



National Center for Science and
Engineering Statistics

Survey of State Government Research and Development: FY 2020

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General Notes

These tables present the results of the FY 2020 Survey of State Government Research and Development, conducted by the Census Bureau under an interagency agreement with the National Center for Science and Engineering Statistics within the National Science Foundation. The Census Bureau employed a methodology similar to one they use to collect data from state and local governments on other censuses and surveys.

The survey was distributed to departments, agencies, commissions, public authorities, and other state-run entities within the 50 states, the District of Columbia, and Puerto Rico that were considered likely to conduct or fund R&D activities. (The District of Columbia and Puerto Rico are referred to as states and treated as state equivalents throughout this report.) Respondents that did not have a qualifying R&D activity were not required to complete the questionnaire beyond a screening question. All 50 states and the District of Columbia participated in the survey. Puerto Rico did not participate this year. Respondents were asked to provide statistics on their total R&D expenditures and amounts for intramural and extramural performers; the amount of intramural R&D devoted to basic research, applied research, and experimental development activities by federal and nonfederal funds; the amount for which the federal government was an original source of funds for both intramural and extramural R&D and from which federal agency the funding came; and the amount of money allocated to particular government functions. An additional question was asked about the amount of expenditures for the construction and acquisition of R&D facilities and major equipment. Additional questions were asked about the number of employees (researchers, technicians, and support staff) and full-time equivalent personnel for intramural R&D.

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State agency expenditures for R&D and R&D plant: FY 2020

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TABLE 1

State government expenditures for R&D and R&D plant, by state: FY 2020

(Dollars)

State	State R&D expenditures ^a	State R&D plant expenditures ^b
United States ^c	2,444,981,212	9,786,932
Alabama	25,695,555	0
Alaska	15,193,507	0
Arizona	16,010,502	0
Arkansas	19,921,168	0
California	533,900,597	0
Colorado	34,365,638	0
Connecticut	58,810,853	0
Delaware	3,598,156	0
District of Columbia	5,860,668	0
Florida	184,600,202	5,209,705
Georgia	15,877,238	0
Hawaii	11,122,545	0
Idaho	21,882,976	5,000
Illinois	16,055,917	0
Indiana	9,591,408	0
Iowa	12,348,062	0
Kansas	13,152,904	0
Kentucky	26,782,125	0
Louisiana	32,360,516	150,000
Maine	29,035,990	0
Maryland	33,407,022	0
Massachusetts	31,700,411	0
Michigan	11,191,816	0
Minnesota	20,511,698	0
Mississippi	10,268,396	0
Missouri	14,826,364	0
Montana	13,131,022	0
Nebraska	32,423,818	0
Nevada	4,764,898	0
New Hampshire	8,221,518	0
New Jersey	23,754,925	0
New Mexico	5,227,599	0
New York	453,807,331	640,000
North Carolina	35,892,185	1,000,000
North Dakota	18,065,251	0
Ohio	76,169,661	0
Oklahoma	30,050,338	243,500
Oregon	30,486,113	700,000
Pennsylvania	103,098,941	0
Rhode Island	4,594,040	46,478
South Carolina	46,800,816	450
South Dakota	2,913,274	0
Tennessee	7,039,923	0
Texas	205,206,977	0
Utah	9,205,399	4,900
Vermont	1,669,900	0
Virginia	35,552,565	1,190,001
Washington	57,239,095	596,898
West Virginia	10,862,315	0

TABLE 1

State government expenditures for R&D and R&D plant, by state: FY 2020

(Dollars)

State	State R&D expenditures ^a	State R&D plant expenditures ^b
Wisconsin	14,340,014	0
Wyoming	6,391,060	0

^a State R&D expenditures do not include R&D plant.

^b State R&D plant expenditures include acquisition of land, facilities, major equipment, and major building renovations intended primarily for R&D use.

^c U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 2

State government expenditures for R&D and R&D plant, by state and performer: FY 2020

(Dollars)

State	All R&D expenditures ^a	Intramural performers ^b	Extramural performers ^c				R&D plant
			Total	Academic institutions	Companies and individuals ^d	Other ^e	
United States ^f	2,444,981,212	692,719,374	1,752,261,838	951,571,893	459,984,365	340,705,580	9,786,932
Alabama	25,695,555	13,704,571	11,990,984	4,956,721	13,600	7,020,663	0
Alaska	15,193,507	10,745,451	4,448,056	1,340,349	3,107,707	0	0
Arizona	16,010,502	1,562,435	14,448,067	7,224,814	813,783	6,409,470	0
Arkansas	19,921,168	189,018	19,732,150	19,328,641	398,009	5,500	0
California	533,900,597	81,087,677	452,812,920	143,835,743	209,309,516	99,667,661	0
Colorado	34,365,638	12,047,699	22,317,939	8,619,433	12,006,033	1,692,473	0
Connecticut	58,810,853	25,868,030	32,942,823	7,272,360	24,070,158	1,600,305	0
Delaware	3,598,156	2,312,965	1,285,191	859,673	374,718	50,800	0
District of Columbia	5,860,668	2,510,818	3,349,850	1,015,794	2,134,056	200,000	0
Florida	184,600,202	52,430,371	132,169,831	72,664,126	3,549,778	55,955,927	5,209,705
Georgia	15,877,238	2,648,196	13,229,042	5,813,168	3,887,493	3,528,381	0
Hawaii	11,122,545	6,531,042	4,591,503	1,238,450	3,263,143	89,910	0
Idaho	21,882,976	7,967,885	13,915,091	9,416,047	283,302	4,215,742	5,000
Illinois	16,055,917	626,262	15,429,655	10,844,423	254,784	4,330,448	0
Indiana	9,591,408	92,268	9,499,140	8,505,448	100,000	893,692	0
Iowa	12,348,062	3,430,444	8,917,618	8,383,653	519,554	14,411	0
Kansas	13,152,904	999,734	12,153,170	10,382,216	0	1,770,954	0
Kentucky	26,782,125	1,752,643	25,029,482	23,155,605	1,636,871	237,006	0
Louisiana	32,360,516	11,101,353	21,259,163	18,797,267	2,249,822	212,074	150,000
Maine	29,035,990	4,038,999	24,996,991	693,082	15,476,463	8,827,446	0
Maryland	33,407,022	659,436	32,747,586	29,720,355	2,000,399	1,026,832	0
Massachusetts	31,700,411	9,681,990	22,018,421	12,797,171	7,736,552	1,484,698	0
Michigan	11,191,816	527,096	10,664,720	5,687,599	1,125,114	3,852,007	0
Minnesota	20,511,698	2,583,398	17,928,300	11,890,847	3,160,956	2,876,497	0
Mississippi	10,268,396	1,236,050	9,032,346	4,803,101	832,974	3,396,271	0
Missouri	14,826,364	8,112,983	6,713,381	5,121,461	1,331,474	260,446	0
Montana	13,131,022	6,104,413	7,026,609	5,798,378	300,381	927,850	0
Nebraska	32,423,818	2,342,783	30,081,035	27,924,739	1,287,704	868,592	0
Nevada	4,764,898	188,146	4,576,752	3,484,810	163,044	928,898	0
New Hampshire	8,221,518	49,309	8,172,209	604,163	7,042,440	525,606	0
New Jersey	23,754,925	2,624,342	21,130,583	18,717,366	1,393,217	1,020,000	0
New Mexico	5,227,599	2,594,660	2,632,939	1,891,660	741,279	0	0
New York	453,807,331	278,751,443	175,055,888	136,921,163	14,666,556	23,468,169	640,000
North Carolina	35,892,185	17,813,294	18,078,891	16,274,791	591,263	1,212,837	1,000,000
North Dakota	18,065,251	346,342	17,718,909	9,635,162	7,041,396	1,042,351	0
Ohio	76,169,661	2,005,523	74,164,138	13,019,832	59,204,085	1,940,221	0
Oklahoma	30,050,338	2,015,986	28,034,352	23,164,214	4,725,430	144,708	243,500
Oregon	30,486,113	15,852,036	14,634,077	8,242,868	5,432,004	959,205	700,000
Pennsylvania	103,098,941	7,874,722	95,224,219	49,572,795	10,787,775	34,863,649	0
Rhode Island	4,594,040	3,098,833	1,495,207	453,781	765,104	276,322	46,478
South Carolina	46,800,816	27,894,342	18,906,474	3,882,230	415,414	14,608,830	450
South Dakota	2,913,274	327,346	2,585,928	1,701,100	599,828	285,000	0
Tennessee	7,039,923	1,607,509	5,432,414	4,574,469	203,125	654,820	0
Texas	205,206,977	3,165,023	202,041,954	142,333,450	29,339,059	30,369,445	0
Utah	9,205,399	6,070,743	3,134,656	2,334,907	799,749	0	4,900
Vermont	1,669,900	633,399	1,036,501	658,425	286,478	91,598	0

TABLE 2

State government expenditures for R&D and R&D plant, by state and performer: FY 2020

(Dollars)

State	All R&D expenditures ^a	Intramural performers ^b	Extramural performers ^c				R&D plant
			Total	Academic institutions	Companies and individuals ^d	Other ^e	
Virginia	35,552,565	12,627,565	22,925,000	16,656,350	3,646,989	2,621,661	1,190,001
Washington	57,239,095	23,415,061	33,824,034	18,119,799	3,934,366	11,769,869	596,898
West Virginia	10,862,315	3,317,637	7,544,678	7,465,577	77,744	1,357	0
Wisconsin	14,340,014	4,674,607	9,665,407	2,868,505	4,440,854	2,356,048	0
Wyoming	6,391,060	2,875,496	3,515,564	903,812	2,462,822	148,930	0

^a State R&D expenditures do not include R&D plant.

^b Intramural performers include a department's or agency's own employees who perform R&D and services performed by others in support of an internal R&D project.

^c Extramural performers are those outside the department or agency who perform R&D.

^d Companies and individuals include individuals under contract for research projects.

^e Other includes federal government; nonprofit organizations; city, county, regional, or other local governments; and other state governments.

^f U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 3

State government expenditures for R&D, by state: FYs 2006–20

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^a	1,059,104,585	1,161,477,543	NA	1,616,483,243	1,756,297,891	1,990,338,324	2,042,260,292	2,028,219,263	1,905,585,762	2,265,232,945	2,314,376,833	2,467,761,297	2,530,723,104	2,412,042,977	2,444,981,212
Alabama	7,269,319	9,065,725	NA	12,929,167	15,113,917	19,684,063	17,352,984	13,292,741	18,532,534	24,486,963	24,798,503	25,768,709	21,652,816	19,763,230	25,695,555
Alaska	10,019,060	9,526,100	NA	7,741,467	9,274,800	11,349,400	5,467,944	6,689,384	12,031,675	11,258,203	10,072,650	9,198,095	10,811,808	12,502,109	15,193,507
Arizona	37,151,471	20,442,635	NA	9,363,943	17,682,315	18,626,577	22,809,895	27,810,970	18,820,149	14,942,124	15,679,948	14,008,740	12,937,292	17,332,044	16,010,502
Arkansas	4,869,648	7,658,199	NA	11,465,214	14,446,084	14,705,327	15,518,374	16,518,947	14,994,903	16,642,711	17,242,823	15,891,579	16,325,049	21,098,863	19,921,168
California	145,880,736	120,641,324	NA	299,929,949	328,982,383	407,616,001	401,522,758	346,942,036	356,158,885	568,971,595	547,188,835	485,647,081	633,060,621	526,918,585	533,900,597
Colorado	8,997,236	11,924,981	NA	14,849,581	20,828,274	18,141,931	14,928,809	14,471,683	15,745,589	16,321,056	16,647,592	25,575,648	30,640,420	36,586,577	34,365,638
Connecticut	19,209,064	29,285,710	NA	28,559,052	40,065,786	39,192,091	40,017,523	41,023,368	47,405,244	55,816,528	49,460,236	55,586,487	54,492,430	57,241,037	58,810,853
Delaware	2,812,102	2,611,108	NA	1,683,562	2,389,720	2,609,902	4,635,720	4,729,141	2,243,868	2,199,635	2,694,787	3,267,034	3,856,775	3,826,318	3,598,156
District of Columbia	1,173,076	2,009,000	NA	487,411	696,198	1,221,108	2,018,447	1,848,800	3,136,271	3,216,073	4,059,615	3,724,444	4,632,564	4,222,412	5,860,668
Florida	42,329,624	51,968,573	NA	66,513,756	120,848,726	150,764,438	136,706,540	118,781,266	157,004,903	191,598,669	156,057,854	201,901,742	186,499,418	170,508,724	184,600,202
Georgia	10,620,188	4,886,946	NA	6,662,887	8,923,795	11,690,663	12,820,412	12,697,846	11,776,221	10,052,848	13,093,428	14,043,200	18,120,602	18,875,484	15,877,238
Hawaii	12,067,849	22,643,330	NA	13,976,364	14,233,186	13,103,983	11,145,520	13,094,794	13,125,455	11,520,961	18,032,316	11,414,756	12,981,754	7,325,591	11,122,545
Idaho	2,280,873	2,739,006	NA	8,552,058	9,059,568	9,366,052	11,785,529	12,929,174	12,862,935	12,935,976	14,501,235	15,029,122	15,690,791	17,828,263	21,882,976
Illinois	37,184,281	28,372,676	NA	9,570,893	16,553,689	17,207,125	17,859,438	17,999,229	24,988,306	30,817,406	19,774,448	18,582,210	17,501,801	17,548,556	16,055,917
Indiana	6,220,575	40,534,381	NA	47,549,928	8,444,832	6,983,364	7,667,988	10,167,120	23,590,723	9,987,058	13,279,466	16,966,067	19,814,418	12,357,151	9,591,408
Iowa	13,564,062	6,790,053	NA	37,976,643	12,950,176	36,992,222	16,147,249	19,365,308	10,357,010	11,277,534	12,296,647	9,343,267	9,710,381	9,386,675	12,348,062
Kansas	14,348,384	11,752,696	NA	12,305,385	6,509,225	6,635,626	6,160,680	5,708,223	5,326,455	6,462,317	7,385,081	10,358,152	14,274,887	12,355,458	13,152,904
Kentucky	17,558,997	11,960,634	NA	13,938,134	20,410,096	20,498,849	19,886,257	19,751,055	14,556,867	25,794,534	30,660,613	30,443,216	22,452,966	26,668,173	26,782,125
Louisiana	11,216,568	6,587,314	NA	8,285,478	9,165,144	14,979,079	18,143,396	15,713,110	18,778,159	32,175,199	27,268,166	41,455,247	37,057,152	35,142,225	32,360,516
Maine	17,509,051	27,525,552	NA	6,400,019	8,847,471	9,918,765	7,094,736	6,109,793	6,857,948	12,609,815	11,429,706	22,652,044	15,991,134	32,592,625	29,035,990
Maryland	24,945,119	40,298,691	NA	21,093,331	22,825,402	20,084,540	21,890,225	29,467,445	29,981,260	24,852,978	26,447,700	29,520,356	30,959,732	29,107,768	33,407,022
Massachusetts	10,729,419	5,600,189	NA	3,290,198	4,884,430	4,878,927	3,918,500	4,590,424	18,259,928	22,664,539	23,432,991	27,737,023	23,000,903	31,965,439	31,700,411
Michigan	75,016,589	32,849,159	NA	8,630,209	9,469,440	9,802,873	12,557,954	12,830,423	12,252,555	12,675,635	17,120,981	16,946,986	7,689,982	8,023,318	11,191,816
Minnesota	6,219,201	10,529,048	NA	16,655,913	12,212,546	11,653,327	11,524,686	14,855,954	19,378,825	21,455,746	22,861,457	18,344,346	18,502,324	20,150,907	20,511,698
Mississippi	2,744,882	7,343,892	NA	3,623,953	7,168,109	7,420,851	6,260,080	4,863,312	1,313,376	780,616	2,339,335	4,269,574	9,205,489	12,170,278	10,268,396
Missouri	18,465,303	15,567,277	NA	15,797,247	13,329,841	13,658,961	13,041,450	13,051,110	15,065,613	16,673,693	14,750,488	15,064,354	16,341,267	15,055,845	14,826,364
Montana	8,606,319	8,200,230	NA	7,200,442	7,543,860	6,474,190	6,841,897	6,570,018	10,428,010	10,362,726	17,990,469	18,230,275	8,867,208	8,794,140	13,131,022
Nebraska	5,602,163	4,043,480	NA	19,415,644	19,232,691	19,561,651	22,167,304	23,274,333	23,421,771	22,475,420	25,143,505	22,608,157	26,564,385	28,167,688	32,423,818
Nevada	1,397,463	1,748,776	NA	1,510,607	1,081,407	1,440,630	1,166,762	1,640,871	3,438,157	3,107,166	5,716,452	10,996,862	7,283,496	7,871,899	4,764,898
New Hampshire	2,040,544	1,685,178	NA	1,860,269	1,804,156	1,921,421	2,241,149	1,788,396	1,448,090	1,607,080	1,520,798	1,924,282	8,269,040	8,432,696	8,221,518
New Jersey	25,900,482	19,981,741	NA	25,146,838	38,639,539	27,868,781	29,818,258	34,413,516	30,384,821	33,756,028	30,483,309	37,415,121	51,295,009	23,886,758	23,754,925
New Mexico	3,105,000	672,921	NA	1,655,529	1,422,955	1,821,583	1,793,561	2,015,961	4,175,116	4,084,876	4,772,978	4,474,459	3,360,115	3,585,944	5,227,599
New York	103,597,135	128,361,166	NA	375,422,634	391,259,392	405,346,642	382,226,391	382,143,207	377,015,244	370,585,484	404,833,101	434,294,353	450,161,190	448,501,735	453,807,331
North Carolina	14,344,310	37,607,109	NA	41,404,202	27,342,380	29,611,785	32,529,885	30,649,974	22,614,350	34,502,384	37,142,044	32,513,098	33,719,142	32,754,090	35,892,185

TABLE 3

State government expenditures for R&D, by state: FYs 2006–20

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	21,062,090	9,908,722	NA	16,415,807	6,352,675	8,072,257	6,034,991	7,364,184	10,784,572	9,611,936	8,470,309	14,851,522	16,108,458	12,140,358	18,065,251
Ohio	55,068,629	114,086,509	NA	121,394,963	125,120,668	159,322,228	153,382,845	188,311,926	94,882,275	94,299,294	99,329,386	108,542,077	93,189,867	80,148,377	76,169,661
Oklahoma	8,922,036	10,731,050	NA	15,930,878	21,226,236	20,304,740	23,133,843	28,224,758	30,473,702	29,952,934	33,460,991	33,512,333	26,848,844	29,607,888	30,050,338
Oregon	7,382,722	7,389,914	NA	11,120,140	18,013,730	20,001,272	22,003,035	23,083,506	29,679,288	31,990,073	24,831,090	30,549,080	31,254,046	44,222,659	30,486,113
Pennsylvania	117,320,158	103,973,448	NA	95,896,714	87,913,796	75,491,812	80,600,099	66,429,400	35,432,244	75,024,127	73,188,503	92,505,396	101,610,656	85,050,999	103,098,941
Rhode Island	150,000	1,771,949	NA	1,877,724	1,461,239	1,947,727	2,028,402	1,640,778	3,225,472	2,594,978	3,372,460	3,791,008	3,364,527	5,512,380	4,594,040
South Carolina	22,427,746	31,969,826	NA	28,599,885	71,290,446	84,692,653	72,467,293	47,732,177	22,311,739	27,419,285	30,512,353	34,686,268	34,291,703	46,983,243	46,800,816
South Dakota	5,791,586	5,473,603	NA	4,430,602	3,762,637	3,629,155	3,447,633	3,660,854	5,067,005	4,211,838	4,511,516	3,665,413	4,137,189	2,953,214	2,913,274
Tennessee	5,355,000	4,549,998	NA	3,752,587	1,064,262	3,642,490	4,293,334	3,430,476	4,363,565	3,828,567	7,040,422	9,433,779	9,231,710	7,439,395	7,039,923
Texas	28,019,645	29,650,947	NA	49,381,346	35,163,655	47,372,367	146,989,380	185,199,541	162,287,552	185,094,332	255,132,755	294,485,067	228,578,310	233,030,466	205,206,977
Utah	3,214,170	2,752,228	NA	26,442,711	30,812,205	34,418,764	47,388,335	53,636,842	36,466,790	38,168,197	31,465,580	32,673,333	27,593,284	7,985,508	9,205,399
Vermont	1,680,533	1,529,805	NA	738,707	1,665,079	1,711,673	1,653,315	1,827,562	2,039,520	2,199,082	1,041,249	1,140,267	1,841,754	2,730,591	1,669,900
Virginia	11,579,623	15,486,526	NA	22,662,519	28,961,491	29,376,417	33,295,328	36,017,935	38,439,643	43,645,755	33,556,333	29,624,941	30,596,207	29,951,353	35,552,565
Washington	22,834,218	23,333,431	NA	16,284,702	38,073,580	45,498,369	49,553,326	47,122,876	40,357,249	38,002,018	35,183,195	42,969,819	37,093,288	51,963,060	57,239,095
West Virginia	6,024,577	22,179,830	NA	10,357,006	23,867,732	35,475,338	33,580,156	19,027,684	11,216,042	10,840,665	8,233,431	11,193,344	10,492,922	11,068,061	10,862,315
Wisconsin	10,949,155	13,774,600	NA	24,942,415	12,435,548	21,128,936	17,861,390	21,212,446	14,643,835	14,517,671	13,442,158	13,300,449	15,879,688	17,473,890	14,340,014
Wyoming	6,326,604	19,500,357	NA	4,806,630	5,471,379	5,419,398	6,879,286	6,497,386	6,444,053	5,160,617	5,425,545	5,641,115	4,886,290	5,232,930	6,391,060
Puerto Rico ^b	1,458,790	2,326,241	NA	9,316,754	4,031,391	4,217,869	7,625,412	7,949,965	6,569,500	5,673,544	na	na	na	na	na

na = not applicable; did not report to survey. NA = not available; survey was not conducted for FY 2008.

^a U.S. total reflects all 50 states and the District of Columbia.

^b Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

Note(s):

State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 4

State government expenditures for R&D for all performers, by state and source of funds: FY 2020

(Dollars)

State	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
United States ^b	2,444,981,212	607,788,664	1,837,192,548
Alabama	25,695,555	6,774,915	18,920,640
Alaska	15,193,507	6,143,917	9,049,590
Arizona	16,010,502	3,766,942	12,243,560
Arkansas	19,921,168	4,966,349	14,954,819
California	533,900,597	22,657,670	511,242,927
Colorado	34,365,638	6,659,704	27,705,934
Connecticut	58,810,853	15,873,807	42,937,046
Delaware	3,598,156	1,476,864	2,121,292
District of Columbia	5,860,668	2,560,026	3,300,642
Florida	184,600,202	30,382,990	154,217,212
Georgia	15,877,238	14,101,354	1,775,884
Hawaii	11,122,545	7,330,911	3,791,634
Idaho	21,882,976	12,620,448	9,262,528
Illinois	16,055,917	7,641,755	8,414,162
Indiana	9,591,408	7,126,764	2,464,644
Iowa	12,348,062	7,734,114	4,613,948
Kansas	13,152,904	6,612,890	6,540,014
Kentucky	26,782,125	6,273,543	20,508,582
Louisiana	32,360,516	19,451,587	12,908,929
Maine	29,035,990	4,162,595	24,873,395
Maryland	33,407,022	4,016,621	29,390,401
Massachusetts	31,700,411	11,397,894	20,302,517
Michigan	11,191,816	7,184,297	4,007,519
Minnesota	20,511,698	6,272,311	14,239,387
Mississippi	10,268,396	8,768,392	1,500,004
Missouri	14,826,364	5,750,412	9,075,952
Montana	13,131,022	6,777,890	6,353,132
Nebraska	32,423,818	6,818,177	25,605,641
Nevada	4,764,898	1,606,707	3,158,191
New Hampshire	8,221,518	639,820	7,581,698
New Jersey	23,754,925	3,299,908	20,455,017
New Mexico	5,227,599	4,238,566	989,033
New York	453,807,331	173,176,058	280,631,273
North Carolina	35,892,185	9,125,937	26,766,248
North Dakota	18,065,251	4,025,187	14,040,064
Ohio	76,169,661	8,463,693	67,705,968
Oklahoma	30,050,338	7,922,136	22,128,202
Oregon	30,486,113	11,978,580	18,507,533
Pennsylvania	103,098,941	19,656,077	83,442,864
Rhode Island	4,594,040	1,918,239	2,675,801
South Carolina	46,800,816	30,291,219	16,509,597
South Dakota	2,913,274	752,592	2,160,682
Tennessee	7,039,923	4,792,328	2,247,595
Texas	205,206,977	23,192,709	182,014,268
Utah	9,205,399	1,721,014	7,484,385
Vermont	1,669,900	1,119,199	550,701
Virginia	35,552,565	14,998,852	20,553,713
Washington	57,239,095	14,747,139	42,491,956

TABLE 4

State government expenditures for R&D for all performers, by state and source of funds: FY 2020

(Dollars)

State	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
West Virginia	10,862,315	6,903,375	3,958,940
Wisconsin	14,340,014	8,358,684	5,981,330
Wyoming	6,391,060	3,555,506	2,835,554

^a State and all others include companies; nonprofit organizations; other state governments; and city, county, regional, or other local governments.

^b U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 5

State government expenditures for R&D for intramural performers, by state and source of funds: FY 2020

(Dollars)

State	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
United States ^a	692,719,374	297,266,219	344,489,185	8,539,006	14,464,456	24,437,440	3,523,068
Alabama	13,704,571	2,080,826	11,217,850	143,552	75,472	770	186,101
Alaska	10,745,451	3,001,085	5,608,966	2,135,400	0	0	0
Arizona	1,562,435	948,582	596,621	0	14,232	0	3,000
Arkansas	189,018	55,137	133,881	0	0	0	0
California	81,087,677	5,573,168	74,760,962	728,547	0	0	25,000
Colorado	12,047,699	3,720,497	8,256,689	69,999	0	514	0
Connecticut	25,868,030	10,960,026	14,908,004	0	0	0	0
Delaware	2,312,965	515,084	1,777,081	0	20,800	0	0
District of Columbia	2,510,818	1,151,218	1,328,100	0	31,500	0	0
Florida	52,430,371	14,172,701	32,435,980	2,837	214,843	5,192,342	411,668
Georgia	2,648,196	2,549,282	98,914	0	0	0	0
Hawaii	6,531,042	5,876,055	654,987	0	0	0	0
Idaho	7,967,885	6,773,965	1,123,739	0	0	70,181	0
Illinois	626,262	0	626,262	0	0	0	0
Indiana	92,268	69,814	17,454	5,000	0	0	0
Iowa	3,430,444	1,447,181	1,951,954	31,309	0	0	0
Kansas	999,734	753,195	246,539	0	0	0	0
Kentucky	1,752,643	1,073,088	679,555	0	0	0	0
Louisiana	11,101,353	8,193,096	2,908,257	0	0	0	0
Maine	4,038,999	2,853,740	1,166,343	0	0	18,916	0
Maryland	659,436	180,086	344,167	0	55,183	80,000	0
Massachusetts	9,681,990	6,242,507	3,439,483	0	0	0	0
Michigan	527,096	0	527,096	0	0	0	0
Minnesota	2,583,398	947,024	1,636,374	0	0	0	0
Mississippi	1,236,050	765,127	409,288	61,635	0	0	0
Missouri	8,112,983	3,249,228	4,863,755	0	0	0	0
Montana	6,104,413	2,567,184	556,128	0	2,981,101	0	0
Nebraska	2,342,783	1,614,866	727,917	0	0	0	0
Nevada	188,146	128,146	60,000	0	0	0	0
New Hampshire	49,309	39,447	9,862	0	0	0	0
New Jersey	2,624,342	437,738	2,186,604	0	0	0	0
New Mexico	2,594,660	1,864,128	627,532	0	103,000	0	0
New York	278,751,443	143,087,081	101,573,996	1,668,591	10,928,665	18,691,286	2,801,824
North Carolina	17,813,294	1,369,902	16,443,392	0	0	0	0
North Dakota	346,342	156,288	190,054	0	0	0	0
Ohio	2,005,523	1,305,632	699,891	0	0	0	0
Oklahoma	2,015,986	1,373,253	622,733	20,000	0	0	0
Oregon	15,852,036	9,822,576	5,531,176	498,284	0	0	0
Pennsylvania	7,874,722	4,771,022	2,939,149	163,303	1,248	0	0
Rhode Island	3,098,833	1,620,109	1,478,724	0	0	0	0
South Carolina	27,894,342	19,807,012	7,975,155	0	16,700	0	95,475
South Dakota	327,346	176,221	151,125	0	0	0	0
Tennessee	1,607,509	960,341	636,455	0	10,713	0	0
Texas	3,165,023	1,622,752	1,542,271	0	0	0	0
Utah	6,070,743	213,721	5,857,022	0	0	0	0

TABLE 5

State government expenditures for R&D for intramural performers, by state and source of funds: FY 2020

(Dollars)

State	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Vermont	633,399	587,080	46,319	0	0	0	0
Virginia	12,627,565	4,840,559	7,727,006	0	0	60,000	0
Washington	23,415,061	8,746,207	11,579,724	3,004,700	10,999	73,431	0
West Virginia	3,317,637	1,617,169	1,695,869	4,599	0	0	0
Wisconsin	4,674,607	3,629,052	1,045,555	0	0	0	0
Wyoming	2,875,496	1,757,021	867,225	1,250	0	250,000	0

^a U.S. total reflects all 50 states and the District of Columbia.

