

TABLE 2. Summary of federal obligations and outlays for research, development, and R&D plant, by character of work, performer, and field: FYs 2009–12
(Dollars in millions)

Character of work, performer, and field	2009	2010	Preliminary			
			2011	% change 2010–11	% change 2012 2011–12	
Outlays for research and development and R&D plant	129,680.3 r	137,523.1	136,458.1	-0.8	138,511.0	1.5
Research and development	126,855.8	131,387.6	131,908.2	0.4	133,858.4	1.5
R&D plant	2,824.5 r	6,135.5	4,549.9	-25.8	4,652.6	2.3
Obligations for research and development and R&D plant	144,760.5 r	146,967.8	136,418.1	-7.2	135,834.4	-0.4
Research and development	141,092.5	140,354.5	132,140.6	-5.9	130,952.4	-0.9
Performer						
Intramural ^a	31,546.4	30,911.8	32,065.9	3.7	29,691.3	-7.4
Industry	59,749.3	59,867.8	54,781.5	-8.5	55,080.2	0.5
Industry FFRDCs	4,067.1	3,946.2	3,946.4	**	4,033.5	2.2
Universities and colleges	31,557.7	31,192.3	27,803.4	-10.9	28,708.0	3.3
University and college FFRDCs	3,402.7	3,370.5	3,239.0	-3.9	3,116.7	-3.8
Other nonprofit institutions	7,049.7	7,245.3	6,306.9	-13.0	6,335.3	0.5
Nonprofit FFRDCs	2,730.7	2,784.1	3,102.8	11.4	3,085.8	-0.5
State and local governments	392.0	426.7	400.9	-6.0	398.1	-0.7
Foreign	596.9	609.9	493.8	-19.0	503.5	2.0
Research	63,694.3	63,728.0	58,166.7	-8.7	60,712.3	4.4
Performer						
Intramural ^a	13,321.2	13,280.9	12,527.5	-5.7	13,125.0	4.8
Industry	6,280.2	6,625.5	6,204.2	-6.4	6,498.6	4.7
Industry FFRDCs	3,070.5	2,960.1	2,780.3	-6.1	3,008.9	8.2
Universities and colleges	30,168.8	29,607.8	26,512.9	-10.5	27,539.6	3.9
University and college FFRDCs	2,148.1	2,151.6	2,127.3	-1.1	2,260.4	6.3
Other nonprofit institutions	6,500.7	6,687.0	5,861.7	-12.3	5,970.7	1.9
Nonprofit FFRDCs	1,462.0	1,633.6	1,456.0	-10.9	1,601.9	10.0
State and local governments	343.6	352.8	325.2	-7.8	314.4	-3.3
Foreign	399.3	428.6	371.7	-13.3	392.8	5.7
Field of science and engineering						
Environmental sciences	3,751.1	3,338.9	3,124.7	-6.4	3,312.7	6.0
Life sciences	33,267.1	33,909.1	30,202.7	-10.9	30,803.9	2.0
Mathematics and computer sciences	3,611.8	3,411.8	3,275.5	-4.0	3,590.3	9.6
Physical sciences	5,821.1	5,870.8	5,534.0	-5.7	5,902.4	6.7
Psychology	2,086.3	2,155.6	1,905.0	-11.6	1,960.1	2.9
Social sciences	1,159.2	1,197.3	1,221.9	2.1	1,258.4	3.0
Other sciences, nec	3,712.7	2,763.2	2,763.5	**	3,028.7	9.6
Engineering	10,285.0	11,081.2	10,139.4	-8.5	10,855.8	7.1
Basic research	32,873.1	31,795.3	29,060.8	-8.6	30,664.8	5.5
Performer						
Intramural ^a	5,523.6	5,190.9	4,794.1	-7.6	5,117.6	6.7
Industry	1,631.6	1,746.9	1,602.0	-8.3	1,709.9	6.7
Industry FFRDCs	678.3	591.6	515.2	-12.9	530.8	3.0
Universities and colleges	18,229.6	17,403.1	15,758.7	-9.4	16,582.3	5.2
University and college FFRDCs	1,964.3	1,870.6	1,914.6	2.4	2,025.1	5.8
Other nonprofit institutions	3,487.4	3,530.4	3,088.6	-12.5	3,209.5	3.9
Nonprofit FFRDCs	1,059.1	1,139.4	1,102.9	-3.2	1,186.5	7.6
State and local governments	94.3	103.2	93.8	-9.1	96.0	2.3
Foreign	204.8	219.2	190.9	-12.9	207.2	8.5
Field of science and engineering						
Environmental sciences	2,142.9	1,787.4	1,708.4	-4.4	1,922.1	12.5
Life sciences	17,587.2	17,748.3	15,671.7	-11.7	16,192.0	3.3
Mathematics and computer sciences	1,861.4	1,663.2	1,592.4	-4.3	1,849.3	16.1

