

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	5,414,464.9	1,550,954.6	3,332,046.7	0.0	471,669.4	0.0	43,379.3	0.0	16,414.9
Department of Agriculture	25,418.6	8,943.9	0.6	0.0	15,861.6	0.0	75.0	0.0	537.5
Department of Commerce	6,782.3	153.0	0.0	0.0	6,579.7	0.0	49.6	0.0	0.0
Department of Defense, research	122,349.2	23,463.9	84,465.2	0.0	14,252.4	0.0	167.7	0.0	0.0
Department of Defense, total experimental development ^b	3,430,071.2	1,298,479.3	2,105,786.9	0.0	19,765.4	0.0	6,039.6	0.0	0.0
Department of Energy	13,380.5	0.0	2,462.8	0.0	9,092.4	0.0	1,825.3	0.0	0.0
Department of Health and Human Services	399,045.8	367.9	6,826.0	0.0	353,100.7	0.0	32,273.4	0.0	6,477.7
Department of Homeland Security	3,241.0	620.4	1,985.2	0.0	635.3	0.0	0.0	0.0	0.0
Department of the Interior	4,866.3	4,120.7	0.0	0.0	465.0	0.0	0.0	0.0	280.6
Department of Transportation	15,109.6	0.0	3,151.4	0.0	2,839.1	0.0	0.0	0.0	9,119.1
Environmental Protection Agency	24.4	0.0	0.0	0.0	24.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,357,203.3	214,805.5	1,127,118.6	0.0	13,148.1	0.0	2,131.0	0.0	0.0
National Science Foundation	36,972.8	0.0	250.0	0.0	35,905.2	0.0	817.6	0.0	0.0
Alaska	334,240.4	120,210.2	71,578.6	0.0	103,762.1	0.0	6,780.5	0.0	31,909.1
Department of Agriculture	14,139.5	9,851.4	0.0	0.0	1,961.2	0.0	73.6	0.0	2,253.3
Department of Commerce	8,128.1	4,624.3	0.0	0.0	2,863.1	0.0	255.1	0.0	385.6
Department of Defense, research	10,732.4	0.0	1,437.7	0.0	7,794.7	0.0	1,500.0	0.0	0.0
Department of Defense, total experimental development ^b	113,451.3	37,042.0	58,086.4	0.0	913.7	0.0	0.0	0.0	17,409.1
Department of Energy	4,809.7	0.0	0.0	0.0	4,560.2	0.0	50.0	0.0	199.5
Department of Health and Human Services	18,841.1	677.7	1,002.0	0.0	13,795.2	0.0	1,611.0	0.0	1,755.2
Department of Homeland Security	4,226.4	0.0	4,226.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	84,056.4	68,013.8	2,767.6	0.0	4,532.4	0.0	167.5	0.0	8,575.2
Department of Transportation	2,908.9	0.0	127.8	0.0	1,506.5	0.0	0.0	0.0	1,274.6

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National Aeronautics and Space Administration	18,223.3	0.9	3,493.7	0.0	14,728.7	0.0	0.0	0.0	0.0
National Science Foundation	54,723.1	0.0	437.0	0.0	51,106.4	0.0	3,123.2	0.0	56.5
Arizona	2,001,235.9	143,412.5	1,331,118.3	0.0	458,738.0	0.0	55,919.4	0.0	12,047.8
Department of Agriculture	31,685.2	22,115.4	18.6	0.0	8,811.2	0.0	740.0	0.0	0.0
Department of Commerce	1,762.5	0.0	37.0	0.0	1,650.6	0.0	0.0	0.0	75.0
Department of Defense, research	96,456.8	3,789.4	48,573.4	0.0	43,793.9	0.0	300.1	0.0	0.0
Department of Defense, total experimental development ^b	1,319,589.0	80,869.9	1,226,623.1	0.0	3,965.1	0.0	0.0	0.0	8,130.9
Department of Energy	39,853.3	0.0	8,855.3	0.0	30,924.0	0.0	0.0	0.0	74.0
Department of Health and Human Services	269,023.2	7,500.1	16,728.7	0.0	199,172.4	0.0	43,014.7	0.0	2,607.5
Department of Homeland Security	4,590.6	0.0	4,590.6	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	7,505.4	5,498.3	167.0	0.0	1,636.1	0.0	0.0	0.0	204.0
Department of Transportation	4,390.1	0.0	1,824.4	0.0	1,650.1	0.0	0.0	0.0	915.6
Environmental Protection Agency	788.4	0.0	300.6	0.0	487.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	115,832.3	23,639.5	19,917.0	0.0	61,158.7	0.0	11,117.1	0.0	0.0
National Science Foundation	109,759.0	0.0	3,482.5	0.0	105,488.1	0.0	747.5	0.0	40.8
Arkansas	179,019.8	27,559.7	52,738.7	0.0	88,780.8	0.0	6,892.7	0.0	3,047.9
Department of Agriculture	42,694.4	23,258.8	0.0	0.0	19,435.5	0.0	0.0	0.0	0.0
Department of Defense, research	8,357.1	82.7	1,858.5	0.0	6,415.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	44,463.7	423.1	43,937.9	0.0	102.8	0.0	0.0	0.0	0.0
Department of Energy	1,428.7	0.0	204.9	0.0	1,149.8	0.0	0.0	0.0	74.0
Department of Health and Human Services	57,139.7	0.0	4,811.8	0.0	45,283.4	0.0	6,892.7	0.0	151.8
Department of the Interior	3,943.1	3,793.7	0.0	0.0	149.4	0.0	0.0	0.0	0.0
Department of Transportation	4,222.2	0.0	0.0	0.0	1,400.1	0.0	0.0	0.0	2,822.1

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National Aeronautics and Space Administration	1,661.6	1.4	1,015.6	0.0	644.6	0.0	0.0	0.0	0.0
National Science Foundation	15,109.3	0.0	910.0	0.0	14,199.3	0.0	0.0	0.0	0.0
California	19,158,610.5	2,745,383.3	5,918,382.0	1,134,746.6	4,535,729.8	3,346,651.2	1,138,293.9	314,358.8	25,064.9
Department of Agriculture	148,648.6	94,028.6	120.2	0.0	53,180.1	0.0	865.5	0.0	454.2
Department of Commerce	18,793.1	412.6	1,452.1	0.0	12,662.4	0.0	3,986.3	0.0	279.7
Department of Defense, research	974,825.5	157,215.7	321,942.6	27,153.4	379,513.1	13,764.6	70,043.2	5,014.0	178.9
Department of Defense, total experimental development ^b	6,513,212.4	2,115,755.2	4,005,319.3	62,969.0	42,439.2	1,329.3	21,257.5	262,315.2	1,827.7
Department of Energy	2,535,112.6	5,979.3	281,192.4	1,035,450.2	189,490.9	1,005,608.3	1,983.3	15,043.6	364.6
Department of Health and Human Services	4,428,263.5	0.0	337,270.4	3,169.2	3,087,109.4	20,551.4	977,106.2	0.0	3,056.9
Department of Homeland Security	63,035.9	19,669.8	29,606.0	5,929.6	1,233.5	2,862.1	0.0	3,517.0	217.9
Department of the Interior	65,568.3	51,878.1	1,175.4	0.0	9,095.1	0.0	217.2	0.0	3,202.4
Department of Transportation	38,011.2	2,125.7	11,437.3	0.0	9,714.2	0.0	1,375.0	0.0	13,358.9
Environmental Protection Agency	13,947.4	0.0	11,402.7	0.0	2,544.6	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,609,902.4	270,538.6	871,173.0	75.2	101,637.2	2,302,535.5	33,350.0	28,469.1	2,123.8
National Science Foundation	749,289.7	27,779.7	46,290.3	0.0	647,110.1	0.0	28,109.6	0.0	0.0
Colorado	5,267,919.7	1,390,348.6	2,548,226.2	0.0	715,603.1	175,998.9	93,209.8	333,306.0	11,227.1
Department of Agriculture	62,031.4	37,976.2	107.4	0.0	23,609.3	0.0	338.5	0.0	0.0
Department of Commerce	260,698.5	186,691.1	638.4	0.0	63,434.0	9,928.6	0.0	0.0	6.5
Department of Defense, research	80,648.3	10,271.8	25,054.7	0.0	44,735.2	0.0	202.4	384.1	0.0
Department of Defense, total experimental development ^b	1,965,977.5	68,478.1	1,884,624.0	0.0	5,213.4	0.0	4,500.0	3,162.0	0.0
Department of Energy	413,474.7	1,513.4	41,770.6	0.0	36,624.3	0.0	4,244.2	328,593.9	728.2
Department of Health and Human Services	428,240.5	1,075.6	34,435.2	0.0	337,506.5	0.0	48,418.9	0.0	6,804.3
Department of Homeland Security	15,115.2	13,276.2	1,313.7	0.0	525.3	0.0	0.0	0.0	0.0

