.8	102,092.6	35,648.1	146.9	66,357.4
Defense Advanced Research Projects Agency	482,126.0	12,960.0	133,520.3	11,061.6	256,737.0	5,997.3	45,749.4	8,077.4	0.0	8,023.0
Defense Health Agency	10,689.1	4,264.9	599.1	0.0	336.3	0.0	5,487.3	1.5	0.0	0.0
Department of the Air Force	520,275.5	76,269.6	32,874.2	112.5	383,429.6	447.8	5,557.1	568.3	15.3	21,001.0
Department of the Army	523,981.7	31,071.6	102,887.7	9.4	328,010.9	10,937.8	12,139.7	20,437.7	0.0	18,487.0
Department of the Navy	640,949.7	192,676.1	28,072.7	1,513.0	369,864.8	0.0	30,334.1	340.0	131.6	18,017.4
Other defense agencies	321,118.7	84,699.6	66,537.6	5,130.0	152,456.4	2,418.0	2,825.0	6,223.1	0.0	829.1
Department of Education	53,666.0	2,803.5	180.0	0.0	41,258.6	0.0	7,873.8	0.0	1,550.1	0.0
Department of Energy	5,501,609.3	207,289.5	325,614.0	334,864.2	865,149.4	2,120,057.8	29,735.6	1,589,279.7	29,452.6	166.5
Electricity Delivery and Energy Reliability	13,038.1	298.1	859.2	3,561.8	1,546.3	784.4	911.4	5,036.7	40.3	0.0
Fossil Energy	33,967.0	0.0	0.0	0.0	33,967.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	114,311.8	0.0	1,982.4	66,211.8	13,750.0	5,642.5	0.0	26,725.1	0.0	0.0
Office of Defense Nuclear Nonproliferation	114,311.8	0.0	1,982.4	66,211.8	13,750.0	5,642.5	0.0	26,725.1	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	1,153.0	1,153.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,339,139.4	205,838.5	322,772.5	265,090.6	815,886.1	2,113,630.9	28,824.2	1,557,517.9	29,412.3	166.5

TABLE 27

Federal obligations for basic research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Health and Human Services	21,808,980.1	4,514,764.5	1,084,543.9	439,688.0	11,841,606.6	10,354.6	3,707,295.7	18,273.5	64,152.0	128,301.2
Centers for Disease Control and Prevention	69,564.7	26,304.7	942.3	0.0	33,225.4	0.0	3,613.1	0.0	4,381.4	1,097.9
Health Resources and Services Administration	2,415.4	2,415.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	21,737,000.0	4,486,044.4	1,083,601.6	439,688.0	11,808,381.2	10,354.6	3,703,682.7	18,273.5	59,770.6	127,203.3
Department of Homeland Security	47,365.5	5,590.8	24,266.7	305.1	17,130.1	0.0	0.0	72.8	0.0	0.0
Countering Weapons of Mass Destruction Office	6,114.3	0.0	399.8	0.0	5,714.5	0.0	0.0	0.0	0.0	0.0
Science and Technology Directorate	41,251.1	5,590.8	23,866.9	305.1	11,415.5	0.0	0.0	72.8	0.0	0.0
Department of the Interior	83,859.9	75,568.6	197.3	0.0	6,697.4	0.0	229.5	0.0	1,167.1	0.0
Bureau of Safety and Environmental Enforcement	1,017.1	993.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Park Service	865.9	0.0	0.0	0.0	865.9	0.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	81,977.0	74,575.6	173.3	0.0	5,831.6	0.0	229.5	0.0	1,167.1	0.0
Department of Justice	711.9	0.0	0.0	0.0	711.9	0.0	0.0	0.0	0.0	0.0
Office of Justice Programs	711.9	0.0	0.0	0.0	711.9	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	5,625.1	1,104.1	3,521.0	0.0	0.0	0.0	0.0	1,000.0	0.0	0.0
Bureau of Engraving and Printing	5,521.0	1,000.0	3,521.0	0.0	0.0	0.0	0.0	1,000.0	0.0	0.0
U.S. Mint	104.1	104.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	617,719.0	617,719.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Agency for International Development	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,839,375.2	680,293.9	1,078,801.5	7,166.7	820,118.9	1,042,829.7	185,347.0	17,922.1	2,593.1	4,302.1
National Science Foundation	5,461,915.4	8,265.2	259,902.4	0.0	4,622,579.1	262,424.9	272,633.7	4,740.0	12,649.3	18,720.8
Nuclear Regulatory Commission	1,795.7	0.0	0.0	0.0	1,000.0	0.0	0.0	795.7	0.0	0.0
Smithsonian Institution	209,760.0	209,760.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 28

Preliminary federal obligations for basic research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	41,231,293.0	8,291,797.3	2,714,811.5	780,815.5	19,526,242.0	3,527,063.2	4,276,059.2	1,781,301.7	113,739.0	219,463.6
Departments										
Department of Agriculture	1,236,053.6	817,601.2	743.1	0.0	393,250.5	0.0	20,518.9	0.0	2,065.6	1,874.4
Agricultural Research Service	793,500.0	727,638.2	0.0	0.0	58,723.0	0.0	5,366.9	0.0	112.1	1,659.8
Animal and Plant Health Inspection Service	21,046.0	14,803.1	0.0	0.0	6,242.9	0.0	0.0	0.0	0.0	0.0
Forest Service	73,307.6	66,065.8	38.6	0.0	5,972.2	0.0	188.9	0.0	827.5	214.6
National Institute of Food and Agriculture	348,200.0	9,094.0	704.5	0.0	322,312.4	0.0	14,963.1	0.0	1,125.9	0.0
Department of Commerce	275,172.5	259,662.4	5,233.6	0.0	8,578.7	0.0	1,379.6	0.0	0.0	318.3
National Institute of Standards and Technology	275,172.5	259,662.4	5,233.6	0.0	8,578.7	0.0	1,379.6	0.0	0.0	318.3
Department of Defense	2,667,604.9	447,214.0	375,875.0	17,240.5	1,594,503.2	19,561.0	105,552.5	39,116.0	156.6	68,386.1
Defense Advanced Research Projects Agency	524,282.0	14,093.2	145,195.1	12,028.8	279,185.5	6,521.7	49,749.7	8,783.7	0.0	8,724.5
Defense Health Agency	10,415.6	4,769.2	1,482.6	0.0	540.1	0.0	3,621.7	2.0	0.0	0.0
Department of the Air Force	496,355.3	70,047.5	31,563.9	108.0	368,146.2	430.0	5,335.6	545.7	14.7	20,163.9
Department of the Army	552,996.5	32,792.2	108,584.9	9.9	346,174.1	11,543.4	12,811.9	21,569.4	0.0	19,510.7
Department of the Navy	719,171.6	241,580.9	26,312.0	1,632.1	397,974.4	0.0	31,728.5	366.8	141.9	19,435.1
Other defense agencies	364,383.9	83,931.0	62,736.5	3,461.7	202,483.0	1,065.9	2,305.1	7,848.6	0.0	552.0
Department of Education	42,137.3	1,931.4	95.5	0.0	33,237.0	0.0	5,800.1	0.0	1,073.4	0.0
Department of Energy	5,477,355.7	588,660.2	133,760.8	315,482.7	381,960.8	2,305,295.4	17,609.7	1,703,484.8	31,101.3	0.0
Electricity Delivery and Energy Reliability	12,943.0	295.9	852.9	3,018.1	1,535.0	1,296.4	904.7	5,000.0	40.0	0.0
Fossil Energy	1,701.0	0.0	0.0	0.0	1,701.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	125,502.7	0.0	3,221.7	74,313.8	10,068.6	7,951.7	150.0	29,796.8	0.0	0.0
Office of Defense Nuclear Nonproliferation	125,502.7	0.0	3,221.7	74,313.8	10,068.6	7,951.7	150.0	29,796.8	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	1,870.0	1,870.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,335,339.0	586,494.3	129,686.1	238,150.8	368,656.2	2,296,047.3	16,555.0	1,668,687.9	31,061.4	0.0

TABLE 28
Preliminary federal obligations for basic research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Health and Human Services	21,759,200.3	4,507,131.4	1,082,134.6	438,939.6	11,811,709.8	10,337.0	3,700,941.7	18,242.4	62,776.9	126,986.8
Centers for Disease Control and Prevention	56,766.4	26,289.1	377.5	0.0	23,428.5	0.0	3,563.4	0.0	3,108.0	0.0
Health Resources and Services Administration	2,433.9	2,433.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	21,700,000.0	4,478,408.4	1,081,757.1	438,939.6	11,788,281.4	10,337.0	3,697,378.4	18,242.4	59,668.9	126,986.8
Department of Homeland Security	53,393.8	6,000.0	24,499.8	500.0	21,894.1	0.0	0.0	500.0	0.0	0.0
Countering Weapons of Mass Destruction Office	8,393.8	0.0	499.8	0.0	7,894.1	0.0	0.0	0.0	0.0	0.0
Science and Technology Directorate	45,000.0	6,000.0	24,000.0	500.0	14,000.0	0.0	0.0	500.0	0.0	0.0
Department of the Interior	86,260.8	77,870.6	202.1	0.0	6,727.3	0.0	231.4	0.0	1,229.4	0.0
Bureau of Safety and Environmental Enforcement	1,071.0	1,045.6	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Park Service	865.9	0.0	0.0	0.0	865.9	0.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	84,324.0	76,824.9	176.8	0.0	5,861.5	0.0	231.4	0.0	1,229.4	0.0
Department of Justice	783.1	0.0	0.0	0.0	783.1	0.0	0.0	0.0	0.0	0.0
Office of Justice Programs	783.1	0.0	0.0	0.0	783.1	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	669,822.6	669,822.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Agency for International Development	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,241,916.9	693,912.6	830,296.4	8,652.7	611,831.9	927,356.5	149,222.1	15,030.7	2,585.8	3,028.2
National Science Foundation	5,505,381.4	8,331.0	261,970.7	0.0	4,659,365.6	264,513.3	274,803.3	4,777.7	12,750.0	18,869.8
Nuclear Regulatory Commission	2,550.1	0.0	0.0	0.0	2,400.1	0.0	0.0	150.0	0.0	0.0
Smithsonian Institution	213,560.0	213,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 29

Federal obligations for basic research, by detailed field of science and engineering: FYs 2020–21

(Dollars in thousands)

Field	2020	2021 (preliminary)
All fields	41,546,622.0	41,231,293.0
Computer sciences and mathematics	2,524,467.8	2,591,082.9
Computer sciences	1,230,121.3	NA
Mathematics	503,789.4	NA
Other computer sciences and mathematics	790,557.2	NA
Engineering	2,897,912.5	2,871,339.3
Aeronautical engineering	70,357.1	NA
Astronautical engineering	14,899.7	NA
Chemical engineering	94,067.1	NA
Civil engineering	16,302.7	NA
Electrical engineering	205,349.7	NA
Mechanical engineering	115,557.7	NA
Metallurgy and materials engineering	281,055.0	NA
Other engineering	2,100,323.6	NA
Environmental sciences	3,166,938.1	2,743,587.2
Atmospheric sciences	562,676.7	NA
Geological sciences	261,839.1	NA
Oceanography	470,224.2	NA
Other environmental sciences	1,872,198.1	NA
Life sciences	20,804,842.8	20,887,076.7
Agricultural sciences	681,834.3	NA
Biological sciences (excluding environmental biology)	10,325,956.0	NA
Environmental biology	471,077.3	NA
Medical sciences	7,460,040.1	NA
Other life sciences	1,865,935.1	NA
Physical sciences	6,512,990.9	7,444,390.0
Astronomy	870,437.6	NA
Chemistry	754,054.9	NA
Physics	2,515,870.5	NA
Other physical sciences	2,372,627.9	NA
Psychology	1,611,672.7	1,637,872.4
Biological aspects	12,932.4	NA
Social aspects	11,799.8	NA
Other psychological sciences	1,586,940.5	NA
Social sciences	439,515.0	439,176.5
Anthropology	18,269.4	NA
Economics	38,879.2	NA
Political science	4,554.1	NA
Sociology	19,923.6	NA
Other social sciences	357,888.8	NA
Other sciences nec	3,588,282.2	2,616,767.9

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 30

Federal obligations for basic research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Science	5,339,139.4	773,223.1	35,450.5	357,051.3	469,657.7	3,340,093.3	0.0	0.0	363,663.4
Department of Health and Human Services	21,808,980.1	150,159.5	1,295,114.4	244,744.2	17,546,923.7	55,669.5	1,502,287.7	69,601.8	944,479.2
Centers for Disease Control and Prevention	69,564.7	0.0	0.0	39,584.9	11,208.6	0.0	0.0	220.0	18,551.2
Health Resources and Services Administration	2,415.4	0.0	0.0	0.0	2,415.4	0.0	0.0	0.0	0.0
National Institutes of Health	21,737,000.0	150,159.5	1,295,114.4	205,159.3	17,533,299.7	55,669.5	1,502,287.7	69,381.8	925,928.0
Department of Homeland Security	47,365.5	2,119.6	22,702.8	7,699.0	731.8	3,649.5	0.0	0.0	10,462.8
Countering Weapons of Mass Destruction Office	6,114.3	2,119.6	0.0	0.0	731.8	3,263.0	0.0	0.0	0.0
Science and Technology Directorate	41,251.1	0.0	22,702.8	7,699.0	0.0	386.6	0.0	0.0	10,462.8
Department of the Interior	83,859.9	0.0	309.8	70,508.3	12,172.4	707.3	0.0	162.2	0.0
Bureau of Safety and Environmental Enforcement	1,017.1	0.0	309.8	0.0	0.0	707.3	0.0	0.0	0.0
National Park Service	865.9	0.0	0.0	469.3	234.4	0.0	0.0	162.2	0.0
U.S. Geological Survey	81,977.0	0.0	0.0	70,039.0	11,938.0	0.0	0.0	0.0	0.0
Department of Justice	711.9	0.0	0.0	0.0	711.9	0.0	0.0	0.0	0.0
Office of Justice Programs	711.9	0.0	0.0	0.0	711.9	0.0	0.0	0.0	0.0
Department of the Treasury	5,625.1	0.0	104.1	0.0	0.0	5,521.0	0.0	0.0	0.0
Bureau of Engraving and Printing	5,521.0	0.0	0.0	0.0	0.0	5,521.0	0.0	0.0	0.0
U.S. Mint	104.1	0.0	104.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	617,719.0	0.0	18,531.6	0.0	555,947.1	0.0	43,240.3	0.0	0.0
Other agencies									
Agency for International Development	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,839,375.2	0.0	0.0	1,391,042.1	36,244.7	1,460,448.9	0.0	0.0	951,639.5
National Science Foundation	5,461,915.4	1,001,538.2	838,056.4	938,341.6	745,806.7	1,016,352.8	37,173.1	205,702.6	678,944.0

TABLE 30

Federal obligations for basic research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Nuclear Regulatory Commission	1,795.7	0.0	1,000.0	0.0	0.0	0.0	0.0	0.0	795.7
Smithsonian Institution	209,760.0	0.0	0.0	21,827.6	81,954.0	1,765.3	0.0	10.2	104,203.0

* = amount greater than \$0 but less than \$50.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 31

Preliminary federal obligations for basic research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Science	5,335,339.0	804,246.0	0.0	356,800.0	399,702.0	3,424,881.0	0.0	0.0	349,710.0
Department of Health and Human Services	21,759,200.3	149,903.9	1,292,909.9	236,869.3	17,511,785.5	55,574.8	1,499,730.6	69,483.7	942,942.6
Centers for Disease Control and Prevention	56,766.4	0.0	0.0	32,059.2	5,896.5	0.0	0.0	220.0	18,590.7
Health Resources and Services Administration	2,433.9	0.0	0.0	0.0	2,433.9	0.0	0.0	0.0	0.0
National Institutes of Health	21,700,000.0	149,903.9	1,292,909.9	204,810.1	17,503,455.1	55,574.8	1,499,730.6	69,263.7	924,351.9
Department of Homeland Security	53,393.8	3,270.4	25,000.0	9,000.0	2,124.5	3,999.0	0.0	0.0	10,000.0
Countering Weapons of Mass Destruction Office	8,393.8	3,270.4	0.0	0.0	2,124.5	2,999.0	0.0	0.0	0.0
Science and Technology Directorate	45,000.0	0.0	25,000.0	9,000.0	0.0	1,000.0	0.0	0.0	10,000.0
Department of the Interior	86,260.8	0.0	326.2	66,867.1	18,163.8	744.8	0.0	159.0	0.0
Bureau of Safety and Environmental Enforcement	1,071.0	0.0	326.2	0.0	0.0	744.8	0.0	0.0	0.0
National Park Service	865.9	0.0	0.0	477.1	229.8	0.0	0.0	159.0	0.0
U.S. Geological Survey	84,324.0	0.0	0.0	66,390.0	17,934.0	0.0	0.0	0.0	0.0
Department of Justice	783.1	0.0	0.0	0.0	783.1	0.0	0.0	0.0	0.0
Office of Justice Programs	783.1	0.0	0.0	0.0	783.1	0.0	0.0	0.0	0.0
Department of Veterans Affairs	669,822.6	0.0	20,094.7	0.0	602,840.4	0.0	46,887.6	0.0	0.0
Other agencies									
Agency for International Development	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,241,916.9	0.0	0.0	977,582.9	47,362.7	2,214,716.2	0.0	0.0	2,255.1
National Science Foundation	5,505,381.4	1,009,508.5	844,725.7	945,808.9	751,741.8	1,024,440.9	37,469.0	207,339.6	684,347.0
Nuclear Regulatory Commission	2,550.1	0.0	2,400.1	0.0	0.0	0.0	0.0	0.0	150.0
Smithsonian Institution	213,560.0	0.0	0.0	3,136.0	77,250.0	57,950.0	0.0	12,031.0	63,193.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 32

Federal obligations for basic research in computer sciences and mathematics, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies	2,524,467.8	1,230,121.3	503,789.4	790,557.2
Departments				
Department of Agriculture	963.6	939.6	24.0	0.0
Agricultural Research Service	925.3	925.3	0.0	0.0
Forest Service	38.3	14.3	24.0	0.0
Department of Commerce	12,900.1	1,396.7	2,384.1	9,119.3
National Institute of Standards and Technology	12,900.1	1,396.7	2,384.1	9,119.3
Department of Defense	576,831.6	431,535.0	64,576.0	80,720.7
Defense Advanced Research Projects Agency	326,095.1	273,556.1	8,219.1	44,320.0
Department of the Air Force	34,513.1	8,399.9	6,937.9	19,175.3
Department of the Army	79,157.1	68,094.4	11,062.7	0.0
Department of the Navy	57,967.2	44,129.4	13,670.9	166.9
Other defense agencies	79,099.1	37,355.3	24,685.3	17,058.5
Department of Energy	779,955.2	38,183.1	43,174.4	698,597.6
National Nuclear Security Administration	5,579.1	722.5	1,050.0	3,806.6
Office of Defense Nuclear Nonproliferation	5,579.1	722.5	1,050.0	3,806.6
Office of Cybersecurity, Energy Security, and Emergency Response	1,153.0	1,153.0	0.0	0.0
Office of Science	773,223.1	36,307.6	42,124.4	694,791.0
Department of Health and Human Services	150,159.5	0.0	150,159.5	0.0
National Institutes of Health	150,159.5	0.0	150,159.5	0.0
Department of Homeland Security	2,119.6	0.0	0.0	2,119.6
Countering Weapons of Mass Destruction Office	2,119.6	0.0	0.0	2,119.6
Other agencies				
National Science Foundation	1,001,538.2	758,066.9	243,471.3	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 33

Federal obligations for basic research in engineering, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Department of the Interior	309.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	309.8
Bureau of Safety and Environmental Enforcement	309.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	309.8
Department of the Treasury	104.1	0.0	0.0	0.0	0.0	0.0	0.0	104.1	0.0
U.S. Mint	104.1	0.0	0.0	0.0	0.0	0.0	0.0	104.1	0.0
Department of Veterans Affairs	18,531.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18,531.6
Other agencies									
National Science Foundation	838,056.4	0.0	0.0	63,499.8	3,820.1	100,202.8	54,782.8	168,003.9	447,747.1
Nuclear Regulatory Commission	1,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,000.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 34

Federal obligations for basic research in environmental sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies	3,166,938.1	562,676.7	261,839.1	470,224.2	1,872,198.1
Departments					
Department of Agriculture	11,243.0	9,439.9	71.2	0.0	1,732.0
Agricultural Research Service	3,131.8	3,060.6	71.2	0.0	0.0
Forest Service	4,563.9	2,831.9	0.0	0.0	1,732.0
National Institute of Food and Agriculture	3,547.4	3,547.4	0.0	0.0	0.0
Department of Defense	122,200.1	26,089.8	2,180.6	84,082.3	9,847.4
Defense Advanced Research Projects Agency	1,395.5	0.0	0.0	0.0	1,395.5
Defense Health Agency	400.0	0.0	0.0	0.0	400.0
Department of the Air Force	2,579.3	1,172.9	11.7	0.0	1,394.8
Department of the Army	4,948.7	0.0	763.6	0.0	4,185.0
Department of the Navy	104,149.3	22,621.3	0.0	79,809.0	1,719.0
Other defense agencies	8,727.3	2,295.6	1,405.3	4,273.3	753.1
Department of Energy	359,332.3	252,681.4	23,584.3	0.0	83,066.7
National Nuclear Security Administration	2,281.0	300.0	1,981.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	2,281.0	300.0	1,981.0	0.0	0.0
Office of Science	357,051.3	252,381.4	21,603.3	0.0	83,066.7
Department of Health and Human Services	244,744.2	0.0	0.0	0.0	244,744.2
Centers for Disease Control and Prevention	39,584.9	0.0	0.0	0.0	39,584.9
National Institutes of Health	205,159.3	0.0	0.0	0.0	205,159.3
Department of Homeland Security	7,699.0	0.0	0.0	4,451.4	3,247.6
Science and Technology Directorate	7,699.0	0.0	0.0	4,451.4	3,247.6
Department of the Interior	70,508.3	0.0	3,440.0	0.0	67,068.3
National Park Service	469.3	0.0	0.0	0.0	469.3
U.S. Geological Survey	70,039.0	0.0	3,440.0	0.0	66,599.0
Other agencies					
National Aeronautics and Space Administration	1,391,042.1	0.0	0.0	0.0	1,391,042.1
National Science Foundation	938,341.6	274,465.7	211,481.0	380,945.0	71,449.9
Smithsonian Institution	21,827.6	0.0	21,082.0	745.6	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 35

Federal obligations for basic research in life sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies	20,804,842.8	681,834.3	10,325,956.0	471,077.3	7,460,040.1	1,865,935.1
Departments						
Department of Agriculture	1,020,557.9	679,538.8	143,388.0	184,981.2	12,643.8	6.1
Agricultural Research Service	653,897.9	507,986.2	45,552.9	88,757.0	11,601.8	0.0
Animal and Plant Health Inspection Service	19,082.1	19,082.1	0.0	0.0	0.0	0.0
Forest Service	64,682.7	15,190.8	6,167.9	43,317.9	0.0	6.1
National Institute of Food and Agriculture	282,895.1	137,279.6	91,667.2	52,906.3	1,042.1	0.0
Department of Commerce	13,873.2	0.0	13,873.2	0.0	0.0	0.0
National Institute of Standards and Technology	13,873.2	0.0	13,873.2	0.0	0.0	0.0
Department of Defense	319,714.7	2,295.6	102,302.0	7,362.6	193,153.5	14,601.1
Defense Advanced Research Projects Agency	85,764.2	0.0	47,177.7	7,362.6	31,224.0	0.0
Defense Health Agency	9,780.5	0.0	0.0	0.0	9,780.5	0.0
Department of the Air Force	9,805.5	0.0	5,567.4	0.0	56.8	4,181.3
Department of the Army	104,350.3	0.0	5,771.4	0.0	93,635.9	4,943.0
Department of the Navy	74,052.2	0.0	12,152.5	0.0	58,456.4	3,443.4
Other defense agencies	35,962.0	2,295.6	31,633.1	0.0	0.0	2,033.3
Department of Energy	470,104.7	0.0	385,439.8	31,742.1	51,754.7	1,168.1
National Nuclear Security Administration	447.0	0.0	300.0	147.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	447.0	0.0	300.0	147.0	0.0	0.0
Office of Science	469,657.7	0.0	385,139.8	31,595.1	51,754.7	1,168.1
Department of Health and Human Services	17,546,923.7	0.0	9,089,510.6	0.0	6,646,441.0	1,810,972.1
Centers for Disease Control and Prevention	11,208.6	0.0	3,506.5	0.0	7,702.1	0.0
Health Resources and Services Administration	2,415.4	0.0	0.0	0.0	2,415.4	0.0
National Institutes of Health	17,533,299.7	0.0	9,086,004.1	0.0	6,636,323.5	1,810,972.1
Department of Homeland Security	731.8	0.0	731.8	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	731.8	0.0	731.8	0.0	0.0	0.0
Department of the Interior	12,172.4	0.0	6,561.5	5,610.9	0.0	0.0
National Park Service	234.4	0.0	234.4	0.0	0.0	0.0
U.S. Geological Survey	11,938.0	0.0	6,327.1	5,610.9	0.0	0.0
Department of Justice	711.9	0.0	711.9	0.0	0.0	0.0
Office of Justice Programs	711.9	0.0	711.9	0.0	0.0	0.0
Department of Veterans Affairs	555,947.1	0.0	0.0	0.0	555,947.1	0.0
Other agencies						
Agency for International Development	100.0	0.0	0.0	0.0	100.0	0.0
National Aeronautics and Space Administration	36,244.7	0.0	0.0	0.0	0.0	36,244.7

TABLE 35

Federal obligations for basic research in life sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
National Science Foundation	745,806.7	0.0	579,575.2	166,231.5	0.0	0.0
Smithsonian Institution	81,954.0	0.0	3,862.0	75,149.0	0.0	2,943.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 36

Federal obligations for basic research in physical sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies	6,512,990.9	870,437.6	754,054.9	2,515,870.5	2,372,627.9
Departments					
Department of Agriculture	54,742.0	0.0	53,033.7	1,708.2	0.0
Agricultural Research Service	45,695.3	0.0	43,987.0	1,708.2	0.0
Forest Service	3,133.0	0.0	3,133.0	0.0	0.0
National Institute of Food and Agriculture	5,913.8	0.0	5,913.8	0.0	0.0
Department of Commerce	187,914.2	0.0	22,295.8	163,650.5	1,967.9
National Institute of Standards and Technology	187,914.2	0.0	22,295.8	163,650.5	1,967.9
Department of Defense	248,492.1	3,803.2	53,688.7	135,822.4	55,177.7
Defense Advanced Research Projects Agency	34,094.4	0.0	550.0	33,544.4	0.0
Department of the Air Force	86,843.8	3,803.2	13,193.9	53,378.8	16,468.0
Department of the Army	39,980.7	0.0	17,060.5	19,221.8	3,698.4
Department of the Navy	42,576.1	0.0	3,175.3	6,088.9	33,311.9
Other defense agencies	44,997.0	0.0	19,709.1	23,588.4	1,699.5
Department of Energy	3,477,728.3	0.0	313,507.9	1,928,376.1	1,235,844.4
Fossil Energy	33,967.0	0.0	33,967.0	0.0	0.0
National Nuclear Security Administration	103,668.0	0.0	8,396.5	33,077.1	62,194.3
Office of Defense Nuclear Nonproliferation	103,668.0	0.0	8,396.5	33,077.1	62,194.3
Office of Science	3,340,093.3	0.0	271,144.3	1,895,298.9	1,173,650.1
Department of Health and Human Services	55,669.5	0.0	54,982.0	687.6	0.0
National Institutes of Health	55,669.5	0.0	54,982.0	687.6	0.0
Department of Homeland Security	3,649.5	0.0	386.6	3,263.0	0.0
Countering Weapons of Mass Destruction Office	3,263.0	0.0	0.0	3,263.0	0.0
Science and Technology Directorate	386.6	0.0	386.6	0.0	0.0
Department of the Interior	707.3	0.0	376.9	330.4	0.0
Bureau of Safety and Environmental Enforcement	707.3	0.0	376.9	330.4	0.0
Department of the Treasury	5,521.0	0.0	0.0	0.0	5,521.0
Bureau of Engraving and Printing	5,521.0	0.0	0.0	0.0	5,521.0
Other agencies					
National Aeronautics and Space Administration	1,460,448.9	612,490.2	0.0	0.0	847,958.6
National Science Foundation	1,016,352.8	252,378.8	255,783.4	282,032.4	226,158.2
Smithsonian Institution	1,765.3	1,765.3	0.0	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 37

Federal obligations for basic research in psychology, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies	1,611,672.7	12,932.4	11,799.8	1,586,940.5
Departments				
Department of Agriculture	*	*	0.0	0.0
Forest Service	*	*	0.0	0.0
Department of Defense	28,971.6	2,290.9	2,905.3	23,775.4
Defense Advanced Research Projects Agency	276.2	0.0	276.2	0.0
Defense Health Agency	2.6	0.0	0.0	2.6
Department of the Air Force	1,629.9	0.0	338.0	1,291.8
Department of the Army	18,752.7	0.0	0.0	18,752.7
Department of the Navy	1,547.8	0.0	0.0	1,547.8
Other defense agencies	6,762.3	2,290.9	2,291.1	2,180.4
Department of Health and Human Services	1,502,287.7	0.0	0.0	1,502,287.7
National Institutes of Health	1,502,287.7	0.0	0.0	1,502,287.7
Department of Veterans Affairs	43,240.3	0.0	0.0	43,240.3
Other agencies				
National Science Foundation	37,173.1	10,641.5	8,894.5	17,637.1

* = amount greater than \$0 but less than \$50.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 38

Federal obligations for basic research in social sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies	439,515.0	18,269.4	38,879.2	4,554.1	19,923.6	357,888.8
Departments						
Department of Agriculture	20,573.1	0.0	14,066.6	0.0	6,035.6	471.0
Agricultural Research Service	1,708.2	0.0	1,708.2	0.0	0.0	0.0
Forest Service	8,547.6	0.0	5,119.1	0.0	2,957.5	471.0
National Institute of Food and Agriculture	10,317.3	0.0	7,239.2	0.0	3,078.1	0.0
Department of Defense	89,799.2	0.0	0.0	0.0	0.0	89,799.2
Department of the Air Force	58,385.7	0.0	0.0	0.0	0.0	58,385.7
Department of the Army	2,510.7	0.0	0.0	0.0	0.0	2,510.7
Department of the Navy	8,542.8	0.0	0.0	0.0	0.0	8,542.8
Other defense agencies	20,359.9	0.0	0.0	0.0	0.0	20,359.9
Department of Education	53,666.0	0.0	0.0	0.0	0.0	53,666.0
Department of Health and Human Services	69,601.8	0.0	0.0	0.0	0.0	69,601.8
Centers for Disease Control and Prevention	220.0	0.0	0.0	0.0	0.0	220.0
National Institutes of Health	69,381.8	0.0	0.0	0.0	0.0	69,381.8
Department of the Interior	162.2	0.0	0.0	0.0	0.0	162.2
National Park Service	162.2	0.0	0.0	0.0	0.0	162.2
Other agencies						
National Science Foundation	205,702.6	18,261.4	24,812.6	4,554.1	13,888.0	144,186.5
Smithsonian Institution	10.2	8.0	0.0	0.0	0.0	2.2

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 39

Federal obligations for applied research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	43,758,135.4	11,884,224.3	6,881,593.8	2,712,635.6	15,345,495.0	407,776.3	4,865,041.9	848,683.7	530,418.7	282,266.1
Departments										
Department of Agriculture	1,224,571.1	733,012.8	4,542.4	0.0	447,648.8	0.0	31,192.0	0.0	5,978.1	2,196.9
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	569,411.5	499,158.9	0.0	0.0	62,637.8	0.0	5,724.6	0.0	119.6	1,770.5
Economic Research Service	81,718.0	74,618.9	1,753.9	0.0	4,095.9	0.0	1,240.8	0.0	8.4	0.0
Forest Service	172,456.5	142,687.6	1,347.9	0.0	18,978.6	0.0	3,954.5	0.0	5,061.6	426.4
National Agricultural Statistics Service	4,998.3	4,672.7	0.0	0.0	67.2	0.0	258.4	0.0	0.0	0.0
National Institute of Food and Agriculture	389,710.6	8,398.3	1,440.7	0.0	359,069.3	0.0	20,013.8	0.0	788.5	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	1,109,644.1	784,731.3	40,318.5	0.0	251,085.4	30.3	6,122.7	19,558.0	3,737.6	4,060.2
National Institute of Standards and Technology	466,253.3	377,553.0	28,486.6	0.0	33,113.9	0.0	3,372.0	19,558.0	113.7	4,056.0
National Oceanic and Atmospheric Administration	597,771.6	361,559.1	11,831.8	0.0	217,971.5	30.3	2,750.8	0.0	3,623.9	4.2
National Telecommunications and Information Administration	7,692.0	7,692.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	37,927.3	37,927.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	6,416,163.1	2,053,019.9	2,813,136.8	67,027.9	936,297.2	62,039.6	309,976.1	130,163.2	1,329.4	43,173.1
Defense Advanced Research Projects Agency	1,524,182.0	83,324.7	933,483.6	22,431.3	327,429.1	18,767.9	95,170.1	16,845.3	297.5	26,432.6
Defense Health Agency	153,364.3	29,006.4	38,182.1	0.0	41,258.7	0.0	41,059.2	1,917.7	0.0	1,940.1
Department of the Air Force	1,728,512.4	1,025,028.5	563,360.3	2,197.2	84,206.8	1,132.0	3,391.2	46,152.1	746.5	2,297.9
Department of the Army	1,382,705.8	260,913.0	836,453.8	1,498.5	167,685.1	3,513.1	69,509.1	40,670.1	0.0	2,463.2
Department of the Navy	1,056,743.3	373,246.8	303,327.8	8,165.4	270,992.6	1,190.0	76,670.3	12,875.8	285.4	9,989.1
Other defense agencies	570,655.3	281,500.4	138,329.2	32,735.6	44,724.9	37,436.7	24,176.1	11,702.2	0.0	50.2
Department of Education	135,827.0	5,601.5	3,852.5	0.0	84,122.1	0.0	34,631.2	0.0	7,619.7	0.0
Department of Energy	5,023,578.5	604,671.7	805,531.2	2,193,131.6	624,495.2	167,094.5	87,899.8	525,075.3	15,581.3	98.0
Advanced Research Projects Agency—Energy	218,999.6	0.0	82,684.5	9,196.1	90,770.6	7,979.8	13,413.7	14,954.8	0.0	0.0

TABLE 39

Federal obligations for applied research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
Electricity Delivery and Energy Reliability	65,313.5	1,493.1	4,304.2	17,842.6	7,746.2	3,929.3	4,565.4	25,231.1	201.7	0.0
Energy Efficiency and Renewable Energy	1,248,343.0	0.0	384,477.1	83,402.8	310,154.7	101,741.4	0.0	353,237.3	15,329.6	0.0
Environmental Management	7,319.2	0.0	2,624.9	4,120.0	318.5	0.0	255.8	0.0	0.0	0.0
Fossil Energy	645,378.0	411,610.4	0.0	23,803.6	166,893.5	8,853.9	0.0	34,216.7	0.0	0.0
National Nuclear Security Administration	2,279,290.3	177,738.6	126,979.4	1,866,898.6	1,175.0	7,116.5	69,664.9	29,667.3	50.0	0.0
Defense Programs	2,154,972.6	165,677.8	117,974.9	1,796,608.0	1,175.0	3,862.0	69,664.9	10.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	124,317.7	12,060.8	9,004.5	70,290.6	0.0	3,254.5	0.0	29,657.3	50.0	0.0
Nuclear Energy	392,343.2	2,044.7	70,810.8	180,154.9	43,516.8	35,673.6	0.0	60,044.5	0.0	98.0
Office of Cybersecurity, Energy Security, and Emergency Response	35,759.0	11,602.5	2,999.9	7,713.0	3,920.0	1,800.0	0.0	7,723.6	0.0	0.0
Office of Science	130,832.7	182.3	130,650.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	22,424,756.9	4,819,605.1	1,221,883.1	422,445.3	11,761,847.3	9,948.6	3,714,078.8	17,978.7	296,394.0	160,575.9
Administration for Children and Families	1,574.4	575.0	0.0	0.0	0.0	0.0	999.4	0.0	0.0	0.0
Administration for Community Living	70,814.9	0.0	574.8	0.0	53,372.5	0.0	16,495.1	0.0	372.5	0.0
Agency for Healthcare Research and Quality	308,145.0	46,928.1	130,303.0	0.0	100,708.7	0.0	30,110.2	0.0	95.0	0.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	0.0	2,102.3	0.0	500.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	371,169.4	80,621.3	34,986.0	0.0	139,211.7	0.0	60,484.5	421.8	20,471.6	34,972.5
Centers for Medicare and Medicaid Services	223,561.9	0.0	0.0	0.0	14,414.5	0.0	0.0	*	209,147.4	0.0
Food and Drug Administration	463,951.7	333,666.7	10,423.3	0.0	75,216.2	0.0	39,376.2	0.0	1,880.8	3,388.4
Health Resources and Services Administration	32,481.5	2,503.4	0.0	0.0	29,003.1	0.0	975.0	0.0	0.0	0.0
National Institutes of Health	20,927,000.0	4,352,552.5	1,041,107.4	422,445.3	11,345,307.4	9,948.6	3,558,440.2	17,556.9	57,426.7	122,215.0

TABLE 39

Federal obligations for applied research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
National Aeronautics and Space Administration	2,554,761.5	931,699.2	1,256,380.7	3,037.7	160,682.6	159,409.0	22,660.9	7,143.3	915.3	12,832.9
National Science Foundation	889,239.3	1,092.6	198,510.8	0.0	615,276.3	0.0	71,872.6	0.0	2,131.2	355.8
Nuclear Regulatory Commission	66,399.3	29,671.8	7,865.6	11,307.5	1,464.6	2,988.4	553.3	12,199.4	0.0	348.8
Patient-Centered Outcomes Research Trust Fund	469,730.1	0.0	0.0	0.0	0.0	0.0	469,730.1	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	9,220.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9,220.3	0.0
Social Security Administration	69,740.0	37,215.6	20,070.6	0.0	9,451.4	0.0	2,883.6	0.0	0.0	118.8
Tennessee Valley Authority	6,444.9	0.0	6,444.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,828.7	0.0	4,828.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	18,234.2	0.0	16,234.2	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 40

Preliminary federal obligations for applied research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	43,924,162.8	12,477,021.8	7,273,614.7	2,799,098.7	14,801,786.1	381,106.1	4,594,999.2	821,135.1	492,120.3	283,280.9
Departments										
Department of Agriculture	1,272,905.4	800,618.1	3,890.3	0.0	433,658.4	0.0	26,564.5	0.0	6,419.8	1,754.3
Agricultural Marketing Service	3,500.3	3,500.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	634,800.0	582,110.6	0.0	0.0	46,978.4	0.0	4,293.5	0.0	89.7	1,327.9
Economic Research Service	87,000.0	79,901.0	1,753.9	0.0	4,095.9	0.0	1,240.8	0.0	8.4	0.0
Forest Service	149,933.1	120,164.2	1,347.9	0.0	18,978.6	0.0	3,954.5	0.0	5,061.6	426.4
National Agricultural Statistics Service	5,172.0	4,764.2	0.0	0.0	78.5	0.0	329.3	0.0	0.0	0.0
National Institute of Food and Agriculture	389,700.0	10,177.9	788.5	0.0	360,727.0	0.0	16,746.5	0.0	1,260.1	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	1,248,604.3	892,334.8	42,085.6	0.0	268,012.4	10,546.2	7,480.2	21,204.5	1,387.0	5,553.6
National Institute of Standards and Technology	526,900.1	430,824.6	30,579.6	0.0	34,620.3	0.0	4,008.2	21,204.5	113.7	5,549.1
National Oceanic and Atmospheric Administration	640,393.0	380,199.0	11,505.9	0.0	233,392.0	10,546.2	3,472.0	0.0	1,273.3	4.5
National Telecommunications and Information Administration	11,180.0	11,180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	70,131.2	70,131.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	6,582,063.9	2,101,746.4	2,886,952.9	72,499.1	941,204.1	62,408.0	330,435.0	140,885.6	1,367.2	44,565.6
Defense Advanced Research Projects Agency	1,378,670.0	75,369.7	844,364.9	20,289.8	296,169.8	16,976.1	86,084.3	15,237.1	269.1	23,909.1
Defense Health Agency	189,074.1	38,106.5	45,416.9	0.0	51,448.4	0.0	48,875.3	2,474.1	0.0	2,753.0
Department of the Air Force	1,829,506.6	1,085,090.8	596,370.8	2,456.4	89,010.5	1,198.3	3,589.9	48,567.0	790.3	2,432.5
Department of the Army	1,489,792.3	281,120.0	901,234.7	1,614.5	180,671.8	3,785.2	74,892.4	43,819.8	0.0	2,653.9
Department of the Navy	1,140,642.7	402,693.6	327,867.8	8,807.9	292,315.0	1,283.6	82,702.9	13,889.0	307.9	10,775.1
Other defense agencies	554,378.2	219,365.8	171,697.8	39,330.5	31,588.6	39,164.8	34,290.2	16,898.6	0.0	2,041.9
Department of Education	219,624.4	6,595.6	16,032.7	0.0	120,294.9	0.0	56,197.5	0.0	20,503.8	0.0
Department of Energy	5,992,756.4	1,068,288.6	1,339,756.6	2,294,509.7	580,683.5	158,175.1	17,668.5	517,794.3	15,830.1	50.0
Advanced Research Projects Agency—Energy	213,500.0	0.0	80,608.1	8,965.2	88,491.2	7,779.4	13,076.9	14,579.2	0.0	0.0

TABLE 40

Preliminary federal obligations for applied research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Electricity Delivery and Energy Reliability	51,654.0	1,180.8	3,404.0	12,044.9	6,126.2	5,173.7	3,610.6	19,954.3	159.5	0.0
Energy Efficiency and Renewable Energy	1,276,114.0	0.0	393,030.3	85,258.3	317,054.5	104,004.8	0.0	361,095.6	15,670.6	0.0
Environmental Management	9,659.0	0.0	2,667.3	2,045.3	4,007.2	500.9	0.0	438.3	0.0	0.0
Fossil Energy	683,292.0	514,036.0	0.0	18,814.4	122,464.5	11,036.8	0.0	16,940.3	0.0	0.0
National Nuclear Security Administration	3,344,271.5	550,803.3	726,280.4	2,017,114.3	0.0	4,359.2	981.0	44,683.3	0.0	50.0
Defense Programs	3,194,671.9	550,543.3	717,541.8	1,924,555.9	0.0	100.0	681.0	1,250.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	149,599.6	260.0	8,738.7	92,558.4	0.0	4,259.2	300.0	43,433.3	0.0	50.0
Nuclear Energy	387,473.9	281.4	115,766.4	150,267.4	35,734.9	25,320.2	0.0	60,103.4	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	26,792.0	1,987.0	18,000.0	0.0	6,805.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	21,620,702.8	4,662,575.2	1,206,571.7	404,257.2	11,280,473.5	9,520.3	3,557,861.1	16,801.0	321,809.1	160,833.7
Administration for Children and Families	3,084.9	35.0	0.0	0.0	0.0	0.0	3,049.9	0.0	0.0	0.0
Administration for Community Living	72,304.2	0.0	574.8	0.0	54,861.8	0.0	16,495.1	0.0	372.5	0.0
Agency for Healthcare Research and Quality	308,145.0	48,270.0	131,483.0	0.0	98,720.2	0.0	29,580.0	0.0	91.8	0.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	0.0	2,102.3	0.0	500.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	430,250.2	87,340.0	62,609.9	0.0	143,065.1	0.0	52,916.2	0.0	44,053.6	40,265.5
Centers for Medicare and Medicaid Services	228,033.2	0.0	0.0	0.0	14,702.8	0.0	0.0	0.0	213,330.3	0.0
Food and Drug Administration	495,000.0	355,996.2	11,120.8	0.0	80,249.7	0.0	42,011.3	0.0	2,006.7	3,615.2
Health Resources and Services Administration	31,383.1	3,028.2	0.0	0.0	27,379.9	0.0	975.0	0.0	0.0	0.0
National Institutes of Health	20,026,000.0	4,165,155.8	996,283.1	404,257.2	10,856,841.7	9,520.3	3,405,233.6	16,801.0	54,954.2	116,953.1
Office of the Secretary of Health and Human Services	16,900.0	2,750.0	4,500.0	0.0	2,550.0	0.0	7,100.0	0.0	0.0	0.0

TABLE 40

Preliminary federal obligations for applied research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Transportation	848,503.4	207,426.4	266,417.9	0.0	217,415.6	1,622.1	44,656.0	3,861.9	106,053.5	1,050.1
Federal Aviation Administration	297,422.6	87,337.2	80,205.8	0.0	99,506.7	0.0	29,212.1	1,160.7	0.0	0.0
Federal Highway Administration	355,765.3	66,460.9	101,844.4	0.0	76,739.0	1,622.1	11,370.6	625.9	97,102.3	0.0
Federal Motor Carrier Safety Administration	11,373.6	3,257.0	4,814.5	0.0	2,175.9	0.0	100.0	1,026.1	0.0	0.0
Federal Railroad Administration	35,543.4	11,905.7	16,705.4	0.0	4,976.1	0.0	906.1	0.0	0.0	1,050.1
Federal Transit Administration	54,000.0	0.0	22,202.7	0.0	19,778.9	0.0	3,067.1	0.0	8,951.2	0.0
National Highway Traffic Safety Administration	65,982.6	10,049.6	40,645.0	0.0	14,238.9	0.0	0.0	1,049.2	0.0	0.0
Office of the Secretary of Transportation	22,800.0	22,800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	5,616.0	5,616.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	52,466.5	2,018.2	25,453.3	75.0	0.0	0.0	0.0	8,350.0	0.0	16,570.0
Bureau of Engraving and Printing	52,373.3	2,000.0	25,453.3	0.0	0.0	0.0	0.0	8,350.0	0.0	16,570.0
U.S. Mint	93.2	18.2	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	987,767.4	919,420.7	0.0	0.0	0.0	0.0	0.0	68,346.7	0.0	0.0
Other agencies										
Administrative Office of the U.S. Courts	6,404.3	0.0	0.0	0.0	0.0	0.0	0.0	6,404.3	0.0	0.0
Agency for International Development	134,794.6	16,668.0	12,339.7	0.0	37,223.5	0.0	32,485.9	0.0	0.0	36,077.5
Appalachian Regional Commission	2.5	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Consumer Product Safety Commission	390.6	390.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	404,397.7	203,379.0	146,347.6	0.0	54,671.0	0.0	0.0	0.0	0.0	0.0
Federal Communications Commission	2,625.0	2,625.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	7,496.6	7,496.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1,216.3	1,216.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,055,632.6	818,252.6	941,322.4	1,830.3	117,109.2	134,994.9	22,984.1	5,768.1	388.3	12,982.7
National Science Foundation	900,260.5	1,106.2	200,971.2	0.0	622,902.0	0.0	72,763.4	0.0	2,157.6	360.2

TABLE 40

Preliminary federal obligations for applied research, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Nuclear Regulatory Commission	71,396.0	31,606.4	8,378.5	12,044.8	2,227.5	3,183.2	589.3	12,994.8	0.0	371.5
Patient-Centered Outcomes Research Trust Fund	390,870.7	0.0	0.0	0.0	0.0	0.0	390,870.7	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	5,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0	0.0
Social Security Administration	129,366.1	68,680.8	47,324.4	0.0	10,220.9	0.0	3,140.0	0.0	0.0	0.0
Tennessee Valley Authority	8,474.9	0.0	8,474.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,777.7	0.0	4,777.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	19,006.0	0.0	17,006.0	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 41

Federal obligations for applied research, by detailed field of science and engineering: FYs 2020–21

(Dollars in thousands)

Field	2020	2021 (preliminary)
All fields	43,758,135.4	43,924,162.8
Computer sciences and mathematics	3,387,917.5	3,472,233.8
Computer sciences	3,050,374.0	NA
Mathematics	177,657.4	NA
Other computer sciences and mathematics	159,886.1	NA
Engineering	10,324,132.3	11,366,714.7
Aeronautical engineering	1,023,122.7	NA
Astronautical engineering	901,007.3	NA
Chemical engineering	694,144.3	NA
Civil engineering	459,381.4	NA
Electrical engineering	675,279.7	NA
Mechanical engineering	407,276.7	NA
Metallurgy and materials engineering	423,415.0	NA
Other engineering	5,740,505.1	NA
Environmental sciences	1,872,519.8	1,888,112.5
Atmospheric sciences	345,386.8	NA
Geological sciences	44,191.2	NA
Oceanography	475,964.2	NA
Other environmental sciences	1,006,977.6	NA
Life sciences	21,720,001.5	21,126,826.8
Agricultural sciences	730,770.9	NA
Biological sciences (excluding environmental biology)	9,839,443.3	NA
Environmental biology	430,842.6	NA
Medical sciences	8,722,160.2	NA
Other life sciences	1,996,784.4	NA
Physical sciences	1,906,879.2	1,331,042.2
Astronomy	903.2	NA
Chemistry	389,772.1	NA
Physics	1,061,211.8	NA
Other physical sciences	454,992.1	NA
Psychology	1,664,157.3	1,627,111.0
Biological aspects	597.1	NA
Social aspects	30,046.0	NA
Other psychological sciences	1,633,514.2	NA
Social sciences	697,896.4	827,089.9
Anthropology	1,056.8	NA
Economics	163,821.7	NA
Political science	7,916.0	NA
Sociology	132,467.9	NA
Other social sciences	392,634.0	NA
Other sciences nec	2,184,631.6	2,285,031.9

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	43,758,135.4	3,387,917.5	10,324,132.3	1,872,519.8	21,720,001.5	1,906,879.2	1,664,157.3	697,896.4	2,184,631.6
Departments									
Department of Agriculture	1,224,571.1	6,389.8	61,953.6	6,635.8	971,775.8	45,482.6	0.0	132,333.4	0.0
Agricultural Marketing Service	3,476.3	0.0	0.0	0.0	3,476.3	0.0	0.0	0.0	0.0
Agricultural Research Service	569,411.5	740.2	5,124.7	2,505.4	523,118.4	36,556.2	0.0	1,366.6	0.0
Economic Research Service	81,718.0	0.0	0.0	0.0	0.0	0.0	0.0	81,718.0	0.0
Forest Service	172,456.5	651.3	4,757.8	2,580.4	136,076.0	1,646.8	0.0	26,744.3	0.0
National Agricultural Statistics Service	4,998.3	4,998.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	389,710.6	0.0	52,071.1	1,550.0	306,305.2	7,279.7	0.0	22,504.6	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	1,109,644.1	158,281.0	238,464.0	484,136.8	76,126.3	75,145.7	311.6	46,690.2	30,488.6
National Institute of Standards and Technology	466,253.3	146,317.3	221,454.0	8,966.7	22,065.2	50,958.7	140.1	482.4	15,868.9
National Oceanic and Atmospheric Administration	597,771.6	5,582.0	9,318.0	475,170.1	54,061.1	24,187.0	0.0	14,833.8	14,619.7
National Telecommunications and Information Administration	7,692.0	0.0	7,692.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	37,927.3	6,381.7	0.0	0.0	0.0	0.0	171.5	31,374.1	0.0
Department of Defense	6,416,163.1	2,021,857.6	2,236,322.4	263,815.6	765,008.3	440,295.7	66,576.6	40,971.3	581,315.6
Defense Advanced Research Projects Agency	1,524,182.0	743,624.5	432,621.5	57,148.4	242,384.1	25,851.1	7,768.9	0.0	14,783.5
Defense Health Agency	153,364.3	0.0	2,050.3	423.0	150,341.6	0.0	165.1	235.0	149.4
Department of the Air Force	1,728,512.4	822,963.7	625,439.3	2,525.3	15,386.9	150,725.2	538.8	368.1	110,565.1
Department of the Army	1,382,705.8	153,389.2	630,480.1	8,531.4	214,105.6	4,622.4	52,159.8	0.0	319,417.4
Department of the Navy	1,056,743.3	211,401.7	460,232.2	194,976.0	38,025.3	41,535.2	4,789.3	40,194.2	65,589.3
Other defense agencies	570,655.3	90,478.5	85,499.0	211.5	104,764.9	217,561.7	1,154.7	173.9	70,810.9
Department of Education	135,827.0	0.0	0.0	0.0	0.0	0.0	0.0	135,827.0	0.0
Department of Energy	5,023,578.5	761,374.1	3,130,609.7	76,914.5	39,003.2	995,780.7	0.0	77.9	19,818.3
Advanced Research Projects Agency—Energy	218,999.6	28,152.0	116,395.2	955.6	37,004.8	36,414.2	0.0	77.9	0.0
Electricity Delivery and Energy Reliability	65,313.5	0.0	65,313.5	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,248,343.0	0.0	1,248,343.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	7,319.2	0.0	0.0	7,319.2	0.0	0.0	0.0	0.0	0.0
Fossil Energy	645,378.0	0.0	481,865.8	61,135.0	0.0	102,377.2	0.0	0.0	0.0
National Nuclear Security Administration	2,279,290.3	692,742.4	730,710.7	4,792.0	100.0	850,945.2	0.0	0.0	0.0
Defense Programs	2,154,972.6	681,075.8	715,094.3	0.0	0.0	758,802.5	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	124,317.7	11,666.5	15,616.4	4,792.0	100.0	92,142.7	0.0	0.0	0.0

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Nuclear Energy	392,343.2	0.0	392,343.2	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	35,759.0	35,759.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	130,832.7	4,720.8	95,638.2	2,712.7	1,898.5	6,044.2	0.0	0.0	19,818.3
Department of Health and Human Services	22,424,756.9	187,952.9	1,247,656.7	302,066.6	18,022,580.0	53,595.1	1,454,106.5	177,955.2	978,844.0
Administration for Children and Families	1,574.4	0.0	0.0	0.0	0.0	0.0	0.0	1,574.4	0.0
Administration for Community Living	70,814.9	0.0	0.0	0.0	0.0	0.0	0.0	70,814.9	0.0
Agency for Healthcare Research and Quality	308,145.0	43,388.9	803.0	0.0	172,573.6	0.0	7,799.5	20,813.1	62,767.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	9,602.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	371,169.4	0.0	0.0	94,950.0	266,098.5	0.0	0.0	312.0	9,808.9
Centers for Medicare and Medicaid Services	223,561.9	0.0	0.0	0.0	223,561.9	0.0	0.0	0.0	0.0
Food and Drug Administration	463,951.7	0.0	0.0	0.0	463,951.7	0.0	0.0	0.0	0.0
Health Resources and Services Administration	32,481.5	0.0	0.0	0.0	16,449.3	0.0	0.0	1,188.7	14,843.6
National Institutes of Health	20,927,000.0	144,564.0	1,246,853.7	197,514.4	16,879,944.9	53,595.1	1,446,307.0	66,796.3	891,424.5
Office of the Secretary of Health and Human Services	16,455.8	0.0	0.0	0.0	0.0	0.0	0.0	16,455.8	0.0
Office of the Assistant Secretary for Planning and Evaluation	16,455.8	0.0	0.0	0.0	0.0	0.0	0.0	16,455.8	0.0
Department of Homeland Security	177,854.9	11,438.3	55,057.7	203.1	70,329.4	23,941.3	14.5	0.0	16,870.5
Countering Weapons of Mass Destruction Office	17,846.6	8,422.5	0.0	0.0	323.6	9,100.5	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	6,954.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,954.5
Science and Technology Directorate	151,568.8	2,870.8	53,935.4	0.0	70,005.8	14,840.8	0.0	0.0	9,916.1
U.S. Coast Guard	1,485.0	145.1	1,122.4	203.1	0.0	0.0	14.5	0.0	0.0
Department of the Interior	614,455.3	3,051.9	11,351.7	389,997.8	200,503.7	244.2	0.0	8,517.0	788.9
Bureau of Indian Affairs	*	0.0	0.0	*	0.0	0.0	0.0	0.0	0.0
Bureau of Land Management	13,724.0	0.0	0.0	0.0	13,724.0	0.0	0.0	0.0	0.0
Bureau of Ocean Energy Management	59,254.3	3,051.9	0.0	47,686.9	0.0	0.0	0.0	7,984.7	530.8
Bureau of Reclamation	19,147.1	0.0	9,573.6	9,573.6	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	4,205.7	0.0	1,778.2	2,169.4	0.0	0.0	0.0	0.0	258.1
National Park Service	9,365.1	0.0	0.0	4,296.9	4,291.7	244.2	0.0	532.3	0.0
Office of Surface Mining Reclamation and Enforcement	562.0	0.0	0.0	562.0	0.0	0.0	0.0	0.0	0.0

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
U.S. Fish and Wildlife Service	32,650.0	0.0	0.0	0.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	475,547.0	0.0	0.0	325,709.0	149,838.0	0.0	0.0	0.0	0.0
Department of Justice	83,797.4	5,485.4	1,757.7	871.4	11,236.4	6,403.9	1,641.2	51,380.4	5,021.1
Bureau of Prisons	1,804.0	0.0	0.0	0.0	0.0	0.0	0.0	1,804.0	0.0
Federal Bureau of Investigation	4,732.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,732.7
Office of Justice Programs	77,260.7	5,485.4	1,757.7	871.4	11,236.4	6,403.9	1,641.2	49,576.4	288.4
Department of Labor	4,748.3	0.0	0.0	0.0	0.0	0.0	0.0	4,748.3	0.0
Employee Benefits Security Administration	2,745.6	0.0	0.0	0.0	0.0	0.0	0.0	2,745.6	0.0
Occupational Safety and Health Administration	2,002.7	0.0	0.0	0.0	0.0	0.0	0.0	2,002.7	0.0
Department of State	30,000.0	0.0	0.0	0.0	28,000.0	0.0	0.0	2,000.0	0.0
Department of Transportation	900,214.7	37,039.1	725,884.4	34,727.1	7,923.9	2,627.9	17,585.1	1,738.1	72,689.1
Federal Aviation Administration	246,975.5	16,494.3	176,734.7	21,759.3	7,923.9	0.0	17,585.1	0.0	6,478.3
Federal Highway Administration	471,854.8	0.0	471,854.8	0.0	0.0	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	8,918.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,918.1
Federal Railroad Administration	34,762.8	0.0	33,024.7	0.0	0.0	0.0	0.0	1,738.1	0.0
Federal Transit Administration	40,153.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40,153.8
National Highway Traffic Safety Administration	68,862.5	20,235.2	19,066.4	12,967.8	0.0	0.0	0.0	0.0	16,593.0
Office of the Secretary of Transportation	12,139.9	0.0	12,139.9	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	16,547.3	309.6	13,063.9	0.0	0.0	2,627.9	0.0	0.0	546.0
Department of the Treasury	44,022.9	0.0	115.2	0.0	0.0	43,907.7	0.0	0.0	0.0
Bureau of Engraving and Printing	43,907.7	0.0	0.0	0.0	0.0	43,907.7	0.0	0.0	0.0
U.S. Mint	115.2	0.0	115.2	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	918,056.7	0.0	49,136.6	0.0	674,885.1	0.0	123,879.9	0.0	70,155.1
Other agencies									
Administrative Office of the U.S. Courts	5,045.5	5,045.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	134,794.6	0.0	0.0	0.0	125,214.9	0.0	0.0	9,579.7	0.0
Appalachian Regional Commission	684.3	0.0	0.0	0.0	0.0	0.0	0.0	684.3	0.0
Consumer Product Safety Commission	385.0	0.0	0.0	365.7	0.0	19.2	0.0	0.0	0.0
Environmental Protection Agency	411,947.5	8,775.0	58,423.4	169,788.1	162,744.7	9,836.6	0.0	2,379.7	0.0
Federal Communications Commission	1,800.0	300.0	1,050.0	0.0	0.0	450.0	0.0	0.0	0.0
Federal Trade Commission	5,974.3	0.0	0.0	0.0	0.0	0.0	0.0	5,974.3	0.0
Library of Congress	1,215.2	0.0	0.0	0.0	0.0	1,215.2	0.0	0.0	0.0
National Aeronautics and Space Administration	2,554,761.5	0.0	2,085,963.7	121,495.1	88,984.9	192,735.2	0.0	0.0	65,582.7

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Science Foundation	889,239.3	180,927.0	329,306.8	12,282.0	5,954.9	15,198.2	42.0	2,470.9	343,057.7
Nuclear Regulatory Commission	66,399.3	0.0	66,399.3	0.0	0.0	0.0	0.0	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	469,730.1	0.0	0.0	0.0	469,730.1	0.0	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	9,220.3	0.0	0.0	9,220.3	0.0	0.0	0.0	0.0	0.0
Social Security Administration	69,740.0	0.0	0.0	0.0	0.0	0.0	0.0	69,740.0	0.0
Tennessee Valley Authority	6,444.9	0.0	6,444.9	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,828.7	0.0	0.0	0.0	0.0	0.0	0.0	4,828.7	0.0
U.S. Postal Service	18,234.2	0.0	18,234.2	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	43,924,162.8	3,472,233.8	11,366,714.7	1,888,112.5	21,126,826.8	1,331,042.2	1,627,111.0	827,089.9	2,285,031.9
Departments									
Department of Agriculture	1,272,905.4	6,648.5	61,862.0	6,923.5	1,012,807.0	50,068.1	0.0	134,596.3	0.0
Agricultural Marketing Service	3,500.3	0.0	0.0	0.0	3,500.3	0.0	0.0	0.0	0.0
Agricultural Research Service	634,800.0	825.2	5,713.2	2,793.1	583,190.8	40,754.2	0.0	1,523.5	0.0
Economic Research Service	87,000.0	0.0	0.0	0.0	0.0	0.0	0.0	87,000.0	0.0
Forest Service	149,933.1	651.3	4,079.1	2,580.4	117,019.1	2,034.5	0.0	23,568.8	0.0
National Agricultural Statistics Service	5,172.0	5,172.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	389,700.0	0.0	52,069.7	1,550.0	306,296.9	7,279.5	0.0	22,504.0	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	1,248,604.3	174,363.6	276,771.9	527,093.3	79,442.6	81,106.8	234.2	76,198.0	33,394.0
National Institute of Standards and Technology	526,900.1	159,911.5	256,338.9	10,101.6	23,381.4	58,360.8	148.4	511.2	18,146.5
National Oceanic and Atmospheric Administration	640,393.0	5,249.0	9,253.0	516,991.8	56,061.3	22,746.0	0.0	14,844.5	15,247.5
National Telecommunications and Information Administration	11,180.0	0.0	11,180.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	70,131.2	9,203.1	0.0	0.0	0.0	0.0	85.7	60,842.4	0.0
Department of Defense	6,582,063.9	2,033,999.4	2,311,617.9	274,279.1	791,432.2	354,395.9	70,853.6	43,974.4	701,511.5
Defense Advanced Research Projects Agency	1,378,670.0	672,631.5	391,319.6	51,692.5	219,243.9	23,383.1	7,027.3	0.0	13,372.1
Defense Health Agency	189,074.1	0.0	0.0	194.0	186,004.7	0.0	493.2	0.0	2,382.1
Department of the Air Force	1,829,506.6	871,185.9	661,798.1	2,663.2	16,288.5	159,557.1	570.4	389.7	117,053.8
Department of the Army	1,489,792.3	165,268.7	679,308.9	9,192.1	230,687.4	4,980.4	56,199.4	0.0	344,155.3
Department of the Navy	1,140,642.7	229,496.4	495,735.5	210,317.2	41,017.2	44,803.3	5,166.1	43,356.8	70,750.1
Other defense agencies	554,378.2	95,416.9	83,455.8	220.0	98,190.4	121,672.0	1,397.2	227.9	153,798.1
Department of Education	219,624.4	0.0	0.0	0.0	0.0	0.0	0.0	162,366.3	57,258.0
Department of Energy	5,992,756.4	809,078.6	4,613,723.3	83,459.9	36,205.5	450,213.1	0.0	75.9	0.0
Advanced Research Projects Agency—Energy	213,500.0	27,445.0	113,472.2	931.6	36,075.5	35,499.7	0.0	75.9	0.0
Electricity Delivery and Energy Reliability	51,654.0	0.0	51,654.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,276,114.0	0.0	1,276,114.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	9,659.0	0.0	0.0	9,659.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	683,292.0	0.0	503,569.7	67,927.4	0.0	111,794.9	0.0	0.0	0.0
National Nuclear Security Administration	3,344,271.5	754,841.6	2,281,439.5	4,941.9	130.0	302,918.5	0.0	0.0	0.0
Defense Programs	3,194,671.9	737,171.1	2,271,346.6	0.0	0.0	186,154.2	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	149,599.6	17,670.5	10,092.9	4,941.9	130.0	116,764.3	0.0	0.0	0.0

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Nuclear Energy	387,473.9	0.0	387,473.9	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	26,792.0	26,792.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	21,620,702.8	181,728.8	1,193,974.2	320,360.7	17,365,016.5	51,287.6	1,391,836.5	177,334.6	939,163.9
Administration for Children and Families	3,084.9	0.0	0.0	0.0	0.0	0.0	0.0	3,084.9	0.0
Administration for Community Living	72,304.2	0.0	0.0	0.0	0.0	0.0	0.0	72,304.2	0.0
Agency for Healthcare Research and Quality	308,145.0	43,388.9	803.0	0.0	172,573.6	0.0	7,799.5	20,813.1	62,767.0
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	9,602.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	430,250.2	0.0	0.0	121,748.0	299,247.2	0.0	0.0	312.0	8,943.1
Centers for Medicare and Medicaid Services	228,033.2	0.0	0.0	0.0	228,033.2	0.0	0.0	0.0	0.0
Food and Drug Administration	495,000.0	0.0	0.0	0.0	495,000.0	0.0	0.0	0.0	0.0
Health Resources and Services Administration	31,383.1	0.0	0.0	0.0	16,974.0	0.0	0.0	0.0	14,409.1
National Institutes of Health	20,026,000.0	138,339.9	1,193,171.2	189,010.5	16,153,188.6	51,287.6	1,384,037.1	63,920.5	853,044.7
Office of the Secretary of Health and Human Services	16,900.0	0.0	0.0	0.0	0.0	0.0	0.0	16,900.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	16,900.0	0.0	0.0	0.0	0.0	0.0	0.0	16,900.0	0.0
Department of Homeland Security	187,035.4	15,371.1	72,330.0	421.6	33,006.0	31,571.3	30.1	0.0	34,305.2
Countering Weapons of Mass Destruction Office	16,647.4	6,070.0	0.0	0.0	1,006.0	9,571.3	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	8,305.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,305.2
Science and Technology Directorate	159,000.0	9,000.0	70,000.0	0.0	32,000.0	22,000.0	0.0	0.0	26,000.0
U.S. Coast Guard	3,082.8	301.1	2,330.0	421.6	0.0	0.0	30.1	0.0	0.0
Department of the Interior	649,452.2	3,103.3	21,026.4	348,768.6	264,498.7	244.2	0.0	10,940.0	871.0
Bureau of Indian Affairs	*	0.0	0.0	*	0.0	0.0	0.0	0.0	0.0
Bureau of Land Management	12,247.0	0.0	0.0	0.0	12,247.0	0.0	0.0	0.0	0.0
Bureau of Ocean Energy Management	65,183.2	3,103.3	0.0	51,073.0	0.0	0.0	0.0	10,407.7	599.2
Bureau of Reclamation	18,000.0	0.0	9,000.0	9,000.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	14,964.9	0.0	12,026.4	2,666.7	0.0	0.0	0.0	0.0	271.8
National Park Service	9,365.1	0.0	0.0	4,296.9	4,291.7	244.2	0.0	532.3	0.0
Office of Surface Mining Reclamation and Enforcement	2,161.0	0.0	0.0	2,161.0	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	0.0	0.0	0.0	32,650.0	0.0	0.0	0.0	0.0

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
U.S. Geological Survey	494,881.0	0.0	0.0	279,571.0	215,310.0	0.0	0.0	0.0	0.0
Department of Justice	85,871.5	6,033.9	1,933.5	958.5	12,360.0	7,044.3	1,805.3	54,469.8	1,266.1
Bureau of Prisons	1,928.0	0.0	0.0	0.0	0.0	0.0	0.0	1,928.0	0.0
Federal Bureau of Investigation	948.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	948.9
Office of Justice Programs	82,994.6	6,033.9	1,933.5	958.5	12,360.0	7,044.3	1,805.3	52,541.8	317.2
Department of Labor	4,297.2	0.0	0.0	0.0	0.0	0.0	0.0	4,297.2	0.0
Employee Benefits Security Administration	2,256.5	0.0	0.0	0.0	0.0	0.0	0.0	2,256.5	0.0
Occupational Safety and Health Administration	2,040.7	0.0	0.0	0.0	0.0	0.0	0.0	2,040.7	0.0
Department of State	30,000.0	0.0	0.0	0.0	25,000.0	0.0	0.0	5,000.0	0.0
Department of Transportation	848,503.4	43,043.6	630,658.9	28,993.6	12,980.9	4,020.0	27,979.9	1,777.2	99,049.3
Federal Aviation Administration	297,422.6	23,654.6	199,008.3	16,568.1	12,980.9	0.0	27,979.9	0.0	17,230.8
Federal Highway Administration	355,765.3	0.0	355,765.3	0.0	0.0	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	11,373.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11,373.6
Federal Railroad Administration	35,543.4	0.0	33,766.2	0.0	0.0	0.0	0.0	1,777.2	0.0
Federal Transit Administration	54,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54,000.0
National Highway Traffic Safety Administration	65,982.6	19,389.0	18,269.1	12,425.5	0.0	0.0	0.0	0.0	15,899.0
Office of the Secretary of Transportation	22,800.0	0.0	22,800.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	5,616.0	0.0	1,050.0	0.0	0.0	4,020.0	0.0	0.0	546.0
Department of the Treasury	52,466.5	0.0	93.2	0.0	0.0	52,373.3	0.0	0.0	0.0
Bureau of Engraving and Printing	52,373.3	0.0	0.0	0.0	0.0	52,373.3	0.0	0.0	0.0
U.S. Mint	93.2	0.0	93.2	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	987,767.4	0.0	53,281.2	0.0	731,810.5	0.0	134,329.0	0.0	68,346.7
Other agencies									
Administrative Office of the U.S. Courts	6,404.3	6,404.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	134,794.6	0.0	0.0	0.0	125,214.9	0.0	0.0	9,579.7	0.0
Appalachian Regional Commission	2.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0
Consumer Product Safety Commission	390.6	0.0	0.0	372.6	0.0	17.9	0.0	0.0	0.0
Environmental Protection Agency	404,397.7	8,614.2	57,352.7	166,676.3	159,762.1	9,656.3	0.0	2,336.1	0.0
Federal Communications Commission	2,625.0	675.0	1,350.0	0.0	0.0	600.0	0.0	0.0	0.0
Federal Trade Commission	7,496.6	0.0	0.0	0.0	0.0	0.0	0.0	7,496.6	0.0
Library of Congress	1,216.3	0.0	0.0	0.0	0.0	1,216.3	0.0	0.0	0.0
National Aeronautics and Space Administration	2,055,632.6	0.0	1,638,474.5	112,370.4	80,390.4	221,840.7	0.0	0.0	2,556.6
National Science Foundation	900,260.5	183,169.4	333,388.2	12,434.2	6,028.7	15,386.5	42.5	2,501.5	347,309.5

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Nuclear Regulatory Commission	71,396.0	0.0	71,396.0	0.0	0.0	0.0	0.0	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	390,870.7	0.0	0.0	0.0	390,870.7	0.0	0.0	0.0	0.0
RESTORE Act Centers of Excellence Research Grants Program	5,000.0	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	129,366.1	0.0	0.0	0.0	0.0	0.0	0.0	129,366.1	0.0
Tennessee Valley Authority	8,474.9	0.0	8,474.9	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	4,777.7	0.0	0.0	0.0	0.0	0.0	0.0	4,777.7	0.0
U.S. Postal Service	19,006.0	0.0	19,006.0	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 44

Federal obligations for applied research in computer sciences and mathematics, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies	3,387,917.5	3,050,374.0	177,657.4	159,886.1
Departments				
Department of Agriculture	6,389.8	1,268.2	5,121.6	0.0
Agricultural Research Service	740.2	740.2	0.0	0.0
Forest Service	651.3	528.0	123.3	0.0
National Agricultural Statistics Service	4,998.3	0.0	4,998.3	0.0
Department of Commerce	158,281.0	148,226.2	6,458.9	3,595.9
National Institute of Standards and Technology	146,317.3	143,465.4	196.8	2,655.0
National Oceanic and Atmospheric Administration	5,582.0	3,721.0	1,861.0	0.0
U.S. Census Bureau	6,381.7	1,039.8	4,401.1	940.8
Department of Defense	2,021,857.6	1,874,998.1	3,379.1	143,480.4
Defense Advanced Research Projects Agency	743,624.5	666,272.3	647.6	76,704.6
Department of the Air Force	822,963.7	811,670.5	994.5	10,298.8
Department of the Army	153,389.2	121,935.4	0.0	31,453.8
Department of the Navy	211,401.7	193,498.9	1,666.4	16,236.4
Other defense agencies	90,478.5	81,621.0	70.6	8,786.8
Department of Energy	761,374.1	749,105.5	1,144.7	11,123.9
Advanced Research Projects Agency—Energy	28,152.0	28,152.0	0.0	0.0
National Nuclear Security Administration	692,742.4	682,565.8	1,144.7	9,031.8
Defense Programs	681,075.8	681,075.8	0.0	0.0
Office of Defense Nuclear Nonproliferation	11,666.5	1,490.0	1,144.7	9,031.8
Office of Cybersecurity, Energy Security, and Emergency Response	35,759.0	35,759.0	0.0	0.0
Office of Science	4,720.8	2,628.7	0.0	2,092.1
Department of Health and Human Services	187,952.9	34,988.8	152,964.2	0.0
Agency for Healthcare Research and Quality	43,388.9	34,988.8	8,400.1	0.0
National Institutes of Health	144,564.0	0.0	144,564.0	0.0
Department of Homeland Security	11,438.3	11,438.3	0.0	0.0
Countering Weapons of Mass Destruction Office	8,422.5	8,422.5	0.0	0.0
Science and Technology Directorate	2,870.8	2,870.8	0.0	0.0
U.S. Coast Guard	145.1	145.1	0.0	0.0
Department of the Interior	3,051.9	3,051.9	0.0	0.0
Bureau of Ocean Energy Management	3,051.9	3,051.9	0.0	0.0
Department of Justice	5,485.4	4,454.8	160.1	870.5
Office of Justice Programs	5,485.4	4,454.8	160.1	870.5
Department of Transportation	37,039.1	32,052.9	4,986.2	0.0
Federal Aviation Administration	16,494.3	11,508.1	4,986.2	0.0
National Highway Traffic Safety Administration	20,235.2	20,235.2	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	309.6	309.6	0.0	0.0
Other agencies				
Administrative Office of the U.S. Courts	5,045.5	5,045.5	0.0	0.0
Environmental Protection Agency	8,775.0	4,826.9	3,132.7	815.4
Federal Communications Commission	300.0	300.0	0.0	0.0
National Science Foundation	180,927.0	180,617.0	310.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 45

Federal obligations for applied research in engineering, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
All agencies	10,324,132.3	1,023,122.7	901,007.3	694,144.3	459,381.4	675,279.7	407,276.7	423,415.0	5,740,505.1
Departments									
Department of Agriculture	61,953.6	0.0	0.0	50.0	0.0	0.0	0.0	0.0	61,903.6
Agricultural Research Service	5,124.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,124.7
Forest Service	4,757.8	0.0	0.0	50.0	0.0	0.0	0.0	0.0	4,707.8
National Institute of Food and Agriculture	52,071.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52,071.1
Department of Commerce	238,464.0	0.0	0.0	199.6	54,482.8	101,243.8	2,727.3	42,253.2	37,557.3
National Institute of Standards and Technology	221,454.0	0.0	0.0	199.6	48,885.8	89,830.8	2,727.3	42,253.2	37,557.3
National Oceanic and Atmospheric Administration	9,318.0	0.0	0.0	0.0	5,597.0	3,721.0	0.0	0.0	0.0
National Telecommunications and Information Administration	7,692.0	0.0	0.0	0.0	0.0	7,692.0	0.0	0.0	0.0
Department of Defense	2,236,322.4	418,234.1	212,348.5	100,937.7	15,890.3	421,998.3	311,970.4	151,355.2	603,587.8
Defense Advanced Research Projects Agency	432,621.5	52,546.7	117.7	36,073.5	0.0	89,556.4	5,445.8	29,912.5	218,968.8
Defense Health Agency	2,050.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,050.3
Department of the Air Force	625,439.3	247,085.0	191,606.5	0.0	6,575.0	136,776.5	27,491.9	230.0	15,674.5
Department of the Army	630,480.1	80,472.5	18,009.1	58,564.6	9,315.3	43,367.1	222,231.4	50,411.5	148,108.7
Department of the Navy	460,232.2	35,844.8	0.0	0.0	0.0	124,281.0	44,629.1	67,809.0	187,668.3
Other defense agencies	85,499.0	2,285.2	2,615.1	6,299.7	0.0	28,017.3	12,172.2	2,992.3	31,117.3
Department of Energy	3,130,609.7	0.0	50.0	531,569.4	6,965.3	92,968.2	33,961.6	174,075.4	2,291,019.9
Advanced Research Projects Agency—Energy	116,395.2	0.0	0.0	47,653.3	0.0	14,536.8	25,160.5	21,034.2	8,010.3
Electricity Delivery and Energy Reliability	65,313.5	0.0	0.0	0.0	0.0	65,313.5	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,248,343.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,248,343.0
Fossil Energy	481,865.8	0.0	0.0	477,992.2	3,873.6	0.0	0.0	0.0	0.0
National Nuclear Security Administration	730,710.7	0.0	50.0	108.0	0.0	262.5	0.0	128,880.9	601,409.3
Defense Programs	715,094.3	0.0	0.0	0.0	0.0	0.0	0.0	127,533.3	587,561.0

TABLE 45

Federal obligations for applied research in engineering, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Environmental Protection Agency	58,423.4	0.0	0.0	21,242.7	2,452.2	0.0	697.6	528.5	33,502.4
Federal Communications Commission	1,050.0	0.0	0.0	0.0	0.0	1,050.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,085,963.7	591,635.9	688,608.8	0.0	0.0	0.0	0.0	0.0	805,718.9
National Science Foundation	329,306.8	0.0	0.0	14,136.4	955.0	21,955.1	13,737.1	612.6	277,910.5
Nuclear Regulatory Commission	66,399.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66,399.3
Tennessee Valley Authority	6,444.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,444.9
U.S. Postal Service	18,234.2	0.0	0.0	0.0	0.0	10,028.8	8,205.4	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 46

Federal obligations for applied research in environmental sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies	1,872,519.8	345,386.8	44,191.2	475,964.2	1,006,977.6
Departments					
Department of Agriculture	6,635.8	4,243.5	56.9	0.0	2,335.3
Agricultural Research Service	2,505.4	2,448.5	56.9	0.0	0.0
Forest Service	2,580.4	245.1	0.0	0.0	2,335.3
National Institute of Food and Agriculture	1,550.0	1,550.0	0.0	0.0	0.0
Department of Commerce	484,136.8	216,602.8	961.0	251,546.3	15,026.6
National Institute of Standards and Technology	8,966.7	8,471.7	495.0	0.0	0.0
National Oceanic and Atmospheric Administration	475,170.1	208,131.1	466.0	251,546.3	15,026.6
Department of Defense	263,815.6	39,084.8	1.4	179,184.8	45,544.6
Defense Advanced Research Projects Agency	57,148.4	12,830.6	0.0	13,905.9	30,411.9
Defense Health Agency	423.0	0.0	0.0	0.0	423.0
Department of the Air Force	2,525.3	2,352.7	1.4	0.0	171.1
Department of the Army	8,531.4	1,420.0	0.0	0.0	7,111.4
Department of the Navy	194,976.0	22,481.5	0.0	165,278.8	7,215.6
Other defense agencies	211.5	0.0	0.0	0.0	211.5
Department of Energy	76,914.5	300.0	3,151.6	955.6	72,507.3
Advanced Research Projects Agency—Energy	955.6	0.0	0.0	955.6	0.0
Environmental Management	7,319.2	0.0	0.0	0.0	7,319.2
Fossil Energy	61,135.0	0.0	0.0	0.0	61,135.0
National Nuclear Security Administration	4,792.0	300.0	2,952.0	0.0	1,540.0
Office of Defense Nuclear Nonproliferation	4,792.0	300.0	2,952.0	0.0	1,540.0
Office of Science	2,712.7	0.0	199.6	0.0	2,513.1
Department of Health and Human Services	302,066.6	0.0	0.0	0.0	302,066.6
Agency for Toxic Substances and Disease Registry	9,602.3	0.0	0.0	0.0	9,602.3
Centers for Disease Control and Prevention	94,950.0	0.0	0.0	0.0	94,950.0
National Institutes of Health	197,514.4	0.0	0.0	0.0	197,514.4
Department of Homeland Security	203.1	0.0	0.0	0.0	203.1
U.S. Coast Guard	203.1	0.0	0.0	0.0	203.1
Department of the Interior	389,997.8	1,786.9	35,651.5	29,731.8	322,827.6
Bureau of Indian Affairs	*	0.0	0.0	0.0	*
Bureau of Ocean Energy Management	47,686.9	452.1	9,136.7	29,391.6	8,706.5
Bureau of Reclamation	9,573.6	0.0	0.0	0.0	9,573.6
Bureau of Safety and Environmental Enforcement	2,169.4	0.0	0.0	30.9	2,138.5
National Park Service	4,296.9	1,334.8	96.4	309.3	2,556.4
Office of Surface Mining Reclamation and Enforcement	562.0	0.0	0.0	0.0	562.0
U.S. Geological Survey	325,709.0	0.0	26,418.3	0.0	299,290.6
Department of Justice	871.4	0.0	871.4	0.0	0.0
Office of Justice Programs	871.4	0.0	871.4	0.0	0.0
Department of Transportation	34,727.1	21,759.3	0.0	0.0	12,967.8

TABLE 46

Federal obligations for applied research in environmental sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
Federal Aviation Administration	21,759.3	21,759.3	0.0	0.0	0.0
National Highway Traffic Safety Administration	12,967.8	0.0	0.0	0.0	12,967.8
Other agencies					
Consumer Product Safety Commission	365.7	0.0	0.0	0.0	365.7
Environmental Protection Agency	169,788.1	59,432.0	2,676.5	14,358.1	93,321.4
National Aeronautics and Space Administration	121,495.1	0.0	0.0	0.0	121,495.1
National Science Foundation	12,282.0	2,177.5	820.8	187.5	9,096.3
RESTORE Act Centers of Excellence Research Grants Program	9,220.3	0.0	0.0	0.0	9,220.3

* = amount greater than \$0 but less than \$50.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 47

Federal obligations for applied research in life sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies	21,720,001.5	730,770.9	9,839,443.3	430,842.6	8,722,160.2	1,996,784.4
Departments						
Department of Agriculture	971,775.8	570,143.7	127,367.7	261,693.0	11,917.7	653.7
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0
Agricultural Research Service	523,118.4	406,389.0	36,442.3	71,005.6	9,281.4	0.0
Forest Service	136,076.0	13,358.8	8,038.4	114,025.1	0.0	653.7
National Institute of Food and Agriculture	306,305.2	144,119.7	82,886.9	76,662.3	2,636.3	0.0
Rural Business-Cooperative Service	2,800.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	76,126.3	8,396.0	34,481.1	15,589.7	5,131.0	12,528.5
National Institute of Standards and Technology	22,065.2	0.0	22,065.2	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	54,061.1	8,396.0	12,415.9	15,589.7	5,131.0	12,528.5
Department of Defense	765,008.3	0.0	120,185.0	22,444.7	587,399.2	34,979.4
Defense Advanced Research Projects Agency	242,384.1	0.0	85,335.9	22,444.7	134,603.5	0.0
Defense Health Agency	150,341.6	0.0	0.0	0.0	150,341.6	0.0
Department of the Air Force	15,386.9	0.0	1,004.8	0.0	0.0	14,382.2
Department of the Army	214,105.6	0.0	0.0	0.0	214,105.6	0.0
Department of the Navy	38,025.3	0.0	9,352.9	0.0	10,627.6	18,044.8
Other defense agencies	104,764.9	0.0	24,491.4	0.0	77,721.0	2,552.4
Department of Energy	39,003.2	34,750.2	2,354.5	0.0	0.0	1,898.5
Advanced Research Projects Agency—Energy	37,004.8	34,750.2	2,254.5	0.0	0.0	0.0
National Nuclear Security Administration	100.0	0.0	100.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	100.0	0.0	100.0	0.0	0.0	0.0
Office of Science	1,898.5	0.0	0.0	0.0	0.0	1,898.5
Department of Health and Human Services	18,022,580.0	0.0	9,280,018.3	0.0	6,889,319.9	1,853,241.8
Agency for Healthcare Research and Quality	172,573.6	0.0	0.0	0.0	171,307.5	1,266.1
Centers for Disease Control and Prevention	266,098.5	0.0	68,640.2	0.0	88,971.4	108,487.0
Centers for Medicare and Medicaid Services	223,561.9	0.0	0.0	0.0	223,561.9	0.0
Food and Drug Administration	463,951.7	0.0	463,951.7	0.0	0.0	0.0
Health Resources and Services Administration	16,449.3	0.0	0.0	0.0	16,449.3	0.0
National Institutes of Health	16,879,944.9	0.0	8,747,426.4	0.0	6,389,029.8	1,743,488.7
Department of Homeland Security	70,329.4	0.0	70,329.4	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	323.6	0.0	323.6	0.0	0.0	0.0

TABLE 47

Federal obligations for applied research in life sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
Science and Technology Directorate	70,005.8	0.0	70,005.8	0.0	0.0	0.0
Department of the Interior	200,503.7	32,650.0	82,498.9	85,354.8	0.0	0.0
Bureau of Land Management	13,724.0	0.0	0.0	13,724.0	0.0	0.0
National Park Service	4,291.7	0.0	3,084.8	1,206.9	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	149,838.0	0.0	79,414.1	70,423.9	0.0	0.0
Department of Justice	11,236.4	150.0	3,761.6	0.0	6,491.3	833.5
Office of Justice Programs	11,236.4	150.0	3,761.6	0.0	6,491.3	833.5
Department of State	28,000.0	0.0	0.0	0.0	28,000.0	0.0
Department of Transportation	7,923.9	0.0	0.0	0.0	7,923.9	0.0
Federal Aviation Administration	7,923.9	0.0	0.0	0.0	7,923.9	0.0
Department of Veterans Affairs	674,885.1	0.0	0.0	0.0	674,885.1	0.0
Other agencies						
Agency for International Development	125,214.9	84,094.6	0.0	0.0	41,120.3	0.0
Environmental Protection Agency	162,744.7	586.4	112,491.9	45,760.5	241.8	3,664.1
National Aeronautics and Space Administration	88,984.9	0.0	0.0	0.0	0.0	88,984.9
National Science Foundation	5,954.9	0.0	5,954.9	0.0	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	469,730.1	0.0	0.0	0.0	469,730.1	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 48

Federal obligations for applied research in physical sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies	1,906,879.2	903.2	389,772.1	1,061,211.8	454,992.1
Departments					
Department of Agriculture	45,482.6	0.0	44,116.0	1,366.6	0.0
Agricultural Research Service	36,556.2	0.0	35,189.6	1,366.6	0.0
Forest Service	1,646.8	0.0	1,646.8	0.0	0.0
National Institute of Food and Agriculture	7,279.7	0.0	7,279.7	0.0	0.0
Department of Commerce	75,145.7	142.9	25,775.3	47,131.5	2,096.0
National Institute of Standards and Technology	50,958.7	142.9	23,914.3	24,805.5	2,096.0
National Oceanic and Atmospheric Administration	24,187.0	0.0	1,861.0	22,326.0	0.0
Department of Defense	440,295.7	684.8	127,718.6	187,159.2	124,733.0
Defense Advanced Research Projects Agency	25,851.1	0.0	0.0	25,317.5	533.6
Department of the Air Force	150,725.2	19.7	357.4	91,558.4	58,789.7
Department of the Army	4,622.4	0.0	0.0	4,622.4	0.0
Department of the Navy	41,535.2	665.1	8,635.2	8,438.0	23,796.8
Other defense agencies	217,561.7	0.0	118,726.0	57,222.8	41,612.9
Department of Energy	995,780.7	0.0	111,036.4	804,220.8	80,523.5
Advanced Research Projects Agency—Energy	36,414.2	0.0	0.0	36,414.2	0.0
Fossil Energy	102,377.2	0.0	102,377.2	0.0	0.0
National Nuclear Security Administration	850,945.2	0.0	8,659.2	761,762.4	80,523.5
Defense Programs	758,802.5	0.0	0.0	727,446.4	31,356.1
Office of Defense Nuclear Nonproliferation	92,142.7	0.0	8,659.2	34,316.1	49,167.4
Office of Science	6,044.2	0.0	0.0	6,044.2	0.0
Department of Health and Human Services	53,595.1	0.0	52,933.1	662.0	0.0
National Institutes of Health	53,595.1	0.0	52,933.1	662.0	0.0
Department of Homeland Security	23,941.3	0.0	9,450.8	5,984.4	8,506.2
Countering Weapons of Mass Destruction Office	9,100.5	0.0	2,105.6	5,984.4	1,010.6
Science and Technology Directorate	14,840.8	0.0	7,345.2	0.0	7,495.6
Department of the Interior	244.2	0.0	0.0	0.0	244.2
National Park Service	244.2	0.0	0.0	0.0	244.2
Department of Justice	6,403.9	0.0	5,240.5	0.0	1,163.5
Office of Justice Programs	6,403.9	0.0	5,240.5	0.0	1,163.5
Department of Transportation	2,627.9	0.0	1,899.1	0.0	728.8
Pipeline and Hazardous Materials Safety Administration	2,627.9	0.0	1,899.1	0.0	728.8
Department of the Treasury	43,907.7	0.0	0.0	0.0	43,907.7
Bureau of Engraving and Printing	43,907.7	0.0	0.0	0.0	43,907.7
Other agencies					
Consumer Product Safety Commission	19.2	0.0	0.0	0.0	19.2
Environmental Protection Agency	9,836.6	0.0	8,673.9	0.0	1,162.7
Federal Communications Commission	450.0	0.0	0.0	450.0	0.0
Library of Congress	1,215.2	0.0	1,215.2	0.0	0.0
National Aeronautics and Space Administration	192,735.2	0.0	0.0	9,076.8	183,658.4
National Science Foundation	15,198.2	75.5	1,713.2	5,160.6	8,248.8

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 49

Federal obligations for applied research in psychology, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies	1,664,157.3	597.1	30,046.0	1,633,514.2
Departments				
Department of Commerce	311.6	140.1	171.5	0.0
National Institute of Standards and Technology	140.1	140.1	0.0	0.0
U.S. Census Bureau	171.5	0.0	171.5	0.0
Department of Defense	66,576.6	0.0	4,907.0	61,669.6
Defense Advanced Research Projects Agency	7,768.9	0.0	117.7	7,651.2
Defense Health Agency	165.1	0.0	0.0	165.1
Department of the Air Force	538.8	0.0	0.0	538.8
Department of the Army	52,159.8	0.0	0.0	52,159.8
Department of the Navy	4,789.3	0.0	4,789.3	0.0
Other defense agencies	1,154.7	0.0	0.0	1,154.7
Department of Health and Human Services	1,454,106.5	417.0	7,382.5	1,446,307.0
Agency for Healthcare Research and Quality	7,799.5	417.0	7,382.5	0.0
National Institutes of Health	1,446,307.0	0.0	0.0	1,446,307.0
Department of Homeland Security	14.5	0.0	0.0	14.5
U.S. Coast Guard	14.5	0.0	0.0	14.5
Department of Justice	1,641.2	0.0	0.0	1,641.2
Office of Justice Programs	1,641.2	0.0	0.0	1,641.2
Department of Transportation	17,585.1	0.0	17,585.1	0.0
Federal Aviation Administration	17,585.1	0.0	17,585.1	0.0
Department of Veterans Affairs	123,879.9	0.0	0.0	123,879.9
Other agencies				
National Science Foundation	42.0	40.0	0.0	2.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 50

