Appendix Table 4-25 Federal obligations for research, by detailed S&E field: Selected years, FYs 1990–2014

S&E field	1990	1995	2000	2005	2010	2013	Preliminary 2014	Average annual growth rate 2000–13	2010–13	2013–14
	Current $millions							Percent		
Total, all fields	21,622.4	28,434.4	38,470.6	53,738.2	63,728.0	59,199.8	62,663.0	3.4	-1.5	5.9
Environmental sciences	2,174.1	2,854.4	3,328.8	3,502.6	3,338.9	4,041.0	4,330.8	1.5	3.9	7.2
Atmospheric sciences	773.4	1,135.6	1,104.3	1,185.1	953.8	1,542.4	NA	–	–	–
Geological sciences	661.1	848.3	639.2	673.5	530.4	626.6	NA	–	–	–
Oceanography	520.1	407.3	673.0	771.5	743.7	787.6	NA	–	–	–
Other environmental sciences	219.5	463.3	912.2	872.5	1,111.0	1,084.4	NA	–	–	–
Life sciences	8,829.8	11,811.0	17,964.7	28,127.8	33,909.1	29,329.9	30,530.6	3.8	-2.9	4.1
Biological and agricultural	5,178.4	0.0	0.0	0.0	0.0	0.0	NA	–	–	–
Agricultural sciences	691.4	670.3	895.0	1,094.2	1,131.9	332.7	NA	–	–	–
Biological sciences (excluding environmental biology)	4,144.6	4,925.4	10,740.0	13,351.6	17,213.9	15,057.2	NA	–	–	–
Environmental biology	342.3	806.9	740.0	699.0	816.4	711.7	NA	–	–	–
Medical sciences	3,382.4	4,972.2	4,463.8	10,862.1	11,677.0	10,620.1	NA	–	–	–
Clinical medical	na	na	na	na	na	na	na	–	–	–
Other medical	na	na	na	na	na	na	na	–	–	–
Other life sciences	269.1	436.3	1,125.9	2,120.9	3,070.0	2,608.2	NA	–	–	–
Computer sciences and mathematics	840.7	1,579.1	2,205.6	2,983.4	3,411.8	3,427.0	3,776.6	3.4	0.1	10.2
Computer sciences	562.1	1,013.9	1,659.6	2,157.1	2,362.0	2,361.5	NA	–	–	–
Mathematics	241.3	258.6	432.9	686.6	835.5	864.0	NA	–	–	–

								Average annual growth rate		
S&E field	1990	1995	2000	2005	2010	2013	Preliminary 2014	2000–13	2010–13	2013–14
Other computer sciences and mathematics	37.3	306.6	113.1	139.7	214.4	201.4	NA	–	–	–
Physical sciences	3,808.7	4,278.3	4,788.0	5,493.7	5,870.8	6,281.9	6,559.0	2.1	1.4	4.4
Astronomy	597.2	764.5	880.3	884.9	559.9	1,147.0	NA	–	–	–
Chemistry	761.7	863.5	1,225.6	1,197.5	1,310.6	982.2	NA	–	–	–
Physics	2,254.9	2,451.2	2,405.4	3,041.3	3,470.1	3,481.8	NA	–	–	–
Other physical sciences	195.0	199.2	276.7	370.0	530.2	670.9	NA	–	–	–
Psychology	448.6	622.6	1,626.7	1,891.8	2,155.6	1,935.2	1,985.7	1.3	-2.1	2.6
Biological aspects	130.6	58.8	8.2	2.3	13.6	14.3	NA	–	–	–
Social aspects	177.5	156.3	56.0	46.6	74.5	64.9	NA	–	–	–
Other psychological sciences	140.5	407.5	1,562.5	1,842.8	2,067.4	1,856.0	NA	–	–	–
Social sciences	630.0	678.7	1,050.4	1,097.1	1,197.3	1,237.3	1,430.7	1.3	0.7	15.6
Anthropology	14.4	21.7	15.9	18.0	24.7	26.3	NA	–	–	–
Economics	197.2	206.5	249.5	215.9	274.0	333.0	NA	–	–	–
Political science	13.1	22.3	22.6	32.7	14.2	11.0	NA	–	–	–
Sociology	116.2	47.8	90.6	70.2	132.3	137.2	NA	–	–	–
Other social sciences	289.1	380.3	671.8	760.4	752.0	729.8	NA	–	–	–
History	na	na	na	na	na	na	na	–	–	–
Linguistics	na	na	na	na	na	na	na	–	–	–
Other social sciences	na	na	na	na	na	na	na	–	–	–
Other sciences nec	663.7	901.8	1,160.2	2,088.9	2,763.2	1,999.3	2,553.7	4.3	-6.3	27.7
Engineering	4,226.6	5,708.4	6,346.4	8,552.9	11,081.2	10,948.2	11,496.1	4.3	-0.2	5.0
Aeronautical engineering	927.1	1,248.3	1,463.9	1,276.3	830.1	1,842.1	NA	–	–	–