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Department of the Interior	64,376.9	52,349.4	3,224.2	0.0	5,332.1	320.0	941.6	200.0	2,009.6
Department of Transportation	27,117.1	3,398.1	20,733.6	0.0	1,600.1	0.0	0.0	0.0	1,385.3
Environmental Protection Agency	5,865.1	928.2	1,604.8	0.0	3,332.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,614,311.7	1,013,039.7	522,819.0	0.0	61,739.9	13,401.2	3,311.8	0.0	0.0
National Science Foundation	330,062.9	1,350.9	11,900.6	0.0	131,950.9	152,349.2	31,252.3	966.0	293.1
Connecticut	2,673,235.2	22,463.8	1,955,329.4	0.0	659,319.9	0.0	29,619.7	0.0	6,502.3
Department of Agriculture	7,619.2	1,919.8	0.0	0.0	5,549.4	0.0	0.0	0.0	150.0
Department of Commerce	18,123.8	0.0	0.0	0.0	5,220.6	0.0	12,903.2	0.0	0.0
Department of Defense, research	43,141.8	0.0	24,093.0	0.0	14,321.7	0.0	4,727.2	0.0	0.0
Department of Defense, total experimental development ^b	1,759,402.3	3,806.3	1,754,006.4	0.0	1,589.6	0.0	0.0	0.0	0.0
Department of Energy	51,682.6	199.1	39,391.8	0.0	12,091.8	0.0	0.0	0.0	0.0
Department of Health and Human Services	585,714.9	0.0	14,944.4	0.0	554,782.5	0.0	11,922.6	0.0	4,065.3
Department of Homeland Security	16,411.2	10,438.4	5,600.3	0.0	372.4	0.0	0.0	0.0	0.0
Department of the Interior	2,204.6	1,053.8	469.2	0.0	571.8	0.0	0.0	0.0	109.8
Department of Transportation	2,803.5	0.0	556.8	0.0	69.5	0.0	0.0	0.0	2,177.2
Environmental Protection Agency	1,687.7	0.0	971.9	0.0	715.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	123,117.8	5,046.4	113,499.4	0.0	4,572.0	0.0	0.0	0.0	0.0
National Science Foundation	61,326.0	0.0	1,796.3	0.0	59,462.9	0.0	66.8	0.0	0.0
Delaware	163,086.6	4,326.4	27,032.1	0.0	122,222.6	0.0	4,639.7	0.0	4,865.9
Department of Agriculture	8,611.4	1,628.4	7.2	0.0	6,975.8	0.0	0.0	0.0	0.0
Department of Commerce	16,140.2	0.0	19.4	0.0	15,947.6	0.0	173.2	0.0	0.0
Department of Defense, research	19,048.8	23.4	2,184.5	0.0	16,840.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	6,897.8	845.0	5,199.8	0.0	853.0	0.0	0.0	0.0	0.0
Department of Energy	18,138.0	0.0	8,288.8	0.0	9,826.9	0.0	0.0	0.0	22.2

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Department of Health and Human Services	50,537.6	0.0	6,504.5	0.0	40,255.9	0.0	3,641.1	0.0	136.1
Department of Homeland Security	628.4	0.0	628.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	2,208.2	1,829.6	0.0	0.0	378.7	0.0	0.0	0.0	0.0
Department of Transportation	4,874.7	0.0	16.7	0.0	150.4	0.0	0.0	0.0	4,707.5
National Aeronautics and Space Administration	6,370.1	0.0	3,499.8	0.0	2,870.3	0.0	0.0	0.0	0.0
National Science Foundation	29,631.5	0.0	683.0	0.0	28,123.2	0.0	825.4	0.0	0.0
District of Columbia	6,228,175.8	4,531,606.0	858,408.3	40,679.3	286,121.8	151,531.6	348,468.9	3,167.6	8,192.2
Department of Agriculture	386,851.4	358,758.8	25,936.3	0.0	727.2	0.0	1,420.4	0.0	8.8
Department of Commerce	26,501.8	21,928.0	3,929.7	0.0	281.6	0.0	362.6	0.0	0.0
Department of Defense, research	460,249.2	395,036.2	20,496.6	0.0	19,989.0	0.0	22,244.5	2,482.9	0.0
Department of Defense, total experimental development ^b	3,161,464.1	2,549,120.2	458,491.2	0.0	12,956.8	0.0	140,890.7	0.0	5.2
Department of Energy	1,081,671.4	892,641.0	111,000.3	40,207.0	35,080.3	0.0	2,305.7	0.0	437.2
Department of Health and Human Services	270,857.6	4,545.4	26,347.5	0.0	174,968.7	0.0	59,889.9	0.0	5,106.1
Department of Homeland Security	66,717.8	28,028.2	38,022.2	0.0	0.0	0.0	197.4	470.0	0.0
Department of the Interior	13,568.1	10,984.0	8.9	0.0	41.4	0.0	67.8	0.0	2,466.0
Department of Transportation	181,477.4	82,293.8	67,912.4	0.0	3,124.3	0.0	27,977.9	0.0	169.0
Environmental Protection Agency	101,537.5	49,349.4	46,595.8	472.3	4,226.2	679.1	0.0	214.7	0.0
National Aeronautics and Space Administration	211,947.7	137,580.5	55,079.0	0.0	9,713.9	0.0	9,574.3	0.0	0.0
National Science Foundation	265,331.9	1,340.4	4,588.6	0.0	25,012.6	150,852.6	83,537.8	0.0	0.0
Florida	3,892,005.0	1,141,703.6	1,657,003.3	0.0	924,133.0	0.0	159,240.5	0.0	9,924.6
Department of Agriculture	77,566.3	38,563.9	2.0	0.0	37,857.3	0.0	1,035.3	0.0	107.9
Department of Commerce	54,316.8	33,674.6	137.5	0.0	17,504.2	0.0	1,915.7	0.0	1,084.8
Department of Defense, research	236,892.1	95,812.2	69,774.9	0.0	61,338.9	0.0	9,966.1	0.0	0.0

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Department of Defense, total experimental development ^b	2,138,937.7	796,427.0	1,329,846.7	0.0	6,114.4	0.0	6,549.6	0.0	0.0
Department of Energy	46,373.8	0.0	9,973.3	0.0	36,337.6	0.0	0.0	0.0	62.9
Department of Health and Human Services	685,322.7	0.0	27,134.2	0.0	519,867.9	0.0	137,973.7	0.0	346.9
Department of Homeland Security	12,496.9	8,289.3	3,805.7	0.0	401.8	0.0	0.0	0.0	0.0
Department of the Interior	45,106.8	40,839.5	1,260.5	0.0	2,524.4	0.0	159.4	0.0	323.0
Department of Transportation	29,626.1	663.9	2,660.4	0.0	18,302.6	0.0	0.0	0.0	7,999.2
Environmental Protection Agency	10,645.7	8,663.2	350.5	0.0	1,632.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	344,862.2	118,770.1	203,736.2	0.0	21,657.7	0.0	698.2	0.0	0.0
National Science Foundation	209,858.0	0.0	8,321.4	0.0	200,594.2	0.0	942.4	0.0	0.0
Georgia	1,503,918.0	283,437.3	202,102.4	0.0	985,832.7	0.0	24,018.6	0.0	8,527.1
Department of Agriculture	80,765.9	47,290.4	6.2	0.0	33,444.2	0.0	25.0	0.0	0.0
Department of Commerce	4,784.5	0.0	230.5	0.0	4,553.9	0.0	0.0	0.0	0.0
Department of Defense, research	105,211.0	3,376.2	18,236.3	0.0	80,948.4	0.0	2,650.1	0.0	0.0
Department of Defense, total experimental development ^b	399,508.4	161,864.2	126,223.0	0.0	98,844.8	0.0	12,576.4	0.0	0.0
Department of Energy	38,762.1	0.0	9,383.2	0.0	26,420.7	0.0	2,958.2	0.0	0.0
Department of Health and Human Services	688,313.0	61,821.3	29,236.6	0.0	590,289.2	0.0	4,230.4	0.0	2,735.5
Department of Homeland Security	3,558.5	0.0	3,204.4	0.0	354.1	0.0	0.0	0.0	0.0
Department of the Interior	2,861.7	2,565.3	0.0	0.0	296.4	0.0	0.0	0.0	0.0
Department of Transportation	10,614.2	293.5	833.4	0.0	2,345.7	0.0	1,375.0	0.0	5,766.6
Environmental Protection Agency	5,893.9	5,878.6	15.3	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	24,253.4	347.8	9,212.1	0.0	14,693.4	0.0	0.0	0.0	0.0
National Science Foundation	139,391.6	0.0	5,521.2	0.0	133,641.9	0.0	203.5	0.0	25.0
Hawaii	411,940.0	169,804.3	98,594.8	0.0	126,866.0	0.0	16,021.8	0.0	653.0