Federal obligations for applied research in social sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies	697,896.4	1,056.8	163,821.7	7,916.0	132,467.9	392,634.0
Departments						
Department of Agriculture	132,333.4	0.0	117,042.7	0.0	13,297.7	1,993.0
Agricultural Research Service	1,366.6	0.0	1,366.6	0.0	0.0	0.0
Economic Research Service	81,718.0	0.0	81,718.0	0.0	0.0	0.0
Forest Service	26,744.3	0.0	18,770.1	0.0	5,981.2	1,993.0
National Institute of Food and Agriculture	22,504.6	0.0	15,188.1	0.0	7,316.5	0.0
Department of Commerce	46,690.2	0.0	18,791.4	1,866.0	12,979.3	13,053.6
National Institute of Standards and Technology	482.4	0.0	482.4	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	14,833.8	0.0	933.0	1,866.0	10,877.0	1,157.8
U.S. Census Bureau	31,374.1	0.0	17,376.0	0.0	2,102.3	11,895.8
Department of Defense	40,971.3	0.0	0.0	0.0	173.9	40,797.3
Defense Health Agency	235.0	0.0	0.0	0.0	0.0	235.0
Department of the Air Force	368.1	0.0	0.0	0.0	0.0	368.1
Department of the Navy	40,194.2	0.0	0.0	0.0	0.0	40,194.2
Other defense agencies	173.9	0.0	0.0	0.0	173.9	0.0
Department of Education	135,827.0	0.0	0.0	0.0	0.0	135,827.0
Department of Energy	77.9	0.0	77.9	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	77.9	0.0	77.9	0.0	0.0	0.0
Department of Health and Human Services	177,955.2	36.1	9,956.5	0.0	0.0	167,962.6
Administration for Children and Families	1,574.4	0.0	0.0	0.0	0.0	1,574.4
Administration for Community Living	70,814.9	0.0	0.0	0.0	0.0	70,814.9
Agency for Healthcare Research and Quality	20,813.1	36.1	9,956.5	0.0	0.0	10,820.5
Centers for Disease Control and Prevention	312.0	0.0	0.0	0.0	0.0	312.0
Health Resources and Services Administration	1,188.7	0.0	0.0	0.0	0.0	1,188.7
National Institutes of Health	66,796.3	0.0	0.0	0.0	0.0	66,796.3
Office of the Secretary of Health and Human Services	16,455.8	0.0	0.0	0.0	0.0	16,455.8
Office of the Assistant Secretary for Planning and Evaluation	16,455.8	0.0	0.0	0.0	0.0	16,455.8
Department of the Interior	8,517.0	174.1	5,764.6	0.0	2,046.0	532.3
Bureau of Ocean Energy Management	7,984.7	174.1	5,764.6	0.0	2,046.0	0.0
National Park Service	532.3	0.0	0.0	0.0	0.0	532.3
Department of Justice	51,380.4	846.6	0.0	0.0	32,231.0	18,302.8
Bureau of Prisons	1,804.0	0.0	0.0	0.0	1,804.0	0.0
Office of Justice Programs	49,576.4	846.6	0.0	0.0	30,427.0	18,302.8
Department of Labor	4,748.3	0.0	2,745.6	0.0	0.0	2,002.7
Employee Benefits Security Administration	2,745.6	0.0	2,745.6	0.0	0.0	0.0
Occupational Safety and Health Administration	2,002.7	0.0	0.0	0.0	0.0	2,002.7
Department of State	2,000.0	0.0	0.0	0.0	2,000.0	0.0
Department of Transportation	1,738.1	0.0	0.0	0.0	0.0	1,738.1
Federal Railroad Administration	1,738.1	0.0	0.0	0.0	0.0	1,738.1
Other agencies						
Agency for International Development	9,579.7	0.0	404.7	6,050.0	0.0	3,125.0
Appalachian Regional Commission	684.3	0.0	684.3	0.0	0.0	0.0
Environmental Protection Agency	2,379.7	0.0	2,379.7	0.0	0.0	0.0
Federal Trade Commission	5,974.3	0.0	5,974.3	0.0	0.0	0.0
National Science Foundation	2,470.9	0.0	0.0	0.0	0.0	2,470.9
Social Security Administration	69,740.0	0.0	0.0	0.0	69,740.0	0.0

TABLE 50

Federal obligations for applied research in social sciences, by agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
U.S. Agency for Global Media	4,828.7	0.0	0.0	0.0	0.0	4,828.7

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural								
			United States and U.S. territories								Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments		
All agencies	82,098,024.1	31,899,441.9	41,399,523.3	606,245.6	3,067,267.2	1,491,966.0	1,508,223.6	1,159,540.9	75,354.2	890,461.2	
Departments											
Department of Agriculture	255,231.2	231,087.8	0.0	0.0	22,028.3	0.0	1,642.5	0.0	29.9	442.6	
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Agricultural Research Service	142,352.9	124,789.7	0.0	0.0	15,659.5	0.0	1,431.2	0.0	29.9	442.6	
Animal and Plant Health Inspection Service	20,679.0	14,365.1	0.0	0.0	6,313.9	0.0	0.0	0.0	0.0	0.0	
Forest Service	84,725.4	84,725.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
National Agricultural Statistics Service	3,997.7	3,731.3	0.0	0.0	55.0	0.0	211.4	0.0	0.0	0.0	
Department of Commerce	260,931.6	171,123.4	4,953.7	0.0	55,629.4	4,137.2	23,474.3	293.0	1,318.6	2.0	
National Institute of Standards and Technology	17,451.8	7,347.6	492.0	0.0	8,396.2	0.0	1,215.9	0.0	0.0	0.0	
National Oceanic and Atmospheric Administration	170,290.0	90,586.0	4,461.7	0.0	47,233.1	4,137.2	22,258.4	293.0	1,318.6	2.0	
U.S. Census Bureau	73,189.8	73,189.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Department of Defense, total experimental development	57,779,715.3	20,211,659.3	32,055,821.6	357,310.9	2,097,756.7	381,227.5	1,061,832.8	751,004.8	7,334.0	855,767.7	
Defense Advanced Research Projects Agency	1,657,985.0	221,017.2	1,316,185.7	5,078.0	63,314.5	14,520.5	22,169.5	8,889.8	0.0	6,809.8	
Defense Health Agency	2,706,390.7	1,064,339.7	361,355.7	0.0	661,828.0	308.0	581,032.1	1,566.5	301.5	35,659.2	
Department of the Air Force	9,434,381.0	3,574,374.8	5,537,577.7	133,056.9	84,279.1	25,505.9	32.8	79,477.0	25.6	51.2	
Department of the Army	8,879,700.4	3,155,676.2	4,810,048.5	760.8	510,035.7	11,103.1	176,763.1	172,992.6	0.0	42,320.4	
Department of the Navy	17,416,147.9	6,773,209.1	9,822,948.7	63,320.4	384,335.3	37,178.8	204,288.5	98,988.9	232.5	31,645.7	
U.S. Space Force	4,385,666.9	134,756.4	3,872,287.8	9,199.5	17,685.9	49,028.8	1,157.3	188,577.1	5,244.1	107,729.9	
Other defense agencies	13,299,443.5	5,288,285.9	6,335,417.4	145,895.3	376,278.2	243,582.4	76,389.5	200,513.0	1,530.2	631,551.5	
Department of Defense, advanced technology	8,600,278.9	2,367,232.8	4,025,684.0	61,437.0	1,059,111.5	72,100.7	779,232.4	123,512.9	1,796.8	110,170.7	
Defense Advanced Research Projects Agency	1,489,154.0	154,884.7	1,214,025.0	5,078.0	63,314.5	14,520.5	21,631.8	8,889.8	0.0	6,809.8	
Defense Health Agency	1,706,000.9	250,647.8	226,415.2	0.0	647,835.2	308.0	547,396.1	1,566.5	301.5	31,530.6	
Department of the Air Force	952,223.4	176,026.3	734,474.6	3,061.2	29,897.4	652.6	32.8	8,053.0	25.6	0.0	
Department of the Army	1,487,372.0	405,873.7	803,203.5	153.2	127,878.2	3,769.5	56,090.5	71,683.1	0.0	18,720.2	

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural								
			United States and U.S. territories								Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments		
Department of the Navy	883,034.3	304,350.0	363,890.2	3,101.0	86,771.4	1,015.8	117,778.1	4,763.4	0.0	1,364.5	
Other defense agencies	2,082,494.3	1,075,450.3	683,675.6	50,043.7	103,414.9	51,834.4	36,303.2	28,557.1	1,469.7	51,745.6	
Department of Defense, major systems	49,179,436.4	17,844,426.5	28,030,137.6	295,873.9	1,038,645.2	309,126.8	282,600.5	627,491.9	5,537.2	745,597.0	
Defense Advanced Research Projects Agency	168,831.0	66,132.5	102,160.7	0.0	0.0	0.0	537.8	0.0	0.0	0.0	
Defense Health Agency	1,000,389.8	813,691.8	134,940.5	0.0	13,992.8	0.0	33,636.0	0.0	0.0	4,128.6	
Department of the Air Force	8,482,157.6	3,398,348.5	4,803,103.2	129,995.7	54,381.7	24,853.3	0.0	71,424.0	0.0	51.2	
Department of the Army	7,392,328.4	2,749,802.5	4,006,845.0	607.6	382,157.5	7,333.6	120,672.6	101,309.4	0.0	23,600.2	
Department of the Navy	16,533,113.6	6,468,859.1	9,459,058.6	60,219.4	297,563.9	36,163.0	86,510.4	94,225.5	232.5	30,281.2	
U.S. Space Force	4,385,666.9	134,756.4	3,872,287.8	9,199.5	17,685.9	49,028.8	1,157.3	188,577.1	5,244.1	107,729.9	
Other defense agencies	11,216,949.2	4,212,835.7	5,651,741.8	95,851.7	272,863.4	191,748.0	40,086.4	171,955.9	60.5	579,805.9	
Department of Education	50,651.8	2,111.9	11,088.2	0.0	32,798.4	0.0	3,645.6	0.0	1,007.7	0.0	
Department of Energy	2,927,857.4	59,818.4	1,842,597.6	243,099.0	347,444.3	87,965.0	30,738.0	305,528.5	10,601.6	65.0	
Advanced Research Projects Agency—Energy	218,999.6	0.0	82,684.5	9,196.1	90,770.6	7,979.8	13,413.7	14,954.8	0.0	0.0	
Electricity Delivery and Energy Reliability	61,436.9	1,404.5	4,048.7	16,783.6	7,286.4	3,696.1	4,294.4	23,733.5	189.7	0.0	
Energy Efficiency and Renewable Energy	847,875.0	0.0	261,137.0	56,647.2	210,657.2	69,102.8	0.0	239,918.9	10,411.9	0.0	
Environmental Management	14,860.1	0.0	5,329.4	8,364.9	646.6	0.0	519.3	0.0	0.0	0.0	
National Nuclear Security Administration	1,590,050.3	56,840.8	1,415,807.4	100,180.5	0.0	3,563.0	57.6	13,601.0	0.0	0.0	
Defense Programs	143,111.6	6,526.1	64,852.8	70,360.1	0.0	0.0	57.6	1,315.0	0.0	0.0	
Naval Nuclear Propulsion Program	1,387,442.2	50,314.7	1,336,147.5	890.0	0.0	0.0	0.0	90.0	0.0	0.0	
Office of Defense Nuclear Nonproliferation	59,496.5	0.0	14,807.1	28,930.4	0.0	3,563.0	0.0	12,196.0	0.0	0.0	
Nuclear Energy	180,816.4	207.2	73,590.6	51,926.6	38,083.5	3,623.3	0.0	13,320.2	0.0	65.0	
Office of Cybersecurity, Energy Security, and Emergency Response	13,819.0	1,366.0	0.0	0.0	0.0	0.0	12,453.0	0.0	0.0	0.0	
Department of Health and Human Services	15,772,003.4	9,965,951.6	5,274,477.6	0.0	324,892.6	0.0	187,071.8	11,856.9	7,753.1	0.0	

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Administration for Community Living	19,598.4	0.0	2,404.9	0.0	14,209.4	0.0	2,860.0	0.0	124.2	0.0
Agency for Healthcare Research and Quality	29,855.0	29,855.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomedical Advanced Research and Development Authority	15,666,447.5	9,929,976.9	5,270,588.4	0.0	273,513.7	0.0	173,621.3	11,856.9	6,890.2	0.0
Centers for Disease Control and Prevention	56,102.6	6,119.7	1,484.3	0.0	37,169.5	0.0	10,590.5	0.0	738.7	0.0
Department of Homeland Security	282,238.0	67,571.4	176,129.6	5,835.7	10,799.0	0.0	1,979.3	12,590.5	764.3	6,568.3
Countering Weapons of Mass Destruction Office	13,518.1	1,213.0	4,490.0	3,912.0	0.0	0.0	200.0	929.9	0.0	2,773.2
Cybersecurity and Infrastructure Security Agency	702.8	0.0	0.0	0.0	0.0	0.0	0.0	702.8	0.0	0.0
Science and Technology Directorate	228,937.2	62,909.6	136,023.5	1,923.7	10,799.0	0.0	1,779.3	10,957.9	764.3	3,779.8
Transportation Security Administration	22,900.0	0.0	22,900.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	3,464.0	3,448.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3
U.S. Secret Service	12,716.0	0.0	12,716.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	138,925.7	115,401.2	3,202.1	0.0	16,419.3	429.2	1,019.4	0.0	2,065.2	389.3
Bureau of Land Management	7,032.0	4,171.0	724.0	0.0	1,705.0	0.0	339.0	0.0	93.0	0.0
Bureau of Ocean Energy Management	13,596.7	12,352.8	794.1	0.0	49.8	0.0	0.0	0.0	400.0	0.0
Bureau of Reclamation	8,306.3	2,509.5	229.6	0.0	4,598.5	429.2	260.0	0.0	279.4	0.0
Bureau of Safety and Environmental Enforcement	2,699.7	941.0	1,137.9	0.0	231.5	0.0	0.0	0.0	0.0	389.3
U.S. Geological Survey	107,291.0	95,426.9	316.5	0.0	9,834.4	0.0	420.4	0.0	1,292.8	0.0
Department of Justice	11,912.3	3,188.0	0.0	0.0	3,006.5	0.0	599.4	0.0	5,118.4	0.0
Bureau of Prisons	6,333.0	1,505.0	0.0	0.0	0.0	0.0	0.0	0.0	4,828.0	0.0
Office of Justice Programs	5,579.3	1,683.0	0.0	0.0	3,006.5	0.0	599.4	0.0	290.4	0.0
Department of State	10,000.0	10,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	283,953.4	47,185.3	111,841.9	0.0	14,870.2	0.0	2,426.3	68,285.9	39,343.8	0.0
Federal Aviation Administration	184,921.8	17,127.6	89,157.7	0.0	9,947.5	0.0	403.1	68,285.9	0.0	0.0

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Federal Highway Administration	40,377.9	4,219.0	0.0	0.0	0.0	0.0	0.0	0.0	36,158.9	0.0
Federal Railroad Administration	11,587.6	3,128.7	6,373.2	0.0	1,738.1	0.0	347.6	0.0	0.0	0.0
Office of the Secretary of Transportation	22,235.0	19,000.1	0.0	0.0	50.0	0.0	0.0	0.0	3,184.9	0.0
Pipeline and Hazardous Materials Safety Administration	24,831.0	3,709.9	16,311.0	0.0	3,134.6	0.0	1,675.6	0.0	0.0	0.0
Department of the Treasury	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	29,332.5	29,332.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Agency for International Development	59,438.1	2,975.0	10,098.1	0.0	13,770.6	0.0	17,593.6	0.0	0.0	15,000.8
Environmental Protection Agency	76,553.5	40,556.4	35,997.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1,606.0	1,606.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	4,143,708.3	939,873.8	1,860,350.1	0.0	126,852.1	1,018,207.1	176,200.5	9,981.3	17.8	12,225.6
Nuclear Regulatory Commission	999.9	0.0	0.0	0.0	999.9	0.0	0.0	0.0	0.0	0.0
Tennessee Valley Authority	1,999.7	0.0	1,999.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Federal intramural amounts for the Biomedical Advanced Research and Development Authority are transfers to the other agencies in support of Operation Warp Speed. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	94,309,779.9	43,440,277.9	42,030,639.0	984,235.0	3,421,580.5	1,328,555.9	1,598,045.0	1,189,605.4	63,636.3	253,204.8
Departments										
Department of Agriculture	229,078.5	209,661.1	0.0	0.0	17,720.2	0.0	1,342.8	0.0	22.4	332.0
Agricultural Marketing Service	3,500.3	3,500.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	158,700.0	145,527.6	0.0	0.0	11,744.6	0.0	1,073.4	0.0	22.4	332.0
Animal and Plant Health Inspection Service	20,884.0	14,972.6	0.0	0.0	5,911.4	0.0	0.0	0.0	0.0	0.0
Forest Service	41,674.2	41,674.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Agricultural Statistics Service	4,320.0	3,986.3	0.0	0.0	64.2	0.0	269.5	0.0	0.0	0.0
Department of Commerce	360,341.5	146,261.6	3,135.7	0.0	97,793.5	3,216.0	109,061.8	0.0	870.6	2.2
National Institute of Standards and Technology	164,298.9	20,538.0	609.7	0.0	87,678.2	0.0	55,472.9	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	145,704.0	75,385.0	2,526.0	0.0	10,115.3	3,216.0	53,588.8	0.0	870.6	2.2
U.S. Census Bureau	50,338.6	50,338.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development	60,047,756.2	20,604,325.6	33,998,522.0	428,040.5	2,362,596.8	284,899.7	1,338,013.0	798,692.8	7,629.8	225,036.0
Defense Advanced Research Projects Agency	1,705,207.0	223,458.8	1,356,487.3	5,268.3	65,687.2	15,064.6	22,952.8	9,222.9	0.0	7,065.0
Defense Health Agency	2,518,559.3	673,003.4	407,145.6	0.0	754,697.1	0.0	640,163.7	1,763.1	346.5	41,440.0
Department of the Air Force	9,103,443.6	3,513,015.6	5,189,174.2	220,294.9	83,872.6	21,570.2	31.6	75,413.5	24.7	46.2
Department of the Army	10,179,275.4	3,602,853.5	5,490,935.8	952.1	625,086.5	12,535.3	202,445.9	195,007.7	0.0	49,458.5
Department of the Navy	16,943,610.7	6,819,573.4	9,377,643.4	25,672.3	352,607.4	35,221.6	205,040.5	96,054.8	250.8	31,546.4
U.S. Space Force	5,038,943.1	217,870.0	4,526,503.1	5,139.7	14,530.5	34,765.1	9,166.0	209,725.8	5,972.8	15,270.1
Other defense agencies	14,558,717.1	5,554,550.9	7,650,632.5	170,713.3	466,115.4	165,742.9	258,212.5	211,504.9	1,035.0	80,209.8
Department of Defense, advanced technology	9,363,569.3	2,380,338.4	4,364,026.7	69,402.0	1,201,877.4	40,667.5	1,038,217.9	133,360.9	1,406.3	134,272.3
Defense Advanced Research Projects Agency	1,544,961.0	160,689.1	1,259,521.4	5,268.3	65,687.2	15,064.6	22,442.4	9,222.9	0.0	7,065.0
Defense Health Agency	1,759,098.5	150,612.9	246,789.8	0.0	737,541.8	0.0	585,666.1	1,763.1	346.5	36,378.3
Department of the Air Force	917,430.6	169,594.5	707,638.0	2,949.3	28,805.0	628.7	31.6	7,758.8	24.7	0.0
Department of the Army	1,895,199.2	517,161.5	1,023,436.4	195.2	162,941.5	4,803.0	71,470.1	91,338.2	0.0	23,853.2

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of the Navy	965,001.4	332,556.3	401,947.4	3,345.0	93,598.8	105.5	127,045.2	4,931.4	0.0	1,471.8
Other defense agencies	2,281,878.6	1,049,724.0	724,693.7	57,644.1	113,303.1	20,065.6	231,562.5	18,346.6	1,035.0	65,504.0
Department of Defense, major systems	50,684,186.9	18,223,987.2	29,634,495.2	358,638.6	1,160,719.3	244,232.2	299,795.1	665,331.9	6,223.6	90,763.8
Defense Advanced Research Projects Agency	160,246.0	62,769.7	96,965.9	0.0	0.0	0.0	510.4	0.0	0.0	0.0
Defense Health Agency	759,460.8	522,390.5	160,355.8	0.0	17,155.3	0.0	54,497.6	0.0	0.0	5,061.7
Department of the Air Force	8,186,013.0	3,343,421.1	4,481,536.2	217,345.6	55,067.6	20,941.5	0.0	67,654.8	0.0	46.2
Department of the Army	8,284,076.2	3,085,692.0	4,467,499.4	756.9	462,145.0	7,732.3	130,975.8	103,669.6	0.0	25,605.3
Department of the Navy	15,978,609.3	6,487,017.1	8,975,696.1	22,327.3	259,008.6	35,116.1	77,995.3	91,123.4	250.8	30,074.6
U.S. Space Force	5,038,943.1	217,870.0	4,526,503.1	5,139.7	14,530.5	34,765.1	9,166.0	209,725.8	5,972.8	15,270.1
Other defense agencies	12,276,838.5	4,504,826.9	6,925,938.8	113,069.1	352,812.3	145,677.3	26,650.0	193,158.3	0.0	14,705.8
Department of Education	117,456.0	2,772.1	14,620.2	0.0	65,600.1	0.0	16,003.7	0.0	18,459.9	0.0
Department of Energy	3,599,863.7	127,815.7	2,228,242.1	549,844.4	302,747.1	80,024.8	28,711.2	273,663.4	8,815.0	0.0
Advanced Research Projects Agency—Energy	213,500.0	0.0	80,608.1	8,965.2	88,491.2	7,779.4	13,076.9	14,579.2	0.0	0.0
Electricity Delivery and Energy Reliability	69,160.0	1,581.0	4,557.6	16,127.0	8,202.4	6,927.1	4,834.3	26,717.0	213.5	0.0
Energy Efficiency and Renewable Energy	700,450.0	0.0	215,731.6	46,797.7	174,029.0	57,087.5	0.0	198,202.8	8,601.5	0.0
Environmental Management	19,619.0	0.0	5,417.7	4,154.3	8,139.3	1,017.4	0.0	890.2	0.0	0.0
National Nuclear Security Administration	2,444,536.9	124,524.1	1,842,192.0	450,972.7	0.0	3,860.6	800.0	22,187.5	0.0	0.0
Defense Programs	915,195.3	72,575.4	434,704.3	407,265.6	0.0	0.0	650.0	0.0	0.0	0.0
Naval Nuclear Propulsion Program	1,443,427.0	51,948.7	1,390,498.2	890.0	0.0	0.0	0.0	90.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	85,914.6	0.0	16,989.5	42,817.1	0.0	3,860.6	150.0	22,097.5	0.0	0.0
Nuclear Energy	130,166.9	46.6	79,735.1	22,827.6	13,118.3	3,352.8	0.0	11,086.6	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	22,431.0	1,664.0	0.0	0.0	10,767.0	0.0	10,000.0	0.0	0.0	0.0
Department of Health and Human Services	25,454,278.8	21,098,238.1	3,891,572.0	0.0	438,684.1	0.0	24,921.8	0.0	862.9	0.0

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Administration for Community Living	19,598.4	0.0	2,404.9	0.0	14,209.4	0.0	2,860.0	0.0	124.2	0.0
Biomedical Advanced Research and Development Authority	25,378,577.8	21,092,118.4	3,887,682.8	0.0	387,305.2	0.0	11,471.4	0.0	0.0	0.0
Centers for Disease Control and Prevention	56,102.6	6,119.7	1,484.3	0.0	37,169.5	0.0	10,590.5	0.0	738.7	0.0
Department of Homeland Security	300,598.4	69,814.2	190,549.4	6,350.0	11,514.0	0.0	2,150.0	18,070.7	1,000.0	1,150.0
Countering Weapons of Mass Destruction Office	10,837.4	1,621.0	2,107.4	4,350.0	514.0	0.0	150.0	1,944.9	0.0	150.0
Cybersecurity and Infrastructure Security Agency	1,125.8	0.0	0.0	0.0	0.0	0.0	0.0	1,125.8	0.0	0.0
Science and Technology Directorate	240,000.0	61,000.0	147,000.0	2,000.0	11,000.0	0.0	2,000.0	15,000.0	1,000.0	1,000.0
Transportation Security Administration	29,500.0	0.0	29,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	7,193.2	7,193.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Secret Service	11,942.0	0.0	11,942.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	143,376.2	117,388.8	3,386.0	0.0	17,127.6	500.0	782.2	0.0	3,781.6	409.9
Bureau of Land Management	3,601.0	1,765.0	86.0	0.0	1,587.0	0.0	153.0	0.0	10.0	0.0
Bureau of Ocean Energy Management	16,517.4	13,949.6	798.8	0.0	127.0	0.0	0.0	0.0	1,642.0	0.0
Bureau of Reclamation	8,350.0	1,300.0	1,000.0	0.0	5,000.0	500.0	200.0	0.0	350.0	0.0
Bureau of Safety and Environmental Enforcement	2,842.8	990.9	1,198.2	0.0	243.8	0.0	0.0	0.0	0.0	409.9
U.S. Geological Survey	112,065.0	99,383.4	303.0	0.0	10,169.8	0.0	429.2	0.0	1,779.6	0.0
Department of Justice	12,872.2	3,386.3	0.0	0.0	3,307.1	0.0	659.3	0.0	5,519.4	0.0
Bureau of Prisons	6,735.0	1,535.0	0.0	0.0	0.0	0.0	0.0	0.0	5,200.0	0.0
Office of Justice Programs	6,137.2	1,851.3	0.0	0.0	3,307.1	0.0	659.3	0.0	319.4	0.0
Department of State	13,000.0	13,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	303,264.0	50,853.9	131,627.9	0.0	14,440.4	0.0	1,939.7	87,741.1	16,661.1	0.0
Federal Aviation Administration	239,017.1	23,417.0	114,559.4	0.0	12,781.7	0.0	517.9	87,741.1	0.0	0.0
Federal Highway Administration	20,880.1	4,219.0	0.0	0.0	0.0	0.0	0.0	0.0	16,661.1	0.0
Federal Railroad Administration	11,847.8	3,198.9	5,568.5	0.0	1,658.7	0.0	1,421.7	0.0	0.0	0.0

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
Office of the Secretary of Transportation	18,156.0	18,156.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	13,363.0	1,863.0	11,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	31,806.7	31,806.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Agency for International Development	59,438.1	2,975.0	10,098.1	0.0	13,770.6	0.0	17,593.6	0.0	0.0	15,000.8
Environmental Protection Agency	117,380.3	59,031.0	58,349.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1,469.5	1,469.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,501,846.6	901,478.3	1,486,982.8	0.0	73,879.2	959,915.4	56,865.8	11,437.5	13.7	11,273.9
Nuclear Regulatory Commission	2,399.9	0.0	0.0	0.0	2,399.9	0.0	0.0	0.0	0.0	0.0
Tennessee Valley Authority	2,587.3	0.0	2,587.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Federal intramural amounts for the Biomedical Advanced Research and Development Authority are transfers to the other agencies in support of Operation Warp Speed. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 53

Federal obligations and outlays for R&D plant, by agency: FYs 2020–21

(Dollars in thousands)

Agency	Obligations		Outlays	
	2020	2021 (preliminary)	2020	2021 (preliminary)
All agencies	6,150,070.1	5,942,874.4	4,785,758.2	6,700,908.1
Departments				
Department of Agriculture	789,827.6	31,684.4	75,466.5	159,684.4
Agricultural Research Service	780,407.1	20,000.0	66,046.0	148,000.0
Forest Service	9,420.5	11,684.4	9,420.5	11,684.4
Department of Commerce	359,142.7	548,567.0	261,362.6	344,658.0
National Institute of Standards and Technology	142,897.3	309,748.0	94,310.6	163,658.0
National Oceanic and Atmospheric Administration	216,245.4	238,819.0	167,052.0	181,000.0
Department of Defense	311,736.4	158,613.9	506,856.3	706,281.6
Defense Health Agency	15,460.0	0.0	15,460.0	0.0
Department of the Air Force	240,734.5	110,518.0	192,785.5	132,215.7
Department of the Navy	44,688.0	37,479.0	284,390.3	562,078.9
Other defense agencies	10,853.9	10,616.9	14,220.5	11,987.0
Department of Energy	2,324,950.3	2,171,214.4	1,789,823.3	2,407,143.0
Energy Efficiency and Renewable Energy	53,288.0	38,707.0	54,547.0	31,571.0
Fossil Energy	28,675.0	29,000.0	23,899.0	27,700.0
National Nuclear Security Administration	573,916.7	520,846.4	511,873.3	739,399.0
Defense Programs	326,936.7	189,846.4	255,893.3	396,950.0
Naval Nuclear Propulsion Program	246,980.0	331,000.0	246,980.0	331,000.0
Office of Defense Nuclear Nonproliferation	0.0	0.0	9,000.0	11,449.0
Office of Science	1,669,070.6	1,582,661.0	1,199,504.0	1,608,473.0
Department of Health and Human Services	1,769,029.1	2,354,850.0	1,501,594.1	2,442,076.3
Biomedical Advanced Research and Development Authority	1,295,716.2	2,100,076.8	1,295,716.2	2,100,076.8
Food and Drug Administration	20,312.9	24,773.2	27,878.0	33,999.5
National Institutes of Health	453,000.0	230,000.0	178,000.0	308,000.0
Department of Homeland Security	0.0	0.0	69,704.2	10,000.0
Science and Technology Directorate	0.0	0.0	69,704.2	10,000.0
Department of the Interior	7,156.6	12,000.0	5,001.2	9,105.5
Bureau of Reclamation	1,704.5	1,150.0	1,704.5	1,150.0
Bureau of Safety and Environmental Enforcement	5,452.1	10,850.0	3,296.7	7,955.5
Department of Transportation	40,321.8	28,823.8	51,923.2	36,762.0
Federal Aviation Administration	38,380.9	26,787.1	50,000.0	35,000.0
Federal Railroad Administration	1,940.9	2,036.7	1,923.2	1,762.0
Department of the Treasury	0.0	0.0	2,126.4	344.0
Bureau of Engraving and Printing	0.0	0.0	1,860.0	0.0
U.S. Mint	0.0	0.0	266.4	344.0
Other agencies				
Environmental Protection Agency	4,499.0	2,310.0	4,499.0	2,310.0
National Aeronautics and Space Administration	35,801.5	34,111.8	27,365.6	13,953.4
National Science Foundation	441,365.1	533,259.1	423,000.0	501,000.0
Nuclear Regulatory Commission	0.0	0.0	795.7	150.0
Smithsonian Institution	66,240.0	67,440.0	66,240.0	67,440.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations or outlays in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 54

Federal obligations for R&D plant, by agency and R&D performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	6,150,070.1	3,105,970.3	677,515.5	222,083.8	350,607.7	867,811.2	125,270.3	793,747.5	6,652.9	410.9
Departments										
Department of Agriculture	789,827.6	789,827.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	780,407.1	780,407.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forest Service	9,420.5	9,420.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	359,142.7	359,142.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Standards and Technology	142,897.3	142,897.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	216,245.4	216,245.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	311,736.4	297,404.6	14,331.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Defense Health Agency	15,460.0	3,335.2	12,124.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Air Force	240,734.5	240,734.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Navy	44,688.0	44,688.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other defense agencies	10,853.9	8,646.9	2,206.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Energy	2,324,950.3	42,675.0	369,832.9	222,083.8	40,000.0	850,611.2	0.0	793,747.5	6,000.0	0.0
Energy Efficiency and Renewable Energy	53,288.0	0.0	0.0	0.0	0.0	0.0	0.0	53,288.0	0.0	0.0
Fossil Energy	28,675.0	28,675.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	573,916.7	0.0	365,832.9	203,883.8	0.0	0.0	0.0	4,200.0	0.0	0.0
Defense Programs	326,936.7	0.0	118,852.9	203,883.8	0.0	0.0	0.0	4,200.0	0.0	0.0
Naval Nuclear Propulsion Program	246,980.0	0.0	246,980.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	1,669,070.6	14,000.0	4,000.0	18,199.9	40,000.0	850,611.2	0.0	736,259.5	6,000.0	0.0
Department of Health and Human Services	1,769,029.1	1,532,057.3	181,928.7	0.0	55,043.1	0.0	0.0	0.0	0.0	0.0

TABLE 54

Federal obligations for R&D plant, by agency and R&D performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Biomedical Advanced Research and Development Authority	1,295,716.2	1,113,787.5	181,928.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Food and Drug Administration	20,312.9	20,312.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	453,000.0	397,956.9	0.0	0.0	55,043.1	0.0	0.0	0.0	0.0	0.0
Department of the Interior	7,156.6	1,526.9	5,553.2	0.0	0.0	0.0	0.0	0.0	0.0	76.5
Bureau of Reclamation	1,704.5	1,178.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	76.5
Bureau of Safety and Environmental Enforcement	5,452.1	348.9	5,103.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	40,321.8	5,802.8	34,519.0	0.0	0.0	0.0	*	0.0	0.0	0.0
Federal Aviation Administration	38,380.9	4,011.8	34,369.0	0.0	0.0	0.0	*	0.0	0.0	0.0
Federal Railroad Administration	1,940.9	1,790.9	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Environmental Protection Agency	4,499.0	0.0	4,499.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	35,801.5	216.4	18,385.0	0.0	0.0	17,200.0	0.0	0.0	0.0	0.0
National Science Foundation	441,365.1	11,077.0	48,465.9	0.0	255,564.6	0.0	125,270.3	0.0	576.4	410.9
Smithsonian Institution	66,240.0	66,240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Federal intramural amounts for the Biomedical Advanced Research and Development Authority are transfers to the other agencies in support of Operation Warp Speed. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 55

Preliminary federal obligations for R&D plant, by agency and R&D performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	5,942,874.4	1,088,406.7	2,720,362.2	30,521.9	343,383.5	809,760.0	151,352.0	792,591.6	6,000.0	496.5
Departments										
Department of Agriculture	31,684.4	31,684.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	20,000.0	20,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forest Service	11,684.4	11,684.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	548,567.0	548,567.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Standards and Technology	309,748.0	309,748.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	238,819.0	238,819.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	158,613.9	156,954.7	1,659.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Air Force	110,518.0	110,518.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Navy	37,479.0	37,479.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other defense agencies	10,616.9	8,957.7	1,659.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Energy	2,171,214.4	40,114.3	489,735.7	30,521.9	6,662.4	806,385.0	0.0	792,591.6	5,203.5	0.0
Energy Efficiency and Renewable Energy	38,707.0	0.0	0.0	0.0	0.0	0.0	0.0	38,707.0	0.0	0.0
Fossil Energy	29,000.0	29,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	520,846.4	8,046.4	483,600.0	29,200.0	0.0	0.0	0.0	0.0	0.0	0.0
Defense Programs	189,846.4	8,046.4	152,600.0	29,200.0	0.0	0.0	0.0	0.0	0.0	0.0
Naval Nuclear Propulsion Program	331,000.0	0.0	331,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	1,582,661.0	3,067.8	6,135.7	1,321.9	6,662.4	806,385.0	0.0	753,884.6	5,203.5	0.0
Department of Health and Human Services	2,354,850.0	226,826.3	2,100,076.8	0.0	27,946.8	0.0	0.0	0.0	0.0	0.0
Biomedical Advanced Research and Development Authority	2,100,076.8	0.0	2,100,076.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Food and Drug Administration	24,773.2	24,773.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	230,000.0	202,053.2	0.0	0.0	27,946.8	0.0	0.0	0.0	0.0	0.0
Department of the Interior	12,000.0	958.0	10,942.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Bureau of Reclamation	1,150.0	600.0	450.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0

TABLE 55

Preliminary federal obligations for R&D plant, by agency and R&D performer: FY 2021

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural								
			United States and U.S. territories								Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments		
Bureau of Safety and Environmental Enforcement	10,850.0	358.0	10,492.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Department of Transportation	28,823.8	2,386.3	26,437.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Federal Aviation Administration	26,787.1	499.6	26,287.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Federal Railroad Administration	2,036.7	1,886.7	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other agencies											
Environmental Protection Agency	2,310.0	0.0	2,310.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
National Aeronautics and Space Administration	34,111.8	92.4	30,644.5	0.0	0.0	3,375.0	0.0	0.0	0.0	0.0	
National Science Foundation	533,259.1	13,383.3	58,556.7	0.0	308,774.2	0.0	151,352.0	0.0	696.4	496.5	
Smithsonian Institution	67,440.0	67,440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Federal intramural amounts for the Biomedical Advanced Research and Development Authority are transfers to the other agencies in support of Operation Warp Speed. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 56

Federal obligations for research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2020–21

(Dollars in thousands)

Field	2020	2021 (preliminary)
All fields	34,618,983.6	33,453,041.8
Computer sciences and mathematics	1,911,534.3	1,880,338.0
Computer sciences	1,341,780.5	NA
Mathematics	507,878.6	NA
Other computer sciences and mathematics	61,875.2	NA
Engineering	3,377,909.6	3,301,000.6
Aeronautical engineering	123,050.8	NA
Astronautical engineering	14,567.6	NA
Chemical engineering	228,631.9	NA
Civil engineering	9,796.7	NA
Electrical engineering	242,088.6	NA
Mechanical engineering	99,032.7	NA
Metallurgy and materials engineering	264,222.2	NA
Other engineering	2,396,519.1	NA
Environmental sciences	1,436,331.5	1,319,992.2
Atmospheric sciences	186,043.7	NA
Geological sciences	177,217.5	NA
Oceanography	471,741.4	NA
Other environmental sciences	601,328.8	NA
Life sciences	21,665,684.0	21,214,977.9
Agricultural sciences	373,128.4	NA
Biological sciences (excluding environmental biology)	11,295,277.3	NA
Environmental biology	338,145.0	NA
Medical sciences	7,451,064.4	NA
Other life sciences	2,208,068.9	NA
Physical sciences	2,404,712.6	1,734,666.7
Astronomy	174,279.3	NA
Chemistry	563,612.4	NA
Physics	793,315.0	NA
Other physical sciences	873,505.9	NA
Psychology	1,935,726.2	1,917,826.9
Biological aspects	12,788.5	NA
Social aspects	14,206.7	NA
Other psychological sciences	1,908,731.0	NA
Social sciences	450,586.5	447,985.4
Anthropology	17,274.0	NA
Economics	47,682.1	NA
Political science	4,554.1	NA
Sociology	20,712.1	NA
Other social sciences	360,364.2	NA
Other sciences nec	1,436,498.9	1,636,254.1

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FYs 2020–21. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 57

Federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	34,618,983.6	1,911,534.3	3,377,909.6	1,436,331.5	21,665,684.0	2,404,712.6	1,935,726.2	450,586.5	1,436,498.9
Departments									
Department of Agriculture	861,682.5	940.0	94,688.3	10,029.8	693,725.3	22,594.9	0.0	39,704.3	0.0
Agricultural Research Service	140,935.1	183.2	1,268.4	620.1	129,477.1	9,048.0	0.0	338.2	0.0
Animal and Plant Health Inspection Service	5,828.2	0.0	0.0	0.0	5,828.2	0.0	0.0	0.0	0.0
Economic Research Service	4,095.9	0.0	0.0	0.0	0.0	0.0	0.0	4,095.9	0.0
Forest Service	24,950.8	689.6	1,522.0	4,312.3	13,515.5	403.4	0.0	4,507.9	0.0
National Agricultural Statistics Service	67.2	67.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	683,005.3	0.0	91,897.8	5,097.4	542,104.5	13,143.4	0.0	30,762.2	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Defense	2,427,132.1	520,469.4	620,464.2	123,969.4	315,410.1	176,032.3	18,515.4	86,390.9	565,880.5
Defense Advanced Research Projects Agency	584,166.1	301,855.7	73,401.5	9,533.7	158,586.0	27,847.9	7,317.4	0.0	5,624.0
Defense Health Agency	41,595.0	0.0	0.0	0.0	41,595.0	0.0	0.0	0.0	0.0
Department of the Air Force	467,636.5	32,431.1	285,261.3	2,080.0	7,627.2	76,003.3	704.3	54,718.3	8,811.0
Department of the Army	495,695.9	42,159.9	16,507.9	1,959.0	48,814.7	14,719.8	0.0	2,440.4	369,094.2
Department of the Navy	640,857.3	97,712.3	203,477.7	104,721.1	31,287.8	13,123.1	4,568.9	13,675.4	172,291.0
Other defense agencies	197,181.3	46,310.3	41,815.9	5,675.6	27,499.5	44,338.2	5,924.8	15,556.8	10,060.2
Department of Energy	1,489,644.6	45,699.9	532,700.7	62,185.9	134,101.8	714,751.8	0.0	66.0	138.4
Advanced Research Projects Agency—Energy	90,770.6	15,761.4	44,852.1	0.0	13,977.2	16,113.9	0.0	66.0	0.0
Electricity Delivery and Energy Reliability	9,292.5	0.0	9,292.5	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	310,154.7	0.0	310,154.7	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	318.5	0.0	0.0	318.5	0.0	0.0	0.0	0.0	0.0
Fossil Energy	200,860.5	0.0	124,609.5	15,809.4	0.0	60,441.5	0.0	0.0	0.0

TABLE 57

Federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Nuclear Security Administration	14,925.0	0.0	275.0	0.0	0.0	14,650.0	0.0	0.0	0.0
Defense Programs	1,175.0	0.0	275.0	0.0	0.0	900.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	13,750.0	0.0	0.0	0.0	0.0	13,750.0	0.0	0.0	0.0
Nuclear Energy	43,516.8	0.0	43,516.8	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	3,920.0	3,920.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	815,886.1	26,018.6	0.0	46,058.1	120,124.6	623,546.4	0.0	0.0	138.4
Department of Health and Human Services	23,603,453.9	223,618.4	1,110,154.7	247,977.4	19,790,029.2	59,287.8	1,880,578.8	139,020.4	152,787.2
Administration for Community Living	53,372.5	0.0	0.0	0.0	0.0	0.0	0.0	53,372.5	0.0
Agency for Healthcare Research and Quality	100,708.7	1,827.9	433.0	0.0	77,447.9	0.0	0.0	10,152.3	10,847.7
Agency for Toxic Substances and Disease Registry	2,102.3	0.0	0.0	2,102.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	172,437.0	0.0	0.0	40,309.1	119,604.4	0.0	0.0	470.0	12,053.6
Centers for Medicare and Medicaid Services	14,414.5	0.0	0.0	0.0	14,414.5	0.0	0.0	0.0	0.0
Food and Drug Administration	75,216.2	0.0	0.0	0.0	75,216.2	0.0	0.0	0.0	0.0
Health Resources and Services Administration	29,003.1	0.0	0.0	0.0	13,066.0	0.0	0.0	1,188.7	14,748.4
National Institutes of Health	23,153,688.6	221,790.6	1,109,721.7	205,566.1	19,490,280.3	59,287.8	1,880,578.8	71,326.1	115,137.4
Office of the Secretary of Health and Human Services	2,510.8	0.0	0.0	0.0	0.0	0.0	0.0	2,510.8	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,510.8	0.0	0.0	0.0	0.0	0.0	0.0	2,510.8	0.0

TABLE 57

Federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Department of Homeland Security	18,413.7	2,119.6	11,415.5	0.0	731.8	4,146.8	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	5,714.5	2,119.6	0.0	0.0	731.8	2,863.1	0.0	0.0	0.0
Science and Technology Directorate	12,699.2	0.0	11,415.5	0.0	0.0	1,283.6	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	980,801.5	0.0	79,973.9	254,048.3	32,241.6	597,958.8	0.0	0.0	16,579.0
National Science Foundation	5,237,855.3	1,118,687.1	928,512.4	738,120.8	699,444.2	829,940.1	36,632.0	185,404.8	701,113.9

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 58

Preliminary federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	33,453,041.8	1,880,338.0	3,301,000.6	1,319,992.2	21,214,977.9	1,734,666.7	1,917,826.9	447,985.4	1,636,254.1
Departments									
Department of Agriculture	826,908.9	905.5	92,775.5	8,554.0	670,049.2	19,402.6	0.0	35,222.2	0.0
Agricultural Research Service	105,701.3	137.4	951.3	465.1	97,107.8	6,786.0	0.0	253.7	0.0
Animal and Plant Health Inspection Service	6,242.9	0.0	0.0	0.0	6,242.9	0.0	0.0	0.0	0.0
Economic Research Service	4,095.9	0.0	0.0	0.0	0.0	0.0	0.0	4,095.9	0.0
Forest Service	24,950.8	689.6	1,522.0	4,312.3	13,515.5	403.4	0.0	4,507.9	0.0
National Agricultural Statistics Service	78.5	78.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	683,039.5	0.0	90,302.1	3,776.6	550,383.0	12,213.1	0.0	26,364.6	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Defense	2,535,707.3	499,317.0	624,954.1	135,849.8	335,893.7	199,090.4	41,630.9	87,859.2	611,112.2
Defense Advanced Research Projects Agency	575,355.3	298,772.4	70,847.7	8,623.5	155,460.3	29,945.4	6,618.8	0.0	5,087.1
Defense Health Agency	51,988.5	0.0	0.0	0.0	51,988.5	0.0	0.0	0.0	0.0
Department of the Air Force	457,156.7	31,863.3	280,006.7	2,008.2	7,350.0	74,209.9	676.2	52,537.2	8,505.2
Department of the Army	526,845.8	33,904.2	18,204.0	2,107.8	52,906.4	15,527.6	0.0	2,575.5	401,620.3
Department of the Navy	690,289.4	105,400.6	219,487.8	112,960.8	32,757.2	14,155.7	4,928.4	14,751.4	185,847.3
Other defense agencies	234,071.6	29,376.5	36,407.9	10,149.4	35,431.3	65,251.7	29,407.5	17,995.1	10,052.3
Department of Energy	962,644.3	29,292.6	495,613.4	21,032.0	101,498.2	148,290.5	0.0	64.4	166,853.2
Advanced Research Projects Agency—Energy	88,491.2	15,365.6	43,725.8	0.0	13,626.2	15,709.2	0.0	64.4	0.0
Electricity Delivery and Energy Reliability	7,661.2	0.0	7,661.2	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	317,054.5	0.0	317,054.5	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	4,007.2	0.0	0.0	4,007.2	0.0	0.0	0.0	0.0	0.0
Fossil Energy	124,165.5	0.0	91,437.0	11,600.8	0.0	21,127.7	0.0	0.0	0.0

TABLE 58

Preliminary federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Nuclear Security Administration	10,068.6	0.0	0.0	0.0	0.0	10,068.6	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	10,068.6	0.0	0.0	0.0	0.0	10,068.6	0.0	0.0	0.0
Nuclear Energy	35,734.9	0.0	35,734.9	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	6,805.0	6,805.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	368,656.2	7,122.0	0.0	5,424.0	87,872.0	101,385.0	0.0	0.0	166,853.2
Department of Health and Human Services	23,092,183.4	218,718.3	1,085,800.1	237,493.4	19,364,798.9	57,985.6	1,839,272.3	137,948.5	150,166.4
Administration for Community Living	54,861.8	0.0	0.0	0.0	0.0	0.0	0.0	54,861.8	0.0
Agency for Healthcare Research and Quality	98,720.2	1,799.3	453.2	0.0	74,970.0	0.0	0.0	10,307.3	11,190.4
Agency for Toxic Substances and Disease Registry	2,102.3	0.0	0.0	2,102.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	166,493.5	0.0	0.0	34,340.3	119,629.6	0.0	0.0	470.0	12,053.6
Centers for Medicare and Medicaid Services	14,702.8	0.0	0.0	0.0	14,702.8	0.0	0.0	0.0	0.0
Food and Drug Administration	80,249.7	0.0	0.0	0.0	80,249.7	0.0	0.0	0.0	0.0
Health Resources and Services Administration	27,379.9	0.0	0.0	0.0	13,066.0	0.0	0.0	0.0	14,313.9
National Institutes of Health	22,645,123.1	216,919.0	1,085,346.9	201,050.9	19,062,180.7	57,985.6	1,839,272.3	69,759.4	112,608.4
Office of the Secretary of Health and Human Services	2,550.0	0.0	0.0	0.0	0.0	0.0	0.0	2,550.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,550.0	0.0	0.0	0.0	0.0	0.0	0.0	2,550.0	0.0
Department of Homeland Security	24,389.3	3,765.6	14,000.0	0.0	2,124.5	4,499.2	0.0	0.0	0.0

TABLE 58

Preliminary federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Countering Weapons of Mass Destruction Office	8,389.3	3,765.6	0.0	0.0	2,124.5	2,499.2	0.0	0.0	0.0
Science and Technology Directorate	16,000.0	0.0	14,000.0	0.0	0.0	2,000.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	728,941.1	0.0	51,314.0	173,023.2	35,576.8	468,786.9	0.0	0.0	240.2
National Science Foundation	5,282,267.6	1,128,339.1	936,543.5	744,039.9	705,036.7	836,611.5	36,923.7	186,891.1	707,882.1

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2021. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 59

Federal obligations for research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies surveyed	1,911,534.3	1,341,780.5	507,878.6	61,875.2
Departments				
Department of Agriculture	940.0	725.5	214.5	0.0
Agricultural Research Service	183.2	183.2	0.0	0.0
Forest Service	689.6	542.3	147.3	0.0
National Agricultural Statistics Service	67.2	0.0	67.2	0.0
Department of Defense	520,469.4	421,210.4	48,575.6	50,683.4
Defense Advanced Research Projects Agency	301,855.7	274,829.1	3,624.8	23,401.8
Department of the Air Force	32,431.1	9,089.6	6,295.2	17,046.3
Department of the Army	42,159.9	31,429.1	10,730.8	0.0
Department of the Navy	97,712.3	79,093.2	14,038.5	4,580.6
Other defense agencies	46,310.3	26,769.4	13,886.3	5,654.7
Department of Energy	45,699.9	27,394.4	9,233.2	9,072.2
Advanced Research Projects Agency—Energy	15,761.4	15,761.4	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	3,920.0	3,920.0	0.0	0.0
Office of Science	26,018.6	7,713.1	9,233.2	9,072.2
Department of Health and Human Services	223,618.4	1,827.9	221,790.6	0.0
Agency for Healthcare Research and Quality	1,827.9	1,827.9	0.0	0.0
National Institutes of Health	221,790.6	0.0	221,790.6	0.0
Department of Homeland Security	2,119.6	0.0	0.0	2,119.6
Countering Weapons of Mass Destruction Office	2,119.6	0.0	0.0	2,119.6
Other agencies				
National Science Foundation	1,118,687.1	890,622.3	228,064.8	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 60

Federal obligations for research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Department of Health and Human Services	1,110,154.7	0.0	0.0	0.0	0.0	0.0	0.0	10,088.0	1,100,066.7
Agency for Healthcare Research and Quality	433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	433.0
National Institutes of Health	1,109,721.7	0.0	0.0	0.0	0.0	0.0	0.0	10,088.0	1,099,633.7
Department of Homeland Security	11,415.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11,415.5
Science and Technology Directorate	11,415.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11,415.5
Other agencies									
National Aeronautics and Space Administration	79,973.9	27,971.5	6,561.6	0.0	0.0	0.0	0.0	0.0	45,440.7
National Science Foundation	928,512.4	0.0	0.0	76,931.4	4,775.1	121,082.8	68,152.9	167,838.4	489,732.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 61

Federal obligations for research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies surveyed	1,436,331.5	186,043.7	177,217.5	471,741.4	601,328.8
Departments					
Department of Agriculture	10,029.8	5,948.4	14.1	0.0	4,067.3
Agricultural Research Service	620.1	606.0	14.1	0.0	0.0
Forest Service	4,312.3	245.1	0.0	0.0	4,067.3
National Institute of Food and Agriculture	5,097.4	5,097.4	0.0	0.0	0.0
Department of Defense	123,969.4	6,513.5	957.1	108,333.9	8,164.9
Defense Advanced Research Projects Agency	9,533.7	2,302.4	0.0	5,475.2	1,756.0
Department of the Air Force	2,080.0	698.3	0.0	0.0	1,381.7
Department of the Army	1,959.0	0.0	759.8	0.0	1,199.2
Department of the Navy	104,721.1	1,217.2	0.0	99,698.4	3,805.5
Other defense agencies	5,675.6	2,295.6	197.3	3,160.2	22.5
Department of Energy	62,185.9	38,062.6	7,247.9	0.0	16,875.4
Environmental Management	318.5	0.0	0.0	0.0	318.5
Fossil Energy	15,809.4	0.0	0.0	0.0	15,809.4
Office of Science	46,058.1	38,062.6	7,247.9	0.0	747.6
Department of Health and Human Services	247,977.4	0.0	0.0	0.0	247,977.4
Agency for Toxic Substances and Disease Registry	2,102.3	0.0	0.0	0.0	2,102.3
Centers for Disease Control and Prevention	40,309.1	0.0	0.0	0.0	40,309.1
National Institutes of Health	205,566.1	0.0	0.0	0.0	205,566.1
Other agencies					
National Aeronautics and Space Administration	254,048.3	0.0	0.0	0.0	254,048.3
National Science Foundation	738,120.8	135,519.2	168,998.4	363,407.6	70,195.6

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 62

Federal obligations for research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies surveyed	21,665,684.0	373,128.4	11,295,277.3	338,145.0	7,451,064.4	2,208,068.9
Departments						
Department of Agriculture	693,725.3	358,767.3	174,902.6	153,419.9	5,975.6	659.9
Agricultural Research Service	129,477.1	100,585.4	9,019.8	17,574.6	2,297.2	0.0
Animal and Plant Health Inspection Service	5,828.2	5,828.2	0.0	0.0	0.0	0.0
Forest Service	13,515.5	461.7	4,115.2	8,278.8	0.0	659.9
National Institute of Food and Agriculture	542,104.5	249,092.0	161,767.6	127,566.6	3,678.4	0.0
Rural Business-Cooperative Service	2,800.0	2,800.0	0.0	0.0	0.0	0.0
Department of Defense	315,410.1	2,295.6	106,833.6	13,890.4	179,304.8	13,085.8
Defense Advanced Research Projects Agency	158,586.0	0.0	61,897.1	13,890.4	82,798.5	0.0
Defense Health Agency	41,595.0	0.0	0.0	0.0	41,595.0	0.0
Department of the Air Force	7,627.2	0.0	5,013.2	0.0	0.0	2,614.0
Department of the Army	48,814.7	0.0	5,615.6	0.0	43,199.1	0.0
Department of the Navy	31,287.8	0.0	12,876.3	0.0	9,486.3	8,925.2
Other defense agencies	27,499.5	2,295.6	21,431.5	0.0	2,225.9	1,546.6
Department of Energy	134,101.8	12,065.5	102,998.5	19,037.9	0.0	0.0
Advanced Research Projects Agency—Energy	13,977.2	12,065.5	1,911.7	0.0	0.0	0.0
Office of Science	120,124.6	0.0	101,086.8	19,037.9	0.0	0.0
Department of Health and Human Services	19,790,029.2	0.0	10,362,163.5	0.0	7,265,784.0	2,162,081.7
Agency for Healthcare Research and Quality	77,447.9	0.0	0.0	0.0	76,256.0	1,191.9
Centers for Disease Control and Prevention	119,604.4	0.0	23,364.0	0.0	31,487.5	64,752.8
Centers for Medicare and Medicaid Services	14,414.5	0.0	0.0	0.0	14,414.5	0.0
Food and Drug Administration	75,216.2	0.0	75,216.2	0.0	0.0	0.0
Health Resources and Services Administration	13,066.0	0.0	0.0	0.0	13,066.0	0.0
National Institutes of Health	19,490,280.3	0.0	10,263,583.3	0.0	7,130,560.0	2,096,137.0
Department of Homeland Security	731.8	0.0	731.8	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	731.8	0.0	731.8	0.0	0.0	0.0
Other agencies						
National Aeronautics and Space Administration	32,241.6	0.0	0.0	0.0	0.0	32,241.6
National Science Foundation	699,444.2	0.0	547,647.3	151,796.9	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 63

Federal obligations for research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies surveyed	2,404,712.6	174,279.3	563,612.4	793,315.0	873,505.9
Departments					
Department of Agriculture	22,594.9	0.0	22,256.6	338.2	0.0
Agricultural Research Service	9,048.0	0.0	8,709.8	338.2	0.0
Forest Service	403.4	0.0	403.4	0.0	0.0
National Institute of Food and Agriculture	13,143.4	0.0	13,143.4	0.0	0.0
Department of Defense	176,032.3	3,735.9	44,469.8	104,776.3	23,050.4
Defense Advanced Research Projects Agency	27,847.9	0.0	550.0	27,297.9	0.0
Department of the Air Force	76,003.3	3,735.9	12,967.5	46,637.3	12,662.7
Department of the Army	14,719.8	0.0	5,561.7	5,478.2	3,679.9
Department of the Navy	13,123.1	0.0	1,815.8	4,599.5	6,707.8
Other defense agencies	44,338.2	0.0	23,574.8	20,763.4	0.0
Department of Energy	714,751.8	0.0	182,981.0	398,992.3	132,778.5
Advanced Research Projects Agency—Energy	16,113.9	0.0	0.0	16,113.9	0.0
Fossil Energy	60,441.5	0.0	60,441.5	0.0	0.0
National Nuclear Security Administration	14,650.0	0.0	0.0	900.0	13,750.0
Defense Programs	900.0	0.0	0.0	900.0	0.0
Office of Defense Nuclear Nonproliferation	13,750.0	0.0	0.0	0.0	13,750.0
Office of Science	623,546.4	0.0	122,539.5	381,978.4	119,028.5
Department of Health and Human Services	59,287.8	0.0	58,923.6	364.2	0.0
National Institutes of Health	59,287.8	0.0	58,923.6	364.2	0.0
Department of Homeland Security	4,146.8	0.0	1,283.6	2,863.1	0.0
Countering Weapons of Mass Destruction Office	2,863.1	0.0	0.0	2,863.1	0.0
Science and Technology Directorate	1,283.6	0.0	1,283.6	0.0	0.0
Other agencies					
National Aeronautics and Space Administration	597,958.8	98,393.5	0.0	2,110.2	497,455.1
National Science Foundation	829,940.1	72,149.9	253,697.8	283,870.6	220,221.9

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 64

Federal obligations for research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies surveyed	1,935,726.2	12,788.5	14,206.7	1,908,731.0
Departments				
Department of Defense	18,515.4	2,290.9	5,312.2	10,912.3
Defense Advanced Research Projects Agency	7,317.4	0.0	0.0	7,317.4
Department of the Air Force	704.3	0.0	0.0	704.3
Department of the Navy	4,568.9	0.0	3,021.1	1,547.8
Other defense agencies	5,924.8	2,290.9	2,291.1	1,342.9
Department of Health and Human Services	1,880,578.8	0.0	0.0	1,880,578.8
National Institutes of Health	1,880,578.8	0.0	0.0	1,880,578.8
Other agencies				
National Science Foundation	36,632.0	10,497.6	8,894.5	17,239.8

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 65

Federal obligations for research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies surveyed	450,586.5	17,274.0	47,682.1	4,554.1	20,712.1	360,364.2
Departments						
Department of Agriculture	39,704.3	0.0	27,321.1	0.0	10,323.6	2,059.6
Agricultural Research Service	338.2	0.0	338.2	0.0	0.0	0.0
Economic Research Service	4,095.9	0.0	4,095.9	0.0	0.0	0.0
Forest Service	4,507.9	0.0	1,874.0	0.0	574.3	2,059.6
National Institute of Food and Agriculture	30,762.2	0.0	21,013.0	0.0	9,749.2	0.0
Department of Defense	86,390.9	0.0	0.0	0.0	173.9	86,216.9
Department of the Air Force	54,718.3	0.0	0.0	0.0	0.0	54,718.3
Department of the Army	2,440.4	0.0	0.0	0.0	0.0	2,440.4
Department of the Navy	13,675.4	0.0	0.0	0.0	0.0	13,675.4
Other defense agencies	15,556.8	0.0	0.0	0.0	173.9	15,382.9
Department of Energy	66.0	0.0	66.0	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	66.0	0.0	66.0	0.0	0.0	0.0
Department of Health and Human Services	139,020.4	36.1	3,429.1	0.0	0.0	135,555.2
Administration for Community Living	53,372.5	0.0	0.0	0.0	0.0	53,372.5
Agency for Healthcare Research and Quality	10,152.3	36.1	3,429.1	0.0	0.0	6,687.1
Centers for Disease Control and Prevention	470.0	0.0	0.0	0.0	0.0	470.0
Health Resources and Services Administration	1,188.7	0.0	0.0	0.0	0.0	1,188.7
National Institutes of Health	71,326.1	0.0	0.0	0.0	0.0	71,326.1
Office of the Secretary of Health and Human Services	2,510.8	0.0	0.0	0.0	0.0	2,510.8
Office of the Assistant Secretary for Planning and Evaluation	2,510.8	0.0	0.0	0.0	0.0	2,510.8
Other agencies						
National Science Foundation	185,404.8	17,237.9	16,865.9	4,554.1	10,214.5	136,532.5

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 66

Federal obligations for basic research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2020–21

(Dollars in thousands)

Field	2020	2021 (preliminary)
All fields	20,071,452.7	19,474,515.9
Computer sciences and mathematics	1,371,895.9	1,358,770.8
Computer sciences	924,890.0	NA
Mathematics	397,034.3	NA
Other computer sciences and mathematics	49,971.6	NA
Engineering	1,791,749.2	1,796,051.5
Aeronautical engineering	48,702.9	NA
Astronautical engineering	2,240.0	NA
Chemical engineering	73,160.3	NA
Civil engineering	7,840.0	NA
Electrical engineering	152,730.3	NA
Mechanical engineering	74,829.8	NA
Metallurgy and materials engineering	215,875.2	NA
Other engineering	1,216,370.7	NA
Environmental sciences	1,175,817.6	1,063,035.8
Atmospheric sciences	179,396.3	NA
Geological sciences	176,447.3	NA
Oceanography	413,641.0	NA
Other environmental sciences	406,332.9	NA
Life sciences	11,270,936.8	11,225,928.8
Agricultural sciences	189,945.9	NA
Biological sciences (excluding environmental biology)	6,043,158.8	NA
Environmental biology	235,991.5	NA
Medical sciences	3,713,913.1	NA
Other life sciences	1,087,927.6	NA
Physical sciences	2,266,145.9	1,612,544.4
Astronomy	174,279.3	NA
Chemistry	483,985.0	NA
Physics	754,148.0	NA
Other physical sciences	853,733.6	NA
Psychology	1,002,707.5	1,024,700.0
Biological aspects	12,748.5	NA
Social aspects	11,185.6	NA
Other psychological sciences	978,773.4	NA
Social sciences	307,483.7	310,079.2
Anthropology	17,237.9	NA
Economics	24,044.4	NA
Political science	4,554.1	NA
Sociology	13,317.6	NA
Other social sciences	248,329.7	NA
Other sciences nec	884,715.9	1,083,405.4

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FYs 2020–21. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 67

Federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	20,071,452.7	1,371,895.9	1,791,749.2	1,175,817.6	11,270,936.8	2,266,145.9	1,002,707.5	307,483.7	884,715.9
Departments									
Department of Agriculture	414,033.7	140.1	42,812.5	5,623.8	344,168.7	10,940.4	0.0	10,348.2	0.0
Agricultural Research Service	78,297.3	101.8	704.7	344.5	71,931.7	5,026.7	0.0	187.9	0.0
Animal and Plant Health Inspection Service	5,828.2	0.0	0.0	0.0	5,828.2	0.0	0.0	0.0	0.0
Forest Service	5,972.2	38.3	122.0	1,732.0	3,688.8	50.0	0.0	341.2	0.0
National Institute of Food and Agriculture	323,936.0	0.0	41,985.8	3,547.4	262,719.9	5,863.8	0.0	9,819.2	0.0
Department of Defense	1,490,834.9	280,789.4	386,221.2	58,553.1	156,566.9	146,199.6	7,022.3	77,591.9	377,890.5
Defense Advanced Research Projects Agency	256,737.0	140,697.7	24,349.9	0.0	65,685.9	26,003.4	0.0	0.0	0.0
Defense Health Agency	336.3	0.0	0.0	0.0	336.3	0.0	0.0	0.0	0.0
Department of the Air Force	383,429.6	24,950.7	222,150.3	1,965.6	7,349.8	63,248.0	704.3	54,718.3	8,342.7
Department of the Army	328,010.9	42,135.5	16,139.0	1,959.0	48,814.7	14,719.8	0.0	2,440.4	201,802.5
Department of the Navy	369,864.8	38,381.8	83,810.9	48,952.9	18,185.5	10,067.8	1,547.8	5,050.4	163,867.7
Other defense agencies	152,456.4	34,623.6	39,771.2	5,675.6	16,194.7	32,160.6	4,770.2	15,382.9	3,877.6
Department of Energy	865,149.4	26,018.6	1,546.3	46,058.1	120,124.6	671,263.4	0.0	0.0	138.4
Electricity Delivery and Energy Reliability	1,546.3	0.0	1,546.3	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	33,967.0	0.0	0.0	0.0	0.0	33,967.0	0.0	0.0	0.0
National Nuclear Security Administration	13,750.0	0.0	0.0	0.0	0.0	13,750.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	13,750.0	0.0	0.0	0.0	0.0	13,750.0	0.0	0.0	0.0
Office of Science	815,886.1	26,018.6	0.0	46,058.1	120,124.6	623,546.4	0.0	0.0	138.4
Department of Health and Human Services	11,841,606.6	113,113.2	565,958.0	122,247.7	9,943,605.7	30,236.8	959,095.2	36,576.3	70,773.7
Centers for Disease Control and Prevention	33,225.4	0.0	0.0	17,409.0	3,562.8	0.0	0.0	200.0	12,053.6
National Institutes of Health	11,808,381.2	113,113.2	565,958.0	104,838.7	9,940,042.9	30,236.8	959,095.2	36,376.3	58,720.1

TABLE 67

Federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Department of Homeland Security	17,130.1	2,119.6	11,415.5	0.0	731.8	2,863.1	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	5,714.5	2,119.6	0.0	0.0	731.8	2,863.1	0.0	0.0	0.0
Science and Technology Directorate	11,415.5	0.0	11,415.5	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	820,118.9	0.0	0.0	215,376.3	12,242.0	589,737.4	0.0	0.0	2,763.2
National Science Foundation	4,622,579.1	949,715.1	783,795.5	727,958.7	693,497.2	814,905.2	36,590.0	182,967.3	433,150.2

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 68

Preliminary federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	19,474,515.9	1,358,770.8	1,796,051.5	1,063,035.8	11,225,928.8	1,612,544.4	1,024,700.0	310,079.2	1,083,405.4
Departments									
Department of Agriculture	393,250.5	114.6	43,262.3	4,217.0	325,272.8	9,583.1	0.0	10,800.8	0.0
Agricultural Research Service	58,723.0	76.3	528.5	258.4	53,948.8	3,770.0	0.0	140.9	0.0
Animal and Plant Health Inspection Service	6,242.9	0.0	0.0	0.0	6,242.9	0.0	0.0	0.0	0.0
Forest Service	5,972.2	38.3	122.0	1,732.0	3,688.8	50.0	0.0	341.2	0.0
National Institute of Food and Agriculture	322,312.4	0.0	42,611.7	2,226.6	261,392.3	5,763.1	0.0	10,318.7	0.0
Department of Defense	1,594,503.2	278,070.2	382,226.6	66,949.1	175,733.6	173,585.7	30,356.2	78,340.7	409,241.1
Defense Advanced Research Projects Agency	279,185.5	153,000.0	26,479.1	0.0	71,429.4	28,277.0	0.0	0.0	0.0
Defense Health Agency	540.1	0.0	0.0	0.0	540.1	0.0	0.0	0.0	0.0
Department of the Air Force	368,146.2	23,956.2	213,295.4	1,887.2	7,056.8	60,727.0	676.2	52,537.2	8,010.2
Department of the Army	346,174.1	33,362.2	17,806.6	2,107.8	52,906.4	15,527.6	0.0	2,575.5	221,888.0
Department of the Navy	397,974.4	41,401.8	90,405.3	52,804.7	18,624.0	10,860.0	1,669.6	5,447.7	176,761.2
Other defense agencies	202,483.0	26,350.0	34,240.2	10,149.4	25,176.9	58,194.1	28,010.4	17,780.2	2,581.8
Department of Energy	381,960.8	7,122.0	1,535.0	5,424.0	87,872.0	113,154.6	0.0	0.0	166,853.2
Electricity Delivery and Energy Reliability	1,535.0	0.0	1,535.0	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	1,701.0	0.0	0.0	0.0	0.0	1,701.0	0.0	0.0	0.0
National Nuclear Security Administration	10,068.6	0.0	0.0	0.0	0.0	10,068.6	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	10,068.6	0.0	0.0	0.0	0.0	10,068.6	0.0	0.0	0.0
Office of Science	368,656.2	7,122.0	0.0	5,424.0	87,872.0	101,385.0	0.0	0.0	166,853.2
Department of Health and Human Services	11,811,709.8	112,920.7	564,994.7	115,213.1	9,923,745.3	30,185.3	957,462.6	36,514.4	70,673.8
Centers for Disease Control and Prevention	23,428.5	0.0	0.0	10,552.8	622.0	0.0	0.0	200.0	12,053.6
National Institutes of Health	11,788,281.4	112,920.7	564,994.7	104,660.2	9,923,123.3	30,185.3	957,462.6	36,314.4	58,620.1

TABLE 68

Preliminary federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Department of Homeland Security	21,894.1	3,270.4	14,000.0	0.0	2,124.5	2,499.2	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	7,894.1	3,270.4	0.0	0.0	2,124.5	2,499.2	0.0	0.0	0.0
Science and Technology Directorate	14,000.0	0.0	14,000.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	611,831.9	0.0	0.0	137,480.9	12,164.7	462,146.2	0.0	0.0	40.0
National Science Foundation	4,659,365.6	957,272.9	790,032.9	733,751.8	699,016.0	821,390.2	36,881.2	184,423.3	436,597.2

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2021. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 69

Federal obligations for basic research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies surveyed	1,371,895.9	924,890.0	397,034.3	49,971.6
Departments				
Department of Agriculture	140.1	116.1	24.0	0.0
Agricultural Research Service	101.8	101.8	0.0	0.0
Forest Service	38.3	14.3	24.0	0.0
Department of Defense	280,789.4	195,100.5	46,909.1	38,779.8
Defense Advanced Research Projects Agency	140,697.7	120,334.6	3,624.8	16,738.3
Department of the Air Force	24,950.7	2,268.8	6,295.2	16,386.8
Department of the Army	42,135.5	31,404.8	10,730.8	0.0
Department of the Navy	38,381.8	26,009.7	12,372.1	0.0
Other defense agencies	34,623.6	15,082.6	13,886.3	5,654.7
Department of Energy	26,018.6	7,713.1	9,233.2	9,072.2
Office of Science	26,018.6	7,713.1	9,233.2	9,072.2
Department of Health and Human Services	113,113.2	0.0	113,113.2	0.0
National Institutes of Health	113,113.2	0.0	113,113.2	0.0
Department of Homeland Security	2,119.6	0.0	0.0	2,119.6
Countering Weapons of Mass Destruction Office	2,119.6	0.0	0.0	2,119.6
Other agencies				
National Science Foundation	949,715.1	721,960.3	227,754.8	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 70

Federal obligations for basic research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
National Science Foundation	783,795.5	0.0	0.0	62,922.5	3,820.1	99,342.7	54,523.3	167,225.8	395,961.2

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 71

Federal obligations for basic research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies surveyed	1,175,817.6	179,396.3	176,447.3	413,641.0	406,332.9
Departments					
Department of Agriculture	5,623.8	3,884.0	7.8	0.0	1,732.0
Agricultural Research Service	344.5	336.7	7.8	0.0	0.0
Forest Service	1,732.0	0.0	0.0	0.0	1,732.0
National Institute of Food and Agriculture	3,547.4	3,547.4	0.0	0.0	0.0
Department of Defense	58,553.1	3,669.8	957.1	50,420.9	3,505.2
Department of the Air Force	1,965.6	698.3	0.0	0.0	1,267.3
Department of the Army	1,959.0	0.0	759.8	0.0	1,199.2
Department of the Navy	48,952.9	676.0	0.0	47,260.7	1,016.3
Other defense agencies	5,675.6	2,295.6	197.3	3,160.2	22.5
Department of Energy	46,058.1	38,062.6	7,247.9	0.0	747.6
Office of Science	46,058.1	38,062.6	7,247.9	0.0	747.6
Department of Health and Human Services	122,247.7	0.0	0.0	0.0	122,247.7
Centers for Disease Control and Prevention	17,409.0	0.0	0.0	0.0	17,409.0
National Institutes of Health	104,838.7	0.0	0.0	0.0	104,838.7
Other agencies					
National Aeronautics and Space Administration	215,376.3	0.0	0.0	0.0	215,376.3
National Science Foundation	727,958.7	133,779.9	168,234.5	363,220.1	62,724.2

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 72

Federal obligations for basic research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies surveyed	11,270,936.8	189,945.9	6,043,158.8	235,991.5	3,713,913.1	1,087,927.6
Departments						
Department of Agriculture	344,168.7	187,650.3	89,382.5	64,811.5	2,318.3	6.1
Agricultural Research Service	71,931.7	55,880.8	5,011.0	9,763.7	1,276.2	0.0
Animal and Plant Health Inspection Service	5,828.2	5,828.2	0.0	0.0	0.0	0.0
Forest Service	3,688.8	89.7	729.5	2,863.5	0.0	6.1
National Institute of Food and Agriculture	262,719.9	125,851.6	83,641.9	52,184.3	1,042.1	0.0
Department of Defense	156,566.9	2,295.6	75,830.0	345.3	71,446.4	6,649.6
Defense Advanced Research Projects Agency	65,685.9	0.0	42,975.4	345.3	22,365.2	0.0
Defense Health Agency	336.3	0.0	0.0	0.0	336.3	0.0
Department of the Air Force	7,349.8	0.0	4,772.2	0.0	0.0	2,577.6
Department of the Army	48,814.7	0.0	5,615.6	0.0	43,199.1	0.0
Department of the Navy	18,185.5	0.0	10,114.3	0.0	5,545.9	2,525.4
Other defense agencies	16,194.7	2,295.6	12,352.5	0.0	0.0	1,546.6
Department of Energy	120,124.6	0.0	101,086.8	19,037.9	0.0	0.0
Office of Science	120,124.6	0.0	101,086.8	19,037.9	0.0	0.0
Department of Health and Human Services	9,943,605.7	0.0	5,234,427.5	0.0	3,640,148.3	1,069,029.9
Centers for Disease Control and Prevention	3,562.8	0.0	0.0	0.0	3,562.8	0.0
National Institutes of Health	9,940,042.9	0.0	5,234,427.5	0.0	3,636,585.6	1,069,029.9
Department of Homeland Security	731.8	0.0	731.8	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	731.8	0.0	731.8	0.0	0.0	0.0
Other agencies						
National Aeronautics and Space Administration	12,242.0	0.0	0.0	0.0	0.0	12,242.0
National Science Foundation	693,497.2	0.0	541,700.3	151,796.9	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 73

Federal obligations for basic research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies surveyed	2,266,145.9	174,279.3	483,985.0	754,148.0	853,733.6
Departments					
Department of Agriculture	10,940.4	0.0	10,752.5	187.9	0.0
Agricultural Research Service	5,026.7	0.0	4,838.8	187.9	0.0
Forest Service	50.0	0.0	50.0	0.0	0.0
National Institute of Food and Agriculture	5,863.8	0.0	5,863.8	0.0	0.0
Department of Defense	146,199.6	3,735.9	34,686.7	90,222.8	17,554.2
Defense Advanced Research Projects Agency	26,003.4	0.0	550.0	25,453.4	0.0
Department of the Air Force	63,248.0	3,735.9	12,967.5	36,597.9	9,946.8
Department of the Army	14,719.8	0.0	5,561.7	5,478.2	3,679.9
Department of the Navy	10,067.8	0.0	1,715.8	4,424.5	3,927.5
Other defense agencies	32,160.6	0.0	13,891.6	18,268.9	0.0
Department of Energy	671,263.4	0.0	156,506.5	381,978.4	132,778.5
Fossil Energy	33,967.0	0.0	33,967.0	0.0	0.0
National Nuclear Security Administration	13,750.0	0.0	0.0	0.0	13,750.0
Office of Defense Nuclear Nonproliferation	13,750.0	0.0	0.0	0.0	13,750.0
Office of Science	623,546.4	0.0	122,539.5	381,978.4	119,028.5
Department of Health and Human Services	30,236.8	0.0	30,051.0	185.8	0.0
National Institutes of Health	30,236.8	0.0	30,051.0	185.8	0.0
Department of Homeland Security	2,863.1	0.0	0.0	2,863.1	0.0
Countering Weapons of Mass Destruction Office	2,863.1	0.0	0.0	2,863.1	0.0
Other agencies					
National Aeronautics and Space Administration	589,737.4	98,393.5	0.0	0.0	491,343.9
National Science Foundation	814,905.2	72,149.9	251,988.3	278,710.0	212,057.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 74

Federal obligations for basic research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies surveyed	1,002,707.5	12,748.5	11,185.6	978,773.4
Departments				
Department of Defense	7,022.3	2,290.9	2,291.1	2,440.4
Department of the Air Force	704.3	0.0	0.0	704.3
Department of the Navy	1,547.8	0.0	0.0	1,547.8
Other defense agencies	4,770.2	2,290.9	2,291.1	188.3
Department of Health and Human Services	959,095.2	0.0	0.0	959,095.2
National Institutes of Health	959,095.2	0.0	0.0	959,095.2
Other agencies				
National Science Foundation	36,590.0	10,457.6	8,894.5	17,237.8

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 75

Federal obligations for basic research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies surveyed	307,483.7	17,237.9	24,044.4	4,554.1	13,317.6	248,329.7
Departments						
Department of Agriculture	10,348.2	0.0	7,178.6	0.0	3,103.1	66.6
Agricultural Research Service	187.9	0.0	187.9	0.0	0.0	0.0
Forest Service	341.2	0.0	249.6	0.0	25.0	66.6
National Institute of Food and Agriculture	9,819.2	0.0	6,741.1	0.0	3,078.1	0.0
Department of Defense	77,591.9	0.0	0.0	0.0	0.0	77,591.9
Department of the Air Force	54,718.3	0.0	0.0	0.0	0.0	54,718.3
Department of the Army	2,440.4	0.0	0.0	0.0	0.0	2,440.4
Department of the Navy	5,050.4	0.0	0.0	0.0	0.0	5,050.4
Other defense agencies	15,382.9	0.0	0.0	0.0	0.0	15,382.9
Department of Health and Human Services	36,576.3	0.0	0.0	0.0	0.0	36,576.3
Centers for Disease Control and Prevention	200.0	0.0	0.0	0.0	0.0	200.0
National Institutes of Health	36,376.3	0.0	0.0	0.0	0.0	36,376.3
Other agencies						
National Science Foundation	182,967.3	17,237.9	16,865.9	4,554.1	10,214.5	134,094.9

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 76

Federal obligations for applied research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2020–21

(Dollars in thousands)

Field	2020	2021 (preliminary)
All fields	14,547,530.9	13,978,525.9
Computer sciences and mathematics	539,638.4	521,567.3
Computer sciences	416,890.5	NA
Mathematics	110,844.3	NA
Other computer sciences and mathematics	11,903.6	NA
Engineering	1,586,160.4	1,504,949.1
Aeronautical engineering	74,347.9	NA
Astronautical engineering	12,327.6	NA
Chemical engineering	155,471.6	NA
Civil engineering	1,956.7	NA
Electrical engineering	89,358.3	NA
Mechanical engineering	24,202.9	NA
Metallurgy and materials engineering	48,347.0	NA
Other engineering	1,180,148.4	NA
Environmental sciences	260,513.9	256,956.4
Atmospheric sciences	6,647.4	NA
Geological sciences	770.2	NA
Oceanography	58,100.4	NA
Other environmental sciences	194,995.9	NA
Life sciences	10,394,747.2	9,989,049.1
Agricultural sciences	183,182.5	NA
Biological sciences (excluding environmental biology)	5,252,118.5	NA
Environmental biology	102,153.5	NA
Medical sciences	3,737,151.3	NA
Other life sciences	1,120,141.3	NA
Physical sciences	138,566.6	122,122.3
Astronomy	0.0	NA
Chemistry	79,627.4	NA
Physics	39,166.9	NA
Other physical sciences	19,772.3	NA
Psychology	933,018.7	893,126.9
Biological aspects	40.0	NA
Social aspects	3,021.1	NA
Other psychological sciences	929,957.6	NA
Social sciences	143,102.7	137,906.2
Anthropology	36.1	NA
Economics	23,637.6	NA
Political science	0.0	NA
Sociology	7,394.5	NA
Other social sciences	112,034.5	NA
Other sciences nec	551,783.0	552,848.7

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal basic research obligations to universities and colleges in FYs 2020–21. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 77

Federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	14,547,530.9	539,638.4	1,586,160.4	260,513.9	10,394,747.2	138,566.6	933,018.7	143,102.7	551,783.0
Departments									
Department of Agriculture	447,648.8	799.9	51,875.7	4,406.0	349,556.6	11,654.4	0.0	29,356.1	0.0
Agricultural Research Service	62,637.8	81.4	563.7	275.6	57,545.4	4,021.3	0.0	150.3	0.0
Economic Research Service	4,095.9	0.0	0.0	0.0	0.0	0.0	0.0	4,095.9	0.0
Forest Service	18,978.6	651.3	1,400.0	2,580.4	9,826.7	353.4	0.0	4,166.8	0.0
National Agricultural Statistics Service	67.2	67.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	359,069.3	0.0	49,912.0	1,550.0	279,384.6	7,279.7	0.0	20,943.0	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Defense	936,297.2	239,679.9	234,242.9	65,416.3	158,843.2	29,832.8	11,493.1	8,799.0	187,990.0
Defense Advanced Research Projects Agency	327,429.1	161,158.0	49,051.5	9,533.7	92,900.0	1,844.5	7,317.4	0.0	5,624.0
Defense Health Agency	41,258.7	0.0	0.0	0.0	41,258.7	0.0	0.0	0.0	0.0
Department of the Air Force	84,206.8	7,480.4	63,111.0	114.5	277.4	12,755.3	0.0	0.0	468.3
Department of the Army	167,685.1	24.4	368.9	0.0	0.0	0.0	0.0	0.0	167,291.8
Department of the Navy	270,992.6	59,330.5	119,666.8	55,768.1	13,102.3	3,055.3	3,021.1	8,625.0	8,423.3
Other defense agencies	44,724.9	11,686.7	2,044.7	0.0	11,304.8	12,177.6	1,154.6	173.9	6,182.6
Department of Energy	624,495.2	19,681.3	531,154.4	16,127.8	13,977.2	43,488.4	0.0	66.0	0.0
Advanced Research Projects Agency—Energy	90,770.6	15,761.4	44,852.1	0.0	13,977.2	16,113.9	0.0	66.0	0.0
Electricity Delivery and Energy Reliability	7,746.2	0.0	7,746.2	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 77

Federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Energy Efficiency and Renewable Energy	310,154.7	0.0	310,154.7	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	318.5	0.0	0.0	318.5	0.0	0.0	0.0	0.0	0.0
Fossil Energy	166,893.5	0.0	124,609.5	15,809.4	0.0	26,474.5	0.0	0.0	0.0
National Nuclear Security Administration	1,175.0	0.0	275.0	0.0	0.0	900.0	0.0	0.0	0.0
Defense Programs	1,175.0	0.0	275.0	0.0	0.0	900.0	0.0	0.0	0.0
Nuclear Energy	43,516.8	0.0	43,516.8	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	3,920.0	3,920.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	11,761,847.3	110,505.3	544,196.6	125,729.7	9,846,423.5	29,051.0	921,483.6	102,444.1	82,013.4
Administration for Community Living	53,372.5	0.0	0.0	0.0	0.0	0.0	0.0	53,372.5	0.0
Agency for Healthcare Research and Quality	100,708.7	1,827.9	433.0	0.0	77,447.9	0.0	0.0	10,152.3	10,847.7
Agency for Toxic Substances and Disease Registry	2,102.3	0.0	0.0	2,102.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	139,211.7	0.0	0.0	22,900.1	116,041.6	0.0	0.0	270.0	0.0
Centers for Medicare and Medicaid Services	14,414.5	0.0	0.0	0.0	14,414.5	0.0	0.0	0.0	0.0
Food and Drug Administration	75,216.2	0.0	0.0	0.0	75,216.2	0.0	0.0	0.0	0.0
Health Resources and Services Administration	29,003.1	0.0	0.0	0.0	13,066.0	0.0	0.0	1,188.7	14,748.4
National Institutes of Health	11,345,307.4	108,677.4	543,763.6	100,727.4	9,550,237.3	29,051.0	921,483.6	34,949.8	56,417.3

TABLE 77

Federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of the Secretary of Health and Human Services	2,510.8	0.0	0.0	0.0	0.0	0.0	0.0	2,510.8	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,510.8	0.0	0.0	0.0	0.0	0.0	0.0	2,510.8	0.0
Department of Homeland Security	1,283.6	0.0	0.0	0.0	0.0	1,283.6	0.0	0.0	0.0
Science and Technology Directorate	1,283.6	0.0	0.0	0.0	0.0	1,283.6	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	160,682.6	0.0	79,973.9	38,671.9	19,999.6	8,221.4	0.0	0.0	13,815.8
National Science Foundation	615,276.3	168,972.0	144,716.9	10,162.1	5,947.0	15,035.0	42.0	2,437.5	267,963.7

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 78

Preliminary federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	13,978,525.9	521,567.3	1,504,949.1	256,956.4	9,989,049.1	122,122.3	893,126.9	137,906.2	552,848.7
Departments									
Department of Agriculture	433,658.4	790.9	49,513.2	4,337.0	344,776.4	9,819.4	0.0	24,421.4	0.0
Agricultural Research Service	46,978.4	61.1	422.8	206.7	43,159.0	3,016.0	0.0	112.7	0.0
Economic Research Service	4,095.9	0.0	0.0	0.0	0.0	0.0	0.0	4,095.9	0.0
Forest Service	18,978.6	651.3	1,400.0	2,580.4	9,826.7	353.4	0.0	4,166.8	0.0
National Agricultural Statistics Service	78.5	78.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	360,727.0	0.0	47,690.4	1,550.0	288,990.7	6,450.0	0.0	16,046.0	0.0
Rural Business-Cooperative Service	2,800.0	0.0	0.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Department of Defense	941,204.1	221,246.8	242,727.6	68,900.6	160,160.1	25,504.7	11,274.7	9,518.5	201,871.1
Defense Advanced Research Projects Agency	296,169.8	145,772.4	44,368.6	8,623.5	84,031.0	1,668.4	6,618.8	0.0	5,087.1
Defense Health Agency	51,448.4	0.0	0.0	0.0	51,448.4	0.0	0.0	0.0	0.0
Department of the Air Force	89,010.5	7,907.1	66,711.3	121.0	293.2	13,483.0	0.0	0.0	495.0
Department of the Army	180,671.8	542.0	397.5	0.0	0.0	0.0	0.0	0.0	179,732.3
Department of the Navy	292,315.0	63,998.8	129,082.5	60,156.1	14,133.2	3,295.7	3,258.8	9,303.7	9,086.1
Other defense agencies	31,588.6	3,026.5	2,167.7	0.0	10,254.4	7,057.6	1,397.0	214.8	7,470.5
Department of Energy	580,683.5	22,170.6	494,078.4	15,608.0	13,626.2	35,135.9	0.0	64.4	0.0
Advanced Research Projects Agency—Energy	88,491.2	15,365.6	43,725.8	0.0	13,626.2	15,709.2	0.0	64.4	0.0
Electricity Delivery and Energy Reliability	6,126.2	0.0	6,126.2	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	317,054.5	0.0	317,054.5	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 78

Preliminary federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Environmental Management	4,007.2	0.0	0.0	4,007.2	0.0	0.0	0.0	0.0	0.0
Fossil Energy	122,464.5	0.0	91,437.0	11,600.8	0.0	19,426.7	0.0	0.0	0.0
Nuclear Energy	35,734.9	0.0	35,734.9	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	6,805.0	6,805.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	11,280,473.5	105,797.6	520,805.4	122,280.4	9,441,053.6	27,800.3	881,809.7	101,434.1	79,492.6
Administration for Community Living	54,861.8	0.0	0.0	0.0	0.0	0.0	0.0	54,861.8	0.0
Agency for Healthcare Research and Quality	98,720.2	1,799.3	453.2	0.0	74,970.0	0.0	0.0	10,307.3	11,190.4
Agency for Toxic Substances and Disease Registry	2,102.3	0.0	0.0	2,102.3	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	143,065.1	0.0	0.0	23,787.5	119,007.6	0.0	0.0	270.0	0.0
Centers for Medicare and Medicaid Services	14,702.8	0.0	0.0	0.0	14,702.8	0.0	0.0	0.0	0.0
Food and Drug Administration	80,249.7	0.0	0.0	0.0	80,249.7	0.0	0.0	0.0	0.0
Health Resources and Services Administration	27,379.9	0.0	0.0	0.0	13,066.0	0.0	0.0	0.0	14,313.9
National Institutes of Health	10,856,841.7	103,998.3	520,352.2	96,390.6	9,139,057.3	27,800.3	881,809.7	33,445.0	53,988.3
Office of the Secretary of Health and Human Services	2,550.0	0.0	0.0	0.0	0.0	0.0	0.0	2,550.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,550.0	0.0	0.0	0.0	0.0	0.0	0.0	2,550.0	0.0
Department of Homeland Security	2,495.2	495.2	0.0	0.0	0.0	2,000.0	0.0	0.0	0.0

TABLE 78

Preliminary federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2021

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Countering Weapons of Mass Destruction Office	495.2	495.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Science and Technology Directorate	2,000.0	0.0	0.0	0.0	0.0	2,000.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	117,109.2	0.0	51,314.0	35,542.3	23,412.1	6,640.7	0.0	0.0	200.2
National Science Foundation	622,902.0	171,066.2	146,510.6	10,288.1	6,020.7	15,221.3	42.5	2,467.7	271,284.9

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2021. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 79