								Average annual growth rate		
S&E field	1990	1995	2000	2005	2010	2013	Preliminary 2014	2000–13	2010–13	2013–14
Astronautical engineering	580.8	546.5	515.0	494.1	389.9	737.3	NA	–	–	–
Chemical engineering	241.9	246.1	196.5	283.8	509.7	419.0	NA	–	–	–
Civil engineering	317.7	339.4	239.2	279.2	699.8	446.9	NA	–	–	–
Electrical engineering	640.0	756.3	744.8	1,033.5	1,360.9	1,163.2	NA	–	–	–
Mechanical engineering	268.3	412.5	289.3	323.7	363.6	548.6	NA	–	–	–
Metallurgy and materials engineering	554.5	815.3	918.1	1,184.1	1,758.8	1,729.3	NA	–	–	–
Other engineering	696.3	1,344.0	1,979.6	3,678.3	5,168.4	4,061.8	NA	–	–	–
	Constant 2009 $millions									
Total, all fields	32,622.8	37,857.0	47,220.6	58,846.0	63,178.3	55,607.6	57,978.3	1.3	-2.5	4.3
Environmental sciences	3,280.2	3,800.3	4,085.9	3,835.5	3,310.1	3,795.8	4,007.0	-0.6	2.8	5.6
Atmospheric sciences	1,166.9	1,511.9	1,355.5	1,297.7	945.6	1,448.8	NA	–	–	–
Geological sciences	997.5	1,129.4	784.6	737.5	525.8	588.6	NA	–	–	–
Oceanography	784.7	542.3	826.1	844.8	737.3	739.8	NA	–	–	–
Other environmental sciences	331.1	616.8	1,119.7	955.4	1,101.4	1,018.6	NA	–	–	–
Life sciences	13,322.0	15,724.9	22,050.7	30,801.4	33,616.6	27,550.2	28,248.1	1.7	-3.9	2.5
Biological and agricultural	7,812.9	0.0	0.0	0.0	0.0	0.0	NA	–	–	–
Agricultural sciences	1,043.2	892.4	1,098.6	1,198.2	1,122.1	312.5	NA	–	–	–
Biological sciences (excluding environmental biology)	6,253.2	6,557.6	13,182.8	14,620.7	17,065.4	14,143.5	NA	–	–	–
Environmental biology	516.5	1,074.3	908.3	765.4	809.4	668.5	NA	–	–	–
Medical sciences	5,103.1	6,619.9	5,479.1	11,894.5	11,576.3	9,975.7	NA	–	–	–
Clinical medical	na	na	na	na	na	na	NA	–	–	–
Other medical	na	na	na	na	na	na	NA	–	–	–