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Department of Agriculture	19,118.8	13,929.3	0.0	0.0	4,503.1	0.0	686.4	0.0	0.0
Department of Commerce	5,049.9	3,290.2	73.0	0.0	50.0	0.0	1,579.2	0.0	57.6
Department of Defense, research	53,638.7	3,423.8	31,024.2	0.0	11,224.6	0.0	7,961.3	0.0	4.8
Department of Defense, total experimental development ^b	199,793.2	146,387.9	51,881.9	0.0	1,288.0	0.0	232.1	0.0	3.2
Department of Energy	9,097.2	0.0	3,910.5	0.0	5,186.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	53,018.8	0.0	5,263.3	0.0	44,054.3	0.0	3,116.3	0.0	584.9
Department of Homeland Security	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	3,751.1	2,483.2	0.0	0.0	1,267.9	0.0	0.0	0.0	0.0
Department of Transportation	202.0	0.0	0.0	0.0	200.0	0.0	0.0	0.0	2.0
National Aeronautics and Space Administration	28,188.8	289.9	5,023.8	0.0	22,874.5	0.0	0.0	0.0	0.6
National Science Foundation	40,081.5	0.0	1,418.1	0.0	36,216.8	0.0	2,446.5	0.0	0.0
Idaho	919,915.3	38,894.7	165,860.0	615,398.7	93,360.6	0.0	2,628.8	0.0	3,772.5
Department of Agriculture	29,437.2	20,269.7	0.1	0.0	9,149.6	0.0	17.8	0.0	0.0
Department of Defense, research	11,922.5	328.0	2,623.0	2,712.6	6,259.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	28,893.0	9,231.8	8,770.0	10,314.1	577.1	0.0	0.0	0.0	0.0
Department of Energy	767,580.9	968.5	130,308.6	600,839.6	34,770.1	0.0	0.0	0.0	694.1
Department of Health and Human Services	17,417.9	0.0	599.7	0.0	14,207.3	0.0	2,611.0	0.0	0.0
Department of Homeland Security	1,532.4	0.0	0.0	1,532.4	0.0	0.0	0.0	0.0	0.0
Department of the Interior	11,522.7	8,095.2	250.0	0.0	1,000.8	0.0	0.0	0.0	2,176.8
Department of Transportation	901.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	901.6
National Aeronautics and Space Administration	25,450.7	1.6	23,308.6	0.0	2,140.5	0.0	0.0	0.0	0.0
National Science Foundation	25,256.4	0.0	0.0	0.0	25,256.4	0.0	0.0	0.0	0.0
Illinois	2,998,344.6	204,026.5	391,241.1	0.0	1,359,822.1	951,544.4	81,944.7	0.0	9,765.8
Department of Agriculture	66,096.1	38,118.4	1,893.5	0.0	26,048.9	0.0	35.3	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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 Commerce	1,725.7	0.0	176.7	0.0	1,549.0	0.0	0.0	0.0	0.0
Department of Defense, research	131,903.8	14,614.1	19,151.9	0.0	93,736.8	2,253.0	248.0	0.0	1,900.0
Department of Defense, total experimental development ^b	328,490.8	92,472.4	220,932.8	0.0	6,723.7	0.0	8,362.0	0.0	0.0
Department of Energy	1,134,187.4	35,528.4	84,055.4	0.0	65,339.5	947,918.1	1,346.0	0.0	0.0
Department of Health and Human Services	1,010,645.1	60.1	39,109.8	0.0	908,560.4	0.0	57,305.9	0.0	5,609.1
Department of Homeland Security	17,728.3	12,625.8	6.0	0.0	3,988.2	1,108.3	0.0	0.0	0.0
Department of the Interior	8,980.2	8,076.6	0.0	0.0	903.6	0.0	0.0	0.0	0.0
Department of Transportation	12,502.9	1,748.9	2,525.4	0.0	1,331.6	265.0	4,375.3	0.0	2,256.7
Environmental Protection Agency	144.4	0.0	95.7	0.0	48.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	35,897.4	781.9	16,419.9	0.0	18,167.3	0.0	528.3	0.0	0.0
National Science Foundation	250,042.5	0.0	6,874.1	0.0	233,424.5	0.0	9,743.9	0.0	0.0
Indiana	894,094.8	150,660.4	169,643.4	0.0	566,372.1	0.0	664.7	0.0	6,754.2
Department of Agriculture	26,863.6	6,227.9	1.1	0.0	20,468.6	0.0	0.0	0.0	166.0
Department of Commerce	2,794.1	0.0	0.0	0.0	2,794.1	0.0	0.0	0.0	0.0
Department of Defense, research	61,660.2	9,519.9	10,262.3	0.0	41,387.4	0.0	490.6	0.0	0.0
Department of Defense, total experimental development ^b	265,368.5	131,392.7	131,147.3	0.0	2,654.4	0.0	174.1	0.0	0.0
Department of Energy	34,088.3	39.4	1,340.9	0.0	32,708.1	0.0	0.0	0.0	0.0
Department of Health and Human Services	318,038.8	0.0	7,665.8	0.0	307,409.2	0.0	0.0	0.0	2,963.8
Department of Homeland Security	226.0	0.0	0.0	0.0	226.0	0.0	0.0	0.0	0.0
Department of the Interior	3,790.5	3,181.3	0.0	0.0	609.2	0.0	0.0	0.0	0.0
Department of Transportation	7,154.7	0.0	1,781.5	0.0	1,748.8	0.0	0.0	0.0	3,624.4
Environmental Protection Agency	1,463.4	0.0	0.0	0.0	1,463.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	21,258.2	299.3	13,434.7	0.0	7,524.2	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 2019

(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	151,388.6	0.0	4,009.7	0.0	147,378.8	0.0	0.0	0.0	0.0
Iowa	517,779.2	69,061.2	130,321.0	0.0	284,708.6	29,851.2	1,235.3	0.0	2,601.9
Department of Agriculture	78,377.8	56,079.3	0.8	0.0	22,192.1	0.0	105.5	0.0	0.0
Department of Commerce	1,029.6	0.0	441.2	0.0	588.4	0.0	0.0	0.0	0.0
Department of Defense, research	24,822.8	2,771.0	13,978.1	0.0	7,694.1	379.6	0.0	0.0	0.0
Department of Defense, total experimental development ^b	109,071.6	1,185.7	106,645.4	0.0	1,240.5	0.0	0.0	0.0	0.0
Department of Energy	37,954.2	670.3	122.1	0.0	7,690.2	29,471.6	0.0	0.0	0.0
Department of Health and Human Services	205,515.8	0.0	5,469.5	0.0	198,543.2	0.0	1,117.8	0.0	385.3
Department of the Interior	8,515.9	8,190.7	0.0	0.0	283.8	0.0	11.9	0.0	29.5
Department of Transportation	7,444.6	0.0	632.5	0.0	4,624.9	0.0	0.0	0.0	2,187.1
Environmental Protection Agency	141.4	0.0	141.4	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	6,834.2	164.2	1,617.6	0.0	5,052.4	0.0	0.0	0.0	0.0
National Science Foundation	38,071.3	0.0	1,272.3	0.0	36,799.0	0.0	0.0	0.0	0.0
Kansas	282,617.3	63,228.8	13,031.9	0.0	203,061.3	0.0	1,643.5	0.0	1,651.7
Department of Agriculture	82,089.6	59,329.1	0.6	0.0	22,760.0	0.0	0.0	0.0	0.0
Department of Commerce	904.0	0.0	0.0	0.0	904.0	0.0	0.0	0.0	0.0
Department of Defense, research	22,919.1	1,096.3	498.1	0.0	20,701.8	0.0	622.9	0.0	0.0
Department of Defense, total experimental development ^b	7,950.2	1,355.5	5,622.4	0.0	969.6	0.0	2.6	0.0	0.0
Department of Energy	10,554.1	0.0	805.4	0.0	8,981.7	0.0	767.0	0.0	0.0
Department of Health and Human Services	114,879.6	0.0	4,129.5	0.0	110,276.9	0.0	251.0	0.0	222.2
Department of the Interior	1,798.3	1,447.9	0.0	0.0	350.4	0.0	0.0	0.0	0.0
Department of Transportation	6,695.1	0.0	76.0	0.0	5,189.6	0.0	0.0	0.0	1,429.5
Environmental Protection Agency	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,845.1	0.0	1,672.2	0.0	2,172.9	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 2019

(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	30,979.2	0.0	224.8	0.0	30,754.4	0.0	0.0	0.0	0.0
Kentucky	313,350.7	7,203.5	34,194.1	0.0	265,399.6	0.0	1,515.9	0.0	5,037.6
Department of Agriculture	22,176.9	3,937.5	*	0.0	17,743.7	0.0	111.7	0.0	383.9
Department of Commerce	316.9	0.0	0.0	0.0	316.9	0.0	0.0	0.0	0.0
Department of Defense, research	4,070.9	476.7	1,397.9	0.0	2,196.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	16,245.8	303.8	15,023.4	0.0	918.7	0.0	0.0	0.0	0.0
Department of Energy	10,381.0	0.0	4,211.7	0.0	6,169.3	0.0	0.0	0.0	0.0
Department of Health and Human Services	225,335.3	0.0	9,632.8	0.0	214,026.7	0.0	524.1	0.0	1,151.7
Department of Homeland Security	880.0	0.0	0.0	0.0	0.0	0.0	880.0	0.0	0.0
Department of the Interior	3,081.1	2,462.2	24.0	0.0	363.5	0.0	0.0	0.0	231.4
Department of Transportation	3,094.0	23.3	0.0	0.0	0.0	0.0	0.0	0.0	3,070.7
National Aeronautics and Space Administration	4,043.3	0.0	2,524.2	0.0	1,519.1	0.0	0.0	0.0	0.0
National Science Foundation	23,725.5	0.0	1,380.1	0.0	22,145.4	0.0	0.0	0.0	200.0
Louisiana	432,060.3	58,857.2	138,215.9	0.0	221,996.0	0.0	2,441.4	0.0	10,549.8
Department of Agriculture	47,057.6	31,743.8	0.9	0.0	14,682.1	0.0	0.0	0.0	630.7
Department of Commerce	3,207.7	151.2	0.0	0.0	3,056.5	0.0	0.0	0.0	0.0
Department of Defense, research	7,189.4	0.0	2,440.2	0.0	4,337.8	0.0	411.4	0.0	0.0
Department of Defense, total experimental development ^b	116,985.8	1,864.0	114,605.9	0.0	375.8	0.0	139.6	0.0	0.4
Department of Energy	4,356.4	0.0	1,658.7	0.0	2,575.5	0.0	0.0	0.0	122.1
Department of Health and Human Services	174,399.5	2,627.8	3,184.2	0.0	167,219.7	0.0	762.6	0.0	605.1
Department of Homeland Security	881.2	863.7	17.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	23,545.7	21,606.6	0.0	0.0	1,794.4	0.0	49.7	0.0	95.0
Department of Transportation	5,272.5	0.0	0.0	0.0	2,574.3	0.0	0.0	0.0	2,698.2
Environmental Protection Agency	343.0	0.0	343.0	0.0	0.0	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 2019