Federal obligations for applied research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies surveyed	539,638.4	416,890.5	110,844.3	11,903.6
Departments				
Department of Agriculture	799.9	609.4	190.5	0.0
Agricultural Research Service	81.4	81.4	0.0	0.0
Forest Service	651.3	528.0	123.3	0.0
National Agricultural Statistics Service	67.2	0.0	67.2	0.0
Department of Defense	239,679.9	226,109.9	1,666.4	11,903.6
Defense Advanced Research Projects Agency	161,158.0	154,494.4	0.0	6,663.5
Department of the Air Force	7,480.4	6,820.8	0.0	659.5
Department of the Army	24.4	24.4	0.0	0.0
Department of the Navy	59,330.5	53,083.5	1,666.4	4,580.6
Other defense agencies	11,686.7	11,686.7	0.0	0.0
Department of Energy	19,681.3	19,681.3	0.0	0.0
Advanced Research Projects Agency—Energy	15,761.4	15,761.4	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	3,920.0	3,920.0	0.0	0.0
Department of Health and Human Services	110,505.3	1,827.9	108,677.4	0.0
Agency for Healthcare Research and Quality	1,827.9	1,827.9	0.0	0.0
National Institutes of Health	108,677.4	0.0	108,677.4	0.0
Other agencies				
National Science Foundation	168,972.0	168,662.0	310.0	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 80

Federal obligations for applied research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Department of Health and Human Services	544,196.6	0.0	0.0	0.0	0.0	0.0	0.0	4,943.1	539,253.5
Agency for Healthcare Research and Quality	433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	433.0
National Institutes of Health	543,763.6	0.0	0.0	0.0	0.0	0.0	0.0	4,943.1	538,820.5
Other agencies									
National Aeronautics and Space Administration	79,973.9	27,971.5	6,561.6	0.0	0.0	0.0	0.0	0.0	45,440.7
National Science Foundation	144,716.9	0.0	0.0	14,008.8	955.0	21,740.1	13,629.6	612.6	93,770.8

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 81

Federal obligations for applied research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies surveyed	260,513.9	6,647.4	770.2	58,100.4	194,995.9
Departments					
Department of Agriculture	4,406.0	2,064.4	6.3	0.0	2,335.3
Agricultural Research Service	275.6	269.3	6.3	0.0	0.0
Forest Service	2,580.4	245.1	0.0	0.0	2,335.3
National Institute of Food and Agriculture	1,550.0	1,550.0	0.0	0.0	0.0
Department of Defense	65,416.3	2,843.7	0.0	57,912.9	4,659.7
Defense Advanced Research Projects Agency	9,533.7	2,302.4	0.0	5,475.2	1,756.0
Department of the Air Force	114.5	0.0	0.0	0.0	114.5
Department of the Navy	55,768.1	541.2	0.0	52,437.7	2,789.2
Department of Energy	16,127.8	0.0	0.0	0.0	16,127.8
Environmental Management	318.5	0.0	0.0	0.0	318.5
Fossil Energy	15,809.4	0.0	0.0	0.0	15,809.4
Department of Health and Human Services	125,729.7	0.0	0.0	0.0	125,729.7
Agency for Toxic Substances and Disease Registry	2,102.3	0.0	0.0	0.0	2,102.3
Centers for Disease Control and Prevention	22,900.1	0.0	0.0	0.0	22,900.1
National Institutes of Health	100,727.4	0.0	0.0	0.0	100,727.4
Other agencies					
National Aeronautics and Space Administration	38,671.9	0.0	0.0	0.0	38,671.9
National Science Foundation	10,162.1	1,739.3	763.9	187.5	7,471.4

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 82

Federal obligations for applied research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies surveyed	10,394,747.2	183,182.5	5,252,118.5	102,153.5	3,737,151.3	1,120,141.3
Departments						
Department of Agriculture	349,556.6	171,117.0	85,520.2	88,608.5	3,657.3	653.7
Agricultural Research Service	57,545.4	44,704.6	4,008.8	7,810.9	1,021.0	0.0
Forest Service	9,826.7	372.0	3,385.7	5,415.3	0.0	653.7
National Institute of Food and Agriculture	279,384.6	123,240.4	78,125.7	75,382.3	2,636.3	0.0
Rural Business-Cooperative Service	2,800.0	2,800.0	0.0	0.0	0.0	0.0
Department of Defense	158,843.2	0.0	31,003.6	13,545.1	107,858.3	6,436.2
Defense Advanced Research Projects Agency	92,900.0	0.0	18,921.6	13,545.1	60,433.3	0.0
Defense Health Agency	41,258.7	0.0	0.0	0.0	41,258.7	0.0
Department of the Air Force	277.4	0.0	241.0	0.0	0.0	36.4
Department of the Navy	13,102.3	0.0	2,762.1	0.0	3,940.4	6,399.8
Other defense agencies	11,304.8	0.0	9,078.9	0.0	2,225.9	0.0
Department of Energy	13,977.2	12,065.5	1,911.7	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	13,977.2	12,065.5	1,911.7	0.0	0.0	0.0
Department of Health and Human Services	9,846,423.5	0.0	5,127,736.0	0.0	3,625,635.7	1,093,051.8
Agency for Healthcare Research and Quality	77,447.9	0.0	0.0	0.0	76,256.0	1,191.9
Centers for Disease Control and Prevention	116,041.6	0.0	23,364.0	0.0	27,924.7	64,752.8
Centers for Medicare and Medicaid Services	14,414.5	0.0	0.0	0.0	14,414.5	0.0
Food and Drug Administration	75,216.2	0.0	75,216.2	0.0	0.0	0.0
Health Resources and Services Administration	13,066.0	0.0	0.0	0.0	13,066.0	0.0
National Institutes of Health	9,550,237.3	0.0	5,029,155.8	0.0	3,493,974.4	1,027,107.1
Other agencies						
National Aeronautics and Space Administration	19,999.6	0.0	0.0	0.0	0.0	19,999.6
National Science Foundation	5,947.0	0.0	5,947.0	0.0	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 83

Federal obligations for applied research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies surveyed	138,566.6	0.0	79,627.4	39,166.9	19,772.3
Departments					
Department of Agriculture	11,654.4	0.0	11,504.1	150.3	0.0
Agricultural Research Service	4,021.3	0.0	3,871.0	150.3	0.0
Forest Service	353.4	0.0	353.4	0.0	0.0
National Institute of Food and Agriculture	7,279.7	0.0	7,279.7	0.0	0.0
Department of Defense	29,832.8	0.0	9,783.1	14,553.4	5,496.2
Defense Advanced Research Projects Agency	1,844.5	0.0	0.0	1,844.5	0.0
Department of the Air Force	12,755.3	0.0	0.0	10,039.4	2,715.9
Department of the Navy	3,055.3	0.0	100.0	175.0	2,780.3
Other defense agencies	12,177.6	0.0	9,683.1	2,494.5	0.0
Department of Energy	43,488.4	0.0	26,474.5	17,013.9	0.0
Advanced Research Projects Agency—Energy	16,113.9	0.0	0.0	16,113.9	0.0
Fossil Energy	26,474.5	0.0	26,474.5	0.0	0.0
National Nuclear Security Administration	900.0	0.0	0.0	900.0	0.0
Defense Programs	900.0	0.0	0.0	900.0	0.0
Department of Health and Human Services	29,051.0	0.0	28,872.6	178.5	0.0
National Institutes of Health	29,051.0	0.0	28,872.6	178.5	0.0
Department of Homeland Security	1,283.6	0.0	1,283.6	0.0	0.0
Science and Technology Directorate	1,283.6	0.0	1,283.6	0.0	0.0
Other agencies					
National Aeronautics and Space Administration	8,221.4	0.0	0.0	2,110.2	6,111.2
National Science Foundation	15,035.0	0.0	1,709.5	5,160.6	8,164.9

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 84

Federal obligations for applied research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies surveyed	933,018.7	40.0	3,021.1	929,957.6
Departments				
Department of Defense	11,493.1	0.0	3,021.1	8,472.0
Defense Advanced Research Projects Agency	7,317.4	0.0	0.0	7,317.4
Department of the Navy	3,021.1	0.0	3,021.1	0.0
Other defense agencies	1,154.6	0.0	0.0	1,154.6
Department of Health and Human Services	921,483.6	0.0	0.0	921,483.6
National Institutes of Health	921,483.6	0.0	0.0	921,483.6
Other agencies				
National Science Foundation	42.0	40.0	0.0	2.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 85

Federal obligations for applied research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2020

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies surveyed	143,102.7	36.1	23,637.6	0.0	7,394.5	112,034.5
Departments						
Department of Agriculture	29,356.1	0.0	20,142.5	0.0	7,220.5	1,993.0
Agricultural Research Service	150.3	0.0	150.3	0.0	0.0	0.0
Economic Research Service	4,095.9	0.0	4,095.9	0.0	0.0	0.0
Forest Service	4,166.8	0.0	1,624.4	0.0	549.3	1,993.0
National Institute of Food and Agriculture	20,943.0	0.0	14,271.8	0.0	6,671.2	0.0
Department of Defense	8,799.0	0.0	0.0	0.0	173.9	8,625.0
Department of the Navy	8,625.0	0.0	0.0	0.0	0.0	8,625.0
Other defense agencies	173.9	0.0	0.0	0.0	173.9	0.0
Department of Energy	66.0	0.0	66.0	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	66.0	0.0	66.0	0.0	0.0	0.0
Department of Health and Human Services	102,444.1	36.1	3,429.1	0.0	0.0	98,978.9
Administration for Community Living	53,372.5	0.0	0.0	0.0	0.0	53,372.5
Agency for Healthcare Research and Quality	10,152.3	36.1	3,429.1	0.0	0.0	6,687.1
Centers for Disease Control and Prevention	270.0	0.0	0.0	0.0	0.0	270.0
Health Resources and Services Administration	1,188.7	0.0	0.0	0.0	0.0	1,188.7
National Institutes of Health	34,949.8	0.0	0.0	0.0	0.0	34,949.8
Office of the Secretary of Health and Human Services	2,510.8	0.0	0.0	0.0	0.0	2,510.8
Office of the Assistant Secretary for Planning and Evaluation	2,510.8	0.0	0.0	0.0	0.0	2,510.8
Other agencies						
National Science Foundation	2,437.5	0.0	0.0	0.0	0.0	2,437.5

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 94% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 86

Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2020

(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
All areas and organizations	1,393,321.4	8,469.1	965,298.2	329.5	288,877.1	29,360.6	19,076.6	5,067.2	76,843.1
Africa	101,484.8	0.0	5,279.4	0.0	96,145.5	0.0	0.0	60.0	0.0
Botswana	1,693.4	0.0	10.0	0.0	1,683.4	0.0	0.0	0.0	0.0
Burkina Faso	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Cameroon	135.0	0.0	0.0	0.0	135.0	0.0	0.0	0.0	0.0
Congo, Democratic Republic of the	735.0	0.0	0.0	0.0	735.0	0.0	0.0	0.0	0.0
Ethiopia	633.4	0.0	0.0	0.0	633.4	0.0	0.0	0.0	0.0
Gambia, The	107.3	0.0	0.0	0.0	107.3	0.0	0.0	0.0	0.0
Ghana	5,065.4	0.0	0.0	0.0	5,065.4	0.0	0.0	0.0	0.0
Kenya	8,280.1	0.0	4,898.1	0.0	3,332.0	0.0	0.0	50.0	0.0
Madagascar	135.0	0.0	0.0	0.0	135.0	0.0	0.0	0.0	0.0
Malawi	925.6	0.0	0.0	0.0	925.6	0.0	0.0	0.0	0.0
Mali	1,934.1	0.0	0.0	0.0	1,934.1	0.0	0.0	0.0	0.0
Mozambique	1,736.2	0.0	0.0	0.0	1,736.2	0.0	0.0	0.0	0.0
Nigeria	6,671.9	0.0	0.0	0.0	6,671.9	0.0	0.0	0.0	0.0
Rwanda	471.5	0.0	0.0	0.0	471.5	0.0	0.0	0.0	0.0
Senegal	950.0	0.0	0.0	0.0	950.0	0.0	0.0	0.0	0.0
South Africa	56,842.9	0.0	371.3	0.0	56,461.6	0.0	0.0	10.0	0.0
Tanzania	1,108.2	0.0	0.0	0.0	1,108.2	0.0	0.0	0.0	0.0
Uganda	11,728.9	0.0	0.0	0.0	11,728.9	0.0	0.0	0.0	0.0
Zambia	1,507.4	0.0	0.0	0.0	1,507.4	0.0	0.0	0.0	0.0
Zimbabwe	723.8	0.0	0.0	0.0	723.8	0.0	0.0	0.0	0.0
Asia	654,984.6	0.0	628,601.6	0.0	25,163.8	10.9	69.0	745.2	394.0
Bangladesh	3,487.1	0.0	58.4	0.0	3,428.7	0.0	0.0	0.0	0.0
Brunei	141.5	0.0	141.5	0.0	0.0	0.0	0.0	0.0	0.0
Cambodia	500.0	0.0	500.0	0.0	0.0	0.0	0.0	0.0	0.0
China	1,830.0	0.0	0.0	0.0	1,710.8	0.0	0.0	119.1	0.0
Georgia	1,170.2	0.0	565.2	0.0	605.1	0.0	0.0	0.0	0.0
Hong Kong	2,904.7	0.0	0.0	0.0	2,900.0	0.0	0.0	0.0	4.7
India	4,541.1	0.0	615.4	0.0	3,925.7	0.0	0.0	0.0	0.0
Indonesia	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Israel	608,658.5	0.0	606,667.5	0.0	1,432.8	8.4	69.0	480.8	0.0
Japan	3,607.8	0.0	3,321.3	0.0	286.5	0.0	0.0	0.0	0.0
Korea, South	6,141.6	0.0	6,119.8	0.0	0.0	0.0	0.0	21.8	0.0
Lebanon	840.4	0.0	0.0	0.0	451.1	0.0	0.0	0.0	389.3
Malaysia	58.2	0.0	58.2	0.0	0.0	0.0	0.0	0.0	0.0
Mongolia	19.6	0.0	0.0	0.0	0.0	0.0	0.0	19.6	0.0
Nepal	279.0	0.0	0.0	0.0	276.5	2.5	0.0	0.0	0.0
Pakistan	370.1	0.0	0.0	0.0	370.1	0.0	0.0	0.0	0.0
Philippines	1,669.0	0.0	1,669.0	0.0	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	118.9	0.0	118.9	0.0	0.0	0.0	0.0	0.0	0.0
Singapore	1,447.5	0.0	1,447.5	0.0	0.0	0.0	0.0	0.0	0.0
Sri Lanka	388.1	0.0	0.0	0.0	388.1	0.0	0.0	0.0	0.0
Taiwan	1,915.8	0.0	624.0	0.0	1,255.9	0.0	0.0	35.9	0.0
Thailand	11,365.9	0.0	4,678.2	0.0	6,687.7	0.0	0.0	0.0	0.0
Turkey	335.3	0.0	335.3	0.0	0.0	0.0	0.0	0.0	0.0
Vietnam	1,327.4	0.0	189.5	0.0	1,069.9	0.0	0.0	68.1	0.0
Asian countries, other	1,767.0	0.0	1,492.0	0.0	275.0	0.0	0.0	0.0	0.0
Europe	329,073.0	2,006.3	204,048.0	329.5	68,065.1	26,811.4	6,641.6	1,499.7	19,671.5

TABLE 86

Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2020

(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
Austria	3,533.0	158.7	577.3	0.0	215.1	69.0	2,512.9	0.0	0.0
Belgium	1,249.5	0.0	595.2	0.0	568.5	85.8	0.0	0.0	0.0
Croatia	906.1	0.0	906.1	0.0	0.0	0.0	0.0	0.0	0.0
Czechia	953.2	0.0	953.2	0.0	0.0	0.0	0.0	0.0	0.0
Denmark	2,374.8	0.0	1,285.4	0.0	1,082.7	0.4	0.0	0.0	6.2
Estonia	159.5	0.0	159.5	0.0	0.0	0.0	0.0	0.0	0.0
Finland	1,838.6	0.0	746.3	0.0	786.9	102.0	0.0	203.4	0.0
France	16,436.1	5.4	6,304.4	127.0	7,493.3	909.0	1,550.0	0.0	46.9
Germany	33,559.3	1,834.3	3,480.8	0.0	18,395.6	3,719.1	2,168.0	461.5	3,500.0
Greece	341.7	0.0	335.7	0.0	0.0	0.0	0.0	6.0	0.0
Hungary	32.0	0.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0
Iceland	458.0	0.0	458.0	0.0	0.0	0.0	0.0	0.0	0.0
Ireland	686.4	0.0	378.7	0.0	307.7	0.0	0.0	0.0	0.0
Italy	10,111.9	0.0	7,378.7	0.0	2,093.4	0.0	0.0	440.0	199.8
Luxembourg	63.1	0.0	63.1	0.0	0.0	0.0	0.0	0.0	0.0
Netherlands	12,354.8	0.0	2,890.5	143.2	7,761.9	1,339.3	100.0	0.0	120.0
Norway	109,908.0	0.0	108,182.0	0.0	0.0	1,715.5	0.0	0.0	10.6
Poland	106.2	0.0	106.2	0.0	0.0	0.0	0.0	0.0	0.0
Portugal	89.5	0.0	89.5	0.0	0.0	0.0	0.0	0.0	0.0
Russia	14,024.0	0.0	0.3	0.0	0.0	14,023.7	0.0	0.0	0.0
Slovakia	97.0	0.0	97.0	0.0	0.0	0.0	0.0	0.0	0.0
Slovenia	302.7	0.0	302.7	0.0	0.0	0.0	0.0	0.0	0.0
Spain	10,572.7	0.0	2,115.6	0.0	322.4	4,174.0	0.0	138.2	3,822.4
Sweden	4,327.5	0.0	1,156.2	0.0	3,090.9	24.2	27.0	29.3	0.0
Switzerland	23,473.4	0.0	3,962.2	36.0	7,516.3	258.8	0.0	0.0	11,700.0
Ukraine	560.7	0.0	114.1	0.0	446.6	0.0	0.0	0.0	0.0
United Kingdom	80,553.2	7.9	61,377.4	23.3	17,983.7	390.5	283.7	221.3	265.5
North America	163,344.6	6,282.4	81,776.4	0.0	56,232.5	1,587.3	11,426.1	689.3	5,350.6
Bahamas, The	11,898.4	0.0	11,898.4	0.0	0.0	0.0	0.0	0.0	0.0
Bermuda	10,179.1	0.0	0.0	0.0	0.0	0.0	10,179.1	0.0	0.0
Canada	131,593.5	6,282.4	67,272.8	0.0	49,426.9	1,587.3	1,247.0	426.5	5,350.6
Costa Rica	962.7	0.0	49.6	0.0	778.6	0.0	0.0	134.5	0.0
Guatemala	1,784.7	0.0	0.0	0.0	1,784.7	0.0	0.0	0.0	0.0
Haiti	2,104.8	0.0	0.0	0.0	2,104.8	0.0	0.0	0.0	0.0
Jamaica	111.2	0.0	0.0	0.0	111.2	0.0	0.0	0.0	0.0
Mexico	2,893.1	0.0	1,941.9	0.0	893.0	0.0	0.0	58.1	0.0
Nicaragua	210.5	0.0	0.0	0.0	210.5	0.0	0.0	0.0	0.0
Panama	180.1	0.0	0.0	0.0	110.0	0.0	0.0	70.1	0.0
Saint Kitts and Nevis	218.9	0.0	0.0	0.0	218.9	0.0	0.0	0.0	0.0
Trinidad and Tobago	593.9	0.0	0.0	0.0	593.9	0.0	0.0	0.0	0.0
Virgin Islands, British	306.5	0.0	306.5	0.0	0.0	0.0	0.0	0.0	0.0
North American countries, other	307.2	0.0	307.2	0.0	0.0	0.0	0.0	0.0	0.0
Oceania	70,003.7	180.4	41,917.0	0.0	26,505.5	475.2	169.0	756.5	0.0
Australia	53,054.3	0.0	28,856.9	0.0	23,217.8	163.5	169.0	647.0	0.0
Fiji	24.7	0.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0
Marshall Islands	12,007.3	0.0	12,007.3	0.0	0.0	0.0	0.0	0.0	0.0
Micronesia, Federated States of	3.7	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0
New Zealand	4,804.3	180.4	1,024.5	0.0	3,287.7	311.6	0.0	0.0	0.0
Palau	109.5	0.0	0.0	0.0	0.0	0.0	0.0	109.5	0.0

TABLE 86

Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2020

(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
South America	23,003.7	0.0	3,675.8	0.0	16,764.7	475.8	770.9	1,316.5	0.0
Argentina	2,363.7	0.0	272.9	0.0	1,384.6	0.0	0.0	706.2	0.0
Bolivia	45.2	0.0	45.2	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	5,916.8	0.0	1,229.2	0.0	3,913.0	314.8	0.0	459.8	0.0
Chile	2,627.3	0.0	1,690.8	0.0	914.4	0.0	0.0	22.0	0.0
Colombia	2,189.4	0.0	83.6	0.0	2,010.8	0.0	0.0	95.0	0.0
Ecuador	64.2	0.0	30.7	0.0	0.0	0.0	0.0	33.5	0.0
Peru	8,784.8	0.0	282.0	0.0	8,341.8	161.0	0.0	0.0	0.0
Suriname	226.3	0.0	26.3	0.0	200.0	0.0	0.0	0.0	0.0
Uruguay	785.9	0.0	15.0	0.0	0.0	0.0	770.9	0.0	0.0
International organizations	51,427.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51,427.0

DHS = Department of Homeland Security; DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Includes data for the Departments of Commerce, the Interior, Transportation, and the Treasury; the Agency for International Development; the Nuclear Regulatory Commission; and the Social Security Administration.

Note(s):

Because of rounding, detail may not add to total. Only those countries that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 87

Federal obligations for basic research to foreign performers, by region, country, or economy, and agency: FY 2020

(Dollars in thousands)

Region, country, or economy	Total	DOC	DOD	DOE	HHS	NASA	NSF	USDA
All areas and organizations	220,594.1	318.3	66,357.4	166.5	128,301.2	4,302.1	18,720.8	2,427.7
Africa	40,472.9	0.0	50.1	0.0	40,392.8	0.0	0.0	30.0
Botswana	858.5	0.0	0.0	0.0	858.5	0.0	0.0	0.0
Cameroon	68.9	0.0	0.0	0.0	68.9	0.0	0.0	0.0
Congo, Democratic Republic of the	68.8	0.0	0.0	0.0	68.8	0.0	0.0	0.0
Ethiopia	323.0	0.0	0.0	0.0	323.0	0.0	0.0	0.0
Gambia, The	54.7	0.0	0.0	0.0	54.7	0.0	0.0	0.0
Ghana	2,583.3	0.0	0.0	0.0	2,583.3	0.0	0.0	0.0
Kenya	1,637.3	0.0	15.0	0.0	1,597.3	0.0	0.0	25.0
Madagascar	68.8	0.0	0.0	0.0	68.8	0.0	0.0	0.0
Malawi	370.0	0.0	0.0	0.0	370.0	0.0	0.0	0.0
Mali	986.4	0.0	0.0	0.0	986.4	0.0	0.0	0.0
Mozambique	885.5	0.0	0.0	0.0	885.5	0.0	0.0	0.0
Nigeria	3,300.6	0.0	0.0	0.0	3,300.6	0.0	0.0	0.0
Rwanda	240.4	0.0	0.0	0.0	240.4	0.0	0.0	0.0
South Africa	24,027.9	0.0	35.1	0.0	23,987.8	0.0	0.0	5.0
Tanzania	565.2	0.0	0.0	0.0	565.2	0.0	0.0	0.0
Uganda	3,295.4	0.0	0.0	0.0	3,295.4	0.0	0.0	0.0
Zambia	768.8	0.0	0.0	0.0	768.8	0.0	0.0	0.0
Zimbabwe	369.1	0.0	0.0	0.0	369.1	0.0	0.0	0.0
Asia	19,067.1	4.7	12,417.4	0.0	6,196.7	2.5	69.0	376.7
Bangladesh	283.5	0.0	58.4	0.0	225.1	0.0	0.0	0.0
Brunei	141.5	0.0	141.5	0.0	0.0	0.0	0.0	0.0
China	585.7	0.0	0.0	0.0	511.1	0.0	0.0	74.6
Georgia	237.7	0.0	0.0	0.0	237.7	0.0	0.0	0.0
Hong Kong	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0
India	1,227.5	0.0	321.0	0.0	906.5	0.0	0.0	0.0
Israel	2,263.5	0.0	1,223.4	0.0	730.7	0.0	69.0	240.4
Japan	2,496.8	0.0	2,350.7	0.0	146.1	0.0	0.0	0.0
Korea, South	5,173.0	0.0	5,173.0	0.0	0.0	0.0	0.0	0.0
Lebanon	230.1	0.0	0.0	0.0	230.1	0.0	0.0	0.0
Malaysia	45.2	0.0	45.2	0.0	0.0	0.0	0.0	0.0
Mongolia	9.8	0.0	0.0	0.0	0.0	0.0	0.0	9.8
Nepal	143.5	0.0	0.0	0.0	141.0	2.5	0.0	0.0
Pakistan	188.7	0.0	0.0	0.0	188.7	0.0	0.0	0.0
Philippines	18.2	0.0	18.2	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	98.9	0.0	98.9	0.0	0.0	0.0	0.0	0.0
Singapore	591.6	0.0	591.6	0.0	0.0	0.0	0.0	0.0
Sri Lanka	197.9	0.0	0.0	0.0	197.9	0.0	0.0	0.0
Taiwan	1,267.5	0.0	609.0	0.0	640.5	0.0	0.0	17.9
Thailand	1,580.8	0.0	85.2	0.0	1,495.6	0.0	0.0	0.0
Turkey	335.3	0.0	335.3	0.0	0.0	0.0	0.0	0.0
Vietnam	614.1	0.0	34.5	0.0	545.7	0.0	0.0	34.0
Asian countries, other	1,331.7	0.0	1,331.7	0.0	0.0	0.0	0.0	0.0
Europe	72,418.1	313.6	29,160.0	166.5	32,266.0	3,182.5	6,641.6	687.8
Austria	2,682.2	0.0	59.5	0.0	109.7	0.0	2,512.9	0.0
Belgium	884.7	0.0	594.8	0.0	289.9	0.0	0.0	0.0
Croatia	207.9	0.0	207.9	0.0	0.0	0.0	0.0	0.0
Czechia	232.8	0.0	232.8	0.0	0.0	0.0	0.0	0.0
Denmark	718.4	0.0	165.8	0.0	552.2	0.4	0.0	0.0

TABLE 87

Federal obligations for basic research to foreign performers, by region, country, or economy, and agency: FY 2020

(Dollars in thousands)

Region, country, or economy	Total	DOC	DOD	DOE	HHS	NASA	NSF	USDA
Estonia	25.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0
Finland	688.2	0.0	83.1	0.0	401.3	102.0	0.0	101.7
France	11,070.3	46.9	4,755.9	0.0	3,821.6	895.9	1,550.0	0.0
Germany	13,626.7	0.0	1,829.9	0.0	9,381.8	16.3	2,168.0	230.8
Greece	315.7	0.0	315.7	0.0	0.0	0.0	0.0	0.0
Hungary	32.0	0.0	32.0	0.0	0.0	0.0	0.0	0.0
Ireland	299.6	0.0	142.7	0.0	156.9	0.0	0.0	0.0
Italy	3,419.9	0.0	2,486.7	0.0	713.2	0.0	0.0	220.0
Luxembourg	51.3	0.0	51.3	0.0	0.0	0.0	0.0	0.0
Netherlands	5,548.1	120.0	1,033.8	143.2	3,958.6	192.6	100.0	0.0
Norway	2,042.4	0.0	342.1	0.0	0.0	1,700.3	0.0	0.0
Poland	58.2	0.0	58.2	0.0	0.0	0.0	0.0	0.0
Portugal	73.8	0.0	73.8	0.0	0.0	0.0	0.0	0.0
Slovakia	97.0	0.0	97.0	0.0	0.0	0.0	0.0	0.0
Slovenia	302.7	0.0	302.7	0.0	0.0	0.0	0.0	0.0
Spain	1,685.3	0.0	1,243.8	0.0	164.4	230.5	0.0	46.6
Sweden	2,144.8	0.0	541.5	0.0	1,576.4	0.0	27.0	0.0
Switzerland	4,487.7	0.0	1,252.8	0.0	3,234.9	0.0	0.0	0.0
Ukraine	284.8	0.0	57.0	0.0	227.8	0.0	0.0	0.0
United Kingdom	21,438.5	146.7	13,174.2	23.3	7,677.4	44.4	283.7	88.8
North America	56,228.2	0.0	16,146.7	0.0	28,132.1	166.1	11,426.1	357.1
Bahamas, The	44.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0
Bermuda	10,179.1	0.0	0.0	0.0	0.0	0.0	10,179.1	0.0
Canada	40,956.0	0.0	13,578.0	0.0	25,739.2	166.1	1,247.0	225.7
Costa Rica	200.6	0.0	0.0	0.0	133.3	0.0	0.0	67.3
Guatemala	152.2	0.0	0.0	0.0	152.2	0.0	0.0	0.0
Haiti	1,073.5	0.0	0.0	0.0	1,073.5	0.0	0.0	0.0
Jamaica	56.7	0.0	0.0	0.0	56.7	0.0	0.0	0.0
Mexico	2,421.4	0.0	1,936.9	0.0	455.4	0.0	0.0	29.1
Nicaragua	107.4	0.0	0.0	0.0	107.4	0.0	0.0	0.0
Panama	35.1	0.0	0.0	0.0	0.0	0.0	0.0	35.1
Saint Kitts and Nevis	111.6	0.0	0.0	0.0	111.6	0.0	0.0	0.0
Trinidad and Tobago	302.9	0.0	0.0	0.0	302.9	0.0	0.0	0.0
Virgin Islands, British	306.5	0.0	306.5	0.0	0.0	0.0	0.0	0.0
North American countries, other	281.3	0.0	281.3	0.0	0.0	0.0	0.0	0.0
Oceania	19,960.4	0.0	5,937.5	0.0	13,125.1	475.2	169.0	253.5
Australia	17,828.1	0.0	5,793.6	0.0	11,448.4	163.5	169.0	253.5
Fiji	24.7	0.0	24.7	0.0	0.0	0.0	0.0	0.0
New Zealand	2,107.6	0.0	119.3	0.0	1,676.7	311.6	0.0	0.0
South America	12,447.5	0.0	2,645.7	0.0	8,188.4	475.8	415.1	722.5
Argentina	1,332.2	0.0	272.9	0.0	706.2	0.0	0.0	353.1
Brazil	3,434.8	0.0	915.9	0.0	1,974.2	314.8	0.0	229.9
Chile	1,793.5	0.0	1,316.2	0.0	466.4	0.0	0.0	11.0
Colombia	902.2	0.0	83.6	0.0	723.6	0.0	0.0	95.0
Ecuador	64.2	0.0	30.7	0.0	0.0	0.0	0.0	33.5
Peru	4,377.1	0.0	0.0	0.0	4,216.1	161.0	0.0	0.0
Suriname	128.3	0.0	26.3	0.0	102.0	0.0	0.0	0.0
Uruguay	415.1	0.0	0.0	0.0	0.0	0.0	415.1	0.0

DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

Note(s):

Because of rounding, detail may not add to total. Only those countries that had obligations in variables represented by this table appear in the table. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 88

Federal obligations for research and experimental development and for R&D plant for selected agencies, by state or location: FY 2020

(Dollars in thousands)

State or location	Total	R&D	R&D plant
All locations	169,042,503.9	162,959,085.2	6,083,419.1
Alabama	3,128,282.3	3,070,409.3	57,873.0
Alaska	291,297.5	278,935.0	12,362.6
Arizona	1,941,915.9	1,938,848.0	3,067.9
Arkansas	501,863.3	501,283.1	580.3
California	23,133,708.5	22,464,304.1	669,404.4
Colorado	5,164,931.2	5,024,162.0	140,769.3
Connecticut	2,566,287.6	2,566,181.7	105.9
Delaware	227,166.0	221,625.6	5,540.5
District of Columbia	16,412,196.1	16,314,674.4	97,521.6
Florida	4,188,871.8	4,061,105.1	127,766.7
Georgia	1,950,724.3	1,912,787.9	37,936.4
Hawaii	399,957.8	393,877.5	6,080.4
Idaho	1,089,981.2	840,359.6	249,621.6
Illinois	3,786,521.5	3,208,955.0	577,566.5
Indiana	1,105,432.8	1,104,109.4	1,323.4
Iowa	706,289.5	702,068.0	4,221.5
Kansas	365,790.4	352,337.6	13,452.8
Kentucky	418,330.2	354,252.4	64,077.7
Louisiana	461,044.2	436,645.1	24,399.0
Maine	185,145.9	185,145.9	0.0
Maryland	24,564,090.6	22,736,194.9	1,827,895.7
Massachusetts	8,871,221.4	8,850,302.8	20,918.5
Michigan	1,975,956.3	1,924,825.7	51,130.6
Minnesota	1,450,308.1	1,447,555.5	2,752.6
Mississippi	484,031.1	471,970.2	12,060.9
Missouri	2,124,734.7	2,079,638.9	45,095.7
Montana	215,353.5	213,205.6	2,147.9
Nebraska	254,860.8	254,860.8	0.0
Nevada	340,055.3	305,900.0	34,155.3
New Hampshire	486,679.2	483,307.8	3,371.4
New Jersey	2,925,981.0	2,884,975.1	41,005.9
New Mexico	3,574,744.4	3,501,956.2	72,788.2
New York	8,381,456.2	8,148,161.8	233,294.4
North Carolina	3,325,055.1	3,271,375.6	53,679.6
North Dakota	141,450.5	140,075.8	1,374.7
Ohio	5,297,068.7	5,215,661.1	81,407.6
Oklahoma	540,792.3	536,709.2	4,083.2
Oregon	866,884.2	814,311.9	52,572.3
Pennsylvania	5,428,233.1	5,214,140.2	214,093.0
Rhode Island	903,558.9	875,650.3	27,908.6
South Carolina	837,051.3	821,547.5	15,503.8
South Dakota	138,437.6	130,890.0	7,547.6
Tennessee	3,844,787.4	3,151,030.3	693,757.1
Texas	6,262,853.3	6,135,035.6	127,817.6
Utah	1,141,251.5	1,140,726.7	524.8
Vermont	135,333.7	129,254.4	6,079.3
Virginia	9,807,384.6	9,650,204.4	157,180.2
Washington	3,402,084.0	3,280,001.8	122,082.2

TABLE 88

Federal obligations for research and experimental development and for R&D plant for selected agencies, by state or location: FY 2020

(Dollars in thousands)

State or location	Total	R&D	R&D plant
West Virginia	152,159.9	150,437.5	1,722.5
Wisconsin	975,777.2	907,886.0	67,891.2
Wyoming	92,724.7	86,676.8	6,047.9
Outlying areas	197,310.9	195,453.7	1,857.3
Puerto Rico	89,230.4	88,075.5	1,154.9
Other areas ^a	108,080.6	107,378.2	702.4
Offices abroad ^b	47,928.2	47,928.2	0.0
Undistributed ^c	1,829,166.2	1,829,166.2	0.0

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government and federal obligations for R&D plant located in foreign countries.

^c Department of Defense (DOD) obligations for which the location of performance is not reported.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 97% of total federal R&D and R&D plant obligations in FY 2020. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 89

Federal obligations for research and experimental development for selected agencies, by state or location and performer: FY 2020

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
All locations	162,959,084.8	49,593,971.6	51,264,374.5	4,100,741.5	38,269,790.3	5,352,221.9	10,103,718.1	3,579,473.2	694,793.7
Alabama	3,070,409.3	1,442,780.4	1,047,612.6	0.0	516,005.7	0.0	50,887.2	0.0	13,123.4
Alaska	278,935.0	86,735.3	80,693.1	0.0	94,136.3	0.0	7,598.2	0.0	9,772.1
Arizona	1,938,848.0	263,901.9	1,097,654.4	0.0	494,438.7	0.0	73,478.1	0.0	9,374.9
Arkansas	501,283.1	41,480.2	332,456.1	0.0	111,946.3	0.0	8,262.0	0.0	7,138.4
California	22,464,304.1	3,457,910.4	7,689,098.3	1,108,969.5	5,177,920.8	3,361,519.6	1,219,206.5	424,876.1	24,803.0
Colorado	5,024,162.0	626,299.8	2,877,616.5	9,899.1	841,146.5	122,519.3	114,606.3	414,653.8	17,420.7
Connecticut	2,566,181.7	14,844.2	1,743,091.2	0.0	754,257.0	0.0	29,735.6	0.0	24,253.7
Delaware	221,625.6	2,966.8	63,579.9	0.0	149,887.4	0.0	5,028.0	0.0	163.4
District of Columbia	16,314,674.4	14,441,170.2	1,078,835.5	149.2	254,343.4	163,824.9	367,376.0	5,522.3	3,453.0
Florida	4,061,105.1	766,274.3	2,109,699.8	0.0	971,782.4	0.0	201,375.0	0.0	11,973.5
Georgia	1,912,787.9	197,767.4	530,877.9	0.0	1,112,293.7	0.0	61,728.5	0.0	10,120.5
Hawaii	393,877.5	90,914.1	146,470.3	0.0	141,517.5	0.0	12,985.9	0.0	1,989.6
Idaho	840,359.6	36,536.0	352,689.1	299,594.5	146,482.8	0.0	2,458.1	0.0	2,599.1
Illinois	3,208,955.0	180,530.0	414,092.5	0.0	1,520,145.4	990,314.4	98,040.5	0.0	5,832.2
Indiana	1,104,109.4	243,001.0	222,194.2	0.0	621,992.6	0.0	0.0	0.0	16,921.5
Iowa	702,068.0	70,782.2	244,711.1	0.0	346,484.1	31,348.2	1,920.7	0.0	6,821.7
Kansas	352,337.6	92,527.3	35,033.6	0.0	218,244.2	0.0	4,528.2	0.0	2,004.2
Kentucky	354,252.4	7,418.8	29,455.2	0.0	311,759.1	0.0	1,837.5	0.0	3,781.8
Louisiana	436,645.1	53,489.3	107,822.0	0.0	256,067.8	0.0	3,026.6	0.0	16,239.4
Maine	185,145.9	7,818.8	18,009.8	0.0	50,989.1	0.0	104,262.7	0.0	4,065.6
Maryland	22,736,194.9	14,521,346.3	4,460,415.9	856,993.0	2,215,252.6	0.0	601,699.5	58,540.0	21,947.7
Massachusetts	8,850,302.8	572,534.8	3,630,199.6	0.0	2,055,988.9	390,498.8	2,083,380.7	108,665.5	9,034.6
Michigan	1,924,825.7	114,562.5	245,134.3	0.0	1,472,856.0	0.0	84,719.5	0.0	7,553.4
Minnesota	1,447,555.5	60,861.5	465,755.0	0.0	499,180.4	0.0	412,629.9	0.0	9,128.7
Mississippi	471,970.2	299,686.7	28,914.3	0.0	139,727.5	0.0	1,809.5	0.0	1,832.2
Missouri	2,079,638.9	126,150.1	1,140,052.5	0.0	770,436.5	0.0	38,180.1	0.0	4,819.7
Montana	213,205.6	65,288.6	29,045.7	0.0	114,401.2	0.0	1,854.4	0.0	2,615.7
Nebraska	254,860.8	39,229.4	13,969.6	0.0	185,820.4	0.0	13,616.9	0.0	2,224.5
Nevada	305,900.0	19,687.1	200,414.1	0.0	78,515.5	0.0	2,504.6	0.0	4,778.8
New Hampshire	483,307.8	63,128.6	231,234.5	0.0	175,002.3	0.0	13,303.0	0.0	639.5
New Jersey	2,884,975.1	569,555.8	1,345,276.1	0.0	784,002.1	118,966.1	42,108.6	0.0	25,066.4
New Mexico	3,501,956.2	687,753.7	815,838.4	1,776,515.3	184,030.3	0.0	36,947.9	0.0	870.7
New York	8,148,161.8	1,378,595.9	2,374,927.1	0.0	3,209,460.2	0.0	527,869.9	530,415.0	126,893.5
North Carolina	3,271,375.6	349,457.2	603,201.8	0.0	1,645,384.7	0.0	661,646.7	0.0	11,685.2
North Dakota	140,075.8	36,538.1	2,478.6	0.0	98,894.9	0.0	673.4	0.0	1,490.8
Ohio	5,215,661.1	1,885,146.5	2,032,806.7	0.0	967,912.9	0.0	282,561.2	0.0	47,233.7
Oklahoma	536,709.2	185,012.4	65,558.9	0.0	243,952.2	0.0	34,027.4	0.0	8,158.4
Oregon	814,311.9	89,267.7	124,263.4	0.0	562,640.5	0.0	26,118.1	0.0	12,022.2
Pennsylvania	5,214,140.2	420,020.3	2,166,237.0	0.0	2,191,260.5	34,062.8	380,886.7	0.0	21,672.9
Rhode Island	875,650.3	351,096.2	191,700.8	0.0	240,609.8	0.0	89,321.4	0.0	2,922.1
South Carolina	821,547.5	107,752.0	205,342.3	26,565.3	289,216.1	0.0	186,131.1	0.0	6,540.8
South Dakota	130,890.0	16,568.4	38,370.8	0.0	28,518.0	0.0	21,254.5	0.0	26,178.3
Tennessee	3,151,030.3	785,966.6	266,724.5	14,712.3	397,172.1	0.5	575,335.1	1,101,455.2	9,664.0
Texas	6,135,035.6	810,001.6	2,703,095.8	0.0	2,408,694.9	0.0	167,702.8	272.2	45,268.4
Utah	1,140,726.7	177,104.3	346,203.7	0.0	526,800.9	0.0	87,398.8	0.0	3,219.1

TABLE 89

Federal obligations for research and experimental development for selected agencies, by state or location and performer: FY 2020

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Vermont	129,254.4	4,474.0	35,244.9	0.0	85,902.2	0.0	*	0.0	3,633.3
Virginia	9,650,204.4	2,019,216.9	6,064,162.8	0.0	748,598.5	136,883.5	183,870.5	482,098.0	15,374.2
Washington	3,280,001.8	282,272.0	481,147.0	7,343.4	911,821.6	2,283.7	1,111,074.9	452,975.1	31,084.1
West Virginia	150,437.5	56,013.9	9,538.6	0.0	71,775.3	0.0	8,149.3	0.0	4,960.3
Wisconsin	907,886.0	57,336.3	86,425.4	0.0	719,046.5	0.0	40,922.8	0.0	4,154.9
Wyoming	86,676.8	25,806.0	5,747.5	0.0	52,481.6	0.0	255.0	0.0	2,386.8
Outlying areas	195,453.7	46,050.5	26,260.1	0.0	94,393.4	0.0	862.4	0.0	27,887.2
Puerto Rico	88,075.5	6,390.1	6,754.7	0.0	73,189.8	0.0	364.5	0.0	1,376.4
Other areas ^b	107,378.2	39,660.4	19,505.5	0.0	21,203.7	0.0	497.8	0.0	26,510.8
Offices abroad ^c	47,928.2	2,730.3	44,798.7	0.0	399.2	0.0	0.0	0.0	0.0
Undistributed ^d	1,829,166.2	1,242,611.3	562,195.1	0.0	7,800.0	0.0	16,559.8	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.^c Includes R&D performed or administered in foreign countries by the U.S. government.^d Undistributed totals include Department of Defense (DOD) obligations for which the location of performance is not reported.**Note(s):**

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2020. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 90

Federal obligations for R&D plant for selected agencies, by state or location and performer: FY 2020

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
All locations	6,083,419.1	3,039,880.4	677,365.4	222,083.8	350,607.7	867,811.2	125,270.3	793,747.5	6,652.9
Alabama	57,873.0	55,313.0	674.5	0.0	1,885.6	0.0	0.0	0.0	0.0
Alaska	12,362.6	8,464.4	0.0	0.0	3,898.2	0.0	0.0	0.0	0.0
Arizona	3,067.9	0.0	0.0	0.0	3,067.9	0.0	0.0	0.0	0.0
Arkansas	580.3	0.0	0.0	0.0	580.3	0.0	0.0	0.0	0.0
California	669,404.4	215,316.3	2,608.3	151,171.4	31,420.4	267,767.2	1,120.8	0.0	0.0
Colorado	140,769.3	85,112.9	0.0	0.0	1,631.9	0.0	736.5	53,288.0	0.0
Connecticut	105.9	0.0	0.0	0.0	105.9	0.0	0.0	0.0	0.0
Delaware	5,540.5	0.0	0.0	0.0	5,540.5	0.0	0.0	0.0	0.0
District of Columbia	97,521.6	30,796.5	14,181.9	0.0	6,193.5	0.0	46,349.6	0.0	0.0
Florida	127,766.7	106,944.9	2,146.0	0.0	18,675.9	0.0	0.0	0.0	0.0
Georgia	37,936.4	32,695.8	177.0	0.0	4,680.2	0.0	383.4	0.0	0.0
Hawaii	6,080.4	5,438.5	0.0	0.0	641.9	0.0	0.0	0.0	0.0
Idaho	249,621.6	0.0	246,980.0	2,060.0	581.6	0.0	0.0	0.0	0.0
Illinois	577,566.5	15,861.0	238.9	0.0	7,797.6	553,669.0	0.0	0.0	0.0
Indiana	1,323.4	0.0	0.0	0.0	1,323.4	0.0	0.0	0.0	0.0
Iowa	4,221.5	445.2	65.8	0.0	1,710.5	2,000.0	0.0	0.0	0.0
Kansas	13,452.8	12,015.9	0.2	0.0	1,436.7	0.0	0.0	0.0	0.0
Kentucky	64,077.7	55,477.8	0.0	0.0	8,599.9	0.0	0.0	0.0	0.0
Louisiana	24,399.0	20,026.6	1,656.8	0.0	2,715.7	0.0	0.0	0.0	0.0
Maine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maryland	1,827,895.7	1,767,704.8	55,687.4	0.0	4,503.5	0.0	0.0	0.0	0.0
Massachusetts	20,918.5	1,790.9	3,494.4	0.0	10,486.7	0.0	5,146.5	0.0	0.0
Michigan	51,130.6	0.0	0.0	0.0	51,130.6	0.0	0.0	0.0	0.0
Minnesota	2,752.6	237.2	163.1	0.0	2,352.3	0.0	0.0	0.0	0.0
Mississippi	12,060.9	11,564.1	0.0	0.0	496.9	0.0	0.0	0.0	0.0
Missouri	45,095.7	24,028.1	17,702.5	0.0	2,704.4	0.0	660.7	0.0	0.0
Montana	2,147.9	0.0	0.0	0.0	2,147.9	0.0	0.0	0.0	0.0
Nebraska	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nevada	34,155.3	0.0	33,072.2	0.0	1,083.1	0.0	0.0	0.0	0.0
New Hampshire	3,371.4	3,018.3	353.0	0.0	0.0	0.0	0.0	0.0	0.0
New Jersey	41,005.9	390.7	15,571.8	0.0	4,293.4	20,750.0	0.0	0.0	0.0
New Mexico	72,788.2	3,402.6	450.0	68,852.3	6.8	0.0	0.0	0.0	76.5
New York	233,294.4	70,321.3	379.0	0.0	49,852.6	0.0	0.0	112,165.2	576.4
North Carolina	53,679.6	33,210.7	2,016.5	0.0	18,452.4	0.0	0.0	0.0	0.0
North Dakota	1,374.7	0.0	490.1	0.0	884.6	0.0	0.0	0.0	0.0
Ohio	81,407.6	0.0	2,403.9	0.0	14,003.7	0.0	65,000.0	0.0	0.0
Oklahoma	4,083.2	3,256.8	118.9	0.0	707.4	0.0	0.0	0.0	0.0
Oregon	52,572.3	24,825.1	174.2	0.0	27,573.0	0.0	0.0	0.0	0.0
Pennsylvania	214,093.0	23,528.9	183,217.5	0.0	7,346.6	0.0	0.0	0.0	0.0
Rhode Island	27,908.6	26,452.8	179.7	0.0	1,276.1	0.0	0.0	0.0	0.0
South Carolina	15,503.8	13,618.4	14.7	0.0	1,870.7	0.0	0.0	0.0	0.0
South Dakota	7,547.6	0.0	0.0	0.0	1,547.6	0.0	0.0	0.0	6,000.0
Tennessee	693,757.1	26,367.2	71,295.3	0.0	909.6	0.0	0.0	595,185.0	0.0
Texas	127,817.6	95,614.8	14,536.8	0.0	17,666.0	0.0	0.0	0.0	0.0
Utah	524.8	0.0	0.0	0.0	524.8	0.0	0.0	0.0	0.0

TABLE 90

Federal obligations for R&D plant for selected agencies, by state or location and performer: FY 2020

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Vermont	6,079.3	0.0	0.0	0.0	6,079.3	0.0	0.0	0.0	0.0
Virginia	157,180.2	124,021.1	4,528.2	0.0	5,006.0	23,625.0	0.0	0.0	0.0
Washington	122,082.2	82,900.0	111.4	0.0	1,811.2	0.0	4,150.3	33,109.3	0.0
West Virginia	1,722.5	0.0	0.0	0.0	0.0	0.0	1,722.5	0.0	0.0
Wisconsin	67,891.2	58,562.9	1,973.0	0.0	7,355.2	0.0	0.0	0.0	0.0
Wyoming	6,047.9	0.0	0.0	0.0	6,047.9	0.0	0.0	0.0	0.0
Outlying areas	1,857.3	1,154.9	702.4	0.0	0.0	0.0	0.0	0.0	0.0
Puerto Rico	1,154.9	1,154.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other areas ^b	702.4	0.0	702.4	0.0	0.0	0.0	0.0	0.0	0.0
Offices abroad ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

^b Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^c Includes federal obligations for R&D plant located in foreign countries.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 98% of total federal R&D plant obligations in FY 2020. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 91

Federal obligations for research and experimental development, by state or location and selected agency: FY 2020

(Dollars in thousands)

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
All locations	162,959,084.8	491,332.0	1,609,673.5	65,701,581.9	13,451,915.7	836,159.8	1,183,932.4	488,501.0	59,716,863.3	10,508,484.3	6,332,078.1	2,638,562.8
Alabama	3,070,409.3	2,766.2	4,274.8	2,342,639.6	13,072.3	1,407.4	14,951.7	162.1	403,356.4	198,342.4	54,589.9	34,846.5
Alaska	278,935.0	3,345.2	9,386.9	103,233.6	8,034.6	54,974.4	4,782.9	0.0	16,385.0	19,039.8	45,029.5	14,723.1
Arizona	1,938,848.0	5,080.5	2,162.1	1,252,292.2	42,065.1	33,192.7	4,833.0	260.5	296,590.8	145,956.3	124,641.0	31,773.8
Arkansas	501,283.1	0.0	185.1	337,343.4	9,279.4	8,010.1	4,788.1	0.0	79,804.7	2,705.1	20,098.6	39,068.8
California	22,464,304.1	30,306.5	27,734.9	9,970,209.3	2,609,456.6	59,547.9	48,106.2	10,482.9	5,204,740.9	3,533,716.3	801,326.4	168,676.4
Colorado	5,024,162.0	0.0	163,985.2	2,681,864.3	531,784.4	77,029.4	41,208.7	5,945.7	532,816.3	604,322.0	326,269.6	58,936.4
Connecticut	2,566,181.7	3,261.4	19,102.4	1,540,532.6	53,594.2	692.6	4,697.4	325.1	721,291.9	147,247.7	60,326.4	15,110.2
Delaware	221,625.6	2,644.4	22,525.9	42,327.1	23,657.7	1,433.7	67.9	118.3	75,375.5	12,027.9	34,378.1	7,069.0
District of Columbia	16,314,674.4	56,956.4	29,438.4	3,744,833.7	705,236.1	22,237.0	191,824.4	137,896.8	10,513,541.2	305,886.8	286,152.7	320,670.9
Florida	4,061,105.1	4,526.0	30,821.6	2,709,272.5	51,670.3	44,111.7	34,119.5	11,639.6	744,553.2	149,752.0	198,740.5	81,898.3
Georgia	1,912,787.9	7,034.9	6,441.0	739,442.4	45,509.0	3,359.9	35,968.0	8,946.9	833,116.5	24,670.5	127,184.1	81,114.6
Hawaii	393,877.5	460.3	11,300.1	204,874.9	12,104.6	7,869.9	1,633.3	0.0	63,438.4	27,710.0	43,285.9	21,200.0
Idaho	840,359.6	3,552.1	0.0	65,006.0	677,648.6	7,605.2	1,045.8	1,739.7	19,138.6	3,087.4	22,352.2	39,184.0
Illinois	3,208,955.0	13,126.6	1,451.7	478,356.4	1,176,265.2	8,326.5	12,220.4	2,473.3	1,129,057.2	32,125.8	289,065.9	66,486.0
Indiana	1,104,109.4	624.0	1,920.6	466,363.6	39,684.2	8,634.5	12,946.9	6,578.3	370,920.6	21,967.0	154,973.0	19,496.8
Iowa	702,068.0	333.3	1,387.2	257,426.9	38,484.0	1,250.2	12,278.3	1,370.6	230,049.7	35,509.0	42,863.5	81,115.1
Kansas	352,337.6	776.9	818.7	50,662.0	11,601.2	5,771.3	15,250.3	0.0	119,717.7	5,850.1	39,094.7	102,794.7
Kentucky	354,252.4	751.3	0.0	24,944.4	19,471.6	2,071.5	2,175.4	0.0	243,754.1	4,898.3	34,711.7	21,474.1
Louisiana	436,645.1	0.0	2,762.5	105,153.3	10,241.9	19,239.2	8,612.3	3,505.8	202,287.0	3,792.3	36,601.5	44,449.4
Maine	185,145.9	4.9	3,435.1	15,694.7	11,799.6	2,477.3	9,119.8	0.0	100,387.6	5,812.3	24,858.4	11,556.2
Maryland	22,736,194.9	74,546.9	1,020,721.3	6,527,815.6	73,386.9	40,163.5	47,163.1	16,769.5	12,663,389.3	1,760,975.3	318,737.5	192,525.9
Massachusetts	8,850,302.8	33,499.3	25,297.9	3,269,726.2	172,013.4	19,572.4	81,494.0	24,200.2	4,517,104.2	212,568.3	465,499.4	29,327.3
Michigan	1,924,825.7	1,355.3	7,301.9	570,495.0	139,804.9	11,106.1	18,622.6	278.2	886,657.4	44,770.4	205,962.4	38,471.6
Minnesota	1,447,555.5	59.2	1,837.9	511,059.3	27,371.5	7,152.5	6,522.4	8,992.0	731,113.3	12,392.9	92,095.1	48,959.3
Mississippi	471,970.2	3,045.6	13,345.3	134,398.7	7,693.4	3,763.3	4,263.5	0.0	63,561.9	115,044.3	14,711.3	112,143.0
Missouri	2,079,638.9	8,423.9	1,710.0	1,176,449.6	58,520.3	11,122.6	7,175.4	5,663.2	685,646.7	31,165.3	49,846.9	43,915.1
Montana	213,205.6	3,221.3	545.3	20,799.1	10,726.4	11,106.1	7,597.2	11.8	91,465.0	9,222.3	30,342.9	28,168.1
Nebraska	254,860.8	1,037.4	1,069.4	28,373.7	14,670.9	669.7	7,745.2	117.1	133,561.8	581.5	22,831.8	44,202.4
Nevada	305,900.0	1,460.1	0.0	51,158.6	131,931.7	16,703.2	6,028.6	1,297.1	45,340.8	22,984.2	22,518.6	6,477.1
New Hampshire	483,307.8	34.0	10,905.9	271,970.0	6,870.7	2,748.7	281.9	168.0	116,799.1	24,124.7	39,502.9	9,902.0
New Jersey	2,884,975.1	4,186.2	13,885.5	1,718,884.3	162,871.6	2,469.3	53,984.6	2,156.9	761,176.3	21,841.7	139,140.7	4,378.1
New Mexico	3,501,956.2	21,418.8	3,724.5	1,575,228.9	1,644,401.9	7,104.6	8,698.2	399.7	125,853.8	54,333.8	43,802.2	16,989.7
New York	8,148,161.8	3,088.3	12,525.7	2,441,993.4	1,424,442.3	10,870.0	12,196.0	3,107.3	3,553,768.5	189,457.0	431,999.5	64,713.8
North Carolina	3,271,375.6	5,687.4	15,648.3	340,959.3	80,572.0	12,548.6	22,935.6	106,020.8	2,478,366.1	9,737.4	154,985.5	43,914.6
North Dakota	140,075.8	0.0	0.0	7,169.0	34,735.1	2,648.7	8,900.7	0.0	25,260.7	1,149.8	14,605.4	45,606.4

TABLE 91

Federal obligations for research and experimental development, by state or location and selected agency: FY 2020

(Dollars in thousands)

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
Ohio	5,215,661.1	18,380.1	3,048.3	3,749,238.0	95,123.8	9,198.7	48,484.1	64,472.9	994,463.5	97,721.8	102,733.7	32,796.1
Oklahoma	536,709.2	0.0	14,207.8	151,935.9	26,095.8	56,734.4	18,952.4	7,745.9	131,660.7	65,153.7	31,783.2	32,439.6
Oregon	814,311.9	80.0	8,080.5	91,528.3	70,877.2	24,356.6	15,572.6	9,622.5	418,648.6	13,355.9	84,090.3	78,099.5
Pennsylvania	5,214,140.2	3,865.9	7,149.0	1,375,976.5	556,702.9	10,348.2	32,295.6	847.3	2,846,498.9	49,178.0	262,388.5	68,889.4
Rhode Island	875,650.3	19.6	20,013.0	546,315.6	6,580.5	1,711.5	2,359.0	9,756.7	229,067.8	9,846.6	47,394.9	2,585.0
South Carolina	821,547.5	19,019.3	15,729.6	440,633.0	40,850.1	1,995.7	4,736.0	101.2	229,434.2	4,820.7	32,748.7	31,479.1
South Dakota	130,890.0	2,175.7	423.7	28,535.7	28,224.6	8.5	712.1	0.0	28,820.9	16,486.3	16,854.8	8,647.5
Tennessee	3,151,030.3	3,628.7	320.0	358,730.7	1,359,651.3	10,358.4	6,560.5	13,210.0	699,705.6	593,156.1	69,030.3	36,678.9
Texas	6,135,035.6	15,909.6	5,724.2	2,679,057.4	158,932.1	9,867.3	60,688.0	5,733.5	1,751,867.2	996,137.3	351,218.3	99,900.9
Utah	1,140,726.7	1,241.6	611.0	575,005.4	92,746.3	15,225.4	4,596.9	236.4	252,529.2	104,454.9	62,950.2	31,129.4
Vermont	129,254.4	2,214.3	1,965.3	17,859.5	4,121.7	1,368.5	660.4	0.0	68,324.1	2,263.8	14,531.7	15,944.9
Virginia	9,650,204.4	124,136.9	9,544.2	7,257,048.1	299,104.3	99,047.1	201,733.8	13,906.0	869,757.1	604,596.6	146,989.1	24,341.2
Washington	3,280,001.8	1,334.2	46,911.0	691,222.9	488,969.8	21,447.8	21,387.3	69.7	1,726,253.2	86,845.8	134,249.7	61,310.5
West Virginia	150,437.5	2,615.6	211.7	6,109.5	15,558.2	2,188.9	2,560.6	0.0	72,112.0	1,678.0	9,522.4	37,880.6
Wisconsin	907,886.0	96.0	5,044.4	84,271.2	93,134.7	15,516.5	3,110.9	2,171.4	519,191.3	15,223.6	106,165.7	63,960.4
Wyoming	86,676.8	0.0	304.6	2,439.5	17,878.6	26,833.4	1,872.1	0.0	12,400.0	1,592.1	19,868.7	3,487.7
Outlying areas	195,453.7	0.0	2,732.1	35,361.2	16,690.7	961.3	3,410.7	0.0	86,740.8	5,470.8	26,432.5	17,653.5
Puerto Rico	88,075.5	0.0	1,790.5	2,088.0	0.0	961.3	0.0	0.0	52,183.0	5,470.8	15,634.3	9,947.6
Other areas ^a	107,378.2	0.0	941.6	33,273.2	16,690.7	*	3,410.7	0.0	34,557.8	0.0	10,798.2	7,705.9
Offices abroad ^b	47,928.2	0.0	0.0	2,193.9	0.0	0.0	0.0	0.0	0.0	45,734.3	0.0	0.0
Undistributed ^c	1,829,166.2	0.0	0.0	1,829,166.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

DHS = Department of Homeland Security; DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; DOI = Department of the Interior; DOT = Department of Transportation; EPA = Environmental Protection Agency; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government.

^c DOD obligations for which the location of performance is not reported, and HHS Biomedical Advanced Research and Development Authority obligations for which the location of performance could not be reported for FY 2020.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: DHS, DOC, DOD, DOE, DOI, DOT, EPA, HHS, NASA, NSF, and USDA. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2020. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Alabama	3,070,409.3	1,442,780.4	1,047,612.6	0.0	516,005.7	0.0	50,887.2	0.0	13,123.4
Department of Agriculture	34,846.5	9,511.0	0.0	0.0	24,737.7	0.0	50.0	0.0	547.8
Department of Commerce	4,274.8	0.0	0.0	0.0	4,274.8	0.0	0.0	0.0	0.0
Department of Defense, research	90,191.4	30,120.8	35,183.0	0.0	16,793.8	0.0	7,993.9	0.0	100.0
Department of Defense, total experimental development ^b	2,252,448.2	1,394,879.9	827,933.8	0.0	21,764.6	0.0	7,869.8	0.0	0.0
Department of Energy	13,072.3	0.0	499.3	0.0	12,197.0	0.0	375.9	0.0	0.0
Department of Health and Human Services	403,356.4	367.9	5,751.2	0.0	360,120.3	0.0	31,170.8	0.0	5,946.2
Department of Homeland Security	2,766.2	51.3	2,715.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,407.4	940.6	0.0	0.0	169.6	0.0	0.0	0.0	297.1
Department of Transportation	14,951.7	0.0	617.8	0.0	8,101.7	0.0	0.0	0.0	6,232.2
Environmental Protection Agency	162.1	0.0	0.0	0.0	162.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	198,342.4	6,908.9	174,431.4	0.0	16,139.8	0.0	862.4	0.0	0.0
National Science Foundation	54,589.9	0.0	481.0	0.0	51,544.4	0.0	2,564.4	0.0	0.0
Alaska	278,935.0	86,735.3	80,693.1	0.0	94,136.3	0.0	7,598.2	0.0	9,772.1
Department of Agriculture	14,723.1	10,041.6	100.0	0.0	2,304.0	0.0	19.8	0.0	2,257.7
Department of Commerce	9,386.9	4,996.0	0.0	0.0	2,919.1	0.0	1,108.8	0.0	363.0
Department of Defense, research	10,752.2	97.4	5,212.6	0.0	3,942.2	0.0	1,500.0	0.0	0.0
Department of Defense, total experimental development ^b	92,481.4	26,034.9	65,264.5	0.0	1,121.4	0.0	0.0	0.0	60.5
Department of Energy	8,034.6	0.0	1,583.2	0.0	4,329.4	0.0	0.0	0.0	2,122.0
Department of Health and Human Services	16,385.0	266.8	55.0	0.0	12,690.3	0.0	977.4	0.0	2,395.4

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Homeland Security	3,345.2	132.6	3,212.6	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	54,974.4	45,166.0	816.9	0.0	7,115.3	0.0	155.8	0.0	1,720.3
Department of Transportation	4,782.9	0.0	0.0	0.0	3,929.9	0.0	0.0	0.0	853.0
National Aeronautics and Space Administration	19,039.8	0.0	4,015.8	0.0	15,024.0	0.0	0.0	0.0	0.0
National Science Foundation	45,029.5	0.0	432.4	0.0	40,760.7	0.0	3,836.3	0.0	0.0
Arizona	1,938,848.0	263,901.9	1,097,654.4	0.0	494,438.7	0.0	73,478.1	0.0	9,374.9
Department of Agriculture	31,773.8	20,529.5	0.0	0.0	9,239.3	0.0	2,005.0	0.0	0.0
Department of Commerce	2,162.1	0.0	149.9	0.0	2,012.3	0.0	0.0	0.0	0.0
Department of Defense, research	101,257.4	3,666.0	57,031.3	0.0	40,560.1	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,151,034.8	166,812.0	969,423.5	0.0	6,159.8	0.0	3,395.4	0.0	5,244.1
Department of Energy	42,065.1	0.0	12,716.7	0.0	29,347.1	0.0	1.3	0.0	0.0
Department of Health and Human Services	296,590.8	7,976.0	13,255.1	0.0	218,155.1	0.0	55,037.9	0.0	2,166.6
Department of Homeland Security	5,080.5	352.0	4,728.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	33,192.7	29,440.5	269.2	0.0	3,284.1	0.0	0.0	0.0	198.9
Department of Transportation	4,833.0	18.0	443.4	0.0	3,033.2	0.0	0.0	0.0	1,338.4
Environmental Protection Agency	260.5	0.0	260.5	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	145,956.3	35,107.9	34,715.4	0.0	65,450.0	0.0	10,683.0	0.0	0.0
National Science Foundation	124,641.0	0.0	4,660.9	0.0	117,197.8	0.0	2,355.5	0.0	426.8
Arkansas	501,283.1	41,480.2	332,456.1	0.0	111,946.3	0.0	8,262.0	0.0	7,138.4
Department of Agriculture	39,068.8	24,563.4	0.0	0.0	13,542.1	0.0	500.0	0.0	463.3
Department of Commerce	185.1	0.0	0.0	0.0	185.1	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	9,962.4	188.7	0.0	0.0	9,773.7	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	327,381.0	9,478.8	317,071.0	0.0	831.2	0.0	0.0	0.0	0.0
Department of Energy	9,279.4	0.0	1,356.1	0.0	7,832.9	0.0	0.0	0.0	90.3
Department of Health and Human Services	79,804.7	0.0	10,538.0	0.0	60,937.9	0.0	7,762.0	0.0	566.7
Department of the Interior	8,010.1	7,249.3	0.0	0.0	635.8	0.0	0.0	0.0	125.0
Department of Transportation	4,788.1	0.0	0.0	0.0	3,247.9	0.0	0.0	0.0	1,540.2
National Aeronautics and Space Administration	2,705.1	0.0	1,891.6	0.0	813.4	0.0	0.0	0.0	0.0
National Science Foundation	20,098.6	0.0	1,599.4	0.0	14,146.3	0.0	0.0	0.0	4,352.9
California	22,464,304.1	3,457,910.4	7,689,098.3	1,108,969.5	5,177,920.8	3,361,519.6	1,219,206.5	424,876.1	24,803.0
Department of Agriculture	168,676.4	100,396.8	542.0	0.0	67,558.2	0.0	174.5	0.0	5.0
Department of Commerce	27,734.9	448.4	3,024.9	0.0	18,960.2	0.0	5,187.1	0.0	114.4
Department of Defense, research	1,236,116.2	208,325.8	443,545.7	33,239.7	394,313.0	6,844.6	84,575.3	65,013.9	258.3
Department of Defense, total experimental development ^b	8,734,093.1	2,738,703.1	5,336,391.1	92,392.2	150,474.3	26,869.4	54,632.4	333,160.9	1,469.7
Department of Energy	2,609,456.6	487.9	326,197.3	972,770.2	200,502.4	1,107,778.1	1,397.0	0.0	323.5
Department of Health and Human Services	5,204,740.9	0.0	712,406.7	1,406.0	3,484,119.3	16,426.4	985,797.0	0.0	4,585.5
Department of Homeland Security	30,306.5	986.8	16,169.7	9,161.3	1,544.2	1,680.2	0.0	0.0	764.3
Department of the Interior	59,547.9	45,923.5	2,730.0	0.0	9,429.3	0.0	343.7	0.0	1,121.4
Department of Transportation	48,106.2	1,956.4	13,164.9	0.0	19,416.5	0.0	0.0	0.0	13,568.5
Environmental Protection Agency	10,482.9	0.0	6,089.5	0.0	4,393.4	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	3,533,716.3	360,284.6	777,137.9	0.0	130,447.7	2,201,920.9	34,631.3	26,701.3	2,592.5
National Science Foundation	801,326.4	397.0	51,698.7	0.0	696,762.3	0.0	52,468.4	0.0	0.0
Colorado	5,024,162.0	626,299.8	2,877,616.5	9,899.1	841,146.5	122,519.3	114,606.3	414,653.8	17,420.7
Department of Agriculture	58,936.4	40,224.4	20.0	0.0	18,365.4	0.0	326.7	0.0	0.0
Department of Commerce	163,985.2	123,971.4	982.1	0.0	34,694.3	4,167.5	169.9	0.0	0.0
Department of Defense, research	84,700.6	5,287.2	31,109.0	0.0	47,947.8	13.8	222.4	120.4	0.0
Department of Defense, total experimental development ^b	2,597,163.7	305,386.5	2,264,997.3	0.0	23,686.0	0.0	1,812.4	1,281.4	0.0
Department of Energy	531,784.4	576.2	40,539.7	9,899.1	66,631.9	0.0	501.1	413,252.0	384.4
Department of Health and Human Services	532,816.3	1,317.6	68,973.2	0.0	397,772.3	0.0	51,850.2	0.0	12,902.9
Department of the Interior	77,029.4	67,568.3	2,883.3	0.0	6,442.7	113.0	22.1	0.0	0.0
Department of Transportation	41,208.7	3,856.5	24,160.0	0.0	9,663.7	0.0	0.0	0.0	3,528.5
Environmental Protection Agency	5,945.7	889.4	2,144.6	0.0	2,911.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	604,322.0	76,149.0	428,816.6	0.0	78,541.2	18,524.9	2,290.2	0.0	0.0
National Science Foundation	326,269.6	1,073.2	12,990.9	0.0	154,489.5	99,700.0	57,411.2	0.0	604.8
Connecticut	2,566,181.7	14,844.2	1,743,091.2	0.0	754,257.0	0.0	29,735.6	0.0	24,253.7
Department of Agriculture	15,110.2	1,935.6	0.0	0.0	9,999.8	0.0	1,347.9	0.0	1,826.9
Department of Commerce	19,102.4	0.0	0.0	0.0	3,844.0	0.0	15,258.3	0.0	0.0
Department of Defense, research	55,176.1	920.1	29,550.4	0.0	23,454.2	0.0	1,251.4	0.0	0.0
Department of Defense, total experimental development ^b	1,485,356.4	4,997.4	1,464,395.4	0.0	15,963.6	0.0	0.0	0.0	0.0
Department of Energy	53,594.2	0.0	39,383.6	0.0	14,210.6	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Health and Human Services	721,291.9	0.0	67,859.7	0.0	626,337.3	0.0	9,322.2	0.0	17,772.6
Department of Homeland Security	3,261.4	2,502.7	388.6	0.0	370.0	0.0	0.0	0.0	0.0
Department of the Interior	692.6	535.6	12.2	0.0	0.0	0.0	0.0	0.0	144.8
Department of Transportation	4,697.4	0.0	117.6	0.0	70.4	0.0	0.0	0.0	4,509.4
Environmental Protection Agency	325.1	0.0	325.1	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	147,247.7	3,952.8	139,181.8	0.0	4,113.2	0.0	0.0	0.0	0.0
National Science Foundation	60,326.4	0.0	1,876.8	0.0	55,893.8	0.0	2,555.8	0.0	0.0
Delaware	221,625.6	2,966.8	63,579.9	0.0	149,887.4	0.0	5,028.0	0.0	163.4
Department of Agriculture	7,069.0	1,908.3	0.0	0.0	5,160.8	0.0	0.0	0.0	0.0
Department of Commerce	22,525.9	0.0	0.0	0.0	22,330.7	0.0	195.2	0.0	0.0
Department of Defense, research	18,637.6	29.7	3,688.4	0.0	14,919.5	0.0	*	0.0	0.0
Department of Defense, total experimental development ^b	23,689.5	125.5	19,193.3	0.0	4,370.7	0.0	0.0	0.0	0.0
Department of Energy	23,657.7	0.0	3,880.1	0.0	19,752.8	0.0	0.0	0.0	24.9
Department of Health and Human Services	75,375.5	0.0	27,679.6	0.0	43,946.0	0.0	3,611.4	0.0	138.5
Department of Homeland Security	2,644.4	0.0	2,644.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,433.7	679.2	0.0	0.0	754.5	0.0	0.0	0.0	0.0
Department of Transportation	67.9	0.0	67.9	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	118.3	0.0	118.3	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	12,027.9	224.1	5,602.0	0.0	6,201.8	0.0	0.0	0.0	0.0
National Science Foundation	34,378.1	0.0	706.0	0.0	32,450.7	0.0	1,221.4	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
District of Columbia	16,314,674.4	14,441,170.2	1,078,835.5	149.2	254,343.4	163,824.9	367,376.0	5,522.3	3,453.0
Department of Agriculture	320,670.9	314,217.2	1,753.9	0.0	1,517.4	0.0	3,174.0	0.0	8.4
Department of Commerce	29,438.4	23,458.4	4,470.6	0.0	1,296.4	0.0	213.0	0.0	0.0
Department of Defense, research	455,557.4	386,390.7	27,732.1	0.0	27,734.5	0.0	11,291.3	2,408.8	0.0
Department of Defense, total experimental development ^b	3,289,276.3	2,687,667.7	510,110.2	0.0	15,541.5	0.0	73,166.7	2,790.1	0.0
Department of Energy	705,236.1	680,070.0	9,599.1	0.0	7,015.6	0.0	7,560.4	0.0	991.0
Department of Health and Human Services	10,513,541.2	9,934,318.9	274,729.3	0.0	152,664.0	0.0	149,826.1	0.0	2,002.9
Department of Homeland Security	56,956.4	21,769.2	34,411.4	0.0	0.0	0.0	775.8	0.0	0.0
Department of the Interior	22,237.0	21,326.1	7.8	0.0	607.0	0.0	296.0	0.0	0.0
Department of Transportation	191,824.4	98,919.7	61,046.0	0.0	548.6	0.0	30,859.4	0.0	450.7
Environmental Protection Agency	137,896.8	46,693.4	87,741.0	149.2	1,889.9	1,100.0	0.0	323.3	0.0
National Aeronautics and Space Administration	305,886.8	224,553.8	52,501.2	0.0	15,126.7	0.0	13,705.1	0.0	0.0
National Science Foundation	286,152.7	1,785.0	14,732.9	0.0	30,401.8	162,724.9	76,508.1	0.0	0.0
Florida	4,061,105.1	766,274.3	2,109,699.8	0.0	971,782.4	0.0	201,375.0	0.0	11,973.5
Department of Agriculture	81,898.3	40,137.3	0.0	0.0	32,585.1	0.0	9,175.9	0.0	0.0
Department of Commerce	30,821.6	13,359.5	0.0	0.0	15,476.9	0.0	665.3	0.0	1,319.9
Department of Defense, research	172,946.5	25,576.0	53,916.4	0.0	74,141.4	0.0	19,312.7	0.0	0.0
Department of Defense, total experimental development ^b	2,536,325.9	629,858.3	1,853,419.7	0.0	32,501.9	0.0	20,546.1	0.0	0.0
Department of Energy	51,670.3	0.0	9,778.8	0.0	41,779.2	0.0	0.2	0.0	112.1
Department of Health and Human Services	744,553.2	0.0	61,840.4	0.0	533,551.3	0.0	148,950.5	0.0	210.9

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Homeland Security	4,526.0	1,225.8	3,002.6	0.0	297.6	0.0	0.0	0.0	0.0
Department of the Interior	44,111.7	40,302.3	406.5	0.0	2,399.2	0.0	710.0	0.0	293.7
Department of Transportation	34,119.5	258.2	1,551.4	0.0	23,092.5	0.0	0.0	0.0	9,217.3
Environmental Protection Agency	11,639.6	8,597.5	4.9	0.0	3,037.2	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	149,752.0	6,959.5	119,034.8	0.0	23,306.3	0.0	451.4	0.0	0.0
National Science Foundation	198,740.5	0.0	6,744.5	0.0	189,613.8	0.0	1,562.7	0.0	819.5
Georgia	1,912,787.9	197,767.4	530,877.9	0.0	1,112,293.7	0.0	61,728.5	0.0	10,120.5
Department of Agriculture	81,114.6	51,548.8	0.0	0.0	19,042.0	0.0	10,523.8	0.0	0.0
Department of Commerce	6,441.0	0.0	171.9	0.0	6,269.2	0.0	0.0	0.0	0.0
Department of Defense, research	98,577.3	3,771.6	10,864.2	0.0	78,928.1	0.0	5,013.4	0.0	0.0
Department of Defense, total experimental development ^b	640,865.1	108,280.8	421,650.8	0.0	83,942.1	0.0	26,991.4	0.0	0.0
Department of Energy	45,509.0	0.0	17,678.1	0.0	23,449.9	0.0	4,381.0	0.0	0.0
Department of Health and Human Services	833,116.5	24,815.2	42,849.6	0.0	746,126.2	0.0	13,113.6	0.0	6,212.0
Department of Homeland Security	7,034.9	6.3	6,720.6	0.0	308.1	0.0	0.0	0.0	0.0
Department of the Interior	3,359.9	2,478.9	175.0	0.0	418.9	0.0	287.1	0.0	0.0
Department of Transportation	35,968.0	49.9	17,250.7	0.0	14,759.0	0.0	0.0	0.0	3,908.4
Environmental Protection Agency	8,946.9	6,225.8	127.0	0.0	2,594.2	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	24,670.5	590.2	10,580.1	0.0	13,500.2	0.0	0.0	0.0	0.0
National Science Foundation	127,184.1	0.0	2,810.0	0.0	122,956.0	0.0	1,418.1	0.0	0.0
Hawaii	393,877.5	90,914.1	146,470.3	0.0	141,517.5	0.0	12,985.9	0.0	1,989.6

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Environmental Protection Agency	1,739.7	0.0	118.3	0.0	1,621.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,087.4	80.6	660.9	0.0	2,345.9	0.0	0.0	0.0	0.0
National Science Foundation	22,352.2	0.0	225.0	0.0	22,125.2	0.0	0.0	0.0	2.0
Illinois	3,208,955.0	180,530.0	414,092.5	0.0	1,520,145.4	990,314.4	98,040.5	0.0	5,832.2
Department of Agriculture	66,486.0	44,581.6	0.0	0.0	21,249.4	0.0	655.0	0.0	0.0
Department of Commerce	1,451.7	564.0	168.0	0.0	719.7	0.0	0.0	0.0	0.0
Department of Defense, research	139,762.2	30,674.9	54,454.1	0.0	52,354.5	2,193.3	85.4	0.0	0.0
Department of Defense, total experimental development ^b	338,594.3	83,125.7	223,516.3	0.0	21,165.9	2,501.5	8,284.9	0.0	0.0
Department of Energy	1,176,265.2	2,593.4	57,101.7	0.0	135,116.7	981,048.5	342.3	0.0	62.6
Department of Health and Human Services	1,129,057.2	3.1	54,882.3	0.0	990,258.3	3,876.8	79,808.3	0.0	228.4
Department of Homeland Security	13,126.6	9,489.5	453.4	0.0	3,183.7	0.0	0.0	0.0	0.0
Department of the Interior	8,326.5	6,304.7	0.0	0.0	1,592.6	429.2	0.0	0.0	0.0
Department of Transportation	12,220.4	280.0	1,798.2	0.0	4,185.6	265.0	290.0	0.0	5,401.5
Environmental Protection Agency	2,473.3	0.0	83.6	0.0	2,389.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	32,125.8	2,913.1	15,102.3	0.0	13,564.2	0.0	546.1	0.0	0.0
National Science Foundation	289,065.9	0.0	6,532.6	0.0	274,365.0	0.0	8,028.6	0.0	139.7
Indiana	1,104,109.4	243,001.0	222,194.2	0.0	621,992.6	0.0	0.0	0.0	16,921.5
Department of Agriculture	19,496.8	6,464.9	0.0	0.0	12,868.4	0.0	0.0	0.0	163.4
Department of Commerce	1,920.6	44.0	0.0	0.0	1,876.6	0.0	0.0	0.0	0.0
Department of Defense, research	60,981.5	16,112.4	14,418.3	0.0	30,450.8	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	405,382.1	210,230.0	174,380.1	0.0	20,772.0	0.0	0.0	0.0	0.0
Department of Energy	39,684.2	0.0	8,776.4	0.0	30,907.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	370,920.6	0.0	12,429.6	0.0	352,537.1	0.0	0.0	0.0	5,953.9
Department of Homeland Security	624.0	225.5	0.0	0.0	398.5	0.0	0.0	0.0	0.0
Department of the Interior	8,634.5	7,167.4	0.0	0.0	1,467.0	0.0	0.0	0.0	0.0
Department of Transportation	12,946.9	0.0	81.2	0.0	2,061.6	0.0	0.0	0.0	10,804.2
Environmental Protection Agency	6,578.3	0.0	118.3	0.0	6,460.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	21,967.0	2,756.8	9,573.6	0.0	9,636.6	0.0	0.0	0.0	0.0
National Science Foundation	154,973.0	0.0	2,416.7	0.0	152,556.3	0.0	0.0	0.0	0.0
Iowa	702,068.0	70,782.2	244,711.1	0.0	346,484.1	31,348.2	1,920.7	0.0	6,821.7
Department of Agriculture	81,115.1	58,100.8	0.0	0.0	22,319.4	0.0	695.0	0.0	0.0
Department of Commerce	1,387.2	0.0	1,080.6	0.0	306.6	0.0	0.0	0.0	0.0
Department of Defense, research	26,951.9	0.0	17,516.0	0.0	9,236.9	199.1	0.0	0.0	0.0
Department of Defense, total experimental development ^b	230,475.1	10,523.1	215,679.2	0.0	4,272.8	0.0	0.0	0.0	0.0
Department of Energy	38,484.0	0.0	467.5	0.0	6,867.3	31,149.2	0.0	0.0	0.0
Department of Health and Human Services	230,049.7	0.0	8,424.7	0.0	218,441.8	0.0	1,225.7	0.0	1,957.5
Department of Homeland Security	333.3	0.0	0.0	0.0	333.3	0.0	0.0	0.0	0.0
Department of the Interior	1,250.2	983.8	0.0	0.0	266.3	0.0	0.0	0.0	0.0
Department of Transportation	12,278.3	0.0	182.5	0.0	7,231.6	0.0	0.0	0.0	4,864.2
Environmental Protection Agency	1,370.6	0.0	73.5	0.0	1,297.1	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	35,509.0	1,174.5	837.1	0.0	33,497.4	0.0	0.0	0.0	0.0
National Science Foundation	42,863.5	0.0	450.0	0.0	42,413.5	0.0	0.0	0.0	0.0
Kansas	352,337.6	92,527.3	35,033.6	0.0	218,244.2	0.0	4,528.2	0.0	2,004.2
Department of Agriculture	102,794.7	83,316.7	0.0	0.0	19,049.7	0.0	428.4	0.0	0.0
Department of Commerce	818.7	0.0	0.0	0.0	818.7	0.0	0.0	0.0	0.0
Department of Defense, research	17,542.1	171.6	241.2	0.0	16,346.8	0.0	782.4	0.0	0.0
Department of Defense, total experimental development ^b	33,119.9	4,409.9	24,472.9	0.0	4,236.9	0.0	0.1	0.0	0.0
Department of Energy	11,601.2	0.0	2,425.2	0.0	6,728.9	0.0	2,447.1	0.0	0.0
Department of Health and Human Services	119,717.7	0.0	1,346.1	0.0	117,925.4	0.0	251.1	0.0	195.1
Department of Homeland Security	776.9	0.0	776.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	5,771.3	4,627.4	0.0	0.0	1,143.9	0.0	0.0	0.0	0.0
Department of Transportation	15,250.3	0.0	3.2	0.0	13,438.0	0.0	0.0	0.0	1,809.1
National Aeronautics and Space Administration	5,850.1	1.8	3,758.5	0.0	2,089.8	0.0	0.0	0.0	0.0
National Science Foundation	39,094.7	0.0	2,009.6	0.0	36,466.1	0.0	619.0	0.0	0.0
Kentucky	354,252.4	7,418.8	29,455.2	0.0	311,759.1	0.0	1,837.5	0.0	3,781.8
Department of Agriculture	21,474.1	4,502.6	0.0	0.0	16,605.2	0.0	0.0	0.0	366.3
Department of Defense, research	4,174.1	383.1	22.4	0.0	3,768.6	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	20,770.3	401.3	8,972.1	0.0	11,396.8	0.0	0.0	0.0	0.0
Department of Energy	19,471.6	752.1	5,958.9	0.0	11,455.3	0.0	1,305.3	0.0	0.0
Department of Health and Human Services	243,754.1	0.0	10,625.3	0.0	231,356.5	0.0	532.2	0.0	1,240.1

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Homeland Security	751.3	1.0	0.0	0.0	750.3	0.0	0.0	0.0	0.0
Department of the Interior	2,071.5	1,378.7	0.0	0.0	692.8	0.0	0.0	0.0	0.0
Department of Transportation	2,175.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,175.4
National Aeronautics and Space Administration	4,898.3	0.0	3,059.5	0.0	1,838.8	0.0	0.0	0.0	0.0
National Science Foundation	34,711.7	0.0	816.9	0.0	33,894.7	0.0	0.0	0.0	0.0
Louisiana	436,645.1	53,489.3	107,822.0	0.0	256,067.8	0.0	3,026.6	0.0	16,239.4
Department of Agriculture	44,449.4	32,309.6	0.0	0.0	12,139.8	0.0	0.0	0.0	0.0
Department of Commerce	2,762.5	0.0	0.0	0.0	2,762.5	0.0	0.0	0.0	0.0
Department of Defense, research	12,947.8	103.2	8,570.1	0.0	3,662.2	0.0	612.3	0.0	0.0
Department of Defense, total experimental development ^b	92,205.5	649.5	89,449.7	0.0	2,105.9	0.0	0.0	0.0	0.4
Department of Energy	10,241.9	95.5	1,035.4	0.0	8,998.8	0.0	0.0	0.0	112.1
Department of Health and Human Services	202,287.0	2,415.4	1,497.8	0.0	188,097.9	0.0	1,638.9	0.0	8,637.0
Department of the Interior	19,239.2	17,914.8	0.0	0.0	1,229.3	0.0	0.0	0.0	95.1
Department of Transportation	8,612.3	0.0	54.5	0.0	5,712.4	0.0	0.0	0.0	2,845.4
Environmental Protection Agency	3,505.8	0.0	3,505.8	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,792.3	1.2	2,428.0	0.0	1,363.0	0.0	0.0	0.0	0.0
National Science Foundation	36,601.5	0.0	1,280.8	0.0	29,996.0	0.0	775.4	0.0	4,549.3
Maine	185,145.9	7,818.8	18,009.8	0.0	50,989.1	0.0	104,262.7	0.0	4,065.6
Department of Agriculture	11,556.2	3,901.4	11.6	0.0	6,698.1	0.0	274.5	0.0	670.6
Department of Commerce	3,435.1	75.0	0.0	0.0	2,732.9	0.0	365.6	0.0	261.6
Department of Defense, research	616.9	140.3	7.9	0.0	335.4	0.0	133.4	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	15,077.8	1,770.0	8,394.6	0.0	4,913.1	0.0	0.0	0.0	0.0
Department of Energy	11,799.6	0.0	1,535.8	0.0	9,827.0	0.0	324.8	0.0	112.1
Department of Health and Human Services	100,387.6	0.0	355.0	0.0	5,578.0	0.0	93,823.6	0.0	631.1
Department of Homeland Security	4.9	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	2,477.3	1,925.1	0.0	0.0	0.0	0.0	0.0	0.0	552.2
Department of Transportation	9,119.8	0.0	2,031.0	0.0	5,250.8	0.0	0.0	0.0	1,838.0
National Aeronautics and Space Administration	5,812.3	2.2	3,984.8	0.0	1,006.5	0.0	818.8	0.0	0.0
National Science Foundation	24,858.4	0.0	1,689.1	0.0	14,647.3	0.0	8,522.1	0.0	0.0
Maryland	22,736,194.9	14,521,346.3	4,460,415.9	856,993.0	2,215,252.6	0.0	601,699.5	58,540.0	21,947.7
Department of Agriculture	192,525.9	165,633.2	0.0	0.0	26,236.9	0.0	655.9	0.0	0.0
Department of Commerce	1,020,721.3	953,532.2	27,953.4	0.0	17,327.9	0.0	990.8	19,558.0	1,359.0
Department of Defense, research	686,456.8	337,003.8	198,828.3	655.8	105,530.9	0.0	44,239.7	0.0	198.3
Department of Defense, total experimental development ^b	5,841,358.8	3,784,518.2	1,275,400.8	986.0	523,326.9	0.0	255,526.0	1,600.4	0.5
Department of Energy	73,386.9	2,001.9	30,068.8	0.0	31,602.9	0.0	3,001.2	0.0	6,712.1
Department of Health and Human Services	12,663,389.3	9,024,989.6	1,588,800.4	855,351.2	1,106,019.5	0.0	76,313.7	*	11,915.0
Department of Homeland Security	74,546.9	16,045.6	20,343.6	0.0	0.0	0.0	1,053.1	37,104.7	0.0
Department of the Interior	40,163.5	37,573.0	1,586.9	0.0	603.2	0.0	20.0	0.0	380.4
Department of Transportation	47,163.1	14,843.6	22,036.8	0.0	5,293.3	0.0	3,607.1	0.0	1,382.3
Environmental Protection Agency	16,769.5	0.0	15,477.4	0.0	1,292.1	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	1,760,975.3	180,882.4	1,088,158.7	0.0	280,737.6	0.0	210,919.7	276.9	0.0
National Science Foundation	318,737.5	4,322.9	191,760.9	0.0	117,281.5	0.0	5,372.3	0.0	0.0
Massachusetts	8,850,302.8	572,534.8	3,630,199.6	0.0	2,055,988.9	390,498.8	2,083,380.7	108,665.5	9,034.6
Department of Agriculture	29,327.3	11,860.7	0.0	0.0	16,661.8	0.0	804.8	0.0	0.0
Department of Commerce	25,297.9	10,423.0	3,047.3	0.0	11,725.1	0.0	102.6	0.0	0.0
Department of Defense, research	620,324.3	20,082.7	267,299.6	0.0	218,692.2	67,636.7	45,438.6	1,174.4	0.0
Department of Defense, total experimental development ^b	2,649,402.0	310,833.2	1,763,746.3	0.0	55,340.0	319,754.3	92,237.1	107,491.0	0.0
Department of Energy	172,013.4	0.0	60,384.3	0.0	102,637.6	0.0	8,256.5	0.0	735.0
Department of Health and Human Services	4,517,104.2	0.0	1,418,627.2	0.0	1,208,918.4	0.0	1,886,157.8	0.0	3,400.8
Department of Homeland Security	33,499.3	14,952.2	15,405.1	0.0	0.0	3,107.8	34.2	0.0	0.0
Department of the Interior	19,572.4	12,623.2	1,740.4	0.0	2,827.6	0.0	1,606.6	0.0	774.7
Department of Transportation	81,494.0	51,815.3	16,517.4	0.0	7,147.0	0.0	1,890.2	0.0	4,124.2
Environmental Protection Agency	24,200.2	1,185.9	13,610.1	0.0	9,404.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	212,568.3	138,758.7	28,717.2	0.0	39,123.2	0.0	5,969.1	0.0	0.0
National Science Foundation	465,499.4	0.0	41,104.6	0.0	383,511.6	0.0	40,883.2	0.0	0.0
Michigan	1,924,825.7	114,562.5	245,134.3	0.0	1,472,856.0	0.0	84,719.5	0.0	7,553.4
Department of Agriculture	38,471.6	2,407.6	99.8	0.0	35,964.1	0.0	0.0	0.0	0.0
Department of Commerce	7,301.9	272.0	0.0	0.0	5,975.4	0.0	1,008.4	0.0	46.0
Department of Defense, research	292,965.7	8,112.9	33,041.6	0.0	251,448.5	0.0	362.6	0.0	0.0
Department of Defense, total experimental development ^b	277,529.2	79,340.5	113,641.7	0.0	60,809.7	0.0	23,737.4	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Energy	139,804.9	0.0	41,411.0	0.0	98,393.9	0.0	0.0	0.0	0.0
Department of Health and Human Services	886,657.4	202.0	41,122.7	0.0	783,502.7	0.0	59,549.0	0.0	2,281.0
Department of Homeland Security	1,355.3	6.4	998.9	0.0	350.0	0.0	0.0	0.0	0.0
Department of the Interior	11,106.1	10,207.1	0.0	0.0	898.9	0.0	0.0	0.0	0.0
Department of Transportation	18,622.6	36.9	5,933.9	0.0	7,425.6	0.0	0.0	0.0	5,226.3
Environmental Protection Agency	278.2	0.0	278.2	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	44,770.4	13,977.1	4,093.7	0.0	26,699.6	0.0	0.0	0.0	0.0
National Science Foundation	205,962.4	0.0	4,512.7	0.0	201,387.5	0.0	62.1	0.0	0.0
Minnesota	1,447,555.5	60,861.5	465,755.0	0.0	499,180.4	0.0	412,629.9	0.0	9,128.7
Department of Agriculture	48,959.3	23,186.1	273.6	0.0	25,499.5	0.0	0.0	0.0	0.0
Department of Commerce	1,837.9	42.0	47.7	0.0	1,748.2	0.0	0.0	0.0	0.0
Department of Defense, research	45,273.2	1,110.7	24,391.5	0.0	15,858.8	0.0	3,912.2	0.0	0.0
Department of Defense, total experimental development ^b	465,786.1	20,583.1	381,028.4	0.0	14,776.2	0.0	49,398.4	0.0	0.0
Department of Energy	27,371.5	0.0	11,253.5	0.0	16,113.9	0.0	0.0	0.0	4.2
Department of Health and Human Services	731,113.3	0.0	35,814.1	0.0	336,923.7	0.0	354,552.4	0.0	3,823.1
Department of Homeland Security	59.2	0.0	59.2	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	7,152.5	5,478.4	0.0	0.0	1,415.2	0.0	0.0	0.0	259.0
Department of Transportation	6,522.4	0.0	1,480.1	0.0	0.0	0.0	0.0	0.0	5,042.4
Environmental Protection Agency	8,992.0	8,745.7	0.0	0.0	246.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	12,392.9	1,715.4	5,886.0	0.0	4,791.4	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Science Foundation	92,095.1	0.0	5,521.0	0.0	81,807.2	0.0	4,766.9	0.0	0.0
Mississippi	471,970.2	299,686.7	28,914.3	0.0	139,727.5	0.0	1,809.5	0.0	1,832.2
Department of Agriculture	112,143.0	78,553.4	106.5	0.0	32,965.4	0.0	79.7	0.0	437.9
Department of Commerce	13,345.3	146.0	0.0	0.0	13,149.3	0.0	0.0	0.0	50.0
Department of Defense, research	23,284.4	17,875.3	822.3	0.0	4,586.7	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	111,114.3	93,872.9	15,330.9	0.0	180.8	0.0	1,729.8	0.0	0.0
Department of Energy	7,693.4	320.0	1,610.3	0.0	5,763.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	63,561.9	0.0	0.0	0.0	62,343.1	0.0	0.0	0.0	1,218.8
Department of Homeland Security	3,045.6	2,904.6	141.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	3,763.3	3,150.7	0.0	0.0	487.2	0.0	0.0	0.0	125.5
Department of Transportation	4,263.5	28.1	100.0	0.0	4,135.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	115,044.3	102,835.8	10,803.3	0.0	1,405.2	0.0	0.0	0.0	0.0
National Science Foundation	14,711.3	0.0	0.0	0.0	14,711.3	0.0	0.0	0.0	0.0
Missouri	2,079,638.9	126,150.1	1,140,052.5	0.0	770,436.5	0.0	38,180.1	0.0	4,819.7
Department of Agriculture	43,915.1	22,210.6	0.0	0.0	19,795.9	0.0	1,908.5	0.0	0.0
Department of Commerce	1,710.0	1,504.1	0.0	0.0	206.0	0.0	0.0	0.0	0.0
Department of Defense, research	40,007.1	2,685.3	19,003.5	0.0	16,353.4	0.0	1,964.8	0.0	0.0
Department of Defense, total experimental development ^b	1,136,442.5	72,213.8	1,043,858.0	0.0	19,724.5	0.0	646.2	0.0	0.0
Department of Energy	58,520.3	1.2	31,754.1	0.0	21,809.1	0.0	4,955.9	0.0	0.0
Department of Health and Human Services	685,646.7	0.0	25,492.5	0.0	634,487.5	0.0	24,237.8	0.0	1,429.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Homeland Security	8,423.9	7,613.1	810.8	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	11,122.6	10,395.3	0.0	0.0	212.2	0.0	0.0	0.0	515.1
Department of Transportation	7,175.4	250.0	355.2	0.0	3,694.6	0.0	0.0	0.0	2,875.6
Environmental Protection Agency	5,663.2	0.0	4,365.3	0.0	1,297.9	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	31,165.3	9,276.8	13,151.8	0.0	8,736.7	0.0	0.0	0.0	0.0
National Science Foundation	49,846.9	0.0	1,261.3	0.0	44,118.8	0.0	4,466.8	0.0	0.0
Montana	213,205.6	65,288.6	29,045.7	0.0	114,401.2	0.0	1,854.4	0.0	2,615.7
Department of Agriculture	28,168.1	15,277.0	339.2	0.0	12,551.9	0.0	0.0	0.0	0.0
Department of Commerce	545.3	0.0	38.4	0.0	506.9	0.0	0.0	0.0	0.0
Department of Defense, research	7,530.2	0.0	2,334.1	0.0	4,996.1	0.0	200.0	0.0	0.0
Department of Defense, total experimental development ^b	13,268.9	543.6	8,002.6	0.0	4,722.7	0.0	0.0	0.0	0.0
Department of Energy	10,726.4	0.0	3,111.9	0.0	7,614.5	0.0	0.0	0.0	0.0
Department of Health and Human Services	91,465.0	37,058.6	10,555.9	0.0	41,257.8	0.0	1,554.8	0.0	1,038.0
Department of Homeland Security	3,221.3	0.0	0.0	0.0	3,221.3	0.0	0.0	0.0	0.0
Department of the Interior	11,106.1	9,184.0	0.0	0.0	1,871.4	0.0	0.0	0.0	50.6
Department of Transportation	7,597.2	3,222.3	0.0	0.0	2,847.9	0.0	0.0	0.0	1,527.0
Environmental Protection Agency	11.8	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	9,222.3	3.1	3,137.0	0.0	6,082.3	0.0	0.0	0.0	0.0
National Science Foundation	30,342.9	0.0	1,514.9	0.0	28,728.4	0.0	99.6	0.0	0.0
Nebraska	254,860.8	39,229.4	13,969.6	0.0	185,820.4	0.0	13,616.9	0.0	2,224.5