Note(s):

Intramural performers include a department's or agency's own employees who perform R&D and services performed by others in support of an internal R&D project.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 6

State government expenditures for R&D by intramural performers, by state: FYs 2006–20

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^a	278,804,902	337,554,442	NA	544,768,301	666,474,213	715,619,606	671,902,599	657,514,410	582,262,610	585,025,545	604,530,902	636,036,132	628,288,241	657,808,336	692,719,374
Alabama	4,339,426	5,786,160	NA	9,138,896	9,749,394	14,250,319	8,612,718	9,160,769	4,589,652	6,167,637	11,438,924	13,806,194	11,465,666	7,412,961	13,704,571
Alaska	5,356,472	7,541,700	NA	6,387,016	7,885,200	9,004,800	5,346,296	5,963,195	9,399,991	9,464,543	7,791,729	6,608,776	7,376,047	8,920,501	10,745,451
Arizona	8,576,436	6,833,220	NA	6,869,506	7,545,171	7,410,362	13,303,829	16,141,770	8,953,596	8,268,168	5,938,520	3,742,746	1,618,025	761,096	1,562,435
Arkansas	1,073,285	420,340	NA	467,767	5,406,407	6,077,854	3,006,648	2,992,079	708,544	660,969	576,503	747,577	202,770	66,099	189,018
California	35,104,016	29,987,603	NA	48,407,683	59,744,655	69,864,773	59,490,293	57,262,060	53,984,295	55,223,244	68,155,837	77,743,824	78,250,013	73,081,146	81,087,677
Colorado	6,594,969	7,004,927	NA	9,395,554	7,108,498	6,942,978	8,170,313	8,248,707	8,178,672	8,467,517	7,733,398	9,193,948	9,119,788	11,900,858	12,047,699
Connecticut	14,519,731	13,979,139	NA	12,571,612	22,561,170	23,573,706	24,039,989	25,612,853	20,533,902	21,885,609	20,919,179	21,181,282	22,502,799	24,679,641	25,868,030
Delaware	1,207,011	2,011,600	NA	1,021,115	1,968,736	2,049,018	2,181,693	2,514,545	1,888,698	1,709,791	1,671,853	1,867,003	2,532,597	2,558,634	2,312,965
District of Columbia	302,000	2,009,000	NA	0	189,691	220,886	354,612	435,813	1,444,007	1,541,038	1,379,944	1,525,542	2,021,912	1,888,642	2,510,818
Florida	10,013,516	9,073,670	NA	10,356,355	50,546,200	48,327,623	48,910,954	47,372,831	44,017,593	45,015,557	44,254,939	44,546,892	51,598,115	50,604,692	52,430,371
Georgia	861,231	60,551	NA	3,500,000	3,200,000	3,600,000	4,145,859	2,041,101	1,766,014	1,709,229	2,303,714	2,608,350	2,345,600	3,539,835	2,648,196
Hawaii	2,329,186	7,617,547	NA	3,268,044	3,049,593	3,667,047	4,267,994	4,320,992	1,038,877	1,659,573	2,412,169	1,406,938	213,163	257,625	6,531,042
Idaho	257,926	1,127,217	NA	4,397,225	4,616,645	4,430,450	7,179,818	7,836,031	6,783,779	6,469,463	6,576,466	6,591,001	6,172,889	6,709,727	7,967,885
Illinois	17,617,332	18,022,400	NA	1,304,428	1,948,263	2,049,697	1,618,580	1,663,080	1,678,403	1,550,890	1,251,225	1,251,225	1,171,225	1,171,225	626,262
Indiana	2,364,046	36,349,207	NA	941,982	975,000	975,000	870,605	1,022,370	675,629	657,583	619,999	809,062	243,160	167,703	92,268
Iowa	5,754,032	363,153	NA	953,909	625,480	1,260,999	4,376,976	5,603,029	3,884,026	3,696,335	3,796,688	3,590,701	2,897,292	3,279,267	3,430,444
Kansas	2,137,741	1,636,784	NA	1,598,127	1,448,133	1,501,433	1,484,948	1,577,722	1,427,786	1,333,800	2,817,975	2,210,187	2,089,000	998,463	999,734
Kentucky	3,702,849	998,840	NA	6,241,919	1,635,906	2,137,354	2,893,270	2,962,965	454,669	734,444	1,547,014	4,414,627	2,135,186	2,038,186	1,752,643
Louisiana	7,530,897	4,259,147	NA	5,014,571	6,523,169	7,493,894	4,884,739	5,081,221	8,785,247	9,325,390	12,536,416	10,944,624	13,442,234	10,974,134	11,101,353
Maine	0	330,000	NA	1,566,832	1,542,846	1,883,123	1,071,798	1,154,177	2,048,918	2,911,504	2,970,210	2,999,641	2,802,497	3,051,263	4,038,999
Maryland	6,086,183	16,726,066	NA	5,683,023	1,962,000	1,928,700	513,661	572,247	906,472	846,300	327,732	1,077,744	2,744,392	989,368	659,436
Massachusetts	3,623,773	922,416	NA	831,202	862,331	785,738	917,177	1,083,202	10,934,792	11,254,392	12,613,509	9,071,354	8,362,815	8,798,238	9,681,990
Michigan	1,527,314	1,373,780	NA	1,800,696	1,688,930	1,509,097	2,277,811	2,651,063	626,768	702,187	1,249,998	1,287,328	0	336,227	527,096
Minnesota	2,132,277	2,904,128	NA	1,974,655	1,507,582	1,509,585	1,471,472	1,007,122	2,284,757	2,828,032	2,195,086	1,481,345	672,674	2,027,757	2,583,398
Mississippi	1,484,612	5,728,190	NA	2,884,940	3,933,046	4,028,133	1,890,566	2,094,537	510,446	252,513	190,826	1,192,864	1,791,073	1,755,759	1,236,050
Missouri	12,171,794	9,815,796	NA	9,289,817	8,065,733	7,546,964	7,274,626	6,696,607	6,922,875	7,284,056	7,900,361	7,593,953	7,809,676	8,242,424	8,112,983
Montana	2,404,391	1,007,000	NA	1,304,712	1,604,601	1,694,519	1,669,440	2,035,229	2,238,501	2,273,458	2,675,607	3,759,869	2,684,109	2,993,604	6,104,413
Nebraska	436,000	291,000	NA	125,000	327,845	320,392	303,472	368,009	769,135	534,852	465,732	373,809	6,000	17,116	2,342,783
Nevada	323,042	581,534	NA	342,744	295,579	364,476	376,301	366,804	9,927	3,893	5,000	3,950	140,823	184,774	188,146
New Hampshire	424,762	167,708	NA	1,018,069	502,616	591,869	760,392	683,882	84,253	82,781	367,680	460,000	151,247	131,672	49,309
New Jersey	5,483,784	5,093,922	NA	4,278,027	3,407,529	2,980,802	2,952,996	2,920,843	1,814,000	1,864,000	1,703,700	1,800,400	1,691,900	2,796,233	2,624,342
New Mexico	3,000,000	576,921	NA	535,531	560,955	494,193	671,314	768,893	2,462,904	2,539,877	1,390,991	860,774	1,240,504	900,212	2,594,660
New York	42,047,823	31,635,352	NA	266,188,075	311,702,575	318,563,367	277,561,513	267,002,282	259,604,368	243,064,412	237,318,047	246,099,969	240,591,998	276,773,893	278,751,443
North Carolina	3,789,289	27,479,434	NA	31,451,251	18,843,326	19,478,718	20,437,242	20,501,169	14,636,872	14,929,283	17,853,240	19,865,183	19,372,111	18,400,435	17,813,294

TABLE 6

State government expenditures for R&D by intramural performers, by state: FYs 2006–20

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	762,297	500,943	NA	568,135	591,770	366,294	530,023	429,670	1,373,563	1,189,828	588,458	1,784,624	1,827,872	421,989	346,342
Ohio	1,515,058	283,131	NA	3,883,347	1,754,417	2,645,393	2,246,092	2,040,795	965,440	864,161	2,096,469	2,741,052	1,247,811	733,326	2,005,523
Oklahoma	83,333	252,516	NA	2,709,663	9,250	9,850	1,057,822	1,074,816	370,925	350,570	2,394,381	6,079,694	935,686	1,685,458	2,015,986
Oregon	3,318,194	2,851,734	NA	5,768,545	14,368,928	17,063,005	18,162,372	19,524,508	15,547,309	18,022,139	10,187,622	15,646,484	16,333,562	24,761,784	15,852,036
Pennsylvania	3,310,731	4,020,292	NA	2,992,367	5,052,858	5,826,832	5,632,495	6,675,458	7,012,137	7,387,261	6,451,626	9,100,618	7,237,397	8,579,205	7,874,722
Rhode Island	0	134,200	NA	67,000	53,547	80,000	20,000	225,050	389,829	281,200	175,000	6,000	1,638,664	2,767,111	3,098,833
South Carolina	15,780,585	26,968,153	NA	24,161,908	42,554,948	52,973,299	49,917,998	37,004,464	17,374,915	22,351,601	24,854,389	25,708,598	28,354,328	28,876,294	27,894,342
South Dakota	2,318,754	3,070,095	NA	424,407	722,906	652,055	60,976	114,425	220,000	240,000	432,788	437,052	330,492	361,072	327,346
Tennessee	704,000	595,010	NA	0	0	52,129	762,313	784,848	563,092	531,871	2,731,571	2,773,520	2,321,833	1,710,689	1,607,509
Texas	5,870,258	5,496,761	NA	4,763,897	2,813,346	9,823,374	12,375,067	11,746,259	2,673,588	2,745,383	4,289,841	4,135,685	3,201,472	3,855,855	3,165,023
Utah	964,170	1,333,630	NA	10,715,649	10,150,322	10,361,727	17,654,475	17,979,931	17,924,476	18,192,260	18,167,666	18,418,869	18,236,912	5,046,202	6,070,743
Vermont	848,787	847,350	NA	738,707	1,442,023	1,543,503	1,074,198	1,160,193	534,520	555,772	368,636	250,257	560,842	681,380	633,399
Virginia	5,045,794	7,577,630	NA	8,242,184	6,744,260	6,567,645	8,766,523	13,046,471	10,486,612	14,607,108	13,596,149	12,312,670	12,931,846	10,733,680	12,627,565
Washington	12,187,408	12,103,757	NA	8,136,939	10,916,316	11,745,788	12,875,297	12,820,150	9,824,415	10,470,091	14,446,035	14,515,938	15,395,106	19,986,935	23,415,061
West Virginia	1,767,688	2,414,915	NA	2,555,126	7,094,173	8,130,744	4,965,278	4,764,417	2,837,135	1,893,045	2,455,891	1,723,204	2,641,834	2,867,846	3,317,637
Wisconsin	5,534,273	4,766,000	NA	5,329,091	5,060,717	6,126,083	6,896,219	7,402,664	6,279,098	6,547,800	5,783,316	4,862,108	5,270,830	5,043,609	4,674,607
Wyoming	4,216,426	4,622,873	NA	2,601,053	3,609,627	3,134,016	3,615,536	3,001,092	1,837,188	1,883,135	2,560,853	2,821,077	2,362,454	1,286,491	2,875,496
Puerto Rico ^b	1,274,358	328,664	NA	8,352,468	2,300,000	2,500,000	6,360,716	6,084,344	5,193,888	4,454,166	na	na	na	na	na

na = not applicable; did not report to survey. NA = not available; survey was not conducted for FY 2008.

^a U.S. total reflects all 50 states and the District of Columbia.^b Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

Intramural performers include a department's or agency's own employees who perform R&D and services performed by others in support of an internal R&D project. State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 7

State government expenditures for intramural R&D, by state and type of work: FY 2020

(Dollars)

State	All intramural R&D expenditures	Type of R&D		
		Basic research	Applied research	Experimental development
United States ^a	692,719,374	129,980,219	523,350,299	39,388,856
Alabama	13,704,571	6,917,365	4,521,539	2,265,667
Alaska	10,745,451	0	8,965,863	1,779,588
Arizona	1,562,435	559,621	1,002,814	0
Arkansas	189,018	0	189,018	0
California	81,087,677	1,190,016	76,831,195	3,066,466
Colorado	12,047,699	40,031	11,985,142	22,526
Connecticut	25,868,030	9,630,799	16,077,202	160,029
Delaware	2,312,965	0	2,312,965	0
District of Columbia	2,510,818	1,101,993	1,294,542	114,283
Florida	52,430,371	156,535	50,104,778	2,169,058
Georgia	2,648,196	0	2,648,196	0
Hawaii	6,531,042	0	534,418	5,996,624
Idaho	7,967,885	0	7,967,885	0
Illinois	626,262	0	125,252	501,010
Indiana	92,268	0	92,268	0
Iowa	3,430,444	0	3,414,444	16,000
Kansas	999,734	5,491	994,243	0
Kentucky	1,752,643	0	1,752,643	0
Louisiana	11,101,353	5,798,837	5,302,516	0
Maine	4,038,999	565,473	2,373,325	1,100,201
Maryland	659,436	0	514,436	145,000
Massachusetts	9,681,990	8,528,000	448,990	705,000
Michigan	527,096	483,306	43,790	0
Minnesota	2,583,398	0	2,583,398	0
Mississippi	1,236,050	3,071	928,689	304,290
Missouri	8,112,983	0	8,112,983	0
Montana	6,104,413	0	6,104,413	0
Nebraska	2,342,783	0	2,342,783	0
Nevada	188,146	0	188,146	0
New Hampshire	49,309	0	2,980	46,329
New Jersey	2,624,342	305,895	1,976,647	341,800
New Mexico	2,594,660	0	2,594,660	0
New York	278,751,443	77,424,622	195,614,455	5,712,366
North Carolina	17,813,294	1,690,939	14,944,211	1,178,144
North Dakota	346,342	223,743	122,599	0
Ohio	2,005,523	639,655	1,365,868	0
Oklahoma	2,015,986	485,626	1,000,662	529,698
Oregon	15,852,036	3,292,490	7,913,179	4,646,367
Pennsylvania	7,874,722	0	7,810,927	63,795
Rhode Island	3,098,833	0	3,098,833	0
South Carolina	27,894,342	1,417,642	25,739,230	737,470
South Dakota	327,346	6,500	314,346	6,500
Tennessee	1,607,509	19,256	1,459,061	129,192
Texas	3,165,023	340,900	2,824,123	0
Utah	6,070,743	4,850	6,065,893	0
Vermont	633,399	56,096	375,193	202,110
Virginia	12,627,565	948,802	11,004,412	674,351
Washington	23,415,061	6,451,845	10,390,589	6,572,627

TABLE 7

State government expenditures for intramural R&D, by state and type of work: FY 2020

(Dollars)

State	All intramural R&D expenditures	Type of R&D		
		Basic research	Applied research	Experimental development
West Virginia	3,317,637	0	3,115,272	202,365
Wisconsin	4,674,607	0	4,674,607	0
Wyoming	2,875,496	1,690,820	1,184,676	0

^a U.S. total reflects all 50 states and the District of Columbia.**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 8

State R&D expenditures, by state and function of R&D: FY 2020

(Dollars)

State	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
United States ^b	2,444,981,212	142,105,027	390,826,851	448,510,450	1,027,756,537	279,442,920	156,339,427
Alabama	25,695,555	0	117,181	5,930,160	2,000,000	3,601,526	14,046,688
Alaska	15,193,507	0	500,000	8,878,600	474,542	5,340,365	0
Arizona	16,010,502	1,041,995	0	1,849,760	11,085,857	1,473,269	559,621
Arkansas	19,921,168	12,606,385	502,762	2,455,409	2,813,075	690,108	853,429
California	533,900,597	7,116,436	256,532,543	46,017,594	171,494,281	41,248,806	11,490,937
Colorado	34,365,638	1,037,559	3,347,250	11,609,704	8,061,107	3,268,633	7,041,385
Connecticut	58,810,853	3,856,987	4,083,058	11,473,607	29,124,362	2,734,495	7,538,344
Delaware	3,598,156	0	20,800	2,241,188	0	1,336,168	0
District of Columbia	5,860,668	0	520,000	2,920,000	1,929,090	239,295	252,283
Florida	184,600,202	21,100,902	784,693	56,851,522	92,452,504	13,322,175	88,406
Georgia	15,877,238	255,642	5,825,649	1,164,256	0	8,599,878	31,813
Hawaii	11,122,545	1,977,000	6,466,637	385,278	0	487,500	1,806,130
Idaho	21,882,976	7,279,087	0	10,831,981	212,000	3,317,794	242,114
Illinois	16,055,917	3,140,385	0	0	399,924	9,710,698	2,804,910
Indiana	9,591,408	100,000	95,000	141,764	0	8,734,644	520,000
Iowa	12,348,062	60,000	0	4,170,756	0	7,228,882	888,424
Kansas	13,152,904	3,675,354	0	4,840,882	0	3,637,912	998,756
Kentucky	26,782,125	540,182	150,000	2,258,368	15,023,579	7,158,996	1,651,000
Louisiana	32,360,516	636,415	2,613,811	12,455,929	2,800,226	9,200,000	4,654,135
Maine	29,035,990	3,329,336	0	7,070,173	9,463,845	824,000	8,348,636
Maryland	33,407,022	269,157	1,168,566	1,184,063	24,466,432	3,660,436	2,658,368
Massachusetts	31,700,411	0	4,183,011	10,052,872	6,849,528	3,840,000	6,775,000
Michigan	11,191,816	3,316,092	0	1,265,405	0	6,610,319	0
Minnesota	20,511,698	5,526,168	0	3,365,930	0	11,619,600	0
Mississippi	10,268,396	1,213,684	0	4,637,046	0	4,417,666	0
Missouri	14,826,364	911,532	500,000	11,624,124	233,307	1,557,401	0
Montana	13,131,022	3,566,938	0	7,753,095	0	1,810,989	0
Nebraska	32,423,818	2,453,010	0	6,941,251	19,977,610	1,985,947	1,066,000
Nevada	4,764,898	188,146	0	222,553	0	1,298,811	3,055,388
New Hampshire	8,221,518	113,278	0	113,525	0	661,587	7,333,128
New Jersey	23,754,925	0	0	2,206,594	14,879,386	3,125,627	3,543,318
New Mexico	5,227,599	0	169,166	2,147,277	0	2,808,156	103,000
New York	453,807,331	7,919,165	65,977,562	30,312,324	313,857,986	9,463,758	26,276,536
North Carolina	35,892,185	13,961,296	1,500,000	7,263,072	3,810,296	8,877,335	480,186
North Dakota	18,065,251	2,955,514	10,111,495	789,902	349,127	3,635,470	223,743
Ohio	76,169,661	0	11,929,919	50,405,927	2,752,778	6,249,317	4,831,720
Oklahoma	30,050,338	2,158,072	599,094	2,281,991	17,420,143	6,480,977	1,110,061
Oregon	30,486,113	706,521	1,590,000	16,706,262	3,100,000	2,460,479	5,922,851
Pennsylvania	103,098,941	3,877,434	837,000	8,868,958	73,605,865	3,934,697	11,974,987
Rhode Island	4,594,040	45,615	0	3,868,806	139,519	0	540,100
South Carolina	46,800,816	809,303	125,624	27,721,566	15,991,705	1,851,635	300,983
South Dakota	2,913,274	1,526,155	16,021	50,000	0	1,321,098	0
Tennessee	7,039,923	0	106,514	919,243	0	2,650,589	3,363,577
Texas	205,206,977	1,151,413	0	7,456,321	175,905,076	20,694,167	0
Utah	9,205,399	0	500,540	5,558,311	4,850	3,141,698	0
Vermont	1,669,900	0	0	282,511	215,000	1,081,391	90,998
Virginia	35,552,565	2,445,328	179,664	5,985,898	3,829,173	19,782,914	3,329,588

TABLE 8

State R&D expenditures, by state and function of R&D: FY 2020

(Dollars)

State	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Washington	57,239,095	17,505,768	6,731,672	23,572,042	1,260,394	4,890,000	3,279,219
West Virginia	10,862,315	10,000	1,390,229	3,939,496	712,330	2,028,215	2,782,045
Wisconsin	14,340,014	1,060,099	0	5,423,223	1,000,000	4,106,692	2,750,000
Wyoming	6,391,060	661,674	1,651,390	2,043,931	61,640	1,240,805	731,620

^a Other functions include, but are not limited to, corrections, criminal justice, education, forensic science, labor, public safety, and social services.

^b U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 9

State government expenditures for agriculture-related R&D, by state: FYs 2009–20

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^a	66,468,692	75,090,255	77,332,829	96,578,888	97,316,191	105,326,909	102,115,908	112,280,689	117,483,305	131,384,543	136,996,698	142,105,027
Alabama	0	0	0	0	0	0	250,000	0	0	0	0	0
Alaska	15,000	687,500	713,500	99,934	750,856	217,231	217,141	0	0	0	0	0
Arizona	220,751	142,816	732,254	616,827	549,556	944,617	718,324	945,226	887,874	723,371	1,054,913	1,041,995
Arkansas	6,755,483	6,643,460	7,945,440	8,803,765	8,857,097	8,483,250	8,248,838	7,513,291	9,063,778	7,087,642	12,519,460	12,606,385
California	6,235,149	3,091,420	4,057,537	5,640,401	5,039,599	7,470,645	8,225,669	7,475,484	6,695,567	5,834,873	7,705,454	7,116,436
Colorado	416,336	826,517	583,117	0	50,000	316,549	373,735	472,293	773,012	1,047,197	721,768	1,037,559
Connecticut	1,237,590	3,259,642	3,326,548	3,256,124	3,314,695	3,920,767	4,228,545	3,942,658	3,894,241	3,321,534	3,856,987	3,856,987
Delaware	0	0	0	0	0	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0	0	0	0	0	0
Florida	19,410,440	16,952,501	15,991,126	19,671,322	19,046,571	23,026,254	18,529,725	17,066,498	15,855,393	20,043,531	11,725,430	21,100,902
Georgia	0	0	0	0	0	0	0	0	0	0	633,607	255,642
Hawaii	233,394	505,967	914,799	1,516,064	1,516,064	80,000	60,000	2,179,089	1,544,443	3,700,895	1,680,702	1,977,000
Idaho	1,352,291	1,529,838	1,720,839	2,344,664	2,940,842	2,442,070	2,930,637	3,956,230	4,205,334	4,796,891	5,349,416	7,279,087
Illinois	18,096	0	0	0	0	0	139,697	2,839,551	2,975,635	2,975,635	3,989,560	3,140,385
Indiana	0	0	0	177,000	268,000	250,000	250,000	250,000	250,000	350,000	141,876	100,000
Iowa	0	0	0	0	0	0	0	0	0	0	0	60,000
Kansas	784,957	1,104,311	1,167,853	1,013,350	984,198	1,129,199	1,328,784	1,457,957	2,021,302	4,415,012	3,998,895	3,675,354
Kentucky	0	0	45,130	478,313	312,518	250,000	1,287,000	1,407,000	1,454,611	1,469,615	627,270	540,182
Louisiana	0	0	0	0	0	27,333	9,167	2,500	49,066	38,750	270,090	636,415
Maine	501,243	1,152,303	987,050	933,637	373,257	407,500	1,013,206	765,706	1,851,874	4,534,099	7,182,948	3,329,336
Maryland	336,650	228,000	451,700	300,000	384,771	200,000	200,000	245,456	379,919	352,432	357,910	269,157
Massachusetts	0	0	0	0	0	34,227	0	37,631	0	0	50,000	0
Michigan	206,282	36,910	82,793	493,895	548,396	3,190,880	3,150,111	1,279,134	1,444,252	1,437,876	1,246,732	3,316,092
Minnesota	987,608	1,301,382	1,387,590	1,721,463	1,981,417	2,725,197	2,938,310	5,516,597	4,972,707	3,929,309	3,701,150	5,526,168
Mississippi	0	0	0	0	0	84,209	0	49,896	0	1,027,288	599,632	1,213,684
Missouri	168,096	189,947	85,115	349,210	381,475	711,626	830,064	1,008,692	1,045,000	1,315,740	1,153,575	911,532
Montana	1,199,654	1,850,656	1,493,635	2,105,602	1,975,948	4,713,540	4,097,279	3,443,331	3,742,881	3,309,628	3,132,570	3,566,938
Nebraska	1,276,949	927,985	977,548	1,399,997	1,748,254	2,996,054	2,725,502	2,897,352	2,183,807	3,593,971	2,851,678	2,453,010
Nevada	0	0	0	0	0	10,000	0	0	0	140,823	184,774	188,146
New Hampshire	38,005	219,170	113,969	477,066	438,435	98,640	130,904	120,719	72,482	141,692	114,949	113,278
New Jersey	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico	0	0	0	0	0	81,699	88,062	0	0	0	0	0
New York	1,869,720	2,117,582	1,779,089	1,748,998	1,383,413	2,265,729	2,605,432	4,885,323	9,014,755	10,578,603	10,612,279	7,919,165
North Carolina	10,568,425	12,625,716	12,878,500	17,944,847	17,947,847	12,239,391	12,050,000	12,225,000	14,972,009	17,220,343	14,132,932	13,961,296

TABLE 9

State government expenditures for agriculture-related R&D, by state: FYs 2009–20

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	935,619	1,444,526	2,014,848	2,521,725	2,475,547	2,504,192	2,674,205	3,311,263	3,511,678	3,334,741	2,998,472	2,955,514
Ohio	0	0	0	0	0	0	0	200,000	0	0	0	0
Oklahoma	1,610,660	1,295,705	1,608,677	1,862,336	2,500,477	1,708,188	1,811,266	2,340,454	1,719,116	1,713,695	1,058,791	2,158,072
Oregon	134,857	489,631	532,446	218,038	290,595	384,341	372,579	169,212	669,211	740,878	1,638,762	706,521
Pennsylvania	852,734	755,736	640,671	1,512,706	2,033,013	787,000	787,000	1,587,000	1,687,000	1,687,000	3,187,000	3,877,434
Rhode Island	0	0	0	166,820	40,000	0	0	0	43,868	50,000	49,042	45,615
South Carolina	421,699	0	92,305	62,024	157,702	534,646	498,748	354,516	665,133	931,700	1,013,153	809,303
South Dakota	50,000	25,000	0	75,000	75,000	3,219,622	2,928,142	2,777,400	2,029,617	2,285,632	1,690,563	1,526,155
Tennessee	0	0	0	0	0	0	0	0	0	150,000	0	0
Texas	1,972,975	3,618,361	2,877,596	2,758,683	2,650,989	3,557,354	808,544	1,761,471	688,365	1,053,502	1,229,300	1,151,413
Utah	1,000,000	3,589	113,336	4,508,902	3,989,111	1,688,670	2,035,321	1,096,257	1,326,188	435,393	0	0
Vermont	0	490,900	652,700	503,308	538,173	384,878	407,694	50,000	0	0	0	0
Virginia	806,328	2,285,378	2,213,361	1,633,434	1,631,509	730,636	1,120,676	3,142,288	2,679,432	2,560,373	2,765,452	2,445,328
Washington	4,587,406	8,340,489	8,317,099	8,098,988	8,954,794	10,769,035	11,203,711	12,385,554	11,904,380	11,663,031	17,797,227	17,505,768
West Virginia	0	0	151,428	206,137	93,033	0	0	0	0	25,000	25,000	10,000
Wisconsin	0	770,721	536,004	864,399	640,941	616,740	841,890	900,573	928,599	838,651	3,518,097	1,060,099
Wyoming	264,295	176,596	147,226	493,909	452,098	125,000	0	222,087	280,776	528,197	429,282	661,674
Puerto Rico ^b	649,048	0	0	507,174	649,048	550,000	683,157	na	na	na	na	na

na = not applicable; did not report to survey.

^a U.S. total reflects all 50 states and the District of Columbia.^b Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&D expenditures by function were surveyed beginning with the FY 2009 survey. State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 10

State government expenditures for energy-related R&D, by state: FYs 2009–20

(Dollars)

State	2009 ^a	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^b	NA	227,404,238	265,645,943	238,545,588	192,380,008	157,200,057	383,145,992	368,028,147	307,574,426	397,036,953	323,076,738	390,826,851
Alabama	NA	988,806	1,279,672	788,212	509,974	386,692	688,913	134,432	206,926	282,748	255,807	117,181
Alaska	NA	1,359,100	1,301,000	1,438,817	1,799,951	35,860	53,202	1,020,450	1,002,160	2,120,127	1,102,206	500,000
Arizona	NA	267,174	1,702,776	6,243,529	7,630,643	1,547,000	658,000	216,988	0	0	0	0
Arkansas	NA	1,736,657	3,156,213	2,913,191	3,620,296	4,800,000	5,243,216	1,548,704	1,444,227	2,304,745	852,718	502,762
California	NA	105,072,000	95,975,000	75,756,774	55,577,129	52,593,000	263,254,000	251,116,066	184,568,270	243,987,483	202,262,559	256,532,543
Colorado	NA	1,464,536	409,252	313,762	254,860	1,934,715	2,241,216	1,839,587	2,304,024	1,099,099	3,184,039	3,347,250
Connecticut	NA	358,778	553,640	571,414	588,724	1,714,724	1,944,337	240,000	0	0	0	4,083,058
Delaware	NA	0	0	0	0	0	10,000	0	0	13,683	24,256	20,800
District of Columbia	NA	0	0	0	0	0	75,000	0	0	29,500	0	520,000
Florida	NA	3,571,447	4,158,768	8,476,266	990,320	355,629	1,117,124	2,371,453	716,664	585,190	557,060	784,693
Georgia	NA	1,000,000	1,200,000	800,000	0	3,096,465	3,148,268	5,976,273	6,235,488	9,382,400	6,335,903	5,825,649
Hawaii	NA	5,825,028	6,020,023	4,024,303	5,674,072	4,300,000	1,500,000	7,500,000	4,108,496	6,004,495	2,510,732	6,466,637
Idaho	NA	0	0	0	0	401,783	274,051	178,178	260,435	237,898	0	0
Illinois	NA	190,000	0	21,110	225,000	5,885,366	4,333,344	390,473	66,300	0	0	0
Indiana	NA	0	0	0	383,432	657,307	354,693	125,478	0	2,298,615	268,086	95,000
Iowa	NA	0	26,590,826	5,207,302	6,340,014	1,117,561	710,522	1,181,136	164,157	0	0	0
Kansas	NA	0	0	0	0	0	0	0	0	0	0	0
Kentucky	NA	4,256,458	3,372,112	4,809,927	5,976,089	2,403,100	2,443,000	774,052	296,900	301,357	2,020,000	150,000
Louisiana	NA	0	0	0	0	0	0	0	790,430	756,017	2,875,376	2,613,811
Maine	NA	5,000	5,000	821,675	480,594	415,000	986,000	1,311,000	0	0	0	0
Maryland	NA	40,000	25,000	300,000	300,000	200,000	200,000	200,000	189,999	646,989	1,181,872	1,168,566
Massachusetts	NA	0	0	0	0	2,640,446	4,998,471	3,982,930	6,660,272	3,906,259	5,049,247	4,183,011
Michigan	NA	0	0	0	0	0	0	0	0	0	0	0
Minnesota	NA	1,243,965	249,201	1,702,500	122,084	327,995	897,117	387,372	0	0	0	0
Mississippi	NA	1,550,000	1,250,000	0	0	22,914	1,739	0	0	0	0	0
Missouri	NA	0	0	0	0	0	0	0	0	0	0	500,000
Montana	NA	835,942	405,260	187,163	1,200	332,678	0	0	178,300	0	0	0
Nebraska	NA	5,000	10,000	196,427	236,100	100,000	0	266,783	177,207	495,519	4,000	0
Nevada	NA	0	0	0	0	0	0	0	0	0	0	0
New Hampshire	NA	0	0	0	0	0	0	19,920	86,235	0	8,938	0
New Jersey	NA	500,000	0	437,685	0	0	0	0	0	0	0	0
New Mexico	NA	0	0	0	57,083	0	0	0	0	83,198	82,970	169,166
New York	NA	29,744,916	45,608,891	41,789,076	27,061,407	36,809,190	45,627,241	50,958,594	55,855,216	86,541,730	51,407,945	65,977,562
North Carolina	NA	100,000	105,000	0	0	1,322,052	1,652,847	1,969,629	0	0	1,656,680	1,500,000

TABLE 10

State government expenditures for energy-related R&D, by state: FYs 2009–20

(Dollars)

State	2009 ^a	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	NA	4,153,800	5,200,850	2,778,935	3,931,762	6,858,556	5,705,731	3,826,839	8,098,449	9,031,575	6,229,265	10,111,495
Ohio	NA	41,236,142	47,150,392	62,348,681	52,267,399	6,472,561	11,048,550	14,930,905	15,281,674	15,071,024	14,557,578	11,929,919
Oklahoma	NA	387,401	149,201	330,000	323,800	1,246,000	1,625,000	2,733,540	1,390,000	977,210	684,211	599,094
Oregon	NA	175,000	50,000	0	0	7,099,464	7,467,172	3,774,000	3,000,000	2,250,000	4,550,000	1,590,000
Pennsylvania	NA	0	0	2,070,343	1,699,984	2,580,520	2,156,564	2,603,817	100,000	0	5,323,743	837,000
Rhode Island	NA	0	0	0	0	2,000	1,200	104,121	131,554	48,106	0	0
South Carolina	NA	863,890	871,078	484,124	251,410	56,129	163,885	213,958	206,826	92,280	86,506	125,624
South Dakota	NA	0	0	0	0	3,779	26,862	11,135	22,447	181,466	39,853	16,021
Tennessee	NA	0	35,764	6,553	0	0	0	213,026	0	106,514	106,514	106,514
Texas	NA	0	0	374,013	447,132	0	0	0	0	0	0	0
Utah	NA	7,375,546	7,209,348	4,125,214	4,558,744	2,076,936	4,835,743	1,213,403	2,525,845	1,909,139	0	500,540
Vermont	NA	300,000	300,000	167,769	179,391	223,802	239,382	0	0	0	0	0
Virginia	NA	10,301,835	8,564,304	8,321,652	10,400,000	5,789,258	6,263,600	549,281	528,160	360,108	350,000	179,664
Washington	NA	0	0	0	0	148,000	0	1,916,700	8,197,974	3,309,037	7,621,218	6,731,672
West Virginia	NA	2,495,817	2,737,372	102,719	159,332	857,387	820,450	1,689,433	1,456,024	2,486,309	1,703,058	1,390,229
Wisconsin	NA	0	0	250,000	150,000	30,000	30,000	0	0	66,000	0	0
Wyoming	NA	0	0	386,452	182,082	356,188	349,552	538,491	1,323,767	71,133	184,398	1,651,390
Puerto Rico ^c	NA	100,000	100,000	106,470	220,000	422,494	400,000	na	na	na	na	na

na = not applicable; did not report to survey. NA = not available; not collected as a separate R&D function for FY 2009.

^a Energy category was introduced with the FY 2010 and FY 2011 Survey of State Government Research and Development. Previously, energy-related R&D was reported primarily in Other and Environment and natural resources categories.

^b U.S. total reflects all 50 states and the District of Columbia.