(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	18,952.9	0.0	15,295.7	0.0	1,317.5	0.0	0.0	0.0	2,339.7
National Science Foundation	29,868.7	0.0	669.8	0.0	24,062.4	0.0	1,078.0	0.0	4,058.4
Maine	189,013.5	3,779.5	11,662.7	0.0	59,315.8	0.0	110,399.9	0.0	3,855.6
Department of Agriculture	8,884.1	1,988.6	17.2	0.0	6,878.2	0.0	0.0	0.0	0.0
Department of Commerce	6,364.3	0.0	0.0	0.0	5,201.3	0.0	1,163.0	0.0	0.0
Department of Defense, research	11,702.0	0.0	428.4	0.0	10,461.8	0.0	811.7	0.0	0.0
Department of Defense, total experimental development ^b	12,800.4	487.3	4,472.8	0.0	6,727.4	0.0	1,113.0	0.0	0.0
Department of Energy	1,950.2	0.0	349.2	0.0	1,478.9	0.0	0.0	0.0	122.1
Department of Health and Human Services	116,403.8	0.0	5,134.0	0.0	8,393.5	0.0	100,634.9	0.0	2,241.4
Department of Homeland Security	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,489.4	1,232.5	72.4	0.0	0.0	0.0	0.0	0.0	184.5
Department of Transportation	6,752.0	0.0	255.0	0.0	5,179.5	0.0	10.0	0.0	1,307.5
Environmental Protection Agency	40.7	0.0	0.0	0.0	40.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,807.1	71.2	698.4	0.0	898.3	0.0	1,139.3	0.0	0.0
National Science Foundation	19,819.2	0.0	235.0	0.0	14,056.3	0.0	5,528.0	0.0	0.0
Maryland	16,992,340.3	10,839,509.2	3,232,809.8	492,255.4	2,030,696.7	0.0	344,044.4	36,463.2	16,561.6
Department of Agriculture	173,473.4	154,755.6	323.8	0.0	18,087.8	0.0	294.6	0.0	11.5
Department of Commerce	732,639.0	680,318.8	21,450.5	0.0	11,802.0	0.0	314.9	18,752.9	0.0
Department of Defense, research	530,443.9	244,547.1	134,569.6	957.5	108,094.1	0.0	41,993.9	200.0	81.8
Department of Defense, total experimental development ^b	3,608,597.6	1,943,679.9	1,117,799.0	359.0	523,030.4	0.0	23,514.1	196.0	19.2
Department of Energy	68,262.6	3,610.3	24,019.0	0.0	28,065.6	0.0	3,399.0	0.0	9,168.7
Department of Health and Human Services	9,409,562.1	7,389,127.1	429,297.2	490,939.0	1,014,751.4	0.0	83,286.1	*	2,161.3
Department of Homeland Security	71,659.7	11,142.4	39,507.1	0.0	1,276.9	0.0	2,419.0	17,314.3	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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 the Interior	79,909.4	78,655.4	31.3	0.0	858.7	0.0	35.0	0.0	329.0
Department of Transportation	37,558.8	6,426.1	22,458.7	0.0	3,620.0	0.0	263.9	0.0	4,790.1
Environmental Protection Agency	32,782.7	0.0	29,385.1	0.0	3,397.6	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,952,709.3	322,973.7	1,223,933.1	0.0	223,422.1	0.0	182,380.3	0.0	0.0
National Science Foundation	294,741.9	4,272.8	190,035.5	0.0	94,290.1	0.0	6,143.4	0.0	0.0
Massachusetts	6,837,816.2	396,103.5	2,195,471.6	0.0	1,855,029.3	397,940.7	1,869,817.9	116,157.2	7,295.9
Department of Agriculture	27,923.9	11,989.4	3.4	0.0	15,116.9	0.0	814.2	0.0	0.0
Department of Commerce	52,403.7	35,595.2	479.3	0.0	16,300.8	0.0	0.0	0.0	28.5
Department of Defense, research	554,591.9	24,576.1	231,337.6	0.0	198,299.0	61,800.4	35,869.8	2,709.1	0.0
Department of Defense, total experimental development ^b	2,307,703.6	150,723.1	1,602,064.0	0.0	44,904.4	334,039.5	62,524.5	113,448.2	0.0
Department of Energy	146,291.8	0.0	55,334.5	0.0	89,964.4	0.0	863.4	0.0	129.6
Department of Health and Human Services	2,972,597.6	0.0	200,401.3	0.0	1,056,984.1	0.0	1,711,123.4	0.0	4,088.8
Department of Homeland Security	53,049.8	19,595.8	31,243.0	0.0	0.0	2,100.8	110.2	0.0	0.0
Department of the Interior	9,988.7	6,778.6	293.0	0.0	2,867.6	0.0	49.4	0.0	0.0
Department of Transportation	74,964.0	48,971.3	14,782.9	0.0	3,666.3	0.0	4,713.0	0.0	2,830.6
Environmental Protection Agency	15,000.7	1,237.6	6,122.7	0.0	7,640.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	161,524.5	96,636.4	30,537.2	0.0	27,604.9	0.0	6,746.0	0.0	0.0
National Science Foundation	461,775.9	0.0	22,872.8	0.0	391,680.5	0.0	47,004.2	0.0	218.4
Michigan	2,053,699.5	198,365.1	607,896.2	0.0	1,111,334.9	0.0	129,222.7	0.0	6,880.7
Department of Agriculture	26,065.9	3,346.1	6.8	0.0	22,643.1	0.0	70.0	0.0	0.0
Department of Commerce	10,074.5	378.0	0.0	0.0	9,296.7	0.0	391.6	0.0	8.2
Department of Defense, research	120,203.1	9,921.2	14,452.2	0.0	52,397.1	0.0	43,432.5	0.0	0.0
Department of Defense, total experimental development ^b	744,242.0	181,578.9	530,222.3	0.0	5,394.1	0.0	27,046.8	0.0	0.0
Department of Energy	74,746.2	0.0	11,668.9	0.0	62,477.3	0.0	600.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	812,015.3	196.0	29,487.1	0.0	721,325.5	0.0	56,356.2	0.0	4,650.6
Department of Homeland Security	3,361.1	0.0	2,666.2	0.0	694.9	0.0	0.0	0.0	0.0
Department of the Interior	3,645.8	2,785.5	0.0	0.0	788.2	0.0	72.0	0.0	0.0
Department of Transportation	17,921.5	35.9	8,018.9	0.0	7,694.4	0.0	0.0	0.0	2,172.3
Environmental Protection Agency	511.7	0.0	349.2	0.0	162.5	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	23,654.9	123.5	5,442.7	0.0	18,088.8	0.0	0.0	0.0	0.0
National Science Foundation	217,257.5	0.0	5,581.9	0.0	210,372.4	0.0	1,253.6	0.0	49.6
Minnesota	1,029,355.9	43,778.2	223,183.4	0.0	451,217.4	0.0	302,832.3	0.0	8,344.6
Department of Agriculture	51,952.7	22,090.8	8.6	0.0	29,197.8	0.0	0.0	0.0	655.5
Department of Commerce	1,741.0	0.0	0.0	0.0	1,741.0	0.0	0.0	0.0	0.0
Department of Defense, research	75,401.3	888.0	56,102.1	0.0	18,197.8	0.0	213.4	0.0	0.0
Department of Defense, total experimental development ^b	142,270.5	4,719.3	109,725.8	0.0	9,825.4	0.0	18,000.0	0.0	0.0
Department of Energy	26,852.0	25.8	6,146.3	0.0	20,679.9	0.0	0.0	0.0	0.0
Department of Health and Human Services	623,396.7	0.0	42,152.6	0.0	297,091.6	0.0	282,589.9	0.0	1,562.6
Department of Homeland Security	2.7	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	7,458.7	6,480.9	1.8	0.0	926.4	0.0	49.6	0.0	0.0
Department of Transportation	6,944.9	0.0	818.4	0.0	0.0	0.0	0.0	0.0	6,126.4
Environmental Protection Agency	9,228.3	8,972.6	231.3	0.0	24.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	7,504.3	600.8	2,736.4	0.0	4,167.2	0.0	0.0	0.0	0.0
National Science Foundation	76,602.9	0.0	5,257.5	0.0	69,366.0	0.0	1,979.4	0.0	0.0
Mississippi	505,111.8	257,876.8	62,255.3	0.0	177,206.9	0.0	992.4	0.0	6,780.4
Department of Agriculture	106,066.1	71,906.7	0.0	0.0	32,844.8	0.0	985.7	0.0	328.9
Department of Commerce	27,431.0	2,260.6	0.0	0.0	25,170.4	0.0	0.0	0.0	0.0
Department of Defense, research	18,448.1	7,246.9	642.4	0.0	10,558.9	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 2019

(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	166,576.4	88,732.2	52,141.5	0.0	25,696.0	0.0	6.7	0.0	0.0
Department of Energy	5,867.7	320.0	0.0	0.0	5,547.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	57,893.1	0.0	332.4	0.0	55,781.9	0.0	0.0	0.0	1,778.9
Department of Homeland Security	9.5	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	3,482.3	2,941.6	0.0	0.0	396.9	0.0	0.0	0.0	143.8
Department of Transportation	7,058.8	27.9	0.0	0.0	2,502.1	0.0	0.0	0.0	4,528.8
National Aeronautics and Space Administration	94,318.0	84,440.9	9,129.5	0.0	747.6	0.0	0.0	0.0	0.0
National Science Foundation	17,960.7	0.0	0.0	0.0	17,960.7	0.0	0.0	0.0	0.0
Missouri	2,375,132.7	141,860.0	1,496,564.5	0.0	694,830.8	0.0	36,738.7	0.0	5,138.7
Department of Agriculture	64,668.9	48,183.5	3.1	0.0	15,088.7	0.0	1,393.7	0.0	0.0
Department of Commerce	1,051.7	1,051.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, research	47,868.9	3,181.5	27,140.9	0.0	15,518.4	0.0	2,028.0	0.0	0.0
Department of Defense, total experimental development ^b	982,092.2	58,099.6	920,484.5	0.0	3,469.3	0.0	38.7	0.0	0.0
Department of Energy	518,222.5	0.0	500,373.5	0.0	9,176.1	0.0	8,672.9	0.0	0.0
Department of Health and Human Services	635,947.0	0.0	16,067.6	0.0	600,337.9	0.0	19,049.9	0.0	491.6
Department of Homeland Security	3,735.7	3,735.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	5,597.5	5,175.4	0.0	0.0	126.4	0.0	0.0	0.0	295.8
Department of Transportation	12,128.0	0.0	3,836.1	0.0	3,940.6	0.0	0.0	0.0	4,351.3
Environmental Protection Agency	3,760.2	0.0	3,719.5	0.0	40.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	52,863.7	22,432.5	24,039.6	0.0	6,391.7	0.0	0.0	0.0	0.0
National Science Foundation	47,196.3	0.0	899.6	0.0	40,741.1	0.0	5,555.5	0.0	0.0
Montana	191,393.8	57,405.3	25,471.6	0.0	101,242.7	0.0	4,613.1	0.0	2,661.2
Department of Agriculture	30,284.4	15,896.7	125.8	0.0	11,457.9	0.0	2,804.0	0.0	0.0
Department of Commerce	404.5	0.0	0.0	0.0	404.5	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 2019