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Agriculture	44,202.4	29,650.4	100.0	0.0	14,452.0	0.0	0.0	0.0	0.0
Department of Commerce	1,069.4	0.0	0.0	0.0	1,069.4	0.0	0.0	0.0	0.0
Department of Defense, research	7,653.2	1,186.5	854.4	0.0	5,612.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	20,720.5	7,542.1	5,762.8	0.0	882.0	0.0	6,533.6	0.0	0.0
Department of Energy	14,670.9	0.0	4,306.3	0.0	10,364.6	0.0	0.0	0.0	0.0
Department of Health and Human Services	133,561.8	0.0	1,792.7	0.0	124,332.6	0.0	7,083.3	0.0	353.2
Department of Homeland Security	1,037.4	0.0	0.0	0.0	1,037.4	0.0	0.0	0.0	0.0
Department of the Interior	669.7	499.2	0.0	0.0	170.6	0.0	0.0	0.0	0.0
Department of Transportation	7,745.2	0.0	0.0	0.0	5,873.8	0.0	0.0	0.0	1,871.3
Environmental Protection Agency	117.1	0.0	117.1	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	581.5	351.2	52.6	0.0	177.7	0.0	0.0	0.0	0.0
National Science Foundation	22,831.8	0.0	983.7	0.0	21,848.1	0.0	0.0	0.0	0.0
Nevada	305,900.0	19,687.1	200,414.1	0.0	78,515.5	0.0	2,504.6	0.0	4,778.8
Department of Agriculture	6,477.1	2,456.5	18.7	0.0	3,952.1	0.0	49.8	0.0	0.0
Department of Defense, research	8,407.5	27.2	5,216.3	0.0	3,164.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	42,751.0	2,388.2	39,330.1	0.0	1,032.7	0.0	0.0	0.0	0.0
Department of Energy	131,931.7	1,274.7	129,166.5	0.0	728.8	0.0	761.7	0.0	0.0
Department of Health and Human Services	45,340.8	0.0	3,922.2	0.0	38,442.5	0.0	1,328.1	0.0	1,648.0
Department of Homeland Security	1,460.1	0.0	1,460.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	16,703.2	11,978.8	1,076.0	0.0	3,233.4	0.0	365.0	0.0	50.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Transportation	6,028.6	0.0	0.0	0.0	2,947.9	0.0	0.0	0.0	3,080.7
Environmental Protection Agency	1,297.1	0.0	0.0	0.0	1,297.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	22,984.2	1,561.7	19,224.2	0.0	2,198.3	0.0	0.0	0.0	0.0
National Science Foundation	22,518.6	0.0	1,000.0	0.0	21,518.6	0.0	0.0	0.0	0.0
New Hampshire	483,307.8	63,128.6	231,234.5	0.0	175,002.3	0.0	13,303.0	0.0	639.5
Department of Agriculture	9,902.0	5,484.3	0.0	0.0	4,360.2	0.0	57.4	0.0	0.0
Department of Commerce	10,905.9	238.0	399.1	0.0	9,831.9	0.0	436.8	0.0	0.0
Department of Defense, research	55,115.1	27,023.0	13,766.2	0.0	14,325.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	216,854.8	22,321.8	189,280.5	0.0	2,029.5	0.0	3,223.0	0.0	0.0
Department of Energy	6,870.7	0.0	3,417.0	0.0	3,335.4	0.0	0.0	0.0	118.3
Department of Health and Human Services	116,799.1	0.0	17,144.6	0.0	89,816.2	0.0	9,524.3	0.0	314.1
Department of Homeland Security	34.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	2,748.7	1,934.5	9.3	0.0	687.1	0.0	0.0	0.0	117.9
Department of Transportation	281.9	0.0	192.6	0.0	0.0	0.0	0.0	0.0	89.2
Environmental Protection Agency	168.0	0.0	168.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	24,124.7	6,092.9	6,587.3	0.0	11,444.5	0.0	0.0	0.0	0.0
National Science Foundation	39,502.9	0.0	269.7	0.0	39,171.6	0.0	61.6	0.0	0.0
New Jersey	2,884,975.1	569,555.8	1,345,276.1	0.0	784,002.1	118,966.1	42,108.6	0.0	25,066.4
Department of Agriculture	4,378.1	95.1	0.0	0.0	3,983.0	0.0	275.0	0.0	25.0
Department of Commerce	13,885.5	0.0	0.0	0.0	13,885.5	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	135,568.8	16,643.8	82,921.9	0.0	35,613.3	0.0	389.7	0.0	0.0
Department of Defense, total experimental development ^b	1,583,315.5	525,380.5	768,110.7	0.0	282,599.7	2,992.5	4,232.0	0.0	0.0
Department of Energy	162,871.6	0.0	15,019.8	0.0	31,331.3	115,973.6	546.9	0.0	0.0
Department of Health and Human Services	761,176.3	0.0	450,642.7	0.0	260,846.6	0.0	31,464.0	0.0	18,223.0
Department of Homeland Security	4,186.2	359.4	3,826.8	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	2,469.3	1,210.4	499.9	0.0	583.0	0.0	0.0	0.0	176.0
Department of Transportation	53,984.6	21,681.6	16,554.3	0.0	7,720.7	0.0	1,385.6	0.0	6,642.4
Environmental Protection Agency	2,156.9	1,778.8	256.5	0.0	121.6	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	21,841.7	2,406.1	4,390.0	0.0	14,999.3	0.0	46.3	0.0	0.0
National Science Foundation	139,140.7	0.0	3,053.5	0.0	132,318.1	0.0	3,769.1	0.0	0.0
New Mexico	3,501,956.2	687,753.7	815,838.4	1,776,515.3	184,030.3	0.0	36,947.9	0.0	870.7
Department of Agriculture	16,989.7	7,006.0	13.0	0.0	4,812.2	0.0	5,158.6	0.0	0.0
Department of Commerce	3,724.5	3,393.9	330.6	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, research	403,908.2	105,022.8	231,884.9	46,508.8	16,006.2	0.0	4,475.3	0.0	10.3
Department of Defense, total experimental development ^b	1,171,320.7	407,679.6	510,093.0	246,259.1	7,262.1	0.0	26.5	0.0	0.4
Department of Energy	1,644,401.9	147,093.3	12,216.9	1,466,400.0	18,063.3	0.0	628.4	0.0	0.0
Department of Health and Human Services	125,853.8	0.0	5,753.5	5,376.1	89,780.5	0.0	24,587.0	0.0	356.6
Department of Homeland Security	21,418.8	8,823.7	10,828.1	1,767.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	7,104.6	4,646.3	259.6	0.0	2,132.7	0.0	66.0	0.0	0.0
Department of Transportation	8,698.2	1,914.2	3,259.8	0.0	3,020.9	0.0	0.0	0.0	503.3

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Environmental Protection Agency	399.7	0.0	359.2	0.0	40.5	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	54,333.8	1,513.9	39,009.9	10,204.4	3,605.6	0.0	0.0	0.0	0.0
National Science Foundation	43,802.2	660.0	1,829.9	0.0	39,306.2	0.0	2,006.2	0.0	0.0
New York	8,148,161.8	1,378,595.9	2,374,927.1	0.0	3,209,460.2	0.0	527,869.9	530,415.0	126,893.5
Department of Agriculture	64,713.8	29,937.7	0.0	0.0	31,973.9	0.0	2,802.2	0.0	0.0
Department of Commerce	12,525.7	44.0	0.0	0.0	12,441.0	0.0	40.7	0.0	0.0
Department of Defense, research	1,138,505.0	791,843.8	177,121.0	0.0	130,631.8	0.0	38,411.7	199.1	297.5
Department of Defense, total experimental development ^b	1,303,488.4	537,559.8	669,863.6	0.0	61,287.3	0.0	31,376.8	3,400.5	0.4
Department of Energy	1,424,442.3	205.4	821,921.5	0.0	80,118.8	0.0	2,099.8	515,147.0	4,949.8
Department of Health and Human Services	3,553,768.5	0.0	546,543.1	0.0	2,455,204.9	0.0	434,993.2	3,600.0	113,427.3
Department of Homeland Security	3,088.3	1,230.9	1,406.7	0.0	0.0	0.0	450.7	0.0	0.0
Department of the Interior	10,870.0	9,773.5	0.0	0.0	678.4	0.0	0.0	0.0	418.1
Department of Transportation	12,196.0	0.0	1,416.9	0.0	6,258.0	0.0	162.6	0.0	4,358.5
Environmental Protection Agency	3,107.3	0.0	1,697.4	0.0	1,409.9	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	189,457.0	8,000.9	134,794.4	0.0	36,711.5	0.0	984.3	8,068.4	897.5
National Science Foundation	431,999.5	0.0	20,162.4	0.0	392,744.7	0.0	16,547.9	0.0	2,544.5
North Carolina	3,271,375.6	349,457.2	603,201.8	0.0	1,645,384.7	0.0	661,646.7	0.0	11,685.2
Department of Agriculture	43,914.6	14,404.1	0.0	0.0	28,602.2	0.0	422.1	0.0	486.2
Department of Commerce	15,648.3	4,790.0	5,971.1	0.0	4,774.3	0.0	49.9	0.0	63.0
Department of Defense, research	140,515.7	1,666.0	41,141.1	0.0	70,338.6	0.0	27,370.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	200,443.6	35,534.3	121,687.8	0.0	41,478.3	0.0	1,593.2	0.0	150.0
Department of Energy	80,572.0	155.3	29,237.5	0.0	46,729.1	0.0	4,225.9	0.0	224.2
Department of Health and Human Services	2,478,366.1	185,166.8	376,070.6	0.0	1,285,392.1	0.0	624,787.8	0.0	6,948.8
Department of Homeland Security	5,687.4	176.8	4,421.8	0.0	1,088.8	0.0	0.0	0.0	0.0
Department of the Interior	12,548.6	10,249.1	32.5	0.0	2,048.0	0.0	0.0	0.0	219.0
Department of Transportation	22,935.6	188.3	3,010.3	0.0	16,143.1	0.0	0.0	0.0	3,593.9
Environmental Protection Agency	106,020.8	96,944.3	6,758.3	0.0	2,318.2	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	9,737.4	182.3	3,687.8	0.0	4,117.4	0.0	1,750.0	0.0	0.0
National Science Foundation	154,985.5	0.0	11,183.0	0.0	142,354.6	0.0	1,447.9	0.0	0.0
North Dakota	140,075.8	36,538.1	2,478.6	0.0	98,894.9	0.0	673.4	0.0	1,490.8
Department of Agriculture	45,606.4	33,889.4	0.0	0.0	11,717.0	0.0	0.0	0.0	0.0
Department of Defense, research	6,326.4	0.0	0.0	0.0	6,326.4	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	842.7	0.0	0.0	0.0	842.7	0.0	0.0	0.0	0.0
Department of Energy	34,735.1	0.0	250.0	0.0	34,485.1	0.0	0.0	0.0	0.0
Department of Health and Human Services	25,260.7	0.0	0.0	0.0	23,493.0	0.0	673.4	0.0	1,094.3
Department of the Interior	2,648.7	2,648.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	8,900.7	0.0	1,784.2	0.0	6,720.0	0.0	0.0	0.0	396.5
National Aeronautics and Space Administration	1,149.8	0.0	444.4	0.0	705.4	0.0	0.0	0.0	0.0
National Science Foundation	14,605.4	0.0	0.0	0.0	14,605.4	0.0	0.0	0.0	0.0
Ohio	5,215,661.1	1,885,146.5	2,032,806.7	0.0	967,912.9	0.0	282,561.2	0.0	47,233.7

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Agriculture	32,796.1	11,626.0	0.0	0.0	21,170.2	0.0	0.0	0.0	0.0
Department of Commerce	3,048.3	588.0	14.2	0.0	2,435.1	0.0	11.0	0.0	0.0
Department of Defense, research	425,314.4	112,242.0	210,742.3	0.0	86,994.2	0.0	15,336.0	0.0	0.0
Department of Defense, total experimental development ^b	3,323,923.6	1,652,406.8	1,603,905.7	0.0	38,354.0	0.0	29,257.1	0.0	0.0
Department of Energy	95,123.8	230.0	58,709.6	0.0	36,182.7	0.0	1.5	0.0	0.0
Department of Health and Human Services	994,463.5	24,210.7	34,604.3	0.0	665,589.2	0.0	235,191.8	0.0	34,867.5
Department of Homeland Security	18,380.1	8,428.9	9,951.2	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	9,198.7	8,728.9	0.0	0.0	172.6	0.0	0.0	0.0	297.2
Department of Transportation	48,484.1	180.0	22,519.4	0.0	12,739.2	0.0	976.5	0.0	12,069.0
Environmental Protection Agency	64,472.9	48,027.4	16,324.4	0.0	121.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	97,721.8	18,477.9	71,978.9	0.0	6,824.1	0.0	441.0	0.0	0.0
National Science Foundation	102,733.7	0.0	4,056.7	0.0	97,330.5	0.0	1,346.4	0.0	0.0
Oklahoma	536,709.2	185,012.4	65,558.9	0.0	243,952.2	0.0	34,027.4	0.0	8,158.4
Department of Agriculture	32,439.6	20,612.8	0.0	0.0	11,776.8	0.0	0.0	0.0	49.9
Department of Commerce	14,207.8	799.0	38.2	0.0	13,370.5	0.0	0.0	0.0	0.0
Department of Defense, research	19,511.5	1,258.1	5,335.5	0.0	12,917.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	132,424.4	91,136.0	39,343.6	0.0	1,944.8	0.0	0.0	0.0	0.0
Department of Energy	26,095.8	1.1	6,744.3	0.0	19,118.8	0.0	7.3	0.0	224.2
Department of Health and Human Services	131,660.7	0.0	6,391.7	0.0	87,683.8	0.0	32,600.7	0.0	4,984.4
Department of the Interior	56,734.4	55,109.8	0.0	0.0	1,543.0	0.0	0.0	0.0	81.6

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Transportation	18,952.4	9,456.0	6,456.9	0.0	486.9	0.0	0.0	0.0	2,552.6
Environmental Protection Agency	7,745.9	6,374.0	0.0	0.0	1,371.9	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	65,153.7	265.6	964.3	0.0	63,588.4	0.0	335.4	0.0	0.0
National Science Foundation	31,783.2	0.0	284.3	0.0	30,149.4	0.0	1,083.9	0.0	265.6
Oregon	814,311.9	89,267.7	124,263.4	0.0	562,640.5	0.0	26,118.1	0.0	12,022.2
Department of Agriculture	78,099.5	53,857.5	345.5	0.0	23,471.4	0.0	374.7	0.0	50.4
Department of Commerce	8,080.5	0.0	0.0	0.0	7,351.7	0.0	299.5	0.0	429.2
Department of Defense, research	47,828.0	233.9	33,721.2	0.0	13,872.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	43,700.3	4,679.5	23,596.9	0.0	15,424.0	0.0	0.0	0.0	0.0
Department of Energy	70,877.2	83.8	31,264.4	0.0	39,455.1	0.0	0.0	0.0	73.9
Department of Health and Human Services	418,648.6	0.0	23,013.8	0.0	373,888.0	0.0	20,562.1	0.0	1,184.7
Department of Homeland Security	80.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	24,356.6	18,426.5	132.0	0.0	4,658.4	0.0	99.0	0.0	1,040.8
Department of Transportation	15,572.6	0.0	20.5	0.0	6,308.8	0.0	0.0	0.0	9,243.3
Environmental Protection Agency	9,622.5	9,338.7	283.9	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	13,355.9	2,647.9	4,398.1	0.0	6,310.0	0.0	0.0	0.0	0.0
National Science Foundation	84,090.3	0.0	7,407.2	0.0	71,900.3	0.0	4,782.7	0.0	0.0
Pennsylvania	5,214,140.2	420,020.3	2,166,237.0	0.0	2,191,260.5	34,062.8	380,886.7	0.0	21,672.9
Department of Agriculture	68,889.4	48,327.9	28.0	0.0	19,072.0	0.0	1,461.4	0.0	0.0
Department of Commerce	7,149.0	44.0	1,116.8	0.0	4,553.9	0.0	1,434.3	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	182,202.8	19,003.7	36,773.6	0.0	120,657.2	4,953.0	815.2	0.0	0.0
Department of Defense, total experimental development ^b	1,193,773.7	293,621.2	695,984.5	0.0	168,744.4	29,109.8	6,313.6	0.0	0.2
Department of Energy	556,702.9	25,902.5	479,726.1	0.0	48,556.4	0.0	2,517.9	0.0	0.0
Department of Health and Human Services	2,846,498.9	20,120.2	911,210.6	0.0	1,540,364.9	0.0	363,511.4	0.0	11,291.9
Department of Homeland Security	3,865.9	0.0	3,265.1	0.0	600.8	0.0	0.0	0.0	0.0
Department of the Interior	10,348.2	9,070.0	360.0	0.0	715.2	0.0	0.0	0.0	203.0
Department of Transportation	32,295.6	60.0	2,284.6	0.0	18,239.5	0.0	1,533.7	0.0	10,177.8
Environmental Protection Agency	847.3	0.0	847.3	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	49,178.0	3,870.8	25,462.2	0.0	19,253.3	0.0	591.8	0.0	0.0
National Science Foundation	262,388.5	0.0	9,178.2	0.0	250,502.9	0.0	2,707.3	0.0	0.0
Rhode Island	875,650.3	351,096.2	191,700.8	0.0	240,609.8	0.0	89,321.4	0.0	2,922.1
Department of Agriculture	2,585.0	32.6	0.0	0.0	2,552.4	0.0	0.0	0.0	0.0
Department of Commerce	20,013.0	0.0	0.0	0.0	19,447.3	0.0	565.7	0.0	0.0
Department of Defense, research	47,831.9	26,241.2	5,890.9	0.0	15,649.7	0.0	50.0	0.0	0.0
Department of Defense, total experimental development ^b	498,483.8	315,096.7	174,263.8	0.0	7,080.0	0.0	2,043.3	0.0	0.0
Department of Energy	6,580.5	0.0	161.8	0.0	6,379.7	0.0	39.0	0.0	0.0
Department of Health and Human Services	229,067.8	0.0	4,040.4	0.0	140,009.1	0.0	84,190.5	0.0	827.9
Department of Homeland Security	19.6	19.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,711.5	70.0	800.0	0.0	841.5	0.0	0.0	0.0	0.0
Department of Transportation	2,359.0	0.0	14.8	0.0	250.0	0.0	0.0	0.0	2,094.2

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Environmental Protection Agency	9,756.7	9,635.1	0.0	0.0	121.6	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	9,846.6	0.9	6,273.1	0.0	3,572.5	0.0	0.0	0.0	0.0
National Science Foundation	47,394.9	0.0	256.0	0.0	44,706.0	0.0	2,432.9	0.0	0.0
South Carolina	821,547.5	107,752.0	205,342.3	26,565.3	289,216.1	0.0	186,131.1	0.0	6,540.8
Department of Agriculture	31,479.1	14,760.8	0.0	0.0	15,718.3	0.0	1,000.0	0.0	0.0
Department of Commerce	15,729.6	12,039.5	0.0	0.0	2,628.5	0.0	428.7	0.0	632.9
Department of Defense, research	57,593.4	8,722.1	4,174.2	596.0	16,014.9	0.0	28,086.2	0.0	0.0
Department of Defense, total experimental development ^b	383,039.6	70,363.4	154,956.2	87.6	3,527.8	0.0	154,104.6	0.0	0.0
Department of Energy	40,850.1	0.0	3,031.4	25,367.6	11,789.1	0.0	543.7	0.0	118.3
Department of Health and Human Services	229,434.2	0.0	21,449.5	0.0	202,457.1	0.0	1,872.2	0.0	3,655.4
Department of Homeland Security	19,019.3	0.0	18,505.1	514.2	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,995.7	1,306.6	0.0	0.0	533.9	0.0	0.0	0.0	155.2
Department of Transportation	4,736.0	300.0	1,574.8	0.0	882.3	0.0	0.0	0.0	1,979.0
Environmental Protection Agency	101.2	0.0	101.2	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	4,820.7	*	1,325.0	0.0	3,400.0	0.0	95.7	0.0	0.0
National Science Foundation	32,748.7	259.5	225.0	0.0	32,264.2	0.0	0.0	0.0	0.0
South Dakota	130,890.0	16,568.4	38,370.8	0.0	28,518.0	0.0	21,254.5	0.0	26,178.3
Department of Agriculture	8,647.5	3,411.6	0.0	0.0	5,213.2	0.0	0.0	0.0	22.7
Department of Commerce	423.7	0.0	0.0	0.0	310.0	0.0	0.0	0.0	113.7
Department of Defense, research	1,674.9	0.0	691.4	0.0	982.5	0.0	1.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	26,860.8	621.8	26,089.9	0.0	149.2	0.0	0.0	0.0	0.0
Department of Energy	28,224.6	0.0	3,621.4	0.0	656.0	0.0	0.0	0.0	23,947.3
Department of Health and Human Services	28,820.9	0.0	1,488.8	0.0	9,607.2	0.0	16,342.4	0.0	1,382.5
Department of Homeland Security	2,175.7	0.0	2,175.7	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	8.5	0.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	712.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	712.1
National Aeronautics and Space Administration	16,486.3	12,535.0	3,612.1	0.0	339.2	0.0	0.0	0.0	0.0
National Science Foundation	16,854.8	0.0	682.9	0.0	11,260.7	0.0	4,911.2	0.0	0.0
Tennessee	3,151,030.3	785,966.6	266,724.5	14,712.3	397,172.1	0.5	575,335.1	1,101,455.2	9,664.0
Department of Agriculture	36,678.9	14,998.4	0.0	0.0	21,227.6	0.0	0.0	0.0	452.8
Department of Commerce	320.0	0.0	0.0	0.0	320.0	0.0	0.0	0.0	0.0
Department of Defense, research	76,071.5	10,757.5	4,243.1	0.0	39,933.2	0.0	15,244.7	5,893.0	0.0
Department of Defense, total experimental development ^b	282,659.2	168,947.2	90,906.4	0.0	17,218.8	0.0	135.0	5,451.8	0.0
Department of Energy	1,359,651.3	981.2	131,062.1	14,712.3	47,765.8	0.5	69,973.5	1,089,008.9	6,147.0
Department of Health and Human Services	699,705.6	290.0	11,747.9	0.0	199,836.0	0.0	486,638.8	421.8	771.2
Department of Homeland Security	3,628.7	0.0	2,000.9	0.0	1,348.0	0.0	0.0	279.9	0.0
Department of the Interior	10,358.4	8,136.7	0.0	0.0	2,050.1	0.0	0.0	0.0	171.5
Department of Transportation	6,560.5	3,521.2	17.9	0.0	500.0	0.0	0.0	400.0	2,121.4
Environmental Protection Agency	13,210.0	0.0	11,928.5	0.0	1,281.5	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	593,156.1	577,630.6	12,976.6	0.0	2,548.9	0.0	0.0	0.0	0.0
National Science Foundation	69,030.3	703.7	1,841.2	0.0	63,142.2	0.0	3,343.1	0.0	0.0
Texas	6,135,035.6	810,001.6	2,703,095.8	0.0	2,408,694.9	0.0	167,702.8	272.2	45,268.4
Department of Agriculture	99,900.9	50,354.8	106.5	0.0	45,793.9	0.0	3,006.6	0.0	639.0
Department of Commerce	5,724.2	0.0	384.1	0.0	5,331.0	0.0	0.0	0.0	9.0
Department of Defense, research	209,522.1	5,082.4	87,487.1	0.0	103,248.1	0.0	13,587.2	117.3	0.0
Department of Defense, total experimental development ^b	2,469,535.3	105,235.2	2,179,043.8	0.0	107,081.8	0.0	77,718.1	154.9	301.5
Department of Energy	158,932.1	0.0	27,007.1	0.0	125,229.1	0.0	6,515.2	0.0	180.6
Department of Health and Human Services	1,751,867.2	0.0	49,686.3	0.0	1,625,817.6	0.0	65,850.3	0.0	10,513.0
Department of Homeland Security	15,909.6	44.2	9,783.6	0.0	6,081.8	0.0	0.0	0.0	0.0
Department of the Interior	9,867.3	6,238.0	1,996.4	0.0	1,481.3	0.0	0.0	0.0	151.5
Department of Transportation	60,688.0	285.3	17,255.4	0.0	9,673.6	0.0	0.0	0.0	33,473.7
Environmental Protection Agency	5,733.5	0.0	3,139.4	0.0	2,594.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	996,137.3	642,761.7	314,071.8	0.0	39,303.8	0.0	0.0	0.0	0.0
National Science Foundation	351,218.3	0.0	13,134.3	0.0	337,058.7	0.0	1,025.3	0.0	0.0
Utah	1,140,726.7	177,104.3	346,203.7	0.0	526,800.9	0.0	87,398.8	0.0	3,219.1
Department of Agriculture	31,129.4	24,951.9	8.0	0.0	6,169.5	0.0	0.0	0.0	0.0
Department of Commerce	611.0	0.0	0.0	0.0	611.0	0.0	0.0	0.0	0.0
Department of Defense, research	134,329.2	1,029.1	111,454.9	0.0	21,845.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	440,676.2	140,178.9	193,869.4	0.0	101,377.9	0.0	5,250.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Energy	92,746.3	0.0	16,273.3	0.0	76,473.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	252,529.2	0.0	14,480.3	0.0	236,181.4	0.0	1,637.9	0.0	229.7
Department of Homeland Security	1,241.6	0.0	898.6	0.0	343.0	0.0	0.0	0.0	0.0
Department of the Interior	15,225.4	10,798.4	93.0	0.0	3,077.8	0.0	258.0	0.0	998.2
Department of Transportation	4,596.9	41.4	2,500.0	0.0	400.0	0.0	0.0	0.0	1,655.6
Environmental Protection Agency	236.4	0.0	236.4	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	104,454.9	104.7	4,260.4	0.0	19,801.3	0.0	80,252.9	0.0	35.7
National Science Foundation	62,950.2	0.0	2,129.4	0.0	60,520.8	0.0	0.0	0.0	300.0
Vermont	129,254.4	4,474.0	35,244.9	0.0	85,902.2	0.0	*	0.0	3,633.3
Department of Agriculture	15,944.9	3,113.0	0.0	0.0	12,831.9	0.0	0.0	0.0	0.0
Department of Commerce	1,965.3	0.0	0.0	0.0	1,965.3	0.0	0.0	0.0	0.0
Department of Defense, research	2,042.2	0.0	1,707.9	0.0	334.3	0.0	*	0.0	0.0
Department of Defense, total experimental development ^b	15,817.3	138.5	15,508.1	0.0	170.8	0.0	0.0	0.0	0.0
Department of Energy	4,121.7	0.0	3,674.7	0.0	447.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	68,324.1	0.0	8,828.0	0.0	56,471.4	0.0	0.0	0.0	3,024.8
Department of Homeland Security	2,214.3	0.0	2,214.3	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,368.5	1,184.5	0.0	0.0	85.9	0.0	0.0	0.0	98.1
Department of Transportation	660.4	0.0	0.0	0.0	149.9	0.0	0.0	0.0	510.5
National Aeronautics and Space Administration	2,263.8	38.0	2,151.8	0.0	74.0	0.0	0.0	0.0	0.0
National Science Foundation	14,531.7	0.0	1,160.2	0.0	13,371.6	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Virginia	9,650,204.4	2,019,216.9	6,064,162.8	0.0	748,598.5	136,883.5	183,870.5	482,098.0	15,374.2
Department of Agriculture	24,341.2	1,180.8	0.0	0.0	20,171.5	0.0	2,989.0	0.0	0.0
Department of Commerce	9,544.2	1,863.0	564.5	0.0	6,766.0	0.0	299.6	0.0	51.0
Department of Defense, research	1,017,668.9	135,736.1	653,144.8	0.0	146,072.8	0.0	11,258.1	70,845.2	611.9
Department of Defense, total experimental development ^b	6,239,379.2	1,635,155.6	4,178,262.7	0.0	76,768.2	0.0	63,572.6	285,513.9	106.2
Department of Energy	299,104.3	7,555.2	90,009.4	0.0	34,720.5	136,883.5	23,223.5	0.0	6,712.2
Department of Health and Human Services	869,757.1	654.6	495,137.3	0.0	309,330.3	0.0	38,138.0	26,277.5	219.4
Department of Homeland Security	124,136.9	35,146.4	57,815.7	0.0	5,379.1	0.0	346.0	25,449.8	0.0
Department of the Interior	99,047.1	96,576.8	1,345.2	0.0	525.0	0.0	0.0	0.0	600.1
Department of Transportation	201,733.8	8,258.8	93,262.8	0.0	11,747.7	0.0	12,119.2	69,271.7	7,073.5
Environmental Protection Agency	13,906.0	0.0	13,865.5	0.0	40.5	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	604,596.6	97,089.6	474,648.5	0.0	14,340.8	0.0	18,517.6	0.0	0.0
National Science Foundation	146,989.1	0.0	6,106.3	0.0	122,735.9	0.0	13,406.9	4,740.0	0.0
Washington	3,280,001.8	282,272.0	481,147.0	7,343.4	911,821.6	2,283.7	1,111,074.9	452,975.1	31,084.1
Department of Agriculture	61,310.5	39,538.5	47.9	0.0	21,517.6	0.0	182.0	0.0	24.5
Department of Commerce	46,911.0	24,744.1	326.5	0.0	21,440.3	0.0	6.8	293.0	100.4
Department of Defense, research	104,041.8	5,743.1	13,422.2	0.0	58,782.6	0.0	6,054.8	20,039.1	0.0
Department of Defense, total experimental development ^b	587,181.1	186,236.2	301,465.6	0.0	34,578.3	0.0	54,741.1	10,160.0	0.0
Department of Energy	488,969.8	0.0	29,377.2	7,343.4	46,607.6	2,283.7	525.2	402,475.6	357.0
Department of Health and Human Services	1,726,253.2	5,602.4	60,916.4	0.0	576,329.2	0.0	1,045,451.8	17,809.9	20,143.5

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Homeland Security	1,334.2	0.0	0.0	0.0	0.0	0.0	0.0	1,334.2	0.0
Department of the Interior	21,447.8	16,603.3	245.3	0.0	3,645.2	0.0	0.0	509.2	444.8
Department of Transportation	21,387.3	589.1	120.3	0.0	8,874.6	0.0	1,718.6	354.1	9,730.6
Environmental Protection Agency	69.7	0.0	0.0	0.0	69.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	86,845.8	3,215.3	65,083.1	0.0	18,231.0	0.0	316.4	0.0	0.0
National Science Foundation	134,249.7	0.0	10,142.5	0.0	121,745.5	0.0	2,078.2	0.0	283.3
West Virginia	150,437.5	56,013.9	9,538.6	0.0	71,775.3	0.0	8,149.3	0.0	4,960.3
Department of Agriculture	37,880.6	26,217.5	0.0	0.0	11,623.6	0.0	0.0	0.0	39.5
Department of Commerce	211.7	0.0	0.0	0.0	211.7	0.0	0.0	0.0	0.0
Department of Defense, research	4,494.7	2,228.6	412.6	0.0	1,703.5	0.0	150.0	0.0	0.0
Department of Defense, total experimental development ^b	1,614.9	43.0	857.0	0.0	714.8	0.0	0.0	0.0	0.0
Department of Energy	15,558.2	0.0	5,094.1	0.0	9,779.5	0.0	616.1	0.0	68.5
Department of Health and Human Services	72,112.0	24,758.7	2,584.1	0.0	41,319.3	0.0	0.0	0.0	3,449.9
Department of Homeland Security	2,615.6	0.0	134.9	0.0	2,480.8	0.0	0.0	0.0	0.0
Department of the Interior	2,188.9	1,923.8	0.0	0.0	0.0	0.0	0.0	0.0	265.0
Department of Transportation	2,560.6	0.0	0.0	0.0	1,915.4	0.0	0.0	0.0	645.2
National Aeronautics and Space Administration	1,678.0	842.2	230.9	0.0	604.8	0.0	0.0	0.0	0.0
National Science Foundation	9,522.4	0.0	225.0	0.0	1,422.0	0.0	7,383.2	0.0	492.2
Wisconsin	907,886.0	57,336.3	86,425.4	0.0	719,046.5	0.0	40,922.8	0.0	4,154.9
Department of Agriculture	63,960.4	43,882.9	119.1	0.0	19,360.3	0.0	553.1	0.0	45.0
Department of Commerce	5,044.4	44.0	5.9	0.0	4,994.5	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	5,470.8	0.0	4,936.0	0.0	534.9	0.0	0.0	0.0	0.0
National Science Foundation	15,634.3	0.0	750.0	0.0	14,884.3	0.0	0.0	0.0	0.0
Other areas ^c	107,378.2	39,660.4	19,505.5	0.0	21,203.7	0.0	497.8	0.0	26,510.8
Department of Agriculture	7,705.9	451.3	0.0	0.0	7,254.5	0.0	0.0	0.0	0.0
Department of Commerce	941.6	0.0	0.0	0.0	845.8	0.0	0.0	0.0	95.8
Department of Defense, total experimental development ^b	33,273.2	33,265.9	7.3	0.0	0.0	0.0	0.0	0.0	0.0
Department of Energy	16,690.7	0.0	16,507.4	0.0	0.0	0.0	0.0	0.0	183.3
Department of Health and Human Services	34,557.8	5,786.6	0.0	0.0	2,461.7	0.0	497.8	0.0	25,811.6
Department of the Interior	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*
Department of Transportation	3,410.7	0.0	2,990.7	0.0	0.0	0.0	0.0	0.0	420.0
National Science Foundation	10,798.2	156.6	0.0	0.0	10,641.7	0.0	0.0	0.0	0.0
Offices abroad ^d	47,928.2	2,730.3	44,798.7	0.0	399.2	0.0	0.0	0.0	0.0
Department of Defense, research	789.6	390.4	0.0	0.0	399.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,404.3	572.4	831.9	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	45,734.3	1,767.5	43,966.8	0.0	0.0	0.0	0.0	0.0	0.0
Undistributed ^e	1,829,166.2	1,242,611.3	562,195.1	0.0	7,800.0	0.0	16,559.8	0.0	0.0
Department of Defense, research	162,552.7	83,495.1	55,075.9	0.0	7,422.0	0.0	16,559.8	0.0	0.0
Department of Defense, total experimental development ^b	1,666,613.4	1,159,116.2	507,119.2	0.0	378.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.

^c Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^d Includes R&D performed or administered in foreign countries by the U.S. government.

^e Undistributed totals include DOD obligations for which the location of performance is not reported.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2020. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 93

Federal obligations for R&D plant, by state or location and selected agency: FY 2020

(Dollars in thousands)

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
All locations	6,083,419.1	0.0	359,142.7	311,736.4	2,324,950.3	7,156.6	40,321.8	4,499.0	1,769,029.0	35,801.5	440,954.2	789,827.5
Alabama	57,873.0	0.0	0.0	3,030.4	0.0	0.0	674.5	0.0	10,214.7	0.0	1,885.6	42,067.8
Alaska	12,362.6	0.0	8,464.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,898.2	0.0
Arizona	3,067.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,067.9	0.0
Arkansas	580.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	580.3	0.0
California	669,404.4	0.0	2,729.9	46,394.4	402,738.6	0.0	1,489.2	0.0	7,583.7	17,200.0	25,295.5	165,973.1
Colorado	140,769.3	0.0	83,934.9	0.0	53,288.0	229.6	0.0	0.0	0.0	0.0	2,368.4	948.4
Connecticut	105.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	105.9	0.0
Delaware	5,540.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,540.5	0.0
District of Columbia	97,521.6	0.0	0.0	0.0	28,675.0	0.0	13,690.7	848.9	5,352.1	0.0	48,792.9	162.0
Florida	127,766.7	0.0	83,774.0	21,117.0	0.0	0.0	15.5	160.4	7,600.0	1,946.2	11,075.9	2,077.8
Georgia	37,936.4	0.0	0.0	0.0	0.0	0.0	60.9	116.1	2,000.0	0.0	3,063.6	32,695.8
Hawaii	6,080.4	0.0	5,438.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	641.9	0.0
Idaho	249,621.6	0.0	0.0	0.0	249,040.0	0.0	0.0	0.0	0.0	0.0	581.6	0.0
Illinois	577,566.5	0.0	0.0	15,923.2	553,669.0	0.0	176.7	0.0	0.0	0.0	7,797.6	0.0
Indiana	1,323.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,323.4	0.0
Iowa	4,221.5	0.0	0.0	0.0	2,000.0	0.0	65.8	0.0	0.0	0.0	1,710.5	445.2
Kansas	13,452.8	0.0	0.0	12,015.9	0.0	0.0	0.2	0.0	0.0	0.0	1,436.7	0.0
Kentucky	64,077.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,000.0	0.0	599.9	55,477.8
Louisiana	24,399.0	0.0	0.0	20,026.6	0.0	0.0	0.0	0.0	0.0	1,656.8	2,715.7	0.0
Maine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maryland	1,827,895.7	0.0	115,772.8	31,234.9	0.0	0.0	206.1	0.0	1,521,396.3	699.5	53,394.2	105,192.0
Massachusetts	20,918.5	0.0	0.0	3,032.9	0.0	0.0	2,252.4	0.0	0.0	0.0	15,633.3	0.0
Michigan	51,130.6	0.0	0.0	0.0	40,000.0	0.0	0.0	0.0	0.0	0.0	11,130.6	0.0
Minnesota	2,752.6	0.0	0.0	237.2	0.0	0.0	0.0	163.1	0.0	0.0	2,352.3	0.0
Mississippi	12,060.9	0.0	11,388.4	0.0	0.0	0.0	0.0	0.0	0.0	175.7	496.9	0.0
Missouri	45,095.7	0.0	0.0	152.3	17,531.0	0.0	19.1	0.0	0.0	0.0	3,365.1	24,028.1
Montana	2,147.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,147.9	0.0
Nebraska	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nevada	34,155.3	0.0	0.0	0.0	33,072.2	0.0	0.0	0.0	0.0	0.0	1,083.1	0.0
New Hampshire	3,371.4	0.0	3,018.3	0.0	0.0	0.0	353.0	0.0	0.0	0.0	0.0	0.0
New Jersey	41,005.9	0.0	0.0	1,103.2	20,750.0	5,191.8	9,630.5	33.2	0.0	3.7	4,293.4	0.0
New Mexico	72,788.2	0.0	0.0	2,454.2	68,852.3	1,474.9	0.0	0.0	0.0	0.0	6.8	0.0
New York	233,294.4	0.0	0.0	16,400.2	112,165.2	0.0	0.0	0.0	8,000.0	0.0	42,429.0	54,300.0
North Carolina	53,679.6	0.0	0.0	208.0	0.0	0.0	0.0	1,808.4	7,335.7	0.0	11,116.7	33,210.7
North Dakota	1,374.7	0.0	0.0	0.0	0.0	0.0	490.1	0.0	0.0	0.0	884.6	0.0
Ohio	81,407.6	0.0	0.0	1,508.0	0.0	0.0	0.0	895.9	0.0	0.0	79,003.7	0.0
Oklahoma	4,083.2	0.0	0.0	0.0	0.0	0.0	3,098.0	118.9	0.0	0.0	866.2	0.0
Oregon	52,572.3	0.0	10,567.8	0.0	0.0	0.0	0.0	174.2	2,000.0	0.0	25,573.0	14,257.2
Pennsylvania	214,093.0	0.0	0.0	2,191.7	0.0	0.0	1,345.3	0.0	181,872.2	0.0	7,346.6	21,337.2
Rhode Island	27,908.6	0.0	19,080.8	7,372.0	0.0	0.0	0.0	179.7	0.0	0.0	1,276.1	0.0
South Carolina	15,503.8	0.0	10,151.4	0.0	0.0	0.0	14.7	0.0	0.0	0.0	5,337.8	0.0
South Dakota	7,547.6	0.0	0.0	0.0	6,000.0	0.0	0.0	0.0	0.0	0.0	1,547.6	0.0
Tennessee	693,757.1	0.0	0.0	11,054.7	680,434.6	0.0	0.0	0.0	0.0	45.7	2,222.1	0.0
Texas	127,817.6	0.0	0.0	211.8	0.0	0.0	468.8	0.0	0.0	14,033.1	17,666.0	95,438.0
Utah	524.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	524.8	0.0
Vermont	6,079.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,472.9	0.0	606.4	0.0
Virginia	157,180.2	0.0	4,621.5	114,616.8	23,625.0	260.3	4,934.6	0.0	0.0	40.7	9,081.3	0.0
Washington	122,082.2	0.0	200.0	111.4	33,109.3	0.0	0.0	0.0	0.0	0.0	5,961.5	82,700.0

TABLE 93

Federal obligations for R&D plant, by state or location and selected agency: FY 2020

(Dollars in thousands)

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
West Virginia	1,722.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,722.5	0.0
Wisconsin	67,891.2	0.0	0.0	1,339.7	0.0	0.0	633.3	0.0	2,000.0	0.0	5,355.2	58,562.9
Wyoming	6,047.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6,047.9	0.0
Outlying areas	1,857.3	0.0	0.0	0.0	0.0	0.0	702.4	0.0	201.4	0.0	0.0	953.5
Puerto Rico	1,154.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	201.4	0.0	0.0	953.5
Other areas ^a	702.4	0.0	0.0	0.0	0.0	0.0	702.4	0.0	0.0	0.0	0.0	0.0
Offices abroad ^b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DHS = Department of Homeland Security; DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; DOI = Department of the Interior; DOT = Department of Transportation; EPA = Environmental Protection Agency; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes federal obligations for R&D plant located in foreign countries.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: DHS, DOC, DOD, DOE, DOI, DOT, EPA, HHS, NASA, NSF, and USDA. Obligations of these 11 agencies represented more than 98% of total federal R&D plant obligations in FY 2020. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Alabama									
Department of Defense, RDT&E	2,712,137.3	1,581,330.6	1,063,387.0	0.0	38,563.2	0.0	28,756.5	0.0	100.0
Department of Defense, research	90,191.4	30,120.8	35,183.0	0.0	16,793.8	0.0	7,993.9	0.0	100.0
Department of Defense, total experimental development ^b	2,252,448.2	1,394,879.9	827,933.8	0.0	21,764.6	0.0	7,869.8	0.0	0.0
Department of Defense, operational systems development ^c	369,497.7	156,329.9	200,270.2	0.0	4.8	0.0	12,892.8	0.0	0.0
Alaska									
Department of Defense, RDT&E	103,863.6	26,132.3	71,107.2	0.0	5,063.6	0.0	1,500.0	0.0	60.5
Department of Defense, research	10,752.2	97.4	5,212.6	0.0	3,942.2	0.0	1,500.0	0.0	0.0
Department of Defense, total experimental development ^b	92,481.4	26,034.9	65,264.5	0.0	1,121.4	0.0	0.0	0.0	60.5
Department of Defense, operational systems development ^c	630.0	0.0	630.0	0.0	0.0	0.0	0.0	0.0	0.0
Arizona									
Department of Defense, RDT&E	1,499,163.9	230,900.4	1,212,904.0	0.0	46,719.9	0.0	3,395.4	0.0	5,244.1
Department of Defense, research	101,257.4	3,666.0	57,031.3	0.0	40,560.1	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,151,034.8	166,812.0	969,423.5	0.0	6,159.8	0.0	3,395.4	0.0	5,244.1
Department of Defense, operational systems development ^c	246,871.7	60,422.5	186,449.2	0.0	0.0	0.0	0.0	0.0	0.0
Arkansas									
Department of Defense, RDT&E	337,385.2	9,703.6	317,076.7	0.0	10,604.9	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	9,962.4	188.7	0.0	0.0	9,773.7	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	327,381.0	9,478.8	317,071.0	0.0	831.2	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	41.9	36.1	5.7	0.0	0.0	0.0	0.0	0.0	0.0
California									
Department of Defense, RDT&E	11,273,243.4	3,271,054.0	6,677,967.9	136,878.7	549,262.5	33,714.0	139,698.0	462,940.4	1,727.9
Department of Defense, research	1,236,116.2	208,325.8	443,545.7	33,239.7	394,313.0	6,844.6	84,575.3	65,013.9	258.3
Department of Defense, total experimental development ^b	8,734,093.1	2,738,703.1	5,336,391.1	92,392.2	150,474.3	26,869.4	54,632.4	333,160.9	1,469.7
Department of Defense, operational systems development ^c	1,303,034.1	324,025.2	898,031.1	11,246.7	4,475.1	0.0	490.4	64,765.6	0.0
Colorado									
Department of Defense, RDT&E	3,272,416.7	347,386.8	2,849,945.6	0.0	71,633.8	13.8	2,034.9	1,401.8	0.0
Department of Defense, research	84,700.6	5,287.2	31,109.0	0.0	47,947.8	13.8	222.4	120.4	0.0
Department of Defense, total experimental development ^b	2,597,163.7	305,386.5	2,264,997.3	0.0	23,686.0	0.0	1,812.4	1,281.4	0.0
Department of Defense, operational systems development ^c	590,552.3	36,713.0	553,839.3	0.0	0.0	0.0	0.0	0.0	0.0
Connecticut									
Department of Defense, RDT&E	1,631,657.6	5,917.5	1,585,070.9	0.0	39,417.7	0.0	1,251.4	0.0	0.0
Department of Defense, research	55,176.1	920.1	29,550.4	0.0	23,454.2	0.0	1,251.4	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	1,485,356.4	4,997.4	1,464,395.4	0.0	15,963.6	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	91,125.0	0.0	91,125.0	0.0	0.0	0.0	0.0	0.0	0.0
Delaware									
Department of Defense, RDT&E	77,113.4	155.2	57,668.0	0.0	19,290.2	0.0	*	0.0	0.0
Department of Defense, research	18,637.6	29.7	3,688.4	0.0	14,919.5	0.0	*	0.0	0.0
Department of Defense, total experimental development ^b	23,689.5	125.5	19,193.3	0.0	4,370.7	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	34,786.3	0.0	34,786.3	0.0	0.0	0.0	0.0	0.0	0.0
District of Columbia									
Department of Defense, RDT&E	4,654,017.5	3,928,263.1	590,483.1	0.0	43,830.7	0.0	86,241.7	5,199.0	0.0
Department of Defense, research	455,557.4	386,390.7	27,732.1	0.0	27,734.5	0.0	11,291.3	2,408.8	0.0
Department of Defense, total experimental development ^b	3,289,276.3	2,687,667.7	510,110.2	0.0	15,541.5	0.0	73,166.7	2,790.1	0.0
Department of Defense, operational systems development ^c	909,183.8	854,204.7	52,640.7	0.0	554.7	0.0	1,783.6	0.0	0.0
Florida									
Department of Defense, RDT&E	2,984,435.1	715,124.9	2,115,722.7	0.0	107,182.6	0.0	46,404.9	0.0	0.0
Department of Defense, research	172,946.5	25,576.0	53,916.4	0.0	74,141.4	0.0	19,312.7	0.0	0.0
Department of Defense, total experimental development ^b	2,536,325.9	629,858.3	1,853,419.7	0.0	32,501.9	0.0	20,546.1	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, operational systems development ^c	275,162.6	59,690.6	208,386.6	0.0	539.3	0.0	6,546.0	0.0	0.0
Georgia									
Department of Defense, RDT&E	900,868.4	191,570.8	507,935.1	0.0	167,601.1	0.0	33,761.5	0.0	0.0
Department of Defense, research	98,577.3	3,771.6	10,864.2	0.0	78,928.1	0.0	5,013.4	0.0	0.0
Department of Defense, total experimental development ^b	640,865.1	108,280.8	421,650.8	0.0	83,942.1	0.0	26,991.4	0.0	0.0
Department of Defense, operational systems development ^c	161,426.0	79,518.4	75,420.1	0.0	4,730.9	0.0	1,756.7	0.0	0.0
Hawaii									
Department of Defense, RDT&E	207,679.5	63,227.2	116,962.1	0.0	21,038.6	0.0	6,451.7	0.0	0.0
Department of Defense, research	76,299.1	254.7	57,326.3	0.0	14,003.4	0.0	4,714.7	0.0	0.0
Department of Defense, total experimental development ^b	128,575.8	62,972.5	58,817.1	0.0	5,049.3	0.0	1,737.0	0.0	0.0
Department of Defense, operational systems development ^c	2,804.6	0.0	818.7	0.0	1,985.9	0.0	0.0	0.0	0.0
Idaho									
Department of Defense, RDT&E	70,029.6	9,277.4	36,805.2	21,745.0	2,202.1	0.0	0.0	0.0	0.0
Department of Defense, research	6,210.5	300.0	236.9	3,854.0	1,819.6	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	58,795.5	8,226.4	32,600.5	17,586.1	382.5	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	5,023.6	751.0	3,967.8	304.8	0.0	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Illinois									
Department of Defense, RDT&E	615,254.7	119,898.9	395,935.2	0.0	73,520.6	4,694.8	21,205.2	0.0	0.0
Department of Defense, research	139,762.2	30,674.9	54,454.1	0.0	52,354.5	2,193.3	85.4	0.0	0.0
Department of Defense, total experimental development ^b	338,594.3	83,125.7	223,516.3	0.0	21,165.9	2,501.5	8,284.9	0.0	0.0
Department of Defense, operational systems development ^c	136,898.3	6,098.3	117,964.8	0.0	0.2	0.0	12,835.0	0.0	0.0
Indiana									
Department of Defense, RDT&E	510,397.0	250,579.5	208,594.7	0.0	51,222.8	0.0	0.0	0.0	0.0
Department of Defense, research	60,981.5	16,112.4	14,418.3	0.0	30,450.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	405,382.1	210,230.0	174,380.1	0.0	20,772.0	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	44,033.4	24,237.2	19,796.2	0.0	0.0	0.0	0.0	0.0	0.0
Iowa									
Department of Defense, RDT&E	268,485.5	10,523.1	244,253.7	0.0	13,509.7	199.1	0.0	0.0	0.0
Department of Defense, research	26,951.9	0.0	17,516.0	0.0	9,236.9	199.1	0.0	0.0	0.0
Department of Defense, total experimental development ^b	230,475.1	10,523.1	215,679.2	0.0	4,272.8	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	11,058.6	0.0	11,058.6	0.0	0.0	0.0	0.0	0.0	0.0
Kansas									
Department of Defense, RDT&E	59,544.0	11,462.0	24,744.8	0.0	22,554.7	0.0	782.6	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	17,542.1	171.6	241.2	0.0	16,346.8	0.0	782.4	0.0	0.0
Department of Defense, total experimental development ^b	33,119.9	4,409.9	24,472.9	0.0	4,236.9	0.0	0.1	0.0	0.0
Department of Defense, operational systems development ^c	8,882.0	6,880.5	30.6	0.0	1,970.9	0.0	0.0	0.0	0.0
Kentucky									
Department of Defense, RDT&E	83,143.2	784.4	67,193.4	0.0	15,165.5	0.0	0.0	0.0	0.0
Department of Defense, research	4,174.1	383.1	22.4	0.0	3,768.6	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	20,770.3	401.3	8,972.1	0.0	11,396.8	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	58,198.8	0.0	58,198.8	0.0	0.0	0.0	0.0	0.0	0.0
Louisiana									
Department of Defense, RDT&E	105,433.6	752.7	98,300.2	0.0	5,768.1	0.0	612.3	0.0	0.4
Department of Defense, research	12,947.8	103.2	8,570.1	0.0	3,662.2	0.0	612.3	0.0	0.0
Department of Defense, total experimental development ^b	92,205.5	649.5	89,449.7	0.0	2,105.9	0.0	0.0	0.0	0.4
Department of Defense, operational systems development ^c	280.4	0.0	280.4	0.0	0.0	0.0	0.0	0.0	0.0
Maine									
Department of Defense, RDT&E	16,230.7	1,911.7	8,937.1	0.0	5,248.5	0.0	133.4	0.0	0.0
Department of Defense, research	616.9	140.3	7.9	0.0	335.4	0.0	133.4	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	15,077.8	1,770.0	8,394.6	0.0	4,913.1	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	536.0	1.4	534.6	0.0	0.0	0.0	0.0	0.0	0.0
Maryland									
Department of Defense, RDT&E	7,322,702.9	4,652,251.4	1,638,352.8	7,182.2	693,155.2	0.0	326,527.8	5,034.6	198.8
Department of Defense, research	686,456.8	337,003.8	198,828.3	655.8	105,530.9	0.0	44,239.7	0.0	198.3
Department of Defense, total experimental development ^b	5,841,358.8	3,784,518.2	1,275,400.8	986.0	523,326.9	0.0	255,526.0	1,600.4	0.5
Department of Defense, operational systems development ^c	794,887.3	530,729.4	164,123.7	5,540.4	64,297.4	0.0	26,762.1	3,434.2	0.0
Massachusetts									
Department of Defense, RDT&E	3,765,166.7	538,882.8	2,183,637.8	0.0	276,427.2	411,185.8	154,440.5	200,592.5	0.0
Department of Defense, research	620,324.3	20,082.7	267,299.6	0.0	218,692.2	67,636.7	45,438.6	1,174.4	0.0
Department of Defense, total experimental development ^b	2,649,402.0	310,833.2	1,763,746.3	0.0	55,340.0	319,754.3	92,237.1	107,491.0	0.0
Department of Defense, operational systems development ^c	495,440.5	207,967.0	152,591.8	0.0	2,395.0	23,794.8	16,764.8	91,927.1	0.0
Michigan									
Department of Defense, RDT&E	594,936.5	97,070.9	156,958.0	0.0	312,311.9	0.0	28,595.6	0.0	0.0
Department of Defense, research	292,965.7	8,112.9	33,041.6	0.0	251,448.5	0.0	362.6	0.0	0.0
Department of Defense, total experimental development ^b	277,529.2	79,340.5	113,641.7	0.0	60,809.7	0.0	23,737.4	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, operational systems development ^c	24,441.5	9,617.5	10,274.7	0.0	53.7	0.0	4,495.6	0.0	0.0
Minnesota									
Department of Defense, RDT&E	557,894.9	22,008.4	451,940.9	0.0	30,635.0	0.0	53,310.6	0.0	0.0
Department of Defense, research	45,273.2	1,110.7	24,391.5	0.0	15,858.8	0.0	3,912.2	0.0	0.0
Department of Defense, total experimental development ^b	465,786.1	20,583.1	381,028.4	0.0	14,776.2	0.0	49,398.4	0.0	0.0
Department of Defense, operational systems development ^c	46,835.7	314.6	46,521.1	0.0	0.0	0.0	0.0	0.0	0.0
Mississippi									
Department of Defense, RDT&E	142,332.9	119,657.4	16,178.2	0.0	4,767.6	0.0	1,729.8	0.0	0.0
Department of Defense, research	23,284.4	17,875.3	822.3	0.0	4,586.7	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	111,114.3	93,872.9	15,330.9	0.0	180.8	0.0	1,729.8	0.0	0.0
Department of Defense, operational systems development ^c	7,934.3	7,909.3	25.0	0.0	0.0	0.0	0.0	0.0	0.0
Missouri									
Department of Defense, RDT&E	1,511,553.8	75,109.5	1,397,755.3	0.0	36,077.9	0.0	2,611.1	0.0	0.0
Department of Defense, research	40,007.1	2,685.3	19,003.5	0.0	16,353.4	0.0	1,964.8	0.0	0.0
Department of Defense, total experimental development ^b	1,136,442.5	72,213.8	1,043,858.0	0.0	19,724.5	0.0	646.2	0.0	0.0
Department of Defense, operational systems development ^c	335,104.2	210.4	334,893.8	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Montana									
Department of Defense, RDT&E	21,214.3	543.6	10,571.8	0.0	9,899.0	0.0	200.0	0.0	0.0
Department of Defense, research	7,530.2	0.0	2,334.1	0.0	4,996.1	0.0	200.0	0.0	0.0
Department of Defense, total experimental development ^b	13,268.9	543.6	8,002.6	0.0	4,722.7	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	415.2	0.0	235.1	0.0	180.1	0.0	0.0	0.0	0.0
Nebraska									
Department of Defense, RDT&E	90,074.6	15,566.9	61,479.9	0.0	6,494.2	0.0	6,533.6	0.0	0.0
Department of Defense, research	7,653.2	1,186.5	854.4	0.0	5,612.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	20,720.5	7,542.1	5,762.8	0.0	882.0	0.0	6,533.6	0.0	0.0
Department of Defense, operational systems development ^c	61,700.9	6,838.2	54,862.7	0.0	0.0	0.0	0.0	0.0	0.0
Nevada									
Department of Defense, RDT&E	72,669.5	6,427.4	62,045.3	0.0	4,196.7	0.0	0.0	0.0	0.0
Department of Defense, research	8,407.5	27.2	5,216.3	0.0	3,164.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	42,751.0	2,388.2	39,330.1	0.0	1,032.7	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	21,510.9	4,012.0	17,498.9	0.0	0.0	0.0	0.0	0.0	0.0
New Hampshire									
Department of Defense, RDT&E	286,979.7	50,322.4	217,078.9	0.0	16,355.4	0.0	3,223.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	55,115.1	27,023.0	13,766.2	0.0	14,325.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	216,854.8	22,321.8	189,280.5	0.0	2,029.5	0.0	3,223.0	0.0	0.0
Department of Defense, operational systems development ^c	15,009.7	977.6	14,032.2	0.0	0.0	0.0	0.0	0.0	0.0
New Jersey									
Department of Defense, RDT&E	1,830,488.1	562,462.9	942,197.9	0.0	318,213.0	2,992.5	4,621.8	0.0	0.0
Department of Defense, research	135,568.8	16,643.8	82,921.9	0.0	35,613.3	0.0	389.7	0.0	0.0
Department of Defense, total experimental development ^b	1,583,315.5	525,380.5	768,110.7	0.0	282,599.7	2,992.5	4,232.0	0.0	0.0
Department of Defense, operational systems development ^c	111,603.9	20,438.6	91,165.3	0.0	0.0	0.0	0.0	0.0	0.0
New Mexico									
Department of Defense, RDT&E	1,714,829.4	536,642.2	778,214.6	372,122.7	23,337.5	0.0	4,501.7	0.0	10.7
Department of Defense, research	403,908.2	105,022.8	231,884.9	46,508.8	16,006.2	0.0	4,475.3	0.0	10.3
Department of Defense, total experimental development ^b	1,171,320.7	407,679.6	510,093.0	246,259.1	7,262.1	0.0	26.5	0.0	0.4
Department of Defense, operational systems development ^c	139,600.5	23,939.8	36,236.7	79,354.8	69.1	0.0	0.0	0.0	0.0
New York									
Department of Defense, RDT&E	2,562,247.2	1,397,993.3	897,956.9	0.0	191,919.1	0.0	70,480.5	3,599.6	297.9
Department of Defense, research	1,138,505.0	791,843.8	177,121.0	0.0	130,631.8	0.0	38,411.7	199.1	297.5

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	1,303,488.4	537,559.8	669,863.6	0.0	61,287.3	0.0	31,376.8	3,400.5	0.4
Department of Defense, operational systems development ^c	120,253.8	68,589.6	50,972.2	0.0	0.0	0.0	692.0	0.0	0.0
North Carolina									
Department of Defense, RDT&E	349,722.4	43,330.2	165,373.7	0.0	111,905.4	0.0	28,963.1	0.0	150.0
Department of Defense, research	140,515.7	1,666.0	41,141.1	0.0	70,338.6	0.0	27,370.0	0.0	0.0
Department of Defense, total experimental development ^b	200,443.6	35,534.3	121,687.8	0.0	41,478.3	0.0	1,593.2	0.0	150.0
Department of Defense, operational systems development ^c	8,763.1	6,129.9	2,544.9	0.0	88.4	0.0	0.0	0.0	0.0
North Dakota									
Department of Defense, RDT&E	7,169.0	0.0	0.0	0.0	7,169.0	0.0	0.0	0.0	0.0
Department of Defense, research	6,326.4	0.0	0.0	0.0	6,326.4	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	842.7	0.0	0.0	0.0	842.7	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ohio									
Department of Defense, RDT&E	4,156,566.4	1,876,516.3	2,107,771.7	0.0	125,610.8	0.0	46,667.6	0.0	0.0
Department of Defense, research	425,314.4	112,242.0	210,742.3	0.0	86,994.2	0.0	15,336.0	0.0	0.0
Department of Defense, total experimental development ^b	3,323,923.6	1,652,406.8	1,603,905.7	0.0	38,354.0	0.0	29,257.1	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, operational systems development ^c	407,328.4	111,867.6	293,123.7	0.0	262.6	0.0	2,074.6	0.0	0.0
Oklahoma									
Department of Defense, RDT&E	537,491.7	138,463.2	384,165.8	0.0	14,862.7	0.0	0.0	0.0	0.0
Department of Defense, research	19,511.5	1,258.1	5,335.5	0.0	12,917.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	132,424.4	91,136.0	39,343.6	0.0	1,944.8	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	385,555.8	46,069.1	339,486.7	0.0	0.0	0.0	0.0	0.0	0.0
Oregon									
Department of Defense, RDT&E	94,059.4	5,429.5	59,333.1	0.0	29,296.8	0.0	0.0	0.0	0.0
Department of Defense, research	47,828.0	233.9	33,721.2	0.0	13,872.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	43,700.3	4,679.5	23,596.9	0.0	15,424.0	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	2,531.0	516.1	2,015.0	0.0	0.0	0.0	0.0	0.0	0.0
Pennsylvania									
Department of Defense, RDT&E	1,578,525.3	353,824.6	878,473.0	0.0	293,838.7	37,914.9	14,473.9	0.0	0.2
Department of Defense, research	182,202.8	19,003.7	36,773.6	0.0	120,657.2	4,953.0	815.2	0.0	0.0
Department of Defense, total experimental development ^b	1,193,773.7	293,621.2	695,984.5	0.0	168,744.4	29,109.8	6,313.6	0.0	0.2
Department of Defense, operational systems development ^c	202,548.8	41,199.6	145,714.9	0.0	4,437.1	3,852.1	7,345.1	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Rhode Island										
Department of Defense, RDT&E	565,860.5	358,047.3	182,990.2	0.0	22,729.7	0.0	2,093.3	0.0	0.0	
Department of Defense, research	47,831.9	26,241.2	5,890.9	0.0	15,649.7	0.0	50.0	0.0	0.0	
Department of Defense, total experimental development ^b	498,483.8	315,096.7	174,263.8	0.0	7,080.0	0.0	2,043.3	0.0	0.0	
Department of Defense, operational systems development ^c	19,544.9	16,709.4	2,835.5	0.0	0.0	0.0	0.0	0.0	0.0	
South Carolina										
Department of Defense, RDT&E	496,053.6	96,399.9	196,062.9	683.5	19,542.8	0.0	183,364.5	0.0	0.0	
Department of Defense, research	57,593.4	8,722.1	4,174.2	596.0	16,014.9	0.0	28,086.2	0.0	0.0	
Department of Defense, total experimental development ^b	383,039.6	70,363.4	154,956.2	87.6	3,527.8	0.0	154,104.6	0.0	0.0	
Department of Defense, operational systems development ^c	55,420.6	17,314.3	36,932.6	0.0	0.0	0.0	1,173.7	0.0	0.0	
South Dakota										
Department of Defense, RDT&E	28,581.7	621.8	26,827.3	0.0	1,131.6	0.0	1.0	0.0	0.0	
Department of Defense, research	1,674.9	0.0	691.4	0.0	982.5	0.0	1.0	0.0	0.0	
Department of Defense, total experimental development ^b	26,860.8	621.8	26,089.9	0.0	149.2	0.0	0.0	0.0	0.0	
Department of Defense, operational systems development ^c	46.0	0.0	46.0	0.0	0.0	0.0	0.0	0.0	0.0	
Tennessee										
Department of Defense, RDT&E	377,105.2	197,815.4	95,375.0	0.0	57,152.0	0.0	15,379.7	11,383.2	0.0	

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	76,071.5	10,757.5	4,243.1	0.0	39,933.2	0.0	15,244.7	5,893.0	0.0
Department of Defense, total experimental development ^b	282,659.2	168,947.2	90,906.4	0.0	17,218.8	0.0	135.0	5,451.8	0.0
Department of Defense, operational systems development ^c	18,374.5	18,110.6	225.4	0.0	0.0	0.0	0.0	38.5	0.0
Texas									
Department of Defense, RDT&E	3,575,741.2	332,015.7	2,932,522.9	0.0	219,140.2	0.0	91,488.7	272.2	301.5
Department of Defense, research	209,522.1	5,082.4	87,487.1	0.0	103,248.1	0.0	13,587.2	117.3	0.0
Department of Defense, total experimental development ^b	2,469,535.3	105,235.2	2,179,043.8	0.0	107,081.8	0.0	77,718.1	154.9	301.5
Department of Defense, operational systems development ^c	896,683.8	221,698.1	665,992.0	0.0	8,810.3	0.0	183.4	0.0	0.0
Utah									
Department of Defense, RDT&E	787,981.8	235,655.2	422,452.6	0.0	124,624.1	0.0	5,250.0	0.0	0.0
Department of Defense, research	134,329.2	1,029.1	111,454.9	0.0	21,845.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	440,676.2	140,178.9	193,869.4	0.0	101,377.9	0.0	5,250.0	0.0	0.0
Department of Defense, operational systems development ^c	212,976.5	94,447.2	117,128.2	0.0	1,401.0	0.0	0.0	0.0	0.0
Vermont									
Department of Defense, RDT&E	17,906.6	177.6	17,215.9	0.0	513.1	0.0	*	0.0	0.0
Department of Defense, research	2,042.2	0.0	1,707.9	0.0	334.3	0.0	*	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	15,817.3	138.5	15,508.1	0.0	170.8	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	47.1	39.1	0.0	0.0	8.0	0.0	0.0	0.0	0.0
Virginia									
Department of Defense, RDT&E	7,948,782.7	1,905,100.0	5,328,556.6	0.0	223,593.6	0.0	76,490.7	414,323.7	718.0
Department of Defense, research	1,017,668.9	135,736.1	653,144.8	0.0	146,072.8	0.0	11,258.1	70,845.2	611.9
Department of Defense, total experimental development ^b	6,239,379.2	1,635,155.6	4,178,262.7	0.0	76,768.2	0.0	63,572.6	285,513.9	106.2
Department of Defense, operational systems development ^c	691,734.6	134,208.3	497,149.0	0.0	752.5	0.0	1,660.1	57,964.7	0.0
Washington									
Department of Defense, RDT&E	722,094.7	201,125.0	327,734.2	0.0	93,656.9	0.0	60,795.9	38,782.7	0.0
Department of Defense, research	104,041.8	5,743.1	13,422.2	0.0	58,782.6	0.0	6,054.8	20,039.1	0.0
Department of Defense, total experimental development ^b	587,181.1	186,236.2	301,465.6	0.0	34,578.3	0.0	54,741.1	10,160.0	0.0
Department of Defense, operational systems development ^c	30,871.8	9,145.8	12,846.4	0.0	296.0	0.0	0.0	8,583.6	0.0
West Virginia									
Department of Defense, RDT&E	26,415.7	2,271.7	21,575.8	0.0	2,418.3	0.0	150.0	0.0	0.0
Department of Defense, research	4,494.7	2,228.6	412.6	0.0	1,703.5	0.0	150.0	0.0	0.0
Department of Defense, total experimental development ^b	1,614.9	43.0	857.0	0.0	714.8	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, operational systems development ^c	20,306.2	0.0	20,306.2	0.0	0.0	0.0	0.0	0.0	0.0
Wisconsin									
Department of Defense, RDT&E	86,117.9	0.5	54,732.1	0.0	30,711.5	0.0	673.8	0.0	0.0
Department of Defense, research	19,579.7	0.5	4,027.4	0.0	14,879.4	0.0	672.4	0.0	0.0
Department of Defense, total experimental development ^b	64,691.5	0.0	48,858.1	0.0	15,832.1	0.0	1.4	0.0	0.0
Department of Defense, operational systems development ^c	1,846.7	0.0	1,846.7	0.0	0.0	0.0	0.0	0.0	0.0
Wyoming									
Department of Defense, RDT&E	4,332.8	0.0	3,239.3	0.0	1,093.5	0.0	0.0	0.0	0.0
Department of Defense, research	1,163.6	0.0	70.1	0.0	1,093.5	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,275.9	0.0	1,275.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	1,893.3	0.0	1,893.3	0.0	0.0	0.0	0.0	0.0	0.0
Outlying areas									
Department of Defense, RDT&E	52,442.8	33,941.1	16,679.9	0.0	1,821.8	0.0	0.0	0.0	0.0
Department of Defense, research	357.6	0.0	0.0	0.0	357.6	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	35,003.6	33,265.9	273.6	0.0	1,464.1	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	17,081.6	675.2	16,406.4	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2020

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, RDT&E	29,486,185.6	6,425,970.3	23,035,855.6	0.0	7,800.0	0.0	16,559.8	0.0	0.0
Department of Defense, research	162,552.7	83,495.1	55,075.9	0.0	7,422.0	0.0	16,559.8	0.0	0.0
Department of Defense, total experimental development ^b	1,666,613.4	1,159,116.2	507,119.2	0.0	378.0	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	27,657,019.4	5,183,359.0	22,473,660.5	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center; RDT&E = research, development, test, and evaluation.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.^c Funding for DOD's operational systems development (Budget Activity 7) was first reported as a separate category for volume 66.^d Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.^e Includes both R&D and RDT&E performed or administered in foreign countries by the U.S. government.^f Undistributed totals include DOD obligations for which the location of performance is not reported.**Note(s):**

Because of rounding, detail may not add to total. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. FYs 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 95

Federal obligations for research and experimental development to intramural performers for personnel costs, by agency: FYs 2020–21

(Dollars in thousands)

Agency	Total intramural R&D (2020)	Personnel costs (2020)		Total intramural R&D (2021)	Personnel costs (2021)	
		Amount	% of total		Amount	% of total
All agencies	51,471,719.7	11,212,545.0	21.8	64,209,097.0	11,382,617.8	17.7
Departments						
Department of Agriculture	1,689,762.7	248,252.8	14.7	1,827,880.4	243,320.7	13.3
Agricultural Marketing Service	6,952.5	5,214.4	75.0	7,000.5	5,250.4	75.0
Agricultural Research Service	1,247,897.3	661.6	0.1	1,455,276.4	719.3	**
Animal and Plant Health Inspection Service	27,618.9	13,257.1	48.0	29,775.7	14,292.4	48.0
Economic Research Service	74,618.9	31,324.9	42.0	79,901.0	31,324.9	39.2
Forest Service	305,000.0	184,000.0	60.3	227,904.3	177,000.0	77.7
National Agricultural Statistics Service	8,404.1	7,371.1	87.7	8,750.5	8,309.8	95.0
National Institute of Food and Agriculture	19,271.0	6,423.7	33.3	19,272.0	6,424.0	33.3
Department of Commerce	1,193,045.0	646,234.1	54.2	1,298,258.7	710,124.2	54.7
National Institute of Standards and Technology	622,090.9	401,377.0	64.5	711,024.9	426,002.5	59.9
National Oceanic and Atmospheric Administration	452,145.1	189,605.0	41.9	455,584.0	221,070.8	48.5
National Telecommunications and Information Administration	7,692.0	5,080.0	66.0	11,180.0	7,250.0	64.8
U.S. Census Bureau	111,117.0	50,172.0	45.2	120,469.8	55,800.9	46.3
Department of Defense	22,666,621.0	3,787,944.2	16.7	23,153,286.0	3,711,694.1	16.0
Defense Advanced Research Projects Agency	317,301.9	231,336.0	72.9	312,921.7	233,964.0	74.8
Defense Health Agency	1,097,611.0	31,116.7	2.8	715,879.1	31,739.1	4.4
Department of the Air Force	4,675,672.9	1,438,235.4	30.8	4,668,154.0	1,212,881.6	26.0
Department of the Army	3,447,660.9	541,428.0	15.7	3,916,765.7	600,441.7	15.3
Department of the Navy	7,339,132.0	266,399.1	3.6	7,463,847.9	214,701.8	2.9
U.S. Space Force	134,756.4	36,699.2	27.2	217,870.0	42,940.3	19.7
Other defense agencies	5,654,486.0	1,242,729.8	22.0	5,857,847.6	1,375,025.7	23.5
Department of Education	10,516.9	7,539.2	71.7	11,299.1	8,056.3	71.3
Department of Energy	871,779.6	281,729.0	32.3	1,784,764.5	319,779.6	17.9
Electricity Delivery and Energy Reliability	3,195.7	2,396.7	75.0	3,057.8	2,293.3	75.0
Fossil Energy	411,610.4	137,203.5	33.3	514,036.0	171,345.3	33.3
National Nuclear Security Administration	234,579.4	280.9	0.1	675,327.4	103.9	**
Defense Programs	172,203.9	*	**	623,118.7	*	**
Naval Nuclear Propulsion Program	50,314.7	100.0	0.2	51,948.7	100.0	0.2
Office of Defense Nuclear Nonproliferation	12,060.8	180.9	1.5	260.0	3.9	1.5
Nuclear Energy	2,251.8	2.0	0.1	328.0	2.0	0.6
Office of Cybersecurity, Energy Security, and Emergency Response	14,121.5	1,484.2	10.5	5,521.0	3,790.0	68.6
Office of Science	206,020.8	140,361.7	68.1	586,494.3	142,245.0	24.3
Department of Health and Human Services	19,300,321.2	2,729,789.7	14.1	30,267,944.7	2,843,180.5	9.4
Administration for Children and Families	575.0	3.1	0.5	35.0	3.1	8.9
Agency for Healthcare Research and Quality	76,783.1	40,440.9	52.7	48,270.0	45.0	0.1
Biomedical Advanced Research and Development Authority	9,929,976.9	110,000.0	1.1	21,092,118.4	140,000.0	0.7
Centers for Disease Control and Prevention	113,045.7	63,807.1	56.4	119,748.7	64,978.7	54.3
Food and Drug Administration	333,666.7	1,072.9	0.3	355,996.2	1,144.7	0.3

TABLE 95

Federal obligations for research and experimental development to intramural performers for personnel costs, by agency: FYs 2020–21

(Dollars in thousands)

Agency	Total intramural R&D (2020)	Personnel costs (2020)		Total intramural R&D (2021)	Personnel costs (2021)	
		Amount	% of total		Amount	% of total
Health Resources and Services Administration	4,918.9	3,455.8	70.3	5,462.1	3,999.0	73.2
National Institutes of Health	8,838,596.9	2,511,000.0	28.4	8,643,564.3	2,633,000.0	30.5
Office of the Secretary of Health and Human Services	2,758.0	10.0	0.4	2,750.0	10.0	0.4
Office of the Assistant Secretary for Planning and Evaluation	2,758.0	10.0	0.4	2,750.0	10.0	0.4
Department of Homeland Security	132,858.2	26,738.0	20.1	144,761.5	28,743.0	19.9
Countering Weapons of Mass Destruction Office	2,741.3	1,700.0	62.0	5,692.5	2,750.0	48.3
Cybersecurity and Infrastructure Security Agency	0.0	0.0	0.0	793.0	793.0	100.0
Science and Technology Directorate	125,189.7	25,037.9	20.0	128,000.0	25,200.0	19.7
U.S. Coast Guard	4,927.2	*	**	10,276.0	*	**
Department of the Interior	719,604.3	466,574.7	64.8	751,878.6	491,268.5	65.3
Bureau of Land Management	11,115.0	3,350.0	30.1	7,412.0	2,230.0	30.1
Bureau of Ocean Energy Management	53,731.3	27,139.0	50.5	65,076.0	34,467.8	53.0
Bureau of Reclamation	17,570.7	3,989.3	22.7	16,000.0	4,100.0	25.6
Bureau of Safety and Environmental Enforcement	3,633.9	1,166.9	32.1	4,851.3	2,223.9	45.8
Office of Surface Mining Reclamation and Enforcement	562.0	541.5	96.4	562.1	541.6	96.4
U.S. Fish and Wildlife Service	32,650.0	13,713.0	42.0	32,650.0	13,713.0	42.0
U.S. Geological Survey	600,341.4	416,675.0	69.4	625,327.2	433,992.1	69.4
Department of Justice	10,901.7	2,671.3	24.5	8,588.9	2,730.4	31.8
Bureau of Prisons	2,660.0	2,500.4	94.0	2,713.0	2,550.2	94.0
Office of Justice Programs	8,241.7	170.9	2.1	5,875.9	180.2	3.1
Department of Labor	3,791.3	3,781.3	99.7	3,807.2	3,797.2	99.7
Employee Benefits Security Administration	1,788.7	1,778.7	99.4	1,766.5	1,756.5	99.4
Occupational Safety and Health Administration	2,002.7	2,002.7	100.0	2,040.7	2,040.7	100.0
Department of State	40,000.0	40,000.0	100.0	43,000.0	43,000.0	100.0
Department of Transportation	222,010.7	96,528.4	43.5	258,280.3	116,009.8	44.9
Federal Aviation Administration	85,678.0	46,598.6	54.4	110,754.2	60,422.7	54.6
Federal Highway Administration	71,850.6	22,516.2	31.3	70,679.9	22,309.8	31.6
Federal Motor Carrier Safety Administration	5,893.8	2,811.1	47.7	3,257.0	2,972.0	91.2
Federal Railroad Administration	12,034.2	3,567.4	29.6	15,104.6	4,243.0	28.1
National Highway Traffic Safety Administration	10,089.3	10,089.3	100.0	10,049.6	10,049.6	100.0
Office of the Secretary of Transportation	26,215.0	9,036.8	34.5	40,956.0	14,103.8	34.4
Pipeline and Hazardous Materials Safety Administration	10,249.8	1,909.0	18.6	7,479.0	1,909.0	25.5
Department of the Treasury	2,522.2	1,955.9	77.5	2,018.2	2,018.2	100.0
Bureau of Engraving and Printing	2,400.0	1,900.0	79.2	2,000.0	2,000.0	100.0
U.S. Mint	122.2	55.9	45.7	18.2	18.2	100.0
Department of Veterans Affairs	1,494,953.2	1,057,440.0	70.7	1,621,050.0	1,112,524.0	68.6
Other agencies						
Agency for International Development	19,743.0	390.4	2.0	19,743.0	390.4	2.0

TABLE 95

Federal obligations for research and experimental development to intramural performers for personnel costs, by agency: FYs 2020–21

(Dollars in thousands)

Agency	Total intramural R&D (2020)	Personnel costs (2020)		Total intramural R&D (2021)	Personnel costs (2021)	
		Amount	% of total		Amount	% of total
Consumer Product Safety Commission	385.0	89.3	23.2	390.6	83.9	21.5
Environmental Protection Agency	244,436.0	239,938.0	98.2	262,410.0	259,760.0	99.0
Federal Communications Commission	1,800.0	1,800.0	100.0	2,625.0	2,625.0	100.0
Federal Trade Commission	5,974.3	3,916.7	65.6	7,496.6	4,914.7	65.6
Library of Congress	2,821.2	1,386.1	49.1	2,685.8	1,360.9	50.7
National Aeronautics and Space Administration	2,551,866.9	1,409,541.4	55.2	2,413,643.5	1,273,855.1	52.8
National Science Foundation	9,357.9	*	**	9,437.2	*	**
Nuclear Regulatory Commission	29,671.8	19,744.2	66.5	31,606.4	22,124.5	70.0
Smithsonian Institution	209,760.0	101,344.8	48.3	213,560.0	112,576.0	52.7
Social Security Administration	37,215.6	37,215.6	100.0	68,680.8	68,680.8	100.0

* = amount greater than \$0 but less than \$50. ** = percentage greater than 0.00% but less than 0.05%.