^c Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

Note(s):

State R&D expenditures by function were surveyed beginning with the FY 2009 survey. State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 11

State government expenditures for environment and natural resources-related R&D, by state: FYs 2009–20

(Dollars)

State	2009 ^a	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^b	328,102,718	356,603,823	380,376,738	357,528,082	380,245,106	369,242,699	416,120,534	411,765,467	450,709,184	418,889,511	440,269,973	448,510,450
Alabama	7,694,078	8,922,103	13,521,133	12,879,773	9,984,291	4,106,869	5,718,986	12,848,739	14,685,442	13,608,231	9,403,795	5,930,160
Alaska	6,449,300	5,833,600	6,767,900	3,702,011	3,662,664	9,001,900	8,987,200	7,617,940	5,324,200	7,104,800	8,392,100	8,878,600
Arizona	6,356,155	6,023,906	5,743,162	5,327,071	6,689,903	6,184,876	7,012,194	4,253,582	2,220,204	1,755,221	1,077,891	1,849,760
Arkansas	345,832	658,590	680,971	707,557	942,106	0	303,087	530,436	0	2,249,406	2,426,103	2,455,409
California	48,172,325	30,914,302	43,443,294	26,096,846	30,615,059	28,842,415	30,382,163	30,970,439	34,984,578	41,221,163	40,709,827	46,017,594
Colorado	8,317,796	7,142,396	7,185,567	6,957,024	6,576,449	8,449,733	8,630,632	7,187,484	9,718,770	9,097,135	10,798,678	11,609,704
Connecticut	5,814,050	13,081,012	12,517,073	12,661,538	13,780,616	10,592,603	10,303,327	10,527,008	9,545,714	10,218,069	10,599,160	11,473,607
Delaware	1,433,562	2,139,720	2,359,902	2,231,693	2,754,545	1,988,655	2,048,014	1,849,169	1,973,153	2,686,413	2,701,302	2,241,188
District of Columbia	0	0	0	0	0	1,740,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,920,000
Florida	17,934,886	50,262,488	47,437,237	48,709,314	47,462,678	51,191,986	57,934,383	51,313,340	52,812,260	50,929,717	52,486,202	56,851,522
Georgia	0	0	0	2,607,843	3,999,505	2,584,180	3,062,308	2,027,695	2,221,630	0	3,871,745	1,164,256
Hawaii	4,497,068	5,229,835	5,607,794	4,533,302	4,484,602	6,929,035	7,849,438	6,483,585	4,975,227	1,363,167	895,592	385,278
Idaho	5,881,390	6,123,012	6,064,901	8,072,165	8,059,032	7,827,527	8,164,676	7,991,169	8,495,485	8,049,677	8,364,544	10,831,981
Illinois	56,800	0	0	0	0	0	0	0	0	0	0	0
Indiana	1,821,645	1,700,000	1,700,000	15,000	2,500	37,694	124,964	790,356	309,601	100,000	0	141,764
Iowa	0	7,074,696	3,640,397	3,278,552	3,517,000	4,135,147	4,279,253	3,981,402	3,892,642	3,669,395	3,797,923	4,170,756
Kansas	365,000	365,000	465,000	0	0	166,000	258,099	747,974	3,190,713	4,145,270	3,645,223	4,840,882
Kentucky	2,874,829	2,005,156	2,137,523	5,902,607	6,074,737	688,300	768,100	2,021,103	3,610,436	2,897,000	2,531,000	2,258,368
Louisiana	1,567,596	2,522,697	8,005,483	10,305,857	8,174,868	7,750,826	21,166,032	18,265,666	16,653,861	12,451,900	11,751,729	12,455,929
Maine	1,969,352	2,527,524	3,728,729	1,615,411	1,434,954	2,127,448	3,129,609	4,737,000	4,913,480	3,399,559	12,055,909	7,070,173
Maryland	6,853,050	390,000	616,000	963,777	947,472	1,191,164	3,070,807	790,790	2,328,795	1,680,353	1,625,725	1,184,063
Massachusetts	1,082,161	1,116,916	842,629	928,129	1,031,320	11,503,702	12,416,317	13,432,781	9,621,224	8,926,019	8,938,925	10,052,872
Michigan	2,320,826	4,792,530	4,595,080	3,164,059	4,582,027	3,561,675	4,025,524	7,519,042	8,548,682	471,572	1,555,898	1,265,405
Minnesota	1,566,712	1,813,748	794,167	673,544	1,662,951	2,678,015	3,562,237	3,499,210	3,446,554	3,790,153	5,356,934	3,365,930
Mississippi	2,105,823	3,634,374	3,295,081	1,458,268	1,562,376	917,631	566,320	1,025,908	2,162,824	6,216,398	5,579,050	4,637,046
Missouri	10,133,435	9,482,088	8,530,764	9,502,232	9,297,498	10,347,414	11,728,858	12,524,705	12,672,628	13,159,754	11,968,316	11,624,124
Montana	1,871,061	2,185,884	2,343,724	2,920,932	2,479,271	3,247,491	3,688,918	3,336,125	4,888,356	4,140,091	4,146,533	7,753,095
Nebraska	2,048,838	2,214,924	1,902,385	1,818,917	2,040,414	219,783	529,071	928,291	400,154	679,369	4,757,681	6,941,251
Nevada	0	32,942	47,582	46,905	45,408	170,494	192,802	83,663	4,967	100,000	128,914	222,553
New Hampshire	155,000	100,000	111,000	0	0	262,850	331,476	744,520	642,613	74,981	101,215	113,525
New Jersey	2,974,000	4,305,318	1,988,395	2,837,940	3,192,669	3,162,639	2,721,846	2,591,814	2,487,857	1,823,000	2,192,254	2,206,594
New Mexico	0	0	0	312,918	502,068	1,274,000	1,156,279	1,595,891	1,283,998	1,727,331	2,108,672	2,147,277
New York	36,911,399	29,002,576	19,416,212	25,121,628	23,232,954	24,029,807	21,834,761	21,338,549	25,507,577	23,271,335	33,457,115	30,312,324
North Carolina	20,919,615	5,076,664	6,817,285	3,011,692	3,136,983	2,864,841	2,901,909	5,490,244	6,354,160	7,534,575	7,935,915	7,263,072

TABLE 11

State government expenditures for environment and natural resources-related R&D, by state: FYs 2009–20

(Dollars)

State	2009 ^a	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	587,710	22,500	15,000	0	0	825,000	825,000	432,220	1,339,067	1,150,015	1,546,256	789,902
Ohio	6,306,109	38,137,758	38,596,214	15,477,600	38,073,964	36,843,569	42,606,559	46,302,620	61,383,778	50,609,867	46,098,202	50,405,927
Oklahoma	2,552,285	1,631,015	2,505,761	2,248,062	4,765,208	5,921,730	5,465,000	5,201,284	5,714,953	3,041,465	3,697,616	2,281,991
Oregon	8,279,562	14,867,136	16,924,664	19,780,040	20,153,209	17,070,483	18,412,322	11,208,431	16,722,907	14,527,986	19,896,508	16,706,262
Pennsylvania	9,395,553	7,891,207	7,749,253	8,058,329	9,069,833	8,792,509	9,129,370	9,043,493	7,739,820	8,326,030	8,385,384	8,868,958
Rhode Island	446,347	401,045	590,282	927,489	1,059,308	861,501	869,042	1,342,772	1,320,932	2,476,653	3,507,663	3,868,806
South Carolina	25,183,342	34,711,576	45,163,028	46,038,125	36,316,203	17,608,196	23,516,239	24,859,330	26,168,247	29,097,570	28,245,560	27,721,566
South Dakota	2,311,292	1,638,739	1,628,888	1,894,989	1,774,517	45,000	20,000	0	62,998	0	0	50,000
Tennessee	0	0	320,000	856,000	866,500	583,092	571,871	1,085,874	863,020	901,162	906,097	919,243
Texas	24,750,247	6,351,022	4,805,152	5,492,140	6,428,787	13,206,103	14,491,269	13,099,100	16,408,555	9,895,119	9,797,876	7,456,321
Utah	6,149,899	6,329,203	7,943,186	17,978,580	18,312,681	17,125,000	18,245,765	17,814,501	18,126,510	17,282,000	4,537,659	5,558,311
Vermont	0	75,000	75,000	115,469	102,379	252,928	90,683	153,931	50,195	49,859	308,227	282,511
Virginia	4,005,964	3,947,713	3,829,525	4,874,529	5,709,773	9,017,423	9,630,219	7,583,316	5,564,985	6,068,610	7,210,949	5,985,898
Washington	6,993,436	10,782,537	11,087,560	10,712,941	10,953,130	9,118,095	9,698,425	11,991,928	14,779,468	12,726,589	16,415,784	23,572,042
West Virginia	1,804,769	1,818,077	1,873,514	1,501,719	1,611,130	279,478	305,196	1,709,742	3,335,151	2,967,206	4,141,682	3,939,496
Wisconsin	15,201,270	6,717,528	10,197,725	9,081,222	8,894,211	7,183,900	7,569,100	6,503,000	7,237,000	7,206,044	6,060,492	5,423,223
Wyoming	3,641,349	4,607,766	4,765,616	4,126,343	4,225,353	4,731,992	3,824,884	2,388,305	2,013,813	2,022,282	2,152,148	2,043,931
Puerto Rico ^c	136,021	100,000	100,000	201,685	244,845	205,623	150,000	na	na	na	na	na

na = not applicable; did not report to survey.

^a Energy category was introduced with the FY 2010 and FY 2011 Survey of State Government Research and Development. Previously, energy-related R&D was reported primarily in Other and Environment and natural resources categories.^b U.S. total reflects all 50 states and the District of Columbia.^c Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&D expenditures by function were surveyed beginning with the FY 2009 survey. State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 12

State government expenditures for health-related R&D, by state: FYs 2009–20

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^a	655,232,591	706,857,175	807,478,439	928,730,622	917,012,571	857,841,801	953,278,196	982,391,978	1,102,800,942	1,103,231,515	1,081,355,223	1,027,756,537
Alabama	0	0	0	0	0	1,000,000	2,829,600	0	0	980,000	1,080,000	2,000,000
Alaska	0	0	0	0	0	0	0	930,260	1,591,735	506,881	320,476	474,542
Arizona	27,750	8,330,000	8,330,000	8,805,168	11,203,068	8,881,971	5,294,706	9,412,703	9,980,905	7,818,486	13,843,058	11,085,857
Arkansas	0	0	0	479,000	806,060	75,000	726,189	3,963,571	725,427	1,152,372	3,477,448	2,813,075
California	126,845,475	148,970,628	225,037,368	253,217,501	217,140,177	216,614,046	221,214,363	199,522,966	203,217,560	287,551,776	224,834,054	171,494,281
Colorado	4,029,968	8,527,268	6,759,774	5,131,657	4,261,796	1,640,750	1,248,410	3,389,071	6,359,827	9,708,144	10,026,796	8,061,107
Connecticut	17,730,124	19,337,597	18,783,202	19,510,447	19,239,333	20,966,024	28,803,862	26,312,600	29,158,735	29,361,070	29,921,946	29,124,362
Delaware	0	0	0	0	0	0	0	0	0	0	0	0
District of Columbia	487,411	503,267	956,728	656,448	861,058	563,442	174,578	527,470	805,139	1,792,224	1,716,302	1,929,090
Florida	18,478,377	39,962,706	65,570,757	47,079,479	38,775,780	67,376,045	102,896,382	72,373,725	118,404,672	98,470,122	90,372,743	92,452,504
Georgia	0	0	0	0	0	0	0	0	0	0	0	0
Hawaii	0	0	0	190,000	190,000	0	0	0	0	263,750	0	0
Idaho	0	0	0	0	0	30,226	130,045	148,927	111,453	376,277	338,288	212,000
Illinois	4,107,400	2,596,733	680,013	4,383,094	3,550,718	1,433,534	2,552,945	2,340,975	1,797,019	217,779	15,596	399,924
Indiana	20,304,740	0	0	135,000	708,497	10,000,000	0	0	2,849,998	299,865	600,000	0
Iowa	0	0	0	0	0	0	0	56,706	79,418	0	61,000	0
Kansas	1,040,411	0	0	0	0	0	0	0	0	0	0	0
Kentucky	3,150,948	7,371,306	7,136,813	4,695,084	4,793,049	4,461,800	13,390,238	13,781,476	11,429,613	10,071,322	14,469,601	15,023,579
Louisiana	0	0	0	0	0	0	0	0	1,287,883	1,231,812	1,532,501	2,800,226
Maine	1,187,173	349,014	1,082,201	414,740	1,115,608	1,040,000	2,210,000	266,000	11,422,764	2,427,890	2,467,740	9,463,845
Maryland	8,801,328	17,699,478	13,611,823	17,851,235	24,603,993	26,800,000	20,500,000	23,700,000	23,800,000	23,800,000	22,520,611	24,466,432
Massachusetts	2,208,037	2,130,489	2,045,865	2,990,371	3,559,104	4,081,553	5,249,751	5,979,649	5,003,259	5,043,625	6,632,267	6,849,528
Michigan	0	0	0	0	0	0	0	2,122,805	134,052	0	88,488	0
Minnesota	0	0	0	0	0	2,500,000	2,500,000	56,970	0	0	0	0
Mississippi	0	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	21,534	48,741	26,867	56,987	509,035	103,760	233,307
Montana	822,627	822,299	848,774	202,778	39,483	577,157	642,384	389,076	491,415	311,826	311,826	0
Nebraska	15,035,043	15,097,864	15,548,482	16,056,068	16,245,250	18,200,000	17,312,977	18,084,908	18,473,914	20,240,268	18,986,705	19,977,610
Nevada	0	0	0	0	0	0	0	0	0	0	0	0
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0
New Jersey	17,709,498	26,514,169	20,337,742	23,299,300	27,235,551	23,534,704	27,235,340	23,477,042	28,254,395	43,407,927	15,865,431	14,879,386
New Mexico	0	0	0	0	0	15,000	25,000	25,000	25,000	0	0	0
New York	280,837,508	283,069,421	282,851,404	277,519,794	270,756,889	256,559,541	243,968,723	269,492,703	284,862,343	267,111,534	315,479,125	313,857,986
North Carolina	0	50,000	50,000	0	0	0	7,966,618	6,899,677	3,686,679	0	778,247	3,810,296

TABLE 12

State government expenditures for health-related R&D, by state: FYs 2009–20

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	100,000	0	0	0	0	0	0	0	0	0	29,510	349,127
Ohio	41,320,535	19,731,000	13,231,000	12,112,168	9,039,545	4,508,615	3,246,554	7,565,421	5,676,625	4,017,450	3,200,453	2,752,778
Oklahoma	5,796,835	5,049,251	5,478,209	12,107,346	14,185,074	14,455,147	14,970,721	15,661,166	16,552,610	14,673,618	16,263,121	17,420,143
Oregon	0	0	0	0	0	1,000,000	1,000,000	2,000,000	3,736,168	4,400,000	6,000,000	3,100,000
Pennsylvania	66,341,905	70,998,595	59,182,594	56,902,179	44,055,514	11,421,718	52,398,628	51,364,919	47,614,029	52,933,326	53,335,777	73,605,865
Rhode Island	984,944	776,356	912,363	400,000	0	305,066	179,946	307,601	351,000	299,864	150,000	139,519
South Carolina	0	1,151,294	1,794,228	1,444,209	1,176,021	461,758	152,441	140,504	2,071,908	1,422,065	14,541,188	15,991,705
South Dakota	0	0	0	0	0	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0	0	0	450,000	0	0
Texas	123,000	123,000	15,838,498	115,648,847	155,001,396	131,883,911	149,991,410	212,222,958	251,174,470	200,381,853	204,708,613	175,905,076
Utah	10,409,824	12,853,867	14,602,894	18,745,639	24,346,306	8,226,438	8,531,383	4,418,669	6,739,754	4,592,665	12,780	4,850
Vermont	0	132,198	190,117	160,853	170,780	170,047	252,706	139,055	166,047	166,047	210,747	215,000
Virginia	1,560,000	611,496	4,370,815	4,273,179	1,806,000	6,113,236	6,250,104	3,723,667	3,065,856	3,458,734	3,183,007	3,829,173
Washington	2,418,730	13,547,879	20,997,880	22,801,588	19,586,521	11,904,246	8,364,171	0	0	1,188,578	1,188,510	1,260,394
West Virginia	0	0	0	0	0	179,292	179,280	566,871	892,283	1,050,330	1,296,852	712,330
Wisconsin	3,373,000	550,000	1,248,895	1,517,450	2,560,000	840,000	840,000	1,000,000	750,000	1,543,000	1,140,656	1,000,000
Wyoming	0	0	0	0	0	0	0	0	0	0	250,000	61,640
Puerto Rico ^b	6,599,988	3,050,000	3,250,000	6,259,429	5,695,724	4,036,171	3,123,280	na	na	na	na	na

na = not applicable; did not report to survey.

^a U.S. total reflects all 50 states and the District of Columbia.^b Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&D expenditures by function were surveyed beginning with the FY 2009 survey. State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 13

State government expenditures for transportation-related R&D, by state: FYs 2009–20

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^a	242,284,805	247,322,194	265,500,923	252,070,334	265,514,142	254,719,885	246,570,344	264,596,307	265,470,160	258,418,727	260,024,511	279,442,920
Alabama	3,485,318	4,730,116	4,407,856	3,348,079	2,654,296	7,237,806	9,255,656	7,658,433	6,921,982	2,014,658	3,601,526	3,601,526
Alaska	1,277,167	1,394,600	2,567,000	227,182	475,913	2,776,684	2,000,660	504,000	1,280,000	1,080,000	2,687,327	5,340,365
Arizona	2,624,700	2,175,550	1,756,700	1,817,300	1,737,800	1,261,685	1,258,900	851,449	919,757	2,500,355	1,356,182	1,473,269
Arkansas	881,000	1,064,332	927,990	2,057,208	1,915,324	1,269,000	1,486,000	639,945	1,266,550	1,013,231	855,437	690,108
California	40,057,000	38,136,000	37,445,000	36,897,000	35,038,000	35,560,150	35,201,005	38,340,899	35,515,719	36,225,667	34,906,443	41,248,806
Colorado	1,424,481	1,930,506	2,270,155	1,623,980	2,338,837	2,099,101	1,881,210	1,476,466	1,128,528	1,750,822	3,288,163	3,268,633
Connecticut	3,777,288	4,028,757	4,011,628	4,018,000	4,100,000	3,936,126	5,409,867	2,370,317	3,516,438	3,150,000	3,283,420	2,734,495
Delaware	250,000	250,000	250,000	2,404,027	1,974,596	255,213	141,621	845,618	1,293,881	1,156,679	1,100,760	1,336,168
District of Columbia	0	192,931	264,380	1,361,999	987,742	754,327	828,377	1,532,145	919,305	723,440	422,412	239,295
Florida	9,830,053	9,804,294	15,645,022	11,836,984	10,300,582	15,054,989	11,121,055	12,932,838	14,112,753	16,470,858	15,367,289	13,322,175
Georgia	4,162,887	7,723,795	10,290,663	9,012,569	8,698,341	6,095,576	3,842,272	5,089,460	5,586,082	8,738,202	8,034,229	8,599,878
Hawaii	2,339,180	2,672,356	561,367	881,851	1,230,056	1,148,448	1,338,452	1,023,488	786,590	595,364	802,000	487,500
Idaho	1,318,377	1,406,718	1,580,312	1,368,700	1,929,300	2,161,329	1,436,567	2,015,633	1,956,415	1,861,276	3,339,242	3,317,794
Illinois	5,369,057	7,066,133	9,287,308	7,354,832	8,719,083	9,517,493	9,602,367	10,148,743	9,969,256	7,834,288	9,458,562	9,710,698
Indiana	4,000,000	5,616,545	4,074,838	6,927,051	8,444,691	10,584,435	7,483,614	5,021,323	6,477,522	10,641,648	8,495,933	8,734,644
Iowa	6,463,700	5,770,000	6,050,000	7,638,920	9,485,810	4,581,695	5,829,951	6,645,953	4,785,941	5,543,815	5,190,691	7,228,882
Kansas	7,416,636	5,039,914	5,002,773	5,147,330	4,724,025	3,923,777	3,749,587	3,872,000	3,049,000	3,960,800	3,714,875	3,637,912
Kentucky	4,228,240	4,042,181	4,425,113	3,324,600	1,964,500	5,769,400	6,294,300	8,442,000	7,461,167	7,152,574	7,020,302	7,158,996
Louisiana	6,717,882	6,642,447	6,396,052	6,975,472	6,965,116	11,000,000	11,000,000	9,000,000	9,000,000	9,500,000	10,000,000	9,200,000
Maine	563,379	709,306	505,860	354,463	521,444	868,000	1,003,000	1,253,000	903,000	780,000	1,136,000	824,000
Maryland	2,209,280	3,167,924	4,080,017	1,928,111	1,778,080	1,590,096	882,171	711,454	2,011,643	2,313,219	1,735,096	3,660,436
Massachusetts	0	1,637,025	1,504,260	0	0	0	0	0	3,480,037	1,700,000	4,425,000	3,840,000
Michigan	6,103,101	4,640,000	5,125,000	8,900,000	7,700,000	5,500,000	5,500,000	6,200,000	6,820,000	5,780,534	5,132,200	6,610,319
Minnesota	13,908,648	7,853,451	9,222,369	7,427,179	11,089,502	11,147,618	11,558,082	13,401,308	9,925,085	10,782,862	11,092,823	11,619,600
Mississippi	1,518,130	1,883,735	2,463,770	4,801,812	3,300,936	288,622	212,557	1,263,531	2,106,750	1,961,803	5,991,596	4,417,666
Missouri	5,495,716	3,657,806	5,043,082	3,190,008	3,372,137	3,985,039	4,066,030	1,190,224	1,289,739	1,356,738	1,830,194	1,557,401
Montana	876,558	917,662	1,168,956	1,418,422	2,061,516	1,418,000	1,663,000	2,886,974	1,215,380	722,979	820,527	1,810,989
Nebraska	1,014,814	986,918	1,123,236	1,647,512	1,721,453	1,708,434	1,810,483	2,966,171	1,373,075	1,355,258	1,409,861	1,985,947
Nevada	1,510,607	1,048,465	1,393,048	1,119,857	1,595,463	3,257,663	2,914,364	1,554,297	1,860,066	921,936	973,452	1,298,811
New Hampshire	1,167,264	1,009,986	1,196,452	1,380,083	1,226,961	786,600	844,700	260,640	673,806	669,797	807,378	661,587
New Jersey	4,153,340	6,570,052	5,542,644	3,243,333	3,985,296	3,687,478	3,798,842	4,414,453	6,672,869	6,064,082	2,717,094	3,125,627
New Mexico	1,655,529	1,422,955	1,821,583	941,856	1,249,365	1,648,017	1,577,835	1,352,087	502,000	1,403,431	1,377,302	2,808,156
New York	12,445,993	13,024,897	12,191,046	6,071,256	12,838,391	9,321,647	6,850,569	10,571,211	10,836,858	14,441,199	8,842,589	9,463,758
North Carolina	9,000,000	9,225,000	9,500,000	8,884,000	6,548,000	5,688,066	5,534,981	6,864,896	7,395,578	8,661,785	7,959,645	8,877,335

TABLE 13

State government expenditures for transportation-related R&D, by state: FYs 2009–20

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	963,611	598,349	578,559	569,931	584,875	596,824	407,000	899,987	1,902,328	2,592,127	1,336,855	3,635,470
Ohio	10,308,223	13,111,393	17,281,878	20,745,056	22,035,664	16,507,471	10,142,447	12,713,029	12,015,510	7,078,867	6,886,766	6,249,317
Oklahoma	3,818,308	3,845,728	4,101,968	2,497,372	4,030,997	4,873,928	3,817,249	4,554,002	4,365,557	5,700,014	6,849,411	6,480,977
Oregon	2,705,721	2,481,963	2,494,162	2,004,957	2,639,702	2,290,000	2,938,000	1,960,000	3,120,794	3,445,111	5,411,595	2,460,479
Pennsylvania	5,815,684	2,979,258	3,919,294	4,034,828	3,842,683	3,095,997	2,438,279	3,889,274	2,714,547	1,714,300	3,913,899	3,934,697
Rhode Island	446,433	283,838	445,082	334,093	541,470	1,576,999	1,436,793	183,000	1,164,842	0	1,225,000	0
South Carolina	2,476,225	1,384,632	1,581,676	1,967,442	1,942,501	1,594,110	2,160,647	2,225,883	2,497,762	2,178,465	2,159,379	1,851,635
South Dakota	2,069,310	2,098,898	2,000,267	1,477,644	1,811,337	1,798,604	1,236,834	1,722,981	1,550,351	1,670,091	1,222,798	1,321,098
Tennessee	3,752,587	1,064,262	3,286,726	3,369,468	2,505,628	3,780,473	3,256,696	2,911,522	3,528,759	2,659,034	3,107,664	2,650,589
Texas	22,535,124	25,071,272	23,851,121	22,715,697	20,671,237	13,640,184	19,803,109	28,049,226	26,213,677	17,247,836	17,294,677	20,694,167
Utah	800,000	2,600,000	2,600,000	2,030,000	2,430,000	2,293,133	1,470,900	2,375,221	3,955,036	3,374,087	3,435,069	3,141,698
Vermont	738,707	666,981	493,856	705,916	836,839	1,007,865	793,005	698,263	924,025	1,625,848	2,211,617	1,081,391
Virginia	9,443,286	8,931,272	8,469,431	9,974,446	14,128,627	12,779,955	17,554,526	16,692,096	15,877,244	15,739,313	12,889,933	19,782,914
Washington	2,285,130	5,402,675	5,095,830	4,893,607	4,257,879	5,450,000	5,450,000	5,607,000	4,852,000	4,852,000	5,596,000	4,890,000
West Virginia	950,000	5,100,000	5,583,425	2,518,000	2,729,000	2,477,760	2,193,922	2,690,000	3,935,000	2,400,000	2,124,711	2,028,215
Wisconsin	5,030,145	3,572,299	4,115,612	4,828,319	6,215,294	3,843,195	3,106,681	3,038,585	2,884,850	4,084,993	3,754,645	4,106,692
Wyoming	900,986	687,017	506,556	1,872,582	1,637,853	1,230,873	986,181	1,085,282	955,106	1,227,341	1,428,942	1,240,805
Puerto Rico ^b	200,000	180,000	180,000	200,000	200,000	560,000	560,000	na	na	na	na	na

na = not applicable; did not report to survey.

^a U.S. total reflects all 50 states and the District of Columbia.^b Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&D expenditures by function were surveyed beginning with the FY 2009 survey. State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 14

State government R&D expenditures for other functions not separately identified, by state: FYs 2009–20

(Dollars)

State	2009 ^a	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^b	324,394,437	143,020,206	194,003,452	168,806,778	175,751,245	161,254,411	164,001,971	175,314,245	223,723,280	221,761,855	170,319,834	156,339,427
Alabama	1,749,771	472,892	475,402	336,920	144,180	5,801,167	5,743,808	4,156,899	3,954,359	4,767,179	5,422,102	14,046,688
Alaska	0	0	0	0	0	0	0	0	0	0	0	0
Arizona	134,587	742,869	361,685	0	0	0	0	0	0	139,859	0	559,621
Arkansas	3,482,899	4,343,045	1,994,713	557,653	378,064	367,653	635,381	3,046,876	3,391,597	2,517,653	967,697	853,429
California	78,620,000	2,798,033	1,657,802	3,914,236	3,532,072	15,078,629	10,694,395	19,762,981	20,665,387	18,239,659	16,500,248	11,490,937
Colorado	661,000	937,051	934,066	902,386	989,741	1,304,741	1,945,853	2,282,691	5,291,487	7,938,023	8,567,133	7,041,385
Connecticut	0	0	0	0	0	6,275,000	5,126,590	6,067,653	9,471,359	8,441,757	9,579,524	7,538,344
Delaware	0	0	0	0	0	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	78,502	138,118	0	0	87,400	83,698	252,283
Florida	860,000	295,290	1,961,528	933,175	2,205,335	0	0	0	0	0	0	88,406
Georgia	2,500,000	200,000	200,000	400,000	0	0	0	0	0	0	0	31,813
Hawaii	6,906,722	0	0	0	0	667,972	773,071	846,154	0	1,054,083	1,436,565	1,806,130
Idaho	0	0	0	0	0	0	0	211,098	0	368,772	436,773	242,114
Illinois	19,540	6,700,823	7,239,804	6,100,402	5,504,428	8,151,913	14,189,053	4,054,706	3,774,000	6,474,099	4,084,838	2,804,910
Indiana	21,423,543	1,128,287	1,208,526	413,937	360,000	2,061,287	1,773,787	7,092,309	7,078,946	6,124,290	2,851,256	520,000
Iowa	31,512,943	105,480	710,999	22,475	22,484	522,607	457,808	431,450	421,109	497,171	337,061	888,424
Kansas	2,698,381	0	0	0	0	107,479	1,125,847	1,307,150	2,097,137	1,753,805	996,465	998,756
Kentucky	3,684,117	2,734,995	3,382,158	675,726	630,162	984,267	1,611,896	4,234,982	6,190,489	561,098	0	1,651,000
Louisiana	0	0	577,544	862,067	573,126	0	0	0	13,674,007	13,078,673	8,712,529	4,654,135
Maine	2,178,872	4,104,324	3,609,925	2,954,810	2,183,936	2,000,000	4,268,000	3,097,000	3,560,926	4,849,586	9,750,028	8,348,636
Maryland	2,893,023	1,300,000	1,300,000	547,102	1,453,129	0	0	800,000	810,000	2,166,739	1,686,554	2,658,368
Massachusetts	0	0	486,173	0	0	0	0	0	2,972,231	3,425,000	6,870,000	6,775,000
Michigan	0	0	0	0	0	0	0	0	0	0	0	0
Minnesota	192,945	0	0	0	0	0	0	0	0	0	0	0
Mississippi	0	100,000	412,000	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0	0
Montana	2,430,542	931,417	213,841	7,000	12,600	139,144	271,145	7,934,963	7,713,943	382,684	382,684	0
Nebraska	40,000	0	0	1,048,383	1,282,862	197,500	97,387	0	0	200,000	157,763	1,066,000
Nevada	0	0	0	0	0	0	0	4,078,492	9,131,829	6,120,737	6,584,759	3,055,388
New Hampshire	500,000	475,000	500,000	384,000	123,000	300,000	300,000	374,999	449,146	7,382,570	7,400,216	7,333,128
New Jersey	310,000	750,000	0	0	0	0	0	0	0	0	3,111,979	3,543,318
New Mexico	0	0	0	538,787	207,445	1,156,400	1,237,700	1,800,000	2,663,461	146,155	17,000	103,000
New York	43,358,014	34,300,000	43,500,000	29,975,639	46,870,153	48,029,330	49,698,758	47,586,721	48,217,604	48,216,789	28,702,682	26,276,536
North Carolina	916,162	265,000	261,000	2,689,346	3,017,144	500,000	4,396,029	3,692,598	104,672	302,439	290,671	480,186

TABLE 14

State government R&D expenditures for other functions not separately identified, by state: FYs 2009–20

(Dollars)

State	2009 ^a	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	13,828,867	133,500	263,000	164,400	372,000	0	0	0	0	0	0	223,743
Ohio	63,460,096	12,904,375	43,062,744	42,699,340	66,895,354	30,550,059	27,255,184	17,617,411	14,184,490	16,412,659	9,405,378	4,831,720
Oklahoma	2,152,790	9,017,136	6,460,924	4,088,727	2,419,202	2,268,709	2,263,698	2,970,545	3,770,097	742,842	1,054,738	1,110,061
Oregon	0	0	0	0	0	1,835,000	1,800,000	5,719,447	3,300,000	5,890,071	6,725,794	5,922,851
Pennsylvania	13,490,838	5,289,000	4,000,000	8,021,714	5,728,373	8,754,500	8,114,286	4,700,000	32,650,000	36,950,000	10,905,196	11,974,987
Rhode Island	0	0	0	200,000	0	479,906	107,997	1,434,966	778,812	489,904	580,675	540,100
South Carolina	518,619	33,179,054	35,190,338	22,471,369	7,888,340	2,056,900	927,325	2,718,162	3,076,392	569,623	937,457	300,983
South Dakota	0	0	0	0	0	0	0	0	0	0	0	0
Tennessee	0	0	0	61,313	58,348	0	0	2,830,000	5,042,000	4,965,000	3,319,120	3,363,577
Texas	0	0	0	0	0	0	0	0	0	0	0	0
Utah	8,082,988	1,650,000	1,950,000	0	0	5,056,613	3,049,085	4,547,529	0	0	0	0
Vermont	0	0	0	0	0	0	415,612	0	0	0	0	90,998
Virginia	6,846,941	2,883,797	1,928,981	4,218,088	2,342,026	4,009,135	2,826,630	1,865,685	1,909,264	2,409,069	3,552,012	3,329,588
Washington	0	0	0	3,046,202	3,370,552	2,967,873	3,285,711	3,282,013	3,235,997	3,354,053	3,344,321	3,279,219
West Virginia	7,602,237	14,453,838	25,129,599	29,251,581	14,435,189	7,422,125	7,341,817	1,577,385	1,574,886	1,564,077	1,776,758	2,782,045
Wisconsin	1,338,000	825,000	5,030,700	1,320,000	2,752,000	2,130,000	2,130,000	2,000,000	1,500,000	2,141,000	3,000,000	2,750,000
Wyoming	0	0	0	0	0	0	0	1,191,380	1,067,653	1,037,337	788,160	731,620
Puerto Rico ^c	1,731,697	601,391	587,869	350,654	940,348	795,212	757,107	na	na	na	na	na

na = not applicable; did not report to survey.