(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	15,617.1	0.0	2,884.6	0.0	12,532.4	0.0	200.0	0.0	0.0
Department of Defense, total experimental development ^b	8,303.1	492.7	3,333.9	0.0	4,476.6	0.0	0.0	0.0	0.0
Department of Energy	3,579.3	0.0	718.3	0.0	2,861.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	83,499.3	33,771.9	13,829.7	0.0	33,805.9	0.0	1,545.1	0.0	546.6
Department of Homeland Security	997.2	0.0	0.0	0.0	997.2	0.0	0.0	0.0	0.0
Department of the Interior	8,963.1	7,244.0	0.0	0.0	1,374.1	0.0	40.0	0.0	305.0
Department of Transportation	3,269.7	0.0	0.0	0.0	1,460.1	0.0	0.0	0.0	1,809.6
National Aeronautics and Space Administration	8,485.4	0.0	3,379.5	0.0	5,081.9	0.0	24.0	0.0	0.0
National Science Foundation	27,990.7	0.0	1,199.7	0.0	26,791.0	0.0	0.0	0.0	0.0
Nebraska	243,708.3	33,689.4	12,340.7	0.0	174,619.2	0.0	19,495.7	0.0	3,563.3
Department of Agriculture	51,859.6	30,499.8	0.1	0.0	9,969.7	0.0	11,390.0	0.0	0.0
Department of Commerce	791.5	0.0	0.0	0.0	791.5	0.0	0.0	0.0	0.0
Department of Defense, research	6,173.1	919.1	1,414.0	0.0	3,398.4	0.0	441.6	0.0	0.0
Department of Defense, total experimental development ^b	8,980.4	1,583.3	6,609.7	0.0	787.5	0.0	0.0	0.0	0.0
Department of Energy	8,812.3	0.0	200.0	0.0	8,612.3	0.0	0.0	0.0	0.0
Department of Health and Human Services	127,122.7	0.0	3,128.5	0.0	116,010.3	0.0	7,664.1	0.0	319.8
Department of Homeland Security	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	736.6	555.6	0.0	0.0	181.0	0.0	0.0	0.0	0.0
Department of Transportation	6,217.7	0.0	0.0	0.0	2,974.3	0.0	0.0	0.0	3,243.4
National Aeronautics and Space Administration	693.8	131.6	112.8	0.0	449.4	0.0	0.0	0.0	0.0
National Science Foundation	32,319.9	0.0	875.0	0.0	31,444.9	0.0	0.0	0.0	0.0
Nevada	375,083.5	13,123.4	275,039.9	0.0	77,954.2	0.0	1,079.8	0.0	7,886.2
Department of Agriculture	7,370.4	2,723.9	0.9	0.0	4,645.6	0.0	0.0	0.0	0.0
Department of Commerce	486.2	0.0	0.0	0.0	486.2	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 2019

(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	8,223.7	981.3	3,122.7	0.0	4,119.6	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	141,202.5	2,768.3	137,376.8	0.0	1,057.3	0.0	0.0	0.0	0.0
Department of Energy	117,673.6	0.0	115,493.9	0.0	2,179.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	42,861.3	0.0	1,816.4	0.0	37,876.6	0.0	1,079.8	0.0	2,088.5
Department of Homeland Security	318.9	318.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	11,691.3	5,573.1	0.0	0.0	1,685.5	0.0	0.0	0.0	4,432.7
Department of Transportation	2,856.9	0.0	1,456.8	0.0	1,400.1	0.0	0.0	0.0	0.0
Environmental Protection Agency	*	0.0	*	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	20,921.0	757.7	15,772.3	0.0	3,026.0	0.0	0.0	0.0	1,365.0
National Science Foundation	21,477.5	0.0	0.0	0.0	21,477.5	0.0	0.0	0.0	0.0
New Hampshire	669,304.6	20,849.8	474,116.1	0.0	164,238.4	0.0	8,892.9	0.0	1,207.4
Department of Agriculture	9,047.0	5,370.8	0.3	0.0	3,575.3	0.0	100.6	0.0	0.0
Department of Commerce	8,120.2	197.0	0.0	0.0	7,757.2	0.0	166.0	0.0	0.0
Department of Defense, research	19,317.9	389.7	11,326.5	0.0	7,601.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	428,844.5	8,469.7	419,812.0	0.0	481.4	0.0	81.3	0.0	0.0
Department of Energy	17,768.9	0.0	13,112.0	0.0	4,556.9	0.0	0.0	0.0	99.9
Department of Health and Human Services	119,409.2	0.0	18,866.5	0.0	92,172.7	0.0	8,039.7	0.0	330.3
Department of Homeland Security	6.5	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	3,570.9	287.3	2,188.1	0.0	1,001.4	0.0	0.0	0.0	94.1
Department of Transportation	776.5	0.0	86.4	0.0	0.0	0.0	6.9	0.0	683.2
Environmental Protection Agency	150.1	0.0	150.1	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	26,527.6	5,645.3	8,117.6	0.0	12,764.7	0.0	0.0	0.0	0.0
National Science Foundation	35,765.4	490.0	450.0	0.0	34,327.1	0.0	498.3	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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
New Jersey	2,834,421.1	1,538,376.5	648,862.5	0.0	479,910.8	127,714.1	32,759.7	0.0	6,797.5
Department of Agriculture	11,268.5	94.1	3.3	0.0	11,146.1	0.0	0.0	0.0	25.0
Department of Commerce	33,255.6	20,346.0	0.0	0.0	12,909.6	0.0	0.0	0.0	0.0
Department of Defense, research	233,291.0	96,941.6	96,497.6	0.0	38,836.5	0.0	514.3	0.0	500.9
Department of Defense, total experimental development ^b	1,871,003.1	1,387,811.0	474,330.1	0.0	5,900.9	2,206.1	754.9	0.0	0.0
Department of Energy	162,048.3	1,800.7	7,931.6	0.0	26,808.1	125,508.0	0.0	0.0	0.0
Department of Health and Human Services	309,235.1	0.0	38,339.5	0.0	239,153.2	0.0	30,359.5	0.0	1,382.9
Department of Homeland Security	3,362.8	41.5	3,110.8	0.0	210.5	0.0	0.0	0.0	0.0
Department of the Interior	3,380.8	1,970.1	179.3	0.0	988.6	0.0	0.0	0.0	242.8
Department of Transportation	51,915.6	22,470.0	17,365.6	0.0	7,484.1	0.0	0.0	0.0	4,595.9
Environmental Protection Agency	3,461.4	2,011.1	1,303.9	0.0	146.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	25,121.5	4,786.9	6,938.7	0.0	13,344.5	0.0	51.3	0.0	0.0
National Science Foundation	127,077.4	103.5	2,862.1	0.0	122,982.3	0.0	1,079.6	0.0	50.0
New Mexico	3,755,707.3	738,100.0	569,770.2	2,268,755.8	151,185.2	0.0	22,253.3	0.0	5,642.8
Department of Agriculture	15,369.7	6,342.3	7.7	0.0	8,051.2	0.0	968.6	0.0	0.0
Department of Commerce	3,985.6	3,326.0	649.6	0.0	10.0	0.0	0.0	0.0	0.0
Department of Defense, research	301,288.0	173,469.8	79,682.1	30,016.4	15,052.1	0.0	2,740.2	0.0	327.4
Department of Defense, total experimental development ^b	1,203,929.0	517,738.5	437,003.5	239,148.8	9,006.4	0.0	963.3	0.0	68.4
Department of Energy	1,998,745.9	0.0	4,773.1	1,988,253.9	4,504.0	0.0	1,215.0	0.0	0.0
Department of Health and Human Services	96,042.9	0.0	3,694.1	1,611.8	73,304.2	0.0	14,608.7	0.0	2,824.0
Department of Homeland Security	36,897.1	20,297.9	11,788.9	4,810.3	0.0	0.0	0.0	0.0	0.0
Department of the Interior	6,408.3	3,596.3	0.0	0.0	1,741.0	0.0	0.0	0.0	1,071.0
Department of Transportation	4,840.4	0.0	3,405.5	0.0	132.9	0.0	0.0	0.0	1,302.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	630.5	0.0	142.7	0.0	487.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	48,953.5	13,329.3	27,420.3	4,914.6	3,289.3	0.0	0.0	0.0	0.0
National Science Foundation	38,616.5	0.0	1,202.7	0.0	35,606.4	0.0	1,757.4	0.0	50.0
New York	6,162,335.7	160,843.1	1,096,634.3	1,017,693.0	2,869,081.9	0.0	432,960.0	478,647.1	106,476.2
Department of Agriculture	66,969.3	26,542.6	70.5	0.0	38,264.6	0.0	2,091.7	0.0	0.0
Department of Commerce	10,472.3	191.8	411.4	0.0	9,823.4	0.0	45.7	0.0	0.0
Department of Defense, research	296,818.0	42,535.0	130,011.6	0.0	107,947.2	0.0	15,285.2	389.0	650.0
Department of Defense, total experimental development ^b	738,409.9	39,848.1	678,108.7	0.0	5,899.7	0.0	14,553.5	0.0	0.0
Department of Energy	1,629,011.2	4,403.4	72,690.8	1,017,693.0	67,933.0	0.0	1,148.9	465,142.1	0.0
Department of Health and Human Services	2,786,296.2	0.0	76,796.0	0.0	2,227,103.5	0.0	386,215.5	3,600.0	92,581.2
Department of Homeland Security	28,011.8	20,492.3	7,519.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	24,394.1	23,103.6	150.0	0.0	720.3	0.0	228.3	0.0	191.9
Department of Transportation	16,617.3	235.7	2,242.1	0.0	3,565.2	0.0	27.0	0.0	10,547.4
Environmental Protection Agency	3,701.7	0.0	1,576.3	0.0	2,125.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	160,069.4	3,436.5	111,443.3	0.0	34,646.7	0.0	947.7	9,516.1	79.1
National Science Foundation	401,564.5	54.0	15,614.2	0.0	371,053.1	0.0	12,416.6	0.0	2,426.6
North Carolina	2,417,439.8	317,219.1	357,888.5	0.0	1,540,021.5	0.0	185,759.1	0.0	16,551.6
Department of Agriculture	62,398.4	13,524.6	38.8	0.0	48,282.9	0.0	30.3	0.0	521.9
Department of Commerce	16,094.1	4,853.0	5,798.4	0.0	5,442.7	0.0	0.0	0.0	0.0
Department of Defense, research	96,660.5	3,817.5	17,869.2	0.0	54,567.6	0.0	20,406.1	0.0	0.0
Department of Defense, total experimental development ^b	151,574.6	13,978.6	131,439.9	0.0	5,616.4	0.0	100.0	0.0	439.7
Department of Energy	46,336.5	0.0	12,487.6	0.0	33,723.0	0.0	0.0	0.0	125.9
Department of Health and Human Services	1,743,122.5	177,645.2	165,319.6	0.0	1,232,028.7	0.0	163,951.5	0.0	4,177.6