								Average annual growth rate		
S&E field	1990	1995	2000	2005	2010	2013	Preliminary 2014	2000–13	2010–13	2013–14
Other life sciences	406.0	580.9	1,382.0	2,322.5	3,043.5	2,449.9	NA	–	–	–
Computer sciences and mathematics	1,268.5	2,102.4	2,707.3	3,267.0	3,382.4	3,219.0	3,494.3	1.3	-1.0	8.5
Computer sciences	848.1	1,349.9	2,037.1	2,362.1	2,341.6	2,218.2	NA	–	–	–
Mathematics	364.1	344.3	531.4	751.9	828.3	811.6	NA	–	–	–
Other computer sciences and mathematics	56.2	408.2	138.8	153.0	212.6	189.2	NA	–	–	–
Physical sciences	5,746.4	5,696.0	5,877.0	6,015.9	5,820.2	5,900.7	6,068.7	0.0	0.3	2.8
Astronomy	901.0	1,017.8	1,080.5	969.0	555.1	1,077.4	NA	–	–	–
Chemistry	1,149.2	1,149.6	1,504.4	1,311.3	1,299.3	922.6	NA	–	–	–
Physics	3,402.1	3,263.5	2,952.5	3,330.4	3,440.2	3,270.5	NA	–	–	–
Other physical sciences	294.1	265.2	339.6	405.2	525.6	630.2	NA	–	–	–
Psychology	676.8	828.9	1,996.7	2,071.6	2,137.0	1,817.8	1,837.3	-0.7	-3.2	1.1
Biological aspects	197.1	78.3	10.1	2.5	13.5	13.4	NA	–	–	–
Social aspects	267.7	208.1	68.7	51.0	73.9	61.0	NA	–	–	–
Other psychological sciences	212.0	542.5	1,917.9	2,018.0	2,049.6	1,743.4	NA	–	–	–
Social sciences	950.5	903.6	1,289.3	1,201.4	1,187.0	1,162.2	1,323.7	-0.8	-0.4	13.9
Anthropology	21.7	28.9	19.5	19.7	24.5	24.7	NA	–	–	–
Economics	297.5	274.9	306.2	236.4	271.6	312.8	NA	–	–	–
Political science	19.8	29.7	27.7	35.8	14.1	10.3	NA	–	–	–
Sociology	175.3	63.6	111.2	76.9	131.2	128.9	NA	–	–	–
Other social sciences	436.2	506.3	824.6	832.7	745.5	685.5	NA	–	–	–
History	na	na	na	na	na	na	NA	–	–	–
Linguistics	na	na	na	na	na	na	NA	–	–	–

								Average annual growth rate		
S&E field	1990	1995	2000	2005	2010	2013	Preliminary 2014	2000–13	2010–13	2013–14
Other social sciences	na	na	na	na	na	na	NA	–	–	–
Other sciences nec	1,001.4	1,200.6	1,424.1	2,287.5	2,739.4	1,878.0	2,362.8	2.2	-7.3	25.8
Engineering	6,376.9	7,600.1	7,789.9	9,365.9	10,985.6	10,283.9	10,636.7	2.2	-1.3	3.4
Aeronautical engineering	1,398.8	1,662.0	1,796.9	1,397.6	822.9	1,730.3	NA	–	–	–
Astronautical engineering	876.3	727.6	632.1	541.1	386.5	692.6	NA	–	–	–
Chemical engineering	364.9	327.7	241.2	310.8	505.3	393.6	NA	–	–	–
Civil engineering	479.3	451.9	293.6	305.7	693.8	419.8	NA	–	–	–
Electrical engineering	965.7	1,006.9	914.2	1,131.7	1,349.2	1,092.6	NA	–	–	–
Mechanical engineering	404.8	549.2	355.1	354.5	360.5	515.3	NA	–	–	–
Metallurgy and materials engineering	836.6	1,085.5	1,126.9	1,296.6	1,743.6	1,624.4	NA	–	–	–
Other engineering	1,050.6	1,789.4	2,429.9	4,027.9	5,123.8	3,815.3	NA	–	–	–
	Share by field (%)									
Total, all fields	100.0	100.0	100.0	100.0	100.0	100.0	100.0	–	–	–
Environmental sciences	10.1	10.0	8.7	6.5	5.2	6.8	6.9	–	–	–
Atmospheric sciences	3.6	4.0	2.9	2.2	1.5	2.6	NA	–	–	–
Geological sciences	3.1	3.0	1.7	1.3	0.8	1.1	NA	–	–	–
Oceanography	2.4	1.4	1.7	1.4	1.2	1.3	NA	–	–	–
Other environmental sciences	1.0	1.6	2.4	1.6	1.7	1.8	NA	–	–	–
Life sciences	40.8	41.5	46.7	52.3	53.2	49.5	48.7	–	–	–
Biological and agricultural	23.9	0.0	0.0	0.0	0.0	0.0	NA	–	–	–
Agricultural sciences	3.2	2.4	2.3	2.0	1.8	0.6	NA	–	–	–
Biological sciences (excluding environmental biology)	19.2	17.3	27.9	24.8	27.0	25.4	NA	–	–	–