Note(s):

Because of rounding, detail may not add to total. Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Federal intramural amounts for the Biomedical Advanced Research and Development Authority are transfers to the other agencies in support of Operation Warp Speed. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All agencies	87,061.8	92,685.9	104,337.1	109,030.5	121,230.1	118,908.6	123,998.3	125,125.3	129,678.7	137,523.1	135,752.8
Departments											
Department of Agriculture	1,869.5	2,026.1	2,043.4	2,161.4	2,281.5	2,369.5	2,433.5	2,401.8	2,303.7	2,434.6	2,419.5
Agricultural Marketing Service	4.7	5.2	4.7	8.4	9.4	6.3	6.4	3.8	4.3	4.4	4.3
Agricultural Research Service	1,014.6	1,131.4	1,100.0	1,192.9	1,248.7	1,305.7	1,293.7	1,275.4	1,176.5	1,255.8	1,263.5
Animal and Plant Health Inspection Service	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	24.6	25.6	24.6
Economic Research Service	66.1	69.9	70.3	65.7	74.6	72.8	90.6	77.8	79.7	86.4	87.9
Food Safety and Inspection Service	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4	0.6
Forest Service	263.0	292.0	321.0	345.0	343.0	354.5	360.0	358.9	367.5	432.8	370.0
Grain Inspection, Packers, and Stockyards Administration	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3	6.7
National Agricultural Statistics Service	4.3	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5	7.4
National Institute of Food and Agriculture	478.9	487.6	503.1	506.8	563.5	586.0	621.8	639.3	634.0	611.7	653.8
Rural Business-Cooperative Service	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	3.0	3.7	0.7
Department of Commerce	1,015.8	1,232.6	1,248.2	1,156.6	747.5	710.2	1,059.3	1,165.9	1,252.4	1,409.3	1,589.7
Economic Development Administration	0.6	0.4	0.5	0.2	0.5	0.2	0.8	20.7	28.3	33.7	15.5
National Institute of Standards and Technology	474.2	532.2	536.6	558.1	478.5	467.1	457.5	493.2	501.2	636.5	741.7
National Oceanic and Atmospheric Administration	501.0	651.3	667.8	550.0	242.1	215.5	573.7	627.1	686.9	684.7	765.7
National Telecommunications and Information Administration	21.0	26.0	23.5	24.2	3.5	5.3	5.3	0.3	6.9	7.0	7.2
U.S. Census Bureau	19.0	22.7	19.9	24.2	23.0	22.0	22.0	24.7	29.0	47.2	59.5
Department of Defense	40,590.1	42,032.3	49,852.1	53,165.3	64,521.6	63,817.6	68,708.7	68,861.8	66,971.2	67,763.1	72,659.3
Defense Advanced Research Projects Agency	na	na	na	na	na	na	na	na	na	na	2,889.3
Defense agencies and activities	7,287.9	10,479.1	11,879.0	11,140.8	17,133.7	14,005.4	14,722.8	15,559.8	15,606.9	15,209.9	na
Department of the Air Force	17,599.3	14,161.8	18,153.0	19,721.4	20,950.8	21,445.9	24,498.1	24,213.6	23,569.4	26,235.0	25,970.1
Department of the Army	5,797.0	6,619.9	7,092.1	6,954.2	9,847.2	10,662.1	10,360.0	11,057.1	10,124.8	9,209.6	8,125.0
Department of the Navy	9,675.4	10,576.2	12,484.9	15,043.8	16,269.8	17,442.7	18,934.7	17,851.0	17,491.6	16,924.3	15,361.7
Operational Test and Evaluation, Director	205.3	195.5	243.1	305.0	320.1	261.6	193.1	180.3	178.5	184.2	NA
Other defense agencies	na	na	na	na	na	na	na	na	na	na	20,313.3
Test and Evaluation, Deputy Under Secretary of Defense	25.3	na	na	na	na	na	na	na	na	na	na
Department of Education	251.0	243.1	315.6	226.9	264.3	254.5	271.2	286.8	312.0	321.7	105.7
Department of Energy	7,415.6	8,034.6	8,424.5	8,501.7	8,607.0	8,213.1	8,444.0	8,856.6	9,770.8	9,890.6	10,456.2
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	0.0	0.0	63.8	118.4
Bonneville Power Administration	NA	22.9	23.3	24.0	11.3	10.7	11.1	13.7	8.1	13.1	13.2
Civilian Radioactive Waste Management	NA	62.5	75.8	74.1	74.1	52.9	10.5	8.4	1.7	0.0	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	71.8	108.3	54.4	89.4	87.1	83.0	89.5
Energy Efficiency and Renewable Energy	NA	739.8	688.5	603.6	593.9	456.7	648.2	794.0	729.5	968.5	888.5

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Environmental Management	NA	160.3	69.4	42.8	49.8	34.0	32.0	35.8	13.1	69.9	67.5
Fossil Energy	NA	480.5	642.7	505.5	538.8	386.1	430.6	325.0	358.6	364.5	303.1
National Nuclear Security Administration	NA	3,711.7	3,895.1	4,005.3	3,925.0	3,858.1	3,794.1	3,999.3	3,661.1	3,769.2	4,185.6
Defense Programs	NA	2,770.0	2,996.7	3,135.1	3,001.3	2,865.2	2,827.8	2,939.4	2,575.8	2,486.5	2,887.8
Fissile Materials Disposition	NA	22.0	16.6	1.0	0.0	0.0	0.0	NA	NA	NA	NA
Naval Nuclear Propulsion Program	NA	654.4	658.3	706.0	778.3	749.6	761.4	760.9	770.2	945.1	974.3
Office of Defense Nuclear Nonproliferation	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	337.6	323.5
Nuclear Energy	NA	28.2	43.0	79.3	82.8	89.0	80.9	133.1	116.0	368.1	387.8
Office of Intelligence	NA	5.2	4.0	0.0	NA	NA	NA	NA	NA	NA	NA
Office of Science	NA	2,823.4	2,982.7	3,167.0	3,259.6	3,217.3	3,382.2	3,457.9	4,795.7	4,190.6	4,402.6
Department of Health and Human Services	21,296.7	23,892.1	27,316.4	28,263.2	28,861.7	28,799.4	29,261.3	29,268.4	35,295.5	36,610.2	30,458.6
Administration for Children and Families	26.4	21.7	19.4	18.7	38.6	13.4	11.8	19.2	13.7	6.5	9.3
Administration for Community Living	1.6	2.1	4.0	3.0	2.0	3.0	3.0	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for Toxic Substances and Disease Registry	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8	5.1
Centers for Disease Control and Prevention	544.0	521.0	564.0	539.8	510.8	688.5	678.7	413.7	338.9	343.0	296.5
Centers for Medicare and Medicaid Services	53.0	72.9	73.6	89.0	89.0	62.4	86.0	69.8	57.4	53.9	45.2
Food and Drug Administration	152.4	129.7	158.1	134.0	140.0	139.8	130.2	138.0	163.9	201.1	214.9
Health Resources and Services Administration	51.6	54.7	439.5	48.0	53.4	24.1	23.9	62.3	56.4	67.0	37.4
National Institutes of Health	19,771.3	22,343.5	25,964.6	27,311.8	27,926.0	27,778.1	28,257.4	28,539.6	34,640.7	35,881.7	29,830.3
Office of the Secretary of Health and Human Services	15.6	16.5	21.7	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Office of Public Health and Science	1.7	1.6	1.8	NA	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	13.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Substance Abuse and Mental Health Services Administration	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA	NA
Department of Homeland Security	na	na	NA	592.3	1,027.6	1,713.9	1,181.3	1,009.3	438.3	976.0	1,165.7
Science and Technology Directorate	na	na	NA	432.4	834.7	1,677.0	1,153.0	993.0	417.3	949.0	1,144.0
Transportation Security Administration	na	na	NA	137.9	180.5	12.2	3.8	0.0	0.0	NA	NA
U.S. Coast Guard	na	na	NA	21.1	11.4	23.8	23.7	15.6	21.0	27.0	21.7
U.S. Secret Service	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA	NA
Department of Housing and Urban Development	64.2	57.7	54.3	43.2	47.9	42.0	32.5	32.5	36.4	50.5	50.1
Department of the Interior	623.2	633.2	600.9	612.2	597.0	607.6	625.7	644.4	744.9	725.6	713.8
Bureau of Ocean Energy Management, Regulation and Enforcement	28.0	31.7	29.5	29.5	29.9	31.2	28.7	34.3	39.4	43.7	49.6
Bureau of Reclamation	9.7	10.4	11.0	16.3	17.3	11.1	15.5	15.2	17.3	13.3	15.1
National Park Service	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6	9.2
U.S. Geological Survey	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1	640.0
Department of Justice	67.4	67.7	103.2	68.7	66.1	71.4	123.9	112.9	103.4	118.6	102.3

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bureau of Prisons	12.0	8.7	9.7	9.4	12.5	12.1	12.7	10.6	10.5	10.8	11.6
Federal Bureau of Investigation	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0	17.7
Immigration and Naturalization Service	0.9	0.0	na	na	na	na	na	na	na	na	na
Office of Justice Programs	35.5	25.4	50.7	25.3	20.1	25.0	40.4	76.2	78.4	77.8	72.9
Department of Labor	95.5	164.6	176.4	198.2	162.9	94.3	59.3	84.4	71.6	13.0	11.8
Bureau of Labor Statistics	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA	NA
Employee Benefits Security Administration	1.3	0.9	2.1	1.3	1.3	1.6	0.8	1.1	1.1	4.5	4.7
Employment and Training Administration	60.9	137.1	148.0	170.1	133.7	64.1	29.4	53.7	64.2	NA	NA
Occupational Safety and Health Administration	5.7	3.8	3.1	3.3	3.4	3.5	3.4	3.6	4.5	5.9	4.3
Office of the Secretary of Labor	5.4	1.2	1.8	0.2	0.4	0.3	0.3	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	1.9	2.6	2.8
Department of State	1.6	1.6	1.6	2.3	2.6	3.4	3.0	3.0	3.7	2.9	3.3
Department of Transportation	515.4	732.9	592.0	569.4	412.1	884.3	775.3	625.8	544.5	781.0	786.3
Federal Aviation Administration	203.0	309.0	250.0	262.0	241.0	307.0	282.0	218.0	197.0	258.0	228.0
Federal Highway Administration	201.9	209.0	230.0	238.1	73.9	400.1	339.9	259.7	214.9	352.4	320.1
Federal Motor Carrier Safety Administration	5.5	2.0	2.9	4.3	6.6	4.2	12.7	6.6	6.9	6.9	6.9
Federal Railroad Administration	21.0	28.4	27.9	32.6	22.8	58.7	36.6	39.6	41.6	45.4	41.7
Federal Transit Administration	3.7	2.3	3.8	4.4	4.2	6.5	4.0	7.0	6.9	21.7	42.0
National Highway Traffic Safety Administration	46.7	47.1	50.7	7.0	31.7	75.0	66.0	58.7	44.3	64.6	116.0
Office of the Secretary of Transportation	7.0	11.1	15.7	11.0	28.8	15.6	16.2	15.9	19.5	20.3	17.9
Pipeline and Hazardous Materials Safety Administration	na	na	na	10.0	2.2	15.2	15.9	13.3	4.5	7.6	9.7
Research and Innovative Technology Administration	na	na	na	0.0	1.0	2.0	2.0	7.0	9.0	4.0	4.0
Research and Special Programs Administration	7.5	9.0	11.0	na	na	na	na	na	na	na	na
Transportation Security Administration	na	95.0	na	na	na	na	na	na	na	na	na
U.S. Coast Guard	19.3	20.0	na	na	na	na	na	na	na	na	na
Department of the Treasury	65.1	70.7	60.0	62.4	66.4	65.1	63.6	65.5	68.5	68.5	77.6
Bureau of Engraving and Printing	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2	5.8
Internal Revenue Service	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3	70.8
Office of Thrift Supervision	0.1	0.1	NA	NA	NA	NA	NA	NA	NA	NA	na
U.S. Customs Service	2.2	7.1	na	na	na	na	na	na	na	na	na
U.S. Mint	0.8	*	0.7	1.0	2.4	3.7	3.5	0.6	0.7	1.1	1.0
U.S. Secret Service	0.7	0.8	na	na	na	na	na	na	na	na	na
Department of Veterans Affairs	345.3	329.2	365.7	405.6	402.3	412.0	446.5	480.0	510.0	581.0	558.9
Other agencies											
Agency for International Development	195.0	202.0	220.0	254.0	260.4	255.0	234.5	123.8	156.2	168.7	119.2
Appalachian Regional Commission	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	1.0	0.6	0.4

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Consumer Product Safety Commission	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	550.0	561.0	550.0	0.2	0.5	0.2	0.5	532.0	552.8	594.7	581.7
Federal Communications Commission	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7	3.7
Federal Trade Commission	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0	2.7
General Services Administration	0.6	*	0.0	0.0	0.0	0.0	NA	NA	NA	NA	NA
Library of Congress	1.8	2.8	3.0	1.2	6.3	7.4	12.0	1.4	0.8	1.2	1.3
National Aeronautics and Space Administration	9,167.0	9,142.0	8,719.9	8,746.3	8,656.6	6,209.6	5,930.3	6,071.7	5,814.9	8,880.9	7,723.7
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6	3.1
National Science Foundation	2,762.0	3,074.0	3,507.0	3,796.0	4,025.0	4,102.0	4,022.0	4,205.0	4,370.0	5,758.0	5,748.0
Nuclear Regulatory Commission	40.0	47.0	38.0	55.0	57.0	59.0	58.8	41.7	74.0	81.0	99.0
Patient-Centered Outcomes Research Trust Fund	na	na	na	na	na	na	na	na	na	na	8.9
Smithsonian Institution	95.5	103.5	100.5	106.0	110.0	139.0	172.0	182.0	200.0	217.0	249.2
Social Security Administration	28.9	27.9	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0	53.0
U.S. Agency for Global Media	*	0.3	0.0	1.2	*	0.2	NA	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FYs 2009 and 2010 outlays include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with agencies listed in this table.

Source(s):

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	131,030.2	129,084.3	130,720.4	130,495.0	111,779.9	113,222.7	120,916.2	128,141.5	149,705.6	173,169.3
Departments										
Department of Agriculture	2,359.8	2,256.4	2,339.9	2,338.7	2,431.9	2,345.0	2,346.6	2,546.8	2,534.2	2,698.4
Agricultural Marketing Service	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0	7.0
Agricultural Research Service	1,153.1	1,086.3	1,035.1	1,085.7	1,123.6	1,154.5	1,124.1	1,188.9	1,330.0	1,436.0
Animal and Plant Health Inspection Service	31.8	31.3	37.1	34.2	39.1	39.1	38.5	39.1	39.5	41.5
Economic Research Service	80.2	78.6	77.0	74.4	94.4	81.5	86.6	82.2	81.7	87.0
Foreign Agricultural Service	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.0	0.0
Forest Service	364.8	349.9	337.5	343.9	349.0	343.3	342.6	332.6	326.4	376.7
Grain Inspection, Packers, and Stockyards Administration	6.7	6.2	7.6	8.1	8.0	0.3	na	na	na	na
National Agricultural Statistics Service	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0	9.5
National Institute of Food and Agriculture	706.8	688.0	824.4	772.3	798.0	706.1	735.3	884.0	737.9	737.9
Rural Business-Cooperative Service	3.9	3.0	5.8	3.5	3.6	3.3	2.8	2.8	2.8	2.8
Department of Commerce	1,402.3	1,261.6	1,446.6	1,417.2	1,541.8	1,709.9	1,706.7	1,907.6	1,807.8	2,025.8
National Institute of Standards and Technology	719.9	575.8	603.7	671.3	706.1	708.5	745.5	836.1	773.9	937.1
National Oceanic and Atmospheric Administration	573.4	546.7	633.8	593.0	655.0	773.0	844.0	967.0	915.1	957.0
National Telecommunications and Information Administration	7.4	7.8	7.9	11.3	10.3	8.1	7.3	8.9	7.7	11.2
U.S. Census Bureau	101.7	131.3	201.2	141.6	170.4	220.3	109.9	95.6	111.1	120.5
Department of Defense	65,391.7	65,106.7	63,646.4	62,250.8	42,868.2	42,211.9	45,237.9	48,488.5	56,339.3	60,791.4
Defense Advanced Research Projects Agency	2,833.3	2,692.2	2,807.7	2,832.5	2,870.6	2,877.1	2,996.0	3,253.7	3,465.8	3,505.4
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	2,016.5	2,521.4
Department of the Air Force	25,178.4	24,857.6	23,316.0	23,441.6	7,259.6	7,600.5	11,194.0	12,035.5	9,242.6	9,887.6
Department of the Army	6,688.5	7,816.8	7,653.1	7,306.3	6,805.4	7,631.0	7,011.3	9,293.2	10,867.8	11,542.5
Department of the Navy	14,364.5	15,505.7	15,456.5	14,692.8	15,195.3	14,427.3	12,560.8	11,029.1	15,071.9	14,556.5
U.S. Space Force	na	na	na	na	na	na	na	na	4,337.8	4,962.7
Other defense agencies	16,327.0	14,234.4	14,413.2	13,977.6	10,737.4	9,676.0	11,475.7	12,877.0	11,336.9	13,815.2

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Education	101.6	97.2	344.8	318.0	212.2	245.8	235.3	226.4	227.2	260.4
Department of Energy	10,313.7	9,860.8	11,033.5	12,295.4	12,853.2	13,187.3	16,672.1	15,164.3	12,600.0	16,385.8
Advanced Research Projects Agency—Energy	142.4	143.6	187.2	245.2	237.9	269.2	250.9	247.1	269.8	365.0
Bonneville Power Administration	14.5	14.4	16.0	15.6	15.6	14.0	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	101.1	45.3	73.1	107.6	91.7	133.0	103.8	144.2	142.1	134.4
Energy Efficiency and Renewable Energy	909.8	721.0	964.1	1,047.3	1,145.0	1,283.6	1,549.0	1,460.7	1,501.7	1,643.7
Environmental Management	45.8	9.1	23.2	24.2	22.8	28.7	38.0	29.3	31.4	20.9
Fossil Energy	298.1	376.3	441.7	649.9	624.5	636.1	682.9	682.0	608.0	705.7
National Nuclear Security Administration	4,012.5	3,930.5	4,393.8	4,514.7	4,806.5	4,925.7	4,324.0	5,752.5	3,987.1	6,505.2
Defense Programs	2,701.1	2,642.8	2,981.3	3,063.5	3,082.0	3,256.5	2,726.0	3,634.9	2,326.2	4,660.8
Naval Nuclear Propulsion Program	1,080.0	994.1	1,115.5	1,238.5	1,375.5	1,420.1	1,282.0	1,788.6	1,360.1	1,471.3
Office of Defense Nuclear Nonproliferation	231.5	293.6	297.0	212.7	348.9	249.0	316.0	329.0	300.7	373.1
Nuclear Energy	361.2	263.4	323.9	760.4	832.6	811.1	846.0	1,109.5	1.2	0.7
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	36.3	50.7	51.1
Office of Science	4,428.2	4,357.2	4,610.5	4,930.4	5,076.7	5,086.1	8,877.5	5,702.7	6,008.0	6,959.1
Department of Health and Human Services	30,876.0	29,430.8	30,564.2	29,624.2	29,663.3	31,385.8	33,218.7	35,426.7	54,909.7	70,265.1
Administration for Children and Families	8.1	2.6	2.6	2.5	3.0	2.0	1.3	2.4	1.6	3.1
Administration for Community Living	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	91.8	92.9
Agency for Healthcare Research and Quality	0.0	365.0	364.0	364.0	334.0	324.0	334.0	338.0	338.0	338.0
Agency for Toxic Substances and Disease Registry	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	*	*
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	280.8	18,736.7	29,096.1
Centers for Disease Control and Prevention	445.3	300.5	198.0	275.3	198.0	208.0	200.1	187.2	217.7	239.2

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Centers for Medicare and Medicaid Services	33.8	20.0	33.6	24.0	29.5	29.8	230.7	5.8	31.3	31.9
Food and Drug Administration	336.9	344.5	371.7	358.9	485.9	464.2	456.2	469.7	443.2	540.5
Health Resources and Services Administration	20.9	37.3	38.5	41.7	41.7	45.8	33.7	26.6	25.0	16.4
National Institutes of Health	30,010.1	28,341.3	29,535.9	28,462.0	28,468.0	30,209.0	31,860.0	34,009.0	35,008.0	39,890.0
Office of the Secretary of Health and Human Services	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Department of Homeland Security	827.9	614.0	855.8	704.0	731.6	1,026.3	1,077.4	1,069.5	936.4	937.1
Countering Weapons of Mass Destruction Office	NA	NA	73.5	71.3	63.0	69.3	64.9	81.4	85.0	77.0
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	7.2	13.1	7.7	9.4
Science and Technology Directorate	806.0	592.0	757.0	607.0	646.4	934.8	966.1	929.0	806.0	799.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9	29.5
U.S. Coast Guard	21.9	22.0	25.2	25.7	22.2	22.2	17.8	23.4	4.9	10.3
U.S. Secret Service	NA	NA	NA	NA	NA	NA	1.2	1.9	9.9	11.9
Department of Housing and Urban Development	53.5	63.8	66.7	56.0	74.7	71.0	70.5	63.0	NA	NA
Department of the Interior	744.6	705.2	744.9	812.6	865.0	864.4	754.3	804.4	826.6	861.5
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	5.0	5.0	*	*
Bureau of Land Management	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8	15.8
Bureau of Ocean Energy Management	39.0	30.5	48.0	50.0	73.0	73.1	77.4	73.3	73.3	72.5
Bureau of Reclamation	12.0	13.0	14.2	12.7	22.0	28.6	24.6	24.3	29.2	27.5
Bureau of Safety and Environmental Enforcement	15.4	18.4	18.1	27.6	33.9	23.4	8.0	15.0	11.2	23.6
National Park Service	5.3	7.0	15.2	8.3	8.7	9.5	0.8	0.9	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	1.1	1.0	0.7	0.8

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	31.9	32.5	24.0	24.0	24.0	25.8	29.2
U.S. Geological Survey	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8	691.3
Department of Justice	67.0	109.7	160.5	56.9	69.1	23.8	19.7	19.6	23.9	20.6
Bureau of Prisons	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	8.1	8.7
Federal Bureau of Investigation	7.7	30.0	9.6	12.9	13.0	2.2	2.9	1.0	4.7	0.9
Office of Justice Programs	48.8	68.6	140.1	33.0	45.2	12.0	11.0	12.0	11.0	11.0
Department of Labor	20.1	14.9	12.3	12.5	8.0	3.1	3.3	2.8	3.0	2.5
Employee Benefits Security Administration	11.5	8.2	5.9	5.1	3.0	1.1	1.4	1.1	1.0	0.5
Occupational Safety and Health Administration	5.9	4.2	3.6	3.4	0.7	2.0	1.9	1.7	2.0	2.0
Pension Benefit Guaranty Corp.	2.7	2.6	2.9	4.1	4.3	0.0	0.0	NA	NA	NA
Department of State	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	40.0	43.0
Department of Transportation	740.2	681.4	806.2	718.8	748.5	716.2	661.1	706.6	702.7	757.6
Federal Aviation Administration	242.0	214.0	227.0	228.0	250.0	266.0	239.0	247.0	245.0	324.0
Federal Highway Administration	311.3	280.9	385.9	353.0	353.0	274.4	261.4	287.1	278.4	233.7
Federal Motor Carrier Safety Administration	6.7	6.9	7.5	7.6	10.6	11.7	10.3	7.1	6.9	8.5
Federal Railroad Administration	47.0	46.5	54.2	43.9	41.3	43.6	34.5	35.1	43.3	49.0
Federal Transit Administration	25.9	10.5	9.1	17.0	6.8	40.7	36.0	39.7	19.5	23.0
National Highway Traffic Safety Administration	82.6	95.0	93.0	46.0	49.0	55.0	53.0	64.0	67.2	63.4
Office of the Secretary of Transportation	13.9	15.6	13.9	11.5	18.5	11.4	16.4	8.5	24.3	27.7
Pipeline and Hazardous Materials Safety Administration	8.0	7.3	15.6	11.9	19.3	13.4	10.5	18.0	18.1	28.2
Research and Innovative Technology Administration	3.0	4.7	NA	NA	NA	NA	NA	NA	NA	NA
Department of the Treasury	75.6	74.1	76.4	66.5	85.2	10.5	37.7	48.8	46.9	52.9
Bureau of Engraving and Printing	5.0	9.4	9.4	9.5	18.8	9.2	37.7	46.4	46.4	52.4
Internal Revenue Service	69.0	64.5	64.4	53.7	64.6	0.0	0.0	0.0	0.0	0.0
U.S. Mint	1.6	0.1	2.6	3.4	1.8	1.3	0.0	2.5	0.5	0.6

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Veterans Affairs	614.8	639.0	608.3	612.1	583.1	594.1	644.0	685.0	778.0	762.0
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	6.8	8.0	6.8	6.4	5.0	6.4
Agency for International Development	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	194.3	194.3
Appalachian Regional Commission	0.6	0.5	0.6	0.6	0.4	0.6	0.6	0.6	0.9	0.5
Consumer Product Safety Commission	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.4	0.4
Environmental Protection Agency	581.1	529.7	538.0	520.7	513.3	498.4	492.1	490.0	493.0	524.1
Federal Communications Commission	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8	2.6
Federal Trade Commission	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	6.0	7.5
Library of Congress	1.0	1.0	1.0	1.1	1.6	1.8	3.3	1.9	2.8	2.7
National Aeronautics and Space Administration	10,595.9	11,330.5	11,261.8	12,360.4	12,012.9	10,615.7	10,852.4	13,338.2	10,508.4	9,117.9
National Archives and Records Administration	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	*	*
National Science Foundation	5,740.0	5,703.0	5,666.0	5,474.0	5,468.0	5,650.0	5,664.0	5,741.0	5,793.0	6,531.0
Nuclear Regulatory Commission	81.0	85.0	90.6	70.8	86.0	67.4	77.7	74.9	70.0	76.5
Patient-Centered Outcomes Research Trust Fund	41.1	74.2	93.6	244.2	354.1	1,345.0	491.7	578.5	469.8	390.9
RESTORE Act Centers of Excellence Research Grants Program	na	na	na	na	na	na	na	na	7.1	5.0
Smithsonian Institution	245.3	251.0	230.8	228.8	236.8	242.7	262.8	269.0	276.0	281.0
Social Security Administration	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	69.7	129.4
Tennessee Valley Authority	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.4	11.1
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	6.1	4.8	4.8
U.S. Postal Service	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	18.2	19.0

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) outlays. Those funds, previously included in DOD's development outlay totals, support the development

efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 outlays include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 98

Federal outlays for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All agencies	82,705.3	88,297.6	100,179.3	105,174.9	117,398.5	116,867.6	121,875.1	123,059.1	126,854.2	131,387.6	131,451.9
Departments											
Department of Agriculture	1,754.3	1,919.1	1,966.3	2,048.2	2,132.1	2,185.0	2,217.6	2,254.1	2,229.4	2,308.9	2,300.5
Agricultural Marketing Service	4.7	5.2	4.7	8.4	9.4	6.3	6.4	3.8	4.3	4.4	4.3
Agricultural Research Service	912.3	1,039.4	1,039.0	1,098.7	1,117.3	1,134.7	1,102.8	1,148.6	1,133.7	1,199.9	1,161.5
Animal and Plant Health Inspection Service	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	24.6	25.6	24.6
Economic Research Service	66.1	69.9	70.3	65.7	74.6	72.8	90.6	77.8	79.7	86.4	87.9
Food Safety and Inspection Service	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4	0.6
Forest Service	250.0	277.0	305.0	326.0	325.0	341.0	335.0	338.0	336.0	363.0	353.0
Grain Inspection, Packers, and Stockyards Administration	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3	6.7
National Agricultural Statistics Service	4.3	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5	7.4
National Institute of Food and Agriculture	478.9	487.6	503.1	506.8	563.5	586.0	621.8	639.3	634.0	611.7	653.8
Rural Business-Cooperative Service	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	3.0	3.7	0.7
Department of Commerce	966.5	1,113.7	1,155.2	1,076.4	707.7	664.2	991.1	1,052.1	1,004.4	1,121.6	1,267.0
Economic Development Administration	0.6	0.4	0.5	0.2	0.5	0.2	0.8	2.2	2.9	7.3	0.6
National Institute of Standards and Technology	424.9	413.3	459.2	508.8	440.6	421.1	422.2	444.1	454.5	534.6	570.6
National Oceanic and Atmospheric Administration	501.0	651.3	652.0	519.0	240.2	215.5	540.7	580.8	510.9	525.4	629.0
National Telecommunications and Information Administration	21.0	26.0	23.5	24.2	3.5	5.3	5.3	0.3	6.9	7.0	7.2
U.S. Census Bureau	19.0	22.7	19.9	24.2	23.0	22.0	22.0	24.7	29.0	47.2	59.5
Department of Defense	40,528.5	41,662.9	49,614.9	52,977.5	64,311.4	63,724.3	68,557.0	68,731.4	66,775.3	67,614.8	72,527.4
Defense Advanced Research Projects Agency	na	na	na	na	na	na	na	na	na	na	2,889.3
Defense agencies and activities	7,285.7	10,196.9	11,741.1	11,074.2	17,056.7	13,970.6	14,686.5	15,521.3	15,598.7	15,209.7	na
Department of the Air Force	17,589.5	14,156.3	18,146.2	19,711.8	20,915.1	21,407.2	24,483.0	24,121.7	23,458.2	26,106.2	25,854.5
Department of the Army	5,796.7	6,619.8	7,092.1	6,954.2	9,847.2	10,662.1	10,360.0	11,057.1	10,048.3	9,209.6	8,125.0
Department of the Navy	9,626.1	10,494.5	12,392.4	14,932.4	16,172.3	17,422.9	18,834.4	17,851.0	17,491.6	16,905.1	15,345.4
Operational Test and Evaluation, Director	205.3	195.5	243.1	305.0	320.1	261.6	193.1	180.3	178.5	184.2	NA
Other defense agencies	na	na	na	na	na	na	na	na	na	na	20,313.3
Test and Evaluation, Deputy Under Secretary of Defense	25.3	na	na	na	na	na	na	na	na	na	na
Department of Education	251.0	243.1	315.6	226.9	264.3	254.5	271.2	286.8	312.0	321.7	105.7
Department of Energy	6,539.1	7,010.3	7,372.7	7,475.8	7,760.2	7,432.9	7,792.8	8,108.3	8,546.3	8,986.2	9,685.0
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	0.0	0.0	63.8	118.4
Bonneville Power Administration	NA	22.9	23.3	24.0	11.3	10.7	11.1	13.7	8.1	13.1	13.2
Civilian Radioactive Waste Management	NA	62.5	75.8	74.1	74.1	52.9	10.5	8.4	1.7	0.0	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	71.8	108.3	54.4	89.4	87.1	83.0	89.5
Energy Efficiency and Renewable Energy	NA	734.9	682.3	583.9	569.1	430.6	646.4	729.1	712.3	915.1	852.6

TABLE 98

Federal outlays for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Environmental Management	NA	160.3	69.4	42.8	49.8	34.0	32.0	35.8	13.1	69.9	67.5
Fossil Energy	NA	471.3	639.8	499.5	532.7	365.6	418.6	306.3	343.8	349.7	288.4
National Nuclear Security Administration	NA	3,299.4	3,448.3	3,579.4	3,624.9	3,547.6	3,589.5	3,730.5	3,488.9	3,488.8	4,033.9
Defense Programs	NA	2,372.7	2,576.7	2,727.4	2,732.9	2,593.6	2,656.9	2,707.4	2,443.7	2,285.1	2,768.7
Fissile Materials Disposition	NA	22.0	16.6	1.0	0.0	0.0	0.0	NA	NA	NA	NA
Naval Nuclear Propulsion Program	NA	639.3	631.5	687.8	746.6	710.7	727.8	724.1	730.1	866.1	941.7
Office of Defense Nuclear Nonproliferation	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	337.6	323.5
Nuclear Energy	NA	28.2	43.0	79.3	82.8	89.0	80.9	133.1	116.0	368.1	387.8
Office of Intelligence	NA	5.2	4.0	0.0	NA	NA	NA	NA	NA	NA	NA
Office of Science	NA	2,225.5	2,386.7	2,592.8	2,743.7	2,794.1	2,949.4	3,062.0	3,775.3	3,634.7	3,833.6
Department of Health and Human Services	21,002.4	23,647.8	26,499.3	27,834.6	28,432.3	28,440.6	29,009.6	29,121.0	35,144.2	34,927.8	30,379.4
Administration for Children and Families	26.4	21.7	19.4	18.7	38.6	13.4	11.8	19.2	13.7	6.5	9.3
Administration for Community Living	1.6	2.1	4.0	3.0	2.0	3.0	3.0	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for Toxic Substances and Disease Registry	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8	5.1
Centers for Disease Control and Prevention	544.0	521.0	564.0	539.8	510.8	544.6	544.3	407.2	338.9	343.0	296.5
Centers for Medicare and Medicaid Services	53.0	72.9	73.6	89.0	89.0	62.4	86.0	69.8	57.4	53.9	45.2
Food and Drug Administration	149.4	119.4	149.5	127.5	136.9	138.0	124.6	132.9	159.1	188.4	206.4
Health Resources and Services Administration	51.0	54.1	439.2	47.4	52.9	23.6	23.2	61.6	56.3	66.3	36.8
National Institutes of Health	19,480.7	22,110.1	25,156.4	26,890.4	27,500.3	27,565.6	28,146.3	28,404.4	34,494.3	34,212.6	29,760.2
Office of the Secretary of Health and Human Services	15.6	16.5	21.7	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Office of Public Health and Science	1.7	1.6	1.8	NA	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	13.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Substance Abuse and Mental Health Services Administration	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA	NA
Department of Homeland Security	na	na	NA	535.9	966.4	1,592.7	922.3	798.8	92.2	583.1	471.4
Science and Technology Directorate	na	na	NA	377.0	774.5	1,556.1	894.5	783.0	72.6	557.2	450.9
Transportation Security Administration	na	na	NA	137.9	180.5	12.2	3.8	0.0	0.0	NA	NA
U.S. Coast Guard	na	na	NA	20.1	10.4	23.4	23.1	15.1	19.5	25.9	20.5
U.S. Secret Service	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA	NA
Department of Housing and Urban Development	64.2	57.7	54.3	43.2	47.9	42.0	32.5	32.5	36.4	50.5	50.1
Department of the Interior	621.1	631.1	597.4	604.6	589.7	602.3	615.9	635.3	738.0	720.0	705.4
Bureau of Ocean Energy Management, Regulation and Enforcement	25.9	29.6	27.4	27.2	27.2	28.1	25.8	31.6	37.1	41.7	44.8
Bureau of Reclamation	9.7	10.4	9.5	10.9	12.7	8.8	8.5	8.9	12.7	9.7	11.5
National Park Service	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6	9.2
U.S. Geological Survey	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1	640.0
Department of Justice	67.4	67.7	103.2	68.7	66.1	71.4	123.9	111.9	103.4	118.6	102.3

TABLE 98

Federal outlays for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bureau of Prisons	12.0	8.7	9.7	9.4	12.5	12.1	12.7	10.6	10.5	10.8	11.6
Federal Bureau of Investigation	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0	17.7
Immigration and Naturalization Service	0.9	0.0	na	na	na	na	na	na	na	na	na
Office of Justice Programs	35.5	25.4	50.7	25.3	20.1	25.0	40.4	75.2	78.4	77.8	72.9
Department of Labor	95.5	164.6	176.4	198.2	162.9	94.3	58.8	83.8	71.0	11.9	10.5
Bureau of Labor Statistics	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA	NA
Employee Benefits Security Administration	1.3	0.9	2.1	1.3	1.3	1.6	0.8	1.1	1.1	4.5	4.7
Employment and Training Administration	60.9	137.1	148.0	170.1	133.7	64.1	29.4	53.7	64.2	NA	NA
Occupational Safety and Health Administration	5.7	3.8	3.1	3.3	3.4	3.5	2.9	3.0	3.8	4.8	3.0
Office of the Secretary of Labor	5.4	1.2	1.8	0.2	0.4	0.3	0.3	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	1.9	2.6	2.8
Department of State	1.6	1.6	1.6	2.3	2.6	3.4	3.0	3.0	3.7	2.9	3.3
Department of Transportation	510.6	681.5	584.6	554.6	396.3	866.2	755.5	606.9	525.6	760.5	768.5
Federal Aviation Administration	199.0	295.0	244.0	248.0	226.0	290.0	264.0	201.0	180.0	239.0	211.0
Federal Highway Administration	201.9	209.0	230.0	238.1	73.9	400.1	339.9	259.7	214.9	352.4	320.1
Federal Motor Carrier Safety Administration	5.5	2.0	2.9	4.3	6.6	4.2	12.7	6.6	6.9	6.9	6.9
Federal Railroad Administration	20.4	27.3	26.5	31.8	22.0	57.6	34.7	37.8	39.7	44.0	40.9
Federal Transit Administration	3.7	2.3	3.8	4.4	4.2	6.5	4.0	7.0	6.9	21.7	42.0
National Highway Traffic Safety Administration	46.7	47.1	50.7	7.0	31.7	75.0	66.0	58.7	44.3	64.6	116.0
Office of the Secretary of Transportation	7.0	11.1	15.7	11.0	28.8	15.6	16.2	15.9	19.5	20.3	17.9
Pipeline and Hazardous Materials Safety Administration	na	na	na	10.0	2.2	15.2	15.9	13.3	4.5	7.6	9.7
Research and Innovative Technology Administration	na	na	na	0.0	1.0	2.0	2.0	7.0	9.0	4.0	4.0
Research and Special Programs Administration	7.5	9.0	11.0	na	na	na	na	na	na	na	na
Transportation Security Administration	na	59.0	na	na	na	na	na	na	na	na	na
U.S. Coast Guard	19.0	19.7	na	na	na	na	na	na	na	na	na
Department of the Treasury	65.1	70.7	60.0	62.4	66.4	65.1	63.6	65.5	68.5	68.5	77.6
Bureau of Engraving and Printing	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2	5.8
Internal Revenue Service	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3	70.8
Office of Thrift Supervision	0.1	0.1	NA	NA	NA	NA	NA	NA	NA	NA	na
U.S. Customs Service	2.2	7.1	na	na	na	na	na	na	na	na	na
U.S. Mint	0.8	*	0.7	1.0	2.4	3.7	3.5	0.6	0.7	1.1	1.0
U.S. Secret Service	0.7	0.8	na	na	na	na	na	na	na	na	na
Department of Veterans Affairs	345.0	328.8	365.4	405.2	402.0	411.6	446.1	479.6	510.0	581.0	558.9
Other agencies											
Agency for International Development	195.0	202.0	220.0	254.0	260.4	255.0	234.5	123.8	156.2	168.7	119.2
Appalachian Regional Commission	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	1.0	0.6	0.4

TABLE 98

Federal outlays for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Consumer Product Safety Commission	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	520.0	561.0	550.0	0.2	0.5	0.2	0.5	532.0	552.8	594.7	577.0
Federal Communications Commission	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7	3.7
Federal Trade Commission	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0	2.7
Library of Congress	1.8	2.8	3.0	1.2	6.3	7.4	12.0	1.4	0.8	1.2	1.3
National Aeronautics and Space Administration	6,444.0	6,945.0	7,124.1	7,165.5	6,959.4	6,197.4	5,918.6	5,999.6	5,739.1	7,316.0	6,145.5
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6	3.1
National Science Foundation	2,566.0	2,803.0	3,235.0	3,439.0	3,657.0	3,707.0	3,569.0	3,781.0	3,937.0	4,809.0	5,233.0
Nuclear Regulatory Commission	40.0	47.0	38.0	55.0	57.0	59.0	58.8	41.7	74.0	81.0	99.0
Patient-Centered Outcomes Research Trust Fund	na	na	na	na	na	na	na	na	na	na	8.9
Smithsonian Institution	93.0	101.0	98.0	103.0	104.0	113.0	142.0	140.0	151.0	164.0	192.2
Social Security Administration	28.9	27.9	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0	53.0
U.S. Agency for Global Media	*	0.3	0.0	1.2	*	0.2	NA	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FYs 2009 and 2010 outlays include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 99

Federal outlays for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	128,559.8	127,224.8	128,476.5	128,089.9	109,551.8	110,000.2	117,072.2	124,854.5	144,919.9	166,468.4
Departments										
Department of Agriculture	2,290.2	2,231.9	2,320.7	2,320.3	2,411.5	2,329.8	2,308.1	2,497.8	2,458.8	2,538.7
Agricultural Marketing Service	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0	7.0
Agricultural Research Service	1,095.0	1,071.2	1,025.4	1,077.2	1,118.3	1,148.8	1,101.3	1,149.6	1,263.9	1,288.0
Animal and Plant Health Inspection Service	31.8	31.3	37.1	34.2	39.1	39.1	38.5	39.1	39.5	41.5
Economic Research Service	80.2	78.6	77.0	74.4	94.4	81.5	86.6	82.2	81.7	87.0
Foreign Agricultural Service	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.0	0.0
Forest Service	355.0	342.0	330.0	336.0	336.0	334.0	327.0	323.0	317.0	365.0
Grain Inspection, Packers, and Stockyards Administration	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na	na
National Agricultural Statistics Service	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0	9.5
National Institute of Food and Agriculture	706.8	688.0	824.4	772.3	798.0	706.1	735.3	884.0	737.9	737.9
Rural Business-Cooperative Service	3.9	3.0	5.8	3.5	3.6	3.3	2.8	2.8	2.8	2.8
Department of Commerce	1,112.1	1,081.7	1,266.7	1,220.7	1,330.4	1,526.5	1,414.6	1,521.9	1,546.4	1,681.1
National Institute of Standards and Technology	570.2	524.1	553.2	606.9	644.7	644.4	670.5	703.4	679.6	773.5
National Oceanic and Atmospheric Administration	432.8	418.6	504.4	461.0	505.0	653.7	627.0	714.0	748.0	776.0
National Telecommunications and Information Administration	7.4	7.8	7.9	11.3	10.3	8.1	7.3	8.9	7.7	11.2
U.S. Census Bureau	101.7	131.3	201.2	141.6	170.4	220.3	109.9	95.6	111.1	120.5
Department of Defense	65,252.9	65,019.6	63,509.3	62,100.4	42,700.4	41,292.2	44,843.2	48,135.3	55,832.5	60,085.1
Defense Advanced Research Projects Agency	2,833.3	2,692.2	2,807.7	2,832.5	2,870.6	2,877.1	2,996.0	3,253.7	3,465.8	3,505.4
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	2,001.0	2,521.4
Department of the Air Force	25,042.8	24,789.7	23,204.7	23,322.8	7,137.3	7,439.3	11,014.9	11,830.4	9,049.8	9,755.4
Department of the Army	6,688.5	7,816.8	7,653.1	7,306.3	6,800.4	6,911.1	7,011.3	9,293.2	10,867.8	11,542.5
Department of the Navy	14,363.0	15,487.4	15,437.3	14,669.0	15,166.4	14,397.6	12,522.6	10,902.7	14,787.5	13,994.5
U.S. Space Force	na	na	na	na	na	na	na	na	4,337.8	4,962.7
Other defense agencies	16,325.4	14,233.4	14,406.5	13,969.8	10,725.8	9,667.2	11,298.4	12,855.2	11,322.7	13,803.2

TABLE 99

Federal outlays for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Education	101.6	97.2	344.8	318.0	212.2	245.8	235.3	226.4	227.2	260.4
Department of Energy	9,599.3	9,302.1	10,364.2	11,303.4	11,855.3	12,019.6	14,606.7	13,656.5	10,810.2	13,978.7
Advanced Research Projects Agency—Energy	142.4	143.6	187.2	245.2	237.9	269.2	250.9	247.1	269.8	365.0
Bonneville Power Administration	14.5	0.0	16.0	15.6	15.6	14.0	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	101.1	45.3	73.1	107.6	91.7	133.0	103.8	144.2	142.1	134.4
Energy Efficiency and Renewable Energy	909.8	704.9	960.5	1,043.1	1,142.1	1,280.0	1,341.0	1,451.2	1,447.2	1,612.1
Environmental Management	45.8	9.1	23.2	24.2	22.8	28.7	38.0	29.3	31.4	20.9
Fossil Energy	285.7	360.4	425.6	631.9	624.5	620.3	661.6	659.0	584.1	678.0
National Nuclear Security Administration	3,919.8	3,855.7	4,312.2	4,221.9	4,544.8	4,636.1	4,025.5	5,477.1	3,475.2	5,765.8
Defense Programs	2,648.2	2,568.1	2,921.5	2,925.9	2,980.1	3,167.0	2,536.7	3,359.5	2,070.3	4,263.9
Naval Nuclear Propulsion Program	1,040.1	994.0	1,093.7	1,083.4	1,215.7	1,220.0	1,172.8	1,788.6	1,113.2	1,140.3
Office of Defense Nuclear Nonproliferation	231.5	293.6	297.0	212.7	348.9	249.0	316.0	329.0	291.7	361.7
Nuclear Energy	361.2	263.4	323.9	760.4	832.6	811.1	846.0	1,109.5	1.2	0.7
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	36.3	50.7	51.1
Office of Science	3,819.1	3,919.7	4,042.4	4,253.3	4,343.4	4,227.3	7,340.0	4,502.9	4,808.5	5,350.6
Department of Health and Human Services	30,721.0	29,282.5	30,403.9	29,497.0	29,522.1	31,168.6	32,997.0	35,270.7	53,408.1	67,823.0
Administration for Children and Families	8.1	2.6	2.6	2.5	3.0	2.0	1.3	2.4	1.6	3.1
Administration for Community Living	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	91.8	92.9
Agency for Healthcare Research and Quality	0.0	365.0	364.0	364.0	334.0	324.0	334.0	338.0	338.0	338.0
Agency for Toxic Substances and Disease Registry	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	*	*
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	280.8	17,441.0	26,996.1
Centers for Disease Control and Prevention	445.3	300.5	198.0	275.3	198.0	208.0	200.1	187.2	217.7	239.2

TABLE 99

Federal outlays for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Centers for Medicare and Medicaid Services	33.8	20.0	33.6	24.0	29.5	29.8	230.7	5.8	31.3	31.9
Food and Drug Administration	315.7	322.8	348.3	336.3	455.3	435.0	427.5	443.7	415.3	506.5
Health Resources and Services Administration	20.3	36.6	37.8	41.1	41.0	45.8	33.7	26.6	25.0	16.4
National Institutes of Health	29,876.8	28,215.3	29,399.6	28,358.0	28,358.0	30,021.0	31,667.0	33,879.0	34,830.0	39,582.0
Office of the Secretary of Health and Human Services	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Department of Homeland Security	593.4	334.9	448.0	475.8	538.4	840.7	862.2	863.2	866.7	927.1
Countering Weapons of Mass Destruction Office	NA	NA	73.5	71.3	63.0	69.3	64.9	81.4	85.0	77.0
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	7.2	13.1	7.7	9.4
Science and Technology Directorate	572.7	314.0	350.5	380.0	454.4	750.6	752.2	724.0	736.3	789.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9	29.5
U.S. Coast Guard	20.7	20.8	24.0	24.5	20.9	20.9	16.5	22.1	4.9	10.3
U.S. Secret Service	NA	NA	NA	NA	NA	NA	1.2	1.9	9.9	11.9
Department of Housing and Urban Development	53.5	63.8	66.7	56.0	74.7	71.0	70.5	63.0	NA	NA
Department of the Interior	738.7	698.3	739.4	805.4	856.8	861.2	750.8	800.7	821.6	852.4
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	5.0	5.0	*	*
Bureau of Land Management	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8	15.8
Bureau of Ocean Energy Management	39.0	30.5	48.0	50.0	73.0	73.1	77.4	73.3	73.3	72.5
Bureau of Reclamation	10.0	10.1	12.0	9.8	20.9	27.4	23.4	23.2	27.5	26.4
Bureau of Safety and Environmental Enforcement	11.6	14.4	14.8	23.3	26.8	21.4	5.6	12.5	7.9	15.6
National Park Service	5.3	7.0	15.2	8.3	8.7	9.5	0.8	0.9	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	1.1	1.0	0.7	0.8

TABLE 99

Federal outlays for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	31.9	32.5	24.0	24.0	24.0	25.8	29.2
U.S. Geological Survey	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8	691.3
Department of Justice	67.0	109.7	160.5	56.9	69.1	23.8	19.7	19.6	23.9	20.6
Bureau of Prisons	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	8.1	8.7
Federal Bureau of Investigation	7.7	30.0	9.6	12.9	13.0	2.2	2.9	1.0	4.7	0.9
Office of Justice Programs	48.8	68.6	140.1	33.0	45.2	12.0	11.0	12.0	11.0	11.0
Department of Labor	18.8	14.7	12.3	12.5	8.0	3.1	3.3	2.8	3.0	2.5
Employee Benefits Security Administration	11.5	8.2	5.9	5.1	3.0	1.1	1.4	1.1	1.0	0.5
Occupational Safety and Health Administration	4.6	3.9	3.6	3.4	0.7	2.0	1.9	1.7	2.0	2.0
Pension Benefit Guaranty Corp.	2.7	2.6	2.9	4.1	4.3	0.0	0.0	NA	NA	NA
Department of State	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	40.0	43.0
Department of Transportation	719.2	659.8	786.1	697.2	719.0	681.6	629.9	668.9	650.8	720.9
Federal Aviation Administration	224.0	198.0	209.0	209.0	223.0	234.0	209.0	211.0	195.0	289.0
Federal Highway Administration	311.3	280.9	385.9	353.0	353.0	274.4	261.4	287.1	278.4	233.7
Federal Motor Carrier Safety Administration	6.7	6.9	7.5	7.6	10.6	11.7	10.3	7.1	6.9	8.5
Federal Railroad Administration	43.9	40.9	52.1	41.3	38.9	41.1	33.3	33.4	41.4	47.2
Federal Transit Administration	25.9	10.5	9.1	17.0	6.8	40.7	36.0	39.7	19.5	23.0
National Highway Traffic Safety Administration	82.6	95.0	93.0	46.0	49.0	55.0	53.0	64.0	67.2	63.4
Office of the Secretary of Transportation	13.9	15.6	13.9	11.5	18.5	11.4	16.4	8.5	24.3	27.7
Pipeline and Hazardous Materials Safety Administration	8.0	7.3	15.6	11.9	19.3	13.4	10.5	18.0	18.1	28.2
Research and Innovative Technology Administration	3.0	4.7	NA	NA	NA	NA	NA	NA	NA	NA
Department of the Treasury	75.6	74.1	76.4	66.5	85.2	10.5	37.7	44.7	44.7	52.6
Bureau of Engraving and Printing	5.0	9.4	9.4	9.5	18.8	9.2	37.7	44.5	44.5	52.4
Internal Revenue Service	69.0	64.5	64.4	53.7	64.6	0.0	0.0	0.0	0.0	0.0
U.S. Mint	1.6	0.1	2.6	3.4	1.8	1.3	0.0	0.2	0.2	0.2

TABLE 99

Federal outlays for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Veterans Affairs	614.8	639.0	608.3	612.1	583.1	594.1	644.0	685.0	778.0	762.0
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	6.8	8.0	6.8	6.4	5.0	6.4
Agency for International Development	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	194.3	194.3
Appalachian Regional Commission	0.6	0.5	0.6	0.6	0.4	0.6	0.6	0.6	0.9	0.5
Consumer Product Safety Commission	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.4	0.4
Environmental Protection Agency	576.3	522.8	530.9	515.6	508.0	493.6	487.4	485.3	488.5	521.8
Federal Communications Commission	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8	2.6
Federal Trade Commission	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	6.0	7.5
Library of Congress	1.0	1.0	1.0	1.1	1.6	1.8	3.3	1.9	2.8	2.7
National Aeronautics and Space Administration	10,427.0	11,265.4	11,128.1	12,150.2	11,936.7	10,528.0	10,765.1	13,260.0	10,481.0	9,103.9
National Archives and Records Administration	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	*	*
National Science Foundation	5,124.0	5,269.0	5,198.0	5,059.0	5,120.0	5,279.0	5,207.0	5,273.0	5,370.0	6,030.0
Nuclear Regulatory Commission	81.0	85.0	90.6	70.8	86.0	67.4	77.7	74.9	69.2	76.3
Patient-Centered Outcomes Research Trust Fund	41.1	74.2	93.6	244.2	354.1	1,345.0	491.7	578.5	469.8	390.9
RESTORE Act Centers of Excellence Research Grants Program	na	na	na	na	na	na	na	na	7.1	5.0
Smithsonian Institution	195.3	204.0	194.8	195.6	207.8	210.0	230.1	236.4	209.8	213.6
Social Security Administration	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	69.7	129.4
Tennessee Valley Authority	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.4	11.1
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	6.1	4.8	4.8
U.S. Postal Service	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	18.2	19.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level in that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) outlays. Those funds, previously included in DOD's development outlay totals, support the development

efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 outlays include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 100

Federal outlays for R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
U.S. Coast Guard	0.3	0.3	na	na	na	na	na	na	na	na	na
Department of Veterans Affairs	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.0	0.0	0.0
Other agencies											
Environmental Protection Agency	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
General Services Administration	0.6	*	0.0	0.0	0.0	0.0	NA	NA	NA	NA	NA
National Aeronautics and Space Administration	2,723.0	2,197.0	1,595.8	1,580.8	1,697.3	12.2	11.7	72.2	75.8	1,564.9	1,578.2
National Science Foundation	196.0	271.0	272.0	357.0	368.0	395.0	453.0	424.0	433.0	949.0	515.0
Smithsonian Institution	2.5	2.5	2.5	3.0	6.0	26.0	30.0	42.0	49.0	53.0	57.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FYs 2009 and 2010 outlays include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 101

Federal outlays for R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	2,470.5	1,859.5	2,243.9	2,405.1	2,228.1	3,222.6	3,844.0	3,287.0	4,785.8	6,700.9
Departments										
Department of Agriculture	69.6	24.5	19.1	18.4	20.4	15.2	38.5	48.9	75.5	159.7
Agricultural Research Service	58.1	15.0	9.7	8.5	5.3	5.7	22.8	39.3	66.0	148.0
Forest Service	9.8	7.9	7.5	7.9	13.0	9.3	15.6	9.6	9.4	11.7
Grain Inspection, Packers, and Stockyards Administration	1.7	1.6	1.9	2.0	2.0	0.2	na	na	na	na
Department of Commerce	290.2	179.8	179.9	196.4	211.5	183.5	292.0	385.7	261.4	344.7
National Institute of Standards and Technology	149.7	51.7	50.6	64.4	61.5	64.2	75.0	132.7	94.3	163.7
National Oceanic and Atmospheric Administration	140.6	128.1	129.3	132.0	150.0	119.3	217.0	253.0	167.1	181.0
Department of Defense	138.7	87.1	137.1	150.3	167.8	919.6	394.7	353.3	506.9	706.3
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	15.5	0.0
Department of the Air Force	135.7	67.8	111.3	118.8	122.3	161.2	179.1	205.1	192.8	132.2
Department of the Army	0.0	0.0	0.0	0.0	5.0	719.9	0.0	0.0	0.0	0.0
Department of the Navy	1.5	18.3	19.2	23.8	28.9	29.7	38.3	126.3	284.4	562.1
Other defense agencies	1.6	1.0	6.6	7.7	11.6	8.8	177.4	21.9	14.2	12.0
Department of Energy	714.3	558.6	669.3	992.0	997.9	1,167.6	2,065.4	1,507.8	1,789.8	2,407.1
Bonneville Power Administration	0.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	0.0	16.1	3.6	4.2	2.9	3.6	208.0	9.5	54.5	31.6
Fossil Energy	12.4	16.0	16.0	18.0	0.0	15.8	21.3	23.0	23.9	27.7
National Nuclear Security Administration	92.8	74.8	81.6	292.7	261.7	289.6	298.6	275.4	511.9	739.4
Defense Programs	52.9	74.7	59.8	137.6	101.9	89.5	189.3	275.4	255.9	397.0
Naval Nuclear Propulsion Program	39.9	0.1	21.8	155.1	159.8	200.1	109.2	0.0	247.0	331.0
Office of Defense Nuclear Nonproliferation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	11.4
Office of Science	609.1	437.4	568.1	677.1	733.3	858.7	1,537.6	1,199.9	1,199.5	1,608.5
Department of Health and Human Services	155.1	148.3	160.4	127.2	141.2	217.2	221.7	156.0	1,501.6	2,442.1
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	0.0	1,295.7	2,100.1
Centers for Medicare and Medicaid Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0	0.0
Food and Drug Administration	21.2	21.7	23.4	22.6	30.6	29.2	28.7	26.0	27.9	34.0
Health Resources and Services Administration	0.6	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	133.2	126.0	136.3	104.0	110.0	188.0	193.0	130.0	178.0	308.0
Department of Homeland Security	234.5	279.2	407.7	228.3	193.2	185.5	215.1	206.3	69.7	10.0
Science and Technology Directorate	233.3	278.0	406.5	227.0	191.9	184.2	213.9	205.0	69.7	10.0
U.S. Coast Guard	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0
Department of the Interior	5.8	6.9	5.5	7.2	8.2	3.2	3.6	3.7	5.0	9.1
Bureau of Reclamation	2.1	3.0	2.2	2.9	1.2	1.2	1.2	1.2	1.7	1.2
Bureau of Safety and Environmental Enforcement	3.8	3.9	3.4	4.3	7.1	2.0	2.4	2.6	3.3	8.0
Department of Labor	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Occupational Safety and Health Administration	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	21.1	21.6	20.1	21.6	29.4	34.5	31.2	37.7	51.9	36.8
Federal Aviation Administration	18.0	16.0	18.0	19.0	27.0	32.0	30.0	36.0	50.0	35.0

TABLE 101

Federal outlays for R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Federal Railroad Administration	3.1	5.6	2.1	2.6	2.4	2.5	1.2	1.7	1.9	1.8
Department of the Treasury	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	2.1	0.3
Bureau of Engraving and Printing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	0.0
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3	0.3
Other agencies										
Environmental Protection Agency	4.9	7.0	7.1	5.1	5.3	4.8	4.7	4.7	4.5	2.3
National Aeronautics and Space Administration	168.9	65.2	133.8	210.2	76.1	87.7	87.3	78.2	27.4	14.0
National Science Foundation	616.0	434.0	468.0	415.0	348.0	371.0	457.0	468.0	423.0	501.0
Nuclear Regulatory Commission	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.2
Smithsonian Institution	50.0	47.0	36.0	33.2	29.0	32.7	32.7	32.6	66.2	67.4

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FYs 2020 and 2021 outlays include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All agencies	88,562.4	98,013.3	107,794.2	116,068.6	122,619.6	123,854.7	129,431.2	129,049.9	144,758.1	146,967.8	139,703.3
Departments											
Department of Agriculture	2,076.0	2,090.6	2,136.0	2,281.6	2,318.6	2,386.2	2,372.3	2,246.0	2,344.7	2,615.4	2,376.9
Agricultural Marketing Service	4.8	5.2	4.8	9.0	7.9	6.3	6.4	5.0	4.3	4.4	4.3
Agricultural Research Service	1,098.3	1,163.6	1,143.2	1,258.6	1,226.8	1,294.0	1,240.9	1,145.6	1,187.2	1,359.6	1,151.6
Animal and Plant Health Inspection Service	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	28.9	30.1	29.0
Economic Research Service	65.6	67.0	68.4	70.8	74.0	75.0	92.0	77.8	78.9	86.4	81.1
Food Safety and Inspection Service	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4	0.6
Forest Service	250.0	268.0	307.2	314.9	315.9	321.6	345.3	315.9	375.7	426.3	370.4
Grain Inspection, Packers, and Stockyards Administration	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3	6.7
National Agricultural Statistics Service	4.2	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5	7.4
National Institute of Food and Agriculture	615.1	546.7	568.1	585.7	651.6	645.1	626.6	655.1	651.5	689.6	724.1
Rural Business-Cooperative Service	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	4.1	4.8	1.7
Department of Commerce	1,021.7	1,180.5	1,267.0	1,148.6	1,094.1	1,016.2	1,145.4	1,196.4	1,533.4	1,683.2	1,308.9
Economic Development Administration	0.6	0.5	0.5	0.2	0.5	0.2	0.8	20.7	28.3	19.0	15.5
National Institute of Standards and Technology	445.7	480.5	525.1	481.6	463.0	429.0	508.0	517.0	605.8	924.7	597.1
National Oceanic and Atmospheric Administration	501.0	651.3	695.4	618.5	600.3	558.2	606.9	627.1	863.3	684.7	629.0
National Telecommunications and Information Administration	50.4	19.6	23.5	24.2	6.9	6.7	7.0	7.0	6.9	7.6	7.8
U.S. Census Bureau	24.0	28.7	22.5	24.2	23.5	22.1	22.6	24.7	29.0	47.2	59.5
Department of Defense	40,129.3	45,777.8	52,148.9	58,067.6	63,661.1	65,933.9	72,290.5	71,996.6	75,973.7	73,623.9	75,328.2
Defense Advanced Research Projects Agency	na	na	na	na	na	na	na	na	na	na	2,846.4
Defense agencies and activities	9,380.8	12,359.8	12,641.3	13,188.7	15,406.6	14,338.4	15,940.0	15,946.7	16,241.7	16,264.7	na
Department of the Air Force	14,583.9	14,763.5	18,265.8	20,338.5	20,078.0	21,699.2	25,292.0	25,338.9	28,051.4	26,648.7	26,641.5
Department of the Army	6,223.7	7,076.6	7,609.5	9,223.0	10,208.3	11,318.3	11,628.6	11,877.8	11,908.5	10,853.2	9,831.8
Department of the Navy	9,710.3	11,344.5	13,396.6	15,019.3	17,660.7	18,399.1	19,248.1	18,648.6	19,586.0	19,660.3	17,814.0
Operational Test and Evaluation, Director	205.3	233.5	235.7	298.2	307.5	178.9	181.9	184.7	186.2	196.9	NA
Test and Evaluation, Deputy Under Secretary of Defense	25.3	na	na	na	na	na	na	na	na	na	na
Other defense agencies	na	na	na	na	na	na	na	na	na	na	18,194.6
Department of Education	277.6	285.6	302.9	311.4	316.0	337.0	333.1	328.1	322.4	362.8	346.1
Department of Energy	7,651.4	8,072.2	8,436.0	8,560.5	8,596.7	8,340.1	8,629.8	8,990.3	11,562.2	11,644.9	10,680.4
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	0.0	0.0	377.8	174.9
Bonneville Power Administration	NA	22.9	23.3	24.7	11.3	10.7	11.1	13.7	8.1	13.1	13.2
Civilian Radioactive Waste Management	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	80.3	133.5	92.5	82.7	87.2	113.3	88.8
Energy Efficiency and Renewable Energy	NA	744.7	688.5	603.6	576.7	456.7	768.7	794.0	1,790.8	1,998.1	902.5

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Environmental Management	NA	160.3	69.4	42.8	49.8	34.0	18.7	19.4	30.2	89.8	67.5
Fossil Energy	NA	373.5	643.8	532.3	572.7	455.0	430.6	417.0	504.8	503.8	429.6
National Nuclear Security Administration	NA	3,728.3	3,923.3	4,036.3	3,922.0	3,861.9	3,782.8	3,981.3	3,716.0	3,638.5	4,164.3
Defense Programs	NA	2,770.0	2,996.7	3,135.1	3,001.3	2,865.2	2,826.8	2,939.4	2,608.2	2,406.7	2,866.5
Fissile Materials Disposition	NA	27.4	25.1	1.0	0.0	0.0	0.0	NA	NA	NA	NA
Naval Nuclear Propulsion Program	NA	665.5	678.0	736.9	775.2	753.4	751.1	742.9	792.7	945.1	974.3
Office of Defense Nuclear Nonproliferation	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	286.7	323.5
Nuclear Energy	NA	42.5	47.1	74.3	84.5	89.0	80.9	133.1	116.0	368.1	387.8
Office of Intelligence	NA	5.3	4.0	0.0	NA	NA	NA	NA	NA	NA	NA
Office of Science	NA	2,932.2	2,960.7	3,167.8	3,245.9	3,246.4	3,434.1	3,547.8	5,309.1	4,542.4	4,451.8
Department of Health and Human Services	21,641.9	24,259.1	27,214.8	28,563.8	29,172.5	29,126.5	29,556.1	29,701.1	35,735.9	37,616.9	30,928.0
Administration for Children and Families	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8	9.6
Administration for Community Living	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	269.7	298.7	308.7	303.7	318.7	318.7	318.9	334.4	378.1	852.5	370.7
Agency for Toxic Substances and Disease Registry	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8	5.1
Centers for Disease Control and Prevention	544.0	521.0	564.0	539.8	510.8	688.5	678.7	545.1	420.3	446.9	385.9
Centers for Medicare and Medicaid Services	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7	35.4
Food and Drug Administration	160.4	149.7	145.6	140.8	142.8	147.2	137.7	143.0	171.2	223.2	233.7
Health Resources and Services Administration	51.6	54.7	43.5	48.0	53.4	24.1	23.9	62.8	57.0	67.0	37.4
National Institutes of Health	19,771.3	22,343.5	25,964.6	27,311.8	27,926.0	27,778.1	28,257.4	28,539.6	34,640.7	35,881.7	29,830.3
Office of the Secretary of Health and Human Services	27.4	17.4	22.5	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Office of Public Health and Science	2.5	2.5	2.6	NA	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Substance Abuse and Mental Health Services Administration	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA	NA
Department of Homeland Security	na	na	NA	1,063.2	1,453.9	1,857.2	1,106.4	1,056.8	983.6	1,131.8	1,127.5
Science and Technology Directorate	na	na	NA	908.4	1,258.0	1,823.0	1,084.0	1,036.0	962.0	1,106.0	1,105.0
Transportation Security Administration	na	na	NA	137.9	180.5	11.7	3.8	0.0	0.0	NA	NA
U.S. Coast Guard	na	na	NA	16.0	14.4	21.5	17.8	20.1	21.6	25.8	22.5
U.S. Secret Service	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA	NA
Department of Housing and Urban Development	52.9	45.3	39.0	46.6	43.5	33.5	40.4	29.6	33.2	61.7	72.9
Department of the Interior	622.1	634.9	600.3	612.5	597.0	608.5	624.7	645.3	738.8	728.0	716.5
Bureau of Ocean Energy Management	27.0	33.3	28.8	29.8	29.9	32.1	27.6	35.2	37.6	46.1	52.3
Bureau of Reclamation	9.7	10.4	11.0	16.3	17.3	11.1	15.5	15.2	13.1	13.3	15.1
National Park Service	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6	9.2
U.S. Geological Survey	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1	640.0
Department of Justice	103.4	99.2	148.2	105.3	127.5	127.9	184.4	114.5	103.4	125.4	102.3

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bureau of Prisons	14.1	8.7	9.7	10.8	12.7	12.2	12.7	10.6	10.5	10.8	11.6
Federal Bureau of Investigation	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0	17.7
Immigration and Naturalization Service	0.9	0.0	na	na	na	na	na	na	na	na	na
Office of Justice Programs	69.3	56.9	95.7	60.5	81.3	81.5	100.9	77.8	78.4	84.6	72.9
Department of Labor	97.4	166.4	189.1	199.4	164.4	95.3	49.6	42.5	31.4	14.3	55.6
Bureau of Labor Statistics	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA	NA
Employee Benefits Security Administration	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8	48.5
Employment and Training Administration	60.9	137.1	160.0	170.0	133.7	64.1	18.8	10.7	22.4	NA	NA
Occupational Safety and Health Administration	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9	4.3
Office of the Secretary of Labor	5.3	1.2	1.8	0.2	0.5	0.3	0.3	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	2.4	2.6	2.8
Department of State	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9	3.3
Department of Transportation	690.5	867.2	711.8	647.0	436.7	838.0	811.0	825.2	846.2	929.2	861.8
Federal Aviation Administration	300.6	359.6	262.6	234.2	243.7	277.0	259.8	274.3	316.1	408.7	347.2
Federal Highway Administration	240.8	258.3	305.2	323.4	73.9	400.1	404.7	377.3	347.8	336.8	344.1
Federal Motor Carrier Safety Administration	11.4	3.7	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.9	6.3
Federal Railroad Administration	26.2	34.1	33.1	29.9	31.8	49.0	39.6	39.4	41.7	43.8	47.1
Federal Transit Administration	8.0	5.8	7.1	4.6	4.2	16.6	6.0	9.5	10.4	22.6	23.8
National Highway Traffic Safety Administration	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8	71.0
Office of the Secretary of Transportation	13.0	18.4	21.0	31.8	21.0	14.8	6.5	13.5	20.5	23.5	9.3
Pipeline and Hazardous Materials Safety Administration	na	na	na	10.0	13.9	15.2	18.2	8.9	9.8	10.0	7.9
Research and Innovative Technology Administration	na	na	na	0.0	1.5	2.5	2.7	10.7	11.1	6.0	5.1
Research and Special Programs Administration	8.4	10.2	10.6	na	na	na	na	na	na	na	na
Transportation Security Administration	na	95.0	na	na	na	na	na	na	na	na	na
U.S. Coast Guard	23.8	22.4	na	na	na	na	na	na	na	na	na
Department of the Treasury	67.7	74.4	60.0	62.4	66.4	68.8	65.2	65.5	68.6	68.5	77.6
Bureau of Engraving and Printing	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2	5.8
Internal Revenue Service	57.3	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3	70.8
Office of Thrift Supervision	0.1	0.1	NA	NA	NA	NA	NA	NA	NA	NA	na
U.S. Customs Service	4.0	10.6	na	na	na	na	na	na	na	na	na
U.S. Mint	0.8	0.3	0.7	1.0	2.4	7.4	5.1	0.6	0.8	1.1	1.0
U.S. Secret Service	0.7	0.8	na	na	na	na	na	na	na	na	na
Department of Veterans Affairs	345.3	329.2	365.7	405.6	402.3	412.0	446.5	480.0	510.0	563.0	612.9
Other agencies											
Agency for International Development	267.0	269.8	286.0	264.8	257.5	255.0	234.5	123.8	160.1	84.3	119.2
Appalachian Regional Commission	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6	0.4

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Consumer Product Safety Commission	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	472.5	415.2	567.1	661.9	641.4	621.5	576.0	532.0	552.8	572.3	581.7
Federal Communications Commission	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7	3.7
Federal Trade Commission	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0	2.7
General Services Administration	*	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	NA
Library of Congress	3.1	3.0	1.8	18.0	8.6	7.3	7.2	1.4	0.8	1.4	1.5
National Aeronautics and Space Administration	9,524.2	9,726.5	9,158.2	8,654.1	8,928.5	7,250.0	6,205.8	5,847.1	5,957.6	8,691.3	8,429.0
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6	3.1
National Science Foundation	3,328.7	3,500.8	3,943.8	4,166.0	4,098.3	4,239.5	4,406.9	4,506.4	6,924.8	6,073.4	5,536.6
Nuclear Regulatory Commission	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4	83.8
Patient-Centered Outcomes Research Trust Fund	na	na	na	na	na	na	na	na	na	na	41.1
Smithsonian Institution	101.0	109.0	107.0	110.8	115.1	146.4	186.0	188.0	226.7	213.0	248.7
Social Security Administration	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0	53.0
U.S. Agency for Global Media	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	140,670.2	127,625.5	132,779.0	131,578.3	118,273.8	121,626.6	133,277.5	146,800.7	173,552.9	185,408.1
Departments										
Department of Agriculture	2,187.6	2,031.2	2,269.0	2,352.0	2,380.4	2,575.2	2,522.7	2,666.1	3,433.5	2,769.7
Agricultural Marketing Service	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0	7.0
Agricultural Research Service	1,094.6	1,017.0	1,123.2	1,132.6	1,152.0	1,317.6	1,229.0	1,311.7	2,203.9	1,607.0
Animal and Plant Health Inspection Service	37.4	36.9	39.6	40.2	40.3	39.5	38.8	39.5	39.8	41.9
Economic Research Service	77.2	71.0	77.6	85.1	85.1	86.4	86.5	85.6	81.7	87.0
Foreign Agricultural Service	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.0	0.0
Forest Service	340.5	337.3	342.9	339.7	354.0	336.9	342.7	336.8	351.4	276.6
Grain Inspection, Packers, and Stockyards Administration	6.7	6.2	7.6	8.1	8.0	0.3	na	na	na	na
National Agricultural Statistics Service	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0	9.5
National Institute of Food and Agriculture	614.2	546.1	657.0	726.1	721.3	774.4	804.9	871.4	737.9	737.9
Rural Business-Cooperative Service	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	2.8	2.8
Department of Commerce	1,230.7	1,293.9	1,567.8	1,519.4	1,635.6	1,847.1	1,832.3	1,999.0	1,980.9	2,432.7
National Institute of Standards and Technology	548.1	608.6	665.7	673.6	750.6	806.6	791.1	831.3	877.8	1,276.1
National Oceanic and Atmospheric Administration	573.4	546.7	633.8	691.9	674.9	811.9	922.2	1,064.2	984.3	1,024.9
National Telecommunications and Information Administration	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	7.7	11.2
U.S. Census Bureau	101.7	131.3	258.8	141.6	199.6	220.3	109.9	95.6	111.1	120.5
Department of Defense	73,973.6	63,654.7	65,128.6	61,683.0	44,926.7	45,163.8	53,444.0	59,389.2	67,006.8	69,456.0
Defense Advanced Research Projects Agency	2,749.7	2,371.8	2,822.5	2,815.6	2,933.4	2,894.5	3,018.2	3,321.0	3,664.3	3,608.2
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	2,885.9	2,718.0
Department of the Air Force	27,688.3	23,599.7	24,331.1	22,443.1	7,441.1	8,324.4	11,412.8	15,269.4	11,923.9	11,539.8
Department of the Army	9,219.8	7,883.3	7,332.1	6,764.3	6,373.4	7,530.8	8,581.3	10,274.8	10,786.4	12,222.1
Department of the Navy	17,753.1	15,439.9	15,590.6	15,525.4	16,682.4	15,284.5	15,525.0	15,484.4	19,158.5	18,840.9
U.S. Space Force	na	na	na	na	na	na	na	na	4,385.7	5,038.9
Other defense agencies	16,562.7	14,360.1	15,052.4	14,134.6	11,496.5	11,129.5	14,906.8	15,039.6	14,202.1	15,488.1

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Education	338.0	309.9	322.0	251.3	244.4	261.8	266.2	235.8	240.1	379.2
Department of Energy	10,635.2	10,397.1	11,296.3	12,343.0	13,343.2	13,583.9	14,894.1	16,621.9	15,778.0	17,241.2
Advanced Research Projects Agency—Energy	102.8	182.1	260.9	241.6	299.3	273.8	159.9	405.0	438.0	427.0
Bonneville Power Administration	14.5	14.4	16.0	15.6	15.6	14.0	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	101.3	83.0	103.6	97.2	112.4	133.0	145.8	137.7	139.8	133.8
Energy Efficiency and Renewable Energy	986.1	922.3	870.0	1,082.8	1,291.3	1,444.6	1,913.3	2,001.3	2,149.5	2,015.3
Environmental Management	45.8	9.1	27.6	25.1	29.7	31.4	38.0	26.1	22.2	29.3
Fossil Energy	382.7	357.5	441.7	539.8	608.7	620.3	682.9	682.0	708.0	714.0
National Nuclear Security Administration	4,126.7	4,255.2	4,532.2	4,527.6	4,818.7	4,739.9	4,531.0	6,077.9	4,557.6	6,435.2
Defense Programs	2,815.2	2,967.5	3,119.7	3,076.4	3,198.0	3,070.7	2,831.4	3,997.8	2,625.0	4,299.7
Naval Nuclear Propulsion Program	1,080.0	994.1	1,115.5	1,238.5	1,375.5	1,420.1	1,420.0	1,788.6	1,634.4	1,774.4
Office of Defense Nuclear Nonproliferation	231.5	293.6	297.0	212.7	245.2	249.0	279.5	291.5	298.1	361.0
Nuclear Energy	361.2	263.4	323.9	728.1	762.8	891.3	1,115.6	606.4	573.2	517.6
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	51.9	50.7	51.1
Office of Science	4,514.0	4,309.9	4,720.4	5,085.4	5,404.8	5,435.7	6,307.6	6,633.6	7,139.0	6,918.0
Department of Health and Human Services	31,335.8	29,512.8	30,799.1	30,425.5	32,366.8	33,901.8	37,115.8	39,434.2	61,774.8	71,189.0
Administration for Children and Families	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6	3.1
Administration for Community Living	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	90.4	91.9
Agency for Healthcare Research and Quality	365.8	365.0	364.0	364.0	334.0	324.0	334.0	338.0	338.0	308.1
Agency for Toxic Substances and Disease Registry	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	9.6	9.6
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	736.2	16,962.2	27,478.7
Centers for Disease Control and Prevention	512.4	362.9	408.9	489.3	521.2	475.5	451.1	419.4	496.8	543.1

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Centers for Medicare and Medicaid Services	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	223.6	228.0
Food and Drug Administration	358.9	364.3	395.1	382.4	491.2	379.6	485.1	519.1	484.3	519.8
Health Resources and Services Administration	38.2	37.3	38.5	41.7	41.5	46.3	36.3	32.6	34.9	33.8
National Institutes of Health	30,010.1	28,341.3	29,535.9	29,026.0	30,843.0	32,542.0	35,473.0	37,146.0	43,117.0	41,956.0
Office of the Secretary of Health and Human Services	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Department of Homeland Security	832.2	718.8	943.8	1,645.2	689.2	869.9	913.1	648.5	507.5	541.0
Countering Weapons of Mass Destruction Office	NA	NA	84.4	71.3	63.0	69.3	29.9	81.4	37.5	35.9
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	7.2	13.1	7.7	9.4
Science and Technology Directorate	792.0	695.9	832.0	1,553.0	601.4	777.8	832.0	510.5	421.8	444.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9	29.5
U.S. Coast Guard	40.2	22.9	27.4	20.9	24.7	22.8	22.8	20.8	4.9	10.3
U.S. Secret Service	NA	NA	NA	NA	NA	NA	1.0	1.9	12.7	11.9
Department of Housing and Urban Development	89.6	67.4	54.3	58.5	66.8	63.8	62.0	61.0	NA	NA
Department of the Interior	742.7	717.3	762.4	808.7	859.9	868.1	768.6	831.5	844.4	891.1
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	5.0	5.0	*	*
Bureau of Land Management	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8	15.8
Bureau of Ocean Energy Management	39.0	39.5	48.0	50.4	72.2	75.7	78.3	85.5	72.9	81.7
Bureau of Reclamation	12.0	13.0	14.2	12.7	22.0	28.6	22.6	24.3	29.2	27.5
Bureau of Safety and Environmental Enforcement	13.2	21.4	35.6	25.3	29.5	15.7	6.8	12.6	13.4	29.7
National Park Service	5.6	7.0	15.2	8.3	8.7	9.5	9.9	10.1	10.2	10.2
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	0.0	0.3	0.6	2.2

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7	32.7
U.S. Geological Survey	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8	691.3
Department of Justice	85.0	118.7	160.5	149.7	208.0	126.9	106.6	121.2	96.4	99.5
Bureau of Prisons	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	8.1	8.7
Federal Bureau of Investigation	7.7	39.0	9.6	12.9	13.0	2.2	2.9	1.0	4.7	0.9
Office of Justice Programs	66.8	68.6	140.1	125.8	184.0	115.1	98.0	113.6	83.6	89.9
Department of Labor	21.5	16.3	14.1	14.2	9.6	4.6	4.8	4.4	4.7	4.3
Employee Benefits Security Administration	12.8	9.6	7.5	6.5	4.6	2.6	3.0	2.6	2.7	2.3
Occupational Safety and Health Administration	6.0	4.2	3.6	3.4	0.7	2.0	1.9	1.7	2.0	2.0
Pension Benefit Guaranty Corp.	2.7	2.6	3.0	4.3	4.3	0.0	0.0	NA	NA	NA
Department of State	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	40.0	43.0
Department of Transportation	936.1	875.8	847.7	884.5	961.5	987.0	1,076.6	1,051.7	1,224.5	1,180.6
Federal Aviation Administration	360.5	310.5	296.9	339.7	425.8	435.3	403.6	424.3	470.3	563.2
Federal Highway Administration	403.3	397.4	397.6	313.0	332.2	351.7	490.6	451.6	512.2	376.6
Federal Motor Carrier Safety Administration	7.3	7.8	7.5	7.6	10.6	11.7	9.3	7.8	8.9	11.4
Federal Railroad Administration	46.1	52.7	43.1	46.7	43.6	45.9	49.0	41.4	48.3	49.4
Federal Transit Administration	25.5	16.4	8.2	81.7	35.3	55.4	10.2	2.8	40.2	54.0
National Highway Traffic Safety Administration	68.7	64.8	65.1	62.5	86.6	69.0	76.0	76.3	68.9	66.0
Office of the Secretary of Transportation	8.9	10.9	15.1	11.5	17.9	11.1	16.4	19.8	34.4	41.0
Pipeline and Hazardous Materials Safety Administration	11.0	10.7	14.2	21.8	9.6	7.0	21.6	27.8	41.4	19.0
Research and Innovative Technology Administration	4.9	4.7	NA	NA	NA	NA	NA	NA	NA	NA
Department of the Treasury	75.6	74.1	74.0	73.1	85.2	8.2	37.7	61.3	60.6	63.4
Bureau of Engraving and Printing	5.0	9.4	9.4	9.5	18.8	6.9	37.7	58.8	60.4	63.3
Internal Revenue Service	69.0	64.5	64.0	63.6	64.6	0.0	0.0	0.0	0.0	0.0
U.S. Mint	1.6	0.2	0.6	*	1.8	1.3	0.0	2.5	0.2	0.1

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Veterans Affairs	614.8	639.0	588.8	661.6	695.2	682.3	1,349.0	1,507.9	1,565.1	1,689.4
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	6.8	8.0	6.8	6.4	5.0	6.4
Agency for International Development	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	194.3	194.3
Appalachian Regional Commission	0.6	0.2	0.6	0.4	0.9	0.1	0.5	0.9	0.7	*
Consumer Product Safety Commission	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.4	0.4
Environmental Protection Agency	581.1	529.7	538.0	520.7	513.3	498.4	492.1	490.0	493.0	524.1
Federal Communications Commission	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8	2.6
Federal Trade Commission	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	6.0	7.5
Library of Congress	1.1	1.3	1.2	1.3	1.7	1.9	3.3	1.9	2.8	2.7
National Aeronautics and Space Administration	10,758.3	10,494.3	10,880.6	11,413.1	12,461.7	12,638.1	10,813.9	13,616.4	10,573.6	8,833.5
National Archives and Records Administration	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0	0.0
National Science Foundation	5,705.4	5,328.5	5,800.2	5,989.7	6,022.3	5,945.7	6,358.0	6,648.3	6,792.5	6,938.9
Nuclear Regulatory Commission	82.6	75.9	85.0	91.9	80.6	67.4	77.7	74.9	69.2	76.3
Patient-Centered Outcomes Research Trust Fund	41.1	334.4	282.6	152.1	114.9	883.9	491.7	578.4	469.7	390.9
RESTORE Act Centers of Excellence Research Grants Program	na	na	na	na	na	na	na	na	9.2	5.0
Smithsonian Institution	246.2	240.3	230.9	229.0	235.0	240.5	260.6	269.0	276.0	281.0
Social Security Administration	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	69.7	129.4
Tennessee Valley Authority	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.4	11.1
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	6.1	4.8	4.8
U.S. Postal Service	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	18.2	19.0

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the

development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 104

Federal obligations for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All agencies	84,492.5	93,708.6	103,527.7	112,074.5	118,848.5	121,729.9	127,262.9	127,106.1	141,090.1	140,354.5	135,532.6
Departments											
Department of Agriculture	1,959.1	1,971.8	2,039.6	2,102.2	2,184.3	2,213.7	2,248.4	2,202.1	2,267.2	2,364.2	2,341.3
Agricultural Marketing Service	4.8	5.2	4.8	9.0	7.9	6.3	6.4	5.0	4.3	4.4	4.3
Agricultural Research Service	994.4	1,059.8	1,062.0	1,098.1	1,107.7	1,134.9	1,142.0	1,122.6	1,141.2	1,178.3	1,133.0
Animal and Plant Health Inspection Service	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	28.9	30.1	29.0
Economic Research Service	65.6	67.0	68.4	70.8	74.0	75.0	92.0	77.8	78.9	86.4	81.1
Food Safety and Inspection Service	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4	0.6
Forest Service	237.0	253.0	292.0	296.0	300.7	308.1	320.3	295.0	344.1	356.5	353.5
Grain Inspection, Packers, and Stockyards Administration	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3	6.7
National Agricultural Statistics Service	4.2	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5	7.4
National Institute of Food and Agriculture	615.1	546.7	568.1	585.7	651.6	645.1	626.6	655.1	651.5	689.6	724.1
Rural Business-Cooperative Service	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	4.1	4.8	1.7
Department of Commerce	997.9	1,151.4	1,208.0	1,058.9	1,033.4	941.7	1,027.7	1,044.7	1,146.9	1,274.4	1,067.1
Economic Development Administration	0.6	0.5	0.5	0.2	0.5	0.2	0.8	2.2	2.9	6.8	0.6
National Institute of Standards and Technology	422.0	451.4	476.0	444.2	418.7	385.7	456.5	430.0	500.5	687.4	506.9
National Oceanic and Atmospheric Administration	501.0	651.3	685.4	566.3	583.8	526.9	540.7	580.8	607.5	525.4	492.3
National Telecommunications and Information Administration	50.4	19.6	23.5	24.2	6.9	6.7	7.0	7.0	6.9	7.6	7.8
U.S. Census Bureau	24.0	28.7	22.5	24.2	23.5	22.1	22.6	24.7	29.0	47.2	59.5
Department of Defense	39,981.9	45,412.7	51,897.5	57,792.9	63,388.3	65,870.7	72,211.2	71,833.3	75,856.6	73,471.1	75,157.9
Defense Advanced Research Projects Agency	na	na	na	na	na	na	na	na	na	na	2,846.4
Defense agencies and activities	9,376.1	12,075.7	12,503.4	13,067.6	15,324.5	14,303.6	15,903.8	15,905.6	16,240.9	16,264.5	na
Department of the Air Force	14,552.0	14,740.0	18,259.0	20,319.0	19,971.0	21,687.9	25,264.0	25,232.3	27,950.4	26,521.4	26,500.1
Department of the Army	6,223.7	7,076.6	7,609.5	9,223.0	10,208.3	11,318.3	11,628.6	11,877.8	11,908.5	10,853.2	9,831.8
Department of the Navy	9,599.6	11,287.0	13,290.0	14,885.2	17,577.0	18,381.9	19,233.0	18,633.0	19,570.6	19,635.0	17,792.5
Operational Test and Evaluation, Director	205.3	233.5	235.7	298.2	307.5	178.9	181.9	184.7	186.2	196.9	NA
Test and Evaluation, Deputy Under Secretary of Defense	25.3	na	na	na	na	na	na	na	na	na	na
Other defense agencies	na	na	na	na	na	na	na	na	na	na	18,187.2
Department of Education	277.6	285.6	302.9	311.4	316.0	337.0	333.1	328.1	322.4	362.8	346.1
Department of Energy	6,668.0	7,044.2	7,411.9	7,553.8	7,733.4	7,562.0	7,877.4	8,238.8	9,889.9	10,685.5	9,945.8
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	0.0	0.0	377.8	174.9
Bonneville Power Administration	NA	22.9	23.3	24.7	11.3	10.7	11.1	13.7	8.1	13.1	13.2
Civilian Radioactive Waste Management	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	80.3	133.5	92.5	82.7	87.2	113.3	88.8
Energy Efficiency and Renewable Energy	NA	739.8	682.3	583.9	557.3	430.6	661.6	729.1	1,583.7	1,895.2	863.2

TABLE 104

Federal obligations for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Environmental Management	NA	160.3	69.4	42.8	49.8	34.0	18.7	19.4	30.2	89.8	67.5
Fossil Energy	NA	363.3	639.3	526.1	566.4	435.7	418.6	403.9	485.8	484.8	410.6
National Nuclear Security Administration	NA	3,302.4	3,475.4	3,600.2	3,618.8	3,557.3	3,590.9	3,718.2	3,547.7	3,448.4	4,036.3
Defense Programs	NA	2,372.7	2,576.7	2,727.4	2,732.9	2,593.6	2,655.9	2,707.4	2,476.2	2,247.4	2,771.0
Fissile Materials Disposition	NA	27.4	25.1	1.0	0.0	0.0	0.0	NA	NA	NA	NA
Naval Nuclear Propulsion Program	NA	637.0	650.0	708.6	740.5	720.4	730.3	711.8	756.4	914.3	941.7
Office of Defense Nuclear Nonproliferation	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	286.7	323.5
Nuclear Energy	NA	42.5	47.1	74.3	84.5	89.0	80.9	133.1	116.0	368.1	387.8
Office of Intelligence	NA	5.3	4.0	0.0	NA	NA	NA	NA	NA	NA	NA
Office of Science	NA	2,345.1	2,395.3	2,623.1	2,711.5	2,818.3	2,992.5	3,137.3	4,031.2	3,895.1	3,903.5
Department of Health and Human Services	21,341.9	24,011.6	26,399.1	28,133.2	28,745.5	28,765.6	29,301.5	29,553.7	35,584.0	35,934.5	30,848.8
Administration for Children and Families	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8	9.6
Administration for Community Living	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	269.7	298.7	308.7	303.7	318.7	318.7	318.9	334.4	378.1	852.5	370.7
Agency for Toxic Substances and Disease Registry	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8	5.1
Centers for Disease Control and Prevention	544.0	521.0	564.0	539.8	510.8	544.6	544.3	538.6	420.3	446.9	385.9
Centers for Medicare and Medicaid Services	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7	35.4
Food and Drug Administration	151.6	136.3	138.3	132.3	142.1	143.3	129.3	137.9	166.4	210.6	225.2
Health Resources and Services Administration	51.0	54.1	43.2	47.4	52.9	23.6	23.2	62.1	56.3	66.3	36.8
National Institutes of Health	19,480.7	22,110.1	25,156.4	26,890.4	27,500.3	27,565.6	28,146.3	28,404.4	34,494.3	34,212.6	29,760.2
Office of the Secretary of Health and Human Services	27.4	17.4	22.5	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Office of Public Health and Science	2.5	2.5	2.6	NA	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Substance Abuse and Mental Health Services Administration	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA	NA
Department of Homeland Security	na	na	NA	946.0	1,362.2	1,725.4	862.9	837.2	672.5	674.1	559.1
Science and Technology Directorate	na	na	NA	792.2	1,167.3	1,691.6	841.0	816.9	652.4	649.4	537.8
Transportation Security Administration	na	na	NA	137.9	180.5	11.7	3.8	0.0	0.0	NA	NA
U.S. Coast Guard	na	na	NA	15.0	13.4	21.2	17.2	19.6	20.1	24.7	21.3
U.S. Secret Service	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA	NA
Department of Housing and Urban Development	52.9	45.3	39.0	46.6	43.5	33.5	40.4	29.6	33.2	61.7	72.9
Department of the Interior	619.7	632.8	596.7	604.6	589.5	603.0	615.1	636.2	732.4	721.7	706.0
Bureau of Ocean Energy Management	24.5	31.2	26.7	27.2	27.1	28.9	25.0	32.4	35.7	43.4	45.4
Bureau of Reclamation	9.7	10.4	9.5	10.9	12.7	8.8	8.5	8.9	8.5	9.7	11.5
National Park Service	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6	9.2
U.S. Geological Survey	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1	640.0
Department of Justice	103.4	99.2	148.2	105.3	127.5	127.9	176.2	113.4	103.4	125.4	102.3

TABLE 104

Federal obligations for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bureau of Prisons	14.1	8.7	9.7	10.8	12.7	12.2	12.7	10.6	10.5	10.8	11.6
Federal Bureau of Investigation	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0	17.7
Immigration and Naturalization Service	0.9	0.0	na	na	na	na	na	na	na	na	na
Office of Justice Programs	69.3	56.9	95.7	60.5	81.3	81.5	92.7	76.8	78.4	84.6	72.9
Department of Labor	97.4	166.4	189.1	199.4	164.4	95.3	49.6	42.5	31.4	14.3	55.6
Bureau of Labor Statistics	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA	NA
Employee Benefits Security Administration	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8	48.5
Employment and Training Administration	60.9	137.1	160.0	170.0	133.7	64.1	18.8	10.7	22.4	NA	NA
Occupational Safety and Health Administration	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9	4.3
Office of the Secretary of Labor	5.3	1.2	1.8	0.2	0.5	0.3	0.3	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	2.4	2.6	2.8
Department of State	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9	3.3
Department of Transportation	674.4	815.5	693.3	629.3	418.4	819.2	791.2	806.1	826.0	908.1	841.4
Federal Aviation Administration	286.9	345.1	245.0	217.8	226.6	260.0	241.9	257.1	297.7	390.4	329.6
Federal Highway Administration	240.8	258.3	305.2	323.4	73.9	400.1	404.7	377.3	347.8	336.8	344.1
Federal Motor Carrier Safety Administration	11.4	3.7	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.9	6.3
Federal Railroad Administration	24.1	33.2	32.2	28.6	30.7	47.2	37.7	37.5	39.8	41.1	44.4
Federal Transit Administration	8.0	5.8	7.1	4.6	4.2	16.6	6.0	9.5	10.4	22.6	23.8
National Highway Traffic Safety Administration	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8	71.0
Office of the Secretary of Transportation	13.0	18.4	21.0	31.8	21.0	14.8	6.5	13.5	20.5	23.5	9.3
Pipeline and Hazardous Materials Safety Administration	na	na	na	10.0	13.9	15.2	18.2	8.9	9.8	10.0	7.9
Research and Innovative Technology Administration	na	na	na	0.0	1.5	2.5	2.7	10.7	11.1	6.0	5.1
Research and Special Programs Administration	8.4	10.2	10.6	na	na	na	na	na	na	na	na
Transportation Security Administration	na	59.0	na	na	na	na	na	na	na	na	na
U.S. Coast Guard	23.5	22.0	na	na	na	na	na	na	na	na	na
Department of the Treasury	67.7	74.4	60.0	62.4	66.4	65.1	63.6	65.5	68.6	68.5	77.6
Bureau of Engraving and Printing	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2	5.8
Internal Revenue Service	57.3	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3	70.8
Office of Thrift Supervision	0.1	0.1	NA	NA	NA	NA	NA	NA	NA	NA	na
U.S. Customs Service	4.0	10.6	na	na	na	na	na	na	na	na	na
U.S. Mint	0.8	0.3	0.7	1.0	2.4	3.7	3.5	0.6	0.8	1.1	1.0
U.S. Secret Service	0.7	0.8	na	na	na	na	na	na	na	na	na
Department of Veterans Affairs	345.0	328.8	365.4	405.2	402.0	411.6	446.1	479.6	510.0	563.0	612.9
Other agencies											
Agency for International Development	267.0	269.8	286.0	264.8	257.5	255.0	234.5	123.8	160.1	84.3	119.2
Appalachian Regional Commission	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6	0.4

TABLE 104

Federal obligations for research and development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Consumer Product Safety Commission	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	450.5	415.2	567.1	661.9	641.4	621.5	576.0	532.0	552.8	572.3	577.0
Federal Communications Commission	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7	3.7
Federal Trade Commission	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0	2.7
Library of Congress	3.1	3.0	1.8	18.0	8.6	7.3	7.2	1.4	0.8	1.4	1.5
National Aeronautics and Space Administration	7,355.0	7,508.2	7,499.0	7,182.5	7,394.8	7,211.0	6,126.2	5,827.5	5,937.0	7,121.3	6,570.5
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6	3.1
National Science Foundation	3,043.5	3,260.0	3,608.6	3,770.7	3,742.9	3,790.6	3,970.1	4,135.2	6,095.2	5,015.7	5,145.6
Nuclear Regulatory Commission	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4	83.8
Patient-Centered Outcomes Research Trust Fund	na	na	na	na	na	na	na	na	na	na	41.1
Smithsonian Institution	98.0	106.0	104.0	108.0	109.0	119.0	145.0	142.0	152.0	167.0	193.1
Social Security Administration	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0	53.0
U.S. Agency for Global Media	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [appendix table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 105