^a Energy category was introduced with the FY 2010 and FY 2011 Survey of State Government Research and Development. Previously, energy-related R&D was reported primarily in Other and Environment and natural resources categories.^b U.S. total reflects all 50 states and the District of Columbia.^c Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&D expenditures by function were surveyed beginning with the FY 2009 survey. State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D. Other R&D functions include, but are not limited to, corrections, criminal justice, education, forensic science, labor, public safety, and social services.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 15

State government expenditures for R&D funded from federal sources, by state: FYs 2006–20

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
United States ^a	255,400,683	279,267,900	NA	427,193,729	535,196,259	566,896,209	541,892,652	525,458,601	483,187,498	482,539,820	509,239,249	540,645,678	532,149,801	560,855,931	607,788,664
Alabama	3,636,117	4,968,557	NA	8,118,750	11,332,512	12,632,066	12,966,760	6,682,218	7,543,639	8,931,316	13,217,714	11,383,605	8,523,193	8,126,730	6,774,915
Alaska	5,647,941	4,945,800	NA	2,956,434	2,766,100	4,548,900	206,004	395,154	3,871,691	2,812,832	1,709,208	2,419,834	2,275,990	4,540,940	6,143,917
Arizona	5,659,756	5,436,201	NA	6,302,846	7,013,167	8,138,077	12,004,585	14,307,201	8,490,200	8,321,298	5,300,664	3,437,562	4,329,332	2,973,198	3,766,942
Arkansas	2,066,318	1,224,152	NA	3,578,975	2,473,992	4,465,149	8,031,452	8,588,120	5,015,200	6,238,800	7,575,244	6,581,901	6,295,667	5,674,217	4,966,349
California	27,867,854	13,491,703	NA	21,031,780	23,698,863	21,016,057	22,646,488	20,235,896	19,504,949	20,343,864	22,209,845	29,772,940	33,014,863	28,877,496	22,657,670
Colorado	4,044,780	4,684,285	NA	4,612,094	6,363,519	5,930,771	5,170,087	6,017,553	4,133,204	3,668,094	3,112,212	4,193,326	4,897,272	7,347,294	6,659,704
Connecticut	6,735,926	6,906,959	NA	6,507,528	11,067,425	11,158,166	11,904,666	13,751,916	12,150,832	13,036,055	13,926,972	13,638,682	13,800,338	15,827,200	15,873,807
Delaware	277,211	844,200	NA	566,184	796,963	847,732	1,687,502	1,684,136	691,432	862,471	1,210,192	1,548,842	1,742,603	1,572,165	1,476,864
District of Columbia	938,460	1,621,000	NA	487,411	657,612	1,168,232	1,712,507	1,467,091	1,277,405	1,035,397	848,770	1,249,571	2,359,043	2,025,098	2,560,026
Florida	9,887,481	9,439,483	NA	13,605,050	27,629,492	26,588,661	26,701,503	25,537,040	25,536,046	22,302,689	21,594,312	26,259,352	26,978,471	24,512,331	30,382,990
Georgia	5,545,780	2,763,180	NA	2,918,071	5,018,230	6,919,140	8,600,759	10,454,723	10,548,856	8,055,609	11,377,179	12,488,470	16,868,348	16,171,100	14,101,354
Hawaii	8,578,749	17,593,176	NA	10,716,399	11,483,268	10,343,631	8,180,435	9,594,181	9,214,342	6,940,018	13,543,956	8,424,072	6,649,466	3,667,466	7,330,911
Idaho	652,451	1,276,787	NA	3,986,193	4,716,185	4,925,050	6,959,273	7,971,555	8,208,360	7,130,703	8,670,010	8,699,138	7,910,743	10,596,005	12,620,448
Illinois	1,521,332	1,990,000	NA	3,414,851	4,851,170	7,033,966	5,421,531	6,176,896	7,032,929	6,913,774	9,304,530	6,902,678	5,330,301	6,900,290	7,641,755
Indiana	4,428,024	4,017,815	NA	4,681,045	6,559,869	5,428,287	6,187,545	7,252,510	9,738,835	7,358,178	5,189,705	5,270,053	6,000,000	6,100,000	7,126,764
Iowa	4,388,234	2,424,713	NA	1,949,200	4,210,203	3,391,265	3,370,143	3,960,205	5,481,288	5,615,415	5,714,200	4,745,317	5,823,675	5,215,707	7,734,114
Kansas	4,864,624	4,107,233	NA	5,619,610	3,625,557	3,675,258	3,356,770	2,983,235	2,360,850	2,138,068	4,036,102	4,875,065	5,768,271	5,465,441	6,612,890
Kentucky	6,823,866	6,315,996	NA	4,755,197	5,263,230	5,873,846	6,170,250	4,316,909	5,266,569	5,935,717	8,070,770	8,364,540	7,475,368	6,577,173	6,273,543
Louisiana	6,382,762	4,125,505	NA	4,539,936	4,929,033	5,536,833	7,295,467	7,412,982	9,900,000	10,012,449	14,853,950	24,199,118	21,892,547	21,317,872	19,451,587
Maine	0	65,000	NA	1,304,294	1,836,035	2,439,296	1,167,751	1,158,805	2,038,174	2,952,778	3,557,605	3,276,573	3,057,355	3,830,784	4,162,595
Maryland	5,053,001	7,228,749	NA	4,234,200	1,643,939	1,551,214	1,888,327	1,944,190	1,782,810	1,649,862	940,143	2,557,338	4,220,626	2,924,655	4,016,621
Massachusetts	1,125,989	1,200,525	NA	379,847	814,609	1,209,020	1,328,828	1,803,176	5,480,624	6,490,647	6,615,788	8,499,880	6,838,085	10,952,465	11,397,894
Michigan	4,127,849	3,910,171	NA	6,054,036	6,885,798	7,110,347	8,187,688	8,454,896	8,417,785	8,346,295	9,760,802	9,352,419	5,774,656	4,579,680	7,184,297
Minnesota	2,002,686	3,083,506	NA	4,864,789	3,457,202	3,782,840	3,718,840	3,652,840	4,827,540	4,814,486	6,772,202	4,757,077	4,443,333	6,020,868	6,272,311
Mississippi	2,285,202	6,272,085	NA	2,926,523	5,671,257	5,454,392	5,174,275	3,937,121	971,637	618,485	2,036,701	3,479,041	5,695,540	8,869,165	8,768,392
Missouri	5,473,754	4,962,973	NA	5,556,085	3,161,177	4,103,709	3,702,943	3,521,812	4,887,547	5,641,298	3,684,515	3,979,736	4,114,609	5,102,079	5,750,412
Montana	2,913,589	1,837,440	NA	2,249,403	2,659,895	2,868,954	2,907,039	3,463,568	3,254,014	3,672,296	4,640,449	5,546,645	4,365,342	4,577,231	6,777,890
Nebraska	1,940,130	1,275,191	NA	1,162,077	878,999	1,071,515	1,900,163	1,973,878	1,607,015	1,668,537	2,703,884	1,406,169	1,681,576	4,371,507	6,818,177
Nevada	505,000	1,115,700	NA	1,242,142	688,933	320,608	469,512	1,001,898	2,771,066	2,515,000	1,752,237	2,091,202	1,147,161	2,370,078	1,606,707
New Hampshire	1,793,026	1,599,228	NA	937,998	896,396	1,081,852	1,302,649	1,071,409	959,521	1,113,769	683,400	874,200	694,217	715,823	639,820
New Jersey	2,927,179	4,040,714	NA	4,293,720	3,735,882	4,387,432	3,628,894	3,989,987	3,453,756	4,041,326	4,398,146	6,367,385	5,773,046	2,890,436	3,299,908
New Mexico	0	538,337	NA	1,324,423	1,072,611	1,443,195	1,434,849	1,592,483	2,086,119	1,966,767	1,959,974	1,325,804	2,201,370	2,415,620	4,238,566
New York	11,175,919	7,858,707	NA	160,779,049	175,534,885	174,021,455	156,066,229	154,054,612	162,053,306	150,683,260	142,916,034	153,685,522	150,807,413	156,961,125	173,176,058
North Carolina	8,043,625	13,118,979	NA	8,477,435	10,223,740	11,187,114	7,904,917	6,075,886	6,418,931	15,605,925	15,392,504	7,949,309	9,085,073	8,477,781	9,125,937

TABLE 15

State government expenditures for R&D funded from federal sources, by state: FYs 2006–20

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
North Dakota	5,957,704	3,713,936	NA	1,895,456	575,654	557,822	540,086	564,878	1,199,176	1,020,728	1,172,763	2,327,432	2,965,210	2,299,808	4,025,187
Ohio	8,767,534	8,253,286	NA	5,141,853	3,351,457	4,455,517	6,415,795	10,584,324	6,979,454	6,437,833	9,624,514	9,889,818	9,948,825	8,126,122	8,463,693
Oklahoma	643,333	3,296,216	NA	5,120,111	5,229,705	6,138,385	5,283,506	8,289,178	8,986,041	7,578,340	8,390,649	11,350,041	8,183,905	10,192,859	7,922,136
Oregon	2,245,190	2,470,211	NA	3,957,639	12,870,466	14,753,575	17,582,132	16,942,402	9,815,170	10,390,644	9,900,748	11,365,484	13,498,683	17,340,000	11,978,580
Pennsylvania	4,278,736	5,321,876	NA	5,975,911	5,882,402	6,652,868	6,442,990	6,002,259	5,353,083	4,830,151	5,686,837	7,498,785	6,801,366	9,903,377	19,656,077
Rhode Island	150,000	403,939	NA	396,154	281,728	515,480	487,305	664,190	1,251,398	1,114,694	1,361,000	1,470,052	852,644	2,473,315	1,918,239
South Carolina	19,731,986	29,773,259	NA	22,877,576	59,873,605	71,204,639	59,056,716	33,931,311	16,290,802	20,114,487	20,737,825	23,646,742	24,143,358	23,400,794	30,291,219
South Dakota	3,011,796	3,847,153	NA	3,522,778	3,145,143	2,882,410	2,618,318	2,840,315	1,427,976	1,003,921	1,255,737	909,739	1,150,602	754,880	752,592
Tennessee	4,658,000	3,638,000	NA	3,002,070	851,410	2,985,145	3,594,115	2,906,011	3,368,748	2,903,575	5,128,836	5,755,973	5,385,899	5,112,715	4,792,328
Texas	20,318,659	19,853,357	NA	22,174,250	21,943,248	21,488,561	20,949,356	20,382,696	17,280,822	21,106,336	28,647,673	28,163,945	20,766,503	21,003,405	23,192,709
Utah	1,800,000	1,880,823	NA	5,593,015	20,724,230	20,687,819	21,153,987	25,727,343	755,484	1,077,198	807,539	1,711,697	1,355,017	2,294,696	1,721,014
Vermont	1,282,280	783,845	NA	610,565	1,100,865	1,184,957	1,121,698	1,240,063	1,583,729	1,183,900	905,065	940,123	1,647,291	2,225,472	1,119,199
Virginia	6,387,630	9,427,028	NA	11,409,211	9,370,939	9,735,857	9,710,044	8,149,554	12,804,594	13,040,444	10,654,905	9,141,544	9,633,966	12,948,118	14,998,852
Washington	7,728,621	8,091,640	NA	5,925,432	9,841,190	9,420,257	8,462,965	8,292,342	11,078,789	12,398,340	11,677,113	9,374,759	11,948,543	14,915,365	14,747,139
West Virginia	2,663,801	5,008,707	NA	3,733,032	7,830,732	6,157,841	8,139,084	7,256,479	6,299,975	7,333,474	3,729,381	6,799,242	6,681,206	7,579,295	6,903,375
Wisconsin	4,772,502	6,316,820	NA	8,656,553	7,890,044	15,611,863	9,632,605	13,741,242	9,388,919	9,471,310	8,658,738	8,233,839	6,971,498	9,448,498	8,358,684
Wyoming	1,688,296	10,903,754	NA	1,068,548	815,693	809,183	1,345,319	1,457,932	2,346,866	2,100,967	1,620,007	2,464,097	2,380,392	2,290,192	3,555,506
Puerto Rico ^b	103,503	0	NA	4,946,080	1,702,000	1,850,000	4,070,151	3,931,918	1,489,553	1,561,588	na	na	na	na	na

na = Not applicable; did not report to survey. NA = not available; survey was not conducted for FY 2008.

^a U.S. total reflects all 50 states and the District of Columbia.^b Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development.

TABLE 16

State government expenditures for R&D funded from federal sources, by state and federal agency: FY 2020

(Dollars)

State	Total federal	DOC	DOD	DOE	DOI	DOT	ED	EPA	HHS	NSF	USDA	Other ^a
United States ^b	607,788,664	20,256,362	11,137,458	21,912,430	106,812,063	188,244,635	7,434,905	7,580,511	179,622,124	13,136,596	31,818,831	19,832,749
Alabama	6,774,915	182,496	212,784	21,883	2,272,473	3,194,428	16,000	25,979	0	716,928	23,866	108,078
Alaska	6,143,917	0	0	0	1,982,200	3,818,404	0	253,313	0	0	0	90,000
Arizona	3,766,942	0	0	0	1,435,961	1,473,269	0	0	0	0	857,712	0
Arkansas	4,966,349	0	0	0	964,929	552,087	0	0	0	3,449,333	0	0
California	22,657,670	0	0	0	1,196,291	16,399,983	2,814,595	1,774,719	0	0	298,913	173,169
Colorado	6,659,704	0	4,182	0	2,708,309	2,833,633	124,839	17,663	311,904	0	603,303	55,871
Connecticut	15,873,807	0	0	0	5,404,300	2,417,467	429,097	26,338	4,329,803	115,574	3,151,228	0
Delaware	1,476,864	66,012	0	875	425,456	961,780	0	0	0	22,741	0	0
District of Columbia	2,560,026	0	0	0	0	506,436	0	156,000	1,812,183	0	0	85,407
Florida	30,382,990	6,120,334	404,149	0	5,383,175	7,026,998	0	757,072	0	10,504	10,480,610	200,148
Georgia	14,101,354	136,188	0	7,893,986	536,683	5,534,497	0	0	0	0	0	0
Hawaii	7,330,911	275,000	5,491,637	625,000	297,000	238,500	0	0	0	0	403,774	0
Idaho	12,620,448	0	0	4,338,516	4,444,709	2,841,617	0	0	0	0	995,606	0
Illinois	7,641,755	0	0	0	0	7,396,777	0	0	244,978	0	0	0
Indiana	7,126,764	0	0	0	56,764	7,070,000	0	0	0	0	0	0
Iowa	7,734,114	0	0	0	2,076,078	5,437,573	0	0	0	0	0	220,463
Kansas	6,612,890	0	0	0	4,103,741	2,452,147	0	7,002	0	0	0	50,000
Kentucky	6,273,543	0	0	0	1,271,959	5,001,584	0	0	0	0	0	0
Louisiana	19,451,587	30,856	0	1,380,472	4,927,358	7,360,000	199,912	0	0	3,588,147	0	1,964,842
Maine	4,162,595	1,461,200	0	0	1,523,895	704,000	0	0	0	0	473,500	0
Maryland	4,016,621	0	0	0	0	2,844,165	1,160,456	0	0	0	12,000	0
Massachusetts	11,397,894	840,000	0	0	5,500,000	3,450,000	0	22,507	1,585,387	0	0	0
Michigan	7,184,297	0	0	0	136,004	5,702,373	0	296,606	0	0	1,049,314	0
Minnesota	6,272,311	0	0	0	1,153,270	4,467,682	0	0	0	0	651,359	0
Mississippi	8,768,392	1,035,393	0	0	1,803,589	3,944,327	0	0	0	0	180,501	1,804,582
Missouri	5,750,412	0	475,572	0	3,445,535	1,301,489	0	204,053	11,322	0	112,441	200,000
Montana	6,777,890	0	0	0	3,783,349	1,525,678	0	40,921	0	0	1,359,343	68,599
Nebraska	6,818,177	0	0	0	4,798,206	1,527,523	0	490,612	0	0	1,836	0
Nevada	1,606,707	0	0	0	0	1,380,210	0	0	0	0	128,146	98,351
New Hampshire	639,820	0	0	0	0	639,820	0	0	0	0	0	0
New Jersey	3,299,908	0	0	0	453,813	2,027,708	0	788,981	29,406	0	0	0
New Mexico	4,238,566	0	0	0	754,743	3,005,788	0	478,035	0	0	0	0
New York	173,176,058	424,937	3,343,004	0	854,721	4,513,795	0	907,870	157,793,073	1,318,463	3,201,679	818,516
North Carolina	9,125,937	479,434	0	0	415,793	8,230,710	0	0	0	0	0	0

TABLE 16

State government expenditures for R&D funded from federal sources, by state and federal agency: FY 2020

(Dollars)

State	Total federal	DOC	DOD	DOE	DOI	DOT	ED	EPA	HHS	NSF	USDA	Other ^a
North Dakota	4,025,187	0	0	0	692,166	3,333,021	0	0	0	0	0	0
Ohio	8,463,693	205,335	0	53,352	2,225,920	5,019,086	460,000	0	500,000	0	0	0
Oklahoma	7,922,136	0	0	0	1,156,844	5,473,239	0	0	837,475	0	454,578	0
Oregon	11,978,580	356,294	717,150	4,289,369	3,790,446	1,875,568	146,584	0	599,557	0	27,708	175,904
Pennsylvania	19,656,077	37,937	0	0	5,608,531	3,162,845	0	187,330	0	0	659,434	10,000,000
Rhode Island	1,918,239	461,072	0	0	1,457,167	0	0	0	0	0	0	0
South Carolina	30,291,219	6,720,860	488,980	147,287	12,232,416	1,424,993	0	147,930	8,675,395	0	366,895	86,463
South Dakota	752,592	0	0	0	0	736,571	0	0	0	16,021	0	0
Tennessee	4,792,328	0	0	90,190	218,948	2,120,472	2,083,422	279,296	0	0	0	0
Texas	23,192,709	106,998	0	0	3,465,765	16,295,393	0	32,513	1,022,059	0	1,151,413	1,118,568
Utah	1,721,014	0	0	0	0	1,597,546	0	123,318	150	0	0	0
Vermont	1,119,199	0	0	0	0	904,199	0	0	215,000	0	0	0
Virginia	14,998,852	241,156	0	3,815	2,837,190	8,604,050	0	0	130,934	0	809,082	2,372,625
Washington	14,747,139	1,074,860	0	2,027,952	3,308,465	3,477,000	0	308,022	1,523,498	0	2,886,179	141,163
West Virginia	6,903,375	0	0	39,733	1,129,682	1,632,710	0	0	0	3,898,885	202,365	0
Wisconsin	8,358,684	0	0	0	3,341,876	3,777,278	0	254,431	0	0	985,099	0
Wyoming	3,555,506	0	0	1,000,000	1,236,343	1,028,216	0	0	0	0	290,947	0

DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; DOI = Department of the Interior; DOT = Department of Transportation; ED = Department of Education; EPA = Environmental Protection Agency; HHS = Department of Health and Human Services; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Other includes the Departments of Housing and Urban Development, Homeland Security, Justice, Labor, State, Treasury, and Veterans Affairs; National Aeronautics and Space Administration; and others.

^b U.S. total reflects all 50 states and the District of Columbia.

Note(s):