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Physical sciences	4,121.0	3,984.1	3,734.1	-6.3	4,083.6	9.4
Psychology	1,100.5	1,129.2	993.3	-12.0	1,009.0	1.6
Social sciences	426.0	358.9	378.4	5.4	377.0	-0.4
Other sciences, nec	2,227.9	1,633.0	1,465.0	-10.3	1,554.3	6.1
Engineering	3,406.2	3,491.1	3,517.5	0.8	3,677.6	4.6
Applied research	30,821.2	31,932.6	29,105.9	-8.9	30,047.5	3.2
Performer						
Intramural ^a	7,797.6	8,090.1	7,733.4	-4.4	8,007.5	3.5
Industry	4,648.6	4,878.6	4,602.3	-5.7	4,788.7	4.0
Industry FFRDCs	2,392.2	2,368.5	2,265.1	-4.4	2,478.2	9.4
Universities and colleges	11,939.2	12,204.7	10,754.3	-11.9	10,957.4	1.9
University and college FFRDCs	183.8	281.0	212.7	-24.3	235.3	10.6
Other nonprofit institutions	3,013.3	3,156.6	2,773.0	-12.2	2,761.2	-0.4
Nonprofit FFRDCs	402.9	494.3	353.1	-28.6	415.3	17.6
State and local governments	249.2	249.6	231.3	-7.3	218.4	-5.6
Foreign	194.5	209.4	180.8	-13.6	185.7	2.7
Field of science and engineering						
Environmental sciences	1,608.2	1,551.5	1,416.3	-8.7	1,390.6	-1.8
Life sciences	15,679.9	16,160.8	14,531.0	-10.1	14,612.0	0.6
Mathematics and computer sciences	1,750.3	1,748.6	1,683.1	-3.7	1,741.0	3.4
Physical sciences	1,700.1	1,886.7	1,799.9	-4.6	1,818.8	1.0
Psychology	985.9	1,026.4	911.7	-11.2	951.1	4.3
Social sciences	733.2	838.4	843.5	0.6	881.4	4.5
Other sciences, nec	1,484.8	1,130.2	1,298.5	14.9	1,474.4	13.5
Engineering	6,878.8	7,590.0	6,622.0	-12.8	7,178.2	8.4
Development	77,398.2	76,626.5	73,973.9	-3.5	70,240.1	-5.0
Performer						
Intramural ^a	18,225.2	17,630.9	19,538.4	10.8	16,566.2	-15.2
Industry	53,467.0	53,242.3	48,577.3	-8.8	48,581.6	**
Industry FFRDCs	996.6	986.1	1,166.1	18.3	1,024.6	-12.1
Universities and colleges	1,389.0	1,584.5	1,290.5	-18.6	1,168.3	-9.5
University and college FFRDCs	1,254.6	1,218.9	1,111.7	-8.8	856.3	-23.0
Other nonprofit institutions	549.0	558.3	445.3	-20.2	364.6	-18.1
Nonprofit FFRDCs	1,268.7	1,150.4	1,646.9	43.2	1,483.9	-9.9
State and local governments	48.4	73.9	75.7	2.5	83.7	10.5
Foreign	197.6	181.3	122.1	-32.7	110.6	-9.4
R&D plant	3,668.0	6,613.3	4,277.4	-35.3	4,882.0	14.1
Performer						
Intramural ^a	804.7	1,953.3	1,090.7	-44.2	1,087.7	-0.3
Industry	396.3	1,751.2	1,966.2	12.3	2,259.2	14.9
Industry FFRDCs	127.7	167.7	161.1	-3.9	200.1	24.2
Universities and colleges	607.0	1,532.6	340.1	-77.8	328.5	-3.4
University and college FFRDCs	706.5	491.4	249.9	-49.1	464.1	85.7
Other nonprofit institutions	154.4	245.9	116.3	-52.7	116.6	0.3

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Nonprofit FFRDCs	868.2	465.3	340.5	-26.8	411.4	20.8
State and local governments	1.2	2.0	0.3	-85.1	0.3	-3.2
Foreign	2.0	4.0	12.3	206.8	14.1	14.2

** = amount greater than 0 but less than 0.05%. r = data significantly revised; replaces previously published value.

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

^a Includes costs associated with administration of intramural and extramural programs by federal personnel and actual intramural performance. Extramural performers are all performers other than intramural.

NOTES: Because of rounding, detail may not add to total. Percentages are computed using dollars in thousands.

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