Federal obligations for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	138,524.6	125,720.4	130,561.3	128,753.3	115,832.8	118,974.8	129,424.8	142,424.2	167,402.8	179,465.2
Departments										
Department of Agriculture	2,171.2	2,019.1	2,258.2	2,341.0	2,357.8	2,418.5	2,478.6	2,637.1	2,643.6	2,738.0
Agricultural Marketing Service	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0	7.0
Agricultural Research Service	1,089.8	1,014.3	1,121.8	1,131.6	1,144.4	1,170.4	1,200.6	1,292.4	1,423.5	1,587.0
Animal and Plant Health Inspection Service	37.4	36.9	39.6	40.2	40.3	39.5	38.8	39.5	39.8	41.9
Economic Research Service	77.2	71.0	77.6	85.1	85.1	86.4	86.5	85.6	81.7	87.0
Foreign Agricultural Service	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.0	0.0
Forest Service	330.7	329.3	335.4	331.8	341.0	327.5	327.0	327.2	342.0	264.9
Grain Inspection, Packers, and Stockyards Administration	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na	na
National Agricultural Statistics Service	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0	9.5
National Institute of Food and Agriculture	614.2	546.1	657.0	726.1	721.3	774.4	804.9	871.4	737.9	737.9
Rural Business-Cooperative Service	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	2.8	2.8
Department of Commerce	1,054.8	1,092.2	1,375.1	1,331.3	1,350.9	1,612.5	1,438.7	1,534.7	1,621.7	1,884.1
National Institute of Standards and Technology	512.7	535.1	602.3	633.9	629.4	715.7	686.1	712.3	734.9	966.4
National Oceanic and Atmospheric Administration	432.8	418.6	504.4	543.5	511.4	668.2	633.8	718.9	768.1	786.1
National Telecommunications and Information Administration	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	7.7	11.2
U.S. Census Bureau	101.7	131.3	258.8	141.6	199.6	220.3	109.9	95.6	111.1	120.5
Department of Defense	73,804.1	63,557.7	64,980.5	61,513.5	44,748.6	44,872.6	52,973.3	58,779.5	66,695.0	69,297.4
Defense Advanced Research Projects Agency	2,749.7	2,371.8	2,822.5	2,815.6	2,933.4	2,894.5	3,018.2	3,321.0	3,664.3	3,608.2
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	2,870.4	2,718.0
Department of the Air Force	27,545.2	23,524.2	24,210.4	22,320.1	7,321.5	8,099.5	11,202.7	15,076.8	11,683.2	11,429.3
Department of the Army	9,219.8	7,883.3	7,332.1	6,764.3	6,372.2	7,530.8	8,581.3	10,274.8	10,786.4	12,222.1
Department of the Navy	17,728.3	15,419.5	15,567.1	15,489.6	16,644.4	15,236.0	15,446.1	15,341.2	19,113.8	18,803.4
U.S. Space Force	na	na	na	na	na	na	na	na	4,385.7	5,038.9
Other defense agencies	16,561.1	14,359.1	15,048.4	14,123.9	11,477.1	11,111.8	14,724.9	14,765.8	14,191.2	15,477.5

TABLE 105

Federal obligations for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Education	338.0	309.9	322.0	251.3	244.4	261.8	266.2	235.8	240.1	379.2
Department of Energy	9,952.0	9,841.0	10,525.8	11,391.0	12,208.6	12,308.4	12,832.4	14,376.4	13,453.0	15,070.0
Advanced Research Projects Agency—Energy	102.8	182.1	260.9	241.6	299.3	273.8	159.9	405.0	438.0	427.0
Bonneville Power Administration	14.5	14.4	16.0	15.6	15.6	14.0	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	101.3	83.0	103.6	97.2	112.4	133.0	145.8	137.7	139.8	133.8
Energy Efficiency and Renewable Energy	986.1	917.9	866.4	1,079.2	1,287.7	1,441.0	1,686.3	1,695.8	2,096.2	1,976.6
Environmental Management	45.8	9.1	27.6	25.1	29.7	31.4	38.0	26.1	22.2	29.3
Fossil Energy	366.8	342.3	425.6	524.0	608.7	604.6	661.6	659.0	679.3	685.0
National Nuclear Security Administration	4,033.9	4,180.4	4,416.7	4,271.3	4,568.0	4,434.7	4,057.4	5,740.6	3,983.7	5,914.3
Defense Programs	2,762.3	2,892.8	3,025.9	2,975.3	3,107.1	2,965.6	2,572.0	3,660.4	2,298.1	4,109.9
Naval Nuclear Propulsion Program	1,040.1	994.0	1,093.7	1,083.4	1,215.7	1,220.0	1,205.8	1,788.6	1,387.4	1,443.4
Office of Defense Nuclear Nonproliferation	231.5	293.6	297.0	212.7	245.2	249.0	279.5	291.5	298.1	361.0
Nuclear Energy	361.2	263.4	323.9	728.1	762.8	891.3	1,115.6	606.4	573.2	517.6
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	51.9	50.7	51.1
Office of Science	3,939.5	3,848.2	4,085.1	4,409.0	4,524.5	4,484.7	4,967.7	5,053.9	5,470.0	5,335.3
Department of Health and Human Services	31,195.6	29,382.5	30,656.1	30,272.1	32,215.7	33,774.2	36,911.3	39,191.2	60,005.7	68,834.2
Administration for Children and Families	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6	3.1
Administration for Community Living	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	90.4	91.9
Agency for Healthcare Research and Quality	365.8	365.0	364.0	364.0	334.0	324.0	334.0	338.0	338.0	308.1
Agency for Toxic Substances and Disease Registry	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	9.6	9.6
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	736.2	15,666.4	25,378.6
Centers for Disease Control and Prevention	512.4	362.9	408.9	489.3	521.2	475.5	451.1	419.4	496.8	543.1

TABLE 105

Federal obligations for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Centers for Medicare and Medicaid Services	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	223.6	228.0
Food and Drug Administration	352.6	360.6	389.1	375.7	485.9	375.0	477.6	493.1	464.0	495.0
Health Resources and Services Administration	37.6	36.6	37.8	41.1	40.8	46.3	36.3	32.6	34.9	33.8
National Institutes of Health	29,876.8	28,215.3	29,399.6	28,880.0	30,698.0	32,419.0	35,276.0	36,929.0	42,664.0	41,726.0
Office of the Secretary of Health and Human Services	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Department of Homeland Security	601.8	390.8	582.7	742.2	572.2	856.6	911.8	647.2	507.5	541.0
Countering Weapons of Mass Destruction Office	NA	NA	84.4	71.3	63.0	69.3	29.9	81.4	37.5	35.9
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	7.2	13.1	7.7	9.4
Science and Technology Directorate	562.7	369.1	472.2	651.4	485.7	765.8	832.0	510.5	421.8	444.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9	29.5
U.S. Coast Guard	39.1	21.7	26.1	19.6	23.5	21.5	21.5	19.5	4.9	10.3
U.S. Secret Service	NA	NA	NA	NA	NA	NA	1.0	1.9	12.7	11.9
Department of Housing and Urban Development	89.6	67.4	54.3	58.5	66.8	63.8	62.0	61.0	NA	NA
Department of the Interior	737.8	709.3	757.6	800.1	856.5	862.6	765.6	826.8	837.2	879.1
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	5.0	5.0	*	*
Bureau of Land Management	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8	15.8
Bureau of Ocean Energy Management	39.0	39.5	48.0	50.4	72.2	75.7	78.3	85.5	72.9	81.7
Bureau of Reclamation	10.0	10.1	12.0	9.8	20.9	27.4	21.4	23.2	27.5	26.4
Bureau of Safety and Environmental Enforcement	10.3	16.4	32.9	19.6	27.3	11.4	4.9	9.1	7.9	18.9
National Park Service	5.6	7.0	15.2	8.3	8.7	9.5	9.9	10.1	10.2	10.2
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	0.0	0.3	0.6	2.2

TABLE 105

Federal obligations for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7	32.7
U.S. Geological Survey	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8	691.3
Department of Justice	85.0	118.7	160.5	149.7	208.0	126.9	106.6	121.2	96.4	99.5
Bureau of Prisons	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	8.1	8.7
Federal Bureau of Investigation	7.7	39.0	9.6	12.9	13.0	2.2	2.9	1.0	4.7	0.9
Office of Justice Programs	66.8	68.6	140.1	125.8	184.0	115.1	98.0	113.6	83.6	89.9
Department of Labor	21.5	16.3	14.1	14.2	9.6	4.6	4.8	4.4	4.7	4.3
Employee Benefits Security Administration	12.8	9.6	7.5	6.5	4.6	2.6	3.0	2.6	2.7	2.3
Occupational Safety and Health Administration	6.0	4.2	3.6	3.4	0.7	2.0	1.9	1.7	2.0	2.0
Pension Benefit Guaranty Corp.	2.7	2.6	3.0	4.3	4.3	0.0	0.0	NA	NA	NA
Department of State	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	40.0	43.0
Department of Transportation	898.4	855.0	828.1	855.6	936.8	948.6	1,046.0	1,012.5	1,184.2	1,151.8
Federal Aviation Administration	329.3	291.8	280.4	313.4	403.3	398.5	375.4	387.0	431.9	536.4
Federal Highway Administration	403.3	397.4	397.6	313.0	332.2	351.7	490.6	451.6	512.2	376.6
Federal Motor Carrier Safety Administration	7.3	7.8	7.5	7.6	10.6	11.7	9.3	7.8	8.9	11.4
Federal Railroad Administration	39.6	50.5	40.0	44.2	41.4	44.3	46.7	39.4	46.4	47.4
Federal Transit Administration	25.5	16.4	8.2	81.7	35.3	55.4	10.2	2.8	40.2	54.0
National Highway Traffic Safety Administration	68.7	64.8	65.1	62.5	86.6	69.0	76.0	76.3	68.9	66.0
Office of the Secretary of Transportation	8.9	10.9	15.1	11.5	17.9	11.1	16.4	19.8	34.4	41.0
Pipeline and Hazardous Materials Safety Administration	11.0	10.7	14.2	21.8	9.6	7.0	21.6	27.8	41.4	19.0
Research and Innovative Technology Administration	4.9	4.7	NA	NA	NA	NA	NA	NA	NA	NA
Department of the Treasury	75.6	74.1	74.0	73.1	85.2	8.2	37.7	57.1	60.6	63.4
Bureau of Engraving and Printing	5.0	9.4	9.4	9.5	18.8	6.9	37.7	57.0	60.4	63.3
Internal Revenue Service	69.0	64.5	64.0	63.6	64.6	0.0	0.0	0.0	0.0	0.0
U.S. Mint	1.6	0.2	0.6	*	1.8	1.3	0.0	0.2	0.2	0.1

TABLE 105

Federal obligations for research and development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Veterans Affairs	614.8	639.0	588.8	661.6	695.2	682.3	1,349.0	1,507.9	1,565.1	1,689.4
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	6.8	8.0	6.8	6.4	5.0	6.4
Agency for International Development	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	194.3	194.3
Appalachian Regional Commission	0.6	0.2	0.6	0.4	0.9	0.1	0.5	0.9	0.7	*
Consumer Product Safety Commission	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.4	0.4
Environmental Protection Agency	576.3	522.8	530.9	515.6	508.0	493.6	487.4	485.3	488.5	521.8
Federal Communications Commission	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8	2.6
Federal Trade Commission	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	6.0	7.5
Library of Congress	1.1	1.3	1.2	1.3	1.7	1.9	3.3	1.9	2.8	2.7
National Aeronautics and Space Administration	10,660.5	10,368.1	10,753.6	11,360.7	12,403.8	12,594.6	10,716.7	13,570.1	10,537.8	8,799.4
National Archives and Records Administration	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0	0.0
National Science Foundation	5,169.8	4,955.9	5,403.3	5,669.7	5,589.4	5,517.6	5,849.5	5,996.1	6,351.2	6,405.6
Nuclear Regulatory Commission	82.6	75.9	85.0	91.9	80.6	67.4	77.7	74.9	69.2	76.3
Patient-Centered Outcomes Research Trust Fund	41.1	334.4	282.6	152.1	114.9	883.9	491.7	578.4	469.7	390.9
RESTORE Act Centers of Excellence Research Grants Program	na	na	na	na	na	na	na	na	9.2	5.0
Smithsonian Institution	197.0	195.0	194.9	195.7	206.2	207.9	227.9	236.4	209.8	213.6
Social Security Administration	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	69.7	129.4
Tennessee Valley Authority	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.4	11.1
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	6.1	4.8	4.8
U.S. Postal Service	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	18.2	19.0

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the

development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 106

Federal obligations for R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All agencies	4,069.8	4,304.7	4,266.5	3,994.2	3,771.1	2,124.8	2,168.4	1,943.9	3,668.0	6,613.3	4,170.7
Departments											
Department of Agriculture	117.0	118.8	96.4	179.4	134.2	172.6	123.9	43.9	77.5	251.2	35.5
Agricultural Research Service	104.0	103.8	81.2	160.5	119.1	159.1	98.9	23.0	46.0	181.3	18.6
Forest Service	13.0	15.0	15.2	18.9	15.2	13.5	25.0	20.9	31.5	69.8	17.0
Department of Commerce	23.8	29.1	59.1	89.7	60.8	74.6	117.7	151.6	386.4	408.8	241.7
Economic Development Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5	25.4	12.1	14.9
National Institute of Standards and Technology	23.8	29.1	49.1	37.4	44.3	43.3	51.5	86.9	105.3	237.3	90.1
National Oceanic and Atmospheric Administration	0.1	0.0	10.0	52.3	16.5	31.3	66.2	46.2	255.8	159.3	136.7
Department of Defense	147.4	365.1	251.4	274.7	272.8	63.3	79.3	163.4	117.2	152.8	170.3
Defense agencies and activities	4.7	284.1	137.9	121.1	82.1	34.8	36.3	41.1	0.9	0.3	na
Department of the Air Force	31.9	23.5	6.8	19.5	107.0	11.3	28.0	106.6	101.0	127.2	141.4
Department of the Navy	110.7	57.5	106.6	134.1	83.7	17.2	15.1	15.6	15.3	25.3	21.5
Other defense agencies	na	na	na	na	na	na	na	na	na	na	7.4
Department of Energy	983.4	1,028.0	1,024.1	1,006.8	863.3	778.2	752.4	751.6	1,672.3	959.3	734.6
Energy Efficiency and Renewable Energy	NA	4.9	6.2	19.8	19.4	26.1	107.0	64.9	207.1	102.9	39.3
Fossil Energy	NA	10.2	4.5	6.2	6.3	19.4	12.0	13.1	19.0	19.0	19.0
National Nuclear Security Administration	NA	425.8	447.9	436.1	303.1	304.6	191.9	263.1	168.3	190.0	128.0
Defense Programs	NA	397.3	419.9	407.8	268.4	271.6	171.0	232.0	132.0	159.2	95.5
Fissile Materials Disposition	NA	*	*	0.0	0.0	0.0	0.0	NA	NA	NA	NA
Naval Nuclear Propulsion Program	NA	28.5	28.0	28.4	34.7	33.0	20.9	31.1	36.3	30.8	32.5
Office of Science	NA	587.1	565.5	544.7	534.4	428.1	441.5	410.5	1,277.9	647.4	548.3
Department of Health and Human Services	300.0	247.5	815.7	430.6	427.0	360.9	254.6	147.4	151.9	1,682.4	79.2
Centers for Disease Control and Prevention	0.0	0.0	0.0	0.0	0.0	143.9	134.4	6.5	0.0	0.0	0.0
Food and Drug Administration	8.8	13.4	7.2	8.5	0.7	3.9	8.4	5.1	4.8	12.6	8.5
Health Resources and Services Administration	0.6	0.6	0.3	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6
National Institutes of Health	290.6	233.4	808.2	421.4	425.7	212.6	111.1	135.1	146.5	1,669.1	70.1
Department of Homeland Security	na	na	NA	117.2	91.7	131.8	243.6	219.6	311.1	457.7	568.5
Science and Technology Directorate	na	na	NA	116.3	90.7	131.4	243.0	219.1	309.6	456.6	567.2
U.S. Coast Guard	na	na	NA	1.0	1.0	0.3	0.6	0.5	1.5	1.1	1.2
Department of the Interior	2.4	2.1	3.6	7.9	7.5	5.5	9.6	9.1	6.4	6.3	10.5
Bureau of Ocean Energy Management, Regulation and Enforcement	2.4	2.1	2.1	2.6	2.9	3.2	2.6	2.8	1.9	2.7	6.9
Bureau of Reclamation	0.0	0.0	1.5	5.3	4.6	2.2	7.0	6.3	4.6	3.6	3.7
Department of Justice	0.0	0.0	0.0	0.0	0.0	0.0	8.3	1.0	0.0	0.0	0.0
Office of Justice Programs	0.0	0.0	0.0	0.0	0.0	0.0	8.3	1.0	0.0	0.0	0.0
Department of Transportation	16.0	51.7	18.5	17.7	18.3	18.7	19.8	19.1	20.3	21.1	20.4
Federal Aviation Administration	13.7	14.5	17.6	16.4	17.2	16.9	17.9	17.2	18.4	18.4	17.7
Federal Railroad Administration	2.1	0.9	0.9	1.3	1.1	1.8	1.9	1.9	1.9	2.7	2.7
Transportation Security Administration	na	36.0	na	na	na	na	na	na	na	na	na
U.S. Coast Guard	0.3	0.3	na	na	na	na	na	na	na	na	na
Department of the Treasury	0.0	0.0	0.0	0.0	0.0	3.7	1.6	0.0	0.0	0.0	0.0

TABLE 106

Federal obligations for R&D plant, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
U.S. Mint	0.0	0.0	0.0	0.0	0.0	3.7	1.6	0.0	0.0	0.0	0.0
Department of Veterans Affairs	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.0	0.0	0.0
Other agencies											
Environmental Protection Agency	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
General Services Administration	*	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	NA
National Aeronautics and Space Administration	2,169.3	2,218.3	1,659.2	1,471.6	1,533.7	39.0	79.6	19.7	20.6	1,570.1	1,858.5
National Science Foundation	285.2	240.8	335.2	395.4	355.5	448.9	436.8	371.1	829.6	1,057.7	391.0
Smithsonian Institution	3.0	3.0	3.0	2.8	6.1	27.4	41.0	46.0	74.7	46.0	55.7

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 107

Federal obligations for R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	2,145.7	1,905.1	2,217.6	2,825.1	2,441.0	2,651.8	3,852.7	4,376.4	6,150.1	5,942.9
Departments										
Department of Agriculture	16.3	12.1	10.8	10.9	22.6	156.8	44.1	29.0	789.8	31.7
Agricultural Research Service	4.9	2.6	1.4	1.0	7.5	147.3	28.4	19.4	780.4	20.0
Forest Service	9.8	7.9	7.5	7.9	13.0	9.3	15.6	9.6	9.4	11.7
Grain Inspection, Packers, and Stockyards Administration	1.7	1.6	1.9	2.0	2.0	0.2	na	na	na	na
Department of Commerce	175.9	201.7	192.7	188.1	284.7	234.6	393.5	464.3	359.1	548.6
National Institute of Standards and Technology	35.4	73.6	63.4	39.7	121.2	90.9	105.0	119.0	142.9	309.7
National Oceanic and Atmospheric Administration	140.6	128.1	129.3	148.4	163.5	143.7	288.5	345.4	216.2	238.8
Department of Defense	169.5	97.0	148.1	169.5	178.1	291.2	470.8	609.7	311.7	158.6
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	15.5	0.0
Department of the Air Force	143.1	75.5	120.6	123.0	119.5	225.0	210.1	192.6	240.7	110.5
Department of the Army	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Department of the Navy	24.8	20.5	23.5	35.7	38.0	48.5	78.9	143.2	44.7	37.5
Other defense agencies	1.6	1.0	4.0	10.7	19.4	17.7	181.9	273.9	10.9	10.6
Department of Energy	683.2	556.1	770.5	952.0	1,134.7	1,275.5	2,061.8	2,245.5	2,325.0	2,171.2
Energy Efficiency and Renewable Energy	0.0	4.4	3.6	3.6	3.6	3.6	227.0	305.5	53.3	38.7
Fossil Energy	16.0	15.2	16.0	15.8	0.0	15.8	21.3	23.0	28.7	29.0
National Nuclear Security Administration	92.8	74.8	115.5	256.3	250.7	305.2	473.6	337.3	573.9	520.8
Defense Programs	52.9	74.7	93.8	101.2	90.9	105.1	259.4	337.3	326.9	189.8
Naval Nuclear Propulsion Program	39.9	0.1	21.8	155.1	159.8	200.1	214.2	0.0	247.0	331.0
Office of Science	574.5	461.7	635.3	676.4	880.3	951.0	1,339.9	1,579.7	1,669.1	1,582.7
Department of Health and Human Services	140.2	130.3	143.0	153.4	151.0	127.6	204.5	243.0	1,769.0	2,354.8
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	0.0	1,295.7	2,100.1
Food and Drug Administration	6.3	3.7	6.0	6.7	5.4	4.6	7.5	26.0	20.3	24.8
Health Resources and Services Administration	0.6	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	133.2	126.0	136.3	146.0	145.0	123.0	197.0	217.0	453.0	230.0
Department of Homeland Security	230.4	327.9	361.1	902.9	117.0	13.3	1.3	1.3	0.0	0.0
Science and Technology Directorate	229.3	326.8	359.8	901.7	115.8	12.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0
Department of the Interior	4.9	8.0	4.8	8.6	3.3	5.4	3.0	4.6	7.2	12.0
Bureau of Reclamation	2.1	3.0	2.2	2.9	1.2	1.2	1.2	1.2	1.7	1.2
Bureau of Safety and Environmental Enforcement	2.9	5.0	2.7	5.7	2.2	4.3	1.8	3.5	5.5	10.8
Department of Transportation	37.7	20.9	19.6	28.9	24.7	38.4	30.6	39.3	40.3	28.8
Federal Aviation Administration	31.2	18.7	16.5	26.3	22.5	36.8	28.3	37.3	38.4	26.8
Federal Railroad Administration	6.5	2.2	3.1	2.6	2.2	1.6	2.3	2.0	1.9	2.0
Department of the Treasury	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
Bureau of Engraving and Printing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Other agencies										
Environmental Protection Agency	4.9	7.0	7.1	5.1	5.3	4.8	4.7	4.7	4.5	2.3

TABLE 107

Federal obligations for R&D plant, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
National Aeronautics and Space Administration	97.8	126.2	127.0	52.4	57.9	43.4	97.2	46.2	35.8	34.1
National Science Foundation	535.6	372.6	396.9	320.0	432.9	428.1	508.6	652.1	441.4	533.3
Smithsonian Institution	49.2	45.3	36.0	33.2	28.8	32.7	32.7	32.6	66.2	67.4

na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 108

Federal obligations for research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Department of Education	183.2	183.6	201.6	210.8	214.0	215.6	211.5	204.1	202.6	225.2	213.0
Department of Energy	4,593.2	5,062.5	5,260.6	5,498.0	5,703.8	5,720.3	5,856.5	6,099.6	7,188.1	7,598.3	7,350.1
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	0.0	0.0	205.1	127.8
Bonneville Power Administration	NA	14.3	14.7	15.4	8.9	9.8	8.7	11.2	7.3	11.8	5.3
Civilian Radioactive Waste Management	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	66.5	93.4	57.3	27.3	61.7	73.5	61.8
Energy Efficiency and Renewable Energy	NA	293.6	310.5	266.9	271.8	211.3	342.9	429.1	653.4	911.7	467.5
Environmental Management	NA	86.9	20.8	12.8	14.9	10.2	2.4	2.3	10.9	30.8	22.3
Fossil Energy	NA	145.0	255.8	231.2	216.0	218.1	216.8	183.0	246.1	218.1	184.8
National Nuclear Security Administration	NA	2,072.6	2,158.3	2,200.4	2,277.4	2,218.7	2,154.4	2,178.1	2,061.4	1,951.4	2,250.4
Defense Programs	NA	1,893.9	2,009.9	2,105.8	2,193.4	2,076.2	2,028.4	1,967.1	1,795.8	1,710.3	1,974.7
Office of Defense Nuclear Nonproliferation	NA	178.7	148.5	94.6	84.0	142.5	126.0	211.0	265.6	241.1	275.6
Nuclear Energy	NA	42.5	29.4	69.4	83.2	87.5	71.0	130.1	116.0	300.9	326.8
Office of Science	NA	2,345.1	2,395.3	2,623.1	2,711.5	2,818.3	2,992.5	3,137.3	4,031.2	3,895.1	3,903.5
Department of Health and Human Services	20,648.7	23,230.9	26,287.8	27,991.2	28,617.1	28,679.6	29,210.7	29,459.2	35,489.9	35,797.5	30,770.7
Administration for Children and Families	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8	9.6
Administration for Community Living	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	248.1	274.8	284.0	279.4	293.2	293.2	293.4	307.6	347.8	789.3	341.0
Agency for Toxic Substances and Disease Registry	13.1	12.4	14.3	10.7	9.4	9.0	4.2	4.3	4.5	2.8	5.1
Centers for Disease Control and Prevention	544.0	521.0	564.0	539.8	510.8	544.6	527.2	511.3	389.4	409.7	347.6
Centers for Medicare and Medicaid Services	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7	35.4
Food and Drug Administration	151.6	136.3	138.3	132.3	142.1	143.3	129.3	137.9	166.4	210.6	225.2
Health Resources and Services Administration	16.1	17.3	16.5	16.9	17.6	17.3	16.8	21.7	23.4	29.6	26.7
National Institutes of Health	19,480.7	22,110.1	25,156.4	26,890.4	27,500.3	27,565.6	28,146.3	28,404.4	34,494.3	34,212.6	29,760.2
Office of the Secretary of Health and Human Services	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Office of the Assistant Secretary for Planning and Evaluation	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9

TABLE 108

Federal obligations for research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Department of Homeland Security	na	na	NA	413.4	597.2	606.2	541.8	325.4	347.2	321.5	248.1
Science and Technology Directorate	na	na	NA	284.5	411.0	595.6	535.8	318.1	340.5	313.9	241.0
Transportation Security Administration	na	na	NA	122.8	180.5	2.6	0.0	0.0	0.0	NA	NA
U.S. Coast Guard	na	na	NA	5.1	4.6	7.1	5.2	6.6	6.7	7.6	7.1
U.S. Secret Service	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA	NA
Department of Housing and Urban Development	17.9	16.2	14.0	17.5	16.5	11.5	14.0	10.4	11.7	38.8	48.8
Department of the Interior	572.8	557.4	533.5	546.6	531.3	551.1	553.7	566.1	657.6	644.0	629.5
Bureau of Ocean Energy Management, Regulation and Enforcement	24.5	31.2	26.7	27.2	27.1	28.9	25.0	32.4	35.7	43.4	45.4
Bureau of Reclamation	7.3	3.6	3.3	3.8	4.4	3.1	3.0	3.1	3.0	7.3	8.6
National Park Service	10.0	17.6	6.5	11.5	3.2	3.7	7.0	6.6	11.3	6.4	8.3
U.S. Geological Survey	531.1	504.9	497.0	504.1	496.6	515.5	518.7	524.0	607.6	586.9	567.2
Department of Justice	61.8	49.2	56.6	47.1	57.6	53.0	62.5	77.5	80.9	87.5	84.5
Bureau of Prisons	8.5	3.6	4.8	5.0	4.4	2.7	4.2	3.0	2.8	2.8	3.5
Federal Bureau of Investigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1
Office of Justice Programs	53.3	45.5	51.9	42.1	53.3	50.2	58.3	74.5	78.1	84.6	72.9
Department of Labor	57.1	45.5	36.3	37.5	36.0	30.1	48.0	40.9	29.2	11.9	53.0
Bureau of Labor Statistics	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA	NA
Employee Benefits Security Administration	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8	48.5
Employment and Training Administration	25.0	17.8	9.0	9.0	6.7	0.7	18.8	10.7	22.4	NA	NA
Occupational Safety and Health Administration	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9	4.3
Office of the Secretary of Labor	1.5	0.3	0.8	0.1	0.5	0.3	0.3	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Department of State	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9	3.3
Department of Transportation	445.7	530.9	432.9	360.2	254.6	535.2	589.5	634.1	586.7	645.9	637.0
Federal Aviation Administration	186.1	244.8	135.6	118.3	128.3	136.6	128.2	140.4	162.9	236.6	210.1
Federal Highway Administration	158.3	138.6	192.8	201.9	51.7	288.4	348.3	347.3	316.8	295.9	299.8
Federal Motor Carrier Safety Administration	8.0	0.2	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.6	5.7
Federal Railroad Administration	23.8	29.7	28.7	24.3	25.7	40.8	31.5	37.5	8.3	9.7	20.3

TABLE 108

Federal obligations for research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Federal Transit Administration	0.0	0.6	0.0	*	0.3	3.6	2.8	3.6	4.2	20.0	23.3
National Highway Traffic Safety Administration	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8	71.0
Pipeline and Hazardous Materials Safety Administration	na	na	na	2.6	1.8	2.2	3.6	2.8	2.1	2.1	3.4
Research and Innovative Technology Administration	na	na	na	0.0	0.1	0.7	1.7	10.7	3.7	4.2	3.4
Research and Special Programs Administration	5.2	3.7	3.5	na	na	na	na	na	na	na	na
Transportation Security Administration	na	47.2	na	na	na	na	na	na	na	na	na
U.S. Coast Guard	5.9	6.4	na	na	na	na	na	na	na	na	na
Department of the Treasury	63.2	61.8	58.7	61.3	63.4	60.7	59.3	64.5	67.0	68.4	77.0
Bureau of Engraving and Printing	4.7	5.3	4.3	4.0	5.6	5.3	4.4	4.9	2.1	1.0	5.2
Internal Revenue Service	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3	70.8
Office of Thrift Supervision	0.1	0.1	NA	NA	NA	NA	NA	NA	NA	NA	na
U.S. Customs Service	1.0	*	na	na	na	na	na	na	na	na	na
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0
U.S. Secret Service	0.7	0.8	na	na	na	na	na	na	na	na	na
Department of Veterans Affairs	338.1	314.3	349.6	383.9	382.7	391.9	424.7	456.6	477.3	529.0	575.4
Other agencies											
Agency for International Development	239.2	247.6	262.4	241.4	216.7	215.0	234.5	123.8	160.1	84.3	119.2
Appalachian Regional Commission	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6	0.4
Consumer Product Safety Commission	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	350.7	323.7	461.8	536.8	525.4	504.8	492.2	450.2	468.1	484.8	491.4
Federal Communications Commission	2.7	4.4	4.5	4.1	5.1	7.1	6.4	6.7	6.9	3.7	3.7
Federal Trade Commission	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0	2.7
Library of Congress	2.0	1.7	0.5	16.4	1.6	3.3	0.5	0.5	0.5	0.7	0.9
National Aeronautics and Space Administration	4,471.8	4,838.5	4,553.5	4,499.4	3,729.0	3,271.8	2,131.8	1,405.7	1,703.5	1,502.8	1,574.6
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6	3.1
National Science Foundation	3,043.5	3,260.0	3,608.6	3,770.7	3,742.9	3,790.6	3,970.1	4,135.2	6,095.2	5,015.7	5,145.6
Nuclear Regulatory Commission	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4	83.8

TABLE 108

Federal obligations for research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Patient-Centered Outcomes Research Trust Fund	na	na	na	na	na	na	na	na	na	na	41.1
Smithsonian Institution	98.0	106.0	104.0	108.0	109.0	119.0	145.0	142.0	152.0	167.0	193.1
Social Security Administration	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0	53.0
U.S. Agency for Global Media	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 109

Federal obligations for research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	61,986.3	59,532.6	63,191.4	63,825.4	67,104.6	69,871.3	74,587.6	81,117.8	85,304.8	85,155.5
Departments										
Department of Agriculture	1,964.0	1,867.9	2,059.7	2,128.4	2,155.9	2,216.3	2,256.6	2,407.0	2,388.4	2,509.0
Agricultural Marketing Service	2.1	2.5	2.9	3.4	3.3	3.6	3.6	3.9	3.5	3.5
Agricultural Research Service	980.8	912.9	1,009.6	1,018.4	1,030.0	1,053.3	1,080.5	1,163.1	1,281.2	1,428.3
Animal and Plant Health Inspection Service	0.0	17.7	19.0	19.5	19.6	18.8	18.1	18.8	19.1	21.0
Economic Research Service	77.2	71.0	77.6	85.1	85.1	86.4	86.5	85.6	81.7	87.0
Foreign Agricultural Service	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.0	0.0
Forest Service	272.1	301.2	276.5	260.2	281.4	270.7	253.5	255.0	257.3	223.2
Grain Inspection, Packers, and Stockyards Administration	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na	na
National Agricultural Statistics Service	7.4	7.5	5.4	5.4	5.4	5.4	5.3	5.3	5.0	5.2
National Institute of Food and Agriculture	614.2	546.1	657.0	726.1	721.3	774.4	804.9	871.4	737.9	737.9
Rural Business-Cooperative Service	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	2.8	2.8
Department of Commerce	988.5	1,023.2	1,277.3	1,153.9	1,152.9	1,302.3	1,228.8	1,281.9	1,360.8	1,523.8
National Institute of Standards and Technology	507.5	526.0	599.4	631.2	624.8	690.6	675.9	703.0	717.4	802.1
National Oceanic and Atmospheric Administration	396.1	374.9	441.8	470.0	427.7	547.4	488.2	541.8	597.8	640.4
National Telecommunications and Information Administration	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	7.7	11.2
U.S. Census Bureau	77.3	115.0	226.5	40.5	89.8	56.1	55.8	29.2	37.9	70.1
Department of Defense	6,662.5	5,955.3	6,704.4	6,691.5	7,152.0	7,178.0	7,652.7	8,268.4	8,915.3	9,249.7
Defense Advanced Research Projects Agency	1,496.3	1,267.9	1,536.5	1,484.9	1,535.9	1,509.4	1,680.0	1,743.3	2,006.3	1,903.0
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	164.1	199.5
Department of the Air Force	1,726.0	1,502.3	1,573.5	1,609.2	1,762.5	1,713.3	1,904.8	2,106.9	2,248.8	2,325.9
Department of the Army	1,333.1	1,256.9	1,418.3	1,390.5	1,522.2	1,683.6	1,689.1	1,956.2	1,906.7	2,042.8
Department of the Navy	1,413.9	1,295.7	1,482.9	1,465.1	1,560.5	1,539.8	1,549.4	1,590.7	1,697.7	1,859.8
Other defense agencies	693.2	632.5	693.2	741.8	771.0	732.1	829.4	871.3	891.8	918.8
Department of Education	208.4	202.1	208.4	159.8	163.3	174.1	189.9	188.7	189.5	261.8
Department of Energy	7,361.3	7,333.3	8,091.7	8,641.5	9,465.2	9,584.5	10,508.2	11,369.7	10,525.2	11,470.1
Advanced Research Projects Agency—Energy	56.4	92.0	150.0	138.9	172.1	150.6	80.0	202.5	219.0	213.5
Bonneville Power Administration	5.3	12.5	7.3	6.8	6.8	9.2	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	64.0	53.5	65.2	63.1	69.3	80.4	94.1	87.0	78.4	64.6
Energy Efficiency and Renewable Energy	441.2	529.8	540.1	472.6	576.4	853.0	1,284.9	1,270.3	1,248.3	1,276.1
Environmental Management	14.7	3.0	16.2	8.3	9.8	10.4	12.5	8.6	7.3	9.7
Fossil Energy	165.1	154.0	161.7	198.8	231.3	229.7	661.6	659.0	679.3	685.0
National Nuclear Security Administration	2,338.8	2,404.3	2,770.0	2,704.9	3,209.6	3,078.1	2,644.8	3,670.1	2,393.6	3,469.8
Defense Programs	2,143.4	2,148.2	2,519.4	2,526.7	3,010.1	2,880.9	2,421.7	3,434.1	2,155.0	3,194.7

TABLE 109

Federal obligations for research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Office of Defense Nuclear Nonproliferation	195.4	256.1	250.6	178.2	199.5	197.2	223.1	236.0	238.6	275.1
Nuclear Energy	336.4	236.1	295.9	639.3	665.5	688.5	762.7	378.3	392.3	387.5
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	40.0	36.9	28.7
Office of Science	3,939.5	3,848.2	4,085.1	4,409.0	4,524.5	4,484.7	4,967.7	5,053.9	5,470.0	5,335.3
Department of Health and Human Services	31,124.2	29,314.6	30,587.3	30,196.7	32,128.6	33,677.4	36,801.5	38,354.4	44,233.7	43,379.9
Administration for Children and Families	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6	3.1
Administration for Community Living	0.0	0.0	0.0	72.5	66.1	66.3	65.6	65.9	70.8	72.3
Agency for Healthcare Research and Quality	336.5	335.8	335.0	335.0	306.2	300.1	306.1	308.1	308.1	308.1
Agency for Toxic Substances and Disease Registry	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	9.6	9.6
Centers for Disease Control and Prevention	481.0	334.3	379.2	460.4	493.6	436.1	386.2	365.9	440.7	487.0
Centers for Medicare and Medicaid Services	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	223.6	228.0
Food and Drug Administration	352.6	360.6	389.1	375.7	485.9	375.0	477.6	493.1	464.0	495.0
Health Resources and Services Administration	26.9	26.5	27.7	27.3	26.1	29.8	36.3	32.6	34.9	33.8
National Institutes of Health	29,876.8	28,215.3	29,399.6	28,880.0	30,698.0	32,419.0	35,276.0	36,929.0	42,664.0	41,726.0
Office of the Secretary of Health and Human Services	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Department of Homeland Security	306.6	140.7	256.1	216.9	207.6	275.9	369.3	279.5	225.2	240.4
Countering Weapons of Mass Destruction Office	NA	NA	79.3	37.3	37.7	34.2	14.2	31.2	24.0	25.0
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	7.2	13.1	7.0	8.3
Science and Technology Directorate	294.4	133.7	168.4	173.1	162.8	235.3	341.5	229.4	192.8	204.0
U.S. Coast Guard	12.2	7.0	8.4	6.4	7.0	6.5	6.5	5.9	1.5	3.1
Department of Housing and Urban Development	63.1	44.1	36.5	38.2	42.9	41.2	40.3	61.0	NA	NA
Department of the Interior	624.5	603.3	649.3	680.3	726.0	721.9	649.5	689.8	698.3	735.7
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	5.0	5.0	*	*
Bureau of Land Management	NA	NA	NA	15.4	17.0	17.0	13.7	13.7	13.7	12.2
Bureau of Ocean Energy Management	39.0	39.5	48.0	43.9	60.1	63.4	65.6	65.1	59.3	65.2
Bureau of Reclamation	7.5	7.5	9.0	7.3	18.6	22.8	16.8	16.5	19.1	18.0
Bureau of Safety and Environmental Enforcement	7.7	15.2	32.6	16.6	23.6	8.3	4.7	7.5	5.2	16.0
National Park Service	5.4	6.4	14.1	7.5	8.0	8.7	9.9	10.1	10.2	10.2

TABLE 109

Federal obligations for research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	0.0	0.3	0.6	2.2
U.S. Fish and Wildlife Service	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7	32.7
U.S. Geological Survey	564.9	534.6	545.5	559.7	566.2	569.0	501.2	538.8	557.5	579.2
Department of Justice	75.4	77.7	142.2	128.4	156.9	86.7	91.2	105.4	84.5	86.7
Bureau of Prisons	1.7	2.5	2.2	2.5	2.5	1.9	1.3	1.2	1.8	1.9
Federal Bureau of Investigation	6.9	6.6	0.0	0.0	0.0	0.0	2.9	1.0	4.7	0.9
Office of Justice Programs	66.8	68.6	140.0	125.8	154.3	84.8	87.0	103.1	78.0	83.8
Department of Labor	18.9	13.9	11.2	10.2	5.6	4.6	4.8	4.4	4.7	4.3
Employee Benefits Security Administration	12.8	9.6	7.5	6.5	4.6	2.6	3.0	2.6	2.7	2.3
Occupational Safety and Health Administration	6.0	4.2	3.6	3.4	0.7	2.0	1.9	1.7	2.0	2.0
Pension Benefit Guaranty Corp.	0.2	0.2	0.2	0.4	0.3	0.0	0.0	NA	NA	NA
Department of State	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	30.0	30.0
Department of Transportation	698.4	654.7	653.0	662.6	625.1	695.6	750.9	745.6	900.2	848.5
Federal Aviation Administration	216.4	196.9	197.5	207.2	207.5	212.3	194.8	193.1	247.0	297.4
Federal Highway Administration	348.9	327.3	338.8	273.2	247.2	305.4	419.6	414.9	471.9	355.8
Federal Motor Carrier Safety Administration	6.9	7.2	7.2	7.6	9.7	11.2	8.8	7.8	8.9	11.4
Federal Railroad Administration	27.5	39.5	29.8	32.9	30.7	34.1	32.6	31.9	34.8	35.5
Federal Transit Administration	24.8	13.6	8.2	72.4	35.3	55.4	10.2	2.8	40.2	54.0
National Highway Traffic Safety Administration	68.7	64.8	65.1	62.5	86.6	69.0	76.0	76.3	68.9	66.0
Office of the Secretary of Transportation	0.0	0.0	4.0	1.9	3.7	2.8	3.4	8.2	12.1	22.8
Pipeline and Hazardous Materials Safety Administration	2.0	2.0	2.4	4.8	4.6	5.4	5.7	10.6	16.5	5.6
Research and Innovative Technology Administration	3.3	3.4	NA	NA	NA	NA	NA	NA	NA	NA
Department of the Treasury	75.3	73.3	73.4	72.5	82.4	1.3	37.7	46.2	49.6	52.5
Bureau of Engraving and Printing	4.7	8.6	8.8	8.9	16.0	0.0	37.7	46.0	49.4	52.4
Internal Revenue Service	69.0	64.5	64.0	63.6	64.6	0.0	0.0	0.0	0.0	0.0
U.S. Mint	1.6	0.2	0.6	*	1.8	1.3	0.0	0.2	0.2	0.1
Department of Veterans Affairs	577.2	604.0	553.5	643.4	677.4	668.8	1,320.0	1,477.6	1,535.8	1,657.6
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	6.8	8.0	6.8	6.4	5.0	6.4
Agency for International Development	77.4	125.5	59.9	212.2	148.5	192.2	120.4	171.7	134.9	134.9
Appalachian Regional Commission	0.6	0.2	0.6	0.4	0.9	0.1	0.5	0.9	0.7	*

TABLE 109

Federal obligations for research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Consumer Product Safety Commission	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.4	0.4
Environmental Protection Agency	490.6	446.2	453.5	440.4	430.0	417.5	412.9	404.8	411.9	404.4
Federal Communications Commission	4.0	5.2	6.7	4.8	5.1	6.1	4.8	2.0	1.8	2.6
Federal Trade Commission	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	6.0	7.5
Library of Congress	0.5	0.7	0.7	0.8	1.0	0.9	0.9	0.9	1.2	1.2
National Aeronautics and Space Administration	5,100.3	5,422.4	5,335.6	5,539.4	5,613.2	5,745.3	5,293.1	8,111.5	6,394.1	5,297.5
National Archives and Records Administration	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0	0.0
National Science Foundation	5,169.8	4,955.9	5,403.3	5,669.7	5,589.4	5,517.6	5,849.5	5,996.1	6,351.2	6,405.6
Nuclear Regulatory Commission	82.6	75.9	85.0	91.9	80.6	67.4	77.7	74.9	68.2	73.9
Patient-Centered Outcomes Research Trust Fund	41.1	334.4	282.6	152.1	114.9	883.9	491.7	578.4	469.7	390.9
RESTORE Act Centers of Excellence Research Grants Program	na	na	na	na	na	na	na	na	9.2	5.0
Smithsonian Institution	197.0	195.0	194.9	195.7	206.2	207.9	227.9	236.4	209.8	213.6
Social Security Administration	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	69.7	129.4
Tennessee Valley Authority	NA	NA	NA	NA	NA	2.6	5.9	5.6	6.4	8.5
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	6.1	4.8	4.8
U.S. Postal Service	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	18.2	19.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 110

Federal obligations for basic research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All agencies	21,958.1	23,668.3	24,751.4	26,120.7	27,140.3	26,584.6	26,865.8	27,154.0	32,879.4	31,795.3	29,313.6
Departments											
Department of Agriculture	903.1	930.1	961.6	919.9	953.7	945.8	937.5	883.4	930.2	982.2	963.3
Agricultural Research Service	546.9	582.9	584.1	538.0	542.8	556.1	559.6	550.1	570.6	589.1	566.5
Economic Research Service	6.6	6.7	6.8	7.1	7.4	7.5	8.6	4.4	8.0	1.9	7.6
Food Safety and Inspection Service	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	0.8	0.8	0.9	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.2
Forest Service	97.2	103.7	119.7	121.4	121.4	125.9	87.9	82.7	105.4	99.2	89.9
Grain Inspection, Packers, and Stockyards Administration	0.0	0.0	0.0	0.0	0.0	0.0	6.7	6.6	6.5	6.3	6.7
National Agricultural Statistics Service	1.4	1.5	1.8	1.8	1.8	1.9	2.0	2.6	3.0	3.2	3.3
National Institute of Food and Agriculture	249.9	234.4	248.2	251.2	279.9	254.2	272.5	237.0	236.6	282.4	289.1
Department of Commerce	64.9	72.5	65.9	47.9	59.0	72.8	102.8	110.9	138.3	202.3	165.5
Economic Development Administration	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.9	1.6	5.5	0.4
National Institute of Standards and Technology	53.5	56.1	65.5	47.0	59.0	72.8	102.8	110.0	136.7	196.7	165.1
National Oceanic and Atmospheric Administration	8.2	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	3.3	2.8	0.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	2,009.3	1,812.5	1,396.1	1,416.2	1,399.5	1,304.2	1,527.2	1,616.4	1,730.3	1,853.5	1,885.4
Defense Advanced Research Projects Agency	na	na	na	na	na	na	na	na	na	na	254.2
Defense agencies and activities	870.9	899.2	512.8	193.1	157.4	160.5	235.9	311.3	343.0	414.7	na
Department of the Air Force	536.2	299.0	238.2	319.2	369.6	350.6	422.3	399.9	432.1	475.7	470.7
Department of the Army	208.4	224.6	240.6	442.3	396.8	348.8	384.6	392.1	431.2	414.3	415.0
Department of the Navy	393.9	389.7	404.5	461.6	475.7	444.3	484.4	513.2	524.0	548.8	547.0
Other defense agencies	na	na	na	na	na	na	na	na	na	na	198.4
Department of Education	2.3	5.3	5.5	9.0	9.6	2.6	4.2	4.5	4.2	7.1	7.5
Department of Energy	2,295.5	2,477.8	2,446.9	2,662.6	2,746.5	2,834.6	3,007.6	3,180.4	4,061.0	3,969.5	3,961.7
Bonneville Power Administration	NA	3.2	3.3	3.4	*	0.0	*	0.1	1.0	7.9	4.0
Electricity Delivery and Energy Reliability	na	na	na	na	0.0	0.0	0.0	0.0	0.0	7.3	6.4

TABLE 110

Federal obligations for basic research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Energy Efficiency and Renewable Energy	NA	60.1	30.6	22.6	22.7	1.2	0.6	12.2	2.3	20.7	1.6
Environmental Management	NA	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	NA	8.1	9.9	9.6	9.3	7.3	5.9	4.0	4.4	4.8	4.1
National Nuclear Security Administration	NA	26.5	10.7	6.8	3.0	7.8	8.6	26.8	22.1	33.7	42.1
Office of Defense Nuclear Nonproliferation	NA	26.5	10.7	6.8	3.0	7.8	8.6	26.8	22.1	33.7	42.1
Office of Science	NA	2,342.1	2,392.4	2,620.2	2,711.5	2,818.3	2,992.5	3,137.3	4,031.2	3,895.1	3,903.5
Department of Health and Human Services	11,592.3	12,860.8	14,102.5	14,766.5	15,786.1	15,539.6	15,772.2	16,030.8	18,772.2	18,649.7	16,066.3
Centers for Disease Control and Prevention	0.0	0.0	0.0	0.0	0.0	0.0	138.6	122.3	108.7	85.4	64.8
Health Resources and Services Administration	2.2	2.1	2.5	2.1	2.5	2.6	2.4	2.5	2.4	2.4	2.6
National Institutes of Health	11,590.2	12,843.8	14,100.0	14,764.5	15,783.6	15,537.0	15,631.2	15,906.0	18,661.0	18,561.9	15,998.9
Office of the Secretary of Health and Human Services	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Homeland Security	na	na	NA	166.5	55.1	79.8	56.7	245.7	101.3	100.3	113.8
Science and Technology Directorate	na	na	NA	85.1	55.1	79.8	56.7	245.6	101.3	100.3	113.8
Transportation Security Administration	na	na	NA	81.3	0.0	0.0	0.0	0.0	0.0	NA	NA
U.S. Secret Service	na	na	NA	0.0	0.0	0.0	0.0	0.1	NA	NA	NA
Department of the Interior	61.8	45.8	40.7	36.7	35.7	42.1	41.9	43.1	47.1	49.9	48.9
National Park Service	1.6	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	60.2	40.8	40.7	36.7	35.7	42.1	41.9	43.1	47.1	49.9	48.9
Department of Justice	25.0	25.4	31.2	14.5	17.5	18.1	24.0	0.0	9.3	13.0	17.5
Office of Justice Programs	25.0	25.4	31.2	14.5	17.5	18.1	24.0	0.0	9.3	13.0	17.5
Department of Labor	38.4	30.2	13.1	13.7	13.8	13.6	14.2	14.3	0.0	0.0	0.0
Bureau of Labor Statistics	13.4	12.4	13.1	13.7	13.8	13.6	14.2	14.3	0.0	NA	NA
Employment and Training Administration	25.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA
Department of Transportation	23.0	36.3	24.5	19.9	0.0	1.6	2.5	0.0	0.0	4.6	4.4
Federal Highway Administration	23.0	17.4	24.5	19.9	0.0	1.6	2.5	0.0	0.0	4.6	4.4

TABLE 110

Federal obligations for basic research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Transportation Security Administration	na	18.9	na	na	na	na	na	na	na	na	na
Department of the Treasury	*	0.7	0.2	0.1	0.2	0.3	0.3	0.1	0.3	0.1	0.2
Bureau of Engraving and Printing	*	0.7	0.2	0.1	0.2	0.3	0.3	0.1	0.3	0.1	0.2
Department of Veterans Affairs	142.1	141.7	164.0	174.7	176.9	181.1	196.2	211.0	203.3	232.0	250.6
Other agencies											
Agency for International Development	0.1	0.1	0.1	0.1	18.4	18.0	1.5	2.9	0.6	0.8	0.0
Environmental Protection Agency	74.5	63.8	96.4	113.9	109.2	104.3	100.6	78.4	83.7	86.9	88.0
Library of Congress	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,765.2	1,984.7	1,907.8	2,143.5	2,239.6	1,803.2	1,313.0	874.5	1,021.6	809.3	856.8
National Science Foundation	2,862.6	3,074.5	3,391.0	3,505.1	3,410.7	3,504.0	3,618.4	3,715.5	5,623.9	4,667.2	4,690.6
Smithsonian Institution	98.0	106.0	104.0	108.0	109.0	119.0	145.0	142.0	152.0	167.0	193.1

* = amount greater than \$0 but less than \$50,000; na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 111

Federal obligations for basic research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	30,958.9	29,779.4	31,587.9	31,527.1	32,292.7	33,271.5	36,195.1	40,017.3	41,546.6	41,231.3
Departments										
Department of Agriculture	851.4	844.2	907.7	924.5	934.9	965.2	986.2	1,056.5	1,163.8	1,236.1
Agricultural Research Service	544.9	507.2	560.9	565.8	572.2	585.2	600.3	646.2	711.8	793.5
Animal and Plant Health Inspection Service	0.0	17.7	19.0	19.5	19.6	18.8	18.1	18.8	19.1	21.0
Economic Research Service	6.9	6.5	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Agricultural Service	0.2	0.2	0.1	0.2	*	*	0.0	0.0	0.0	0.0
Forest Service	84.9	96.5	89.7	84.6	90.5	88.5	84.3	84.7	84.8	73.3
National Agricultural Statistics Service	3.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	211.0	212.7	231.0	254.5	252.4	272.6	283.5	306.9	348.2	348.2
Department of Commerce	174.2	190.6	214.5	232.4	247.3	246.0	227.3	253.2	251.2	275.2
National Institute of Standards and Technology	174.2	190.6	214.5	232.4	247.3	246.0	227.3	253.2	251.2	275.2
Department of Defense	2,035.8	1,862.8	2,073.5	2,133.4	2,238.7	2,110.1	2,389.9	2,510.2	2,499.1	2,667.6
Defense Advanced Research Projects Agency	345.0	284.7	347.3	359.8	378.1	391.2	458.4	478.3	482.1	524.3
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	10.7	10.4
Department of the Air Force	502.7	447.6	501.3	501.4	522.3	469.3	564.1	559.4	520.3	496.4
Department of the Army	418.1	397.9	435.8	448.9	461.8	450.4	471.9	494.7	524.0	553.0
Department of the Navy	587.8	555.6	610.9	620.4	636.9	569.2	596.1	655.7	640.9	719.2
Other defense agencies	182.1	177.2	178.2	202.9	239.8	230.0	299.3	322.1	321.1	364.4
Department of Education	6.8	24.4	25.0	22.4	23.2	32.7	54.6	57.3	53.7	42.1
Department of Energy	3,957.4	3,851.1	4,075.1	4,460.4	4,585.5	4,500.3	5,000.9	5,074.5	5,501.6	5,477.4
Bonneville Power Administration	4.6	9.0	4.8	4.3	4.3	5.5	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	6.3	3.6	4.2	6.5	2.7	6.0	12.6	14.6	13.0	12.9
Energy Efficiency and Renewable Energy	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	3.7	3.4	4.3	5.2	6.1	6.0	33.1	33.0	34.0	1.7
National Nuclear Security Administration	45.6	49.3	55.8	67.6	82.9	80.9	88.4	101.8	114.3	125.5
Defense Programs	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	45.6	42.7	55.8	67.6	82.9	80.9	88.4	101.8	114.3	125.5
Nuclear Energy	0.0	0.0	0.0	42.6	34.6	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	1.0	1.2	1.9
Office of Science	3,890.5	3,785.7	4,006.0	4,334.2	4,454.9	4,402.0	4,866.8	4,924.1	5,339.1	5,335.3
Department of Health and Human Services	15,977.4	15,288.3	16,005.2	15,076.9	15,645.3	16,700.1	18,240.9	19,099.8	21,809.0	21,759.2
Agency for Toxic Substances and Disease Registry	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0
Centers for Disease Control and Prevention	73.6	57.6	70.6	95.2	84.8	72.1	64.0	77.2	69.6	56.8
Health Resources and Services Administration	2.6	2.4	2.2	2.6	2.5	3.0	2.7	2.6	2.4	2.4

TABLE 111

Federal obligations for basic research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
National Institutes of Health	15,901.2	15,228.4	15,932.4	14,979.0	15,558.0	16,625.0	18,173.0	19,020.0	21,737.0	21,700.0
Department of Homeland Security	84.3	0.0	41.6	11.7	13.1	11.6	60.6	46.3	47.4	53.4
Countering Weapons of Mass Destruction Office	NA	NA	41.6	11.7	13.1	11.6	5.4	5.4	6.1	8.4
Science and Technology Directorate	84.3	0.0	0.0	0.0	0.0	0.0	55.2	40.9	41.3	45.0
Department of Housing and Urban Development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.1	NA	NA
Department of the Interior	54.2	51.4	52.2	53.3	53.8	54.3	79.5	81.4	83.9	86.3
Bureau of Land Management	NA	NA	NA	0.0	0.0	0.0	0.9	0.9	0.0	0.0
Bureau of Safety and Environmental Enforcement	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	1.0	1.1
National Park Service	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.9	0.9
U.S. Geological Survey	54.2	51.4	52.2	53.3	53.8	54.3	77.1	79.5	82.0	84.3
Department of Justice	15.3	20.7	8.1	5.3	12.9	2.1	16.2	21.2	0.7	0.8
Federal Bureau of Investigation	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Justice Programs	15.3	16.5	8.1	5.3	12.9	2.1	16.2	21.2	0.7	0.8
Department of Transportation	8.4	7.2	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Highway Administration	8.4	7.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Transit Administration	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	0.1	0.1	0.2	0.2	1.9	0.0	11.1	10.3	5.6	0.0
Bureau of Engraving and Printing	0.1	0.1	0.2	0.2	1.9	0.0	11.1	10.3	5.5	0.0
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.1	0.0
Department of Veterans Affairs	251.3	249.0	232.0	227.2	219.4	274.1	527.8	629.1	617.7	669.8
Other agencies										
Agency for International Development	0.0	9.0	0.7	0.0	0.0	0.8	0.0	0.0	0.1	0.1
Environmental Protection Agency	86.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Communications Commission	0.0	0.0	0.0	0.0	0.0	*	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,606.0	2,824.2	3,022.9	3,209.7	3,280.8	3,425.8	3,281.7	5,689.0	3,839.4	3,241.9
National Science Foundation	4,652.4	4,361.5	4,725.2	4,973.9	4,829.3	4,739.1	5,089.2	5,212.1	5,461.9	5,505.4
Nuclear Regulatory Commission	0.0	0.0	0.0	0.0	0.1	1.4	1.4	0.8	1.8	2.6
Smithsonian Institution	197.0	195.0	194.9	195.7	206.2	207.9	227.9	236.4	209.8	213.6

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 112

Federal obligations for applied research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Department of Education	180.9	178.3	196.1	201.9	204.4	213.0	207.4	199.5	198.4	218.0	205.5
Department of Energy	2,297.6	2,584.6	2,813.7	2,835.4	2,957.3	2,885.7	2,848.9	2,919.3	3,127.2	3,628.8	3,388.4
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	0.0	0.0	205.1	127.8
Bonneville Power Administration	NA	11.1	11.4	12.0	8.9	9.8	8.6	11.1	6.4	3.9	1.3
Civilian Radioactive Waste Management	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	66.5	93.4	57.3	27.3	61.7	66.1	55.3
Energy Efficiency and Renewable Energy	NA	233.6	279.9	244.3	249.1	210.2	342.3	416.8	651.1	891.0	465.9
Environmental Management	NA	49.0	20.8	12.8	14.9	10.2	2.4	2.3	10.9	30.8	22.3
Fossil Energy	NA	136.9	245.9	221.6	206.7	210.8	211.0	179.0	241.8	213.3	180.7
National Nuclear Security Administration	NA	2,046.1	2,147.7	2,193.6	2,274.5	2,210.9	2,145.8	2,151.3	2,039.3	1,917.7	2,208.3
Defense Programs	NA	1,893.9	2,009.9	2,105.8	2,193.4	2,076.2	2,028.4	1,967.1	1,795.8	1,710.3	1,974.7
Office of Defense Nuclear Nonproliferation	NA	152.1	137.8	87.8	81.0	134.7	117.4	184.2	243.5	207.4	233.6
Nuclear Energy	NA	42.5	29.4	69.4	83.2	87.5	71.0	130.1	116.0	300.9	326.8
Office of Science	NA	3.0	2.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	9,056.3	10,370.1	12,185.3	13,224.7	12,831.0	13,140.0	13,438.5	13,428.5	16,717.7	17,147.7	14,704.4
Administration for Children and Families	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8	9.6
Administration for Community Living	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	248.1	274.8	284.0	279.4	293.2	293.2	293.4	307.6	347.8	789.3	341.0
Agency for Toxic Substances and Disease Registry	13.1	12.4	14.3	10.7	9.4	9.0	4.2	4.3	4.5	2.8	5.1
Centers for Disease Control and Prevention	544.0	521.0	564.0	539.8	510.8	544.6	388.6	389.0	280.7	324.3	282.8
Centers for Medicare and Medicaid Services	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7	35.4
Food and Drug Administration	151.6	136.3	138.3	132.3	142.1	143.3	129.3	137.9	166.4	210.6	225.2
Health Resources and Services Administration	13.9	15.2	14.0	14.9	15.1	14.8	14.4	19.2	21.0	27.2	24.1
National Institutes of Health	7,890.5	9,266.3	11,056.4	12,125.9	11,716.7	12,028.6	12,515.1	12,498.4	15,833.3	15,650.7	13,761.3
Office of the Secretary of Health and Human Services	24.9	0.0	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9
Office of the Assistant Secretary for Planning and Evaluation	24.9	0.0	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4	19.9

TABLE 112

Federal obligations for applied research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Department of Homeland Security	na	na	NA	246.9	542.1	526.3	485.2	79.7	245.9	221.2	134.3
Science and Technology Directorate	na	na	NA	199.4	356.0	515.7	479.2	72.5	239.1	213.6	127.3
Transportation Security Administration	na	na	NA	41.5	180.5	2.6	0.0	0.0	0.0	NA	NA
U.S. Coast Guard	na	na	NA	5.1	4.6	7.1	5.2	6.6	6.7	7.6	7.1
U.S. Secret Service	na	na	NA	1.0	1.0	1.0	0.8	0.6	NA	NA	NA
Department of Housing and Urban Development	17.9	16.2	14.0	17.5	16.5	11.5	14.0	10.4	11.7	38.8	48.8
Department of the Interior	511.0	511.6	492.7	509.9	495.6	509.0	511.8	522.9	610.5	594.1	580.6
Bureau of Ocean Energy Management, Regulation and Enforcement	24.5	31.2	26.7	27.2	27.1	28.9	25.0	32.4	35.7	43.4	45.4
Bureau of Reclamation	7.3	3.6	3.3	3.8	4.4	3.1	3.0	3.1	3.0	7.3	8.6
National Park Service	8.3	12.6	6.5	11.5	3.2	3.7	7.0	6.6	11.3	6.4	8.3
U.S. Geological Survey	470.9	464.1	456.2	467.4	460.9	473.4	476.8	480.8	560.5	537.0	518.3
Department of Justice	36.8	23.8	25.4	32.6	40.2	34.9	38.5	77.5	71.5	74.4	66.9
Bureau of Prisons	8.5	3.6	4.8	5.0	4.4	2.7	4.2	3.0	2.8	2.8	3.5
Federal Bureau of Investigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1
Office of Justice Programs	28.3	20.1	20.6	27.6	35.8	32.1	34.3	74.5	68.8	71.6	55.4
Department of Labor	18.7	15.3	23.2	23.8	22.2	16.5	33.8	26.6	29.2	11.9	53.0
Bureau of Labor Statistics	8.1	8.3	7.5	8.7	8.7	9.2	9.5	9.9	0.0	NA	NA
Employee Benefits Security Administration	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8	48.5
Employment and Training Administration	0.0	0.0	9.0	9.0	6.7	0.7	18.8	10.7	22.4	NA	NA
Occupational Safety and Health Administration	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9	4.3
Office of the Secretary of Labor	1.5	0.3	0.8	0.1	0.5	0.3	0.3	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Department of State	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9	3.3
Department of Transportation	422.7	494.6	408.4	340.3	254.6	533.6	587.0	634.1	586.7	641.2	632.6
Federal Aviation Administration	186.1	244.8	135.6	118.3	128.3	136.6	128.2	140.4	162.9	236.6	210.1
Federal Highway Administration	135.3	121.1	168.3	181.9	51.7	286.8	345.8	347.3	316.8	291.2	295.4
Federal Motor Carrier Safety Administration	8.0	0.2	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.6	5.7
Federal Railroad Administration	23.8	29.7	28.7	24.3	25.7	40.8	31.5	37.5	8.3	9.7	20.3

TABLE 112

Federal obligations for applied research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Federal Transit Administration	0.0	0.6	0.0	*	0.3	3.6	2.8	3.6	4.2	20.0	23.3
National Highway Traffic Safety Administration	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8	71.0
Pipeline and Hazardous Materials Safety Administration	na	na	na	2.6	1.8	2.2	3.6	2.8	2.1	2.1	3.4
Research and Innovative Technology Administration	na	na	na	0.0	0.1	0.7	1.7	10.7	3.7	4.2	3.4
Research and Special Programs Administration	5.2	3.7	3.5	na	na	na	na	na	na	na	na
Transportation Security Administration	na	28.3	na	na	na	na	na	na	na	na	na
U.S. Coast Guard	5.9	6.4	na	na	na	na	na	na	na	na	na
Department of the Treasury	63.2	61.1	58.5	61.2	63.1	60.4	58.9	64.4	66.8	68.3	76.7
Bureau of Engraving and Printing	4.7	4.6	4.1	3.9	5.4	5.1	4.1	4.8	1.8	0.9	4.9
Internal Revenue Service	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3	70.8
Office of Thrift Supervision	0.1	0.1	NA	NA	NA	NA	NA	NA	NA	NA	na
U.S. Customs Service	1.0	*	na	na	na	na	na	na	na	na	na
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0
U.S. Secret Service	0.7	0.8	na	na	na	na	na	na	na	na	na
Department of Veterans Affairs	196.1	172.6	185.6	209.2	205.8	210.8	228.4	245.6	274.0	297.0	324.9
Other agencies											
Agency for International Development	239.1	247.5	262.3	241.3	198.3	197.0	232.9	121.0	159.6	83.5	119.2
Appalachian Regional Commission	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6	0.4
Consumer Product Safety Commission	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	276.2	259.9	365.4	422.9	416.2	400.5	391.5	371.8	384.4	397.9	403.4
Federal Communications Commission	2.7	4.4	4.5	4.1	5.1	7.1	6.4	6.7	6.9	3.7	3.7
Federal Trade Commission	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0	2.7
Library of Congress	2.0	1.7	0.5	14.4	1.6	3.3	0.5	0.5	0.5	0.7	0.9
National Aeronautics and Space Administration	2,706.6	2,853.8	2,645.7	2,355.9	1,489.4	1,468.6	818.8	531.2	681.8	693.6	717.8
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6	3.1
National Science Foundation	180.9	185.5	217.6	265.6	332.2	286.6	351.7	419.7	471.3	348.5	455.0
Nuclear Regulatory Commission	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4	83.8

TABLE 112

Federal obligations for applied research, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Patient-Centered Outcomes Research Trust Fund	na	na	na	na	na	na	na	na	na	na	41.1
Social Security Administration	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0	53.0
U.S. Agency for Global Media	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 113

Federal obligations for applied research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	31,027.4	29,753.2	31,603.5	32,298.4	34,812.0	36,599.8	38,392.4	41,100.5	43,758.1	43,924.2
Departments										
Department of Agriculture	1,112.6	1,023.7	1,152.1	1,203.9	1,221.0	1,251.1	1,270.4	1,350.4	1,224.6	1,272.9
Agricultural Marketing Service	2.1	2.5	2.9	3.4	3.3	3.6	3.6	3.9	3.5	3.5
Agricultural Research Service	435.9	405.7	448.7	452.6	457.8	468.1	480.2	516.9	569.4	634.8
Economic Research Service	70.2	64.5	70.6	85.1	85.1	86.4	86.5	85.6	81.7	87.0
Foreign Agricultural Service	0.5	0.5	0.2	0.4	0.2	0.2	0.0	0.0	0.0	0.0
Forest Service	187.2	204.7	186.8	175.6	190.9	182.1	169.2	170.3	172.5	149.9
Grain Inspection, Packers, and Stockyards Administration	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na	na
National Agricultural Statistics Service	3.9	4.1	5.4	5.4	5.4	5.4	5.3	5.3	5.0	5.2
National Institute of Food and Agriculture	403.2	333.5	426.0	471.7	468.8	501.8	521.4	564.5	389.7	389.7
Rural Business-Cooperative Service	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	2.8	2.8
Department of Commerce	814.3	832.6	1,062.8	921.5	905.6	1,056.3	1,001.5	1,028.8	1,109.6	1,248.6
National Institute of Standards and Technology	333.3	335.4	384.9	398.8	377.5	444.6	448.6	449.8	466.3	526.9
National Oceanic and Atmospheric Administration	396.1	374.9	441.8	470.0	427.7	547.4	488.2	541.8	597.8	640.4
National Telecommunications and Information Administration	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	7.7	11.2
U.S. Census Bureau	77.3	115.0	226.5	40.5	89.8	56.1	55.8	29.2	37.9	70.1
Department of Defense	4,626.7	4,092.5	4,630.8	4,558.1	4,913.3	5,068.0	5,262.8	5,758.2	6,416.2	6,582.1
Defense Advanced Research Projects Agency	1,151.3	983.3	1,189.2	1,125.2	1,157.9	1,118.1	1,221.6	1,265.0	1,524.2	1,378.7
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	153.4	189.1
Department of the Air Force	1,223.2	1,054.7	1,072.2	1,107.8	1,240.2	1,244.0	1,340.7	1,547.5	1,728.5	1,829.5
Department of the Army	915.0	859.0	982.6	941.6	1,060.4	1,233.2	1,217.2	1,461.5	1,382.7	1,489.8
Department of the Navy	826.1	740.1	871.9	844.7	923.6	970.6	953.3	935.0	1,056.7	1,140.6
Other defense agencies	511.1	455.4	515.0	538.9	531.2	502.1	530.1	549.2	570.7	554.4
Department of Education	201.6	177.8	183.4	137.4	140.1	141.4	135.3	131.4	135.8	219.6
Department of Energy	3,403.9	3,482.3	4,016.6	4,181.1	4,879.7	5,084.2	5,507.4	6,295.2	5,023.6	5,992.8
Advanced Research Projects Agency—Energy	56.4	92.0	150.0	138.9	172.1	150.6	80.0	202.5	219.0	213.5
Bonneville Power Administration	0.7	3.5	2.5	2.5	2.5	3.7	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	57.7	49.8	61.0	56.6	66.6	74.4	81.5	72.3	65.3	51.7
Energy Efficiency and Renewable Energy	434.5	529.8	540.1	472.6	576.4	853.0	1,284.9	1,270.3	1,248.3	1,276.1
Environmental Management	14.7	3.0	16.2	8.3	9.8	10.4	12.5	8.6	7.3	9.7
Fossil Energy	161.4	150.6	157.5	193.6	225.2	223.7	628.6	626.0	645.4	683.3
National Nuclear Security Administration	2,293.2	2,355.0	2,714.3	2,637.2	3,126.6	2,997.2	2,556.3	3,568.3	2,279.3	3,344.3
Defense Programs	2,143.4	2,141.6	2,519.4	2,526.7	3,010.1	2,880.9	2,421.7	3,434.1	2,155.0	3,194.7
Office of Defense Nuclear Nonproliferation	149.8	213.4	194.9	110.5	116.5	116.3	134.7	134.2	124.3	149.6

TABLE 113

Federal obligations for applied research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Nuclear Energy	336.4	236.1	295.9	596.7	630.9	688.5	762.7	378.3	392.3	387.5
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	39.0	35.8	26.8
Office of Science	49.1	62.5	79.1	74.7	69.5	82.7	100.9	129.8	130.8	0.0
Department of Health and Human Services	15,146.8	14,026.3	14,582.0	15,119.9	16,483.3	16,977.3	18,560.6	19,254.6	22,424.8	21,620.7
Administration for Children and Families	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6	3.1
Administration for Community Living	0.0	0.0	0.0	72.5	66.1	66.3	65.6	65.9	70.8	72.3
Agency for Healthcare Research and Quality	336.5	335.8	335.0	335.0	306.2	300.1	306.1	308.1	308.1	308.1
Agency for Toxic Substances and Disease Registry	1.4	1.1	1.4	1.8	2.2	2.8	1.6	7.0	9.6	9.6
Centers for Disease Control and Prevention	407.4	276.8	308.6	365.1	408.8	363.9	322.3	288.7	371.2	430.3
Centers for Medicare and Medicaid Services	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	223.6	228.0
Food and Drug Administration	352.6	360.6	389.1	375.7	485.9	375.0	477.6	493.1	464.0	495.0
Health Resources and Services Administration	24.2	24.1	25.5	24.6	23.5	26.8	33.6	30.0	32.5	31.4
National Institutes of Health	13,975.6	12,986.9	13,467.2	13,901.0	15,140.0	15,794.0	17,103.0	17,909.0	20,927.0	20,026.0
Office of the Secretary of Health and Human Services	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Office of the Assistant Secretary for Planning and Evaluation	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	16.5	16.9
Department of Homeland Security	222.3	140.7	214.5	205.1	194.5	264.4	308.7	233.2	177.9	187.0
Countering Weapons of Mass Destruction Office	NA	NA	37.7	25.6	24.6	22.7	8.8	25.8	17.8	16.6
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	7.2	13.1	7.0	8.3
Science and Technology Directorate	210.1	133.7	168.4	173.1	162.8	235.3	286.3	188.4	151.6	159.0
U.S. Coast Guard	12.2	7.0	8.4	6.4	7.0	6.5	6.5	5.9	1.5	3.1
Department of Housing and Urban Development	63.1	44.1	36.5	38.2	42.9	41.2	40.3	21.9	NA	NA
Department of the Interior	570.3	551.9	597.1	627.0	672.1	667.5	570.0	608.3	614.5	649.5
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	5.0	5.0	*	*
Bureau of Land Management	NA	NA	NA	15.4	17.0	17.0	12.9	12.9	13.7	12.2
Bureau of Ocean Energy Management	39.0	39.5	48.0	43.9	60.1	63.4	65.6	65.1	59.3	65.2
Bureau of Reclamation	7.5	7.5	9.0	7.3	18.6	22.8	16.8	16.5	19.1	18.0
Bureau of Safety and Environmental Enforcement	7.7	15.2	32.6	16.6	23.6	8.3	4.0	7.4	4.2	15.0
National Park Service	5.4	6.4	14.1	7.5	8.0	8.7	9.1	9.3	9.4	9.4

TABLE 113

Federal obligations for applied research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	0.0	0.3	0.6	2.2
U.S. Fish and Wildlife Service	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7	32.7
U.S. Geological Survey	510.7	483.2	493.4	506.4	512.4	514.6	424.1	459.2	475.5	494.9
Department of Justice	60.1	57.1	134.1	123.0	144.0	84.6	75.0	84.2	83.8	85.9
Bureau of Prisons	1.7	2.5	2.2	2.5	2.5	1.9	1.3	1.2	1.8	1.9
Federal Bureau of Investigation	6.9	2.4	0.0	0.0	0.0	0.0	2.9	1.0	4.7	0.9
Office of Justice Programs	51.5	52.2	131.9	120.5	141.4	82.7	70.8	81.9	77.3	83.0
Department of Labor	18.9	13.9	11.2	10.2	5.6	4.6	4.8	4.4	4.7	4.3
Employee Benefits Security Administration	12.8	9.6	7.5	6.5	4.6	2.6	3.0	2.6	2.7	2.3
Occupational Safety and Health Administration	6.0	4.2	3.6	3.4	0.7	2.0	1.9	1.7	2.0	2.0
Pension Benefit Guaranty Corp.	0.2	0.2	0.2	0.4	0.3	0.0	0.0	NA	NA	NA
Department of State	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	30.0	30.0
Department of Transportation	690.0	647.5	643.8	662.6	625.1	695.6	750.9	745.6	900.2	848.5
Federal Aviation Administration	216.4	196.9	197.5	207.2	207.5	212.3	194.8	193.1	247.0	297.4
Federal Highway Administration	340.5	320.1	337.9	273.2	247.2	305.4	419.6	414.9	471.9	355.8
Federal Motor Carrier Safety Administration	6.9	7.2	7.2	7.6	9.7	11.2	8.8	7.8	8.9	11.4
Federal Railroad Administration	27.5	39.5	29.8	32.9	30.7	34.1	32.6	31.9	34.8	35.5
Federal Transit Administration	24.8	13.6	0.0	72.4	35.3	55.4	10.2	2.8	40.2	54.0
National Highway Traffic Safety Administration	68.7	64.8	65.1	62.5	86.6	69.0	76.0	76.3	68.9	66.0
Office of the Secretary of Transportation	0.0	0.0	4.0	1.9	3.7	2.8	3.4	8.2	12.1	22.8
Pipeline and Hazardous Materials Safety Administration	2.0	2.0	2.4	4.8	4.6	5.4	5.7	10.6	16.5	5.6
Research and Innovative Technology Administration	3.3	3.4	NA	NA	NA	NA	NA	NA	NA	NA
Department of the Treasury	75.2	73.2	73.2	72.3	80.5	1.3	26.6	35.9	44.0	52.5
Bureau of Engraving and Printing	4.6	8.4	8.6	8.7	14.1	0.0	26.6	35.7	43.9	52.4
Internal Revenue Service	69.0	64.5	64.0	63.6	64.6	0.0	0.0	0.0	0.0	0.0
U.S. Mint	1.6	0.2	0.6	*	1.8	1.3	0.0	0.2	0.1	0.1
Department of Veterans Affairs	325.9	355.0	321.5	416.3	458.0	394.7	792.2	848.5	918.1	987.8
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	6.8	8.0	6.8	6.4	5.0	6.4
Agency for International Development	77.4	116.5	59.2	212.2	148.5	191.5	120.4	171.7	134.8	134.8
Appalachian Regional Commission	0.6	0.2	0.6	0.4	0.9	0.1	0.5	0.9	0.7	*

TABLE 113

Federal obligations for applied research, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Consumer Product Safety Commission	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.4	0.4
Environmental Protection Agency	403.7	446.2	453.5	440.4	430.0	417.5	412.9	404.8	411.9	404.4
Federal Communications Commission	4.0	5.2	6.7	4.8	5.1	6.1	4.8	2.0	1.8	2.6
Federal Trade Commission	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	6.0	7.5
Library of Congress	0.5	0.7	0.7	0.8	1.0	0.9	0.9	0.9	1.2	1.2
National Aeronautics and Space Administration	2,494.3	2,598.2	2,312.7	2,329.7	2,332.3	2,319.5	2,011.4	2,422.5	2,554.8	2,055.6
National Archives and Records Administration	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0	0.0
National Science Foundation	517.4	594.4	678.1	695.8	760.1	778.6	760.3	784.1	889.2	900.3
Nuclear Regulatory Commission	82.6	75.9	85.0	91.9	80.5	66.0	76.3	74.1	66.4	71.4
Patient-Centered Outcomes Research Trust Fund	41.1	334.4	282.6	152.1	114.9	883.9	491.7	578.4	469.7	390.9
RESTORE Act Centers of Excellence Research Grants Program	na	na	na	na	na	na	na	na	9.2	5.0
Social Security Administration	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	69.7	129.4
Tennessee Valley Authority	NA	NA	NA	NA	NA	2.6	5.9	5.6	6.4	8.5
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	6.1	4.8	4.8
U.S. Postal Service	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	18.2	19.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 114

Federal obligations for development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All agencies	39,778.8	45,701.9	52,455.8	58,716.6	65,110.2	68,194.3	73,169.3	73,212.4	77,398.2	76,626.5	77,467.8
Departments											
Department of Agriculture	155.3	161.3	170.5	183.4	181.5	183.1	180.8	182.5	191.7	223.2	216.0
Agricultural Marketing Service	0.7	0.8	0.7	1.0	0.2	0.0	0.0	2.5	2.1	2.2	2.1
Agricultural Research Service	89.5	95.4	95.6	109.8	110.8	113.5	114.2	112.3	114.1	117.8	113.3
Animal and Plant Health Inspection Service	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	28.9	30.1	29.0
Food Safety and Inspection Service	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Forest Service	33.2	35.4	40.9	41.4	46.2	44.1	40.5	39.3	46.6	73.1	71.6
Grain Inspection, Packers, and Stockyards Administration	6.1	6.0	5.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	169.6	156.9	153.8	171.0	143.9	101.5	99.2	80.8	187.8	139.4	126.2
National Institute of Standards and Technology	85.2	96.7	95.0	84.5	61.2	30.3	41.2	23.2	21.2	34.1	34.0
National Oceanic and Atmospheric Administration	22.1	22.0	19.8	46.3	63.5	55.1	40.7	38.1	143.7	67.4	43.5
National Telecommunications and Information Administration	46.2	15.5	17.1	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	16.1	22.7	21.9	22.4	19.3	16.1	17.3	19.4	22.9	37.8	48.7
Department of Defense	33,175.8	39,147.4	46,081.9	52,095.0	57,456.8	60,118.7	65,817.3	65,252.4	69,064.6	66,405.6	68,562.2
Defense Advanced Research Projects Agency	na	na	na	na	na	na	na	na	na	na	1,462.3
Defense agencies and activities	6,871.8	9,422.2	10,291.3	11,189.0	13,572.5	12,563.0	14,037.1	13,874.8	14,034.0	13,820.9	na
Department of the Air Force	12,361.1	13,382.6	16,929.6	19,108.5	18,724.6	20,336.8	23,723.9	23,640.4	26,346.2	24,843.2	24,826.1
Department of the Army	5,135.7	5,965.1	6,492.0	7,751.9	8,508.1	9,865.7	9,907.3	10,246.7	10,241.5	9,178.1	8,353.3
Department of the Navy	8,576.6	10,144.1	12,133.4	13,747.5	16,344.0	17,174.3	17,967.2	17,305.8	18,256.7	18,366.5	16,497.1
Operational Test and Evaluation, Director	205.3	233.5	235.7	298.2	307.5	178.9	181.9	184.7	186.2	196.9	NA
Test and Evaluation, Deputy Under Secretary of Defense	25.3	na	na	na	na	na	na	na	na	na	na
Other defense agencies	na	na	na	na	na	na	na	na	na	na	17,423.3
Department of Education	94.4	102.1	101.2	100.6	102.0	121.4	121.6	124.0	119.7	137.7	133.1
Department of Energy	2,074.9	1,981.7	2,151.3	2,055.7	2,029.7	1,841.7	2,020.9	2,139.1	2,701.8	3,087.2	2,595.7
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	0.0	0.0	172.7	47.1

TABLE 114

Federal obligations for development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bonneville Power Administration	NA	8.7	8.7	9.3	2.3	1.0	2.5	2.6	0.7	1.3	7.9
Electricity Delivery and Energy Reliability	na	na	na	na	13.9	40.1	35.2	55.4	25.5	39.9	27.0
Energy Efficiency and Renewable Energy	NA	446.2	371.8	317.0	285.5	219.3	318.7	300.1	930.3	983.4	395.7
Environmental Management	NA	73.5	48.6	30.0	34.8	23.8	16.3	17.1	19.3	59.0	45.2
Fossil Energy	NA	218.3	383.5	294.9	350.4	217.5	201.7	221.0	239.7	266.6	225.8
National Nuclear Security Administration	NA	1,229.8	1,317.0	1,399.8	1,341.4	1,338.6	1,436.5	1,540.1	1,486.2	1,497.1	1,785.9
Defense Programs	NA	478.7	566.8	621.5	539.4	517.4	627.5	740.3	680.3	537.2	796.3
Fissile Materials Disposition	NA	27.4	25.1	1.0	0.0	0.0	0.0	NA	NA	NA	NA
Naval Nuclear Propulsion Program	NA	637.0	650.0	708.6	740.5	720.4	730.3	711.8	756.4	914.3	941.7
Office of Defense Nuclear Nonproliferation	NA	86.8	75.1	68.7	61.5	100.8	78.8	88.0	49.5	45.6	47.9
Nuclear Energy	NA	0.0	17.7	4.8	1.3	1.5	9.9	3.0	0.0	67.2	61.0
Office of Intelligence	NA	5.3	4.0	0.0	NA	NA	NA	NA	NA	NA	NA
Office of Science	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0	0.0
Department of Health and Human Services	693.3	780.7	111.3	142.0	128.5	86.0	90.8	94.5	94.1	137.0	78.0
Agency for Healthcare Research and Quality	21.6	23.9	24.7	24.3	25.5	25.5	25.5	26.7	30.2	63.1	29.7
Agency for Toxic Substances and Disease Registry	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	0.0	0.0	0.0	0.0	0.0	0.0	17.1	27.3	30.9	37.2	38.3
Health Resources and Services Administration	34.9	36.8	26.7	30.5	35.2	6.2	6.4	40.4	32.9	36.7	10.1
Office of the Secretary of Health and Human Services	2.5	2.5	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Public Health and Science	2.5	2.5	2.6	NA	NA	NA	NA	NA	NA	NA	NA
Substance Abuse and Mental Health Services Administration	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA	NA
Department of Homeland Security	na	na	NA	532.6	765.0	1,119.2	321.0	511.8	325.3	352.6	311.0
Science and Technology Directorate	na	na	NA	507.7	756.2	1,096.0	305.2	498.7	311.9	335.5	296.8
Transportation Security Administration	na	na	NA	15.0	0.0	9.1	3.8	0.0	0.0	NA	NA
U.S. Coast Guard	na	na	NA	9.9	8.8	14.2	12.1	13.0	13.4	17.1	14.2
Department of Housing and Urban Development	34.9	29.1	25.1	29.2	27.0	22.0	26.5	19.2	21.5	22.9	24.1

TABLE 114

Federal obligations for development, by agency: FYs 2001–11

(Dollars in millions)

Agency	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
U.S. Mint	0.8	0.3	0.7	1.0	2.4	3.7	3.5	0.6	0.8	0.0	0.0
Department of Veterans Affairs	6.8	14.5	15.8	21.3	19.3	19.7	21.4	23.0	32.7	34.0	37.5
Other agencies											
Agency for International Development	27.8	22.2	23.6	23.4	40.8	40.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	99.8	91.5	105.3	125.1	116.0	116.7	83.8	81.8	84.7	87.5	85.6
Federal Communications Commission	0.0	0.0	0.0	4.4	3.7	0.4	2.1	0.0	0.1	0.0	0.0
Library of Congress	1.1	1.3	1.2	1.6	7.0	4.0	6.7	0.9	0.3	0.7	0.6
National Aeronautics and Space Administration	2,883.1	2,669.7	2,945.5	2,683.1	3,665.7	3,939.2	3,994.4	4,421.8	4,233.5	5,618.4	4,995.8
National Science Foundation	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 115

Federal obligations for development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All agencies	76,538.3	66,187.8	67,369.9	64,927.8	48,728.1	49,103.5	54,837.2	61,306.4	82,098.0	94,309.8
Departments										
Department of Agriculture	207.2	151.2	198.5	212.7	201.9	202.1	222.0	230.1	255.2	229.1
Agricultural Marketing Service	2.1	2.5	2.9	3.4	3.3	3.6	3.6	3.9	3.5	3.5
Agricultural Research Service	109.0	101.4	112.2	113.2	114.4	117.0	120.1	129.2	142.4	158.7
Animal and Plant Health Inspection Service	37.4	19.1	20.6	20.7	20.7	20.7	20.7	20.7	20.7	20.9
Forest Service	58.6	28.1	58.8	71.6	59.6	56.9	73.5	72.2	84.7	41.7
National Agricultural Statistics Service	0.0	0.0	4.0	3.8	3.9	4.0	4.2	4.2	4.0	4.3
Department of Commerce	66.3	69.0	97.8	177.4	198.0	310.2	209.9	252.8	260.9	360.3
National Institute of Standards and Technology	5.2	9.1	2.8	2.7	4.6	25.1	10.2	9.4	17.5	164.3
National Oceanic and Atmospheric Administration	36.7	43.7	62.7	73.6	83.6	120.8	145.6	177.0	170.3	145.7
U.S. Census Bureau	24.4	16.2	32.3	101.1	109.8	164.2	54.1	66.4	73.2	50.3
Department of Defense	67,141.6	57,602.4	58,276.1	54,822.1	37,596.6	37,694.6	45,320.5	50,511.1	57,779.7	60,047.8
Defense Advanced Research Projects Agency	1,253.4	1,103.9	1,286.0	1,330.7	1,397.5	1,385.2	1,338.2	1,577.7	1,658.0	1,705.2
Defense Health Agency	na	na	NA	NA	NA	NA	NA	NA	2,706.4	2,518.6
Department of the Air Force	25,819.2	22,021.9	22,636.9	20,710.9	5,559.1	6,386.2	9,297.9	12,969.9	9,434.4	9,103.4
Department of the Army	7,886.7	6,626.4	5,913.8	5,373.8	4,850.0	5,847.2	6,892.2	8,318.6	8,879.7	10,179.3
Department of the Navy	16,314.4	14,123.8	14,084.2	14,024.6	15,083.9	13,696.2	13,896.8	13,750.5	17,416.1	16,943.6
Operational Test and Evaluation, Director	*	*	na	na	na	na	na	na	na	na
U.S. Space Force	na	na	na	na	na	na	na	na	4,385.7	5,038.9
Other defense agencies	15,867.9	13,726.5	14,355.2	13,382.1	10,706.1	10,379.8	13,895.5	13,894.4	13,299.4	14,558.7
Department of Education	129.7	107.7	113.6	91.6	81.1	87.8	76.3	47.2	50.7	117.5
Department of Energy	2,590.7	2,507.6	2,434.2	2,749.5	2,743.3	2,723.9	2,324.1	3,006.7	2,927.9	3,599.9
Advanced Research Projects Agency—Energy	46.4	90.2	110.9	102.7	127.2	123.2	80.0	202.5	219.0	213.5
Bonneville Power Administration	9.2	1.9	8.7	8.8	8.8	4.8	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	37.3	29.5	38.4	34.1	43.1	52.6	51.7	50.8	61.4	69.2
Energy Efficiency and Renewable Energy	544.9	388.2	326.3	606.6	711.2	588.0	401.4	425.5	847.9	700.5
Environmental Management	31.2	6.1	11.4	16.8	19.9	21.1	25.4	17.5	14.9	19.6
Fossil Energy	201.7	188.3	263.9	325.2	377.4	374.8	0.0	0.0	0.0	0.0
National Nuclear Security Administration	1,695.2	1,776.1	1,646.6	1,566.5	1,358.4	1,356.6	1,412.7	2,070.5	1,590.1	2,444.5
Defense Programs	619.0	744.7	506.5	448.6	97.0	84.7	150.4	226.3	143.1	915.2
Naval Nuclear Propulsion Program	1,040.1	994.0	1,093.7	1,083.4	1,215.7	1,220.0	1,205.8	1,788.6	1,387.4	1,443.4
Office of Defense Nuclear Nonproliferation	36.1	37.4	46.4	34.5	45.8	51.8	56.4	55.5	59.5	85.9
Nuclear Energy	24.8	27.4	28.0	88.8	97.3	202.8	352.9	228.1	180.8	130.2
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	0.0	11.9	13.8	22.4

TABLE 115

Federal obligations for development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Department of Health and Human Services	71.4	67.9	68.8	75.4	87.1	96.8	109.8	836.8	15,772.0	25,454.3
Administration for Community Living	0.0	0.0	0.0	3.6	17.0	17.0	17.1	17.2	19.6	19.6
Agency for Healthcare Research and Quality	29.3	29.2	29.0	29.0	27.8	23.9	27.9	29.9	29.9	0.0
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	736.2	15,666.4	25,378.6
Centers for Disease Control and Prevention	31.4	28.6	29.7	29.0	27.6	39.4	64.9	53.6	56.1	56.1
Health Resources and Services Administration	10.7	10.1	10.1	13.8	14.7	16.6	0.0	0.0	0.0	0.0
Department of Homeland Security	295.2	250.2	326.6	525.4	364.6	580.6	542.5	367.6	282.2	300.6
Countering Weapons of Mass Destruction Office	NA	NA	5.1	34.0	25.3	35.0	15.7	50.2	13.5	10.8
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	0.0	0.0	0.7	1.1
Science and Technology Directorate	268.3	235.4	303.8	478.2	322.8	530.5	490.5	281.2	228.9	240.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9	29.5
U.S. Coast Guard	26.9	14.8	17.7	13.2	16.4	15.1	15.1	13.7	3.5	7.2
U.S. Secret Service	NA	NA	NA	NA	NA	NA	1.0	1.9	12.7	11.9
Department of Housing and Urban Development	26.4	23.3	17.8	20.3	23.9	22.7	21.6	0.0	NA	NA
Department of the Interior	113.3	106.0	108.3	119.7	130.6	140.7	116.0	137.1	138.9	143.4
Bureau of Land Management	NA	NA	NA	1.0	1.0	1.0	7.0	7.0	7.0	3.6
Bureau of Ocean Energy Management	0.0	0.0	0.0	6.4	12.1	12.4	12.7	20.4	13.6	16.5
Bureau of Reclamation	2.5	2.5	3.0	2.4	2.3	4.7	4.7	6.7	8.3	8.4
Bureau of Safety and Environmental Enforcement	2.6	1.2	0.3	3.0	3.7	3.1	0.3	1.5	2.7	2.8
National Park Service	0.2	0.5	1.1	0.7	0.7	0.8	0.0	0.0	0.0	0.0
U.S. Geological Survey	108.0	101.8	103.9	106.1	110.7	118.8	91.4	101.4	107.3	112.1
Department of Justice	9.6	41.0	18.3	21.3	51.1	40.2	15.4	15.8	11.9	12.9
Bureau of Prisons	8.8	8.6	8.6	8.4	8.4	7.7	4.4	5.3	6.3	6.7
Federal Bureau of Investigation	0.8	32.4	9.6	12.9	13.0	2.2	0.0	0.0	0.0	0.0
Office of Justice Programs	0.0	0.0	0.1	0.0	29.7	30.3	11.0	10.5	5.6	6.1
Department of Labor	2.5	2.4	2.9	3.9	3.9	0.0	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	2.5	2.4	2.9	3.9	3.9	0.0	0.0	NA	NA	NA
Department of State	0.0	0.0	NA	0.0	0.0	0.0	0.0	0.0	10.0	13.0
Department of Transportation	200.0	200.3	175.2	192.9	311.8	253.0	295.1	266.9	284.0	303.3
Federal Aviation Administration	112.9	95.0	82.9	106.1	195.8	186.2	180.5	193.9	184.9	239.0
Federal Highway Administration	54.5	70.1	58.8	39.8	85.0	46.3	71.0	36.7	40.4	20.9