State R&D totals can display considerable volatility between survey years due to several national and state-specific factors. Large changes are not unusual, especially for discretionary spending items such as R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
United States ^b	2,444,981,212	692,719,374	1,752,261,838	9,786,932
Alabama	25,695,555	13,704,571	11,990,984	0
Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority	4,000	0	4,000	0
Commerce, Department of	3,000,000	0	3,000,000	0
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	1,930,023	280,032	1,649,991	0
Education, Department of	9,755,650	9,104,650	651,000	0
Forensic Sciences, Department of	262,993	262,993	0	0
Geological Survey	2,470,957	2,470,957	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	1,585,939	1,585,939	0	0
Supercomputer Authority	3,028,045	0	3,028,045	0
Transportation, Department of	3,657,948	0	3,657,948	0
Alaska	15,193,507	10,745,451	4,448,056	0
Environmental Conservation, Department of	474,542	19,763	454,779	0
Housing Finance Corporation	500,000	0	500,000	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	8,878,600	8,878,600	0	0
Railroad Corporation	3,824,365	1,712,088	2,112,277	0
Transportation and Public Facilities, Department of	1,516,000	135,000	1,381,000	0
Arizona	16,010,502	1,562,435	14,448,067	0
Agriculture, Department of	1,220,812	0	1,220,812	0
Game and Fish Department	1,361,376	1,002,814	358,562	0
Health Services, Department of	11,085,857	0	11,085,857	0
Juvenile Corrections, Department of	559,621	559,621	0	0
Transportation, Department of	1,782,836	0	1,782,836	0
Arkansas	19,921,168	189,018	19,732,150	0
Agriculture, Department of	251,460	0	251,460	0
Beef Council	40,223	0	40,223	0
Corn and Grain Sorghum Board	965,000	0	965,000	0
Economic Development Commission	5,446,430	0	5,446,430	0
Game and Fish Commission	954,281	0	954,281	0
Natural Heritage Commission	274,611	142,678	131,933	0
Rice Research and Promotion Board	8,623,500	0	8,623,500	0
Soybean Promotion Board	2,625,555	0	2,625,555	0
Transportation, Department of	690,108	46,340	643,768	0
Wheat Promotion Board	50,000	0	50,000	0
California	533,900,597	81,087,677	452,812,920	0
Air Resources Board	16,709,642	10,222,932	6,486,710	0
Children and Families Commission (First 5 California)	3,518,680	0	3,518,680	0
Conservation, Department of	1,143,000	398,000	745,000	0
Corrections and Rehabilitation, Department of	1,974,791	0	1,974,791	0
Covered California	3,209,181	0	3,209,181	0
Delta Stewardship Council	5,602,379	0	5,602,379	0
Earthquake Authority	2,664,000	500,000	2,164,000	0
Energy Commission	219,532,543	19,478,336	200,054,207	0
Environmental Health Hazard Assessment, Office of	19,726,954	17,372,704	2,354,250	0
Food and Agriculture, Department of	4,213,376	0	4,213,376	0
Forestry and Fire Protection, Department of	3,500,000	500,000	3,000,000	0
Horse Racing Board	627,442	0	627,442	0
Housing and Community Development, Department of	75,000	0	75,000	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Institute for Regenerative Medicine	127,546,003	0	127,546,003	0
Mental Health Services Oversight and Accountability Commission	2,500,000	0	2,500,000	0
Motor Vehicles, Department of	1,401,521	1,401,521	0	0
Pesticide Regulation, Department of	14,088,416	10,404,433	3,683,983	0
Public Health, Department of	3,370,497	1,351	3,369,146	0
Public Utilities Commission, Executive Division	37,000,000	0	37,000,000	0
Rehabilitation, Department of	2,814,595	439,191	2,375,404	0
State Coastal Conservancy	1,620,693	0	1,620,693	0
State Water Resources Control Board	17,957,684	3,188,854	14,768,830	0
Transportation, Department of	41,248,806	15,881,012	25,367,794	0
Water Resources, Department of	1,855,394	1,299,343	556,051	0
Colorado	34,365,638	12,047,699	22,317,939	0
Agriculture, Department of	635,148	305,327	329,821	0
Economic Development and International Trade, Office of	15,456,483	0	15,456,483	0
Higher Education Competitive, Research Authority	2,455,224	0	2,455,224	0
Higher Education, Department of	124,839	53,135	71,704	0
Natural Resources, Department of	8,002,949	7,914,944	88,005	0
Public Health and Environment, Department of	3,808,558	2,344,944	1,463,614	0
Public Safety, Department of	826,494	826,494	0	0
Transportation, Department of	2,833,633	602,855	2,230,778	0
Wine Industry Development Board	222,310	0	222,310	0
Connecticut	58,810,853	25,868,030	32,942,823	0
Agricultural Experiment Station	12,445,226	12,445,226	0	0
Children and Families, Department of	604,461	0	604,461	0
Education, Department of	429,097	0	429,097	0
Energy and Environmental Protection, Department of	7,498,136	6,802,949	695,187	0
Innovation Inc.	27,245,173	0	27,245,173	0
Mental Health and Addiction Services, Department of	6,310,349	6,310,349	0	0
Public Health, Department of	27,000	0	27,000	0
Social Services, Department of	1,516,916	0	1,516,916	0
Transportation, Department of	2,734,495	309,506	2,424,989	0
Delaware	3,598,156	2,312,965	1,285,191	0
Geological Survey	2,183,965	2,133,165	50,800	0
Natural Resources and Environmental Control, Department of	159,000	159,000	0	0
Sustainable Energy Utility	20,800	20,800	0	0
Transportation, Department of	1,234,391	0	1,234,391	0
District of Columbia	5,860,668	2,510,818	3,349,850	0
Energy and Environment, Department of	1,550,000	230,000	1,320,000	0
Forensic Sciences, Department of	114,283	114,283	0	0
Health, Department of	1,957,090	1,037,450	919,640	0
Transportation, Department of	239,295	129,085	110,210	0
Water and Sewer Authority	2,000,000	1,000,000	1,000,000	0
Florida	184,600,202	52,430,371	132,169,831	5,209,705
Agriculture and Consumer Services, Department of	22,450,768	2,169,058	20,281,710	0
Business and Professional Regulation, Department of	88,406	0	88,406	0
Citrus, Department of	1,127,588	156,535	971,053	0
Environmental Protection, Department of	217,759	0	217,759	0
Fish and Wildlife Conservation Commission	56,278,906	48,601,987	7,676,919	5,209,705
Health, Department of	91,114,600	0	91,114,600	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Space Florida	1,299,010	0	1,299,010	0
Transportation, Department of	12,023,165	1,502,791	10,520,374	0
Georgia	15,877,238	2,648,196	13,229,042	0
Natural Resources, Department of	997,526	214,928	782,598	0
Seed Development Commission	255,642	0	255,642	0
Southern States Energy Board	8,092,378	2,433,268	5,659,110	0
Transportation, Department of	6,531,692	0	6,531,692	0
Hawaii	11,122,545	6,531,042	4,591,503	0
Agriculture, Department of	702,000	384,418	317,582	0
Business, Economic Development, and Tourism, Department of	7,297,767	5,996,624	1,301,143	0
Land and Natural Resources, Department of	385,278	0	385,278	0
Natural Energy Laboratory	2,250,000	150,000	2,100,000	0
Transportation, Department of	487,500	0	487,500	0
Idaho	21,882,976	7,967,885	13,915,091	5,000
Agriculture, Department of	900,539	1,300	899,239	0
Alfalfa and Clover Seed Commission	1,500	0	1,500	0
Barley Commission	238,859	0	238,859	5,000
Bean Commission	28,220	0	28,220	0
Beef Council	88,187	0	88,187	0
Commerce, Department of	953,711	0	953,711	0
Dairy West	2,900,000	0	2,900,000	0
Environmental Quality, Department of	450,000	0	450,000	0
Fish and Game, Department of	10,381,981	7,845,168	2,536,813	0
Honey Commission	1,500	0	1,500	0
Oilseed Commission	62,000	0	62,000	0
Pea and Lentil Commission	73,418	0	73,418	0
Potato Commission	1,596,042	0	1,596,042	0
Transportation Department	3,069,711	121,417	2,948,294	0
Wheat Commission	1,137,308	0	1,137,308	0
Illinois	16,055,917	626,262	15,429,655	0
Children and Family Services, Department of	2,559,932	0	2,559,932	0
Human Services, Department of	244,978	0	244,978	0
Nutrient Research and Education	3,140,385	0	3,140,385	0
Public Health, Department of	399,924	0	399,924	0
Transportation, Department of	9,710,698	626,262	9,084,436	0
Indiana	9,591,408	92,268	9,499,140	0
Economic Development Corporation	595,000	0	595,000	0
Environmental Management, Department of	56,764	0	56,764	0
Natural Resources, Department of	100,000	0	100,000	0
St. Joseph River Basin Commission	105,000	5,000	100,000	0
Transportation, Department of	8,734,644	87,268	8,647,376	0
Iowa	12,348,062	3,430,444	8,917,618	0
Beef Industry Council	60,000	0	60,000	0
Corrections	470,931	470,931	0	0
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	417,493	417,493	0	0
Natural Resources, Department of	4,170,756	2,542,020	1,628,736	0
Transportation, Department of	7,228,882	0	7,228,882	0
Kansas	13,152,904	999,734	12,153,170	0
Corn Commission	871,765	0	871,765	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Grain Sorghum Commission	445,300	0	445,300	0
Soybean Commission	1,200,000	0	1,200,000	0
State Board of Regents	998,756	5,491	993,265	0
Sunflower Commission	20,000	0	20,000	0
Transportation, Department of	3,637,912	937,241	2,700,671	0
Water Office	429,361	57,002	372,359	0
Wheat Commission	1,138,289	0	1,138,289	0
Wildlife, Parks, and Tourism, Department of	4,411,521	0	4,411,521	0
Kentucky	26,782,125	1,752,643	25,029,482	0
Behavioral Health, Developmental and Intellectual Disabilities	67,500	0	67,500	0
Economic Development, Cabinet for	3,051,000	0	3,051,000	0
Fish and Wildlife Resources, Department of	2,008,546	1,752,643	255,903	0
Horse Racing Commission	430,748	0	430,748	0
Nature Preserves, Office of	34,200	0	34,200	0
Postsecondary Education, Council on	9,939,022	0	9,939,022	0
Public Health, Department for	3,336,309	0	3,336,309	0
Public Service Commission	21,000	0	21,000	0
Soybean Promotion Board	658,864	0	658,864	0
Transportation Cabinet	7,234,936	0	7,234,936	0
Louisiana	32,360,516	11,101,353	21,259,163	150,000
Board of Regents	12,728,300	0	12,728,300	0
Coastal Protection and Restoration Authority	3,436,344	475,534	2,960,810	0
Education, Department of	394,664	326,982	67,682	0
Transportation and Development, Department of	9,200,000	4,500,000	4,700,000	150,000
Wildlife and Fisheries, Department of	6,601,208	5,798,837	802,371	0
Maine	29,035,990	4,038,999	24,996,991	0
Agriculture, Conservation and Forestry, Department of	1,511,473	565,473	946,000	0
Inland Fisheries and Wildlife, Department of	1,080,841	763,201	317,640	0
Marine Resources, Department of	2,458,575	2,348,325	110,250	0
Technology Institute	23,161,101	0	23,161,101	0
Transportation, Department of	824,000	362,000	462,000	0
Maryland	33,407,022	659,436	32,747,586	0
Education, Department of	1,160,456	0	1,160,456	0
Energy Administration	1,026,832	0	1,026,832	0
Health and Mental Hygiene, Department of	15,000,000	0	15,000,000	0
Natural Resources, Department of	607,906	79,183	528,723	0
Technology Development Corporation	10,964,344	0	10,964,344	0
Transportation, Department of	4,647,484	580,253	4,067,231	0
Massachusetts	31,700,411	9,681,990	22,018,421	0
Clean Energy Technology Center	4,008,011	0	4,008,011	0
Environmental Protection, Department of	309,872	248,990	60,882	0
Fish and Game, Department of	9,493,000	9,333,000	160,000	0
Gaming Commission	2,670,000	0	2,670,000	0
Life Sciences Center	1,030,299	0	1,030,299	0
Massventures	3,100,000	0	3,100,000	0
Mental Health, Department of	1,800,000	0	1,800,000	0
Public Health, Department of	1,849,229	0	1,849,229	0
Technology Park Corporation	3,175,000	0	3,175,000	0
Transportation, Department of	4,065,000	0	4,065,000	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Water Resources Authority	200,000	100,000	100,000	0
Michigan	11,191,816	527,096	10,664,720	0
Agriculture and Rural Development, Department of	3,316,092	0	3,316,092	0
Environmental, Great Lakes and Energy, Department of	1,265,405	527,096	738,309	0
Transportation, Department of	6,610,319	0	6,610,319	0
Minnesota	20,511,698	2,583,398	17,928,300	0
Agriculture, Department of	6,203,140	886,703	5,316,437	0
Forest Resources Council	150,000	100,000	50,000	0
Natural Resources, Department of	1,941,631	1,591,195	350,436	0
Pollution Control Agency	25,981	0	25,981	0
Transportation, Department of	12,190,946	5,500	12,185,446	0
Mississippi	10,268,396	1,236,050	9,032,346	0
Agriculture and Commerce, Department of	180,501	0	180,501	0
Environmental Quality, Department of	1,804,582	110,635	1,693,947	0
Gulf States Marine Fisheries Commission	1,100,424	0	1,100,424	0
Marine Resources, Department of	1,060,182	304,290	755,892	0
Transportation, Department of	4,417,666	3,071	4,414,595	0
Wildlife, Fisheries, and Parks, Department of	1,705,041	818,054	886,987	0
Missouri	14,826,364	8,112,983	6,713,381	0
Agriculture, Department of	95,763	0	95,763	0
Conservation, Department of	10,860,153	8,068,161	2,791,992	0
Health and Senior Services, Department of	29,761	29,761	0	0
Mental Health, Department of	121,250	0	121,250	0
Natural Resources, Department of	743,537	15,061	728,476	0
Technology Corporation	582,296	0	582,296	0
Transportation, Department of	1,557,401	0	1,557,401	0
Wine and Grape Board	836,203	0	836,203	0
Montana	13,131,022	6,104,413	7,026,609	0
Agriculture, Department of	3,566,938	0	3,566,938	0
Environmental Quality, Department of	92,296	92,296	0	0
Fish, Wildlife and Parks, Department of	7,640,799	5,916,231	1,724,568	0
Natural Resources and Conservation, Department of	20,000	0	20,000	0
Transportation, Department of	1,810,989	95,886	1,715,103	0
Nebraska	32,423,818	2,342,783	30,081,035	0
Agriculture, Department of	645,372	0	645,372	0
Corn Board	803,068	0	803,068	0
Dairy Industry Development Board	87,654	0	87,654	0
Dry Bean Commission	290,954	0	290,954	0
Economic Development, Department of	2,184,835	0	2,184,835	0
Game and Parks Commission	5,798,854	2,332,795	3,466,059	0
Grain Sorghum Board	3,672	0	3,672	0
Health and Human Services, Department of	19,453,501	0	19,453,501	0
Natural Resources, Department of	958,089	9,988	948,101	0
Transportation, Department of	1,909,404	0	1,909,404	0
Wheat Board	288,415	0	288,415	0
Nevada	4,764,898	188,146	4,576,752	0
Agriculture, Department of	188,146	188,146	0	0
Economic Development, Governor's office of	3,055,388	0	3,055,388	0
Transportation, Department of	1,521,364	0	1,521,364	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
New Hampshire	8,221,518	49,309	8,172,209	0
Agriculture, Markets and Food, Department of	146,743	0	146,743	0
Business and Economic Affairs, Department of	7,275,000	0	7,275,000	0
Transportation, Department of	799,775	49,309	750,466	0
New Jersey	23,754,925	2,624,342	21,130,583	0
Children and Families, Department of	237,423	181,115	56,308	0
Corrections, Department of	305,895	305,895	0	0
Environmental Protection, Department of	2,608,000	1,802,000	806,000	0
Health, Department of	940,186	0	940,186	0
Pinelands Commission	537,794	335,332	202,462	0
Research Initiatives, Office of	13,000,000	0	13,000,000	0
Secretary of Higher Education, Office of	3,000,000	0	3,000,000	0
Transit, New Jersey	511,533	0	511,533	0
Transportation, Department of	2,614,094	0	2,614,094	0
New Mexico	5,227,599	2,594,660	2,632,939	0
Cultural Affairs, Department of	103,000	103,000	0	0
Game and Fish, Department of	1,000,000	500,000	500,000	0
Transportation, Department of	3,383,320	1,991,660	1,391,660	0
Western State Air Resources Council	741,279	0	741,279	0
New York	453,807,331	278,751,443	175,055,888	640,000
Agriculture and Markets, Department of	6,587,196	2,290,000	4,297,196	0
Economic Development, Department of	34,942,880	0	34,942,880	0
Energy Research and Development Authority	63,800,898	8,152,894	55,648,004	0
Environmental Conservation, Department of	11,066,820	4,490,190	6,576,630	0
Health, Department of	74,723,334	32,566,879	42,156,455	0
Mental Health, Office of	166,944,173	144,972,379	21,971,794	640,000
People with Developmental Disabilities, Office of	2,136,105	2,136,105	0	0
Power Authority	11,111,406	5,915,635	5,195,771	0
Roswell Park Comprehensive Cancer Center	66,297,074	66,297,074	0	0
State Museum	10,578,496	10,089,582	488,914	0
Thoroughbred Breeding and Development Fund Corp.	234,030	0	234,030	0
Transportation, Department of	5,384,919	1,840,705	3,544,214	0
North Carolina	35,892,185	17,813,294	18,078,891	1,000,000
Agriculture and Consumer Services, Department of	15,422,911	13,922,911	1,500,000	1,000,000
Biotechnology Center	3,810,296	0	3,810,296	0
Environmental Quality, Department of	3,621,969	1,421,353	2,200,616	0
Natural and Cultural Resources, Department of	2,903,776	1,690,939	1,212,837	0
Transportation, Department of	10,033,233	778,091	9,255,142	0
Wine and Grape Growers Council	100,000	0	100,000	0
North Dakota	18,065,251	346,342	17,718,909	0
Agriculture, Department of	817,049	0	817,049	0
Dairy Promotion Commission	16,000	0	16,000	0
Dry Pea and Lentil Council	80,683	0	80,683	0
Game and Fish Department	789,902	0	789,902	0
Historical Society of North Dakota	223,743	223,743	0	0
Industrial Commission	10,111,495	0	10,111,495	0
Soybean Council	1,163,242	0	1,163,242	0
Transportation, Department of	3,635,470	122,599	3,512,871	0
Wheat Commission	1,227,667	0	1,227,667	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Ohio	76,169,661	2,005,523	74,164,138	0
Development Services Agency	63,372,408	0	63,372,408	0
Education, Department of	460,000	0	460,000	0
Environmental Protection Agency	53,352	53,352	0	0
Mental Health and Addictions Services, Department of	1,500,000	0	1,500,000	0
Natural Resources, Department of	3,583,207	1,952,171	1,631,036	0
Rail Development Commission	220,000	0	220,000	0
Transportation, Department of	6,029,317	0	6,029,317	0
Water Development Authority	951,377	0	951,377	0
Oklahoma	30,050,338	2,015,986	28,034,352	243,500
Advancement of Science and Technology, Center for the	8,704,830	0	8,704,830	243,500
Agriculture, Food, and Forestry, Department of	454,578	0	454,578	0
Grand River Dam Authority	550,000	140,000	410,000	0
Health, Department of	544,357	527,041	17,316	0
Human Services, Department of	457,147	457,147	0	0
Tobacco Settlement Endowment Trust	12,300,000	0	12,300,000	0
Transportation, Department of	5,817,457	844,589	4,972,868	0
Wildlife Conservation, Department of	1,221,969	47,209	1,174,760	0
Oregon	30,486,113	15,852,036	14,634,077	700,000
Agriculture, Department of	206,521	0	206,521	0
Business Oregon	9,190,000	0	9,190,000	700,000
Education, Department of	639,639	639,639	0	0
Environmental Quality, Department of	433,500	433,500	0	0
Fish and Wildlife, Department of	12,424,618	11,265,588	1,159,030	0
Forestry, Department of	694,549	449,480	245,069	0
Geology and Mineral Industries, Department of	496,117	496,117	0	0
Human Services, Department of	1,488,479	1,488,479	0	0
Transportation, Department of	2,460,479	81,545	2,378,934	0
Water Resources Department	1,583,355	987,464	595,891	0
Watershed Enhancement Board	868,856	10,224	858,632	0
Pennsylvania	103,098,941	7,874,722	95,224,219	0
Agriculture, Department of	3,877,434	0	3,877,434	0
Community and Economic Development, Department of	31,350,000	0	31,350,000	0
Conservation and Natural Resources, Department of	1,248	1,248	0	0
Environmental Protection, Department of	894,656	18,052	876,604	0
Fish and Boat Commission	270,914	161,651	109,263	0
Game Commission	9,876,885	7,358,771	2,518,114	0
Health, Department of	53,279,107	0	53,279,107	0
Susquehanna River Basin Commission	335,000	335,000	0	0
Transportation, Department of	3,213,697	0	3,213,697	0
Rhode Island	4,594,040	3,098,833	1,495,207	46,478
Commerce Corporation	1,119,546	0	1,119,546	0
Environmental Management, Department of; Marine Fisheries	3,097,546	2,799,416	298,130	46,478
Environmental Management, Department of; Narragansett Bay National Estuarine Research Reserve	76,014	76,014	0	0
Water Resources Board	300,934	223,403	77,531	0
South Carolina	46,800,816	27,894,342	18,906,474	450
Agriculture, Department of	803,873	0	803,873	0
Disabilities and Special Needs, Department of	14,226,376	0	14,226,376	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Health and Environmental Control, Department of	1,388,752	1,233,275	155,477	0
Natural Resources, Department of	25,080,757	24,796,999	283,758	450
Public Service Authority	30,000	0	30,000	0
Research Authority	726,551	0	726,551	0
Sea Grant Consortium	2,742,872	1,843,674	899,198	0
Transportation, Department of	1,801,635	20,394	1,781,241	0
South Dakota	2,913,274	327,346	2,585,928	0
Corn Utilization Council	310,000	0	310,000	0
Oilseeds Council	250,865	0	250,865	0
Pulse Crop Council	2,273	0	2,273	0
Science and Technology Authority	16,021	0	16,021	0
Soybean Research and Promotion Council	375,717	25,724	349,993	0
Transportation, Department of	1,321,098	301,622	1,019,476	0
Weed and Pest Control Commission	47,000	0	47,000	0
Wheat Commission	590,300	0	590,300	0
Tennessee	7,039,923	1,607,509	5,432,414	0
Education, Department of	3,363,577	1,052,595	2,310,982	0
Environment and Conservation, Department of	843,184	372,341	470,843	0
Geological Survey	182,573	182,573	0	0
Transportation, Department of	2,650,589	0	2,650,589	0
Texas	205,206,977	3,165,023	202,041,954	0
Agriculture, Department of	1,151,413	0	1,151,413	0
Alzheimer's Research and Care Consortium (TARCC)	4,615,313	0	4,615,313	0
Cancer Prevention and Research Institute	169,450,936	0	169,450,936	0
Environmental Quality, Commission on	2,135,774	42,206	2,093,568	0
Parks and Wildlife Department	4,858,066	2,470,790	2,387,276	0
State Health Services, Department of	1,838,827	652,027	1,186,800	0
Transportation, Department of	20,694,167	0	20,694,167	0
Water Development Board	462,481	0	462,481	0
Utah	9,205,399	6,070,743	3,134,656	4,900
Energy Development, Office of	500,540	0	500,540	3,900
Environmental Quality, Department of	716,389	103,210	613,179	0
Health, Department of	4,850	4,850	0	0
Natural Resources, Department of	4,841,922	4,841,922	0	0
Transportation, Department of	3,141,698	1,120,761	2,020,937	1,000
Vermont	1,669,900	633,399	1,036,501	0
Agriculture, Food, and Markets, Agency of	282,511	0	282,511	0
Education, Agency of	90,998	0	90,998	0
Human Services, Agency of	215,000	215,000	0	0
Transportation, Agency of	1,081,391	418,399	662,992	0
Virginia	35,552,565	12,627,565	22,925,000	1,190,001
Aging and Rehabilitative Services, Department of	32,746	28,028	4,718	0
Agriculture and Consumer Services, Department of	2,362,121	0	2,362,121	0
Commonwealth Health Research Board	1,399,997	0	1,399,997	0
Environmental Quality, Department of	103,612	34,102	69,510	0
Forensic Science, Department of	971,793	971,793	0	199,412
Forestry, Department of	577,211	533,801	43,410	0
Foundation for Healthy Youth	884,774	0	884,774	0
Innovative Technology, Center for	6,074,557	674,351	5,400,206	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Institute for Advanced Learning and Research	60,000	60,000	0	0
Marine Resources Commission	1,885,300	204,543	1,680,757	0
Mines, Minerals and Energy, Department of	903,212	903,212	0	0
Social Services, Department of	10,000	10,000	0	0
Transportation, Department of	18,616,858	9,207,735	9,409,123	990,589
Wildlife Resources, Department of	1,670,384	0	1,670,384	0
Washington	57,239,095	23,415,061	33,824,034	596,898
Agriculture, Department of	2,974,886	0	2,974,886	0
Alfalfa Seed Commission	34,000	0	34,000	0
Asparagus Commission	70,000	0	70,000	0
Blueberry Commission	252,900	0	252,900	0
Commerce, Department of	4,686,545	0	4,686,545	596,898
Dairy Products Commission	30,000	0	30,000	0
Ecology, Department of	1,053,172	887,977	165,195	0
Fish and Wildlife, Department of	9,811,591	9,569,456	242,135	0
Fruit Commission	146,911	0	146,911	0
Grain Commission	2,121,448	0	2,121,448	0
Health, Department of	1,113,483	1,057,809	55,674	0
Hop Commission	281,762	0	281,762	0
Labor and Industries, Department of	3,279,219	3,279,219	0	0
Mint Commission	73,825	0	73,825	0
Natural Resources, Department of	13,196,143	5,721,319	7,474,824	0
Oilseeds Commission	44,448	0	44,448	0
Pesticide Registration, Commission on	438,075	0	438,075	0
Potato Commission	760,097	0	760,097	0
Puget Sound Partnership	1,526,263	0	1,526,263	0
Pulse Crops Commission	159,243	0	159,243	0
Red Raspberry Commission	307,500	0	307,500	0
Transportation, Department of	4,890,000	1,293,000	3,597,000	0
Tree Fruit Research Commission	9,668,382	1,606,281	8,062,101	0
Turfgrass Seed Commission	64,018	0	64,018	0
Wine Commission	255,184	0	255,184	0
West Virginia	10,862,315	3,317,637	7,544,678	0
Agriculture, Department of	202,365	202,365	0	0
Geological and Economic Survey	1,854,645	1,576,721	277,924	0
Higher Education Policy Commission	5,483,928	400,180	5,083,748	0
Justice and Community Services, Division of	8,000	8,000	0	0
Natural Resources, Department of	1,285,162	1,130,371	154,791	0
Transportation, Department of	2,028,215	0	2,028,215	0
Wisconsin	14,340,014	4,674,607	9,665,407	0
Agriculture, Trade and Consumer Protection, Department of	985,099	0	985,099	0
Economic Development Corporation	3,825,000	0	3,825,000	0
Natural Resources, Department of	5,423,223	4,402,853	1,020,370	0
Transportation, Department of	4,106,692	271,754	3,834,938	0
Wyoming	6,391,060	2,875,496	3,515,564	0
Agriculture, Department of	561,674	0	561,674	0
Business Council	847,500	0	847,500	0
Corrections, Department of	123,280	123,280	0	0
Enhanced Oil Recovery Institute	1,500,000	1,000,000	500,000	0

TABLE 17

State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2020

(Dollars)

State and department or agency	R&D performers ^a			R&D plant
	All	Intramural	Extramural	
Game and Fish Department	1,689,237	1,476,267	212,970	0
State Geological Survey	184,676	184,676	0	0
Transportation, Department of	1,240,805	91,273	1,149,532	0
Water Development Office	243,888	0	243,888	0

^a Intramural performers include a department's or agency's own employees who perform R&D and services performed by others in support of an internal R&D project. Extramural performers are those outside the department or agency who perform R&D.

^b U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
United States ^b	2,444,981,212	607,788,664	1,837,192,548
Alabama	25,695,555	6,774,915	18,920,640
Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority	4,000	0	4,000
Commerce, Department of	3,000,000	0	3,000,000
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	1,930,023	1,691,718	238,305
Education, Department of	9,755,650	16,000	9,739,650
Forensic Sciences, Department of	262,993	0	262,993
Geological Survey	2,470,957	738,855	1,732,102
Marine Environmental Science Consortium, Dauphin Island Sea Lab	1,585,939	1,133,914	452,025
Supercomputer Authority	3,028,045	0	3,028,045
Transportation, Department of	3,657,948	3,194,428	463,520
Alaska	15,193,507	6,143,917	9,049,590
Environmental Conservation, Department of	474,542	225,313	249,229
Housing Finance Corporation	500,000	0	500,000
Natural Resources, Department of; Division of Geological and Geophysical Surveys	8,878,600	2,100,200	6,778,400
Railroad Corporation	3,824,365	2,605,604	1,218,761
Transportation and Public Facilities, Department of	1,516,000	1,212,800	303,200
Arizona	16,010,502	3,766,942	12,243,560
Agriculture, Department of	1,220,812	1,036,529	184,283
Game and Fish Department	1,361,376	1,257,144	104,232
Health Services, Department of	11,085,857	0	11,085,857
Juvenile Corrections, Department of	559,621	0	559,621
Transportation, Department of	1,782,836	1,473,269	309,567
Arkansas	19,921,168	4,966,349	14,954,819
Agriculture, Department of	251,460	0	251,460
Beef Council	40,223	0	40,223
Corn and Grain Sorghum Board	965,000	0	965,000
Economic Development Commission	5,446,430	3,449,333	1,997,097
Game and Fish Commission	954,281	946,864	7,417
Natural Heritage Commission	274,611	18,065	256,546
Rice Research and Promotion Board	8,623,500	0	8,623,500
Soybean Promotion Board	2,625,555	0	2,625,555
Transportation, Department of	690,108	552,087	138,021
Wheat Promotion Board	50,000	0	50,000
California	533,900,597	22,657,670	511,242,927
Air Resources Board	16,709,642	0	16,709,642
Children and Families Commission (First 5 California)	3,518,680	0	3,518,680
Conservation, Department of	1,143,000	190,000	953,000
Corrections and Rehabilitation, Department of	1,974,791	0	1,974,791
Covered California	3,209,181	0	3,209,181
Delta Stewardship Council	5,602,379	1,133,461	4,468,918
Earthquake Authority	2,664,000	0	2,664,000
Energy Commission	219,532,543	0	219,532,543
Environmental Health Hazard Assessment, Office of	19,726,954	0	19,726,954
Food and Agriculture, Department of	4,213,376	298,913	3,914,463
Forestry and Fire Protection, Department of	3,500,000	0	3,500,000

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Horse Racing Board	627,442	0	627,442
Housing and Community Development, Department of	75,000	0	75,000
Institute for Regenerative Medicine	127,546,003	0	127,546,003
Mental Health Services Oversight and Accountability Commission	2,500,000	0	2,500,000
Motor Vehicles, Department of	1,401,521	52,964	1,348,557
Pesticide Regulation, Department of	14,088,416	109,485	13,978,931
Public Health, Department of	3,370,497	169	3,370,328
Public Utilities Commission, Executive Division	37,000,000	0	37,000,000
Rehabilitation, Department of	2,814,595	2,814,595	0
State Coastal Conservancy	1,620,693	119,114	1,501,579
State Water Resources Control Board	17,957,684	1,546,120	16,411,564
Transportation, Department of	41,248,806	16,347,019	24,901,787
Water Resources, Department of	1,855,394	45,830	1,809,564
Colorado	34,365,638	6,659,704	27,705,934
Agriculture, Department of	635,148	625,148	10,000
Economic Development and International Trade, Office of	15,456,483	0	15,456,483
Higher Education Competitive, Research Authority	2,455,224	0	2,455,224
Higher Education, Department of	124,839	124,839	0
Natural Resources, Department of	8,002,949	2,708,309	5,294,640
Public Health and Environment, Department of	3,808,558	311,904	3,496,654
Public Safety, Department of	826,494	55,871	770,623
Transportation, Department of	2,833,633	2,833,633	0
Wine Industry Development Board	222,310	0	222,310
Connecticut	58,810,853	15,873,807	42,937,046
Agricultural Experiment Station	12,445,226	5,337,429	7,107,797
Children and Families, Department of	604,461	115,524	488,937
Education, Department of	429,097	429,097	0
Energy and Environmental Protection, Department of	7,498,136	5,404,300	2,093,836
Innovation Inc.	27,245,173	0	27,245,173
Mental Health and Addiction Services, Department of	6,310,349	626,074	5,684,275
Public Health, Department of	27,000	27,000	0
Social Services, Department of	1,516,916	1,516,916	0
Transportation, Department of	2,734,495	2,417,467	317,028
Delaware	3,598,156	1,476,864	2,121,292
Geological Survey	2,183,965	405,384	1,778,581
Natural Resources and Environmental Control, Department of	159,000	109,700	49,300
Sustainable Energy Utility	20,800	0	20,800
Transportation, Department of	1,234,391	961,780	272,611
District of Columbia	5,860,668	2,560,026	3,300,642
Energy and Environment, Department of	1,550,000	471,000	1,079,000
Forensic Sciences, Department of	114,283	30,000	84,283
Health, Department of	1,957,090	1,867,590	89,500
Transportation, Department of	239,295	191,436	47,859
Water and Sewer Authority	2,000,000	0	2,000,000
Florida	184,600,202	30,382,990	154,217,212
Agriculture and Consumer Services, Department of	22,450,768	10,465,613	11,985,155
Business and Professional Regulation, Department of	88,406	0	88,406
Citrus, Department of	1,127,588	0	1,127,588

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Environmental Protection, Department of	217,759	66,669	151,090
Fish and Wildlife Conservation Commission	56,278,906	12,823,710	43,455,196
Health, Department of	91,114,600	0	91,114,600
Space Florida	1,299,010	0	1,299,010
Transportation, Department of	12,023,165	7,026,998	4,996,167
Georgia	15,877,238	14,101,354	1,775,884
Natural Resources, Department of	997,526	672,871	324,655
Seed Development Commission	255,642	0	255,642
Southern States Energy Board	8,092,378	7,893,986	198,392
Transportation, Department of	6,531,692	5,534,497	997,195
Hawaii	11,122,545	7,330,911	3,791,634
Agriculture, Department of	702,000	632,000	70,000
Business, Economic Development, and Tourism, Department of	7,297,767	5,491,637	1,806,130
Land and Natural Resources, Department of	385,278	68,774	316,504
Natural Energy Laboratory	2,250,000	900,000	1,350,000
Transportation, Department of	487,500	238,500	249,000
Idaho	21,882,976	12,620,448	9,262,528
Agriculture, Department of	900,539	900,539	0
Alfalfa and Clover Seed Commission	1,500	0	1,500
Barley Commission	238,859	0	238,859
Bean Commission	28,220	0	28,220
Beef Council	88,187	0	88,187
Commerce, Department of	953,711	0	953,711
Dairy West	2,900,000	0	2,900,000
Environmental Quality, Department of	450,000	0	450,000
Fish and Game, Department of	10,381,981	8,783,225	1,598,756
Honey Commission	1,500	0	1,500
Oilseed Commission	62,000	0	62,000
Pea and Lentil Commission	73,418	0	73,418
Potato Commission	1,596,042	95,067	1,500,975
Transportation Department	3,069,711	2,841,617	228,094
Wheat Commission	1,137,308	0	1,137,308
Illinois	16,055,917	7,641,755	8,414,162
Children and Family Services, Department of	2,559,932	0	2,559,932
Human Services, Department of	244,978	244,978	0
Nutrient Research and Education	3,140,385	0	3,140,385
Public Health, Department of	399,924	0	399,924
Transportation, Department of	9,710,698	7,396,777	2,313,921
Indiana	9,591,408	7,126,764	2,464,644
Economic Development Corporation	595,000	0	595,000
Environmental Management, Department of	56,764	56,764	0
Natural Resources, Department of	100,000	0	100,000
St. Joseph River Basin Commission	105,000	0	105,000
Transportation, Department of	8,734,644	7,070,000	1,664,644
Iowa	12,348,062	7,734,114	4,613,948
Beef Industry Council	60,000	0	60,000
Corrections	470,931	0	470,931

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	417,493	220,463	197,030
Natural Resources, Department of	4,170,756	2,076,078	2,094,678
Transportation, Department of	7,228,882	5,437,573	1,791,309
Kansas	13,152,904	6,612,890	6,540,014
Corn Commission	871,765	0	871,765
Grain Sorghum Commission	445,300	0	445,300
Soybean Commission	1,200,000	0	1,200,000
State Board of Regents	998,756	0	998,756
Sunflower Commission	20,000	0	20,000
Transportation, Department of	3,637,912	2,452,147	1,185,765
Water Office	429,361	57,002	372,359
Wheat Commission	1,138,289	0	1,138,289
Wildlife, Parks, and Tourism, Department of	4,411,521	4,103,741	307,780
Kentucky	26,782,125	6,273,543	20,508,582
Behavioral Health, Developmental and Intellectual Disabilities	67,500	0	67,500
Economic Development, Cabinet for	3,051,000	0	3,051,000
Fish and Wildlife Resources, Department of	2,008,546	1,271,959	736,587
Horse Racing Commission	430,748	0	430,748
Nature Preserves, Office of	34,200	0	34,200
Postsecondary Education, Council on	9,939,022	0	9,939,022
Public Health, Department for	3,336,309	0	3,336,309
Public Service Commission	21,000	0	21,000
Soybean Promotion Board	658,864	0	658,864
Transportation Cabinet	7,234,936	5,001,584	2,233,352
Louisiana	32,360,516	19,451,587	12,908,929
Board of Regents	12,728,300	6,291,305	6,436,995
Coastal Protection and Restoration Authority	3,436,344	642,156	2,794,188
Education, Department of	394,664	199,912	194,752
Transportation and Development, Department of	9,200,000	7,360,000	1,840,000
Wildlife and Fisheries, Department of	6,601,208	4,958,214	1,642,994
Maine	29,035,990	4,162,595	24,873,395
Agriculture, Conservation and Forestry, Department of	1,511,473	648,246	863,227
Inland Fisheries and Wildlife, Department of	1,080,841	847,899	232,942
Marine Resources, Department of	2,458,575	1,962,450	496,125
Technology Institute	23,161,101	0	23,161,101
Transportation, Department of	824,000	704,000	120,000
Maryland	33,407,022	4,016,621	29,390,401
Education, Department of	1,160,456	1,160,456	0
Energy Administration	1,026,832	0	1,026,832
Health and Mental Hygiene, Department of	15,000,000	0	15,000,000
Natural Resources, Department of	607,906	12,000	595,906
Technology Development Corporation	10,964,344	0	10,964,344
Transportation, Department of	4,647,484	2,844,165	1,803,319
Massachusetts	31,700,411	11,397,894	20,302,517
Clean Energy Technology Center	4,008,011	0	4,008,011
Environmental Protection, Department of	309,872	22,507	287,365
Fish and Game, Department of	9,493,000	6,340,000	3,153,000

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Gaming Commission	2,670,000	0	2,670,000
Life Sciences Center	1,030,299	0	1,030,299
Massventures	3,100,000	0	3,100,000
Mental Health, Department of	1,800,000	0	1,800,000
Public Health, Department of	1,849,229	1,585,387	263,842
Technology Park Corporation	3,175,000	0	3,175,000
Transportation, Department of	4,065,000	3,450,000	615,000
Water Resources Authority	200,000	0	200,000
Michigan	11,191,816	7,184,297	4,007,519
Agriculture and Rural Development, Department of	3,316,092	1,049,314	2,266,778
Environmental, Great Lakes and Energy, Department of	1,265,405	432,610	832,795
Transportation, Department of	6,610,319	5,702,373	907,946
Minnesota	20,511,698	6,272,311	14,239,387
Agriculture, Department of	6,203,140	651,359	5,551,781
Forest Resources Council	150,000	0	150,000
Natural Resources, Department of	1,941,631	1,153,270	788,361
Pollution Control Agency	25,981	0	25,981
Transportation, Department of	12,190,946	4,467,682	7,723,264
Mississippi	10,268,396	8,768,392	1,500,004
Agriculture and Commerce, Department of	180,501	180,501	0
Environmental Quality, Department of	1,804,582	1,804,582	0
Gulf States Marine Fisheries Commission	1,100,424	1,100,424	0
Marine Resources, Department of	1,060,182	468,328	591,854
Transportation, Department of	4,417,666	3,944,327	473,339
Wildlife, Fisheries, and Parks, Department of	1,705,041	1,270,230	434,811
Missouri	14,826,364	5,750,412	9,075,952
Agriculture, Department of	95,763	95,763	0
Conservation, Department of	10,860,153	3,939,815	6,920,338
Health and Senior Services, Department of	29,761	11,322	18,439
Mental Health, Department of	121,250	0	121,250
Natural Resources, Department of	743,537	202,023	541,514
Technology Corporation	582,296	200,000	382,296
Transportation, Department of	1,557,401	1,301,489	255,912
Wine and Grape Board	836,203	0	836,203
Montana	13,131,022	6,777,890	6,353,132
Agriculture, Department of	3,566,938	1,064,629	2,502,309
Environmental Quality, Department of	92,296	40,921	51,375
Fish, Wildlife and Parks, Department of	7,640,799	4,146,662	3,494,137
Natural Resources and Conservation, Department of	20,000	0	20,000
Transportation, Department of	1,810,989	1,525,678	285,311
Nebraska	32,423,818	6,818,177	25,605,641
Agriculture, Department of	645,372	490,612	154,760
Corn Board	803,068	0	803,068
Dairy Industry Development Board	87,654	0	87,654
Dry Bean Commission	290,954	0	290,954
Economic Development, Department of	2,184,835	0	2,184,835
Game and Parks Commission	5,798,854	4,798,206	1,000,648
Grain Sorghum Board	3,672	1,836	1,836

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Health and Human Services, Department of	19,453,501	0	19,453,501
Natural Resources, Department of	958,089	0	958,089
Transportation, Department of	1,909,404	1,527,523	381,881
Wheat Board	288,415	0	288,415
Nevada	4,764,898	1,606,707	3,158,191
Agriculture, Department of	188,146	128,146	60,000
Economic Development, Governor's office of	3,055,388	98,351	2,957,037
Transportation, Department of	1,521,364	1,380,210	141,154
New Hampshire	8,221,518	639,820	7,581,698
Agriculture, Markets and Food, Department of	146,743	0	146,743
Business and Economic Affairs, Department of	7,275,000	0	7,275,000
Transportation, Department of	799,775	639,820	159,955
New Jersey	23,754,925	3,299,908	20,455,017
Children and Families, Department of	237,423	29,406	208,017
Corrections, Department of	305,895	0	305,895
Environmental Protection, Department of	2,608,000	705,000	1,903,000
Health, Department of	940,186	0	940,186
Pinelands Commission	537,794	537,794	0
Research Initiatives, Office of	13,000,000	0	13,000,000
Secretary of Higher Education, Office of	3,000,000	0	3,000,000
Transit, New Jersey	511,533	0	511,533
Transportation, Department of	2,614,094	2,027,708	586,386
New Mexico	5,227,599	4,238,566	989,033
Cultural Affairs, Department of	103,000	0	103,000
Game and Fish, Department of	1,000,000	500,000	500,000
Transportation, Department of	3,383,320	3,005,788	377,532
Western State Air Resources Council	741,279	732,778	8,501
New York	453,807,331	173,176,058	280,631,273
Agriculture and Markets, Department of	6,587,196	3,016,846	3,570,350
Economic Development, Department of	34,942,880	0	34,942,880
Energy Research and Development Authority	63,800,898	0	63,800,898
Environmental Conservation, Department of	11,066,820	2,035,629	9,031,191
Health, Department of	74,723,334	23,197,578	51,525,756
Mental Health, Office of	166,944,173	93,791,467	73,152,706
People with Developmental Disabilities, Office of	2,136,105	1,624,860	511,245
Power Authority	11,111,406	0	11,111,406
Roswell Park Comprehensive Cancer Center	66,297,074	44,803,984	21,493,090
State Museum	10,578,496	191,899	10,386,597
Thoroughbred Breeding and Development Fund Corp.	234,030	0	234,030
Transportation, Department of	5,384,919	4,513,795	871,124
North Carolina	35,892,185	9,125,937	26,766,248
Agriculture and Consumer Services, Department of	15,422,911	0	15,422,911
Biotechnology Center	3,810,296	0	3,810,296
Environmental Quality, Department of	3,621,969	890,383	2,731,586
Natural and Cultural Resources, Department of	2,903,776	4,844	2,898,932
Transportation, Department of	10,033,233	8,230,710	1,802,523
Wine and Grape Growers Council	100,000	0	100,000
North Dakota	18,065,251	4,025,187	14,040,064