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	6,072.3	447.0	5,625.3	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	9,323.0	6,410.6	76.3	0.0	2,212.5	0.0	0.0	0.0	623.6
Department of Transportation	17,559.8	0.0	0.0	0.0	6,746.8	0.0	150.0	0.0	10,663.0
Environmental Protection Agency	112,289.3	96,378.3	11,391.9	0.0	4,519.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	9,409.7	164.3	3,174.3	0.0	5,391.7	0.0	679.4	0.0	0.0
National Science Foundation	146,599.1	0.0	4,667.2	0.0	141,490.1	0.0	441.8	0.0	0.0
North Dakota	73,020.1	29,938.6	1,144.5	0.0	40,608.3	0.0	674.5	0.0	654.3
Department of Agriculture	39,377.7	28,814.4	0.0	0.0	10,543.4	0.0	0.0	0.0	20.0
Department of Defense, research	1,484.2	12.3	12.7	0.0	1,459.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,720.4	1,083.7	406.4	0.0	230.4	0.0	0.0	0.0	0.0
Department of Health and Human Services	19,625.5	0.0	0.0	0.0	18,728.8	0.0	674.5	0.0	222.2
Department of the Interior	75.9	27.9	0.0	0.0	48.0	0.0	0.0	0.0	0.0
Department of Transportation	3,528.6	0.0	224.9	0.0	2,998.5	0.0	0.0	0.0	305.1
Environmental Protection Agency	811.7	0.0	0.4	0.0	811.2	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	404.8	0.4	0.0	0.0	297.4	0.0	0.0	0.0	107.0
National Science Foundation	5,991.4	0.0	500.0	0.0	5,491.4	0.0	0.0	0.0	0.0
Ohio	5,188,238.0	2,288,898.1	1,741,143.7	0.0	874,282.5	0.0	255,612.5	0.0	28,301.2
Department of Agriculture	33,439.8	10,809.4	51.7	0.0	22,518.8	0.0	0.0	0.0	60.0
Department of Commerce	2,736.5	0.0	108.4	0.0	2,614.0	0.0	14.0	0.0	0.0
Department of Defense, research	754,338.9	421,697.5	211,699.7	0.0	96,381.4	0.0	24,560.3	0.0	0.0
Department of Defense, total experimental development ^b	3,032,802.9	1,645,365.0	1,364,950.7	0.0	10,331.6	0.0	12,155.6	0.0	0.0
Department of Energy	65,733.6	0.0	31,482.0	0.0	34,251.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	873,454.0	19,317.0	19,058.5	0.0	602,515.9	0.0	215,188.4	0.0	17,374.2

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	1,067.9	200.0	867.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	5,484.7	4,456.3	6.5	0.0	300.3	0.0	588.6	0.0	133.0
Department of Transportation	36,189.7	22.1	23,949.0	0.0	1,195.3	0.0	289.3	0.0	10,734.0
Environmental Protection Agency	62,285.9	49,194.7	12,880.1	0.0	211.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	221,648.3	137,836.0	70,896.8	0.0	12,417.0	0.0	498.5	0.0	0.0
National Science Foundation	99,055.7	0.0	5,192.5	0.0	91,545.6	0.0	2,317.7	0.0	0.0
Oklahoma	505,865.6	215,412.4	59,289.8	0.0	200,204.9	0.0	26,934.2	0.0	4,024.4
Department of Agriculture	25,631.8	13,283.1	0.0	0.0	12,298.9	0.0	0.0	0.0	49.9
Department of Commerce	61,205.9	37,497.9	0.0	0.0	23,707.9	0.0	0.0	0.0	0.0
Department of Defense, research	19,967.8	894.4	6,673.4	0.0	12,399.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	134,678.9	93,332.8	40,524.3	0.0	821.8	0.0	0.0	0.0	0.0
Department of Energy	18,063.5	0.0	402.9	0.0	17,408.9	0.0	0.0	0.0	251.7
Department of Health and Human Services	106,910.1	0.0	1,859.5	0.0	77,895.5	0.0	25,796.1	0.0	1,359.1
Department of Homeland Security	5,610.0	0.0	5,610.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	55,459.2	53,705.7	271.4	0.0	1,391.0	0.0	0.0	0.0	91.1
Department of Transportation	16,009.8	10,195.1	2,161.3	0.0	1,380.8	0.0	0.0	0.0	2,272.6
Environmental Protection Agency	6,542.3	6,342.7	2.8	0.0	196.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	27,408.3	160.6	829.4	0.0	26,337.0	0.0	81.2	0.0	0.0
National Science Foundation	28,378.1	0.0	954.8	0.0	26,366.3	0.0	1,057.0	0.0	0.0
Oregon	696,901.8	71,695.4	129,331.5	0.0	466,607.5	0.0	20,525.0	0.0	8,742.4
Department of Agriculture	62,878.4	48,203.9	61.1	0.0	13,577.4	0.0	958.0	0.0	77.9
Department of Commerce	7,221.2	0.0	38.7	0.0	7,136.5	0.0	0.0	0.0	46.0
Department of Defense, research	47,620.4	400.1	37,761.5	0.0	9,458.8	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 2019

(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	51,061.1	1,051.3	46,878.6	0.0	3,131.2	0.0	0.0	0.0	0.0
Department of Energy	24,964.2	5.4	9,644.8	0.0	15,267.0	0.0	0.0	0.0	46.9
Department of Health and Human Services	384,574.7	0.0	26,589.2	0.0	338,010.7	0.0	18,432.1	0.0	1,542.7
Department of the Interior	17,992.6	12,441.5	55.0	0.0	2,081.5	0.0	0.0	0.0	3,414.7
Department of Transportation	6,153.6	0.0	20.3	0.0	2,967.1	0.0	16.7	0.0	3,149.5
Environmental Protection Agency	14,582.4	9,591.4	357.9	0.0	4,633.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	11,582.0	1.7	4,737.1	0.0	6,843.2	0.0	0.0	0.0	0.0
National Science Foundation	68,271.1	0.0	3,187.3	0.0	63,501.0	0.0	1,118.2	0.0	464.7
Pennsylvania	4,092,542.5	380,776.6	714,711.8	459,365.0	2,128,287.0	35,178.0	365,667.8	0.0	8,556.3
Department of Agriculture	79,527.6	48,626.2	78.9	0.0	29,742.9	0.0	989.6	0.0	90.0
Department of Commerce	4,561.0	0.0	15.0	0.0	4,535.0	0.0	11.0	0.0	0.0
Department of Defense, research	213,346.9	11,531.7	29,679.5	0.0	159,288.3	10,890.0	1,957.4	0.0	0.0
Department of Defense, total experimental development ^b	943,783.1	286,497.7	496,560.4	0.0	134,588.5	24,038.0	2,098.5	0.0	0.0
Department of Energy	535,981.3	4,363.3	22,069.8	459,365.0	50,029.3	0.0	153.8	0.0	0.0
Department of Health and Human Services	1,923,654.9	22,387.8	89,795.7	0.0	1,456,667.9	0.0	354,274.3	0.0	529.2
Department of Homeland Security	5,620.5	0.0	4,776.1	0.0	594.4	250.0	0.0	0.0	0.0
Department of the Interior	4,010.4	3,282.7	187.0	0.0	323.4	0.0	0.0	0.0	217.4
Department of Transportation	26,215.5	29.7	6,202.8	0.0	11,399.1	0.0	864.2	0.0	7,719.8
Environmental Protection Agency	3,416.4	0.0	443.1	0.0	2,973.2	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	86,507.9	4,057.5	57,819.0	0.0	24,631.4	0.0	0.0	0.0	0.0
National Science Foundation	265,916.8	0.0	7,084.4	0.0	253,513.5	0.0	5,318.9	0.0	0.0
Rhode Island	722,584.7	270,394.8	139,358.9	0.0	213,156.5	0.0	93,923.8	0.0	5,750.6
Department of Agriculture	2,749.3	26.0	0.6	0.0	2,611.6	0.0	111.1	0.0	0.0
Department of Commerce	6,290.8	0.0	0.0	0.0	6,081.8	0.0	209.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	46,711.1	21,609.1	2,492.5	0.0	21,871.8	0.0	737.7	0.0	0.0
Department of Defense, total experimental development ^b	368,791.6	237,929.4	125,801.3	0.0	5,060.8	0.0	0.0	0.0	0.0
Department of Energy	7,309.4	0.0	4,187.4	0.0	2,846.9	0.0	275.0	0.0	0.0
Department of Health and Human Services	222,078.3	0.0	3,731.1	0.0	124,656.1	0.0	89,831.6	0.0	3,859.5
Department of Homeland Security	2.7	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	2,671.7	0.0	2,063.0	0.0	0.0	0.0	0.0	0.0	608.7
Department of Transportation	1,532.5	0.0	0.0	0.0	250.0	0.0	0.0	0.0	1,282.5
Environmental Protection Agency	10,885.9	10,829.0	0.0	0.0	56.9	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,197.0	1.2	839.3	0.0	2,260.9	0.0	95.5	0.0	0.0
National Science Foundation	50,364.4	0.0	241.0	0.0	47,459.7	0.0	2,663.7	0.0	0.0
South Carolina	645,951.1	94,934.0	179,107.1	34,681.1	262,199.9	0.0	67,308.7	0.0	7,720.3
Department of Agriculture	25,697.8	14,830.9	0.0	0.0	9,866.9	0.0	1,000.0	0.0	0.0
Department of Commerce	17,569.5	12,811.7	130.5	0.0	3,044.2	0.0	1,013.9	0.0	569.2
Department of Defense, research	29,238.2	10,342.4	3,486.1	729.0	7,934.0	0.0	6,746.7	0.0	0.0
Department of Defense, total experimental development ^b	268,589.6	54,136.0	151,687.7	5,625.4	554.7	0.0	56,585.7	0.0	0.0
Department of Energy	40,445.9	0.0	1,972.0	27,171.4	11,169.2	0.0	0.0	0.0	133.3
Department of Health and Human Services	207,579.9	0.0	13,742.5	0.0	188,429.9	0.0	1,872.2	0.0	3,535.3
Department of Homeland Security	6,230.3	327.6	4,737.0	1,155.3	10.5	0.0	0.0	0.0	0.0
Department of the Interior	3,941.8	2,484.5	580.3	0.0	509.4	0.0	0.0	0.0	367.6
Department of Transportation	5,587.6	0.0	2,255.7	0.0	217.0	0.0	0.0	0.0	3,114.9
Environmental Protection Agency	796.2	0.0	10.1	0.0	786.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	4,444.3	1.0	280.2	0.0	4,163.1	0.0	0.0	0.0	0.0
National Science Foundation	35,830.0	0.0	225.0	0.0	35,514.7	0.0	90.2	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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
South Dakota	88,897.7	15,668.9	19,702.3	0.0	28,840.9	0.0	18,304.0	0.0	6,381.5
Department of Agriculture	10,622.3	2,878.0	0.0	0.0	7,723.1	0.0	0.0	0.0	21.2
Department of Defense, research	5,595.2	9.2	5,233.5	0.0	352.5	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	7,263.9	30.2	7,225.8	0.0	7.9	0.0	0.0	0.0	0.0
Department of Energy	2,902.3	0.0	1,396.2	0.0	306.1	0.0	0.0	0.0	1,200.0
Department of Health and Human Services	26,304.1	0.0	2,031.8	0.0	8,155.1	0.0	14,475.7	0.0	1,641.5
Department of Homeland Security	1,437.1	0.0	1,437.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,211.7	553.8	3.0	0.0	655.0	0.0	0.0	0.0	0.0
Department of Transportation	3,518.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,518.8
National Aeronautics and Space Administration	14,757.8	12,197.8	2,149.8	0.0	410.2	0.0	0.0	0.0	0.0
National Science Foundation	15,284.5	0.0	225.0	0.0	11,231.2	0.0	3,828.4	0.0	0.0
Tennessee	3,578,413.6	1,002,594.3	740,069.1	1,600.1	317,158.5	0.0	445,344.6	1,066,175.1	5,471.9
Department of Agriculture	33,807.1	14,770.9	1.5	0.0	18,626.3	0.0	1.8	0.0	406.6
Department of Commerce	157.2	0.0	49.2	0.0	75.0	0.0	0.0	0.0	33.0
Department of Defense, research	67,025.6	22,974.5	2,997.4	0.0	23,386.2	0.0	11,196.6	6,470.9	0.0
Department of Defense, total experimental development ^b	550,727.9	204,936.7	339,491.9	0.0	2,346.2	0.0	475.3	3,477.8	0.0
Department of Energy	1,545,496.5	85,485.0	326,345.8	1,600.1	32,621.9	0.0	46,070.0	1,053,373.7	0.0
Department of Health and Human Services	572,730.3	171.0	12,720.9	0.0	173,342.5	0.0	385,482.2	340.8	673.0
Department of Homeland Security	4,789.0	0.0	860.0	0.0	2,016.1	0.0	0.0	1,912.9	0.0
Department of the Interior	7,330.0	6,303.5	0.0	0.0	778.7	0.0	0.0	99.0	148.8
Department of Transportation	8,828.3	2,800.0	945.3	0.0	372.5	0.0	0.0	500.0	4,210.5
Environmental Protection Agency	25,429.4	0.0	22,642.5	0.0	2,786.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	701,788.1	664,449.0	31,834.0	0.0	5,505.1	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 2019