TABLE 115

Federal obligations for development, by agency: FYs 2012–21

(Dollars in millions)

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
Federal Motor Carrier Safety Administration	0.4	0.5	0.4	0.0	0.9	0.5	0.5	0.0	0.0	0.0
Federal Railroad Administration	12.1	11.0	10.2	11.2	10.8	10.2	14.1	7.5	11.6	11.8
Federal Transit Administration	0.8	2.8	0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0
Office of the Secretary of Transportation	8.9	10.9	11.1	9.5	14.2	8.2	13.0	11.6	22.2	18.2
Pipeline and Hazardous Materials Safety Administration	9.0	8.7	11.8	17.0	5.0	1.6	16.0	17.2	24.8	13.4
Research and Innovative Technology Administration	1.6	1.3	NA	NA	NA	NA	NA	NA	NA	NA
Department of the Treasury	0.3	0.8	0.6	0.6	2.8	6.9	0.0	11.0	11.0	11.0
Bureau of Engraving and Printing	0.3	0.8	0.6	0.6	2.8	6.9	0.0	11.0	11.0	11.0
Department of Veterans Affairs	37.6	35.0	35.3	18.1	17.8	13.5	29.1	30.3	29.3	31.8
Other agencies										
Agency for International Development	0.0	0.0	0.0	0.0	44.3	0.0	46.2	48.9	59.4	59.4
Environmental Protection Agency	85.7	76.6	77.5	75.2	78.0	76.2	74.5	80.5	76.6	117.4
Federal Communications Commission	0.0	0.0	0.0	0.0	0.0	1.1	0.7	0.0	0.0	0.0
Library of Congress	0.6	0.6	0.6	0.6	0.7	1.0	2.5	1.0	1.6	1.5
National Aeronautics and Space Administration	5,560.2	4,945.7	5,418.0	5,821.3	6,790.6	6,849.4	5,423.6	5,458.6	4,143.7	3,501.8
Nuclear Regulatory Commission	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.4
Tennessee Valley Authority	NA	NA	NA	NA	NA	3.0	7.3	4.1	2.0	2.6

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 116

Federal obligations for research and development, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	16,529.1	3,395.7	9,877.8	384.7	1,454.3	666.5	400.1	223.5	63.5	63.1
1968	15,921.2	3,493.1	9,047.0	414.2	1,487.4	713.7	377.5	234.5	100.2	53.5
1969	15,640.9	3,501.2	8,703.1	427.1	1,529.2	722.0	364.2	240.7	102.2	51.1
1970	15,338.9	4,079.3	7,770.1	430.7	1,475.6	751.1	444.9	247.4	99.6	40.2
1971	15,542.5	4,228.3	7,587.5	480.2	1,644.6	728.9	458.8	210.2	141.1	63.1
1972	16,495.9	4,589.2	7,716.0	529.9	1,903.5	760.6	514.9	215.4	206.7	59.6
1973	16,800.2	4,762.2	7,731.3	582.4	1,916.6	725.3	578.2	183.1	256.8	64.4
1974	17,410.1	4,910.9	7,752.3	592.8	2,214.0	789.1	672.2	199.3	214.4	65.1
1975	19,038.8	5,354.0	8,423.2	703.7	2,411.4	935.1	702.3	219.9	227.6	61.6
1976	20,779.7	5,768.7	9,340.3	813.8	2,551.8	1,061.1	708.6	231.0	231.2	73.1
1977	23,450.4	6,011.7	10,717.2	1,112.7	2,905.5	1,313.1	800.0	263.9	238.0	88.2
1978	25,845.1	6,810.4	11,400.0	1,242.5	3,374.6	1,311.9	998.2	315.9	268.4	123.2
1979	28,145.1	7,417.5	12,172.4	1,318.1	3,888.8	1,488.3	1,026.5	368.7	310.1	154.7
1980	29,830.4	7,632.3	12,969.1	1,408.1	4,263.4	1,533.3	1,105.6	441.8	265.5	211.2
1981	33,103.9	8,425.7	14,867.9	1,413.9	4,465.8	1,791.0	1,068.8	525.2	222.2	323.4
1982	36,432.6	9,141.0	17,192.2	1,506.4	4,605.5	1,976.7	1,091.7	520.6	184.3	214.3
1983	38,711.5	10,581.9	17,019.7	1,501.2	4,966.4	2,393.9	1,241.6	581.3	186.0	239.5
1984	42,224.9	11,572.3	18,610.4	1,608.4	5,546.9	2,485.8	1,497.3	597.1	130.9	175.8
1985	48,359.6	12,945.4	21,704.9	1,790.8	6,339.7	2,816.4	1,699.2	689.2	129.4	244.5
1986	51,412.4	13,534.9	24,201.2	1,697.0	6,558.8	2,767.7	1,677.0	551.2	128.4	296.3
1987	55,253.7	13,413.1	26,768.2	1,860.0	7,337.3	3,209.6	1,711.4	510.6	148.2	295.3
1988	56,769.4	14,114.6	26,719.2	1,911.3	7,827.7	3,473.9	1,683.2	505.6	142.1	391.8
1989	61,406.5	15,024.6	28,547.9	2,056.3	8,672.0	3,497.1	1,999.9	522.0	167.4	919.4
1990	63,559.5	15,848.9	29,370.0	2,326.8	9,137.5	3,449.8	2,248.2	621.6	213.9	342.6
1991	61,295.2	15,138.2	26,420.6	2,168.3	10,168.5	3,603.8	2,637.4	679.4	215.1	263.9
1992	65,592.6	15,582.8	29,744.8	2,117.0	10,271.2	3,855.5	2,803.6	745.6	184.1	287.9
1993	67,314.0	16,663.3	30,219.0	1,451.3	11,208.4	3,614.2	2,811.9	753.4	320.3	272.2
1994	67,235.4	16,132.1	30,454.9	1,293.5	11,796.9	3,292.9	2,936.9	736.0	325.4	266.8
1995	68,186.8	17,024.8	30,236.1	1,201.8	11,927.5	3,561.6	2,834.1	825.1	316.5	259.2
1996	67,653.0	16,540.4	30,373.8	1,137.0	11,977.8	3,447.1	2,886.8	755.2	246.7	288.3
1997	69,826.8	16,718.2	31,419.3	1,128.2	12,559.0	3,701.0	2,961.6	821.0	261.1	257.5
1998	72,100.7	17,121.5	31,998.6	1,188.9	13,380.7	3,890.2	3,171.3	603.0	447.5	299.1
1999	75,340.6	18,084.7	31,901.7	1,328.0	14,959.1	3,896.4	3,608.7	913.2	357.5	291.4
2000	75,910.3	18,313.2	29,409.1	1,103.7	16,890.7	4,083.4	4,227.8	1,313.1	225.5	343.9
2001	84,492.5	22,046.7	28,236.7	1,381.7	20,065.1	4,840.0	5,390.0	1,602.8	453.3	476.2
2002	93,708.6	23,357.3	34,569.0	1,364.3	21,620.0	4,663.3	5,781.8	1,489.6	453.7	409.6
2003	103,527.7	25,118.5	40,694.5	1,522.3	23,005.8	4,845.1	5,766.0	1,613.5	404.6	557.3
2004	112,074.5	24,573.1	43,758.7	1,572.1	24,947.0	6,493.9	6,480.5	2,307.6	1,235.7	705.8
2005	118,848.5	25,871.1	48,867.9	1,704.6	25,687.5	6,506.3	6,705.3	2,164.2	689.9	651.7
2006	121,729.9	27,675.4	52,754.0	1,440.7	24,669.7	5,549.7	6,063.3	2,127.8	625.3	824.0
2007	127,262.9	29,932.5	55,342.3	2,691.6	25,547.8	4,171.2	5,984.4	2,520.3	362.0	710.6
2008	127,106.1	29,637.9	56,337.6	4,119.9	26,026.5	1,988.6	5,965.0	2,083.0	389.0	558.6
2009	141,090.1	31,543.9	59,749.3	4,067.1	31,557.8	3,402.7	7,049.7	2,730.7	392.0	596.9
2010	140,354.5	30,911.8	59,867.8	3,946.2	31,192.3	3,370.5	7,245.3	2,784.1	426.7	609.9
2011	135,532.6	35,144.7	53,550.2	4,424.5	27,680.3	3,437.8	6,677.7	2,923.7	716.2	977.5
2012	138,524.6	34,366.1	58,910.1	3,611.7	27,509.5	3,694.2	6,388.1	2,752.2	453.2	839.5

TABLE 116

Federal obligations for research and development, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
2013	125,720.4	32,963.1	49,538.1	3,796.1	25,772.0	3,711.7	6,249.4	2,571.9	385.6	732.4
2014	130,561.3	34,736.1	50,236.5	4,207.5	27,429.3	3,800.8	6,417.5	2,557.1	446.4	730.1
2015	128,753.3	34,925.1	47,483.2	3,935.8	27,414.7	3,911.7	6,288.3	3,271.4	487.0	1,036.0
2016	115,832.8	32,350.8	35,811.1	4,126.2	28,199.3	4,041.4	6,681.9	3,255.2	542.5	824.3
2017	118,974.8	30,990.2	37,875.4	4,075.8	28,963.2	4,445.3	8,140.6	3,173.0	553.4	757.9
2018	129,424.8	35,953.4	39,753.7	4,062.4	31,534.1	4,895.8	8,450.8	3,497.3	561.9	715.4
2019	142,424.2	39,312.8	44,446.0	6,077.6	34,000.5	5,351.9	8,450.2	3,261.5	586.5	937.2
2020	167,402.8	51,471.7	51,428.0	4,118.7	38,540.9	5,355.2	10,698.9	3,676.0	720.1	1,393.3
2021 (preliminary)	179,465.2	64,209.1	52,019.1	4,564.1	37,749.6	5,236.7	10,469.1	3,792.0	669.5	755.9

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 117

Federal obligations for research, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	4,631.4	1,461.3	1,038.5	69.1	1,312.1	355.0	248.7	47.6	53.2	45.7
1968	4,781.1	1,541.4	1,093.6	64.4	1,301.8	378.9	234.1	40.5	81.9	44.5
1969	4,644.9	1,645.3	886.4	69.9	1,321.8	335.5	221.7	47.6	75.1	41.7
1970	4,900.8	1,903.9	876.5	72.5	1,276.4	382.6	230.5	45.1	83.4	29.9
1971	5,123.2	1,887.9	889.0	75.7	1,430.2	358.9	282.0	52.0	95.8	51.6
1972	5,547.7	1,984.4	906.6	75.3	1,642.8	398.4	342.0	59.9	93.8	44.5
1973	5,581.4	2,088.5	887.3	68.7	1,691.1	355.2	316.2	50.2	84.3	40.0
1974	6,175.2	2,270.2	874.6	98.2	1,958.3	374.0	414.2	50.8	91.0	44.0
1975	6,729.7	2,463.8	1,010.2	135.7	2,078.8	425.5	394.7	64.8	111.9	44.3
1976	7,619.3	2,879.2	1,103.0	176.5	2,249.7	548.3	435.4	57.5	119.4	50.4
1977	8,514.1	2,957.7	1,367.3	192.2	2,583.5	670.3	512.2	55.6	115.2	60.3
1978	9,606.8	3,220.8	1,651.4	235.2	2,928.0	714.9	590.9	66.9	128.8	69.9
1979	10,535.0	3,481.2	1,762.0	245.0	3,333.4	800.6	622.6	73.4	139.5	77.4
1980	11,597.4	3,666.3	2,077.6	311.0	3,699.1	851.2	678.4	71.7	150.9	91.1
1981	12,212.8	4,034.2	1,958.3	351.3	3,920.1	940.6	705.2	67.7	129.3	106.0
1982	13,022.2	4,194.2	2,156.6	487.3	4,045.4	1,056.7	743.5	104.2	125.9	108.3
1983	14,253.5	4,710.3	2,114.2	522.6	4,467.9	1,250.1	836.9	85.2	136.7	129.6
1984	14,978.8	4,764.7	2,137.4	496.5	5,029.7	1,335.9	922.6	87.3	88.2	116.5
1985	16,133.4	5,056.1	2,074.4	485.9	5,726.3	1,421.3	1,045.1	97.0	89.5	137.9
1986	16,502.2	5,160.3	2,280.5	482.1	5,883.4	1,291.7	1,062.9	87.9	91.0	162.4
1987	17,940.5	5,437.7	2,448.6	433.5	6,640.2	1,471.0	1,207.5	89.8	90.2	121.9
1988	18,650.1	5,338.4	2,642.5	455.2	7,022.9	1,564.8	1,300.0	82.9	103.1	140.4
1989	20,765.5	5,897.0	2,875.0	604.3	7,793.1	1,703.4	1,519.8	109.5	121.2	142.1
1990	21,622.4	5,809.8	3,191.6	614.3	8,136.5	1,791.5	1,660.0	137.6	126.4	154.5
1991	23,968.4	6,454.4	3,406.5	709.6	8,867.5	2,160.9	1,925.9	170.9	129.3	143.4
1992	24,490.6	6,523.3	3,451.2	684.9	9,060.7	2,351.8	2,049.6	139.9	109.3	120.0
1993	26,890.5	7,451.8	3,923.8	799.3	9,892.3	2,299.4	2,041.3	173.4	211.8	97.4
1994	27,411.2	7,481.1	4,063.9	737.2	10,291.7	2,181.1	2,102.1	178.4	230.8	144.8
1995	28,434.4	7,684.5	4,698.7	811.6	10,353.8	2,233.6	2,078.7	207.2	221.4	144.8
1996	28,259.8	7,513.2	4,269.1	696.2	10,706.6	2,385.0	2,178.9	195.5	187.4	127.8
1997	29,365.3	7,666.9	4,392.1	759.6	11,173.2	2,598.9	2,294.9	217.5	144.0	118.2
1998	30,922.3	7,969.1	4,632.7	844.1	11,739.0	2,743.0	2,425.2	214.5	240.1	114.5
1999	33,527.5	8,685.8	4,579.8	879.3	13,203.8	2,554.1	2,806.7	469.5	232.4	116.1
2000	38,470.6	9,449.6	4,800.7	700.3	16,021.8	2,773.2	3,714.5	696.1	162.5	152.0
2001	44,713.7	11,130.9	5,262.3	822.3	18,657.1	3,096.3	4,577.9	739.4	308.7	118.9
2002	48,006.7	11,857.4	5,786.8	937.3	20,285.4	3,219.4	4,723.0	749.6	275.5	172.3
2003	51,071.8	12,419.6	6,042.4	1,103.5	21,676.5	3,272.6	5,196.3	779.0	305.8	276.1
2004	53,357.8	12,085.2	6,782.7	1,131.6	22,699.1	3,687.3	5,216.4	795.5	532.9	427.0
2005	53,738.2	12,349.9	6,456.4	1,082.0	23,156.0	3,743.4	5,295.8	907.8	376.8	370.2
2006	53,535.7	12,261.6	6,436.3	947.9	22,809.4	3,783.0	5,448.9	1,028.6	417.9	402.1
2007	54,093.6	11,816.4	6,074.2	1,863.0	23,966.9	2,942.4	5,416.7	1,283.0	297.6	433.3
2008	53,893.7	11,921.7	5,782.4	2,929.7	24,323.2	1,623.1	5,397.5	1,205.7	338.8	371.5
2009	63,691.9	13,318.7	6,280.2	3,070.5	30,168.9	2,148.1	6,500.7	1,462.0	343.6	399.3
2010	63,728.0	13,280.9	6,625.5	2,960.1	29,607.8	2,151.6	6,687.0	1,633.6	352.8	428.6
2011	58,064.8	12,663.4	6,037.4	2,984.4	26,253.2	2,224.4	5,801.9	1,447.7	282.2	370.2
2012	61,986.3	14,293.3	7,794.0	2,678.7	26,289.9	2,856.9	5,854.0	1,457.0	352.2	410.3

TABLE 117

Federal obligations for research, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
2013	59,532.6	13,416.8	7,365.5	2,713.8	24,771.7	3,089.7	5,779.9	1,686.8	313.5	394.8
2014	63,191.4	14,305.6	8,057.5	3,217.5	26,110.1	3,090.9	5,931.0	1,725.7	394.7	358.5
2015	63,825.4	15,006.5	8,138.4	3,098.0	25,962.1	3,226.8	5,862.7	1,616.9	420.3	493.7
2016	67,104.6	16,054.7	8,370.3	3,533.6	26,863.6	3,224.1	6,270.4	1,891.8	420.2	475.8
2017	69,871.3	15,904.7	8,963.2	3,559.6	27,626.1	3,501.1	7,576.2	1,915.0	453.1	372.3
2018	74,587.6	17,817.5	8,768.1	3,453.6	30,088.6	3,704.6	7,614.5	2,299.8	430.2	410.7
2019	81,117.8	18,298.2	10,738.9	3,666.7	32,381.0	4,882.4	7,891.5	2,270.9	500.4	487.7
2020	85,304.8	19,572.3	10,028.4	3,512.5	35,473.7	3,863.2	9,190.7	2,516.4	644.7	502.9
2021 (preliminary)	85,155.5	20,768.8	9,988.4	3,579.9	34,328.0	3,908.2	8,871.1	2,602.4	605.9	502.7

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 118

Federal obligations for basic research, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	1,845.8	434.9	180.9	30.3	857.1	203.7	104.9	7.9	4.2	21.9
1968	1,840.6	431.6	195.0	30.1	835.1	225.2	93.4	3.0	11.8	15.5
1969	1,944.8	531.9	184.7	29.8	864.3	219.3	85.5	3.3	13.3	12.6
1970	1,925.9	558.4	185.0	29.7	808.1	237.0	80.1	3.5	13.9	10.1
1971	1,980.1	565.4	166.6	29.2	879.4	227.7	85.2	2.2	16.6	7.9
1972	2,186.9	596.9	151.4	32.2	1,021.4	254.5	96.4	7.2	15.6	11.2
1973	2,232.0	608.1	176.1	39.4	1,048.2	229.0	98.5	3.4	16.2	13.1
1974	2,387.7	695.9	124.0	31.5	1,144.7	223.1	127.1	6.2	16.8	18.3
1975	2,588.4	733.5	118.5	47.9	1,260.6	257.5	128.2	13.8	14.0	14.3
1976	2,767.5	786.0	131.1	59.8	1,341.7	284.9	126.5	7.9	12.9	16.6
1977	3,258.6	914.1	208.1	53.1	1,555.1	324.1	162.5	5.6	15.6	20.4
1978	3,698.6	1,029.3	247.7	65.4	1,759.2	356.8	192.8	5.8	17.1	24.6
1979	4,192.7	1,089.1	277.1	66.6	2,079.9	393.6	240.3	6.7	19.8	19.5
1980	4,674.2	1,182.5	325.3	70.4	2,320.3	436.8	279.5	7.5	23.9	28.1
1981	5,041.3	1,301.8	292.9	73.3	2,503.2	490.6	313.1	8.6	26.5	31.2
1982	5,481.6	1,465.5	270.9	87.4	2,727.1	516.7	355.6	9.0	24.5	24.9
1983	6,260.1	1,689.8	292.9	83.0	3,112.3	604.0	409.6	8.0	32.1	28.5
1984	7,067.4	1,861.1	377.9	91.1	3,530.8	668.9	473.6	8.2	28.1	27.7
1985	7,818.7	1,923.4	380.1	122.6	4,038.7	724.2	555.8	12.4	30.5	30.9
1986	8,153.1	2,018.9	511.6	117.6	4,132.1	724.1	572.1	13.0	30.9	32.7
1987	8,942.4	2,046.2	467.0	119.9	4,665.6	906.7	657.7	13.3	37.5	28.5
1988	9,473.6	2,050.3	596.9	133.0	4,868.3	989.8	728.6	17.7	42.7	46.3
1989	10,602.0	2,313.4	773.2	223.9	5,221.4	1,098.1	838.9	42.2	43.6	47.4
1990	11,285.6	2,294.6	887.5	246.8	5,548.2	1,227.3	924.1	59.2	50.4	47.6
1991	12,170.8	2,391.6	949.9	264.0	6,064.5	1,306.2	1,015.5	80.8	49.1	49.1
1992	12,489.9	2,337.6	920.3	247.2	6,331.8	1,394.1	1,097.2	65.5	42.4	53.8
1993	13,399.1	2,661.8	896.3	243.6	6,833.7	1,402.7	1,164.9	71.3	71.7	53.3
1994	13,523.5	2,497.8	1,109.6	237.6	6,992.3	1,336.0	1,132.9	74.4	75.2	67.6
1995	13,877.0	2,693.5	1,214.2	239.8	6,943.9	1,438.8	1,148.3	75.2	78.7	44.6
1996	14,464.0	2,676.7	1,108.8	272.8	7,443.5	1,521.0	1,234.6	76.1	80.2	50.5
1997	14,941.9	2,688.3	1,166.7	294.7	7,695.8	1,600.0	1,289.6	88.4	68.4	49.9
1998	15,613.0	2,918.5	1,119.4	326.4	7,951.7	1,642.3	1,397.6	121.8	84.9	50.4
1999	17,443.7	3,255.2	1,082.8	313.4	9,107.1	1,565.5	1,650.0	354.9	61.4	53.4
2000	19,569.8	3,621.8	1,356.5	171.3	10,056.7	1,674.0	1,985.3	521.6	75.7	106.9
2001	21,958.1	4,193.8	917.1	175.1	11,792.2	1,762.1	2,441.7	540.5	71.6	64.0
2002	23,668.3	4,460.0	1,231.9	239.6	12,668.2	1,805.2	2,531.7	563.4	71.5	96.8
2003	24,751.4	4,662.1	1,279.6	312.8	13,151.8	1,827.8	2,703.9	582.1	85.4	146.1
2004	26,120.7	4,671.6	1,969.4	292.2	13,398.5	2,005.8	2,746.1	606.8	197.9	232.3
2005	27,140.3	4,772.7	2,051.0	270.1	13,989.9	2,021.2	2,914.2	670.7	235.9	214.6
2006	26,584.6	4,763.6	1,858.9	220.4	13,657.6	2,096.8	2,867.4	755.8	152.7	211.2
2007	26,865.8	4,572.2	1,736.2	341.3	14,220.3	1,982.8	2,793.8	889.5	101.3	228.4
2008	27,154.0	4,767.5	1,545.4	574.9	14,645.7	1,484.3	2,935.2	915.8	75.9	209.1
2009	32,879.4	5,529.8	1,631.6	678.3	18,229.6	1,964.3	3,487.4	1,059.1	94.3	204.8
2010	31,795.3	5,190.9	1,746.9	591.6	17,403.1	1,870.6	3,530.4	1,139.4	103.2	219.2
2011	29,313.6	4,869.8	1,726.5	483.0	15,771.4	2,010.1	3,066.5	1,101.9	75.8	208.7
2012	30,958.9	5,579.4	2,155.3	434.1	15,729.8	2,550.5	3,123.1	1,096.2	80.4	210.0

TABLE 118

Federal obligations for basic research, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
2013	29,779.4	5,217.2	2,052.3	463.3	14,950.2	2,738.5	2,999.8	1,099.9	66.0	192.3
2014	31,587.9	5,669.4	2,516.0	459.1	15,654.7	2,744.3	3,124.8	1,156.6	78.0	185.0
2015	31,527.1	5,813.7	2,536.5	507.0	15,295.5	2,920.5	2,985.7	1,200.2	61.2	206.7
2016	32,292.7	6,120.5	2,446.5	472.0	15,550.6	2,845.0	3,179.4	1,393.3	81.4	203.9
2017	33,271.5	6,116.1	2,692.3	600.3	15,847.1	3,078.3	3,359.1	1,315.2	66.3	196.6
2018	36,195.1	6,688.7	2,786.8	584.4	17,503.5	3,283.4	3,657.8	1,401.0	87.0	202.5
2019	40,017.3	7,240.4	3,636.6	555.7	18,626.5	4,419.7	3,724.6	1,478.1	86.0	249.5
2020	41,546.6	7,688.1	3,146.8	799.9	20,128.2	3,455.5	4,325.6	1,667.7	114.3	220.6
2021 (preliminary)	41,231.3	8,291.8	2,714.8	780.8	19,526.2	3,527.1	4,276.1	1,781.3	113.7	219.5

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 119

Federal obligations for applied research, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
1967	2,785.5	1,026.4	857.7	38.8	455.0	151.3	143.9	39.7	49.0	23.9
1968	2,940.5	1,109.8	898.5	34.3	466.7	153.7	140.7	37.5	70.2	29.1
1969	2,700.1	1,113.4	701.7	40.0	457.4	116.2	136.2	44.2	61.8	29.0
1970	2,974.9	1,345.5	691.5	42.8	468.4	145.6	150.3	41.6	69.5	19.8
1971	3,143.0	1,322.5	722.4	46.4	550.8	131.2	196.9	49.8	79.2	43.7
1972	3,360.8	1,387.5	755.2	43.1	621.4	144.0	245.5	52.6	78.2	33.3
1973	3,349.4	1,480.4	711.2	29.3	642.9	126.2	217.7	46.8	68.1	26.9
1974	3,787.6	1,574.3	750.7	66.7	813.5	150.9	287.1	44.6	74.2	25.7
1975	4,141.3	1,730.3	891.7	87.8	818.2	168.0	266.4	51.0	97.9	30.0
1976	4,851.9	2,093.1	971.9	116.7	908.0	263.4	308.9	49.6	106.5	33.8
1977	5,255.5	2,043.6	1,159.1	139.1	1,028.4	346.2	349.6	49.9	99.6	39.9
1978	5,908.2	2,191.5	1,403.7	169.8	1,168.8	358.1	398.1	61.2	111.8	45.3
1979	6,342.3	2,392.1	1,484.9	178.3	1,253.5	407.0	382.3	66.7	119.7	57.9
1980	6,923.2	2,483.8	1,752.3	240.7	1,378.8	414.3	398.9	64.2	127.1	63.0
1981	7,171.5	2,732.4	1,665.4	278.1	1,416.9	450.0	392.1	59.1	102.8	74.8
1982	7,540.6	2,728.7	1,885.7	400.0	1,318.3	540.0	387.9	95.2	101.4	83.4
1983	7,993.4	3,020.4	1,821.3	439.7	1,355.6	646.1	427.3	77.1	104.7	101.1
1984	7,911.4	2,903.6	1,759.5	405.4	1,498.9	667.0	449.0	79.1	60.0	88.8
1985	8,314.7	3,132.7	1,694.3	363.3	1,687.6	697.1	489.3	84.6	58.9	107.0
1986	8,349.1	3,141.5	1,768.8	364.5	1,751.4	567.6	490.8	74.9	60.0	129.7
1987	8,998.1	3,391.5	1,981.6	313.6	1,974.6	564.3	549.8	76.5	52.7	93.4
1988	9,176.5	3,288.1	2,045.6	322.2	2,154.6	575.0	571.3	65.2	60.4	94.1
1989	10,163.5	3,583.5	2,101.8	380.5	2,571.8	605.4	681.0	67.3	77.6	94.6
1990	10,336.8	3,515.2	2,304.2	367.5	2,588.4	564.3	735.9	78.4	76.1	106.9
1991	11,797.6	4,062.8	2,456.6	445.6	2,803.0	854.7	910.4	90.1	80.2	94.3
1992	12,000.7	4,185.7	2,530.9	437.6	2,728.9	957.6	952.5	74.5	66.9	66.2
1993	13,491.4	4,790.0	3,027.5	555.6	3,058.6	896.8	876.4	102.2	140.1	44.1
1994	13,887.7	4,983.3	2,954.4	499.6	3,299.4	845.1	969.2	104.0	155.5	77.2
1995	14,557.4	4,991.0	3,484.5	571.8	3,409.9	794.8	930.4	132.0	142.7	100.3
1996	13,795.7	4,836.5	3,160.3	423.4	3,263.1	864.0	944.3	119.4	107.3	77.4
1997	14,423.4	4,978.6	3,225.5	464.9	3,477.4	998.8	1,005.3	129.2	75.5	68.2
1998	15,309.3	5,050.6	3,513.3	517.7	3,787.3	1,100.7	1,027.7	92.6	155.2	64.1
1999	16,083.9	5,430.6	3,497.0	565.8	4,096.7	988.6	1,156.7	114.6	171.0	62.8
2000	18,900.8	5,827.8	3,444.2	528.9	5,965.1	1,099.2	1,729.2	174.5	86.9	45.1
2001	22,755.6	6,937.2	4,345.2	647.2	6,864.9	1,334.2	2,136.2	198.9	237.1	54.9
2002	24,338.4	7,397.4	4,554.9	697.7	7,617.2	1,414.1	2,191.3	186.2	204.0	75.6
2003	26,320.4	7,757.5	4,762.8	790.7	8,524.7	1,444.8	2,492.5	197.0	220.4	130.0
2004	27,237.1	7,413.6	4,813.3	839.3	9,300.6	1,681.6	2,470.3	188.7	335.0	194.7
2005	26,597.9	7,577.2	4,405.4	811.9	9,166.1	1,722.2	2,381.6	237.1	140.9	155.6
2006	26,951.1	7,498.0	4,577.4	727.5	9,151.8	1,686.2	2,581.5	272.8	265.1	190.9
2007	27,227.8	7,244.2	4,338.0	1,521.6	9,746.6	959.6	2,622.9	393.5	196.3	205.0
2008	26,739.7	7,154.2	4,237.0	2,354.8	9,677.5	138.8	2,462.3	289.9	262.9	162.4
2009	30,812.5	7,788.8	4,648.6	2,392.2	11,939.2	183.8	3,013.3	402.9	249.2	194.5
2010	31,932.6	8,090.1	4,878.6	2,368.5	12,204.7	281.0	3,156.6	494.3	249.6	209.4
2011	28,751.2	7,793.6	4,310.9	2,501.4	10,481.8	214.3	2,735.4	345.8	206.4	161.5
2012	31,027.4	8,713.9	5,638.7	2,244.6	10,560.1	306.3	2,730.9	360.8	271.8	200.3

TABLE 119

Federal obligations for applied research, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
2013	29,753.2	8,199.6	5,313.3	2,250.5	9,821.6	351.1	2,780.2	587.0	247.5	202.5
2014	31,603.5	8,636.2	5,541.5	2,758.4	10,455.4	346.6	2,806.2	569.1	316.7	173.5
2015	32,298.4	9,192.8	5,601.8	2,591.0	10,666.6	306.3	2,877.0	416.7	359.1	287.0
2016	34,812.0	9,934.2	5,923.8	3,061.6	11,313.1	379.1	3,091.0	498.5	338.8	271.9
2017	36,599.8	9,788.6	6,270.9	2,959.3	11,779.0	422.8	4,217.0	599.8	386.8	175.6
2018	38,392.4	11,128.8	5,981.3	2,869.2	12,585.1	421.2	3,956.7	898.8	343.2	208.1
2019	41,100.5	11,057.9	7,102.3	3,110.9	13,754.5	462.7	4,166.9	792.8	414.4	238.2
2020	43,758.1	11,884.2	6,881.6	2,712.6	15,345.5	407.8	4,865.0	848.7	530.4	282.3
2021 (preliminary)	43,924.2	12,477.0	7,273.6	2,799.1	14,801.8	381.1	4,595.0	821.1	492.1	283.3

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 120

Federal obligations for development, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	11,897.7	1,934.4	8,839.2	315.6	142.2	311.4	151.4	176.0	10.3	17.3
1968	11,140.1	1,951.8	7,953.4	349.9	185.6	334.9	143.4	194.0	18.3	9.0
1969	10,996.0	1,855.9	7,816.7	357.2	207.4	386.5	142.6	193.1	27.0	9.4
1970	10,438.1	2,175.4	6,893.7	358.2	199.1	368.6	214.4	202.3	16.2	10.3
1971	10,419.3	2,340.4	6,698.5	404.5	214.4	370.0	176.8	158.2	45.2	11.4
1972	10,948.2	2,604.8	6,809.5	454.6	260.7	362.1	172.9	155.6	112.9	15.1
1973	11,218.7	2,673.7	6,844.0	513.6	225.5	370.1	262.0	132.8	172.6	24.4
1974	11,234.9	2,640.7	6,877.7	494.6	255.7	415.2	258.1	148.6	123.3	21.0
1975	12,309.1	2,890.2	7,413.0	568.0	332.7	509.6	307.7	155.1	115.7	17.3
1976	13,160.3	2,889.6	8,237.3	637.3	302.1	512.8	273.1	173.5	111.8	22.7
1977	14,936.3	3,054.0	9,350.0	920.6	322.0	642.8	287.9	208.3	122.9	27.9
1978	16,238.4	3,589.7	9,748.6	1,007.3	446.6	597.1	407.3	249.0	139.6	53.2
1979	17,610.1	3,936.3	10,410.5	1,073.1	555.5	687.7	403.8	295.4	170.7	77.3
1980	18,233.1	3,966.1	10,891.5	1,097.0	564.4	682.2	427.1	370.1	114.6	120.1
1981	20,891.1	4,391.5	12,909.6	1,062.6	545.6	850.4	363.6	457.5	92.9	217.5
1982	23,410.4	4,946.8	15,035.6	1,019.1	560.0	920.0	348.1	416.4	58.4	106.0
1983	24,458.0	5,871.7	14,905.5	978.5	498.5	1,143.8	404.7	496.1	49.3	109.9
1984	27,246.1	6,807.6	16,472.9	1,112.0	517.2	1,149.9	574.6	509.8	42.8	59.2
1985	32,226.1	7,889.3	19,630.5	1,304.9	613.5	1,395.1	654.1	592.2	39.9	106.7
1986	34,910.2	8,374.6	21,920.7	1,215.0	675.4	1,476.0	614.1	463.3	37.4	133.9
1987	37,313.2	7,975.3	24,319.6	1,426.4	697.0	1,738.6	503.9	420.8	58.0	173.4
1988	38,119.3	8,776.2	24,076.7	1,456.1	804.8	1,909.1	383.2	422.7	39.0	251.4
1989	40,641.0	9,127.6	25,672.9	1,452.0	878.8	1,793.6	480.0	412.4	46.3	777.3
1990	41,937.1	10,039.1	26,178.4	1,712.5	1,001.0	1,658.3	588.2	484.0	87.5	188.1
1991	37,326.8	8,683.8	23,014.1	1,458.7	1,301.0	1,442.9	711.5	508.5	85.8	120.5
1992	41,102.0	9,059.6	26,293.6	1,432.2	1,210.6	1,503.7	753.9	605.7	74.8	167.9
1993	40,423.5	9,211.6	26,295.2	652.1	1,316.1	1,314.8	770.6	580.0	108.5	174.8
1994	39,824.2	8,650.9	26,390.9	556.3	1,505.2	1,111.8	834.8	557.6	94.7	122.0
1995	39,752.4	9,340.2	25,537.4	390.2	1,573.7	1,328.0	755.4	617.9	95.1	114.4
1996	39,393.3	9,027.2	26,104.7	440.7	1,271.2	1,062.1	707.9	559.7	59.3	160.5
1997	40,461.5	9,051.3	27,027.2	368.6	1,385.7	1,102.1	666.7	603.4	117.1	139.3
1998	41,178.5	9,152.4	27,365.9	344.7	1,641.7	1,147.2	746.0	388.5	207.4	184.6
1999	41,813.1	9,398.9	27,321.8	448.8	1,755.3	1,342.3	802.0	443.7	125.1	175.2
2000	37,439.7	8,863.6	24,608.4	403.4	868.9	1,310.1	513.4	617.1	63.0	191.9
2001	39,778.8	10,915.8	22,974.4	559.4	1,408.0	1,743.7	812.1	863.4	144.6	357.3
2002	45,701.9	11,500.0	28,782.2	427.0	1,334.7	1,443.9	1,058.8	740.0	178.2	237.2
2003	52,455.8	12,698.9	34,652.1	418.9	1,329.3	1,572.5	569.7	834.5	98.8	281.2
2004	58,716.6	12,487.9	36,975.9	440.5	2,247.8	2,806.5	1,264.1	1,512.1	702.8	278.8
2005	65,110.2	13,521.2	42,411.5	622.6	2,531.6	2,762.9	1,409.4	1,256.4	313.1	281.5
2006	68,194.3	15,413.8	46,317.7	492.8	1,860.3	1,766.7	614.4	1,099.2	207.4	421.9
2007	73,169.3	18,116.1	49,268.1	828.6	1,580.9	1,228.8	567.7	1,237.3	64.4	277.3
2008	73,212.4	17,716.1	50,555.2	1,190.2	1,703.3	365.5	567.5	877.3	50.2	187.1
2009	77,398.2	18,225.2	53,469.2	996.6	1,389.0	1,254.6	549.0	1,268.7	48.4	197.6
2010	76,626.5	17,630.9	53,242.3	986.1	1,584.5	1,218.9	558.3	1,150.4	73.9	181.3
2011	77,467.8	22,481.4	47,512.8	1,440.1	1,427.1	1,213.3	875.8	1,476.0	434.0	607.2
2012	76,538.3	20,072.8	51,116.1	933.0	1,219.6	837.3	534.1	1,295.2	101.0	429.2

TABLE 120

Federal obligations for development, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
2013	66,187.8	19,546.3	42,172.6	1,082.3	1,000.2	622.1	469.5	885.1	72.1	337.6
2014	67,369.9	20,430.5	42,179.1	990.0	1,319.2	709.9	486.5	831.5	51.6	371.6
2015	64,927.8	19,918.5	39,344.9	837.8	1,452.6	684.9	425.6	1,654.5	66.7	542.3
2016	48,728.1	16,296.0	27,440.7	592.6	1,335.7	817.3	411.5	1,363.4	122.4	348.5
2017	49,103.5	15,085.5	28,912.2	516.2	1,337.1	944.1	564.4	1,258.0	100.3	385.6
2018	54,837.2	18,135.9	30,985.5	608.8	1,445.5	1,191.2	836.3	1,197.6	131.7	304.7
2019	61,306.4	21,014.5	33,707.1	2,410.9	1,619.5	469.5	558.7	990.6	86.1	449.5
2020	82,098.0	31,899.4	41,399.5	606.2	3,067.3	1,492.0	1,508.2	1,159.5	75.4	890.5
2021 (preliminary)	94,309.8	43,440.3	42,030.6	984.2	3,421.6	1,328.6	1,598.0	1,189.6	63.6	253.2

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 121

Federal obligations for R&D plant, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	620.1	239.0	NA	NA	111.7	138.8	NA	NA	130.5	0.1
1968	603.8	294.2	40.9	40.8	98.1	101.7	11.1	9.8	7.3	0.0
1969	669.0	260.4	53.8	87.9	61.9	176.6	4.6	21.2	1.6	0.9
1970	524.4	166.0	41.4	60.9	56.1	169.0	4.7	24.1	2.1	0.1
1971	611.2	202.8	54.0	110.6	49.2	178.7	2.5	3.3	1.2	8.9
1972	602.1	246.6	67.1	75.3	45.3	130.4	28.1	1.8	4.7	2.7
1973	774.3	323.8	76.8	145.0	42.6	162.3	15.8	3.1	3.0	1.9
1974	766.3	308.7	64.3	229.8	25.0	118.4	6.2	2.1	11.9	*
1975	820.7	346.8	62.3	229.7	35.9	131.8	10.5	3.6	0.2	*
1976	836.7	316.8	73.7	205.9	35.2	189.6	10.9	4.7	0.0	0.0
1977	1,367.2	711.9	103.4	215.8	33.7	277.8	6.7	6.1	0.6	11.2
1978	1,295.7	518.0	76.9	257.0	54.6	376.3	4.4	8.3	0.0	0.1
1979	1,475.5	544.8	214.4	224.4	42.0	414.1	9.2	17.7	0.3	8.4
1980	1,555.7	491.1	304.0	256.0	40.3	426.3	8.6	24.6	0.8	3.9
1981	1,485.7	468.0	302.1	246.5	37.0	370.9	41.3	15.1	0.0	4.8
1982	1,389.8	426.0	110.4	362.2	30.3	441.7	6.6	9.4	0.0	3.2
1983	1,297.5	393.9	259.3	166.4	33.6	353.0	82.1	7.9	0.0	1.2
1984	1,787.3	632.8	451.5	196.6	78.5	363.2	55.6	4.2	0.0	4.9
1985	1,820.8	625.3	298.3	187.8	140.8	454.2	69.9	9.1	0.1	35.5
1986	1,538.8	317.1	409.2	215.9	133.2	420.9	11.8	9.6	0.0	21.0
1987	1,846.0	301.6	668.1	212.9	231.1	400.5	20.6	5.4	0.0	5.8
1988	2,057.1	319.6	719.5	204.3	245.8	535.3	23.7	6.2	0.3	2.4
1989	2,165.1	329.5	900.4	212.3	204.9	489.9	14.2	8.4	1.4	4.2
1990	2,271.7	359.0	882.9	231.0	157.3	495.8	113.0	31.4	0.5	0.9
1991	2,852.8	518.8	1,003.1	278.7	253.3	624.2	145.4	19.7	0.6	9.2
1992	2,984.6	506.2	1,014.4	202.2	241.5	579.5	393.9	46.3	0.5	0.0
1993	3,100.7	432.0	1,048.2	124.4	361.4	619.5	415.6	65.5	0.5	33.5
1994	2,215.4	392.6	746.8	119.4	253.2	608.8	20.9	72.9	0.8	0.2
1995	2,256.1	479.8	695.3	95.1	327.3	543.8	25.6	62.6	0.5	26.1
1996	1,746.1	405.1	465.4	43.9	243.1	497.8	23.4	66.1	1.0	0.5
1997	1,926.7	608.3	389.8	60.5	238.6	560.7	16.7	52.0	0.0	0.1
1998	1,813.3	448.4	487.7	45.6	139.5	663.6	10.9	12.1	5.5	0.0
1999	2,045.7	483.3	544.7	172.8	141.2	615.5	12.2	70.7	5.3	*
2000	4,492.8	573.3	2,814.6	27.6	213.5	613.8	55.5	193.5	0.9	0.1
2001	4,069.8	520.4	2,179.8	41.8	284.7	615.9	27.9	357.5	1.4	40.4
2002	4,304.7	414.8	2,524.9	109.1	241.1	583.3	29.1	388.8	2.0	11.7
2003	4,266.5	609.7	1,817.0	145.7	686.9	578.4	70.7	333.9	0.8	23.4
2004	3,994.2	961.3	1,442.0	188.3	354.3	603.9	164.5	252.4	15.8	11.7
2005	3,771.1	859.3	1,381.4	125.7	423.0	558.3	134.6	218.0	55.2	15.6
2006	2,124.8	662.8	265.8	82.7	262.5	519.3	127.3	201.6	2.6	0.3
2007	2,168.4	593.4	401.4	27.6	265.6	498.4	79.7	296.2	0.0	6.1
2008	1,943.9	494.0	449.0	175.6	210.2	334.4	23.7	253.8	*	3.1
2009	3,668.0	804.7	396.3	127.7	607.0	706.5	154.4	868.2	1.2	2.0
2010	6,613.3	1,953.3	1,751.2	167.7	1,532.6	491.4	245.9	465.3	2.0	4.0
2011	4,170.7	846.5	2,030.0	118.3	286.0	242.9	141.3	491.0	0.2	14.6
2012	2,145.7	481.2	460.5	51.8	372.5	248.1	200.8	323.1	*	7.6

TABLE 121

Federal obligations for R&D plant, by performer: FYs 1967–2021

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories						State, local governments	
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
2013	1,905.1	673.3	231.5	79.5	236.6	246.2	184.1	249.8	0.2	3.9
2014	2,217.6	642.5	323.3	91.2	325.8	308.5	212.8	309.8	0.3	3.4
2015	2,825.1	1,417.2	275.6	101.7	292.2	376.3	151.3	210.6	*	0.1
2016	2,441.0	646.2	344.9	71.3	284.1	591.2	289.8	202.4	0.6	10.5
2017	2,651.8	829.5	333.8	82.4	350.0	585.7	157.8	287.7	0.0	25.0
2018	3,852.7	1,252.1	310.9	214.2	410.4	761.5	180.2	709.4	0.0	14.1
2019	4,376.4	1,092.7	354.0	428.3	514.0	850.0	169.8	956.2	1.2	10.3
2020	6,150.1	3,106.0	677.5	222.1	350.6	867.8	125.3	793.7	6.7	0.4
2021 (preliminary)	5,942.9	1,088.4	2,720.4	30.5	343.4	809.8	151.4	792.6	6.0	0.5

* = amount greater than \$0 but less than \$50,000. NA = not available; data were not collected at that level for that fiscal year.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 122

Federal obligations for research, by detailed field of science and engineering: FYs 2001–11

(Dollars in millions)

Field	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All fields	44,713.7	48,006.7	51,071.8	53,357.8	53,738.2	53,535.7	54,093.6	53,893.7	63,691.9	63,728.0	58,064.8
Computer sciences and mathematics	2,610.6	2,630.7	2,672.5	2,949.4	2,983.4	2,814.9	2,945.7	3,047.3	3,611.8	3,411.8	3,374.3
Computer sciences	2,022.8	2,043.2	2,052.8	2,144.9	2,157.1	1,987.8	2,077.7	2,053.0	2,422.2	2,362.0	2,191.7
Mathematics	396.4	402.0	452.9	617.8	686.6	669.2	708.6	782.9	927.9	835.5	891.6
Other computer sciences and mathematics	191.4	185.5	166.7	186.7	139.7	157.9	159.4	211.4	261.6	214.4	291.0
Engineering	8,197.0	8,274.9	8,405.1	8,866.4	8,552.9	8,678.7	8,989.7	8,975.5	10,285.0	11,081.2	10,057.2
Aeronautical engineering	2,430.1	2,157.1	1,732.2	1,640.8	1,276.3	1,229.2	929.2	810.3	907.8	830.1	845.1
Astronautical engineering	752.7	760.8	702.5	664.9	494.1	476.3	341.0	288.1	370.2	389.9	410.1
Chemical engineering	199.0	201.6	327.9	318.8	283.8	294.6	353.8	345.6	447.1	509.7	474.5
Civil engineering	288.4	302.7	339.6	330.3	279.2	352.7	461.5	488.0	678.9	699.8	617.1
Electrical engineering	889.7	808.7	950.0	890.9	1,033.5	1,035.5	1,027.5	1,046.5	1,254.0	1,360.9	1,235.5
Mechanical engineering	319.2	265.9	298.4	301.9	323.7	298.2	337.2	292.4	314.3	363.6	309.8
Metallurgy and materials engineering	1,080.8	1,000.5	1,083.7	1,037.2	1,184.1	1,250.0	1,479.8	1,623.9	1,721.6	1,758.8	1,621.3
Other engineering	2,237.0	2,777.6	2,970.8	3,681.6	3,678.3	3,742.3	4,059.8	4,080.8	4,591.2	5,168.4	4,543.8
Environmental sciences	3,251.7	3,418.3	3,740.9	3,741.6	3,502.6	3,430.6	3,170.5	2,984.6	3,751.1	3,338.9	3,207.2
Atmospheric sciences	1,113.6	1,163.5	1,259.4	1,259.7	1,185.1	1,166.9	964.6	884.5	1,018.1	953.8	953.9
Geological sciences	673.8	674.9	725.0	704.5	673.5	653.9	638.0	517.5	754.0	530.4	597.8
Oceanography	681.1	784.6	846.1	809.1	771.5	745.8	787.8	788.7	834.2	743.7	723.7
Other environmental sciences	783.3	795.2	910.3	968.4	872.5	864.0	780.1	793.9	1,144.8	1,111.0	931.7
Life sciences	23,057.3	25,476.8	27,772.2	27,728.5	28,127.8	27,927.7	29,463.6	28,918.8	33,267.1	33,909.1	29,449.7
Agricultural sciences	1,007.7	1,047.6	1,046.0	1,086.8	1,094.2	1,108.2	1,139.4	1,020.3	1,120.4	1,131.9	1,085.0
Biological sciences (excluding environmental biology)	12,380.0	14,498.5	18,643.5	13,091.9	13,351.6	13,690.8	14,429.7	14,443.1	17,376.8	17,213.9	15,178.3
Environmental biology	728.8	778.9	717.9	670.0	699.0	686.6	757.2	858.0	963.7	816.4	854.9
Medical sciences	6,585.2	6,427.4	6,160.3	10,898.8	10,862.1	10,592.2	10,790.7	10,387.3	11,392.7	11,677.0	10,202.2
Other life sciences	2,355.7	2,724.4	1,204.6	1,981.0	2,120.9	1,849.9	2,346.5	2,210.1	2,413.6	3,070.0	2,129.4
Physical sciences	4,600.8	4,983.2	5,021.6	5,211.1	5,493.7	5,351.1	5,136.1	5,072.6	5,821.1	5,870.8	5,426.6
Astronomy	759.2	751.5	871.8	920.8	884.9	792.5	655.9	527.9	671.5	559.9	555.4
Chemistry	1,024.9	1,181.7	1,137.9	1,191.0	1,197.5	1,126.4	1,149.9	1,148.4	1,274.0	1,310.6	1,106.3
Physics	2,461.7	2,621.4	2,500.2	2,598.6	3,041.3	3,001.8	2,939.2	2,968.9	3,356.1	3,470.1	3,268.8
Other physical sciences	354.9	428.6	511.7	500.8	370.0	430.5	391.1	427.4	519.6	530.2	496.1
Psychology	741.9	905.9	1,104.4	1,854.9	1,891.8	1,747.3	1,837.9	1,740.8	2,086.3	2,155.6	1,886.8
Biological aspects	13.6	10.6	23.2	6.0	2.3	3.0	3.8	21.8	2.1	13.6	16.4
Social aspects	59.8	52.5	50.6	51.7	46.6	40.9	36.8	18.8	50.8	74.5	54.5
Other psychological sciences	668.5	842.8	1,030.6	1,797.2	1,842.8	1,703.4	1,797.3	1,700.3	2,033.4	2,067.4	1,816.0
Social sciences	1,008.6	983.0	1,025.8	1,089.6	1,097.1	1,123.9	1,147.1	977.0	1,156.7	1,197.3	1,262.4
Anthropology	15.6	16.4	14.5	15.0	18.0	15.1	16.1	17.4	29.4	24.7	26.1
Economics	234.1	227.3	234.5	204.6	215.9	202.6	250.0	212.3	230.1	274.0	398.6
Political science	19.5	18.4	18.5	18.7	32.7	44.6	41.2	29.2	24.6	14.2	12.0
Sociology	95.5	96.1	124.7	120.1	70.2	144.2	217.6	95.2	138.8	132.3	132.5
Other social sciences	644.0	624.7	633.6	731.2	760.4	717.4	622.2	622.9	733.8	752.0	693.2
Other sciences nec	1,245.8	1,334.0	1,329.3	1,916.3	2,088.9	2,461.3	1,403.1	2,177.1	3,712.7	2,763.2	3,400.5

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 123

Federal obligations for research, by detailed field of science and engineering: FYs 2012–21

(Dollars in millions)

Field	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All fields	61,986.3	59,532.6	63,191.4	63,825.4	67,104.6	69,871.3	74,587.6	81,117.8	85,304.8	85,155.5
Computer sciences and mathematics	3,527.5	3,427.0	3,883.2	3,862.7	4,222.8	3,894.2	4,206.9	4,330.0	5,912.4	6,063.3
Computer sciences	2,392.2	2,361.5	2,612.8	2,645.6	2,815.4	2,734.7	2,887.9	2,896.8	4,280.5	NA
Mathematics	925.3	864.0	979.3	1,005.9	1,160.0	941.7	1,055.2	1,156.9	681.4	NA
Other computer sciences and mathematics	210.1	201.4	291.0	211.2	247.3	217.8	263.8	276.3	950.4	NA
Engineering	11,403.4	10,948.2	11,887.5	11,983.6	12,971.5	13,207.4	13,758.6	15,279.3	13,222.0	14,238.1
Aeronautical engineering	1,814.9	1,842.1	1,833.0	1,825.1	1,836.1	1,892.1	1,118.0	1,199.2	1,093.5	NA
Astronautical engineering	690.2	737.3	668.7	660.6	650.7	651.4	795.8	829.7	915.9	NA
Chemical engineering	349.6	419.0	535.4	374.6	373.0	302.3	692.3	454.1	788.2	NA
Civil engineering	513.6	446.9	445.1	457.6	461.9	605.9	476.3	566.3	475.7	NA
Electrical engineering	1,324.6	1,163.2	1,240.2	897.3	1,062.9	1,102.7	1,009.8	970.6	880.6	NA
Mechanical engineering	372.2	548.6	502.7	323.6	374.2	449.8	498.2	630.1	522.8	NA
Metallurgy and materials engineering	1,699.2	1,729.3	1,768.7	1,756.9	1,975.4	1,941.1	1,915.0	1,842.8	704.5	NA
Other engineering	4,639.1	4,061.8	4,893.6	5,688.0	6,237.3	6,262.1	7,253.1	8,786.5	7,840.8	NA
Environmental sciences	3,884.3	4,041.0	4,365.8	4,413.7	4,450.4	4,469.6	4,567.6	5,074.7	5,039.5	4,631.7
Atmospheric sciences	1,469.2	1,542.4	1,567.5	1,567.9	1,597.0	1,651.3	796.3	824.2	908.1	NA
Geological sciences	725.7	626.6	561.0	643.3	562.4	580.3	227.1	239.1	306.0	NA
Oceanography	813.5	787.6	848.0	726.0	773.0	774.3	777.7	819.2	946.2	NA
Other environmental sciences	875.8	1,084.4	1,389.3	1,476.5	1,518.0	1,463.8	2,766.4	3,192.1	2,879.2	NA
Life sciences	31,006.2	29,662.8	30,950.8	30,625.1	32,045.4	34,089.6	36,994.4	38,303.7	42,524.8	42,013.9
Agricultural sciences	942.7	903.1	1,004.2	1,320.3	1,283.1	1,353.4	1,325.0	1,445.5	1,412.6	NA
Biological sciences (excluding environmental biology)	15,458.3	14,588.1	15,310.6	14,839.7	15,922.6	16,555.7	17,828.5	18,910.4	20,165.4	NA
Environmental biology	796.7	782.0	820.6	819.1	788.1	783.4	922.4	924.2	901.9	NA
Medical sciences	11,078.5	10,917.4	11,285.3	11,086.8	11,358.6	12,648.7	13,564.5	13,774.8	16,182.2	NA
Other life sciences	2,729.9	2,472.3	2,530.0	2,559.2	2,693.0	2,748.4	3,353.9	3,248.8	3,862.7	NA
Physical sciences	6,407.5	6,281.9	6,483.1	6,510.3	6,705.6	6,581.5	7,881.4	9,816.1	8,419.9	8,775.4
Astronomy	1,099.4	1,147.0	1,191.6	1,230.2	1,246.7	1,292.4	887.3	1,583.4	871.3	NA
Chemistry	1,103.0	982.2	1,012.7	967.7	998.9	969.2	1,121.2	1,125.5	1,143.8	NA
Physics	3,708.3	3,481.8	3,565.2	3,040.2	3,731.9	3,675.9	3,541.1	3,446.0	3,577.1	NA
Other physical sciences	496.7	670.9	713.6	1,272.2	728.1	643.9	2,331.7	3,661.3	2,827.6	NA
Psychology	2,086.6	1,935.2	1,968.0	1,994.9	2,021.4	2,081.2	2,326.9	2,753.6	3,275.8	3,265.0
Biological aspects	14.2	14.3	15.0	19.1	19.8	10.4	19.9	17.5	13.5	NA
Social aspects	61.7	64.9	59.5	58.5	56.0	56.4	48.4	52.7	41.8	NA
Other psychological sciences	2,010.8	1,856.0	1,893.5	1,917.2	1,945.6	2,014.4	2,258.5	2,683.3	3,220.5	NA
Social sciences	1,124.5	1,237.3	1,435.1	1,136.3	1,226.7	1,027.2	1,039.4	1,155.7	1,137.4	1,266.3
Anthropology	30.2	26.3	26.5	29.9	31.5	32.1	34.7	34.9	19.3	NA
Economics	343.5	333.0	344.3	336.8	370.9	294.1	282.4	294.9	202.7	NA
Political science	12.9	11.0	13.4	16.0	14.6	17.6	10.8	14.2	12.5	NA
Sociology	154.7	137.2	157.7	128.2	197.4	178.0	143.2	224.0	152.4	NA
Other social sciences	583.2	729.8	893.2	625.3	612.2	505.4	568.2	587.6	750.5	NA
Other sciences nec	2,546.3	1,999.3	2,217.9	3,298.8	3,460.8	4,520.6	3,812.4	4,404.8	5,772.9	4,901.8

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 124

Federal obligations for basic research, by detailed field of science and engineering: FYs 2001–11

(Dollars in millions)

Field	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All fields	21,958.1	23,668.3	24,751.4	26,120.7	27,140.3	26,584.6	26,865.8	27,154.0	32,879.4	31,795.3	29,313.6
Computer sciences and mathematics	957.8	998.7	1,120.2	1,239.1	1,228.4	1,208.2	1,293.5	1,407.4	1,861.4	1,663.2	1,788.5
Computer sciences	585.6	636.9	730.5	712.2	658.1	670.9	708.3	733.8	978.1	873.6	936.4
Mathematics	288.4	325.6	359.8	479.1	542.5	518.6	561.0	645.0	804.3	716.6	741.3
Other computer sciences and mathematics	83.9	36.2	30.0	47.9	27.8	18.7	24.2	28.6	79.0	73.0	110.7
Engineering	1,911.5	1,864.9	1,913.1	2,271.7	2,300.5	2,364.6	2,629.9	2,736.0	3,406.2	3,491.1	3,168.0
Aeronautical engineering	369.7	330.1	255.8	304.2	317.7	242.7	195.1	149.5	185.3	151.3	153.2
Astronautical engineering	33.9	68.1	59.5	67.1	72.9	57.8	43.8	32.0	35.3	31.6	32.9
Chemical engineering	60.2	62.3	71.5	68.6	66.8	67.6	109.0	111.6	167.6	142.7	182.7
Civil engineering	47.9	46.5	51.1	55.6	62.2	67.4	123.6	126.2	185.5	155.2	149.2
Electrical engineering	246.9	213.0	226.3	199.6	212.6	205.1	246.4	221.4	297.4	295.0	281.0
Mechanical engineering	128.8	89.2	96.3	89.6	76.7	70.5	77.6	65.8	84.3	80.3	82.3
Metallurgy and materials engineering	591.1	507.8	581.0	592.0	665.9	811.4	959.9	993.2	1,112.6	1,091.4	1,077.2
Other engineering	433.1	547.8	571.7	895.0	825.7	842.1	874.5	1,036.2	1,338.3	1,543.7	1,209.5
Environmental sciences	1,663.0	1,833.3	1,899.5	2,022.9	1,966.1	1,849.5	1,727.8	1,593.1	2,142.9	1,787.4	1,796.4
Atmospheric sciences	597.2	684.1	668.1	726.8	743.6	666.3	583.6	523.2	650.5	596.9	612.5
Geological sciences	400.6	426.0	461.9	482.0	470.3	444.6	426.8	303.0	429.7	332.6	396.4
Oceanography	402.4	427.0	442.2	452.6	431.1	416.5	436.9	433.6	549.2	471.6	483.0
Other environmental sciences	262.9	296.1	327.3	361.5	321.1	322.2	280.5	333.3	513.5	386.3	304.5
Life sciences	12,835.5	14,024.1	14,765.3	14,490.0	15,247.6	14,934.4	15,643.5	15,557.4	17,587.2	17,748.3	15,373.4
Agricultural sciences	511.7	530.6	528.3	503.7	511.2	514.3	532.9	494.7	531.4	571.4	547.0
Biological sciences (excluding environmental biology)	7,952.3	8,379.7	10,471.5	7,222.8	7,608.0	7,699.8	8,075.5	8,258.7	9,600.1	9,417.4	8,277.1
Environmental biology	309.8	334.5	324.0	329.1	339.0	344.3	350.8	368.2	466.6	435.4	434.6
Medical sciences	2,808.6	3,361.0	2,919.1	5,477.2	5,702.7	5,454.4	5,504.0	5,314.3	5,747.6	5,786.9	5,085.5
Other life sciences	1,253.1	1,418.3	522.3	957.1	1,086.7	921.7	1,180.2	1,121.5	1,241.5	1,537.1	1,029.2
Physical sciences	3,327.1	3,405.9	3,454.0	3,662.6	3,738.7	3,515.5	3,544.5	3,403.1	4,121.0	3,984.1	3,815.0
Astronomy	650.2	603.3	696.0	765.4	778.4	686.9	592.6	482.5	617.7	504.2	498.8
Chemistry	736.8	748.8	748.6	776.0	764.0	720.7	732.8	725.8	835.4	827.7	774.3
Physics	1,762.3	1,861.7	1,820.6	1,904.5	1,995.9	1,910.8	2,012.3	1,986.6	2,370.4	2,377.0	2,275.2
Other physical sciences	177.9	192.0	188.8	216.7	200.4	197.1	206.8	208.2	297.5	275.1	266.7
Psychology	292.9	464.6	543.8	979.2	1,040.1	944.9	978.8	936.0	1,100.5	1,129.2	978.8
Biological aspects	10.4	7.8	10.6	0.9	0.3	0.7	1.5	0.5	1.9	10.1	13.4
Social aspects	5.5	4.8	4.1	5.0	4.3	4.9	5.4	6.6	18.5	18.4	16.9
Other psychological sciences	277.0	452.0	529.2	973.2	1,035.5	939.3	972.0	928.9	1,080.0	1,100.8	948.5
Social sciences	278.4	361.7	352.8	419.3	391.4	381.0	361.3	330.0	432.2	358.9	371.0
Anthropology	14.1	15.2	12.7	12.9	15.2	14.1	15.3	15.2	27.7	24.3	25.8
Economics	42.5	45.3	48.2	48.0	51.3	46.3	52.3	43.7	52.0	44.4	54.5
Political science	5.9	5.7	6.0	6.7	10.5	11.0	8.5	16.5	13.0	9.6	9.3
Sociology	17.9	19.5	48.7	48.6	17.9	19.2	40.8	14.0	33.3	29.5	35.5
Other social sciences	198.0	276.0	237.1	303.1	296.5	290.3	244.3	240.6	306.1	251.1	245.9
Other sciences nec	691.7	715.2	702.7	1,035.9	1,227.5	1,386.5	686.4	1,190.9	2,227.9	1,633.0	2,022.6

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 125

Federal obligations for basic research, by detailed field of science and engineering: FYs 2012–21

(Dollars in millions)

Field	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All fields	30,958.9	29,779.4	31,587.9	31,527.1	32,292.7	33,271.5	36,195.1	40,017.3	41,546.6	41,231.3
Computer sciences and mathematics	1,794.9	1,690.8	1,917.7	1,984.5	2,109.7	1,877.3	2,084.6	2,305.9	2,524.5	2,591.1
Computer sciences	922.4	859.9	958.9	1,024.5	996.9	998.7	1,032.3	1,150.7	1,230.1	NA
Mathematics	806.2	757.5	824.4	874.1	1,019.3	823.9	942.5	1,038.8	503.8	NA
Other computer sciences and mathematics	66.3	73.4	134.4	85.8	93.4	54.6	109.8	116.4	790.6	NA
Engineering	3,458.9	3,407.5	3,544.6	3,694.0	3,657.7	3,685.6	3,585.7	3,618.0	2,897.9	2,871.3
Aeronautical engineering	401.9	408.9	446.9	468.7	478.6	450.0	99.2	70.9	70.4	NA
Astronautical engineering	79.4	85.0	92.8	98.8	99.3	101.0	8.3	8.7	14.9	NA
Chemical engineering	94.4	84.2	103.7	60.5	69.6	76.2	71.6	74.9	94.1	NA
Civil engineering	35.3	28.2	27.8	54.3	38.0	26.7	13.9	11.5	16.3	NA
Electrical engineering	298.7	259.4	247.8	228.2	227.7	225.0	238.2	219.5	205.3	NA
Mechanical engineering	156.4	146.9	128.6	125.5	122.9	123.8	110.5	103.4	115.6	NA
Metallurgy and materials engineering	1,186.1	1,201.1	1,232.8	1,289.9	1,279.3	1,306.5	1,363.5	1,223.1	281.1	NA
Other engineering	1,206.7	1,193.9	1,264.2	1,368.0	1,342.3	1,376.4	1,680.4	1,906.0	2,100.3	NA
Environmental sciences	2,258.7	2,395.8	2,753.0	2,738.4	2,765.0	2,686.8	2,996.4	3,251.8	3,166.9	2,743.6
Atmospheric sciences	952.3	994.8	1,036.6	1,051.4	1,080.4	1,087.8	508.1	513.7	562.7	NA
Geological sciences	501.5	411.2	417.8	432.7	433.1	439.0	182.6	200.3	261.8	NA
Oceanography	494.4	456.5	482.7	431.8	441.7	384.5	418.6	432.1	470.2	NA
Other environmental sciences	310.3	533.2	815.8	822.4	809.8	775.5	1,887.2	2,105.6	1,872.2	NA
Life sciences	16,015.8	15,317.3	16,019.0	15,209.7	15,577.0	16,573.8	18,176.1	18,880.6	20,804.8	20,887.1
Agricultural sciences	480.4	462.4	513.7	554.2	566.1	584.2	596.6	634.6	681.8	NA
Biological sciences (excluding environmental biology)	8,317.4	7,918.8	8,283.6	7,758.4	8,026.1	8,573.3	9,158.9	9,785.8	10,326.0	NA
Environmental biology	406.6	384.4	394.8	398.6	380.5	371.9	513.6	490.2	471.1	NA
Medical sciences	5,528.0	5,325.9	5,564.2	5,270.5	5,337.2	5,717.3	6,414.9	6,389.2	7,460.0	NA
Other life sciences	1,283.4	1,225.8	1,262.7	1,228.0	1,267.1	1,327.2	1,492.1	1,580.8	1,865.9	NA
Physical sciences	4,556.7	4,432.2	4,637.5	4,620.8	4,706.9	4,717.4	5,930.8	7,907.0	6,513.0	7,444.4
Astronomy	925.0	973.9	1,036.0	1,073.5	1,093.0	1,139.5	878.9	1,577.2	870.4	NA
Chemistry	776.3	714.7	722.1	672.4	688.0	694.5	738.9	691.3	754.1	NA
Physics	2,568.0	2,468.8	2,576.0	2,569.2	2,593.2	2,597.2	2,517.8	2,570.6	2,515.9	NA
Other physical sciences	287.4	274.8	303.4	305.7	332.7	286.2	1,795.2	3,067.8	2,372.6	NA
Psychology	1,087.8	1,016.0	1,037.6	999.9	989.8	1,027.3	1,147.3	1,366.1	1,611.7	1,637.9
Biological aspects	13.1	13.8	13.7	14.2	15.7	10.0	19.4	16.1	12.9	NA
Social aspects	13.3	16.4	13.2	13.6	11.7	13.5	10.3	10.6	11.8	NA
Other psychological sciences	1,061.5	985.8	1,010.7	972.1	962.4	1,003.8	1,117.6	1,339.4	1,586.9	NA
Social sciences	381.4	373.8	386.1	344.7	378.1	359.3	374.1	451.2	439.5	439.2
Anthropology	26.8	24.1	24.1	28.2	29.4	28.9	31.0	32.7	18.3	NA
Economics	54.6	58.4	58.2	47.3	50.5	56.3	52.5	85.7	38.9	NA
Political science	10.3	8.9	12.1	12.4	13.7	12.1	9.0	10.3	4.6	NA
Sociology	38.7	24.4	30.8	26.7	24.2	23.2	24.0	36.7	19.9	NA
Other social sciences	251.0	258.1	260.9	230.1	260.2	238.7	257.6	285.9	357.9	NA
Other sciences nec	1,404.6	1,145.8	1,292.5	1,935.1	2,108.5	2,344.2	1,900.0	2,236.8	3,588.3	2,616.8

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 126

Federal obligations for applied research, by detailed field of science and engineering: FYs 2001–11

(Dollars in millions)

Field	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All fields	22,755.6	24,338.4	26,320.4	27,237.1	26,597.9	26,951.1	27,227.8	26,739.7	30,812.5	31,932.6	28,751.2
Computer sciences and mathematics	1,652.8	1,632.0	1,552.2	1,710.3	1,754.9	1,606.7	1,652.1	1,639.8	1,750.3	1,748.6	1,585.9
Computer sciences	1,437.2	1,406.3	1,322.3	1,432.7	1,499.0	1,316.9	1,369.4	1,319.2	1,444.1	1,488.4	1,255.2
Mathematics	108.0	76.4	93.2	138.7	144.1	150.5	147.5	137.8	123.6	118.9	150.3
Other computer sciences and mathematics	107.6	149.3	136.7	138.9	111.9	139.3	135.2	182.8	182.7	141.4	180.4
Engineering	6,285.5	6,410.0	6,492.0	6,594.7	6,252.5	6,314.2	6,359.8	6,239.5	6,878.8	7,590.0	6,889.2
Aeronautical engineering	2,060.3	1,827.0	1,476.5	1,336.6	958.6	986.5	734.0	660.8	722.5	678.8	691.9
Astronautical engineering	718.9	692.6	643.0	597.8	421.2	418.6	297.2	256.1	334.9	358.3	377.2
Chemical engineering	138.9	139.2	256.4	250.2	217.0	227.0	244.8	234.0	279.4	366.9	291.8
Civil engineering	240.5	256.1	288.5	274.7	217.1	285.2	337.9	361.8	493.4	544.6	467.9
Electrical engineering	642.8	595.6	723.7	691.3	820.9	830.3	781.1	825.1	956.6	1,065.9	954.4
Mechanical engineering	190.4	176.7	202.2	212.3	247.0	227.7	259.5	226.6	230.1	283.3	227.5
Metallurgy and materials engineering	489.7	492.8	502.7	445.2	518.2	438.6	519.9	630.7	609.0	667.4	544.0
Other engineering	1,803.9	2,229.9	2,399.1	2,786.6	2,852.5	2,900.2	3,185.3	3,044.6	3,252.9	3,624.7	3,334.4
Environmental sciences	1,588.6	1,585.0	1,841.4	1,718.7	1,536.5	1,581.1	1,442.7	1,391.5	1,608.2	1,551.5	1,410.7
Atmospheric sciences	516.4	479.4	591.3	532.9	441.5	500.7	380.9	361.3	367.6	356.9	341.4
Geological sciences	273.2	248.9	263.1	222.5	203.2	209.3	211.2	214.5	324.3	197.7	201.4
Oceanography	278.7	357.6	403.9	356.5	340.4	329.4	350.9	355.1	285.0	272.1	240.7
Other environmental sciences	520.4	499.1	583.0	606.9	551.4	541.8	499.6	460.6	631.3	724.8	627.2
Life sciences	10,221.8	11,452.7	13,007.0	13,238.5	12,880.2	12,993.3	13,820.1	13,361.5	15,679.9	16,160.8	14,076.3
Agricultural sciences	496.0	517.1	517.7	583.1	583.0	593.9	606.5	525.6	589.0	560.4	538.0
Biological sciences (excluding environmental biology)	4,427.7	6,118.8	8,172.0	5,869.1	5,743.6	5,991.1	6,354.2	6,184.4	7,776.7	7,796.5	6,901.2
Environmental biology	419.0	444.4	393.8	340.8	360.0	342.3	406.4	489.9	497.0	380.9	420.3
Medical sciences	3,776.6	3,066.4	3,241.2	5,421.5	5,159.4	5,137.8	5,286.7	5,073.0	5,645.1	5,890.1	5,116.7
Other life sciences	1,102.6	1,306.0	682.3	1,023.9	1,034.2	928.2	1,166.3	1,088.6	1,172.1	1,532.9	1,100.1
Physical sciences	1,273.6	1,577.4	1,567.6	1,548.6	1,755.0	1,835.6	1,591.6	1,669.5	1,700.1	1,886.7	1,611.6
Astronomy	109.0	148.2	175.8	155.4	106.5	105.5	63.3	45.4	53.8	55.7	56.6
Chemistry	288.1	432.9	389.3	415.0	433.5	405.7	417.1	422.6	438.6	482.9	332.0
Physics	699.5	759.6	679.6	694.0	1,045.4	1,091.0	926.9	982.4	985.7	1,093.0	993.6
Other physical sciences	177.0	236.6	322.9	284.1	169.6	233.4	184.3	219.2	222.0	255.1	229.4
Psychology	449.0	441.3	560.6	875.6	851.6	802.4	859.1	804.8	985.9	1,026.4	908.1
Biological aspects	3.2	2.8	12.7	5.0	2.0	2.3	2.3	21.2	0.2	3.5	3.0
Social aspects	54.3	47.7	46.5	46.6	42.3	36.0	31.4	12.2	32.3	56.2	37.6
Other psychological sciences	391.5	390.8	501.5	824.0	807.3	764.1	825.3	771.4	953.3	966.6	867.5
Social sciences	730.2	621.3	673.0	670.3	705.8	742.9	785.9	647.0	724.5	838.4	891.4
Anthropology	1.5	1.2	1.8	2.1	2.8	1.0	0.8	2.2	1.6	0.4	0.3
Economics	191.5	182.1	186.2	156.7	164.6	156.3	197.7	168.6	178.1	229.6	344.1
Political science	13.6	12.7	12.5	12.0	22.2	33.6	32.7	12.7	11.6	4.7	2.7
Sociology	77.6	76.6	76.0	71.5	52.2	124.9	176.8	81.2	105.5	102.8	97.0
Other social sciences	446.0	348.7	396.5	428.0	463.9	427.1	377.9	382.2	427.7	500.9	447.3
Other sciences nec	554.1	618.8	626.6	880.5	861.4	1,074.9	716.7	986.2	1,484.8	1,130.2	1,377.9

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 127

Federal obligations for applied research, by detailed field of science and engineering: FYs 2012–21

(Dollars in millions)

Field	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 (preliminary)
All fields	31,027.4	29,753.2	31,603.5	32,298.4	34,812.0	36,599.8	38,392.4	41,100.5	43,758.1	43,924.2
Computer sciences and mathematics	1,732.6	1,736.2	1,965.5	1,878.2	2,113.1	2,016.9	2,122.3	2,024.0	3,387.9	3,472.2
Computer sciences	1,469.7	1,501.7	1,654.0	1,621.1	1,818.5	1,736.0	1,855.6	1,746.1	3,050.4	NA
Mathematics	119.1	106.5	154.9	131.8	140.7	117.7	112.7	118.1	177.7	NA
Other computer sciences and mathematics	143.8	128.0	156.6	125.4	153.9	163.2	154.0	159.9	159.9	NA
Engineering	7,944.5	7,540.7	8,343.0	8,289.7	9,313.9	9,521.8	10,172.8	11,661.4	10,324.1	11,366.7
Aeronautical engineering	1,413.0	1,433.2	1,386.2	1,356.4	1,357.5	1,442.2	1,018.8	1,128.2	1,023.1	NA
Astronautical engineering	610.8	652.3	575.9	561.9	551.4	550.4	787.5	821.0	901.0	NA
Chemical engineering	255.2	334.8	431.7	314.1	303.3	226.1	620.7	379.2	694.1	NA
Civil engineering	478.3	418.7	417.3	403.3	424.0	579.2	462.4	554.8	459.4	NA
Electrical engineering	1,025.9	903.9	992.4	669.0	835.2	877.7	771.6	751.2	675.3	NA
Mechanical engineering	215.7	401.7	374.1	198.1	251.3	325.9	387.7	526.7	407.3	NA
Metallurgy and materials engineering	513.1	528.2	536.0	467.0	696.1	634.6	551.5	619.7	423.4	NA
Other engineering	3,432.4	2,867.8	3,629.4	4,320.0	4,895.0	4,885.7	5,572.7	6,880.6	5,740.5	NA
Environmental sciences	1,625.6	1,645.2	1,612.9	1,675.4	1,685.4	1,782.8	1,571.1	1,822.9	1,872.5	1,888.1
Atmospheric sciences	516.9	547.6	530.9	516.5	516.6	563.5	288.2	310.5	345.4	NA
Geological sciences	224.1	215.4	143.2	210.6	129.3	141.3	44.6	38.8	44.2	NA
Oceanography	319.1	331.1	365.3	294.2	331.3	389.7	359.1	387.1	476.0	NA
Other environmental sciences	565.5	551.1	573.5	654.2	708.2	688.3	879.2	1,086.5	1,007.0	NA
Life sciences	14,990.3	14,345.5	14,931.8	15,415.4	16,468.4	17,515.8	18,818.3	19,423.1	21,720.0	21,126.8
Agricultural sciences	462.3	440.7	490.5	766.1	717.0	769.3	728.4	810.9	730.8	NA
Biological sciences (excluding environmental biology)	7,141.0	6,669.3	7,027.0	7,081.3	7,896.5	7,982.4	8,669.6	9,124.6	9,839.4	NA
Environmental biology	390.0	397.6	425.8	420.5	407.5	411.5	408.9	434.0	430.8	NA
Medical sciences	5,550.5	5,591.5	5,721.1	5,816.3	6,021.3	6,931.4	7,149.6	7,385.6	8,722.2	NA
Other life sciences	1,446.5	1,246.5	1,267.4	1,331.2	1,426.0	1,421.1	1,861.8	1,668.0	1,996.8	NA
Physical sciences	1,850.8	1,849.7	1,845.6	1,889.5	1,998.7	1,864.1	1,950.7	1,909.2	1,906.9	1,331.0
Astronomy	174.4	173.1	155.6	156.7	153.7	152.9	8.4	6.2	0.9	NA
Chemistry	326.7	267.4	290.6	295.3	310.9	274.8	382.3	434.2	389.8	NA
Physics	1,140.3	1,013.0	989.2	471.0	1,138.7	1,078.7	1,023.4	875.3	1,061.2	NA
Other physical sciences	209.3	396.1	410.3	966.4	395.4	357.7	536.6	593.4	455.0	NA
Psychology	998.8	919.2	930.5	995.0	1,031.6	1,053.9	1,179.6	1,387.5	1,664.2	1,627.1
Biological aspects	1.1	0.5	1.4	4.9	4.1	0.5	0.5	1.4	0.6	NA
Social aspects	48.4	48.5	46.2	44.9	44.3	42.9	38.1	42.1	30.0	NA
Other psychological sciences	949.3	870.2	882.8	945.2	983.2	1,010.6	1,140.9	1,343.9	1,633.5	NA
Social sciences	743.1	863.4	1,049.0	791.6	848.6	667.9	665.3	704.5	697.9	827.1
Anthropology	3.4	2.3	2.4	1.7	2.1	3.1	3.7	2.3	1.1	NA
Economics	289.0	274.6	286.1	289.5	320.4	237.8	229.9	209.2	163.8	NA
Political science	2.6	2.1	1.3	3.6	1.0	5.4	1.8	3.9	7.9	NA
Sociology	116.0	112.8	126.9	101.5	173.2	154.8	119.2	187.4	132.5	NA
Other social sciences	332.2	471.7	632.2	395.2	352.0	266.7	310.7	301.7	392.6	NA
Other sciences nec	1,141.7	853.5	925.4	1,363.7	1,352.3	2,176.5	1,912.4	2,168.0	2,184.6	2,285.0

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 128

Federal obligations for research and development for selected agencies, by state or location: FYs 2001–11

(Dollars in millions)

State or location	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All locations	82,618.0	91,816.0	101,366.4	109,732.9	116,585.5	119,302.2	124,900.3	125,091.8	138,975.5	138,156.5	132,793.6
Alabama	2,456.8	2,734.8	3,211.8	3,035.5	3,108.2	2,198.2	2,247.6	2,782.2	3,023.3	3,476.9	5,202.1
Alaska	254.4	299.9	399.4	461.3	495.1	212.1	264.0	222.2	247.3	235.6	196.5
Arizona	1,881.0	2,279.2	2,385.4	2,643.7	2,958.8	2,459.6	2,422.4	2,449.2	3,141.5	3,425.6	2,917.0
Arkansas	183.9	141.3	145.4	146.7	165.0	161.8	177.7	145.3	171.2	181.8	178.6
California	13,001.7	19,198.5	20,169.6	19,259.4	19,964.3	26,897.6	26,987.2	19,938.7	26,988.8	27,226.9	22,768.9
Colorado	1,450.6	1,728.4	1,735.0	2,068.0	2,264.9	2,188.7	2,797.5	2,668.1	3,862.3	4,348.3	3,815.5
Connecticut	1,377.4	2,816.7	2,068.0	2,122.5	2,399.6	1,946.6	2,116.8	1,815.4	2,364.5	2,193.5	2,426.0
Delaware	83.5	80.6	95.4	89.7	94.2	112.7	130.6	144.3	225.2	129.1	114.7
District of Columbia	2,776.0	3,145.6	2,985.5	3,329.4	4,161.8	4,193.2	4,277.7	17,537.2	4,265.5	3,890.1	3,013.5
Florida	2,774.0	2,542.0	2,854.1	3,265.0	2,590.0	3,346.5	4,078.2	2,290.4	3,734.4	3,142.2	2,481.8
Georgia	3,438.3	2,229.0	2,133.0	1,906.5	2,181.8	1,750.8	1,686.2	1,386.0	1,957.6	1,520.0	1,421.8
Hawaii	435.7	428.3	413.9	488.2	600.3	380.3	379.2	347.8	387.5	389.4	403.6
Idaho	209.3	235.5	217.8	288.5	290.3	300.0	287.5	355.4	388.0	479.0	430.2
Illinois	1,825.1	1,728.6	1,934.7	1,880.1	2,127.8	2,003.5	2,145.1	2,168.5	2,745.5	2,631.3	2,878.1
Indiana	568.8	537.6	573.7	556.7	566.8	583.2	596.6	672.0	1,109.2	988.7	903.0
Iowa	361.5	463.4	499.5	538.3	487.7	548.7	662.4	634.9	683.2	909.1	695.3
Kansas	306.7	290.5	268.7	287.4	357.8	294.5	317.8	300.4	464.2	347.5	367.8
Kentucky	370.4	321.5	246.7	251.8	296.3	240.0	222.2	252.5	319.1	287.4	242.0
Louisiana	275.8	432.7	453.4	446.7	443.7	322.6	419.4	406.1	405.6	330.8	597.3
Maine	450.7	255.6	166.7	210.3	292.1	229.2	378.8	168.0	194.2	163.1	180.0
Maryland	9,473.7	7,420.0	8,027.3	12,608.6	12,500.8	12,746.6	11,905.8	13,312.7	15,970.5	15,879.0	15,750.6
Massachusetts	4,499.8	4,920.7	5,491.7	5,963.6	6,591.9	6,875.8	7,528.9	6,883.1	9,047.0	8,747.5	7,758.4
Michigan	1,196.4	1,254.1	1,693.1	1,117.8	1,177.0	1,700.3	1,726.1	1,866.5	2,427.4	2,509.7	2,153.4
Minnesota	900.9	1,152.8	866.2	831.3	768.3	1,241.6	1,386.8	1,393.0	1,550.6	1,062.6	949.3
Mississippi	415.7	627.7	1,181.0	1,598.7	438.2	554.9	433.9	435.2	384.6	421.6	588.1
Missouri	927.0	1,241.1	1,349.5	3,058.8	4,201.7	1,315.6	1,220.6	1,111.3	1,284.6	1,151.0	1,193.3
Montana	136.8	113.7	131.2	188.8	182.1	151.3	653.6	159.5	171.5	139.2	181.7
Nebraska	145.2	153.8	168.0	210.5	193.1	178.1	230.1	204.6	220.2	239.8	262.2
Nevada	360.2	342.5	418.9	555.0	593.3	436.2	321.1	312.6	558.2	379.8	478.1
New Hampshire	474.4	312.3	511.9	422.1	513.8	400.4	339.9	294.3	458.4	350.5	406.0
New Jersey	1,674.0	2,109.1	2,087.6	2,273.7	2,524.8	2,172.7	2,192.0	2,192.7	2,492.2	2,853.0	2,582.7
New Mexico	2,890.6	2,877.0	3,090.1	3,363.2	3,593.4	3,315.0	3,478.0	3,502.9	3,695.6	3,338.0	3,456.2
New York	3,528.3	3,820.6	4,382.5	4,505.3	5,320.1	5,368.2	5,367.6	4,651.2	6,242.0	5,602.2	5,042.1
North Carolina	1,400.9	1,393.0	1,617.3	1,683.6	1,806.1	1,771.4	1,828.4	1,772.6	2,021.8	2,151.2	2,060.3
North Dakota	77.9	104.7	107.3	108.6	117.9	117.9	115.8	98.3	101.2	119.6	117.7
Ohio	3,051.1	2,380.4	2,967.1	2,794.2	2,961.5	2,723.9	3,660.9	2,580.4	4,459.5	4,098.8	3,554.7
Oklahoma	324.0	276.1	570.2	498.5	400.7	271.1	253.2	260.8	370.0	429.6	462.5
Oregon	522.6	504.0	514.2	504.8	650.1	510.1	506.4	581.1	635.2	675.3	711.1
Pennsylvania	2,772.1	3,245.0	3,989.3	3,731.1	3,677.4	3,299.7	3,359.9	3,279.4	4,297.6	4,963.4	4,513.0
Rhode Island	437.5	501.5	565.6	642.1	888.8	622.5	627.8	643.7	679.5	669.8	610.1
South Carolina	314.3	371.0	454.0	384.3	492.7	373.8	421.7	453.0	661.6	662.2	496.7
South Dakota	54.9	58.7	54.8	70.0	70.0	75.9	61.9	76.4	79.3	75.0	61.1
Tennessee	1,039.5	1,157.2	1,130.6	1,382.0	1,426.0	1,489.1	1,907.9	1,689.9	2,081.4	2,104.8	1,898.6
Texas	3,189.4	3,553.9	5,414.4	5,506.7	5,187.0	5,914.7	6,692.8	5,029.6	6,031.1	6,896.1	5,475.4
Utah	421.6	457.9	803.4	1,183.7	1,058.2	845.8	991.3	699.9	1,168.5	1,708.9	1,756.4
Vermont	112.7	136.4	201.1	417.1	262.6	105.5	108.4	121.0	151.4	142.3	124.4
Virginia	4,995.7	6,175.9	6,709.2	7,298.3	8,746.5	8,994.3	9,088.2	9,282.2	9,381.3	9,111.7	8,287.1
Washington	1,725.3	2,023.3	2,442.2	2,311.3	2,641.2	4,087.1	4,751.1	4,339.5	4,156.7	3,915.5	4,931.4

TABLE 128

Federal obligations for research and development for selected agencies, by state or location: FYs 2001–11

(Dollars in millions)

State or location	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
West Virginia	376.1	254.2	383.4	315.7	807.5	301.4	219.1	224.6	262.6	312.8	239.8
Wisconsin	487.9	595.5	658.4	645.9	651.8	635.7	671.4	660.9	885.7	795.6	742.2
Wyoming	37.0	39.6	43.0	47.6	37.5	36.2	36.6	47.4	65.2	36.7	37.2
Outlying areas	142.6	288.2	323.3	135.0	160.6	161.2	178.4	160.3	237.2	263.2	269.0
Puerto Rico	90.8	135.3	112.2	100.9	101.4	98.8	85.9	84.9	96.1	94.8	97.4
Other areas ^a	51.8	152.9	211.1	34.1	59.2	62.4	92.5	75.4	141.1	168.4	171.7
Offices abroad ^b	30.3	64.4	60.9	99.4	96.5	138.0	39.9	86.8	67.8	54.0	35.7
Undistributed ^c	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,373.4

NA = not available; data were not collected at that level for that fiscal year.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government.