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Agriculture, Department of	817,049	0	817,049
Dairy Promotion Commission	16,000	0	16,000
Dry Pea and Lentil Council	80,683	0	80,683
Game and Fish Department	789,902	633,957	155,945
Historical Society of North Dakota	223,743	58,209	165,534
Industrial Commission	10,111,495	0	10,111,495
Soybean Council	1,163,242	0	1,163,242
Transportation, Department of	3,635,470	3,333,021	302,449
Wheat Commission	1,227,667	0	1,227,667
Ohio	76,169,661	8,463,693	67,705,968
Development Services Agency	63,372,408	0	63,372,408
Education, Department of	460,000	460,000	0
Environmental Protection Agency	53,352	53,352	0
Mental Health and Addictions Services, Department of	1,500,000	500,000	1,000,000
Natural Resources, Department of	3,583,207	2,431,255	1,151,952
Rail Development Commission	220,000	0	220,000
Transportation, Department of	6,029,317	5,019,086	1,010,231
Water Development Authority	951,377	0	951,377
Oklahoma	30,050,338	7,922,136	22,128,202
Advancement of Science and Technology, Center for the	8,704,830	0	8,704,830
Agriculture, Food, and Forestry, Department of	454,578	454,578	0
Grand River Dam Authority	550,000	0	550,000
Health, Department of	544,357	457,041	87,316
Human Services, Department of	457,147	380,434	76,713
Tobacco Settlement Endowment Trust	12,300,000	0	12,300,000
Transportation, Department of	5,817,457	5,473,239	344,218
Wildlife Conservation, Department of	1,221,969	1,156,844	65,125
Oregon	30,486,113	11,978,580	18,507,533
Agriculture, Department of	206,521	0	206,521
Business Oregon	9,190,000	0	9,190,000
Education, Department of	639,639	146,584	493,055
Environmental Quality, Department of	433,500	0	433,500
Fish and Wildlife, Department of	12,424,618	8,832,691	3,591,927
Forestry, Department of	694,549	25,000	669,549
Geology and Mineral Industries, Department of	496,117	421,307	74,810
Human Services, Department of	1,488,479	599,557	888,922
Transportation, Department of	2,460,479	1,875,568	584,911
Water Resources Department	1,583,355	0	1,583,355
Watershed Enhancement Board	868,856	77,873	790,983
Pennsylvania	103,098,941	19,656,077	83,442,864
Agriculture, Department of	3,877,434	659,434	3,218,000
Community and Economic Development, Department of	31,350,000	10,000,000	21,350,000
Conservation and Natural Resources, Department of	1,248	0	1,248
Environmental Protection, Department of	894,656	203,165	691,491
Fish and Boat Commission	270,914	131,318	139,596
Game Commission	9,876,885	5,325,815	4,551,070
Health, Department of	53,279,107	0	53,279,107
Susquehanna River Basin Commission	335,000	173,500	161,500

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Transportation, Department of	3,213,697	3,162,845	50,852
Rhode Island	4,594,040	1,918,239	2,675,801
Commerce Corporation	1,119,546	0	1,119,546
Environmental Management, Department of; Marine Fisheries	3,097,546	1,788,850	1,308,696
Environmental Management, Department of; Narragansett Bay National Estuarine Research Reserve	76,014	18,540	57,474
Water Resources Board	300,934	110,849	190,085
South Carolina	46,800,816	30,291,219	16,509,597
Agriculture, Department of	803,873	366,895	436,978
Disabilities and Special Needs, Department of	14,226,376	7,292,076	6,934,300
Health and Environmental Control, Department of	1,388,752	1,388,752	0
Natural Resources, Department of	25,080,757	17,705,315	7,375,442
Public Service Authority	30,000	0	30,000
Research Authority	726,551	61,810	664,741
Sea Grant Consortium	2,742,872	2,051,378	691,494
Transportation, Department of	1,801,635	1,424,993	376,642
South Dakota	2,913,274	752,592	2,160,682
Corn Utilization Council	310,000	0	310,000
Oilseeds Council	250,865	0	250,865
Pulse Crop Council	2,273	0	2,273
Science and Technology Authority	16,021	16,021	0
Soybean Research and Promotion Council	375,717	0	375,717
Transportation, Department of	1,321,098	736,571	584,527
Weed and Pest Control Commission	47,000	0	47,000
Wheat Commission	590,300	0	590,300
Tennessee	7,039,923	4,792,328	2,247,595
Education, Department of	3,363,577	2,083,422	1,280,155
Environment and Conservation, Department of	843,184	497,404	345,780
Geological Survey	182,573	91,030	91,543
Transportation, Department of	2,650,589	2,120,472	530,117
Texas	205,206,977	23,192,709	182,014,268
Agriculture, Department of	1,151,413	1,151,413	0
Alzheimer's Research and Care Consortium (TARCC)	4,615,313	0	4,615,313
Cancer Prevention and Research Institute	169,450,936	0	169,450,936
Environmental Quality, Commission on	2,135,774	1,118,568	1,017,206
Parks and Wildlife Department	4,858,066	3,605,276	1,252,790
State Health Services, Department of	1,838,827	1,022,059	816,768
Transportation, Department of	20,694,167	16,295,393	4,398,774
Water Development Board	462,481	0	462,481
Utah	9,205,399	1,721,014	7,484,385
Energy Development, Office of	500,540	0	500,540
Environmental Quality, Department of	716,389	123,318	593,071
Health, Department of	4,850	150	4,700
Natural Resources, Department of	4,841,922	0	4,841,922
Transportation, Department of	3,141,698	1,597,546	1,544,152
Vermont	1,669,900	1,119,199	550,701
Agriculture, Food, and Markets, Agency of	282,511	0	282,511
Education, Agency of	90,998	0	90,998

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Human Services, Agency of	215,000	215,000	0
Transportation, Agency of	1,081,391	904,199	177,192
Virginia	35,552,565	14,998,852	20,553,713
Aging and Rehabilitative Services, Department of	32,746	32,746	0
Agriculture and Consumer Services, Department of	2,362,121	353,322	2,008,799
Commonwealth Health Research Board	1,399,997	0	1,399,997
Environmental Quality, Department of	103,612	103,612	0
Forensic Science, Department of	971,793	285,878	685,915
Forestry, Department of	577,211	455,760	121,451
Foundation for Healthy Youth	884,774	0	884,774
Innovative Technology, Center for	6,074,557	2,173,491	3,901,066
Institute for Advanced Learning and Research	60,000	0	60,000
Marine Resources Commission	1,885,300	1,544,188	341,112
Mines, Minerals and Energy, Department of	903,212	381,464	521,748
Social Services, Department of	10,000	0	10,000
Transportation, Department of	18,616,858	8,604,050	10,012,808
Wildlife Resources, Department of	1,670,384	1,064,341	606,043
Washington	57,239,095	14,747,139	42,491,956
Agriculture, Department of	2,974,886	2,824,761	150,125
Alfalfa Seed Commission	34,000	0	34,000
Asparagus Commission	70,000	0	70,000
Blueberry Commission	252,900	0	252,900
Commerce, Department of	4,686,545	0	4,686,545
Dairy Products Commission	30,000	0	30,000
Ecology, Department of	1,053,172	181,306	871,866
Fish and Wildlife, Department of	9,811,591	5,706,855	4,104,736
Fruit Commission	146,911	0	146,911
Grain Commission	2,121,448	0	2,121,448
Health, Department of	1,113,483	869,185	244,298
Hop Commission	281,762	0	281,762
Labor and Industries, Department of	3,279,219	689,081	2,590,138
Mint Commission	73,825	0	73,825
Natural Resources, Department of	13,196,143	704,900	12,491,243
Oilseeds Commission	44,448	0	44,448
Pesticide Registration, Commission on	438,075	0	438,075
Potato Commission	760,097	0	760,097
Puget Sound Partnership	1,526,263	250,017	1,276,246
Pulse Crops Commission	159,243	0	159,243
Red Raspberry Commission	307,500	0	307,500
Transportation, Department of	4,890,000	3,477,000	1,413,000
Tree Fruit Research Commission	9,668,382	44,034	9,624,348
Turfgrass Seed Commission	64,018	0	64,018
Wine Commission	255,184	0	255,184
West Virginia	10,862,315	6,903,375	3,958,940
Agriculture, Department of	202,365	202,365	0
Geological and Economic Survey	1,854,645	166,846	1,687,799
Higher Education Policy Commission	5,483,928	3,898,885	1,585,043
Justice and Community Services, Division of	8,000	0	8,000

TABLE 18

State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others ^a
Natural Resources, Department of	1,285,162	1,002,569	282,593
Transportation, Department of	2,028,215	1,632,710	395,505
Wisconsin	14,340,014	8,358,684	5,981,330
Agriculture, Trade and Consumer Protection, Department of	985,099	985,099	0
Economic Development Corporation	3,825,000	0	3,825,000
Natural Resources, Department of	5,423,223	3,596,307	1,826,916
Transportation, Department of	4,106,692	3,777,278	329,414
Wyoming	6,391,060	3,555,506	2,835,554
Agriculture, Department of	561,674	192,300	369,374
Business Council	847,500	0	847,500
Corrections, Department of	123,280	0	123,280
Enhanced Oil Recovery Institute	1,500,000	1,000,000	500,000
Game and Fish Department	1,689,237	1,162,443	526,794
State Geological Survey	184,676	172,547	12,129
Transportation, Department of	1,240,805	1,028,216	212,589
Water Development Office	243,888	0	243,888

^a State and all others category includes primarily other state governments and city, county, regional, township, or other local governments; it also includes nonprofit organizations and companies.

^b U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
United States ^a	692,719,374	297,266,219	344,489,185	8,539,006	14,464,456	24,437,440	3,523,068
Alabama	13,704,571	2,080,826	11,217,850	143,552	75,472	770	186,101
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	280,032	208,057	71,205	0	0	770	0
Education, Department of	9,104,650	0	9,104,650	0	0	0	0
Forensic Sciences, Department of	262,993	0	262,993	0	0	0	0
Geological Survey	2,470,957	738,855	1,558,673	143,552	29,877	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	1,585,939	1,133,914	220,329	0	45,595	0	186,101
Alaska	10,745,451	3,001,085	5,608,966	2,135,400	0	0	0
Environmental Conservation, Department of	19,763	4,941	14,822	0	0	0	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	8,878,600	2,100,200	4,643,000	2,135,400	0	0	0
Railroad Corporation	1,712,088	787,944	924,144	0	0	0	0
Transportation and Public Facilities, Department of	135,000	108,000	27,000	0	0	0	0
Arizona	1,562,435	948,582	596,621	0	14,232	0	3,000
Game and Fish Department	1,002,814	948,582	37,000	0	14,232	0	3,000
Juvenile Corrections, Department of	559,621	0	559,621	0	0	0	0
Arkansas	189,018	55,137	133,881	0	0	0	0
Natural Heritage Commission	142,678	18,065	124,613	0	0	0	0
Transportation, Department of	46,340	37,072	9,268	0	0	0	0
California	81,087,677	5,573,168	74,760,962	728,547	0	0	25,000
Air Resources Board	10,222,932	0	10,222,932	0	0	0	0
Conservation, Department of	398,000	70,000	228,000	75,000	0	0	25,000
Earthquake Authority	500,000	0	0	500,000	0	0	0
Energy Commission	19,478,336	0	19,478,336	0	0	0	0
Environmental Health Hazard Assessment, Office of	17,372,704	0	17,372,704	0	0	0	0
Forestry and Fire Protection, Department of	500,000	0	500,000	0	0	0	0
Motor Vehicles, Department of	1,401,521	52,964	1,195,010	153,547	0	0	0
Pesticide Regulation, Department of	10,404,433	0	10,404,433	0	0	0	0
Public Health, Department of	1,351	169	1,182	0	0	0	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Rehabilitation, Department of	439,191	439,191	0	0	0	0	0
State Water Resources Control Board	3,188,854	1,414,404	1,774,450	0	0	0	0
Transportation, Department of	15,881,012	3,550,610	12,330,402	0	0	0	0
Water Resources, Department of	1,299,343	45,830	1,253,513	0	0	0	0
Colorado	12,047,699	3,720,497	8,256,689	69,999	0	514	0
Agriculture, Department of	305,327	300,327	5,000	0	0	0	0
Higher Education, Department of	53,135	53,135	0	0	0	0	0
Natural Resources, Department of	7,914,944	2,708,309	5,136,122	69,999	0	514	0
Public Health and Environment, Department of	2,344,944	0	2,344,944	0	0	0	0
Public Safety, Department of	826,494	55,871	770,623	0	0	0	0
Transportation, Department of	602,855	602,855	0	0	0	0	0
Connecticut	25,868,030	10,960,026	14,908,004	0	0	0	0
Agricultural Experiment Station	12,445,226	5,337,429	7,107,797	0	0	0	0
Energy and Environmental Protection, Department of	6,802,949	4,790,186	2,012,763	0	0	0	0
Mental Health and Addiction Services, Department of	6,310,349	626,074	5,684,275	0	0	0	0
Transportation, Department of	309,506	206,337	103,169	0	0	0	0
Delaware	2,312,965	515,084	1,777,081	0	20,800	0	0
Geological Survey	2,133,165	405,384	1,727,781	0	0	0	0
Natural Resources and Environmental Control, Department of	159,000	109,700	49,300	0	0	0	0
Sustainable Energy Utility	20,800	0	0	0	20,800	0	0
District of Columbia	2,510,818	1,151,218	1,328,100	0	31,500	0	0
Energy and Environment, Department of	230,000	70,000	160,000	0	0	0	0
Forensic Sciences, Department of	114,283	30,000	52,783	0	31,500	0	0
Health, Department of	1,037,450	947,950	89,500	0	0	0	0
Transportation, Department of	129,085	103,268	25,817	0	0	0	0
Water and Sewer Authority	1,000,000	0	1,000,000	0	0	0	0
Florida	52,430,371	14,172,701	32,435,980	2,837	214,843	5,192,342	411,668
Agriculture and Consumer Services, Department of	2,169,058	2,013,715	155,343	0	0	0	0
Citrus, Department of	156,535	0	156,535	0	0	0	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Fish and Wildlife Conservation Commission	48,601,987	12,158,986	30,621,311	2,837	214,843	5,192,342	411,668
Transportation, Department of	1,502,791	0	1,502,791	0	0	0	0
Georgia	2,648,196	2,549,282	98,914	0	0	0	0
Natural Resources, Department of	214,928	116,014	98,914	0	0	0	0
Southern States Energy Board	2,433,268	2,433,268	0	0	0	0	0
Hawaii	6,531,042	5,876,055	654,987	0	0	0	0
Agriculture, Department of	384,418	384,418	0	0	0	0	0
Business, Economic Development, and Tourism, Department of	5,996,624	5,491,637	504,987	0	0	0	0
Natural Energy Laboratory	150,000	0	150,000	0	0	0	0
Idaho	7,967,885	6,773,965	1,123,739	0	0	70,181	0
Agriculture, Department of	1,300	1,300	0	0	0	0	0
Fish and Game, Department of	7,845,168	6,675,531	1,099,456	0	0	70,181	0
Transportation Department	121,417	97,134	24,283	0	0	0	0
Illinois	626,262	0	626,262	0	0	0	0
Transportation, Department of	626,262	0	626,262	0	0	0	0
Indiana	92,268	69,814	17,454	5,000	0	0	0
St. Joseph River Basin Commission	5,000	0	0	5,000	0	0	0
Transportation, Department of	87,268	69,814	17,454	0	0	0	0
Iowa	3,430,444	1,447,181	1,951,954	31,309	0	0	0
Corrections	470,931	0	454,931	16,000	0	0	0
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	417,493	220,463	181,721	15,309	0	0	0
Natural Resources, Department of	2,542,020	1,226,718	1,315,302	0	0	0	0
Kansas	999,734	753,195	246,539	0	0	0	0
State Board of Regents	5,491	0	5,491	0	0	0	0
Transportation, Department of	937,241	746,193	191,048	0	0	0	0
Water Office	57,002	7,002	50,000	0	0	0	0
Kentucky	1,752,643	1,073,088	679,555	0	0	0	0
Fish and Wildlife Resources, Department of	1,752,643	1,073,088	679,555	0	0	0	0
Louisiana	11,101,353	8,193,096	2,908,257	0	0	0	0
Coastal Protection and Restoration Authority	475,534	25,612	449,922	0	0	0	0
Education, Department of	326,982	155,251	171,731	0	0	0	0
Transportation and Development, Department of	4,500,000	3,600,000	900,000	0	0	0	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Wildlife and Fisheries, Department of	5,798,837	4,412,233	1,386,604	0	0	0	0
Maine	4,038,999	2,853,740	1,166,343	0	0	18,916	0
Agriculture, Conservation and Forestry, Department of	565,473	120,746	444,727	0	0	0	0
Inland Fisheries and Wildlife, Department of	763,201	590,794	153,491	0	0	18,916	0
Marine Resources, Department of	2,348,325	1,852,200	496,125	0	0	0	0
Transportation, Department of	362,000	290,000	72,000	0	0	0	0
Maryland	659,436	180,086	344,167	0	55,183	80,000	0
Natural Resources, Department of	79,183	12,000	12,000	0	55,183	0	0
Transportation, Department of	580,253	168,086	332,167	0	0	80,000	0
Massachusetts	9,681,990	6,242,507	3,439,483	0	0	0	0
Environmental Protection, Department of	248,990	22,507	226,483	0	0	0	0
Fish and Game, Department of	9,333,000	6,220,000	3,113,000	0	0	0	0
Water Resources Authority	100,000	0	100,000	0	0	0	0
Michigan	527,096	0	527,096	0	0	0	0
Environmental, Great Lakes and Energy, Department of	527,096	0	527,096	0	0	0	0
Minnesota	2,583,398	947,024	1,636,374	0	0	0	0
Agriculture, Department of	886,703	0	886,703	0	0	0	0
Forest Resources Council	100,000	0	100,000	0	0	0	0
Natural Resources, Department of	1,591,195	947,024	644,171	0	0	0	0
Transportation, Department of	5,500	0	5,500	0	0	0	0
Mississippi	1,236,050	765,127	409,288	61,635	0	0	0
Environmental Quality, Department of	110,635	110,635	0	0	0	0	0
Marine Resources, Department of	304,290	111,240	131,415	61,635	0	0	0
Transportation, Department of	3,071	2,457	614	0	0	0	0
Wildlife, Fisheries, and Parks, Department of	818,054	540,795	277,259	0	0	0	0
Missouri	8,112,983	3,249,228	4,863,755	0	0	0	0
Conservation, Department of	8,068,161	3,237,906	4,830,255	0	0	0	0
Health and Senior Services, Department of	29,761	11,322	18,439	0	0	0	0
Natural Resources, Department of	15,061	0	15,061	0	0	0	0
Montana	6,104,413	2,567,184	556,128	0	2,981,101	0	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Environmental Quality, Department of	92,296	40,921	51,375	0	0	0	0
Fish, Wildlife and Parks, Department of	5,916,231	2,449,554	485,576	0	2,981,101	0	0
Transportation, Department of	95,886	76,709	19,177	0	0	0	0
Nebraska	2,342,783	1,614,866	727,917	0	0	0	0
Game and Parks Commission	2,332,795	1,614,866	717,929	0	0	0	0
Natural Resources, Department of	9,988	0	9,988	0	0	0	0
Nevada	188,146	128,146	60,000	0	0	0	0
Agriculture, Department of	188,146	128,146	60,000	0	0	0	0
New Hampshire	49,309	39,447	9,862	0	0	0	0
Transportation, Department of	49,309	39,447	9,862	0	0	0	0
New Jersey	2,624,342	437,738	2,186,604	0	0	0	0
Children and Families, Department of	181,115	9,406	171,709	0	0	0	0
Corrections, Department of	305,895	0	305,895	0	0	0	0
Environmental Protection, Department of	1,802,000	93,000	1,709,000	0	0	0	0
Pinelands Commission	335,332	335,332	0	0	0	0	0
New Mexico	2,594,660	1,864,128	627,532	0	103,000	0	0
Cultural Affairs, Department of	103,000	0	0	0	103,000	0	0
Game and Fish, Department of	500,000	250,000	250,000	0	0	0	0
Transportation, Department of	1,991,660	1,614,128	377,532	0	0	0	0
New York	278,751,443	143,087,081	101,573,996	1,668,591	10,928,665	18,691,286	2,801,824
Agriculture and Markets, Department of	2,290,000	2,290,000	0	0	0	0	0
Energy Research and Development Authority	8,152,894	0	8,152,894	0	0	0	0
Environmental Conservation, Department of	4,490,190	1,372,807	3,117,383	0	0	0	0
Health, Department of	32,566,879	19,197,650	10,157,327	1,396,591	1,655,018	131,922	28,371
Mental Health, Office of	144,972,379	72,133,317	57,000,000	0	7,865,806	5,807,396	2,165,860
People with Developmental Disabilities, Office of	2,136,105	1,624,860	157,402	0	353,843	0	0
Power Authority	5,915,635	0	5,643,635	272,000	0	0	0
Roswell Park Comprehensive Cancer Center	66,297,074	44,803,984	7,079,531	0	1,053,998	12,751,968	607,593
State Museum	10,089,582	191,899	9,897,683	0	0	0	0
Transportation, Department of	1,840,705	1,472,564	368,141	0	0	0	0
North Carolina	17,813,294	1,369,902	16,443,392	0	0	0	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Agriculture and Consumer Services, Department of	13,922,911	0	13,922,911	0	0	0	0
Environmental Quality, Department of	1,421,353	871,398	549,955	0	0	0	0
Natural and Cultural Resources, Department of	1,690,939	4,844	1,686,095	0	0	0	0
Transportation, Department of	778,091	493,660	284,431	0	0	0	0
North Dakota	346,342	156,288	190,054	0	0	0	0
Historical Society of North Dakota	223,743	58,209	165,534	0	0	0	0
Transportation, Department of	122,599	98,079	24,520	0	0	0	0
Ohio	2,005,523	1,305,632	699,891	0	0	0	0
Environmental Protection Agency	53,352	53,352	0	0	0	0	0
Natural Resources, Department of	1,952,171	1,252,280	699,891	0	0	0	0
Oklahoma	2,015,986	1,373,253	622,733	20,000	0	0	0
Grand River Dam Authority	140,000	0	140,000	0	0	0	0
Health, Department of	527,041	457,041	50,000	20,000	0	0	0
Human Services, Department of	457,147	380,434	76,713	0	0	0	0
Transportation, Department of	844,589	500,371	344,218	0	0	0	0
Wildlife Conservation, Department of	47,209	35,407	11,802	0	0	0	0
Oregon	15,852,036	9,822,576	5,531,176	498,284	0	0	0
Education, Department of	639,639	146,584	493,055	0	0	0	0
Environmental Quality, Department of	433,500	0	408,500	25,000	0	0	0
Fish and Wildlife, Department of	11,265,588	8,561,667	2,703,921	0	0	0	0
Forestry, Department of	449,480	25,000	413,480	11,000	0	0	0
Geology and Mineral Industries, Department of	496,117	421,307	74,810	0	0	0	0
Human Services, Department of	1,488,479	599,557	794,386	94,536	0	0	0
Transportation, Department of	81,545	65,236	16,309	0	0	0	0
Water Resources Department	987,464	0	619,716	367,748	0	0	0
Watershed Enhancement Board	10,224	3,225	6,999	0	0	0	0
Pennsylvania	7,874,722	4,771,022	2,939,149	163,303	1,248	0	0
Conservation and Natural Resources, Department of	1,248	0	0	0	1,248	0	0
Environmental Protection, Department of	18,052	10,830	7,222	0	0	0	0
Fish and Boat Commission	161,651	85,806	74,042	1,803	0	0	0
Game Commission	7,358,771	4,500,886	2,857,885	0	0	0	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Susquehanna River Basin Commission	335,000	173,500	0	161,500	0	0	0
Rhode Island	3,098,833	1,620,109	1,478,724	0	0	0	0
Environmental Management, Department of; Marine Fisheries	2,799,416	1,490,720	1,308,696	0	0	0	0
Environmental Management, Department of; Narragansett Bay National Estuarine Research Reserve	76,014	18,540	57,474	0	0	0	0
Water Resources Board	223,403	110,849	112,554	0	0	0	0
South Carolina	27,894,342	19,807,012	7,975,155	0	16,700	0	95,475
Health and Environmental Control, Department of	1,233,275	1,233,275	0	0	0	0	0
Natural Resources, Department of	24,796,999	17,421,557	7,326,068	0	0	0	49,374
Sea Grant Consortium	1,843,674	1,152,180	628,693	0	16,700	0	46,101
Transportation, Department of	20,394	0	20,394	0	0	0	0
South Dakota	327,346	176,221	151,125	0	0	0	0
Soybean Research and Promotion Council	25,724	0	25,724	0	0	0	0
Transportation, Department of	301,622	176,221	125,401	0	0	0	0
Tennessee	1,607,509	960,341	636,455	0	10,713	0	0
Education, Department of	1,052,595	738,250	303,632	0	10,713	0	0
Environment and Conservation, Department of	372,341	131,061	241,280	0	0	0	0
Geological Survey	182,573	91,030	91,543	0	0	0	0
Texas	3,165,023	1,622,752	1,542,271	0	0	0	0
Environmental Quality, Commission on	42,206	0	42,206	0	0	0	0
Parks and Wildlife Department	2,470,790	1,587,493	883,297	0	0	0	0
State Health Services, Department of	652,027	35,259	616,768	0	0	0	0
Utah	6,070,743	213,721	5,857,022	0	0	0	0
Environmental Quality, Department of	103,210	37,390	65,820	0	0	0	0
Health, Department of	4,850	150	4,700	0	0	0	0
Natural Resources, Department of	4,841,922	0	4,841,922	0	0	0	0
Transportation, Department of	1,120,761	176,181	944,580	0	0	0	0
Vermont	633,399	587,080	46,319	0	0	0	0
Human Services, Agency of	215,000	215,000	0	0	0	0	0
Transportation, Agency of	418,399	372,080	46,319	0	0	0	0
Virginia	12,627,565	4,840,559	7,727,006	0	0	60,000	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Aging and Rehabilitative Services, Department of	28,028	28,028	0	0	0	0	0
Environmental Quality, Department of	34,102	34,102	0	0	0	0	0
Forensic Science, Department of	971,793	285,878	685,915	0	0	0	0
Forestry, Department of	533,801	412,350	121,451	0	0	0	0
Innovative Technology, Center for	674,351	303,768	370,583	0	0	0	0
Institute for Advanced Learning and Research	60,000	0	0	0	0	60,000	0
Marine Resources Commission	204,543	204,543	0	0	0	0	0
Mines, Minerals and Energy, Department of	903,212	381,464	521,748	0	0	0	0
Social Services, Department of	10,000	0	10,000	0	0	0	0
Transportation, Department of	9,207,735	3,190,426	6,017,309	0	0	0	0
Washington	23,415,061	8,746,207	11,579,724	3,004,700	10,999	73,431	0
Ecology, Department of	887,977	181,306	705,671	0	1,000	0	0
Fish and Wildlife, Department of	9,569,456	5,705,885	876,046	2,987,525	0	0	0
Health, Department of	1,057,809	825,726	232,083	0	0	0	0
Labor and Industries, Department of	3,279,219	689,081	2,590,138	0	0	0	0
Natural Resources, Department of	5,721,319	283,299	5,410,846	17,175	9,999	0	0
Transportation, Department of	1,293,000	1,051,000	242,000	0	0	0	0
Tree Fruit Research Commission	1,606,281	9,910	1,522,940	0	0	73,431	0
West Virginia	3,317,637	1,617,169	1,695,869	4,599	0	0	0
Agriculture, Department of	202,365	202,365	0	0	0	0	0
Geological and Economic Survey	1,576,721	166,846	1,405,276	4,599	0	0	0
Higher Education Policy Commission	400,180	400,180	0	0	0	0	0
Justice and Community Services, Division of	8,000	0	8,000	0	0	0	0
Natural Resources, Department of	1,130,371	847,778	282,593	0	0	0	0
Wisconsin	4,674,607	3,629,052	1,045,555	0	0	0	0
Natural Resources, Department of	4,402,853	3,415,878	986,975	0	0	0	0
Transportation, Department of	271,754	213,174	58,580	0	0	0	0
Wyoming	2,875,496	1,757,021	867,225	1,250	0	250,000	0
Corrections, Department of	123,280	0	123,280	0	0	0	0
Enhanced Oil Recovery Institute	1,000,000	500,000	250,000	0	0	250,000	0

TABLE 19

State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2020

(Dollars)

State and department or agency	R&D expenditures for intramural performers	Source of funds					
		Federal government	Own state government	Other nonfederal governments	Nonprofit organizations	Businesses and individuals	Higher education institutions
Game and Fish Department	1,476,267	1,011,456	463,561	1,250	0	0	0
State Geological Survey	184,676	172,547	12,129	0	0	0	0
Transportation, Department of	91,273	73,018	18,255	0	0	0	0

^a U.S. total reflects all 50 states and the District of Columbia.