(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	60,304.3	703.7	2,180.7	0.0	55,301.2	0.0	2,118.7	0.0	0.0
Texas	5,067,493.3	888,777.4	2,159,499.9	0.0	1,863,276.3	0.0	148,302.5	4,737.6	2,899.5
Department of Agriculture	94,685.8	40,252.6	54.9	0.0	49,310.4	0.0	5,067.9	0.0	0.0
Department of Commerce	8,003.9	0.0	741.5	0.0	7,236.6	0.0	0.0	0.0	25.9
Department of Defense, research	183,625.4	13,446.2	52,944.4	0.0	108,139.0	0.0	9,085.3	10.6	0.0
Department of Defense, total experimental development ^b	1,679,548.5	68,644.0	1,548,753.8	0.0	48,561.3	0.0	9,575.2	4,014.1	0.1
Department of Energy	78,331.3	0.0	22,969.5	0.0	51,701.8	0.0	3,412.1	0.0	248.0
Department of Health and Human Services	1,322,533.3	0.0	41,692.2	0.0	1,228,027.2	0.0	51,442.1	0.0	1,371.8
Department of Homeland Security	17,446.9	0.0	13,061.0	0.0	4,385.9	0.0	0.0	0.0	0.0
Department of the Interior	9,765.8	5,305.1	3,198.1	0.0	1,070.8	0.0	168.0	0.0	23.8
Department of Transportation	9,857.3	100.0	2,185.5	0.0	6,758.3	0.0	0.0	713.0	100.5
Environmental Protection Agency	4,862.6	0.0	2,402.8	0.0	2,459.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,336,483.8	761,029.6	461,415.6	0.0	48,819.4	0.0	65,188.7	0.0	30.6
National Science Foundation	322,348.5	0.0	10,080.6	0.0	306,805.8	0.0	4,363.3	0.0	1,098.8
Utah	1,301,136.4	172,150.0	600,103.8	0.0	519,871.4	0.0	2,970.9	0.0	6,040.4
Department of Agriculture	31,231.1	24,590.5	0.0	0.0	6,640.6	0.0	0.0	0.0	0.0
Department of Commerce	440.4	0.0	0.0	0.0	440.4	0.0	0.0	0.0	0.0
Department of Defense, research	25,629.2	1,699.5	2,418.8	0.0	21,081.0	0.0	429.9	0.0	0.0
Department of Defense, total experimental development ^b	453,009.1	143,863.3	284,310.8	0.0	24,236.2	0.0	598.8	0.0	0.0
Department of Energy	208,409.5	64.8	10,891.3	0.0	197,453.3	0.0	0.0	0.0	0.0
Department of Health and Human Services	224,372.8	0.0	14,622.0	0.0	207,497.7	0.0	1,942.2	0.0	311.0
Department of Homeland Security	586.8	0.0	0.0	0.0	586.8	0.0	0.0	0.0	0.0
Department of the Interior	4,650.0	1,915.5	0.0	0.0	271.0	0.0	0.0	0.0	2,463.6
Department of Transportation	3,481.1	15.4	50.0	0.0	150.0	0.0	0.0	0.0	3,265.8