^c Undistributed totals include Department of Defense (DOD) obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and obligations for other performers that were not reported prior to FY 2011.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2020. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. Geographic distribution of Department of Defense development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 129

Federal obligations for research and development for selected agencies, by state or location: FYs 2012–20

(Dollars in millions)

State or location	2012	2013	2014	2015	2016	2017	2018	2019	2020
All locations	135,995.4	122,985.2	127,927.2	125,846.3	113,002.0	115,507.6	125,737.3	138,170.3	162,959.1
Alabama	5,159.1	4,716.4	4,483.7	4,538.0	4,354.3	8,662.5	5,173.7	5,414.5	3,070.4
Alaska	159.1	185.5	136.9	208.0	211.9	280.0	299.8	334.2	278.9
Arizona	2,405.2	2,369.3	1,606.0	1,643.7	1,549.4	1,198.8	1,737.0	2,001.2	1,938.8
Arkansas	183.8	167.3	190.9	105.6	307.5	170.0	206.2	179.0	501.3
California	18,036.3	16,180.8	15,798.7	15,280.6	15,756.5	15,886.7	17,236.9	19,158.6	22,464.3
Colorado	3,744.7	3,394.0	3,611.4	3,506.4	4,183.1	3,395.6	4,916.8	5,267.9	5,024.2
Connecticut	2,231.1	2,516.6	2,287.0	2,292.8	2,365.9	2,349.3	2,568.2	2,673.2	2,566.2
Delaware	108.7	112.3	130.1	108.1	142.0	168.6	161.6	163.1	221.6
District of Columbia	3,339.3	3,908.1	3,980.1	4,221.7	4,204.5	4,867.4	6,157.7	6,228.2	16,314.7
Florida	2,355.8	2,282.0	2,447.6	2,932.7	2,781.5	2,879.5	3,178.5	3,892.0	4,061.1
Georgia	1,133.3	1,130.0	1,253.1	1,182.4	1,301.3	1,284.7	1,349.8	1,503.9	1,912.8
Hawaii	382.5	348.0	326.5	305.4	283.8	275.4	441.3	411.9	393.9
Idaho	446.9	380.8	597.9	532.6	568.4	679.1	824.2	919.9	840.4
Illinois	2,399.5	2,327.5	2,368.6	2,482.7	3,922.1	2,552.9	2,911.1	2,998.3	3,209.0
Indiana	838.3	692.6	771.2	678.3	719.1	689.8	781.3	894.1	1,104.1
Iowa	613.3	560.5	512.2	567.0	496.2	520.0	525.0	517.8	702.1
Kansas	231.6	234.3	187.1	193.7	187.9	211.6	232.8	282.6	352.3
Kentucky	308.1	306.8	296.7	296.7	272.6	289.5	302.8	313.4	354.3
Louisiana	313.8	278.0	284.5	253.7	278.5	397.2	321.1	432.1	436.6
Maine	247.8	169.9	131.1	138.0	137.5	158.0	188.4	189.0	185.1
Maryland	15,597.8	15,605.9	16,890.5	16,750.6	16,640.3	15,416.8	17,779.2	16,992.3	22,736.2
Massachusetts	6,279.3	5,690.8	6,268.5	6,055.0	5,532.6	5,238.4	6,036.0	6,837.8	8,850.3
Michigan	2,206.4	1,826.1	1,852.7	1,799.0	1,795.9	1,491.4	1,630.5	2,053.7	1,924.8
Minnesota	961.1	939.7	947.4	817.4	859.1	985.8	1,031.0	1,029.4	1,447.6
Mississippi	542.6	567.7	589.5	489.0	448.2	449.5	819.8	505.1	472.0
Missouri	1,122.8	1,056.3	1,038.6	1,296.3	1,258.6	1,603.8	1,492.0	2,375.1	2,079.6
Montana	190.2	134.5	170.5	152.2	169.5	151.0	194.7	191.4	213.2
Nebraska	261.9	200.5	234.1	216.4	204.8	210.6	211.3	243.7	254.9
Nevada	481.7	584.6	510.0	394.2	286.2	338.4	400.2	375.1	305.9
New Hampshire	490.7	296.2	335.9	342.1	373.5	351.1	472.4	669.3	483.3
New Jersey	2,167.0	1,726.9	1,968.5	1,631.9	1,676.6	1,962.6	2,367.3	2,834.4	2,885.0
New Mexico	3,378.6	3,421.5	3,714.2	3,542.9	3,662.1	3,383.4	3,630.3	3,755.7	3,502.0
New York	4,727.2	4,605.2	4,580.6	4,566.9	4,743.8	4,954.5	5,366.1	6,162.3	8,148.2
North Carolina	1,922.3	1,759.2	1,880.5	1,892.0	1,906.2	2,005.4	2,270.1	2,417.4	3,271.4
North Dakota	88.1	89.5	80.5	82.0	103.6	74.8	110.7	73.0	140.1
Ohio	3,436.3	2,425.7	2,454.5	2,638.5	2,497.4	2,549.8	4,206.8	5,188.2	5,215.7
Oklahoma	449.8	262.4	316.8	450.2	349.0	367.6	480.6	505.9	536.7
Oregon	632.1	529.0	601.5	557.5	543.8	572.5	626.8	696.9	814.3
Pennsylvania	3,724.9	3,295.4	3,695.3	3,710.5	3,980.6	3,787.5	4,147.6	4,092.5	5,214.1
Rhode Island	557.4	486.4	555.3	519.4	627.3	615.0	662.4	722.6	875.7
South Carolina	555.4	397.5	476.4	446.6	460.9	504.7	561.4	646.0	821.5
South Dakota	63.2	56.6	68.8	72.8	69.0	77.2	80.8	88.9	130.9
Tennessee	2,111.9	2,118.6	2,023.1	2,312.5	2,479.3	2,491.1	2,564.2	3,578.4	3,151.0
Texas	5,619.7	5,234.2	4,678.4	5,574.5	5,296.5	5,318.9	4,677.3	5,067.5	6,135.0
Utah	972.3	918.6	1,221.8	1,143.6	937.7	1,057.5	1,109.7	1,301.1	1,140.7
Vermont	103.4	103.0	115.7	81.6	82.4	80.7	97.1	119.9	129.3
Virginia	8,130.0	6,487.5	7,651.7	7,487.1	7,383.6	6,310.9	7,187.2	8,028.9	9,650.2
Washington	2,757.4	3,433.5	3,565.3	2,361.7	2,083.8	2,623.7	2,746.0	3,195.3	3,280.0
West Virginia	263.3	171.4	208.0	239.5	455.5	141.4	280.5	141.9	150.4

TABLE 129

Federal obligations for research and development for selected agencies, by state or location: FYs 2012–20

(Dollars in millions)

State or location	2012	2013	2014	2015	2016	2017	2018	2019	2020
Wisconsin	734.3	654.0	701.1	700.7	722.7	729.5	759.4	839.5	907.9
Wyoming	75.6	41.2	45.8	53.5	43.7	45.8	48.6	67.6	86.7
Outlying areas	193.0	228.6	318.0	347.1	331.1	104.1	496.1	520.7	195.5
Puerto Rico	71.3	82.6	71.0	65.9	71.8	67.6	74.7	81.8	88.1
Other areas ^a	121.6	146.1	247.0	281.3	259.3	36.5	421.4	438.9	107.4
Offices abroad ^b	91.6	165.5	38.0	28.3	3.7	1.8	12.3	4.3	47.9
Undistributed ^c	20,468.0	15,210.8	16,728.5	15,624.4	969.2	2,593.9	1,666.5	3,073.1	1,829.2

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government.

^c Undistributed totals include Department of Defense (DOD) obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and obligations for other performers that were not reported prior to FY 2011. The undistributed total for FY 2019 also include Department of Health and Human Services' Biomedical Advanced Research and Development Authority obligations for which the location of performance could not be reported.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2020. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. Starting with volume 62 (FYs 2012–14), an "undistributed" category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the DOD Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 130

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2001–11

(Dollars in millions)

State or location	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All locations	4,026.0	4,289.7	4,239.8	3,979.3	3,749.1	2,093.1	2,111.0	1,893.3	3,591.3	6,563.3	4,100.5
Alabama	202.6	176.1	92.5	37.3	27.1	6.4	1.4	2.6	4.2	98.1	93.2
Alaska	0.4	281.4	133.9	126.8	15.8	4.8	7.6	3.6	173.5	57.8	6.3
Arizona	2.7	6.7	38.3	27.7	6.7	3.6	62.6	5.7	20.5	194.9	30.3
Arkansas	4.7	13.0	6.0	7.7	0.7	1.7	8.6	6.1	8.9	28.5	6.4
California	570.3	523.9	519.3	987.7	972.4	427.7	404.8	291.0	475.5	1,087.8	997.4
Colorado	54.5	118.3	97.1	82.9	89.3	97.7	183.8	115.9	279.5	300.0	140.6
Connecticut	55.6	51.6	48.7	46.8	87.8	4.3	1.9	5.6	3.1	123.2	93.7
Delaware	0.1	1.0	0.9	0.6	0.4	*	*	0.4	0.5	13.5	0.4
District of Columbia	26.5	52.8	18.7	118.1	33.3	105.8	73.4	76.7	180.4	364.9	236.9
Florida	180.0	196.1	173.0	120.9	107.0	1.6	11.4	12.9	56.7	140.7	90.4
Georgia	20.1	18.0	7.5	16.4	98.7	128.7	131.7	36.0	53.8	58.5	45.4
Hawaii	2.8	6.4	1.9	7.0	43.8	5.6	8.0	3.1	25.3	38.1	23.3
Idaho	18.4	12.7	7.0	22.6	23.1	7.0	8.7	5.9	16.6	25.2	30.9
Illinois	167.2	100.7	122.1	122.9	104.7	84.6	89.2	61.7	233.8	281.3	115.4
Indiana	18.0	11.9	12.3	7.7	4.2	2.7	4.1	3.7	7.5	34.9	6.6
Iowa	16.6	16.3	30.0	107.0	32.0	62.3	64.4	11.3	11.1	28.3	7.1
Kansas	3.0	5.6	1.9	1.3	10.2	0.3	1.6	0.4	2.9	12.7	4.4
Kentucky	0.8	0.9	3.1	7.4	25.2	7.2	0.8	5.6	2.5	21.8	4.6
Louisiana	16.5	35.9	56.8	17.2	15.4	36.7	6.2	2.8	26.7	28.4	14.9
Maine	7.5	8.1	0.9	4.8	3.8	3.8	1.8	0.8	6.3	1.4	1.5
Maryland	107.5	210.3	106.0	472.7	515.1	250.5	157.1	262.1	238.7	1,137.3	404.9
Massachusetts	58.9	24.2	233.4	21.6	90.5	49.1	32.7	13.9	48.8	102.7	30.8
Michigan	17.6	5.1	17.0	8.0	3.3	3.5	2.6	1.3	11.3	45.0	3.5
Minnesota	7.5	8.2	4.2	5.7	4.3	0.8	4.7	0.9	8.5	24.1	24.0
Mississippi	31.0	43.4	24.4	11.0	11.1	20.5	19.4	3.1	25.3	77.6	22.0
Missouri	11.4	5.2	21.2	4.7	11.3	6.3	1.3	1.9	5.8	30.5	4.2
Montana	7.5	8.0	6.5	3.4	6.3	6.5	1.4	0.9	2.0	23.3	0.4
Nebraska	12.2	4.8	0.8	1.5	*	0.7	0.7	1.0	0.9	22.2	0.8
Nevada	14.6	16.5	12.4	7.6	7.2	40.9	32.5	4.3	1.2	1.8	4.1
New Hampshire	2.6	1.3	2.8	6.6	3.4	4.0	1.1	0.8	2.1	11.1	1.6
New Jersey	39.2	29.2	72.5	50.5	51.0	56.9	90.2	53.3	82.8	74.5	40.0
New Mexico	159.7	127.8	187.9	269.4	183.3	110.8	29.2	184.6	108.7	190.5	96.8
New York	138.2	129.2	89.2	71.3	97.1	100.8	80.4	81.7	326.0	309.7	210.5
North Carolina	14.3	8.6	26.2	21.0	8.5	4.1	3.0	4.9	12.2	36.7	8.8
North Dakota	1.5	1.7	0.2	0.0	4.4	0.3	0.0	0.7	2.0	5.9	0.4
Ohio	84.4	56.3	26.4	19.5	26.1	17.0	21.5	16.7	24.3	100.5	55.2
Oklahoma	2.7	4.3	14.4	17.6	4.2	0.9	2.5	12.8	5.7	19.0	13.1
Oregon	16.2	7.3	8.3	7.1	4.0	2.8	4.1	2.9	4.9	35.9	18.1
Pennsylvania	39.9	34.8	79.6	26.8	24.7	17.4	12.9	35.0	37.8	127.1	15.2
Rhode Island	1.3	18.5	0.2	12.0	2.4	1.0	0.1	0.8	4.7	6.1	2.6
South Carolina	6.3	6.7	10.0	8.6	20.7	3.5	7.3	11.4	14.7	24.5	19.0
South Dakota	0.4	3.1	1.1	10.8	2.3	0.5	0.5	0.3	2.2	2.6	0.8
Tennessee	288.3	333.3	309.6	199.7	198.9	111.8	143.6	188.8	330.1	371.6	315.3
Texas	1,421.5	1,399.2	1,370.4	568.7	486.8	42.1	7.5	20.6	39.9	430.3	428.7
Utah	3.0	8.4	8.3	1.1	4.3	0.5	3.9	1.9	83.7	12.1	1.5
Vermont	0.3	0.1	0.0	0.6	0.7	0.3	0.2	0.8	0.6	3.2	1.4
Virginia	114.4	99.9	147.3	179.3	170.4	129.0	283.9	268.9	268.6	215.1	344.7
Washington	20.5	18.6	30.6	32.4	34.3	30.0	29.6	13.5	215.2	89.0	48.8
West Virginia	18.6	8.7	6.0	11.3	10.2	20.7	16.0	13.1	52.2	35.7	21.4

TABLE 130

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2001–11

(Dollars in millions)

State or location	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Wisconsin	11.5	23.9	47.7	56.2	58.2	65.1	47.1	30.6	36.9	33.3	10.0
Wyoming	0.3	0.6	0.2	0.3	0.8	0.4	0.6	0.0	0.5	1.2	0.5
Outlying areas	3.7	4.5	1.9	1.6	1.1	0.4	1.6	8.0	3.6	23.3	1.5
Puerto Rico	1.5	4.5	1.9	1.6	1.1	0.4	1.6	4.4	3.6	15.9	1.5
Other areas ^a	2.2	0.0	0.0	0.0	0.0	0.0	0.0	3.6	*	7.4	0.0
Offices abroad ^b	0.6	0.5	1.0	0.0	0.8	1.7	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.^b Includes federal obligations for R&D plant located in foreign countries.**Note(s):**

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 98% of federal R&D plant obligations in FY 2020. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 131

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2012–20

(Dollars in millions)

State or location	2012	2013	2014	2015	2016	2017	2018	2019	2020
All locations	2,088.9	1,856.0	2,178.2	2,791.8	2,401.7	2,594.1	3,806.0	4,329.5	6,083.4
Alabama	3.4	39.3	12.5	14.5	1.6	9.1	127.7	125.3	57.9
Alaska	6.6	7.8	8.1	8.0	9.6	7.1	16.6	6.6	12.4
Arizona	2.9	1.0	29.2	85.9	98.7	61.8	16.3	12.5	3.1
Arkansas	5.9	3.0	5.6	5.2	3.7	4.8	2.6	0.0	0.6
California	117.9	166.2	246.5	307.4	451.4	479.6	656.3	676.5	669.4
Colorado	108.2	150.9	170.4	74.1	112.7	45.7	266.9	365.1	140.8
Connecticut	1.7	1.5	3.1	1.6	1.3	1.6	3.2	1.5	0.1
Delaware	0.8	0.2	1.1	0.1	1.4	0.5	1.9	9.6	5.5
District of Columbia	135.4	167.5	225.1	39.8	49.8	32.5	324.9	150.5	97.5
Florida	47.9	37.6	104.0	29.7	28.7	18.3	80.3	33.8	127.8
Georgia	50.8	92.4	37.3	5.3	11.9	143.9	11.2	6.6	37.9
Hawaii	15.4	13.0	15.2	14.2	14.8	14.8	19.2	24.3	6.1
Idaho	41.0	1.2	2.6	80.9	89.1	116.9	0.0	3.4	249.6
Illinois	245.0	103.4	108.6	126.0	176.9	207.2	383.0	471.3	577.6
Indiana	2.2	2.6	1.4	8.5	8.3	4.1	4.2	8.9	1.3
Iowa	8.0	7.5	3.7	2.5	3.8	4.2	17.6	2.1	4.2
Kansas	5.5	2.5	1.0	815.7	0.8	14.0	10.9	12.2	13.5
Kentucky	8.5	0.8	0.7	1.2	3.2	*	2.3	6.8	64.1
Louisiana	1.2	12.2	1.9	0.7	2.7	17.3	21.1	25.9	24.4
Maine	0.1	1.7	0.8	1.1	0.9	0.9	0.5	0.4	0.0
Maryland	235.3	263.7	202.7	208.3	328.5	258.9	478.5	648.4	1,827.9
Massachusetts	28.0	13.9	26.8	24.9	29.9	30.4	18.4	39.8	20.9
Michigan	23.8	24.5	59.6	95.7	107.5	103.9	98.9	84.6	51.1
Minnesota	2.1	2.2	3.1	3.1	2.7	1.6	1.1	3.0	2.8
Mississippi	13.6	14.5	14.1	17.6	18.6	16.3	15.4	13.6	12.1
Missouri	7.1	2.9	9.8	5.1	12.2	6.0	5.0	11.1	45.1
Montana	0.0	1.0	0.4	0.8	3.7	0.4	2.8	*	2.1
Nebraska	0.5	0.5	1.2	2.7	0.2	*	0.3	0.8	0.0
Nevada	1.1	0.3	0.6	0.2	0.3	14.0	27.5	1.0	34.2
New Hampshire	2.0	1.3	0.5	0.6	2.0	0.3	2.3	1.3	3.4
New Jersey	52.1	55.5	71.5	44.8	46.2	47.4	49.1	80.8	41.0
New Mexico	54.2	82.9	90.4	86.0	66.3	39.6	87.1	256.8	72.8
New York	186.2	94.1	172.9	204.3	153.8	148.3	98.7	129.7	233.3
North Carolina	10.7	7.4	8.0	6.4	7.7	12.1	8.7	22.9	53.7
North Dakota	0.7	0.0	*	0.2	0.3	0.5	0.7	0.2	1.4
Ohio	61.6	4.7	4.2	7.7	120.9	76.2	82.9	94.5	81.4
Oklahoma	10.6	8.2	7.4	9.8	1.1	3.9	3.2	10.8	4.1
Oregon	9.6	9.6	12.2	14.2	17.6	144.8	103.9	144.4	52.6
Pennsylvania	23.3	13.0	10.4	34.8	24.7	25.5	17.3	12.3	214.1
Rhode Island	6.5	6.2	18.0	19.5	27.8	36.7	19.1	27.7	27.9
South Carolina	16.2	13.2	16.0	16.5	25.8	19.2	20.5	21.8	15.5
South Dakota	0.6	1.1	1.8	0.3	1.1	1.6	0.6	0.3	7.5
Tennessee	248.3	223.4	292.9	264.4	194.7	250.1	430.8	513.1	693.8
Texas	34.8	15.0	9.2	9.3	29.7	33.0	70.6	64.5	127.8
Utah	2.0	3.6	1.4	0.4	0.8	1.0	0.8	0.0	0.5
Vermont	0.5	0.3	1.6	*	0.3	*	1.5	0.8	6.1
Virginia	169.7	131.9	103.9	30.6	82.7	129.7	122.0	103.8	157.2
Washington	52.3	40.8	35.3	37.0	13.2	4.3	36.2	55.9	122.1
West Virginia	14.9	0.2	14.6	14.1	*	1.0	19.8	0.8	1.7

TABLE 131

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2012–20

(Dollars in millions)

State or location	2012	2013	2014	2015	2016	2017	2018	2019	2020
Wisconsin	11.3	5.7	7.2	9.0	8.2	2.0	4.2	12.5	67.9
Wyoming	0.3	1.2	0.7	0.5	0.0	0.0	1.0	10.6	6.0
Outlying areas	0.5	0.6	0.8	0.6	0.7	0.6	9.4	18.3	1.9
Puerto Rico	0.5	0.6	0.8	0.6	0.7	0.6	9.4	15.5	1.2
Other areas ^a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.7
Offices abroad ^b	0.0	0.0	0.0	0.4	*	0.6	0.9	0.0	0.0
Undistributed ^c	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes federal obligations for R&D plant located in foreign countries.

^c Undistributed totals include Department of Defense (DOD) obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and obligations for other performers that were not reported prior to FY 2011.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: 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. Obligations of these 11 agencies represented more than 98% of federal R&D plant obligations in FY 2020. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. Starting with volume 62 (FYs 2012–14), an "undistributed" category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data. FY 2020 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 132

Federal obligations for COVID-19 related R&D and all other R&D, by agency: FY 2020

(Dollars in millions)

Agency	Total R&D	COVID-19 R&D	All other R&D
All agencies	167,402.8	23,248.5	144,154.3
Departments			
Department of Agriculture	2,643.6	4.2	2,639.5
Agricultural Marketing Service	7.0	1.2	5.8
Agricultural Research Service	1,423.5	0.0	1,423.5
Animal and Plant Health Inspection Service	39.8	0.0	39.8
Economic Research Service	81.7	0.0	81.7
Forest Service	342.0	3.0	339.0
National Agricultural Statistics Service	9.0	0.0	9.0
National Institute of Food and Agriculture	737.9	0.0	737.9
Rural Business-Cooperative Service	2.8	0.0	2.8
Department of Commerce	1,621.7	10.8	1,610.9
National Institute of Standards and Technology	734.9	10.7	724.1
National Oceanic and Atmospheric Administration	768.1	0.0	768.1
National Telecommunications and Information Administration	7.7	0.0	7.7
U.S. Census Bureau	111.1	0.1	111.0
Department of Defense	66,695.0	1,434.2	65,260.8
Defense Advanced Research Projects Agency	3,664.3	126.5	3,537.8
Defense Health Agency	2,870.4	840.7	2,029.7
Department of the Air Force	11,683.2	349.6	11,333.5
Department of the Army	10,786.4	0.0	10,786.4
Department of the Navy	19,113.8	0.6	19,113.2
U.S. Space Force	4,385.7	6.4	4,379.3
Other defense agencies	14,191.2	110.4	14,080.9
Department of Education	240.1	0.0	240.1
Department of Energy	13,453.0	61.9	13,391.1
Advanced Research Projects Agency—Energy	438.0	1.0	437.0
Electricity Delivery and Energy Reliability	139.8	0.0	139.8
Energy Efficiency and Renewable Energy	2,096.2	0.0	2,096.2
Environmental Management	22.2	0.4	21.8
Fossil Energy	679.3	0.0	679.3
National Nuclear Security Administration	3,983.7	0.0	3,983.7
Defense Programs	2,298.1	0.0	2,298.1
Naval Nuclear Propulsion Program	1,387.4	0.0	1,387.4
Office of Defense Nuclear Nonproliferation	298.1	0.0	298.1
Nuclear Energy	573.2	0.0	573.2
Office of Cybersecurity, Energy Security, and Emergency Response	50.7	0.0	50.7
Office of Science	5,470.0	60.6	5,409.4
Department of Health and Human Services	60,005.7	21,513.8	38,491.9
Administration for Children and Families	1.6	0.0	1.6
Administration for Community Living	90.4	0.0	90.4
Agency for Healthcare Research and Quality	338.0	0.0	338.0
Agency for Toxic Substances and Disease Registry	9.6	0.0	9.6
Biomedical Advanced Research and Development Authority	15,666.4	15,437.3	229.1
Centers for Disease Control and Prevention	496.8	93.2	403.6
Centers for Medicare and Medicaid Services	223.6	0.0	223.6
Food and Drug Administration	464.0	0.0	464.0
Health Resources and Services Administration	34.9	0.0	34.9
National Institutes of Health	42,664.0	5,983.3	36,680.7
Office of the Secretary of Health and Human Services	16.5	0.0	16.5

TABLE 132

Federal obligations for COVID-19 related R&D and all other R&D, by agency: FY 2020

(Dollars in millions)

Agency	Total R&D	COVID-19 R&D	All other R&D
Office of the Assistant Secretary for Planning and Evaluation	16.5	0.0	16.5
Department of Homeland Security	507.5	8.0	499.5
Countering Weapons of Mass Destruction Office	37.5	0.0	37.5
Cybersecurity and Infrastructure Security Agency	7.7	0.0	7.7
Science and Technology Directorate	421.8	8.0	413.8
Transportation Security Administration	22.9	0.0	22.9
U.S. Coast Guard	4.9	0.0	4.9
U.S. Secret Service	12.7	0.0	12.7
Department of the Interior	837.2	0.0	837.2
Bureau of Indian Affairs	*	0.0	*
Bureau of Land Management	20.8	0.0	20.8
Bureau of Ocean Energy Management, Regulation and Enforcement	72.9	0.0	72.9
Bureau of Reclamation	27.5	0.0	27.5
Bureau of Safety and Environmental Enforcement	7.9	0.0	7.9
National Park Service	10.2	0.0	10.2
Office of Surface Mining Reclamation and Enforcement	0.6	0.0	0.6
U.S. Fish and Wildlife Service	32.6	0.0	32.6
U.S. Geological Survey	664.8	0.0	664.8
Department of Justice	96.4	0.1	96.3
Bureau of Prisons	8.1	0.0	8.1
Federal Bureau of Investigation	4.7	0.0	4.7
Office of Justice Programs	83.6	0.1	83.4
Department of Labor	4.7	0.0	4.7
Employee Benefits Security Administration	2.7	0.0	2.7
Occupational Safety and Health Administration	2.0	0.0	2.0
Department of State	40.0	0.0	40.0
Department of Transportation	1,184.2	0.0	1,184.2
Federal Aviation Administration	431.9	0.0	431.9
Federal Highway Administration	512.2	0.0	512.2
Federal Motor Carrier Safety Administration	8.9	0.0	8.9
Federal Railroad Administration	46.4	0.0	46.4
Federal Transit Administration	40.2	0.0	40.2
National Highway Traffic Safety Administration	68.9	0.0	68.9
Office of the Secretary of Transportation	34.4	0.0	34.4
Pipeline and Hazardous Materials Safety Administration	41.4	0.0	41.4
Department of the Treasury	60.6	0.0	60.6
Bureau of Engraving and Printing	60.4	0.0	60.4
U.S. Mint	0.2	0.0	0.2
Department of Veterans Affairs	1,565.1	4.5	1,560.6
Other agencies			
Administrative Office of the U.S. Courts	5.0	0.0	5.0
Agency for International Development	194.3	3.6	190.8
Appalachian Regional Commission	0.7	0.0	0.7
Consumer Product Safety Commission	0.4	0.0	0.4
Environmental Protection Agency	488.5	1.5	487.0
Federal Communications Commission	1.8	0.0	1.8
Federal Trade Commission	6.0	0.0	6.0
Library of Congress	2.8	0.0	2.8
National Aeronautics and Space Administration	10,537.8	14.2	10,523.6
National Science Foundation	6,351.2	191.6	6,159.6

TABLE 132

Federal obligations for COVID-19 related R&D and all other R&D, by agency: FY 2020

(Dollars in millions)

Agency	Total R&D	COVID-19 R&D	All other R&D
Nuclear Regulatory Commission	69.2	0.0	69.2
Patient-Centered Outcomes Research Trust Fund	469.7	0.0	469.7
RESTORE Act Centers of Excellence Research Grants Program	9.2	0.0	9.2
Smithsonian Institution	209.8	0.0	209.8
Social Security Administration	69.7	0.0	69.7
Tennessee Valley Authority	8.4	0.0	8.4
U.S. Agency for Global Media	4.8	0.0	4.8
U.S. Postal Service	18.2	0.0	18.2

* = amount greater than \$0 but less than \$50,000.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations or outlays in variables represented by this table appear in the table. Agencies were requested to report their FY 2020 obligations for COVID-19 related R&D that were from their agency's initial appropriations as well as from any stimulus funds received from the Coronavirus Aid, Relief, and Economic Security Act plus any other pandemic-related supplemental appropriations. The Biomedical Advanced Research and Development Authority accounted for 66% of all COVID-19 research; a substantial portion of these funds include transfers to other agencies for COVID-19 R&D in support of Operation Warp Speed. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2020–21.

Technical Notes

Survey Overview

Purpose. The annual Survey of Federal Funds for Research and Development (Federal Funds Survey) is the primary source of information about federal funding for R&D in the United States. The results of the survey are used to help implement three federal programs: the Federal Laboratory Consortium for Technology Transfer, the Small Business Innovation Research, and the Small Business Technology Transfer.

Data collection authority. The information is solicited under the authority of the National Science Foundation Act of 1950, as amended, and the America COMPETES Reauthorization Act of 2010.

Survey contractor. Synectics for Management Decisions, Inc. (Synectics).

Survey sponsor. The National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF).

Key Survey Information

Frequency. Annual.

Initial survey year. 1951.

Reference period. FYs 2020–21.

Response unit. Federal agencies.

Sample or census. Census.

Population size. In the survey cycle for data collection on FYs 2020–21, a total of 33 federal agencies reported R&D data. (See section “[Survey Design](#)” for details.)

Sample size. Not applicable; the survey is a census of all federal agencies that conduct R&D programs, excluding the Central Intelligence Agency (CIA).

Survey Design

Target population. The Federal Funds Survey target population consists of the federal agencies that conduct R&D programs, excluding the CIA. For the FYs 2020–21 cycle, 33 federal agencies (14 federal departments and 19 independent agencies) reported R&D data. Because multiple subdivisions of some federal departments completed the survey, there were 77 agency-level respondents: 5 federal departments, 53 agencies within another 9 federal departments, and 19 independent agencies. (Note: The Department of Agriculture’s Foreign Agricultural Services and the Department of Treasury’s Internal Revenue Service [IRS] reported no R&D funds.) However, lower offices could also be authorized to enter data: in Federal Funds Survey nomenclature, agency-level offices could authorize program offices, program offices could authorize field offices, and field offices could authorize branch offices. When these sub-offices are included, there were 737 total respondents: 77 agencies, 170 program offices, 105 field offices, and 385 branch offices.

Sampling frame. The survey is a census of all federal agencies that conduct R&D programs, which are identified from information in the president’s budget submitted to Congress. The Analytical Perspectives volume and the “Detailed Budget Estimates by Agency” section of the appendix to the president’s budget identify agencies that receive R&D funding.

Sample design. Not applicable.

Data Collection and Processing Methods

Data collection. Data for FYs 2020–21 (volume 70) were collected by Synectics under contract to NCSES. Data collection began with an e-mail to each agency to verify the name, phone number, and e-mail address of each agency-level survey respondent. A Web-based data collection system is used to collect the Federal Funds Survey data.

The Web-based data collection system is part of NCSES's effort to enhance survey reporting and reduce data collection and processing costs by offering respondents direct online reporting and editing; however, some agencies submit their data in alternative formats.

Volume 70 continued the procedure established in volume 66 to collect information for 2 instead of 3 federal government fiscal years: the fiscal year just completed (FY 2020—i.e., 1 October 2019 through 30 September 2020) and the current fiscal year (FY 2021). FY 2020 data are completed transactions. FY 2021 data are estimates of congressional appropriation actions and apportionment and reprogramming decisions. After consultation with data users, it was determined that the budget year projections for obligations based on the president's budget request to Congress were not as useful as the budget authority data presented in the budget request, so data were not requested for the president's budget year.

Data collection began on 28 April 2021, and the requested due date for data submissions was 2 July 2021. Data collection was extended until all surveyed agencies provided complete and final survey data.

Mode. The Federal Funds Survey uses a Web-based data collection system. The Web-based system consists of a data collection component that allows survey respondents to enter their data online and a monitoring component that allows the data collection contractor to monitor support requests, data entry, and data issues. The Web-based system's two components are password protected, so that only authorized respondents and staff can access them. All data imports and trend checking are accomplished using the Web-based system.

Response rate. The unit response rate is 100%.

Data checking. Data errors in the Federal Funds Survey are flagged automatically by the Web-based data collection system: respondents cannot submit their data to NCSES until all required fields have been completed without errors. Once data are submitted, each agency's narrative statement, 2-year difference report, and \$100-million difference report are reviewed. Respondents are contacted to resolve potential reporting errors that cannot be reconciled by the narratives. Explanations of questionable data are noted.

Imputation. None.

Weighting. None.

Variance estimation. Not applicable.

Survey Quality Measures

Sampling error. Not applicable.

Coverage error. Given the existence of a complete list of all eligible agencies, there is no known coverage error. The CIA is purposefully excluded.

Nonresponse error. Agencies are encouraged to estimate when actual data are unavailable. The survey instrument allows respondents to enter data or skip data fields. There are several possible sources of nonresponse error by respondents, including inadvertently skipping data fields, skipping data fields under the false assumption that blank fields are equivalent to zero, and skipping data fields when data are unavailable.

Measurement error. Some measurement problems are known to exist in the Federal Funds Survey data. Some agencies cannot report the full costs of R&D, the ultimate performer of R&D, or R&D plant data.

For example, the Department of Defense (DOD) does not include headquarters' costs of planning and administering R&D programs, which are estimated at a fraction of 1% of its total cost. DOD has stated that identification of amounts at this level is impracticable.

The National Institutes of Health (NIH) in the Department of Health and Human Services (HHS) currently has many of its awards in its financial system without any field of science code. Therefore, NIH uses an alternate source to estimate its research dollars by field of science. NIH uses scientific class codes (based upon history of grant, content of the title, and the name of the awarding institute or center) as an approximation for field of science codes.

The National Aeronautics and Space Administration (NASA) does not include any field of science codes in its financial database. Consequently, NASA must estimate what percentage of the agency's research dollars are allocated into the fields of science.

Also, agencies are required to report the ultimate performer of R&D. However, through past workshops, NCSES has learned that some agencies do not always track their R&D dollars to the ultimate performer of R&D. This leads to some degree of misclassification of performers of R&D, but NCSES has not determined the extent of the errors in performer misclassification by the reporting agencies.

Eleven agencies are required to report R&D obligations by state and performer (the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; NASA; and NSF). Obligations of these 11 agencies represent the majority of total federal R&D obligations (98% for FYs 2008–20), but there is some underreporting by state, which may affect states unevenly. In addition, geographic distribution of DOD development funding to industry reflects the location of prime contractors and not the numerous subcontractors who perform much of the R&D. DOD development funding to industry represented 39.0% of total federal obligations for development in FY 2020 (\$32.1 billion out of \$82.1 billion).

R&D plant data are underreported to some extent because of the difficulty some agencies, particularly DOD and NASA, encounter in identifying and reporting these data. DOD's respondents report obligations for R&D plant that are funded under the agency's appropriation for construction, but they are able to identify only a small portion of the R&D plant support that is within R&D contracts funded from DOD's appropriation for research, development, testing, and evaluation. Similarly, NASA respondents cannot separately identify the portions of industrial R&D contracts that apply to R&D plant, since these data are subsumed in the R&D data covering industrial performance. NASA R&D plant data for other performing sectors are reported separately.

Data Comparability (Changes)

Data revisions. When completing the current year's survey, agencies naturally revise their estimates for the last year of the previous report—in this case, FY 2020. Sometimes, survey submissions also reflect reappraisals and revisions in classification of various aspects of agencies' R&D programs; in those instances, NCSES requests that agencies provide revised prior-year data to maintain consistency and comparability with the most recent R&D concepts.

For trend comparisons, use the historical data from only the most recent publication, which incorporates changes agencies have made in prior-year data to reflect program reclassifications or other corrections. Do not use data published earlier.

Changes in survey coverage and population. This cycle (volume 70, FYs 2020–21), one department, the Department of the Interior, became the agency respondent instead of continuing to delegate that role to its bureaus; three new agencies were added as respondents—DOD’s Defense Health Agency and U.S. Space Force and the independent RESTORE Act Centers of Excellence Research Grants Program—and one agency was removed, the Department of Housing and Urban Development.

Changes in questionnaire.

- For volume 70 (FYs 2020–21), agencies were requested to report COVID-19 related R&D that were from their agency’s initial appropriations as well as from any stimulus funds received from the Coronavirus Aid, Relief, and Economic Security (CARES) Act plus any other pandemic-related supplemental appropriations. Two tables in the questionnaire were modified to collect the stimulus and non-stimulus amounts separately (tables 1 and 2), and seven tables in the questionnaire (tables 6.1, 6.2, 7.1, 11.1, 11.2, 12.1, and 13.1) were added for respondents to specify stimulus and non-stimulus funding by various categories. The data on stimulus funding is reported in data [table 132](#). The Biomedical Advanced Research and Development Authority accounted for 66% of all COVID-19 R&D in FY 2020; these obligations primarily include transfers to the other agencies to help facilitate execution of contractual awards under Operation Warp Speed.
- For volume 70 (FYs 2020–21), the optional narrative tables that ask for comparisons of the R&D obligations reported in the Federal Funds Survey with corresponding amounts in the Federal S&E Support Survey (non-DOD questionnaire only) were renumbered from Tables 6B and 6C to Tables 6A and 6B.
- In volumes 68 (FYs 2018–19) and 69 (FYs 2019–20), table 6A, which collected information on federal intramural R&D obligations, was deactivated, and agencies were instructed not to complete it.
- For volumes 66 and 67 (FYs 2017–18), table 6A (formerly table VI.A) was included, but it was modified so that it no longer collected laboratory names.
- Starting with volume 66 (FYs 2016–17), the survey collects 2 federal government fiscal years—actual data for the fiscal year just completed and estimates for the current fiscal year. Previously, the survey also collected projected obligations for the next fiscal year based on the president’s budget request to Congress. For volume 66, data were collected for only 2 fiscal years due to the delayed FY 2018 budget formulation process. However, after consultation with data users, NCSSES determined that the projections were not as useful as the budget authority data presented in the budget request.
- In volume 66, the survey table numbering was changed from Roman numerals I–XI and, for selected agencies, the letters A–E, to Arabic numerals 1–16. The order of tables remained the same.
- In the volume 66 DOD-version of the questionnaire, the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7, and questions relating to funding for Operational Systems Development (Budget Activity 7) were added to the instrument. The survey’s narrative tables 6 and 11 were removed from the DOD-version of the questionnaire.
- For volume 65 (FYs 2015–17), the survey reintroduced table VI.A to collect information on federal intramural R&D obligations, including the names and addresses of all federal laboratories that received federal intramural R&D obligations. The table was included in both the non-DOD and DOD questionnaires.
- For volume 62 (FYs 2012–14), the survey added table VI.A to the non-DOD questionnaire for that volume only to collect information on FY 2012 federal intramural R&D obligations, including the names and addresses of all federal laboratories that received federal intramural R&D obligations.
- In volumes 59 (FYs 2009–11) and 60 (FYs 2010–12), questions relating to funding from the American Recovery and Reinvestment Act of 2009 (ARRA) were added to the data collection instruments. The survey collected separate outlays and obligations for ARRA and non-ARRA sources of funding, by performer and geography for FYs 2009 and 2010.

- Starting with volume 59 (FYs 2009–11), federal funding data were requested in actual dollars (instead of rounded in thousands, as was done through volume 58).

Changes in reporting procedures or classification.

- FY 2020. For volume 70 (FYs 2020 and 2021), data include obligations from supplemental COVID-19 related appropriations (e.g., CARES Act) plus any other pandemic-related supplemental appropriations.
- FY 2020. The Department of Energy's Naval Reactor Program reclassified some of its R&D obligations from industry-administered federally funded research and development centers (FFRDCs) to the industry sector.
- FY 2020. The Department of the Air Force (AF) and the Department of Energy's Energy Efficiency and Renewable Energy (EERE) partially revised their FY 2019 data. AF revised its operational system development classified program numbers for businesses excluding FFRDCs, and EERE revised its outlay numbers.
- FY 2019. For volume 69 (FYs 2019–20), FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., CARES Act).
- FY 2019. The Biomedical Advanced Research and Development Authority began reporting. For volume 69 (FYs 2019–20), it could not submit any geographical data, so its data were reported as undistributed on the state tables.
- FY 2019. The U.S. Agency for Global Media (formerly the Broadcasting Board of Governors), which did not report data between FY 2008 and FY 2018, resumed reporting.
- FY 2018. The HHS Centers for Medicare and Medicaid (CMS) funding was reported by the CMS Office of Financial Management at an agency-wide level instead of by the CMS Center for Medicare and Medicaid Innovation (CMMI) and its R&D group, the Office of Research, Development, and Information (ORDI), which used to report at a component level.
- FY 2018. The Department of State added the Global Health Programs R&D funding.
- FY 2018. The Department of Veterans Affairs added funds for the Medical Services support to the existing R&D funding to fully report the total cost of intramural R&D. Although the Medical Services do not directly fund specific R&D activities, they host intramural research programs that were not previously reported.
- FY 2018. The Department of Homeland Security's (DHS's) Countering Weapons of Mass Destruction (CWMD) Office was established on 7 December 2017. CWMD consolidated primarily the Domestic Nuclear Detection Office (DNDO) and a majority of the Office of Health Affairs, as well as other DHS elements. Prior to FY 2018, data reported for the CWMD would have been under the DNDO.
- FY 2018. The Department of Energy (DOE) revised its FYs 2016 and 2017 data after discovering its Office of Fossil Energy reported "in thousands" instead of actual dollars for volumes 66 (FYs 2016–17) and 67 (FYs 2017–18).
- FY 2018. The Department of Agriculture's (USDA's) Economic Research Service (ERS) partially revised its FYs 2009 and 2010 data during the volume 61 (FYs 2011–13) cycle. NCSSES discovered a discrepancy that was corrected during the volume 68 cycle, completing the revision.
- FY 2018. DHS's Transportation Security Administration, which did not report data between FY 2010 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).
- FY 2018. DHS's U.S. Secret Service, which did not report data between FY 2009 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).
- FY 2018. NCSSES discovered that in some past volumes, the obligations reported for basic research in certain foreign countries were greater than the corresponding obligations reported for R&D; the following data were corrected as a result: DOD and Chemical and Biological Defense FY 2003 data, defense agencies and activities FY 2003 and FY 2011 data, Department of the Air Force FY 2009 data, and Department of the Navy FY 2005, FY 2011, and FY 2013 data; DOE and Office of Science FY 2009 data; HHS and Centers for Disease Control and Prevention (CDC) FY 2008 and FY 2017

data; and NSF FY 2001 data. NCSES also discovered that some obligations reported for academic performers were greater than the corresponding obligations reported for total performers, and DOD and AF FY 2009 data, DOE and Fossil Energy FY 1999 data, and NASA FY 2008 data were corrected. Finally, NCSES discovered a problem with FY 2017 HHS CDC personnel costs data, which were then also corrected.

- FY 2017. The Department of the Treasury's IRS performed a detailed evaluation and assessment of its programs and determined that none of its functions can be defined as R&D activity as defined in Office of Management and Budget (OMB) Circular A-11. The review included discussions with program owners and relevant contractors who perform work on behalf of the IRS. The IRS also provided a negative response to the OMB data call on R&D under Circular A-11 for the same reference period (FYs 2017–18). Despite no longer having any R&D obligations, the IRS still sponsors an FFRDC, the Center for Enterprise Modernization.
- FY 2017. NASA estimated that the revised OMB definition for "experimental development" reduced its reported R&D total by about \$2.7 billion in FY 2017 and \$2.9 billion in FY 2018 from what would have been reported under the previous definition prior to volume 66 (FYs 2016–17).
- FY 2017. The Patient-Centered Outcomes Research Trust Fund (PCORTF) was established by Congress through the Patient Protection and Affordable Care Act of 2010, signed by the president on 23 March 2010. PCORTF began reporting for volume 67 (FYs 2017–18), but it also submitted data for FYs 2011–16.
- FY 2017. The Tennessee Valley Authority, which did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18).
- FY 2017. The U.S. Postal Service, which did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18) and submitted data for FYs 2015–16.
- FY 2017. During the volume 67 (FYs 2017–18) data collection, DHS's Science and Technology Directorate revised its FY 2016 data.
- FY 2016. The Administrative Office of the U.S. Courts began reporting as of volume 66 (FYs 2016–17).
- Beginning with FY 2016, the totals reported for development obligations and outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the DOD Budget Activity 7 (Operational System Development) obligations and outlays. Those funds, previously included in DOD's development totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years.
- Prior to the volume 66 launch, the definitions of basic research, applied research, experimental development, R&D, and R&D plant were revised to match the definitions used by the OMB in the July 2016 version of Circular A-11, Section 84 (Schedule C).
- FYs 2016–17. Before the volume 66 survey cycle, NSF updated the list of foreign performers in the Federal Funds Survey to match the list of countries and territories in the Department of State's Bureau of Intelligence and Research fact sheet of Independent States in the World and fact sheet of Dependencies and Areas of Special Sovereignty. Country lists in volume 66 data tables and later may differ from those in previous reports.
- FY 2015. The HHS Administration for Community Living (ACL) began reporting in FY 2015, replacing the Administration on Aging, which was transferred to ACL when ACL was established on 18 April 2012. Several programs that serve older adults and people with disabilities were transferred from other agencies to ACL, including a number of programs from the Department of Education due to the 2014 Workforce Innovation and Opportunities Act.
- FY 2015. The Department of the Interior's Bureau of Land Management and U.S. Fish and Wildlife Service, which did not report data between FY 1999 and FY 2014, resumed reporting.

- In January 2014, all Research and Innovative Technology Administration programs were transferred into the Office of the Assistant Secretary for Research and Technology in the Office of the Secretary of Transportation.
- FY 2014. DHS's Domestic Nuclear Detection Office began reporting for FY 2014.
- FY 2014. The Department of State data for FY 2014 were excluded due to their poor quality.
- FY 2013. NASA revamped its reporting process so that the data for FY 2012 forward are not directly comparable with totals reported in previous years.
- FY 2012. NASA began reporting International Space Station (ISS) obligations as research rather than R&D plant.
- Starting with volume 62 (FYs 2012–14), an “undistributed” category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data.
- Starting with volume 61 (FYs 2011–13), DOD subagencies other than the Defense Advanced Research Projects Agency were reported as an aggregate total under other defense agencies to enable complete reporting of DOD R&D (both unclassified and classified). Consequently, DOD began reporting additional classified R&D not previously reported by its subagencies.
- FY 2011. USDA's ERS partially revised its data for FYs 2009 and 2010 data during the volume 61 (FYs 2011–13) cycle.
- FY 2010. NASA resumed reporting ISS obligations as R&D plant.
- FYs 2000–09. Beginning in FY 2000, AF did not report Budget Activity (BA) 6.7 Operational Systems Development data because the agency misunderstood the reporting requirements. During the volume 57 data collection cycle, AF edited prior-year data for FYs 2000–07 to include BA 6.7 Operational Systems Development data. These data revisions were derived from FY 2007 distribution percentages that were then applied backward to revise data for FYs 2000–06.
- FYs 2006–07. NASA's R&D obligations decreased by \$1 billion. Of this amount, \$850 million was accounted for by obligations for operational projects that NASA excluded in FY 2007 but reported in FY 2006. The remainder was from an overall decrease in obligations between FYs 2006 and 2007.
- FY 2006. NASA reclassified funding for the following items as operational costs: Space Operations, the Hubble Space Telescope, the Stratospheric Observatory for Infrared Astronomy, and the James Webb Space Telescope. This funding was previously reported as R&D plant.
- FYs 2005–07. Before the volume 55 survey cycle, NSF updated the list of foreign performers in the Federal Funds Survey to match the list of countries and territories in the Department of State's Bureau of Intelligence and Research fact sheet of Independent States in the World and fact sheet of Dependencies and Areas of Special Sovereignty. Area and country lists in volume 55 data tables and later may differ from those in previous reports.
- FYs 2004–06. NASA implemented a full-cost budget approach, which includes all of the direct and indirect costs for procurement, personnel, travel, and other infrastructure-related expenses relative to a particular program and project. NASA's data for FY 2004 and later years may not be directly comparable with its data for FY 2003 and earlier years.
- FY 2004. NIH revised its financial database; beginning with FY 2004, NIH records no longer contain information on the field of S&E. Data for FY 2004 and later years are not directly comparable with data for FY 2003 and earlier years.
- Data for FYs 2003–06 from the Substance Abuse and Mental Health Services Administration (SAMHSA) are estimates based on SAMHSA's obligations by program activity budget and previously reported funding for development.
- FY 2003. SAMHSA reclassified some of its funding categories as non-R&D that had been considered R&D in prior years.

- On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing DHS. DHS includes the R&D activities previously reported by the Federal Emergency Management Agency, the Science and Technology Directorate, the Transportation Security Administration, the U.S. Coast Guard, and the U.S. Secret Service.
- FY 2000. NASA reclassified the ISS as a physical asset, reclassified ISS Research as equipment, and transferred funding for the program from R&D to R&D plant.
- FY 2000. NIH reclassified as research the activities that it had previously classified as development. NIH data for FY 2000 forward reflect this change. For more information on the classification changes at NASA and NIH, refer to *Classification Revisions Reduce Reported Federal Development Obligations* (InfoBrief NSF 02-309), February 2002, available at <https://www.nsf.gov/statistics/nsf02309>.
- FYs 1996–98. The lines on the survey instrument for the special foreign currency program and for detailed field of S&E were eliminated beginning with the volume 46 survey cycle. Two tables depicting data on foreign performers by region, country, and agency that were removed before publication of volume 43 were reinstated with volume 46.
- FYs 1994–96. During the volume 44 survey cycle, the Director for Defense Research and Engineering (DDR&E) at DOD requested that NSF further clarify the true character of DOD’s R&D program, particularly as it compares with other federal agencies, by adding more detail to development obligations reported by DOD respondents. Specifically, DOD requested that NSF allow DOD agencies to report development obligations in two separate categories: advanced technology development and major systems development.

An excerpt from a letter written by Robert V. Tuohy, Chief, Program Analysis and Integration at DDR&E, to John E. Jankowski, Program Director, Research and Development Statistics Program, Division of Science Resources Statistics, NSF, explains the reasoning behind the DDR&E request:

“The DOD’s R&D program is divided into two major pieces, Science and Technology (S&T) and Major Systems Development. The other federal agencies’ entire R&D programs are equivalent in nature to DOD’s S&T program, with the exception of the Department of Energy and possibly NASA. Comparing those other agency programs to DOD’s program, including the development of weapons systems such as F-22 Fighter and the New Attack Submarine, is misleading.”

- FYs 1990–92. Since volume 40, DOD has reported research obligations and development obligations separately. Tables reporting obligations for research, by state and performer, and obligations for development, by state and performer, were specifically created for DOD. Circumstances specific to DOD are (1) DOD funds the preponderance of federal development and (2) DOD development funded at institutions of higher education is typically performed at university-affiliated nonacademic laboratories, which are separate from universities’ academic departments, where university research is typically performed.

Definitions

Agency and subdivision. An agency is an organization of the federal government whose principal executive officer reports to the president. The Library of Congress and the Administrative Office of the U.S. Courts are also included in the survey, even though the chief officer of the Library of Congress reports to Congress and the U.S. Courts are part of the judicial branch. Subdivision refers to any organizational unit of a reporting agency, such as a bureau, division, office, or service.

Development. See R&D and R&D plant.

Fields of science and engineering. The Federal Funds Survey uses eight broad field categories, each comprising a number of detailed fields. A discipline under one detailed field may be classified under another detailed field when the major emphasis is elsewhere. Research in biochemistry, for example, might be reported as biological, agricultural, or medical, depending on the focus of the project. No double counting is intended or allowed. The fields are as follows:

- *Computer sciences and mathematics* employs logical reasoning with the aid of symbols and is concerned with the development of methods of operation using such symbols or with the application of such methods to automated information systems. Detailed fields: computer sciences, mathematics, and other computer sciences and mathematics.
- *Engineering* is concerned with developing engineering principles or making specific principles usable in engineering practice. Detailed fields: aeronautical, astronautical, chemical, civil, electrical, mechanical, metallurgy and materials engineering, and other engineering.
- *Environmental sciences* (terrestrial and extraterrestrial) is, with the exception of oceanography, concerned with the gross nonbiological properties of the areas of the solar system that directly or indirectly affect human survival and welfare. Obligations for studies pertaining to life in the sea or other bodies of water are reported as support of oceanography, not biology. Detailed fields: atmospheric sciences, geological sciences, oceanography, and other environmental sciences.
- *Life sciences* is concerned with the scientific study of living organisms and their systems. Detailed fields: agricultural sciences, biological sciences (excluding environmental biology), environmental biology, medical sciences, and other life sciences.
- *Physical sciences* is concerned with understanding of the material universe and its phenomena. Detailed fields: astronomy, chemistry, physics, and other physical sciences.
- *Psychology* deals with behavior, mental processes, and individual and group characteristics and abilities. Detailed fields: biological aspects, social aspects, and other psychological sciences.
- *Social sciences* is concerned with an understanding of the behavior of social institutions and groups and of individuals as members of a group. Detailed fields: anthropology, economics, political science, sociology, and other social sciences.
- *Other sciences not elsewhere classified (nec)* is used for multidisciplinary or interdisciplinary projects that cannot be classified within one of the broad fields of science already listed.

Federal obligations for research performed at universities and colleges, by detailed field of science and engineering.

Seven agencies respond to this part of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; NASA; and NSF.

Geographic distribution of R&D obligations. The 11 largest R&D funding agencies respond to this portion of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; NASA; and NSF. They are asked to provide the principal location (state or outlying area) of the work performed by the primary contractor, grantee, or intramural organization, assign the obligations to the location of the headquarters of the U.S. primary contractor, grantee, or intramural organization, or list the funds as undistributed.

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

Performer. An intramural group or organization carrying out an operational function or an extramural organization or a person receiving support or providing services under a contract or grant.

- *Intramural performers* are agencies of the federal government, including federal employees who work on R&D both onsite and offsite. The work of these agencies is carried out directly by agency personnel. Obligations reported under this category are for activities performed or to be performed by the reporting agency itself or are for funds that the agency transfers to another federal agency for performance of work, as long as the ultimate performer is that agency or any federal agency. If the ultimate performer is not a federal agency, funds transferred are reported by the transferring agency under the appropriate extramural performer category (businesses, universities and colleges, other nonprofit institutions, FFRDCs, nonfederal government, and foreign).

Intramural activities cover not only actual intramural R&D performance but also the costs associated with administration of intramural R&D programs and extramural R&D procurements by federal personnel. Intramural activities also include the costs of supplies and off-the-shelf equipment (equipment that has gone beyond the development or prototype stage) procured for use in intramural R&D. For example, an operational launch vehicle purchased from an extramural source by NASA and used for intramural performance of R&D is reported as a part of the cost of intramural R&D.

- *Extramural performers* are organizations outside the federal sector that perform R&D with federal funds under contract, grant, or cooperative agreement. Only costs associated with actual R&D performance are reported. Types of extramural performers:
 - *Businesses or industrial firms*—Organizations that may legally distribute net earnings to individuals or to other organizations.
 - *Universities and colleges*—Institutions of higher education in the United States that engage primarily in providing resident 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, 4-year colleges, universities, and freestanding professional schools (medical schools, law schools, etc.).
 - *Other nonprofit institutions*—Private organizations other than educational institutions whose net earnings do not benefit either private stockholders or individuals and other private organizations organized for the exclusive purpose of turning over their entire net earnings to such nonprofit organizations. Examples of nonprofit institutions include foundations, trade associations, charities, and research organizations.
 - *Federally funded research and development centers (FFRDCs)*—R&D-performing organizations that are exclusively or substantially financed by the federal government and are supported by the federal government either to meet a particular R&D objective or in some instances to provide major facilities at universities for research and associated training purposes. Each center is administered by an industrial firm, a university, or another nonprofit institution (see <https://www.nsf.gov/statistics/ffrdclist/> for the Master Government List of FFRDCs maintained by NSF).
 - *State and local governments*—State and local government agencies, excluding state or local universities and colleges, agricultural experiment stations, medical schools, and affiliated hospitals. (Federal R&D funds obligated directly to such state and local institutions are excluded in this category. However, they are included under the universities and colleges category in this report.) R&D activities under the state and local governments category are performed either by the state or local agencies themselves or by other organizations under grants or contracts from such agencies. Regardless of the ultimate performer, federal R&D funds directed to state and local governments are reported only under this sector.

- *Foreign performers*—Other nations’ citizens, organizations, universities and colleges, governments, as well as international organizations located outside the United States, that perform R&D. In most cases, foreigners performing R&D in the United States are not reported here. Excluded from this category are U.S. agencies, U.S. organizations, or U.S. citizens performing R&D abroad for the federal government. Examples of foreign performers include the North Atlantic Treaty Organization (NATO), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the World Health Organization (WHO). An exception in the past was made in the case of U.S. citizens performing R&D abroad under special foreign-currency funds; these activities were included under the foreign performers category but have not been collected since the mid-1990s.
- *Private individuals*—When an R&D grant or contract is awarded directly to a private individual, obligations incurred are placed under the category industrial firms.

R&D and R&D plant. Amounts for R&D and R&D plant include all direct, incidental, or related costs resulting from, or necessary to, performance of R&D and costs of R&D plant as defined below, regardless of whether R&D is performed by a federal agency (intramurally) or by private individuals and organizations under grant or contract (extramurally). R&D excludes routine product testing, quality control, mapping and surveys, collection of general-purpose statistics, experimental production, and the training of scientific personnel.

- *Research* is defined as systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the sponsoring agency.
- *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.
- *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.
- *Development*, also known as 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, the following are included:

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.

However, experimental development excludes the following:

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.

To better differentiate between the part of the federal R&D budget that supports science and key enabling technologies (including technologies for military and nondefense applications) and the part that primarily supports testing and evaluation (mostly of defense-related systems), NSF collects development dollars from DOD in two categories: advanced technology development and major systems development.

DOD uses Research, Development, Test, and Evaluation (RDT&E) Budget Activities 1–7 to classify data into the survey categories. Within DOD’s research categories, basic research is classified as Budget Activity 1, and applied research is classified as Budget Activity 2. Within DOD’s development categories, advanced technology development is classified as Budget Activity 3. Starting in volume 66, major systems development is classified as Budget Activities 4–6 instead of Budget Activities 4–7 and includes advanced component development and prototypes, system development and demonstration, and RDT&E management support; data on Budget Activity 7, operational systems development, is collected separately. (Note: As a historical artifact from previous DOD budget authority terminology, funds for Budget Activity categories 1 through 7 are sometimes referred to as 6.1 through 6.7 monies.)

- *Demonstration* includes amounts for activities that are part of R&D (i.e., that are intended to prove or to test whether a technology or method does in fact work). Demonstrations intended primarily to make information available about new technologies or methods are excluded.
- *R&D plant* is defined as spending on both R&D facilities and major equipment as defined in 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 2 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.

Technical Tables

Table	Title
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A-1	Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70
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A-2	Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70
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TABLE A-1
Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Agency key)

Agency	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70						
Pay and Allowances of Military Personnel in R&D	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T			
RDT&E Appropriation	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T		
Special Foreign Currency Program	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T		
Health Affairs, Assistant Secretary of Defense for	N	N	N	N	N	N	N	N	N	N	N	N	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T		
Operational Test and Evaluation, Director	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	T	T	T	T	T	T	T	T	T	T	T	T	T		
Test and Evaluation, Deputy Under Secretary of Defense	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
U.S. Space Force	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X
Department of Education	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Department of Energy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Advanced Research Projects Agency-Energy (formerly Energy Transformation Acceleration Fund)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Bonneville Power Administration	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	
Civilian Radioactive Waste Management	N	N	N	N	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	T	
Electricity Delivery and Energy Reliability	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Energy Efficiency and Renewable Energy	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Environmental Management	N	N	N	N	N	N	N	N	N	N	N	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Fossil Energy	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
National Nuclear Security Administration	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Defense Programs	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Fissile Materials Disposition	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	T	T	T	X	X	X	X	X	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T		
Naval Reactors	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Nuclear Nonproliferation	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Nuclear Energy	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Office of Cybersecurity, Energy Security, and Emergency Response	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	
Office of Intelligence	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
Office of Science	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Department of Health and Human Services	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
Administration for Children and Families	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Administration for Community Living	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	T	T	T	X	X	X	X	X	X	X		
Administration on Aging	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	

TABLE A-1
Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Agency key)

Agency	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70		
U.S. Information Agency	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
U.S. International Trade Commission	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
U.S. Postal Service	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X

N = The agency did not exist as such; therefore, no data are available.

O = The agency existed but had no R&D to report.

T = The agency existed, but data were not collected at this level.

X = The agency existed, and data were collected and submitted by the agency.

Z = The agency existed but was unable to report.

DT&E = Developmental test and evaluation.

RDT&E = Research and development, testing, and evaluation.

Note(s):
 This table summarizes which agencies have reported to the Survey of Federal Funds for Research and Development (Federal Funds Survey) and have been included in Federal Funds Survey reports for volume 29 (FYs 1979–81) through volume 70 (FYs 2020–21). For volume 70, actual data were collected for FY 2020, and estimates were collected for FY 2021.

Source(s):
 National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
Department of Agriculture	
Agricultural Marketing Service	Although the Agricultural Marketing Service (AMS) was established in April 1972, FY 1979 was the first year in which Congress appropriated funds to this agency. Data reported for AMS include funds for the Office of Transportation beginning in 1989. The Grain Inspection, Packers, and Stockyards Administration (GIPSA) was re-organized and absorbed in AMS in September 2017. Because GIPSA R&D projects were closed out, the transfer did not have much effect on the FY 2018 funding reported by AMS.
Agricultural Research Service	The Human Nutrition Information Service merged with the Agricultural Research Service on 20 February 1994.
Agricultural Stabilization and Conservation Service	The Agricultural Stabilization and Conservation Service was abolished as of 20 October 1994.
Cooperative State Research, Education, and Extension Service	The Cooperative State Research Service merged with the Extension Service on 19 October 1994 to become the Cooperative State Research, Education, and Extension Service (CSREES) due to reorganization of the Department of Agriculture. CSREES changed its name to the National Institute of Food and Agriculture in FY 2008.
Economic Research Service	Data reported for the Economics, Statistics, and Cooperative Service include programs of the Economic Research Service (ERS), the Statistical Reporting Service (SRS), and the Farmer Cooperative Service for FYs 1977–79. Data reported for the Economics and Statistics Service include programs of ERS and SRS for FY 1980.
Economics and Statistics Service	Data reported for the Economics and Statistics Service include programs of the Economic Research Service and the Statistical Reporting Service for FY 1980.
Economics, Statistics, and Cooperative Service	Data reported for the Economics, Statistics, and Cooperative Service include programs of the Economic Research Service, the Statistical Reporting Service, and the Farmer Cooperative Service for FYs 1977–79.
Federal Grain Inspection Service	The Federal Grain Inspection Service was abolished on 20 October 1994, and the Grain Inspection, Packers, and Stockyards Administration assumed its functions.
Foreign Agricultural Service	The Office of International Cooperation and Development became part of the Foreign Agricultural Service (FAS) in June 1994. Data reported for FAS include funds appropriated to International Cooperation and Development programs within FAS as of FY 1994.
Grain Inspection, Packers, and Stockyards Administration	The Federal Grain Inspection Service was abolished on 20 October 1994, and the Grain Inspection, Packers, and Stockyards Administration (GIPSA) assumed its functions. GIPSA was re-organized and absorbed in the Agricultural Marketing Service in September 2017; GIPSA funding for FY 2017 declined because GIPSA R&D projects were closed out. GIPSA was eliminated as a standalone agency as of 14 November 2017, so no funding was reported for FY 2018.
Human Nutrition Information Service	The Human Nutrition Information Service merged with the Agricultural Research Service on 20 February 1994.
National Institute of Food and Agriculture	The National Institute of Food and Agriculture was created through the Food, Conservation, and Energy Act of 2008 and replaced the former Cooperative State Research, Education, and Extension Service (CSREES).
Office of International Cooperation and Development	The Office of International Cooperation and Development became part of the Foreign Agricultural Service (FAS) in June 1994. Data reported for FAS include funds appropriated to International Cooperation and Development programs within FAS as of FY 1994.
Office of Transportation	Data reported for the Agricultural Marketing Service include funds for the Office of Transportation beginning in 1989.
Rural Business-Cooperative Service	This agency's name changed from the Rural Business and Cooperative Development Service to the Rural Business-Cooperative Service on 30 January 1996.
Department of Commerce	
Maritime Administration	In 1981, the Maritime Administration moved from the Department of Commerce to the Department of Transportation.
National Fire Prevention and Control Administration	Functions for the National Fire Prevention and Control Administration transferred from the Department of Commerce to the Federal Emergency Management Agency as of 1 April 1979.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
Department of Defense	Since volume 40, the Department of Defense (DOD) has reported research obligations and development obligations separately. Tables reporting obligations for research, by state and performer, and obligations for development, by state and performer, were specifically created for DOD. Circumstances specific to DOD are (1) DOD funds the preponderance of federal development and (2) DOD development funded at institutions of higher education is typically performed at university-affiliated nonacademic laboratories, which are separate from universities' academic departments, where university research is typically performed.
	During the volume 44 survey cycle, the Director for Defense Research and Engineering (DDR&E) at DOD requested that the National Science Foundation (NSF) further clarify the true character of DOD's R&D program, particularly as it compares with other federal agencies, by adding more detail to development obligations reported by DOD respondents. Specifically, DOD requested that NSF allow DOD agencies to report development obligations in two separate categories: advanced technology development and major systems development.
	An excerpt from a letter written by Robert V. Tuohy, Chief, Program Analysis and Integration at DDR&E, to John E. Jankowski, Program Director, Research and Development Statistics Program, Division of Science Resources Statistics, NSF, explains the reasoning behind the DDR&E request:
	"The DOD's R&D program is divided into two major pieces, Science and Technology (S&T) and Major Systems Development. The other federal agencies' entire R&D programs are equivalent in nature to DOD's S&T program, with the exception of the Department of Energy and possibly the National Aeronautics and Space Administration. Comparing those other agency programs to DOD's program, including the development of weapons systems such as F-22 Fighter and the New Attack Submarine, is misleading."
	Not all DOD agencies with development obligations are able to categorize them according to the advanced technology and major systems development breakdown. Therefore, in the volume 46 (FYs 1996–98) survey cycle, total DOD development does not equal the sum of total DOD advanced technology development and total DOD major systems development.
	Beginning with volume 54 (FYs 2004–06), DOD now requires its reporting agencies to adhere to DOD control numbers when providing data to the Federal Funds Survey.
	Starting with volume 61 (FYs 2011–13), DOD subagencies other than the Defense Advanced Research Projects Agency were reported as an aggregate total under other defense agencies to enable complete reporting of DOD R&D (both unclassified and classified). Consequently, DOD began reporting additional classified R&D not previously reported by its subagencies.
	Starting with volume 62 (FYs 2012–14), an "undistributed" category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data.
	Beginning with FY 2016, the totals reported for development outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the DOD Budget Activity 7 (Operational Systems Development) outlays. Those funds, previously included in DOD's development outlay totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years.
	As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.
Funding for DOD's Operational Systems Development (Budget Activity 7) was first reported as a separate category for volume 66 (FYs 2016–17).	
Defense Agencies	
Chemical and Biological Defense	Before FY 2000, R&D of Chemical and Biological Defense was reported with the Washington Headquarters Services. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Advanced Research Projects Agency	This agency's name changed to the Advanced Research Projects Agency on 13 July 1993, and it was changed back to Defense Advanced Research Projects Agency in February 1996.
Defense Business Transformation Agency	The Defense Business Transformation Agency was established on 7 October 2005. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Contract Management Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Health Agency	Beginning with volume 70 (FYs 2020–21), Defense Health Agency began reporting as a separate agency under the Department of Defense.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
Defense Information Systems Agency	Data reported for the Defense Information Systems Agency included data for the Defense Technical Information Center (DTIC) until FY 2006, when DTIC became a separate field activity. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Logistics Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Security Cooperation Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Special Weapons Agency	The Defense Nuclear Agency was renamed the Defense Special Weapons Agency (DSWA) in 1996 as a result of a new charter and an expanded mission. The Defense Threat Reduction Agency (DTRA) was established on 1 October 1998. DTRA was formed through a merger of elements of the Office of the Secretary of Defense staff, the Defense Technology Security Administration, DSWA, and the On-Site Inspection Agency.
Defense Technical Information Center	In FY 2006, the Defense Technical Information Center became a separate field activity; in prior years, these data were reported as part of the Defense Information Systems Agency. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Threat Reduction Agency	The Defense Threat Reduction Agency (DTRA) was established on 1 October 1998. DTRA was formed through a merger of elements of the Office of the Secretary of Defense staff, the Defense Technology Security Administration, the Defense Special Weapons Agency, and the On-Site Inspection Agency. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Joint Staff	The name of this agency changed from Joint Chiefs of Staff to Joint Staff in FY 1986. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Missile Defense Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
National Imagery and Mapping Agency	The Defense Mapping Agency merged with the newly created National Imagery and Mapping Agency on 1 October 1996.
Office of the Secretary of Defense	In FY 2006, the Washington Headquarters Service was renamed the Office of the Secretary of Defense (OSD). Beginning with volume 61 (FYs 2011–13), excepting the Defense Advanced Research Projects Agency, OSD began reporting for the agencies that had been presented under Department of Defense (DOD) agencies and activities and Operational Test and Evaluation, Director. These are now reported under Other defense agencies.
Other defense agencies	Beginning in FY 2011, Other defense agencies displays aggregated data of DOD subagencies engaged in classified R&D projects.
Special Operations Command	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Uniformed Services University of the Health Sciences	Data for the Uniformed Services University of the Health Sciences are included with the Washington Headquarters Services' submission as of volume 45 (FYs 1995–97).
Washington Headquarters Services	Data for the Uniformed Services University of the Health Sciences are included with the Washington Headquarters Services' (WHS's) submission as of volume 45 (FYs 1995–97). Public Law No. 103-160, Section 1703, made the Office of the Secretary of Defense (OSD) responsible for the Chemical and Biological Defense Program (CBDP). Section 1701 required the creation of CBDP research, development, test, and evaluation program elements be established in the President's Budget for FYs 1996–97. Data for these new program elements are included in the Federal Funds Survey as of volume 46 (FYs 1996–98). Since FY 2000, R&D of Chemical and Biological Defense has been reported separately from the WHS. WHS's basic research data were revised in volume 47 (FYs 1997–99) to reflect changes that were not incorporated in volume 46 (FYs 1996–98). In FY 2006, WHS was renamed OSD.
Defense Civil Preparedness Agency	Functions for the Defense Civil Preparedness Agency transferred from the Department of Defense to the Federal Emergency Management Agency on 20 July 1979.
Department of the Air Force	Beginning in FY 2000, the Department of the Air Force (AF) did not report Budget Activity 6.7 Operational Systems Development data because the agency misunderstood the reporting requirements. During the volume 57 data collection cycle, AF edited prior-year data for FYs 2000–07 to include Budget Activity 6.7 Operational Systems Development data. These data revisions were derived from FY 2007 distribution percentages that were then applied backward to revise data for FYs 2000–06. Beginning in FY 2011, the Air Force stopped reporting classified R&D projects by location and started reporting them as undistributed.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
	Space Command stopped reporting as part of the Department of the Air Force after volume 69 (FYs 2019–20); it was replaced by U.S. Space Force, which is now an independent service within DOD.
Department of the Army	
Civil Functions	Department of the Army (DA), Civil Functions (Corps of Engineers), development activities are appropriated by the Energy and Water Development and Related Agencies Appropriations Act and therefore cannot be categorized according to the advanced technology and major systems development breakdown. For accounting purposes, the funds are shown in the advanced technology total for DA.
Operational Test and Evaluation, Director	On 7 June 1999, the Secretary of Defense approved the disestablishment of the Office of the Director, Test, Systems Engineering and Evaluation. As a result of the restructure, the Director, Operational Test and Evaluation, assumed management responsibility for the Central Test and Evaluation Investment Program and the Test and Evaluation Program, excluding the Joint Test and Evaluation Program.
Other defense agencies	Beginning with volume 61 (FYs 2011–13), Other defense agencies displays aggregated data of Department of Defense subagencies engaged in classified R&D projects. DOD does not report the location of performance for these projects; rather they report these obligations as undistributed.
Test and Evaluation, Deputy under Secretary of Defense	On 7 June 1999, the Secretary of Defense approved the disestablishment of the Office of the Director, Test, Systems Engineering and Evaluation. As a result of the restructure, the Director, Operational Test and Evaluation, assumed management responsibility for the Central Test and Evaluation Investment Program and the Test and Evaluation Program, excluding the Joint Test and Evaluation Program. Beginning with volume 61 (FYs 2011–13), agency totals are included in Other defense agencies.
U.S. Space Force	Founded 20 December 2019 as an independent service; U.S. Space Force began reporting for volume 70 (FYs 2020–21).
Department of Education	Several programs that serve older adults and people with disabilities were transferred from other agencies to the Department of Health and Human Services' Administration for Community Living, including a number of programs from the Department of Education due to the 2014 Workforce Innovation and Opportunities Act.
Department of Energy	In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management, the U.S. Geological Survey, and the Department of Energy (DOE).
Advanced Research Projects Agency-Energy	In FY 2007, the president signed the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act (America COMPETES), which authorized the creation of the Advanced Research Projects Agency-Energy. In FY 2009, Congress appropriated \$400 million to fund the agency's first projects.
Bonneville Power Administration	In FY 1982, the Bonneville Power Administration (BPA) became part of the Department of Energy. BPA ceased to be a respondent as of the volume 68 (FYs 2018–19) data collection cycle.
Energy Delivery and Energy Reliability	In March 2003, the Department of Energy (DOE) created the Office of Electric Transmission and Distribution and the Office of Energy Assurance. In 2005, both offices and elements of the DOE Office of Fossil Energy were merged into the new Office of Electricity Delivery and Energy Reliability.
Office of Cybersecurity, Energy Security, and Emergency Response	In March 2018, the Department of Energy (DOE) created the Office of Cybersecurity, Energy Security, and Emergency Response. Data were first collected on vol. 68 with estimated R&D obligations for FY 2019.
Department of Health and Human Services	
Administration on Aging	In FY 1991, Human Development Services was replaced by the Administration for Children and Families (ACF) and by the Administration on Aging (AOA). Since FY 1992, data shown for ACF have been separate from obligations for AOA. In FY 2012, AOA was transferred to the Administration for Community Living.
Administration for Children and Families	Obligations reported for the Administration for Children and Families (ACF) may be incomplete for FY 1992 due to unavailability of data. In FY 1991, Human Development Services was replaced by ACF and by the Administration on Aging (AOA). Since FY 1992, data shown for ACF have been separate from obligations for AOA.
Administration for Community Living	The Administration for Community Living (ACL) began reporting in FY 2015, replacing the Administration on Aging, which was transferred to ACL when ACL was established on 18 April 2012. Several programs that serve older adults and people with disabilities were transferred from other agencies to ACL, including a number of programs from the Department of Education due to the 2014 Workforce Innovation and Opportunities Act. Prior to FY 2012, data reported for the ACL was for the Administration on Aging.
Agency for Healthcare Research and Quality	In FY 1991, the Agency for Health Care Policy and Research (AHCPR) became separate from the Office of the Assistant Secretary for Health. AHCPR was renamed the Agency for Healthcare Research and Quality as stated in the Healthcare Research and Quality Act of 1999, signed by the president on 6 December 1999.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
Agency for Toxic Substances and Disease Registry	Prior to FY 2000, data reported for the Environmental Protection Agency include R&D data for the Agency for Toxic Substances and Disease Registry.
Alcohol, Drug Abuse, and Mental Health Administration	Due to reorganization within the Department of Health and Human Services, the Alcohol, Drug Abuse, and Mental Health Administration ceased to exist as of October 1992, and its R&D functions are reported with National Institutes of Health data beginning with FY 1992. However, research support for some fields (such as psychology) in FY 1992 seems to be underreported.
Biomedical Advanced Research and Development Authority	The Biomedical Advanced Research and Development Authority began reporting for volume 69 (FYs 2019–20). It could not submit any geographical data for FY 2019, so its data were reported as undistributed on the state tables.
Centers for Medicare and Medicaid Services	The Health Care Financing Administration became the Centers for Medicare and Medicaid Services (CMS) as of 1 July 2001. Starting with volume 68 (FYs 2018–19), CMS funding was reported by the CMS Office of Financial Management at an agency-wide level instead of by the CMS Center for Medicare and Medicaid Innovation (CMMI) and its R&D group, the Office of Research, Development, and Information (ORDI), which used to report at a component level.
Health Care Financing Administration	The Health Care Financing Administration became the Centers for Medicare and Medicaid Services as of 1 July 2001.
Human Development Services	In FY 1991, Human Development Services was replaced by the Administration for Children and Families (ACF) and by the Administration on Aging (AOA). Since FY 1992, data shown for ACF have been separate from obligations for AOA.
National Institutes of Health	Due to reorganization within the Department of Health and Human Services, the Alcohol, Drug Abuse, and Mental Health Administration ceased to exist as of October 1992, and its R&D functions have been reported with National Institutes of Health (NIH) data since FY 1992. However, research support for some fields (such as psychology) in FY 1992 seems to be underreported. In FY 2000, NIH reclassified as research the activities that it had previously classified as development; NIH data for FY 2000 forward reflect this change. For more information on the classification changes at the National Aeronautics and Space Administration and NIH, refer to Classification Revisions Reduce Reported Federal Development Obligations (InfoBrief NSF 02-309), February 2002, available at https://www.nsf.gov/statistics/nsf02309/ . NIH revised its financial database; beginning with FY 2004, NIH records no longer contain information on the field of science and engineering. Data for FY 2004 and later years are not directly comparable with data for FY 2003 and earlier years.
Office of the Assistant Secretary for Health	In FY 1991, the Agency for Health Care Policy and Research became separate from the Office of the Assistant Secretary for Health (ASH). ASH merged with the Office of the Secretary of Health and Human Services (OS) as of FY 1996. The merger created a new role for the Assistant Secretary for Health who became head of the Office of Public Health and Science, a new division within OS.
Office of the Secretary of Health and Human Services	The Office of the Assistant Secretary for Health merged with the Office of the Secretary of Health and Human Services (OS) as of FY 1996. The merger created a new role for the Assistant Secretary for Health who became head of the Office of Public Health and Science, a new division within OS.
Office of Public Health and Science	The Office of the Assistant Secretary for Health merged with the Office of the Secretary of Health and Human Services (OS) as of FY 1996. The merger created a new role for the Assistant Secretary for Health who became head of the Office of Public Health and Science, a new division within OS.
Social Security Administration	Effective 31 March 1995, the Social Security Administration became an independent agency; it is no longer part of the Department of Health and Human Services.
Substance Abuse and Mental Health Services Administration	In FY 2003, the Substance Abuse and Mental Health Services Administration (SAMHSA) reclassified some of its funding categories as non-R&D that were considered R&D in prior years. Data for FYs 2003–06 from SAMHSA are estimates based on SAMHSA's obligations by program activity budget and previously reported funding for development.
Department of Homeland Security	On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing the Department of Homeland Security (DHS). DHS includes the R&D activities previously reported by the Federal Emergency Management Agency, the Science and Technology Directorate, the Transportation Security Administration, the U.S. Coast Guard, and the U.S. Secret Service.
Countering Weapons of Mass Destruction Office	The Countering Weapons of Mass Destruction (CWMD) Office was established on 7 December 2017. CWMD consolidated primarily the Domestic Nuclear Detection Office (DNDO) and a majority of the Office of Health Affairs, as well as other DHS elements. Prior to FY 2018, data reported for the CWMD would have been under the DNDO.
Domestic Nuclear Detection Office	The Domestic Nuclear Detection Office (DNDO) began reporting for FY 2014. It was consolidated under the Countering Weapons of Mass Destruction (CWMD) Office in December 2017. All of its funding is reported under the CWMD.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
Science and Technology Directorate	The Transportation Security Laboratory (TSL) initially existed under the Transportation Security Administration (TSA) of the Department of Homeland Security (DHS), but in the 2005 DHS reorganization, TSL was moved from TSA to the Science and Technology Directorate. During the volume 67 (FYs 2017–18) data collection, the Science and Technology Directorate revised its FY 2016 data.
Transportation Security Administration	The Transportation Security Administration, which did not report data between FY 2010 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).
U.S. Secret Service	The U.S. Secret Service, which did not report data between FY 2009 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).
Department of the Interior	
Bonneville Power Administration	In FY 1982, the Bonneville Power Administration became part of the Department of Energy.
Bureau of Land Management	In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management (BLM), the U.S. Geological Survey, and the Department of Energy. BLM, which did not report data between FY 1999 and FY 2014, resumed reporting for volume 65 (FYs 2015–17).
Bureau of Mines	In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management, the U.S. Geological Survey, and the Department of Energy.
Bureau of Ocean Energy Management	The Bureau of Ocean Energy Management, Regulation and Enforcement was split into the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement in FY 2012.
Bureau of Ocean Energy Management, Regulation, and Enforcement	On 19 May 2010, the Minerals Management Service was renamed the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE). BOEMRE was split into the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement in FY 2012.
Bureau of Safety and Environmental Enforcement	The Bureau of Ocean Energy Management, Regulation and Enforcement was split into the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement in FY 2012.
Minerals Management Service	On 19 May 2010, the Minerals Management Service was renamed the Bureau of Ocean Energy Management, Regulation, and Enforcement.
National Biological Service	The name of the National Biological Survey changed to the National Biological Service (NBS) on 5 January 1995. Since FY 1994, NBS has performed all biological research activities formerly funded by the U.S. Fish and Wildlife Service and the National Park Service. Funding for NBS comes from the U.S. Geological Survey's (USGS's) congressional appropriation. Since FY 1996 data for the NBS have been included with the USGS submission.
National Park Service	The name of the National Biological Survey changed to the National Biological Service (NBS) on 5 January 1995. Since FY 1994, NBS has performed all biological research activities formerly funded by the U.S. Fish and Wildlife Service and the National Park Service (NPS). Obligations for FYs 2003–08 are for the NPS natural resources program; data for the cultural resources program were not available.
Office of the Secretary of the Interior	The Department of the Interior's Office of the Secretary has not funded any R&D activities since FY 1995.
Office of Water Research and Technology	The Office of Water Research and Technology has been combined with the U.S. Geological Survey since 1985.
U.S. Fish and Wildlife Service	The name of the National Biological Survey changed to the National Biological Service (NBS) on 5 January 1995. Since FY 1994, the NBS has performed all biological research activities formerly funded by the U.S. Fish and Wildlife Service (FWS) and the National Park Service. FWS, which did not report data between FY 1999 and FY 2014, resumed reporting for volume 65 (FYs 2015–17).
U.S. Geological Survey	The Office of Water Research and Technology has been combined with the U.S. Geological Survey (USGS) since 1985. Funding for the National Biological Service (NBS) comes from the USGS congressional appropriation. Since FY 1996, data for NBS have been included with the USGS submission. In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management, the USGS, and the Department of Energy.
Department of Justice	
Drug Enforcement Administration	Large differences exist between the Drug Enforcement Administration's R&D funding amounts for FYs 1996 and 1997 due to changes in the agency's R&D programs.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
Immigration and Naturalization Service	On 1 March 2003, service and benefit functions of Immigration and Naturalization Service were transferred to the Department of Homeland Security as the U.S. Citizenship and Immigration Services.
Department of Labor	
Labor-Management Relations and Cooperative Programs	In 1984, Labor-Management Relations and Cooperative Programs replaced the Labor-Management Services Administration.
Labor-Management Services Administration	In 1984, the Labor-Management Services Administration was replaced by the Labor-Management Relations and Cooperative Programs.
Department of State	The Agency for International Development (USAID) transferred from the Department of State (DOS) to the International Development Cooperation Agency on 1 October 1979.
	Increases in outlays and obligations reported by DOS during the volume 44 (FYs 1994–96) survey cycle reflect reporting of moneys received through interagency agreements with USAID. DOS transfers these outlays and obligations to other R&D performers.
	Effective 1 April 1999, all functions and authorities of the U.S. Arms Control and Disarmament Agency were transferred to DOS.
	On 1 October 1999, the U.S. Information Agency was integrated into DOS.
	DOS data for FY 2014 were excluded due to their poor quality.
	As of volume 68 (FYs 2018–19), DOS added the Global Health Programs R&D funding.
Agency for International Development	The Agency for International Development (USAID) transferred from the Department of State (DOS) to the International Development Cooperation Agency on 1 October 1979.
	Increases in outlays and obligations reported by DOS during the volume 44 (FYs 1994–96) survey cycle reflect reporting of moneys received through interagency agreements with USAID. DOS transfers these outlays and obligations to other R&D performers.
Department of Transportation	The Department of Transportation (DOT) did not become operational until 1967. Prior to 1966, similar obligations appear under DOT's organizational predecessors: the Federal Aviation Agency, the U.S. Coast Guard (formerly part of the Department of the Treasury and transferred to the Department of Homeland Security in 2003), the Bureau of Public Roads, the Office of Transportation Research and Development, and other components of the Department of Commerce vested with transportation functions.
Federal Highway Administration	The Federal Motor Carrier Safety Administration, formerly a part of the Federal Highway Administration, was established within the Department of Transportation on 1 January 2000, as stated in the Motor Carrier Safety Improvement Act of 1999 (Public Law No. 106-159, 113 Stat. 1748 [9 December 1999]).
Federal Motor Carrier Safety Administration	The Federal Motor Carrier Safety Administration, formerly a part of the Federal Highway Administration, was established within the Department of Transportation on 1 January 2000, as stated in the Motor Carrier Safety Improvement Act of 1999 (Public Law No. 106-159, 113 Stat. 1748 [9 December 1999]).
Federal Transit Administration	The name of this agency changed from the Urban Mass Transit Administration to the Federal Transit Administration on 18 December 1991.
Maritime Administration	In 1981, the Maritime Administration moved from the Department of Commerce to the Department of Transportation.
Research and Innovative Technology Administration	In January 2014, all Research and Innovative Technology Administration programs were transferred into the Office of the Assistant Secretary for Research and Technology in the Office of the Secretary of Transportation.
U.S. Coast Guard	On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing the Department of Homeland Security (DHS). DHS includes the R&D activities previously reported by the U.S. Coast Guard.
Department of the Treasury	
Internal Revenue Service	Due to the reorganization of the Internal Revenue Service (IRS) and subsequent unavailability of data, FY 1992 figures are taken from estimates made in the volume 41 (FYs 1991–93) submission.
	Large changes in obligations reported by IRS for volume 44 (FYs 1994–96) are due to shifts in research funding.
	The IRS performed a detailed evaluation and assessment of its programs and determined that none of its functions can be defined as an R&D activity as defined in Office of Management and Budget (OMB) Circular A-11. Despite not having any R&D obligations, the IRS still sponsors a Federally Funded Research and Development Center, the Center for Enterprise Modernization.
Office of Thrift Supervision	In 1989, the Federal Home Loan Bank Board was replaced by the Office of Thrift Supervision (OTS). In 1990, OTS became part of the Department of the Treasury.
	As of 21 July 2011, OTS merged with the Office of the Comptroller of the Currency; it ceased to exist on 19 October 2011.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
U.S. Customs Service	Beginning in FY 2003, the U.S. Customs Service Research and Development program was transferred to other subagencies of the Department of Homeland Security.
U.S. Secret Service	On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing the Department of Homeland Security (DHS). DHS includes the R&D activities previously reported by the U.S. Secret Service (USSS).
Department of Veterans Affairs	During volume 68 (FYs 2018–19), the Department of Veterans Affairs added funds for the Medical Services Support to the existing R&D funding to fully report the total cost of intramural R&D. Although the Medical Services Support do not directly fund specific R&D activities, they do cover the additional expense of hosting intramural research programs that were not previously reported.
Other agencies	
Administrative Office of the U.S. Courts	The Administrative Office of the U.S. Courts began reporting as of volume 66 (FYs 2016–17).
Agency for International Development	Increases in outlays and obligations reported by the Department of State (DOS) during the volume 44 (FYs 1994–96) survey cycle reflect reporting of moneys received through interagency agreements with the Agency for International Development (USAID). DOS transfers these outlays and obligations to other R&D performers.
	USAID's new integrated system for budget and accounting records used to report data for volume 48 (FYs 1998–2000) did not contain codes for determining either fields of science and engineering or performer data. The National Science Foundation estimated these data based on USAID's Budget Authority (FYs 2000–02) and USAID's Federal Funds Survey submission to volume 44 (FYs 1994–96).
	USAID transferred from DOS to the International Development Cooperation Agency on 1 October 1979.
Broadcasting Board of Governors	The Broadcasting Board of Governors (BBG) became an independent federal entity on 1 October 1999, as mandated by the Foreign Affairs Reform and Restructuring Act (Public Law 105-277), signed by the president on 21 October 1998.
	On 22 August 2018, as part of a modernization effort, the BBG changed its name to the U.S. Agency for Global Media.
Consumer Product Safety Commission	The Consumer Product Safety Commission did not submit data from FY 2004 through FY 2011 but began reporting again for volume 62 (FYs 2012–14).
Environmental Protection Agency	Before FY 2000, data reported for the Environmental Protection Agency (EPA) included R&D data for the Agency for Toxic Substances and Disease Registry.
	In FY 2010, EPA was unable to report R&D or R&D plant by performer or by location. Percentage distributions calculated from EPA's data submission for FY 2009 were used to estimate its FY 2010 R&D by performer and its location.
Federal Emergency Management Agency	The Federal Emergency Management Agency (FEMA) was activated 1 April 1979, by Executive Order 12127. FEMA merged many of the separate disaster-related responsibilities, including the National Fire Prevention and Control Administration, whose 1978 funds are reported under FEMA.
	Functions for the Defense Civil Preparedness Agency transferred from the Department of Defense to FEMA on 20 July 1979.
	Functions for the National Fire Prevention and Control Administration transferred from the Department of Commerce to FEMA on 1 April 1979.
	Functions were transferred to the Department of Homeland Security (DHS) by act of 25 Nov. 2002 (116 Stat. 2213) and absorbed into DHS effective 1 March 2003.
General Services Administration	Since 1985, the National Archives and Records Administration has been separate from the General Services Administration.
International Development Cooperation Agency	The Agency for International Development transferred from the Department of State to the International Development Cooperation Agency on 1 October 1979.
National Aeronautics and Space Administration	During the volume 45 (FYs 1995–97) survey cycle, the National Aeronautics and Space Administration (NASA) made a statistical adjustment to the 1994 and 1995 field of science and engineering values to diminish a computational error introduced by its software.
	In FY 2000, NASA reclassified the International Space Station (ISS) as a physical asset, reclassified ISS Research as equipment, and transferred funding for the program from R&D to R&D plant.
	FYs 2004–06. NASA implemented a full-cost budget approach, which includes all of the direct and indirect costs for procurement, personnel, travel, and other infrastructure-related expenses relative to a particular program and project. NASA's data for FY 2004 and later years may not be directly comparable with its data for FY 2003 and earlier years.
	In FY 2006, NASA reclassified funding for the following items as operational costs: Space Operations, the Hubble Space Telescope, the Stratospheric Observatory for Infrared Astronomy, and the James Webb Space Telescope. This funding was previously reported as R&D plant.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–70

(Notes)

Department	Explanatory information
	Between FYs 2006 and 2007, NASA's R&D obligations decreased by \$1 billion. Of this amount, \$850 million was accounted for by obligations for operational projects that NASA excluded in FY 2007 but reported in FY 2006. The remainder was from an overall decrease in obligations between FYs 2006 and 2007.
	In FY 2010, NASA resumed reporting ISS obligations as R&D plant.
	In FY 2012, NASA began reporting ISS obligations as research rather than R&D plant.
	In FY 2013, NASA revamped its reporting process so that the data for FY 2012 forward are not directly comparable with totals reported in previous years.
	NASA estimated that the revised Office of Management and Budget definition for "experimental development" reduced its reported R&D total by about \$2.7 billion in FY 2017 and \$2.9 billion in FY 2018 from what would have been reported under the previous definition prior to volume 66 (FYs 2016–17).
National Archives and Records Administration	Since 1985, the National Archives and Records Administration has been separate from the General Services Administration.
National Science Foundation	The National Science Foundation made changes to its field of science and engineering coding system, producing changes to some of the FY 1996 field of science data (such as mechanical engineering). These changes are reflected in the historical data tables.
Patient-Centered Outcomes Research Trust Fund	The Patient-Centered Outcomes Research Trust Fund (PCORTF) was established by Congress through the Patient Protection and Affordable Care Act of 2010, signed by the president on 23 March 2010. PCORTF began reporting for volume 67 (FYs 2017–18), but it also submitted data for FYs 2011–16.
Office of Thrift Supervision	In 1989, the Federal Home Loan Bank Board was replaced by the Office of Thrift Supervision (OTS). In 1990, OTS became part of the Department of the Treasury.
Social Security Administration	Effective 31 March 1995, the Social Security Administration became an independent agency; it is no longer part of the Department of Health and Human Services.
Tennessee Valley Authority	During the volume 47 (FYs 1997–99) survey cycle, the Tennessee Valley Authority (TVA) made adjustments to its FY 1996 R&D values to correct reporting errors. TVA reported that in recent years, most of the funds TVA had reported had been those invested by TVA's Office of Power rather than congressionally appropriated funds. In addition, a substantial amount of congressionally appropriated funds earmarked for environmental compliance and site restoration was erroneously reported as R&D in past years. TVA determined that these funds did not meet the criteria for classification as R&D spending. Some trend shifts are related to these adjustments because TVA could only make revisions as far back as 1996.
	TVA, which did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18).
U.S. Agency for Global Media	On 22 August 2018, as part of a modernization effort, the Broadcasting Board of Governors changed its name to the U.S. Agency for Global Media (USAGM).
	USAGM did not submit data from FY 2008 through FY 2018 but began reporting again for volume 69 (FYs 2019–20).
U.S. Arms Control and Disarmament Agency	FY 1994 figures for the U.S. Arms Control and Disarmament Agency (ACDA) are based on the agency's volume 43 submission for FY 1993.
	Effective 1 April 1999, all functions and authorities of ACDA were transferred to the Department of State.
U.S. Information Agency	Data reported for the U.S. Information Agency (USIA) include funds for the former International Communication Agency for FYs 1977–81.
	On 1 October 1999, USIA was integrated into the Department of State.
U.S. International Trade Commission	In 2000, the U.S. International Trade Commission stopped classifying any of its activities as R&D.
U.S. Postal Service	The U.S. Postal Service, whi+B5:B209ch did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18) and submitted data for FYs 2015–16.

Note(s):

These notes include explanatory information on federal agencies' reports for volume 29 (FYs 1979–81) through volume 70 (FYs 2020–21) of the Survey of Federal Funds for Research and Development (Federal Funds Survey). For volume 70, actual data were collected for FY 2020, and estimates were collected for FY 2021.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

Acknowledgments and Suggested Citation

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