								Average annual growth rate		
S&E field	1990	1995	2000	2005	2010	2013	Preliminary 2014	2000–13	2010–13	2013–14
Environmental biology	1.6	2.8	1.9	1.3	1.3	1.2	NA	–	–	–
Medical sciences	15.6	17.5	11.6	20.2	18.3	17.9	NA	–	–	–
Clinical medical	na	na	na	na	na	na	NA	–	–	–
Other medical	na	na	na	na	na	na	NA	–	–	–
Other life sciences	1.2	1.5	2.9	3.9	4.8	4.4	NA	–	–	–
Computer sciences and mathematics	3.9	5.6	5.7	5.6	5.4	5.8	6.0	–	–	–
Computer sciences	2.6	3.6	4.3	4.0	3.7	4.0	NA	–	–	–
Mathematics	1.1	0.9	1.1	1.3	1.3	1.5	NA	–	–	–
Other computer sciences and mathematics	0.2	1.1	0.3	0.3	0.3	0.3	NA	–	–	–
Physical sciences	17.6	15.0	12.4	10.2	9.2	10.6	10.5	–	–	–
Astronomy	2.8	2.7	2.3	1.6	0.9	1.9	NA	–	–	–
Chemistry	3.5	3.0	3.2	2.2	2.1	1.7	NA	–	–	–
Physics	10.4	8.6	6.3	5.7	5.4	5.9	NA	–	–	–
Other physical sciences	0.9	0.7	0.7	0.7	0.8	1.1	NA	–	–	–
Psychology	2.1	2.2	4.2	3.5	3.4	3.3	3.2	–	–	–
Biological aspects	0.6	0.2	0.0	0.0	0.0	0.0	NA	–	–	–
Social aspects	0.8	0.5	0.1	0.1	0.1	0.1	NA	–	–	–
Other psychological sciences	0.6	1.4	4.1	3.4	3.2	3.1	NA	–	–	–
Social sciences	2.9	2.4	2.7	2.0	1.9	2.1	2.3	–	–	–
Anthropology	0.1	0.1	0.0	0.0	0.0	0.0	NA	–	–	–
Economics	0.9	0.7	0.6	0.4	0.4	0.6	NA	–	–	–
Political science	0.1	0.1	0.1	0.1	0.0	0.0	NA	–	–	–

								Average annual growth rate		
S&E field	1990	1995	2000	2005	2010	2013	Preliminary 2014	2000–13	2010–13	2013–14
Sociology	0.5	0.2	0.2	0.1	0.2	0.2	NA	–	–	–
Other social sciences	1.3	1.3	1.7	1.4	1.2	1.2	NA	–	–	–
History	na	na	na	na	na	na	NA	–	–	–
Linguistics	na	na	na	na	na	na	NA	–	–	–
Other social sciences	na	na	na	na	na	na	NA	–	–	–
Other sciences nec	3.1	3.2	3.0	3.9	4.3	3.4	4.1	–	–	–
Engineering	19.5	20.1	16.5	15.9	17.4	18.5	18.3	–	–	–
Aeronautical engineering	4.3	4.4	3.8	2.4	1.3	3.1	NA	–	–	–
Astronautical engineering	2.7	1.9	1.3	0.9	0.6	1.2	NA	–	–	–
Chemical engineering	1.1	0.9	0.5	0.5	0.8	0.7	NA	–	–	–
Civil engineering	1.5	1.2	0.6	0.5	1.1	0.8	NA	–	–	–
Electrical engineering	3.0	2.7	1.9	1.9	2.1	2.0	NA	–	–	–
Mechanical engineering	1.2	1.5	0.8	0.6	0.6	0.9	NA	–	–	–
Metallurgy and materials engineering	2.6	2.9	2.4	2.2	2.8	2.9	NA	–	–	–
Other engineering	3.2	4.7	5.1	6.8	8.1	6.9	NA	–	–	–

NOTES: na = not applicable; data collected for this table were not recorded at that level in that particular fiscal year, or the agency or subagency did not exist as such or in that organization in that year; NA = not available; data collected for this table were not recorded at that level in that particular fiscal year.

nec = not elsewhere classified.

Detail may not add to total because of rounding. Between FYs 2006 and 2007, the National Aeronautics and Space Administration's (NASA's) R&D obligations decreased for two reasons: (1) In FY 2007, NASA excluded projects that were operational in nature that were not excluded in FY 2006, which accounts for $850 million of the decrease; and (2) there was an overall decrease in obligations between FYs 2006 and 2007, which accounts for the remainder of the decrease. In FY 2010, NASA resumed reporting International Space Station obligations as R&D plant.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development (FYs 2013–15).

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