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	449.9	0.0	449.9	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	297,976.1	1.1	284,761.6	0.0	13,213.4	0.0	0.0	0.0	0.0
National Science Foundation	50,900.4	0.0	2,599.4	0.0	48,301.0	0.0	0.0	0.0	0.0
Vermont	119,948.0	8,264.9	30,866.8	0.0	77,544.0	0.0	250.0	0.0	3,022.4
Department of Agriculture	16,168.8	3,056.4	0.0	0.0	13,112.5	0.0	0.0	0.0	0.0
Department of Commerce	1,239.7	0.0	0.0	0.0	1,239.7	0.0	0.0	0.0	0.0
Department of Defense, research	1,134.8	0.0	672.9	0.0	461.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	25,520.3	819.3	24,687.8	0.0	13.1	0.0	0.0	0.0	0.0
Department of Energy	4,415.3	0.0	2,039.6	0.0	2,375.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	59,259.4	0.0	2,178.5	0.0	55,119.1	0.0	0.0	0.0	1,961.8
Department of Homeland Security	1,048.2	391.7	656.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	4,426.0	3,997.5	0.0	0.0	250.0	0.0	0.0	0.0	178.5
Department of Transportation	972.1	0.0	0.0	0.0	90.0	0.0	0.0	0.0	882.1
National Aeronautics and Space Administration	676.5	0.1	631.4	0.0	45.0	0.0	0.0	0.0	0.0
National Science Foundation	5,087.0	0.0	0.0	0.0	4,837.0	0.0	250.0	0.0	0.0
Virginia	8,028,901.8	2,250,870.4	4,501,403.8	0.0	601,130.0	131,515.1	121,443.3	408,772.9	13,766.3
Department of Agriculture	26,390.2	1,555.6	2,892.0	0.0	17,712.5	0.0	4,230.1	0.0	0.0
Department of Commerce	8,440.8	256.0	1,182.4	0.0	6,552.4	0.0	0.0	450.0	0.0
Department of Defense, research	926,078.8	213,881.4	584,531.7	0.0	84,535.2	0.0	11,821.4	31,309.2	0.0
Department of Defense, total experimental development ^b	5,116,616.0	1,698,128.1	3,106,123.7	0.0	24,536.6	0.0	30,795.0	257,007.0	25.6
Department of Energy	225,616.5	9,122.3	58,716.5	0.0	25,053.3	131,515.1	1,209.3	0.0	0.0
Department of Health and Human Services	505,375.2	689.6	153,971.8	0.0	299,622.4	0.0	33,071.6	12,837.6	5,182.3
Department of Homeland Security	170,212.4	9,103.9	133,711.0	0.0	4,253.0	0.0	0.0	23,144.6	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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 the Interior	93,025.8	91,317.5	843.3	0.0	509.9	0.0	0.0	0.0	355.1
Department of Transportation	236,250.5	7,600.9	111,419.3	0.0	14,122.5	0.0	15,619.9	79,284.6	8,203.3
Environmental Protection Agency	27,426.6	0.0	27,190.8	0.0	235.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	566,367.2	219,058.7	317,036.3	0.0	14,091.7	0.0	16,180.6	0.0	0.0
National Science Foundation	127,101.8	156.5	3,785.0	0.0	109,904.8	0.0	8,515.5	4,740.0	0.0
Washington	3,195,255.2	357,337.4	1,029,251.1	0.0	841,535.2	0.0	536,123.9	407,666.9	23,340.7
Department of Agriculture	58,065.9	34,427.0	90.7	0.0	23,238.4	0.0	262.8	0.0	47.1
Department of Commerce	71,544.0	52,110.1	0.0	0.0	19,024.9	0.0	25.0	296.8	87.1
Department of Defense, research	101,763.3	4,986.2	14,549.8	0.0	54,104.4	0.0	5,541.9	22,580.9	0.0
Department of Defense, total experimental development ^b	1,116,842.0	231,040.9	873,101.8	0.0	7,107.5	0.0	292.1	5,299.7	0.0
Department of Energy	441,158.5	5,187.8	40,071.2	0.0	32,272.5	0.0	2,507.3	359,645.4	1,474.3
Department of Health and Human Services	1,155,393.7	5,041.7	37,883.8	0.0	558,515.0	0.0	522,205.2	15,459.5	16,288.6
Department of Homeland Security	3,355.3	0.0	19.9	0.0	0.0	0.0	0.0	3,335.5	0.0
Department of the Interior	25,786.9	19,658.4	0.0	0.0	5,761.9	0.0	41.7	0.0	324.9
Department of Transportation	11,617.8	0.0	214.4	0.0	5,829.2	0.0	0.0	1,049.2	4,525.0
Environmental Protection Agency	3,739.9	0.0	151.7	0.0	3,588.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	77,732.9	4,635.4	54,629.4	0.0	16,148.5	0.0	2,319.7	0.0	0.0
National Science Foundation	128,255.0	250.0	8,538.4	0.0	115,944.6	0.0	2,928.2	0.0	593.9
West Virginia	141,895.2	46,898.7	24,609.3	0.0	50,315.0	0.0	12,410.3	0.0	7,662.0
Department of Agriculture	31,423.9	21,942.9	1.5	0.0	9,440.1	0.0	0.0	0.0	39.5
Department of Commerce	167.6	0.0	0.0	0.0	167.6	0.0	0.0	0.0	0.0
Department of Defense, research	2,884.8	52.2	97.3	0.0	2,532.6	0.0	202.7	0.0	0.0
Department of Defense, total experimental development ^b	2,984.4	75.9	2,017.0	0.0	641.5	0.0	250.0	0.0	0.0
Department of Energy	25,161.5	280.0	18,516.8	0.0	2,459.4	0.0	3,842.3	0.0	62.9

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(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	61,631.8	24,056.8	2,365.7	0.0	32,712.0	0.0	0.0	0.0	2,497.3
Department of Homeland Security	679.1	0.0	679.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	369.3	260.2	0.0	0.0	0.0	0.0	0.0	0.0	109.1
Department of Transportation	1,641.4	0.0	641.9	0.0	206.9	0.0	1.0	0.0	791.5
National Aeronautics and Space Administration	2,158.7	230.7	290.0	0.0	1,638.0	0.0	0.0	0.0	0.0
National Science Foundation	12,792.7	0.0	0.0	0.0	516.8	0.0	8,114.2	0.0	4,161.6
Wisconsin	839,542.6	54,827.2	96,258.0	0.0	644,517.1	0.0	39,519.7	0.0	4,420.6
Department of Agriculture	71,513.8	41,353.6	13.1	0.0	29,534.4	0.0	581.9	0.0	30.8
Department of Commerce	4,476.1	0.0	392.6	0.0	4,083.5	0.0	0.0	0.0	0.0
Department of Defense, research	31,006.7	250.0	10,909.6	0.0	19,838.6	0.0	8.5	0.0	0.0
Department of Defense, total experimental development ^b	55,779.4	2.1	55,259.6	0.0	516.0	0.0	1.7	0.0	0.0
Department of Energy	66,657.7	0.0	8,356.2	0.0	58,301.6	0.0	0.0	0.0	0.0
Department of Health and Human Services	473,342.2	0.0	14,991.1	0.0	419,287.4	0.0	38,766.5	0.0	297.1
Department of Homeland Security	348.8	0.0	0.0	0.0	348.8	0.0	0.0	0.0	0.0
Department of the Interior	15,137.5	13,074.7	0.0	0.0	1,712.4	0.0	0.0	0.0	350.4
Department of Transportation	5,234.9	0.0	960.0	0.0	532.5	0.0	0.0	0.0	3,742.4
Environmental Protection Agency	33.3	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	14,151.9	146.8	1,547.4	0.0	12,457.7	0.0	0.0	0.0	0.0
National Science Foundation	101,860.2	0.0	3,828.3	0.0	97,870.9	0.0	161.0	0.0	0.0
Wyoming	67,645.9	24,654.8	6,178.2	0.0	33,551.1	0.0	150.0	0.0	3,111.8
Department of Agriculture	3,031.6	66.1	0.0	0.0	2,815.5	0.0	150.0	0.0	0.0
Department of Commerce	864.7	0.0	0.0	0.0	864.7	0.0	0.0	0.0	0.0
Department of Defense, research	893.5	0.0	1.1	0.0	892.5	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 2019

(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	2,173.3	11.7	2,112.7	0.0	48.8	0.0	0.0	0.0	0.0
Department of Energy	2,876.9	0.0	1,326.9	0.0	1,550.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	11,429.4	0.0	740.0	0.0	10,526.7	0.0	0.0	0.0	162.6
Department of the Interior	25,994.0	24,577.0	0.0	0.0	145.1	0.0	0.0	0.0	1,272.0
Department of Transportation	1,798.8	0.0	121.6	0.0	0.0	0.0	0.0	0.0	1,677.2
National Aeronautics and Space Administration	1,282.4	0.0	875.0	0.0	407.4	0.0	0.0	0.0	0.0
National Science Foundation	17,301.4	0.0	1,000.9	0.0	16,300.4	0.0	0.0	0.0	0.0
Outlying areas	520,697.2	376,479.9	5,705.9	0.0	82,136.2	0.0	1,425.7	0.0	54,949.6
Department of Agriculture	16,566.7	4,854.8	0.0	0.0	11,711.9	0.0	0.0	0.0	0.0
Department of Commerce	1,963.8	0.0	0.0	0.0	1,963.8	0.0	0.0	0.0	0.0
Department of Defense, research	1,657.8	204.0	5.0	0.0	1,448.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	368,819.9	368,723.8	73.2	0.0	22.9	0.0	0.0	0.0	0.0
Department of Energy	1,936.6	123.5	1,813.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	103,814.2	2,086.1	373.1	0.0	50,344.2	0.0	1,061.1	0.0	49,949.6
Department of the Interior	5,404.1	404.1	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
Department of Transportation	1,719.1	83.5	1,598.6	0.0	37.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	565.0	0.0	0.0	0.0	565.0	0.0	0.0	0.0	0.0
National Science Foundation	18,250.1	0.0	1,843.0	0.0	16,042.5	0.0	364.6	0.0	0.0
Puerto Rico	81,769.7	5,601.3	2,288.4	0.0	70,994.3	0.0	520.5	0.0	2,365.2
Department of Agriculture	9,794.0	4,854.8	0.0	0.0	4,939.2	0.0	0.0	0.0	0.0
Department of Commerce	1,547.5	0.0	0.0	0.0	1,547.5	0.0	0.0	0.0	0.0
Department of Defense, research	1,657.8	204.0	5.0	0.0	1,448.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	105.1	14.9	67.2	0.0	22.9	0.0	0.0	0.0	0.0
Department of Energy	123.5	123.5	0.0	0.0	0.0	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 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						State, local governments
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	
Department of Health and Human Services	51,190.8	0.0	373.1	0.0	48,296.6	0.0	155.9	0.0	2,365.2
Department of the Interior	404.1	404.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	565.0	0.0	0.0	0.0	565.0	0.0	0.0	0.0	0.0
National Science Foundation	16,381.8	0.0	1,843.0	0.0	14,174.2	0.0	364.6	0.0	0.0
Other areas ^c	438,927.5	370,878.6	3,417.5	0.0	11,141.9	0.0	905.2	0.0	52,584.4
Department of Agriculture	6,772.7	0.0	0.0	0.0	6,772.7	0.0	0.0	0.0	0.0
Department of Commerce	416.3	0.0	0.0	0.0	416.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	368,714.9	368,708.9	5.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of Energy	1,813.0	0.0	1,813.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	52,623.4	2,086.1	0.0	0.0	2,047.7	0.0	905.2	0.0	47,584.4
Department of the Interior	5,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
Department of Transportation	1,719.1	83.5	1,598.6	0.0	37.0	0.0	0.0	0.0	0.0
National Science Foundation	1,868.3	0.0	0.0	0.0	1,868.3	0.0	0.0	0.0	0.0
Offices abroad ^d	4,335.6	620.8	3,304.1	0.0	344.0	0.0	0.6	0.0	66.2
Department of Agriculture	373.2	319.7	52.8	0.0	0.1	0.0	0.6	0.0	0.0
Department of Commerce	66.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.2
Department of Defense, total experimental development ^b	3,736.3	141.1	3,251.3	0.0	343.9	0.0	0.0	0.0	0.0
National Science Foundation	160.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Undistributed ^e	3,073,110.3	1,325,952.1	1,663,866.4	0.0	60,414.2	0.0	22,877.5	0.0	0.0
Department of Defense, research	881,859.1	549,761.6	331,274.2	0.0	823.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,455,073.2	776,190.5	677,407.3	0.0	1,475.4	0.0	0.0	0.0	0.0
Department of Health and Human Services	736,178.0	0.0	655,184.9	0.0	58,115.6	0.0	22,877.5	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, and HHS 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 2019. 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. 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 2019–20.