Note(s):

Intramural performers include a department's or agency's own employees who perform R&D and services performed by others in support of an internal R&D project.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
United States ^e	2,444,981,212	692,719,374	1,752,261,838	951,571,893	459,984,365	340,705,580
Alabama	25,695,555	13,704,571	11,990,984	4,956,721	13,600	7,020,663
Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority	4,000	0	4,000	0	0	4,000
Commerce, Department of	3,000,000	0	3,000,000	1,000,000	0	2,000,000
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	1,930,023	280,032	1,649,991	1,636,391	13,600	0
Education, Department of	9,755,650	9,104,650	651,000	0	0	651,000
Forensic Sciences, Department of	262,993	262,993	0	0	0	0
Geological Survey	2,470,957	2,470,957	0	0	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	1,585,939	1,585,939	0	0	0	0
Supercomputer Authority	3,028,045	0	3,028,045	884,266	0	2,143,779
Transportation, Department of	3,657,948	0	3,657,948	1,436,064	0	2,221,884
Alaska	15,193,507	10,745,451	4,448,056	1,340,349	3,107,707	0
Environmental Conservation, Department of	474,542	19,763	454,779	104,349	350,430	0
Housing Finance Corporation	500,000	0	500,000	0	500,000	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	8,878,600	8,878,600	0	0	0	0
Railroad Corporation	3,824,365	1,712,088	2,112,277	0	2,112,277	0
Transportation and Public Facilities, Department of	1,516,000	135,000	1,381,000	1,236,000	145,000	0
Arizona	16,010,502	1,562,435	14,448,067	7,224,814	813,783	6,409,470
Agriculture, Department of	1,220,812	0	1,220,812	1,081,539	139,273	0
Game and Fish Department	1,361,376	1,002,814	358,562	358,562	0	0
Health Services, Department of	11,085,857	0	11,085,857	5,056,722	0	6,029,135
Juvenile Corrections, Department of	559,621	559,621	0	0	0	0
Transportation, Department of	1,782,836	0	1,782,836	727,991	674,510	380,335
Arkansas	19,921,168	189,018	19,732,150	19,328,641	398,009	5,500
Agriculture, Department of	251,460	0	251,460	251,460	0	0
Beef Council	40,223	0	40,223	40,223	0	0
Corn and Grain Sorghum Board	965,000	0	965,000	965,000	0	0
Economic Development Commission	5,446,430	0	5,446,430	5,152,680	293,750	0
Game and Fish Commission	954,281	0	954,281	954,281	0	0
Natural Heritage Commission	274,611	142,678	131,933	22,174	104,259	5,500
Rice Research and Promotion Board	8,623,500	0	8,623,500	8,623,500	0	0
Soybean Promotion Board	2,625,555	0	2,625,555	2,625,555	0	0
Transportation, Department of	690,108	46,340	643,768	643,768	0	0
Wheat Promotion Board	50,000	0	50,000	50,000	0	0
California	533,900,597	81,087,677	452,812,920	143,835,743	209,309,516	99,667,661
Air Resources Board	16,709,642	10,222,932	6,486,710	5,028,759	112,854	1,345,097
Children and Families Commission (First 5 California)	3,518,680	0	3,518,680	565,000	0	2,953,680
Conservation, Department of	1,143,000	398,000	745,000	525,000	200,000	20,000
Corrections and Rehabilitation, Department of	1,974,791	0	1,974,791	0	1,974,791	0
Covered California	3,209,181	0	3,209,181	0	3,209,181	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Delta Stewardship Council	5,602,379	0	5,602,379	3,647,328	418,545	1,536,506
Earthquake Authority	2,664,000	500,000	2,164,000	2,000,000	164,000	0
Energy Commission	219,532,543	19,478,336	200,054,207	11,004,436	177,601,346	11,448,425
Environmental Health Hazard Assessment, Office of	19,726,954	17,372,704	2,354,250	2,282,284	9,998	61,968
Food and Agriculture, Department of	4,213,376	0	4,213,376	3,194,834	34,112	984,430
Forestry and Fire Protection, Department of	3,500,000	500,000	3,000,000	3,000,000	0	0
Horse Racing Board	627,442	0	627,442	627,442	0	0
Housing and Community Development, Department of	75,000	0	75,000	0	0	75,000
Institute for Regenerative Medicine	127,546,003	0	127,546,003	82,369,527	22,357,221	22,819,255
Mental Health Services Oversight and Accountability Commission	2,500,000	0	2,500,000	2,500,000	0	0
Motor Vehicles, Department of	1,401,521	1,401,521	0	0	0	0
Pesticide Regulation, Department of	14,088,416	10,404,433	3,683,983	977,272	0	2,706,711
Public Health, Department of	3,370,497	1,351	3,369,146	3,369,146	0	0
Public Utilities Commission, Executive Division	37,000,000	0	37,000,000	0	0	37,000,000
Rehabilitation, Department of	2,814,595	439,191	2,375,404	1,400,744	0	974,660
State Coastal Conservancy	1,620,693	0	1,620,693	186,833	302,415	1,131,445
State Water Resources Control Board	17,957,684	3,188,854	14,768,830	2,787,270	1,447,643	10,533,917
Transportation, Department of	41,248,806	15,881,012	25,367,794	18,182,119	1,109,108	6,076,567
Water Resources, Department of	1,855,394	1,299,343	556,051	187,749	368,302	0
Colorado	34,365,638	12,047,699	22,317,939	8,619,433	12,006,033	1,692,473
Agriculture, Department of	635,148	305,327	329,821	320,821	0	9,000
Economic Development and International Trade, Office of	15,456,483	0	15,456,483	4,353,483	10,743,000	360,000
Higher Education Competitive, Research Authority	2,455,224	0	2,455,224	2,455,224	0	0
Higher Education, Department of	124,839	53,135	71,704	28,223	43,481	0
Natural Resources, Department of	8,002,949	7,914,944	88,005	72,851	15,154	0
Public Health and Environment, Department of	3,808,558	2,344,944	1,463,614	1,067,521	396,093	0
Public Safety, Department of	826,494	826,494	0	0	0	0
Transportation, Department of	2,833,633	602,855	2,230,778	99,000	808,305	1,323,473
Wine Industry Development Board	222,310	0	222,310	222,310	0	0
Connecticut	58,810,853	25,868,030	32,942,823	7,272,360	24,070,158	1,600,305
Agricultural Experiment Station	12,445,226	12,445,226	0	0	0	0
Children and Families, Department of	604,461	0	604,461	359,852	0	244,609
Education, Department of	429,097	0	429,097	429,097	0	0
Energy and Environmental Protection, Department of	7,498,136	6,802,949	695,187	570,187	125,000	0
Innovation Inc.	27,245,173	0	27,245,173	3,300,015	23,945,158	0
Mental Health and Addiction Services, Department of	6,310,349	6,310,349	0	0	0	0
Public Health, Department of	27,000	0	27,000	27,000	0	0
Social Services, Department of	1,516,916	0	1,516,916	1,516,916	0	0
Transportation, Department of	2,734,495	309,506	2,424,989	1,069,293	0	1,355,696
Delaware	3,598,156	2,312,965	1,285,191	859,673	374,718	50,800

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Geological Survey	2,183,965	2,133,165	50,800	0	0	50,800
Natural Resources and Environmental Control, Department of	159,000	159,000	0	0	0	0
Sustainable Energy Utility	20,800	20,800	0	0	0	0
Transportation, Department of	1,234,391	0	1,234,391	859,673	374,718	0
District of Columbia	5,860,668	2,510,818	3,349,850	1,015,794	2,134,056	200,000
Energy and Environment, Department of	1,550,000	230,000	1,320,000	86,000	1,234,000	0
Forensic Sciences, Department of	114,283	114,283	0	0	0	0
Health, Department of	1,957,090	1,037,450	919,640	348,384	571,256	0
Transportation, Department of	239,295	129,085	110,210	81,410	28,800	0
Water and Sewer Authority	2,000,000	1,000,000	1,000,000	500,000	300,000	200,000
Florida	184,600,202	52,430,371	132,169,831	72,664,126	3,549,778	55,955,927
Agriculture and Consumer Services, Department of	22,450,768	2,169,058	20,281,710	5,883,114	365,639	14,032,957
Business and Professional Regulation, Department of	88,406	0	88,406	88,406	0	0
Citrus, Department of	1,127,588	156,535	971,053	229,003	92,050	650,000
Environmental Protection, Department of	217,759	0	217,759	29,919	40,000	147,840
Fish and Wildlife Conservation Commission	56,278,906	48,601,987	7,676,919	1,009,605	631,045	6,036,269
Health, Department of	91,114,600	0	91,114,600	56,025,739	0	35,088,861
Space Florida	1,299,010	0	1,299,010	100,000	1,199,010	0
Transportation, Department of	12,023,165	1,502,791	10,520,374	9,298,340	1,222,034	0
Georgia	15,877,238	2,648,196	13,229,042	5,813,168	3,887,493	3,528,381
Natural Resources, Department of	997,526	214,928	782,598	782,598	0	0
Seed Development Commission	255,642	0	255,642	255,642	0	0
Southern States Energy Board	8,092,378	2,433,268	5,659,110	1,288,952	2,387,493	1,982,665
Transportation, Department of	6,531,692	0	6,531,692	3,485,976	1,500,000	1,545,716
Hawaii	11,122,545	6,531,042	4,591,503	1,238,450	3,263,143	89,910
Agriculture, Department of	702,000	384,418	317,582	227,672	0	89,910
Business, Economic Development, and Tourism, Department of	7,297,767	5,996,624	1,301,143	0	1,301,143	0
Land and Natural Resources, Department of	385,278	0	385,278	373,278	12,000	0
Natural Energy Laboratory	2,250,000	150,000	2,100,000	150,000	1,950,000	0
Transportation, Department of	487,500	0	487,500	487,500	0	0
Idaho	21,882,976	7,967,885	13,915,091	9,416,047	283,302	4,215,742
Agriculture, Department of	900,539	1,300	899,239	621,465	0	277,774
Alfalfa and Clover Seed Commission	1,500	0	1,500	1,500	0	0
Barley Commission	238,859	0	238,859	191,609	0	47,250
Bean Commission	28,220	0	28,220	28,220	0	0
Beef Council	88,187	0	88,187	87,562	0	625
Commerce, Department of	953,711	0	953,711	953,711	0	0
Dairy West	2,900,000	0	2,900,000	2,900,000	0	0
Environmental Quality, Department of	450,000	0	450,000	0	0	450,000
Fish and Game, Department of	10,381,981	7,845,168	2,536,813	1,334,606	0	1,202,207
Honey Commission	1,500	0	1,500	1,500	0	0
Oilseed Commission	62,000	0	62,000	62,000	0	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Pea and Lentil Commission	73,418	0	73,418	73,418	0	0
Potato Commission	1,596,042	0	1,596,042	1,495,492	100,550	0
Transportation Department	3,069,711	121,417	2,948,294	596,302	182,752	2,169,240
Wheat Commission	1,137,308	0	1,137,308	1,068,662	0	68,646
Illinois	16,055,917	626,262	15,429,655	10,844,423	254,784	4,330,448
Children and Family Services, Department of	2,559,932	0	2,559,932	2,559,932	0	0
Human Services, Department of	244,978	0	244,978	0	0	244,978
Nutrient Research and Education	3,140,385	0	3,140,385	3,140,385	0	0
Public Health, Department of	399,924	0	399,924	0	0	399,924
Transportation, Department of	9,710,698	626,262	9,084,436	5,144,106	254,784	3,685,546
Indiana	9,591,408	92,268	9,499,140	8,505,448	100,000	893,692
Economic Development Corporation	595,000	0	595,000	200,000	0	395,000
Environmental Management, Department of	56,764	0	56,764	56,764	0	0
Natural Resources, Department of	100,000	0	100,000	100,000	0	0
St. Joseph River Basin Commission	105,000	5,000	100,000	0	100,000	0
Transportation, Department of	8,734,644	87,268	8,647,376	8,148,684	0	498,692
Iowa	12,348,062	3,430,444	8,917,618	8,383,653	519,554	14,411
Beef Industry Council	60,000	0	60,000	60,000	0	0
Corrections	470,931	470,931	0	0	0	0
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	417,493	417,493	0	0	0	0
Natural Resources, Department of	4,170,756	2,542,020	1,628,736	1,439,256	175,069	14,411
Transportation, Department of	7,228,882	0	7,228,882	6,884,397	344,485	0
Kansas	13,152,904	999,734	12,153,170	10,382,216	0	1,770,954
Corn Commission	871,765	0	871,765	871,765	0	0
Grain Sorghum Commission	445,300	0	445,300	445,300	0	0
Soybean Commission	1,200,000	0	1,200,000	1,200,000	0	0
State Board of Regents	998,756	5,491	993,265	993,265	0	0
Sunflower Commission	20,000	0	20,000	10,000	0	10,000
Transportation, Department of	3,637,912	937,241	2,700,671	994,717	0	1,705,954
Water Office	429,361	57,002	372,359	317,359	0	55,000
Wheat Commission	1,138,289	0	1,138,289	1,138,289	0	0
Wildlife, Parks, and Tourism, Department of	4,411,521	0	4,411,521	4,411,521	0	0
Kentucky	26,782,125	1,752,643	25,029,482	23,155,605	1,636,871	237,006
Behavioral Health, Developmental and Intellectual Disabilities	67,500	0	67,500	0	0	67,500
Economic Development, Cabinet for	3,051,000	0	3,051,000	1,640,000	1,411,000	0
Fish and Wildlife Resources, Department of	2,008,546	1,752,643	255,903	57,032	198,871	0
Horse Racing Commission	430,748	0	430,748	282,242	0	148,506
Nature Preserves, Office of	34,200	0	34,200	7,200	27,000	0
Postsecondary Education, Council on	9,939,022	0	9,939,022	9,939,022	0	0
Public Health, Department for	3,336,309	0	3,336,309	3,336,309	0	0
Public Service Commission	21,000	0	21,000	0	0	21,000
Soybean Promotion Board	658,864	0	658,864	658,864	0	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Transportation Cabinet	7,234,936	0	7,234,936	7,234,936	0	0
Louisiana	32,360,516	11,101,353	21,259,163	18,797,267	2,249,822	212,074
Board of Regents	12,728,300	0	12,728,300	12,728,300	0	0
Coastal Protection and Restoration Authority	3,436,344	475,534	2,960,810	566,596	2,249,822	144,392
Education, Department of	394,664	326,982	67,682	0	0	67,682
Transportation and Development, Department of	9,200,000	4,500,000	4,700,000	4,700,000	0	0
Wildlife and Fisheries, Department of	6,601,208	5,798,837	802,371	802,371	0	0
Maine	29,035,990	4,038,999	24,996,991	693,082	15,476,463	8,827,446
Agriculture, Conservation and Forestry, Department of	1,511,473	565,473	946,000	0	946,000	0
Inland Fisheries and Wildlife, Department of	1,080,841	763,201	317,640	317,640	0	0
Marine Resources, Department of	2,458,575	2,348,325	110,250	0	110,250	0
Technology Institute	23,161,101	0	23,161,101	265,442	14,068,213	8,827,446
Transportation, Department of	824,000	362,000	462,000	110,000	352,000	0
Maryland	33,407,022	659,436	32,747,586	29,720,355	2,000,399	1,026,832
Education, Department of	1,160,456	0	1,160,456	1,160,456	0	0
Energy Administration	1,026,832	0	1,026,832	0	0	1,026,832
Health and Mental Hygiene, Department of	15,000,000	0	15,000,000	15,000,000	0	0
Natural Resources, Department of	607,906	79,183	528,723	528,723	0	0
Technology Development Corporation	10,964,344	0	10,964,344	9,466,432	1,497,912	0
Transportation, Department of	4,647,484	580,253	4,067,231	3,564,744	502,487	0
Massachusetts	31,700,411	9,681,990	22,018,421	12,797,171	7,736,552	1,484,698
Clean Energy Technology Center	4,008,011	0	4,008,011	739,388	3,168,623	100,000
Environmental Protection, Department of	309,872	248,990	60,882	26,308	29,876	4,698
Fish and Game, Department of	9,493,000	9,333,000	160,000	160,000	0	0
Gaming Commission	2,670,000	0	2,670,000	2,370,000	0	300,000
Life Sciences Center	1,030,299	0	1,030,299	0	1,030,299	0
Massventures	3,100,000	0	3,100,000	0	3,100,000	0
Mental Health, Department of	1,800,000	0	1,800,000	1,800,000	0	0
Public Health, Department of	1,849,229	0	1,849,229	1,426,475	407,754	15,000
Technology Park Corporation	3,175,000	0	3,175,000	3,175,000	0	0
Transportation, Department of	4,065,000	0	4,065,000	3,000,000	0	1,065,000
Water Resources Authority	200,000	100,000	100,000	100,000	0	0
Michigan	11,191,816	527,096	10,664,720	5,687,599	1,125,114	3,852,007
Agriculture and Rural Development, Department of	3,316,092	0	3,316,092	2,333,765	100,240	882,087
Environmental, Great Lakes and Energy, Department of	1,265,405	527,096	738,309	298,622	305,699	133,988
Transportation, Department of	6,610,319	0	6,610,319	3,055,212	719,175	2,835,932
Minnesota	20,511,698	2,583,398	17,928,300	11,890,847	3,160,956	2,876,497
Agriculture, Department of	6,203,140	886,703	5,316,437	4,589,991	171,515	554,931
Forest Resources Council	150,000	100,000	50,000	50,000	0	0
Natural Resources, Department of	1,941,631	1,591,195	350,436	340,342	10,094	0
Pollution Control Agency	25,981	0	25,981	0	24,381	1,600
Transportation, Department of	12,190,946	5,500	12,185,446	6,910,514	2,954,966	2,319,966

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Mississippi	10,268,396	1,236,050	9,032,346	4,803,101	832,974	3,396,271
Agriculture and Commerce, Department of	180,501	0	180,501	180,501	0	0
Environmental Quality, Department of	1,804,582	110,635	1,693,947	1,693,947	0	0
Gulf States Marine Fisheries Commission	1,100,424	0	1,100,424	913,282	125,965	61,177
Marine Resources, Department of	1,060,182	304,290	755,892	755,892	0	0
Transportation, Department of	4,417,666	3,071	4,414,595	458,660	700,341	3,255,594
Wildlife, Fisheries, and Parks, Department of	1,705,041	818,054	886,987	800,819	6,668	79,500
Missouri	14,826,364	8,112,983	6,713,381	5,121,461	1,331,474	260,446
Agriculture, Department of	95,763	0	95,763	95,763	0	0
Conservation, Department of	10,860,153	8,068,161	2,791,992	2,538,303	253,689	0
Health and Senior Services, Department of	29,761	29,761	0	0	0	0
Mental Health, Department of	121,250	0	121,250	121,250	0	0
Natural Resources, Department of	743,537	15,061	728,476	468,030	0	260,446
Technology Corporation	582,296	0	582,296	19,796	562,500	0
Transportation, Department of	1,557,401	0	1,557,401	1,042,116	515,285	0
Wine and Grape Board	836,203	0	836,203	836,203	0	0
Montana	13,131,022	6,104,413	7,026,609	5,798,378	300,381	927,850
Agriculture, Department of	3,566,938	0	3,566,938	3,566,938	0	0
Environmental Quality, Department of	92,296	92,296	0	0	0	0
Fish, Wildlife and Parks, Department of	7,640,799	5,916,231	1,724,568	1,724,568	0	0
Natural Resources and Conservation, Department of	20,000	0	20,000	20,000	0	0
Transportation, Department of	1,810,989	95,886	1,715,103	486,872	300,381	927,850
Nebraska	32,423,818	2,342,783	30,081,035	27,924,739	1,287,704	868,592
Agriculture, Department of	645,372	0	645,372	579,990	172	65,210
Corn Board	803,068	0	803,068	653,068	0	150,000
Dairy Industry Development Board	87,654	0	87,654	87,654	0	0
Dry Bean Commission	290,954	0	290,954	290,954	0	0
Economic Development, Department of	2,184,835	0	2,184,835	1,004,221	1,180,614	0
Game and Parks Commission	5,798,854	2,332,795	3,466,059	3,466,059	0	0
Grain Sorghum Board	3,672	0	3,672	0	0	3,672
Health and Human Services, Department of	19,453,501	0	19,453,501	19,453,501	0	0
Natural Resources, Department of	958,089	9,988	948,101	201,180	106,918	640,003
Transportation, Department of	1,909,404	0	1,909,404	1,899,697	0	9,707
Wheat Board	288,415	0	288,415	288,415	0	0
Nevada	4,764,898	188,146	4,576,752	3,484,810	163,044	928,898
Agriculture, Department of	188,146	188,146	0	0	0	0
Economic Development, Governor's office of	3,055,388	0	3,055,388	2,857,037	0	198,351
Transportation, Department of	1,521,364	0	1,521,364	627,773	163,044	730,547
New Hampshire	8,221,518	49,309	8,172,209	604,163	7,042,440	525,606
Agriculture, Markets and Food, Department of	146,743	0	146,743	113,278	0	33,465
Business and Economic Affairs, Department of	7,275,000	0	7,275,000	275,000	7,000,000	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Transportation, Department of	799,775	49,309	750,466	215,885	42,440	492,141
New Jersey	23,754,925	2,624,342	21,130,583	18,717,366	1,393,217	1,020,000
Children and Families, Department of	237,423	181,115	56,308	0	36,308	20,000
Corrections, Department of	305,895	305,895	0	0	0	0
Environmental Protection, Department of	2,608,000	1,802,000	806,000	759,718	46,282	0
Health, Department of	940,186	0	940,186	718,407	221,779	0
Pinelands Commission	537,794	335,332	202,462	0	202,462	0
Research Initiatives, Office of	13,000,000	0	13,000,000	12,600,000	400,000	0
Secretary of Higher Education, Office of	3,000,000	0	3,000,000	2,000,000	0	1,000,000
Transit, New Jersey	511,533	0	511,533	511,533	0	0
Transportation, Department of	2,614,094	0	2,614,094	2,127,708	486,386	0
New Mexico	5,227,599	2,594,660	2,632,939	1,891,660	741,279	0
Cultural Affairs, Department of	103,000	103,000	0	0	0	0
Game and Fish, Department of	1,000,000	500,000	500,000	500,000	0	0
Transportation, Department of	3,383,320	1,991,660	1,391,660	1,391,660	0	0
Western State Air Resources Council	741,279	0	741,279	0	741,279	0
New York	453,807,331	278,751,443	175,055,888	136,921,163	14,666,556	23,468,169
Agriculture and Markets, Department of	6,587,196	2,290,000	4,297,196	2,262,503	0	2,034,693
Economic Development, Department of	34,942,880	0	34,942,880	34,942,880	0	0
Energy Research and Development Authority	63,800,898	8,152,894	55,648,004	37,535,475	9,207,898	8,904,631
Environmental Conservation, Department of	11,066,820	4,490,190	6,576,630	6,503,573	0	73,057
Health, Department of	74,723,334	32,566,879	42,156,455	32,425,710	3,849,924	5,880,821
Mental Health, Office of	166,944,173	144,972,379	21,971,794	20,299,132	0	1,672,662
People with Developmental Disabilities, Office of	2,136,105	2,136,105	0	0	0	0
Power Authority	11,111,406	5,915,635	5,195,771	293,466	0	4,902,305
Roswell Park Comprehensive Cancer Center	66,297,074	66,297,074	0	0	0	0
State Museum	10,578,496	10,089,582	488,914	488,914	0	0
Thoroughbred Breeding and Development Fund Corp.	234,030	0	234,030	234,030	0	0
Transportation, Department of	5,384,919	1,840,705	3,544,214	1,935,480	1,608,734	0
North Carolina	35,892,185	17,813,294	18,078,891	16,274,791	591,263	1,212,837
Agriculture and Consumer Services, Department of	15,422,911	13,922,911	1,500,000	1,300,000	200,000	0
Biotechnology Center	3,810,296	0	3,810,296	3,810,296	0	0
Environmental Quality, Department of	3,621,969	1,421,353	2,200,616	1,846,853	353,763	0
Natural and Cultural Resources, Department of	2,903,776	1,690,939	1,212,837	0	0	1,212,837
Transportation, Department of	10,033,233	778,091	9,255,142	9,255,142	0	0
Wine and Grape Growers Council	100,000	0	100,000	62,500	37,500	0
North Dakota	18,065,251	346,342	17,718,909	9,635,162	7,041,396	1,042,351
Agriculture, Department of	817,049	0	817,049	375,977	441,072	0
Dairy Promotion Commission	16,000	0	16,000	0	0	16,000
Dry Pea and Lentil Council	80,683	0	80,683	80,683	0	0
Game and Fish Department	789,902	0	789,902	740,580	49,322	0
Historical Society of North Dakota	223,743	223,743	0	0	0	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Industrial Commission	10,111,495	0	10,111,495	5,975,554	4,062,383	73,558
Soybean Council	1,163,242	0	1,163,242	1,134,313	28,929	0
Transportation, Department of	3,635,470	122,599	3,512,871	200,388	2,459,690	852,793
Wheat Commission	1,227,667	0	1,227,667	1,127,667	0	100,000
Ohio	76,169,661	2,005,523	74,164,138	13,019,832	59,204,085	1,940,221
Development Services Agency	63,372,408	0	63,372,408	6,272,704	57,099,704	0
Education, Department of	460,000	0	460,000	340,000	0	120,000
Environmental Protection Agency	53,352	53,352	0	0	0	0
Mental Health and Addictions Services, Department of	1,500,000	0	1,500,000	1,000,000	500,000	0
Natural Resources, Department of	3,583,207	1,952,171	1,631,036	1,464,046	0	166,990
Rail Development Commission	220,000	0	220,000	0	220,000	0
Transportation, Department of	6,029,317	0	6,029,317	3,450,523	1,384,381	1,194,413
Water Development Authority	951,377	0	951,377	492,559	0	458,818
Oklahoma	30,050,338	2,015,986	28,034,352	23,164,214	4,725,430	144,708
Advancement of Science and Technology, Center for the	8,704,830	0	8,704,830	4,036,259	4,525,430	143,141
Agriculture, Food, and Forestry, Department of	454,578	0	454,578	454,578	0	0
Grand River Dam Authority	550,000	140,000	410,000	210,000	200,000	0
Health, Department of	544,357	527,041	17,316	17,316	0	0
Human Services, Department of	457,147	457,147	0	0	0	0
Tobacco Settlement Endowment Trust	12,300,000	0	12,300,000	12,300,000	0	0
Transportation, Department of	5,817,457	844,589	4,972,868	4,971,301	0	1,567
Wildlife Conservation, Department of	1,221,969	47,209	1,174,760	1,174,760	0	0
Oregon	30,486,113	15,852,036	14,634,077	8,242,868	5,432,004	959,205
Agriculture, Department of	206,521	0	206,521	206,521	0	0
Business Oregon	9,190,000	0	9,190,000	4,400,000	4,790,000	0
Education, Department of	639,639	639,639	0	0	0	0
Environmental Quality, Department of	433,500	433,500	0	0	0	0
Fish and Wildlife, Department of	12,424,618	11,265,588	1,159,030	1,128,807	0	30,223
Forestry, Department of	694,549	449,480	245,069	213,569	31,500	0
Geology and Mineral Industries, Department of	496,117	496,117	0	0	0	0
Human Services, Department of	1,488,479	1,488,479	0	0	0	0
Transportation, Department of	2,460,479	81,545	2,378,934	2,293,971	14,613	70,350
Water Resources Department	1,583,355	987,464	595,891	0	595,891	0
Watershed Enhancement Board	868,856	10,224	858,632	0	0	858,632
Pennsylvania	103,098,941	7,874,722	95,224,219	49,572,795	10,787,775	34,863,649
Agriculture, Department of	3,877,434	0	3,877,434	2,622,317	0	1,255,117
Community and Economic Development, Department of	31,350,000	0	31,350,000	6,595,410	4,347,670	20,406,920
Conservation and Natural Resources, Department of	1,248	1,248	0	0	0	0
Environmental Protection, Department of	894,656	18,052	876,604	769,224	0	107,380
Fish and Boat Commission	270,914	161,651	109,263	109,263	0	0
Game Commission	9,876,885	7,358,771	2,518,114	1,477,103	707,381	333,630
Health, Department of	53,279,107	0	53,279,107	36,768,505	3,750,000	12,760,602

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Susquehanna River Basin Commission	335,000	335,000	0	0	0	0
Transportation, Department of	3,213,697	0	3,213,697	1,230,973	1,982,724	0
Rhode Island	4,594,040	3,098,833	1,495,207	453,781	765,104	276,322
Commerce Corporation	1,119,546	0	1,119,546	354,442	765,104	0
Environmental Management, Department of; Marine Fisheries	3,097,546	2,799,416	298,130	99,339	0	198,791
Environmental Management, Department of; Narragansett Bay National Estuarine Research Reserve	76,014	76,014	0	0	0	0
Water Resources Board	300,934	223,403	77,531	0	0	77,531
South Carolina	46,800,816	27,894,342	18,906,474	3,882,230	415,414	14,608,830
Agriculture, Department of	803,873	0	803,873	803,873	0	0
Disabilities and Special Needs, Department of	14,226,376	0	14,226,376	0	0	14,226,376
Health and Environmental Control, Department of	1,388,752	1,233,275	155,477	155,477	0	0
Natural Resources, Department of	25,080,757	24,796,999	283,758	238,318	45,440	0
Public Service Authority	30,000	0	30,000	30,000	0	0
Research Authority	726,551	0	726,551	356,577	369,974	0
Sea Grant Consortium	2,742,872	1,843,674	899,198	696,632	0	202,566
Transportation, Department of	1,801,635	20,394	1,781,241	1,601,353	0	179,888
South Dakota	2,913,274	327,346	2,585,928	1,701,100	599,828	285,000
Corn Utilization Council	310,000	0	310,000	260,000	0	50,000
Oilseeds Council	250,865	0	250,865	65,865	0	185,000
Pulse Crop Council	2,273	0	2,273	2,273	0	0
Science and Technology Authority	16,021	0	16,021	16,021	0	0
Soybean Research and Promotion Council	375,717	25,724	349,993	299,993	0	50,000
Transportation, Department of	1,321,098	301,622	1,019,476	419,648	599,828	0
Weed and Pest Control Commission	47,000	0	47,000	47,000	0	0
Wheat Commission	590,300	0	590,300	590,300	0	0
Tennessee	7,039,923	1,607,509	5,432,414	4,574,469	203,125	654,820
Education, Department of	3,363,577	1,052,595	2,310,982	1,808,880	0	502,102
Environment and Conservation, Department of	843,184	372,341	470,843	115,000	203,125	152,718
Geological Survey	182,573	182,573	0	0	0	0
Transportation, Department of	2,650,589	0	2,650,589	2,650,589	0	0
Texas	205,206,977	3,165,023	202,041,954	142,333,450	29,339,059	30,369,445
Agriculture, Department of	1,151,413	0	1,151,413	611,500	0	539,913
Alzheimer's Research and Care Consortium (TARCC)	4,615,313	0	4,615,313	4,615,313	0	0
Cancer Prevention and Research Institute	169,450,936	0	169,450,936	111,088,246	28,897,452	29,465,238
Environmental Quality, Commission on	2,135,774	42,206	2,093,568	2,093,568	0	0
Parks and Wildlife Department	4,858,066	2,470,790	2,387,276	2,043,856	0	343,420
State Health Services, Department of	1,838,827	652,027	1,186,800	1,186,800	0	0
Transportation, Department of	20,694,167	0	20,694,167	20,694,167	0	0
Water Development Board	462,481	0	462,481	0	441,607	20,874
Utah	9,205,399	6,070,743	3,134,656	2,334,907	799,749	0
Energy Development, Office of	500,540	0	500,540	500,540	0	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Environmental Quality, Department of	716,389	103,210	613,179	440,855	172,324	0
Health, Department of	4,850	4,850	0	0	0	0
Natural Resources, Department of	4,841,922	4,841,922	0	0	0	0
Transportation, Department of	3,141,698	1,120,761	2,020,937	1,393,512	627,425	0
Vermont	1,669,900	633,399	1,036,501	658,425	286,478	91,598
Agriculture, Food, and Markets, Agency of	282,511	0	282,511	0	282,511	0
Education, Agency of	90,998	0	90,998	0	0	90,998
Human Services, Agency of	215,000	215,000	0	0	0	0
Transportation, Agency of	1,081,391	418,399	662,992	658,425	3,967	600
Virginia	35,552,565	12,627,565	22,925,000	16,656,350	3,646,989	2,621,661
Aging and Rehabilitative Services, Department of	32,746	28,028	4,718	0	0	4,718
Agriculture and Consumer Services, Department of	2,362,121	0	2,362,121	2,001,589	0	360,532
Commonwealth Health Research Board	1,399,997	0	1,399,997	1,399,997	0	0
Environmental Quality, Department of	103,612	34,102	69,510	69,510	0	0
Forensic Science, Department of	971,793	971,793	0	0	0	0
Forestry, Department of	577,211	533,801	43,410	43,410	0	0
Foundation for Healthy Youth	884,774	0	884,774	884,774	0	0
Innovative Technology, Center for	6,074,557	674,351	5,400,206	1,488,379	3,615,489	296,338
Institute for Advanced Learning and Research	60,000	60,000	0	0	0	0
Marine Resources Commission	1,885,300	204,543	1,680,757	0	0	1,680,757
Mines, Minerals and Energy, Department of	903,212	903,212	0	0	0	0
Social Services, Department of	10,000	10,000	0	0	0	0
Transportation, Department of	18,616,858	9,207,735	9,409,123	9,409,123	0	0
Wildlife Resources, Department of	1,670,384	0	1,670,384	1,359,568	31,500	279,316
Washington	57,239,095	23,415,061	33,824,034	18,119,799	3,934,366	11,769,869
Agriculture, Department of	2,974,886	0	2,974,886	2,087,745	176,078	711,063
Alfalfa Seed Commission	34,000	0	34,000	34,000	0	0
Asparagus Commission	70,000	0	70,000	0	70,000	0
Blueberry Commission	252,900	0	252,900	0	252,900	0
Commerce, Department of	4,686,545	0	4,686,545	0	930,756	3,755,789
Dairy Products Commission	30,000	0	30,000	30,000	0	0
Ecology, Department of	1,053,172	887,977	165,195	165,195	0	0
Fish and Wildlife, Department of	9,811,591	9,569,456	242,135	0	0	242,135
Fruit Commission	146,911	0	146,911	50,215	3,300	93,396
Grain Commission	2,121,448	0	2,121,448	2,121,448	0	0
Health, Department of	1,113,483	1,057,809	55,674	55,674	0	0
Hop Commission	281,762	0	281,762	255,762	26,000	0
Labor and Industries, Department of	3,279,219	3,279,219	0	0	0	0
Mint Commission	73,825	0	73,825	73,825	0	0
Natural Resources, Department of	13,196,143	5,721,319	7,474,824	922,122	995,478	5,557,224
Oilseeds Commission	44,448	0	44,448	44,448	0	0
Pesticide Registration, Commission on	438,075	0	438,075	438,075	0	0
Potato Commission	760,097	0	760,097	494,685	50,000	215,412
Puget Sound Partnership	1,526,263	0	1,526,263	265,550	458,220	802,493

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers ^a	Extramural performers ^b			
			Total	Academic institutions	Companies and individuals ^c	Other ^d
Pulse Crops Commission	159,243	0	159,243	159,243	0	0
Red Raspberry Commission	307,500	0	307,500	284,578	22,922	0
Transportation, Department of	4,890,000	1,293,000	3,597,000	2,827,000	770,000	0
Tree Fruit Research Commission	9,668,382	1,606,281	8,062,101	7,491,032	178,712	392,357
Turfgrass Seed Commission	64,018	0	64,018	64,018	0	0
Wine Commission	255,184	0	255,184	255,184	0	0
West Virginia	10,862,315	3,317,637	7,544,678	7,465,577	77,744	1,357
Agriculture, Department of	202,365	202,365	0	0	0	0
Geological and Economic Survey	1,854,645	1,576,721	277,924	277,924	0	0
Higher Education Policy Commission	5,483,928	400,180	5,083,748	5,083,748	0	0
Justice and Community Services, Division of	8,000	8,000	0	0	0	0
Natural Resources, Department of	1,285,162	1,130,371	154,791	75,690	77,744	1,357
Transportation, Department of	2,028,215	0	2,028,215	2,028,215	0	0
Wisconsin	14,340,014	4,674,607	9,665,407	2,868,505	4,440,854	2,356,048
Agriculture, Trade and Consumer Protection, Department of	985,099	0	985,099	665,000	95,000	225,099
Economic Development Corporation	3,825,000	0	3,825,000	75,000	3,750,000	0
Natural Resources, Department of	5,423,223	4,402,853	1,020,370	827,038	193,332	0
Transportation, Department of	4,106,692	271,754	3,834,938	1,301,467	402,522	2,130,949
Wyoming	6,391,060	2,875,496	3,515,564	903,812	2,462,822	148,930
Agriculture, Department of	561,674	0	561,674	343,339	69,405	148,930
Business Council	847,500	0	847,500	0	847,500	0
Corrections, Department of	123,280	123,280	0	0	0	0
Enhanced Oil Recovery Institute	1,500,000	1,000,000	500,000	150,000	350,000	0
Game and Fish Department	1,689,237	1,476,267	212,970	157,467	55,503	0
State Geological Survey	184,676	184,676	0	0	0	0
Transportation, Department of	1,240,805	91,273	1,149,532	9,118	1,140,414	0
Water Development Office	243,888	0	243,888	243,888	0	0

^a Intramural performers include a department's or agency's own employees who perform R&D and services performed by others in support of an internal R&D project.

^b Extramural performers are those outside the department or agency who perform R&D.

^c Companies and individuals include individuals under contract for research projects.

^d Other includes federal government; nonprofit organizations; city, county, regional, or other local governments; and other state governments.

^e U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
United States ^b	2,444,981,212	142,105,027	390,826,851	448,510,450	1,027,756,537	279,442,920	156,339,427
Alabama	25,695,555	0	117,181	5,930,160	2,000,000	3,601,526	14,046,688
Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority	4,000	0	0	4,000	0	0	0
Commerce, Department of	3,000,000	0	0	0	2,000,000	0	1,000,000
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	1,930,023	0	0	1,930,023	0	0	0
Education, Department of	9,755,650	0	0	0	0	0	9,755,650
Forensic Sciences, Department of	262,993	0	0	0	0	0	262,993
Geological Survey	2,470,957	0	117,181	2,353,776	0	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	1,585,939	0	0	1,585,939	0	0	0
Supercomputer Authority	3,028,045	0	0	0	0	0	3,028,045
Transportation, Department of	3,657,948	0	0	56,422	0	3,601,526	0
Alaska	15,193,507	0	500,000	8,878,600	474,542	5,340,365	0
Environmental Conservation, Department of	474,542	0	0	0	474,542	0	0
Housing Finance Corporation	500,000	0	500,000	0	0	0	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	8,878,600	0	0	8,878,600	0	0	0
Railroad Corporation	3,824,365	0	0	0	0	3,824,365	0
Transportation and Public Facilities, Department of	1,516,000	0	0	0	0	1,516,000	0
Arizona	16,010,502	1,041,995	0	1,849,760	11,085,857	1,473,269	559,621
Agriculture, Department of	1,220,812	1,041,995	0	178,817	0	0	0
Game and Fish Department	1,361,376	0	0	1,361,376	0	0	0
Health Services, Department of	11,085,857	0	0	0	11,085,857	0	0
Juvenile Corrections, Department of	559,621	0	0	0	0	0	559,621
Transportation, Department of	1,782,836	0	0	309,567	0	1,473,269	0
Arkansas	19,921,168	12,606,385	502,762	2,455,409	2,813,075	690,108	853,429
Agriculture, Department of	251,460	251,460	0	0	0	0	0
Beef Council	40,223	40,223	0	0	0	0	0
Corn and Grain Sorghum Board	965,000	965,000	0	0	0	0	0
Economic Development Commission	5,446,430	50,647	502,762	1,226,517	2,813,075	0	853,429
Game and Fish Commission	954,281	0	0	954,281	0	0	0
Natural Heritage Commission	274,611	0	0	274,611	0	0	0
Rice Research and Promotion Board	8,623,500	8,623,500	0	0	0	0	0
Soybean Promotion Board	2,625,555	2,625,555	0	0	0	0	0
Transportation, Department of	690,108	0	0	0	0	690,108	0
Wheat Promotion Board	50,000	50,000	0	0	0	0	0
California	533,900,597	7,116,436	256,532,543	46,017,594	171,494,281	41,248,806	11,490,937

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Air Resources Board	16,709,642	0	0	16,709,642	0	0	0
Children and Families Commission (First 5 California)	3,518,680	0	0	0	565,000	0	2,953,680
Conservation, Department of	1,143,000	0	0	538,000	0	0	605,000
Corrections and Rehabilitation, Department of	1,974,791	0	0	0	0	0	1,974,791
Covered California	3,209,181	0	0	0	3,209,181	0	0
Delta Stewardship Council	5,602,379	0	0	5,602,379	0	0	0
Earthquake Authority	2,664,000	0	0	0	0	0	2,664,000
Energy Commission	219,532,543	0	219,532,543	0	0	0	0
Environmental Health Hazard Assessment, Office of	19,726,954	0	0	0	19,726,954	0	0
Food and Agriculture, Department of	4,213,376	4,213,376	0	0	0	0	0
Forestry and Fire Protection, Department of	3,500,000	0	0	3,500,000	0	0	0
Horse Racing Board	627,442	627,442	0	0	0	0	0
Housing and Community Development, Department of	75,000	0	0	0	0	0	75,000
Institute for Regenerative Medicine	127,546,003	0	0	0	127,546,003	0	0
Mental Health Services Oversight and Accountability Commission	2,500,000	0	0	0	2,500,000	0	0
Motor Vehicles, Department of	1,401,521	0	0	0	1,401,521	0	0
Pesticide Regulation, Department of	14,088,416	2,275,618	0	1,974,574	9,838,224	0	0
Public Health, Department of	3,370,497	0	0	394	3,370,103	0	0
Public Utilities Commission, Executive Division	37,000,000	0	37,000,000	0	0	0	0
Rehabilitation, Department of	2,814,595	0	0	0	0	0	2,814,595
State Coastal Conservancy	1,620,693	0	0	1,620,693	0	0	0
State Water Resources Control Board	17,957,684	0	0	14,620,389	3,337,295	0	0
Transportation, Department of	41,248,806	0	0	0	0	41,248,806	0
Water Resources, Department of	1,855,394	0	0	1,451,523	0	0	403,871
Colorado	34,365,638	1,037,559	3,347,250	11,609,704	8,061,107	3,268,633	7,041,385
Agriculture, Department of	635,148	375,249	0	259,899	0	0	0
Economic Development and International Trade, Office of	15,456,483	440,000	3,234,790	275,463	6,597,493	430,000	4,478,737
Higher Education Competitive, Research Authority	2,455,224	0	66,435	800,000	0	0	1,588,789
Higher Education, Department of	124,839	0	0	0	0	0	124,839
Natural Resources, Department of	8,002,949	0	46,025	7,929,398	0	5,000	22,526
Public Health and Environment, Department of	3,808,558	0	0	2,344,944	1,463,614	0	0
Public Safety, Department of	826,494	0	0	0	0	0	826,494
Transportation, Department of	2,833,633	0	0	0	0	2,833,633	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Wine Industry Development Board	222,310	222,310	0	0	0	0	0
Connecticut	58,810,853	3,856,987	4,083,058	11,473,607	29,124,362	2,734,495	7,538,344
Agricultural Experiment Station	12,445,226	3,856,987	0	3,975,471	4,612,768	0	0
Children and Families, Department of	604,461	0	0	0	0	0	604,461
Education, Department of	429,097	0	0	0	0	0	429,097
Energy and Environmental Protection, Department of	7,498,136	0	0	7,498,136	0	0	0
Innovation Inc.	27,245,173	0	4,083,058	0	16,657,329	0	6,504,786
Mental Health and Addiction Services, Department of	6,310,349	0	0	0	6,310,349	0	0
Public Health, Department of	27,000	0	0	0	27,000	0	0
Social Services, Department of	1,516,916	0	0	0	1,516,916	0	0
Transportation, Department of	2,734,495	0	0	0	0	2,734,495	0
Delaware	3,598,156	0	20,800	2,241,188	0	1,336,168	0
Geological Survey	2,183,965	0	0	2,082,188	0	101,777	0
Natural Resources and Environmental Control, Department of	159,000	0	0	159,000	0	0	0
Sustainable Energy Utility	20,800	0	20,800	0	0	0	0
Transportation, Department of	1,234,391	0	0	0	0	1,234,391	0
District of Columbia	5,860,668	0	520,000	2,920,000	1,929,090	239,295	252,283
Energy and Environment, Department of	1,550,000	0	520,000	920,000	0	0	110,000
Forensic Sciences, Department of	114,283	0	0	0	61,500	0	52,783
Health, Department of	1,957,090	0	0	0	1,867,590	0	89,500
Transportation, Department of	239,295	0	0	0	0	239,295	0
Water and Sewer Authority	2,000,000	0	0	2,000,000	0	0	0
Florida	184,600,202	21,100,902	784,693	56,851,522	92,452,504	13,322,175	88,406
Agriculture and Consumer Services, Department of	22,450,768	20,450,902	784,693	354,857	860,316	0	0
Business and Professional Regulation, Department of	88,406	0	0	0	0	0	88,406
Citrus, Department of	1,127,588	650,000	0	0	477,588	0	0
Environmental Protection, Department of	217,759	0	0	217,759	0	0	0
Fish and Wildlife Conservation Commission	56,278,906	0	0	56,278,906	0	0	0
Health, Department of	91,114,600	0	0	0	91,114,600	0	0
Space Florida	1,299,010	0	0	0	0	1,299,010	0
Transportation, Department of	12,023,165	0	0	0	0	12,023,165	0
Georgia	15,877,238	255,642	5,825,649	1,164,256	0	8,599,878	31,813
Natural Resources, Department of	997,526	0	0	997,526	0	0	0
Seed Development Commission	255,642	255,642	0	0	0	0	0
Southern States Energy Board	8,092,378	0	5,825,649	166,730	0	2,068,186	31,813
Transportation, Department of	6,531,692	0	0	0	0	6,531,692	0
Hawaii	11,122,545	1,977,000	6,466,637	385,278	0	487,500	1,806,130

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Agriculture, Department of	702,000	702,000	0	0	0	0	0
Business, Economic Development, and Tourism, Department of	7,297,767	0	5,491,637	0	0	0	1,806,130
Land and Natural Resources, Department of	385,278	0	0	385,278	0	0	0
Natural Energy Laboratory	2,250,000	1,275,000	975,000	0	0	0	0
Transportation, Department of	487,500	0	0	0	0	487,500	0
Idaho	21,882,976	7,279,087	0	10,831,981	212,000	3,317,794	242,114
Agriculture, Department of	900,539	900,539	0	0	0	0	0
Alfalfa and Clover Seed Commission	1,500	1,500	0	0	0	0	0
Barley Commission	238,859	238,859	0	0	0	0	0
Bean Commission	28,220	28,220	0	0	0	0	0
Beef Council	88,187	88,187	0	0	0	0	0
Commerce, Department of	953,711	251,514	0	0	212,000	248,083	242,114
Dairy West	2,900,000	2,900,000	0	0	0	0	0
Environmental Quality, Department of	450,000	0	0	450,000	0	0	0
Fish and Game, Department of	10,381,981	0	0	10,381,981	0	0	0
Honey Commission	1,500	1,500	0	0	0	0	0
Oilseed Commission	62,000	62,000	0	0	0	0	0
Pea and Lentil Commission	73,418	73,418	0	0	0	0	0
Potato Commission	1,596,042	1,596,042	0	0	0	0	0
Transportation Department	3,069,711	0	0	0	0	3,069,711	0
Wheat Commission	1,137,308	1,137,308	0	0	0	0	0
Illinois	16,055,917	3,140,385	0	0	399,924	9,710,698	2,804,910
Children and Family Services, Department of	2,559,932	0	0	0	0	0	2,559,932
Human Services, Department of	244,978	0	0	0	0	0	244,978
Nutrient Research and Education	3,140,385	3,140,385	0	0	0	0	0
Public Health, Department of	399,924	0	0	0	399,924	0	0
Transportation, Department of	9,710,698	0	0	0	0	9,710,698	0
Indiana	9,591,408	100,000	95,000	141,764	0	8,734,644	520,000
Economic Development Corporation	595,000	0	95,000	0	0	0	500,000
Environmental Management, Department of	56,764	0	0	56,764	0	0	0
Natural Resources, Department of	100,000	100,000	0	0	0	0	0
St. Joseph River Basin Commission	105,000	0	0	85,000	0	0	20,000
Transportation, Department of	8,734,644	0	0	0	0	8,734,644	0
Iowa	12,348,062	60,000	0	4,170,756	0	7,228,882	888,424
Beef Industry Council	60,000	60,000	0	0	0	0	0
Corrections	470,931	0	0	0	0	0	470,931
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	417,493	0	0	0	0	0	417,493

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Natural Resources, Department of	4,170,756	0	0	4,170,756	0	0	0
Transportation, Department of	7,228,882	0	0	0	0	7,228,882	0
Kansas	13,152,904	3,675,354	0	4,840,882	0	3,637,912	998,756
Corn Commission	871,765	871,765	0	0	0	0	0
Grain Sorghum Commission	445,300	445,300	0	0	0	0	0
Soybean Commission	1,200,000	1,200,000	0	0	0	0	0
State Board of Regents	998,756	0	0	0	0	0	998,756
Sunflower Commission	20,000	20,000	0	0	0	0	0
Transportation, Department of	3,637,912	0	0	0	0	3,637,912	0
Water Office	429,361	0	0	429,361	0	0	0
Wheat Commission	1,138,289	1,138,289	0	0	0	0	0
Wildlife, Parks, and Tourism, Department of	4,411,521	0	0	4,411,521	0	0	0
Kentucky	26,782,125	540,182	150,000	2,258,368	15,023,579	7,158,996	1,651,000
Behavioral Health, Developmental and Intellectual Disabilities	67,500	0	0	0	67,500	0	0
Economic Development, Cabinet for	3,051,000	0	150,000	0	1,250,000	0	1,651,000
Fish and Wildlife Resources, Department of	2,008,546	0	0	2,008,546	0	0	0
Horse Racing Commission	430,748	0	0	0	430,748	0	0
Nature Preserves, Office of	34,200	0	0	34,200	0	0	0
Postsecondary Education, Council on	9,939,022	0	0	0	9,939,022	0	0
Public Health, Department for	3,336,309	0	0	0	3,336,309	0	0
Public Service Commission	21,000	0	0	21,000	0	0	0
Soybean Promotion Board	658,864	540,182	0	118,682	0	0	0
Transportation Cabinet	7,234,936	0	0	75,940	0	7,158,996	0
Louisiana	32,360,516	636,415	2,613,811	12,455,929	2,800,226	9,200,000	4,654,135
Board of Regents	12,728,300	636,415	2,613,811	2,418,377	2,800,226	0	4,259,471
Coastal Protection and Restoration Authority	3,436,344	0	0	3,436,344	0	0	0
Education, Department of	394,664	0	0	0	0	0	394,664
Transportation and Development, Department of	9,200,000	0	0	0	0	9,200,000	0
Wildlife and Fisheries, Department of	6,601,208	0	0	6,601,208	0	0	0
Maine	29,035,990	3,329,336	0	7,070,173	9,463,845	824,000	8,348,636
Agriculture, Conservation and Forestry, Department of	1,511,473	928,000	0	583,473	0	0	0
Inland Fisheries and Wildlife, Department of	1,080,841	0	0	1,080,841	0	0	0
Marine Resources, Department of	2,458,575	0	0	2,458,575	0	0	0
Technology Institute	23,161,101	2,401,336	0	2,947,284	9,463,845	0	8,348,636
Transportation, Department of	824,000	0	0	0	0	824,000	0
Maryland	33,407,022	269,157	1,168,566	1,184,063	24,466,432	3,660,436	2,658,368
Education, Department of	1,160,456	0	0	0	0	0	1,160,456
Energy Administration	1,026,832	0	1,000,000	26,832	0	0	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Health and Mental Hygiene, Department of	15,000,000	0	0	0	15,000,000	0	0
Natural Resources, Department of	607,906	269,157	168,566	170,183	0	0	0
Technology Development Corporation	10,964,344	0	0	0	9,466,432	0	1,497,912
Transportation, Department of	4,647,484	0	0	987,048	0	3,660,436	0
Massachusetts	31,700,411	0	4,183,011	10,052,872	6,849,528	3,840,000	6,775,000
Clean Energy Technology Center	4,008,011	0	4,008,011	0	0	0	0
Environmental Protection, Department of	309,872	0	0	309,872	0	0	0
Fish and Game, Department of	9,493,000	0	0	9,493,000	0	0	0
Gaming Commission	2,670,000	0	0	0	2,170,000	0	500,000
Life Sciences Center	1,030,299	0	0	0	1,030,299	0	0
Massventures	3,100,000	0	0	0	0	0	3,100,000
Mental Health, Department of	1,800,000	0	0	0	1,800,000	0	0
Public Health, Department of	1,849,229	0	0	0	1,849,229	0	0
Technology Park Corporation	3,175,000	0	0	0	0	0	3,175,000
Transportation, Department of	4,065,000	0	125,000	100,000	0	3,840,000	0
Water Resources Authority	200,000	0	50,000	150,000	0	0	0
Michigan	11,191,816	3,316,092	0	1,265,405	0	6,610,319	0
Agriculture and Rural Development, Department of	3,316,092	3,316,092	0	0	0	0	0
Environmental, Great Lakes and Energy, Department of	1,265,405	0	0	1,265,405	0	0	0
Transportation, Department of	6,610,319	0	0	0	0	6,610,319	0
Minnesota	20,511,698	5,526,168	0	3,365,930	0	11,619,600	0
Agriculture, Department of	6,203,140	5,526,168	0	676,972	0	0	0
Forest Resources Council	150,000	0	0	150,000	0	0	0
Natural Resources, Department of	1,941,631	0	0	1,941,631	0	0	0
Pollution Control Agency	25,981	0	0	25,981	0	0	0
Transportation, Department of	12,190,946	0	0	571,346	0	11,619,600	0
Mississippi	10,268,396	1,213,684	0	4,637,046	0	4,417,666	0
Agriculture and Commerce, Department of	180,501	180,501	0	0	0	0	0
Environmental Quality, Department of	1,804,582	0	0	1,804,582	0	0	0
Gulf States Marine Fisheries Commission	1,100,424	1,033,183	0	67,241	0	0	0
Marine Resources, Department of	1,060,182	0	0	1,060,182	0	0	0
Transportation, Department of	4,417,666	0	0	0	0	4,417,666	0
Wildlife, Fisheries, and Parks, Department of	1,705,041	0	0	1,705,041	0	0	0
Missouri	14,826,364	911,532	500,000	11,624,124	233,307	1,557,401	0
Agriculture, Department of	95,763	75,329	0	20,434	0	0	0
Conservation, Department of	10,860,153	0	0	10,860,153	0	0	0
Health and Senior Services, Department of	29,761	0	0	0	29,761	0	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Mental Health, Department of	121,250	0	0	0	121,250	0	0
Natural Resources, Department of	743,537	0	0	743,537	0	0	0
Technology Corporation	582,296	0	500,000	0	82,296	0	0
Transportation, Department of	1,557,401	0	0	0	0	1,557,401	0
Wine and Grape Board	836,203	836,203	0	0	0	0	0
Montana	13,131,022	3,566,938	0	7,753,095	0	1,810,989	0
Agriculture, Department of	3,566,938	3,566,938	0	0	0	0	0
Environmental Quality, Department of	92,296	0	0	92,296	0	0	0
Fish, Wildlife and Parks, Department of	7,640,799	0	0	7,640,799	0	0	0
Natural Resources and Conservation, Department of	20,000	0	0	20,000	0	0	0
Transportation, Department of	1,810,989	0	0	0	0	1,810,989	0
Nebraska	32,423,818	2,453,010	0	6,941,251	19,977,610	1,985,947	1,066,000
Agriculture, Department of	645,372	645,372	0	0	0	0	0
Corn Board	803,068	803,068	0	0	0	0	0
Dairy Industry Development Board	87,654	87,654	0	0	0	0	0
Dry Bean Commission	290,954	290,954	0	0	0	0	0
Economic Development, Department of	2,184,835	333,875	0	118,352	524,109	142,499	1,066,000
Game and Parks Commission	5,798,854	0	0	5,798,854	0	0	0
Grain Sorghum Board	3,672	3,672	0	0	0	0	0
Health and Human Services, Department of	19,453,501	0	0	0	19,453,501	0	0
Natural Resources, Department of	958,089	0	0	958,089	0	0	0
Transportation, Department of	1,909,404	0	0	65,956	0	1,843,448	0
Wheat Board	288,415	288,415	0	0	0	0	0
Nevada	4,764,898	188,146	0	222,553	0	1,298,811	3,055,388
Agriculture, Department of	188,146	188,146	0	0	0	0	0
Economic Development, Governor's office of	3,055,388	0	0	0	0	0	3,055,388
Transportation, Department of	1,521,364	0	0	222,553	0	1,298,811	0
New Hampshire	8,221,518	113,278	0	113,525	0	661,587	7,333,128
Agriculture, Markets and Food, Department of	146,743	113,278	0	15,640	0	17,825	0
Business and Economic Affairs, Department of	7,275,000	0	0	0	0	0	7,275,000
Transportation, Department of	799,775	0	0	97,885	0	643,762	58,128
New Jersey	23,754,925	0	0	2,206,594	14,879,386	3,125,627	3,543,318
Children and Families, Department of	237,423	0	0	0	0	0	237,423
Corrections, Department of	305,895	0	0	0	0	0	305,895
Environmental Protection, Department of	2,608,000	0	0	1,668,800	939,200	0	0
Health, Department of	940,186	0	0	0	940,186	0	0
Pinelands Commission	537,794	0	0	537,794	0	0	0
Research Initiatives, Office of	13,000,000	0	0	0	13,000,000	0	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Secretary of Higher Education, Office of	3,000,000	0	0	0	0	0	3,000,000
Transit, New Jersey	511,533	0	0	0	0	511,533	0
Transportation, Department of	2,614,094	0	0	0	0	2,614,094	0
New Mexico	5,227,599	0	169,166	2,147,277	0	2,808,156	103,000
Cultural Affairs, Department of	103,000	0	0	0	0	0	103,000
Game and Fish, Department of	1,000,000	0	0	1,000,000	0	0	0
Transportation, Department of	3,383,320	0	169,166	405,998	0	2,808,156	0
Western State Air Resources Council	741,279	0	0	741,279	0	0	0
New York	453,807,331	7,919,165	65,977,562	30,312,324	313,857,986	9,463,758	26,276,536
Agriculture and Markets, Department of	6,587,196	6,587,196	0	0	0	0	0
Economic Development, Department of	34,942,880	0	2,837,623	0	6,177,192	0	25,928,065
Energy Research and Development Authority	63,800,898	0	54,176,157	5,545,902	0	4,078,839	0
Environmental Conservation, Department of	11,066,820	576,000	0	10,490,820	0	0	0
Health, Department of	74,723,334	378,821	0	2,272,929	72,071,584	0	0
Mental Health, Office of	166,944,173	0	0	0	166,944,173	0	0
People with Developmental Disabilities, Office of	2,136,105	0	0	0	2,081,100	0	55,005
Power Authority	11,111,406	143,118	8,963,782	1,424,177	286,863	0	293,466
Roswell Park Comprehensive Cancer Center	66,297,074	0	0	0	66,297,074	0	0
State Museum	10,578,496	0	0	10,578,496	0	0	0
Thoroughbred Breeding and Development Fund Corp.	234,030	234,030	0	0	0	0	0
Transportation, Department of	5,384,919	0	0	0	0	5,384,919	0
North Carolina	35,892,185	13,961,296	1,500,000	7,263,072	3,810,296	8,877,335	480,186
Agriculture and Consumer Services, Department of	15,422,911	13,922,911	1,500,000	0	0	0	0
Biotechnology Center	3,810,296	0	0	0	3,810,296	0	0
Environmental Quality, Department of	3,621,969	0	0	3,208,242	0	0	413,727
Natural and Cultural Resources, Department of	2,903,776	0	0	2,898,932	0	0	4,844
Transportation, Department of	10,033,233	0	0	1,155,898	0	8,877,335	0
Wine and Grape Growers Council	100,000	38,385	0	0	0	0	61,615
North Dakota	18,065,251	2,955,514	10,111,495	789,902	349,127	3,635,470	223,743
Agriculture, Department of	817,049	467,922	0	0	349,127	0	0
Dairy Promotion Commission	16,000	16,000	0	0	0	0	0
Dry Pea and Lentil Council	80,683	80,683	0	0	0	0	0
Game and Fish Department	789,902	0	0	789,902	0	0	0
Historical Society of North Dakota	223,743	0	0	0	0	0	223,743
Industrial Commission	10,111,495	0	10,111,495	0	0	0	0
Soybean Council	1,163,242	1,163,242	0	0	0	0	0
Transportation, Department of	3,635,470	0	0	0	0	3,635,470	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Wheat Commission	1,227,667	1,227,667	0	0	0	0	0
Ohio	76,169,661	0	11,929,919	50,405,927	2,752,778	6,249,317	4,831,720
Development Services Agency	63,372,408	0	11,854,876	45,893,034	1,252,778	0	4,371,720
Education, Department of	460,000	0	0	0	0	0	460,000
Environmental Protection Agency	53,352	0	53,352	0	0	0	0
Mental Health and Addictions Services, Department of	1,500,000	0	0	0	1,500,000	0	0
Natural Resources, Department of	3,583,207	0	21,691	3,561,516	0	0	0
Rail Development Commission	220,000	0	0	0	0	220,000	0
Transportation, Department of	6,029,317	0	0	0	0	6,029,317	0
Water Development Authority	951,377	0	0	951,377	0	0	0
Oklahoma	30,050,338	2,158,072	599,094	2,281,991	17,420,143	6,480,977	1,110,061
Advancement of Science and Technology, Center for the	8,704,830	1,703,494	599,094	510,022	4,575,786	663,520	652,914
Agriculture, Food, and Forestry, Department of	454,578	454,578	0	0	0	0	0
Grand River Dam Authority	550,000	0	0	550,000	0	0	0
Health, Department of	544,357	0	0	0	544,357	0	0
Human Services, Department of	457,147	0	0	0	0	0	457,147
Tobacco Settlement Endowment Trust	12,300,000	0	0	0	12,300,000	0	0
Transportation, Department of	5,817,457	0	0	0	0	5,817,457	0
Wildlife Conservation, Department of	1,221,969	0	0	1,221,969	0	0	0
Oregon	30,486,113	706,521	1,590,000	16,706,262	3,100,000	2,460,479	5,922,851
Agriculture, Department of	206,521	206,521	0	0	0	0	0
Business Oregon	9,190,000	500,000	1,590,000	250,000	3,100,000	0	3,750,000
Education, Department of	639,639	0	0	0	0	0	639,639
Environmental Quality, Department of	433,500	0	0	433,500	0	0	0
Fish and Wildlife, Department of	12,424,618	0	0	12,424,618	0	0	0
Forestry, Department of	694,549	0	0	694,549	0	0	0
Geology and Mineral Industries, Department of	496,117	0	0	451,384	0	0	44,733
Human Services, Department of	1,488,479	0	0	0	0	0	1,488,479
Transportation, Department of	2,460,479	0	0	0	0	2,460,479	0
Water Resources Department	1,583,355	0	0	1,583,355	0	0	0
Watershed Enhancement Board	868,856	0	0	868,856	0	0	0
Pennsylvania	103,098,941	3,877,434	837,000	8,868,958	73,605,865	3,934,697	11,974,987
Agriculture, Department of	3,877,434	3,877,434	0	0	0	0	0
Community and Economic Development, Department of	31,350,000	0	837,000	0	18,000,000	721,000	11,792,000
Conservation and Natural Resources, Department of	1,248	0	0	1,248	0	0	0
Environmental Protection, Department of	894,656	0	0	894,656	0	0	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Fish and Boat Commission	270,914	0	0	270,914	0	0	0
Game Commission	9,876,885	0	0	7,367,140	2,326,758	0	182,987
Health, Department of	53,279,107	0	0	0	53,279,107	0	0
Susquehanna River Basin Commission	335,000	0	0	335,000	0	0	0
Transportation, Department of	3,213,697	0	0	0	0	3,213,697	0
Rhode Island	4,594,040	45,615	0	3,868,806	139,519	0	540,100
Commerce Corporation	1,119,546	45,615	0	394,312	139,519	0	540,100
Environmental Management, Department of; Marine Fisheries	3,097,546	0	0	3,097,546	0	0	0
Environmental Management, Department of; Narragansett Bay National Estuarine Research Reserve	76,014	0	0	76,014	0	0	0
Water Resources Board	300,934	0	0	300,934	0	0	0
South Carolina	46,800,816	809,303	125,624	27,721,566	15,991,705	1,851,635	300,983
Agriculture, Department of	803,873	803,873	0	0	0	0	0
Disabilities and Special Needs, Department of	14,226,376	0	0	0	14,226,376	0	0
Health and Environmental Control, Department of	1,388,752	0	0	0	1,388,752	0	0
Natural Resources, Department of	25,080,757	0	0	25,080,757	0	0	0
Public Service Authority	30,000	0	30,000	0	0	0	0
Research Authority	726,551	0	95,624	0	376,577	50,000	204,350
Sea Grant Consortium	2,742,872	5,430	0	2,640,809	0	0	96,633
Transportation, Department of	1,801,635	0	0	0	0	1,801,635	0
South Dakota	2,913,274	1,526,155	16,021	50,000	0	1,321,098	0
Corn Utilization Council	310,000	260,000	0	50,000	0	0	0
Oilseeds Council	250,865	250,865	0	0	0	0	0
Pulse Crop Council	2,273	2,273	0	0	0	0	0
Science and Technology Authority	16,021	0	16,021	0	0	0	0
Soybean Research and Promotion Council	375,717	375,717	0	0	0	0	0
Transportation, Department of	1,321,098	0	0	0	0	1,321,098	0
Weed and Pest Control Commission	47,000	47,000	0	0	0	0	0
Wheat Commission	590,300	590,300	0	0	0	0	0
Tennessee	7,039,923	0	106,514	919,243	0	2,650,589	3,363,577
Education, Department of	3,363,577	0	0	0	0	0	3,363,577
Environment and Conservation, Department of	843,184	0	106,514	736,670	0	0	0
Geological Survey	182,573	0	0	182,573	0	0	0
Transportation, Department of	2,650,589	0	0	0	0	2,650,589	0
Texas	205,206,977	1,151,413	0	7,456,321	175,905,076	20,694,167	0
Agriculture, Department of	1,151,413	1,151,413	0	0	0	0	0
Alzheimer's Research and Care Consortium (TARCC)	4,615,313	0	0	0	4,615,313	0	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Cancer Prevention and Research Institute	169,450,936	0	0	0	169,450,936	0	0
Environmental Quality, Commission on	2,135,774	0	0	2,135,774	0	0	0
Parks and Wildlife Department	4,858,066	0	0	4,858,066	0	0	0
State Health Services, Department of	1,838,827	0	0	0	1,838,827	0	0
Transportation, Department of	20,694,167	0	0	0	0	20,694,167	0
Water Development Board	462,481	0	0	462,481	0	0	0
Utah	9,205,399	0	500,540	5,558,311	4,850	3,141,698	0
Energy Development, Office of	500,540	0	500,540	0	0	0	0
Environmental Quality, Department of	716,389	0	0	716,389	0	0	0
Health, Department of	4,850	0	0	0	4,850	0	0
Natural Resources, Department of	4,841,922	0	0	4,841,922	0	0	0
Transportation, Department of	3,141,698	0	0	0	0	3,141,698	0
Vermont	1,669,900	0	0	282,511	215,000	1,081,391	90,998
Agriculture, Food, and Markets, Agency of	282,511	0	0	282,511	0	0	0
Education, Agency of	90,998	0	0	0	0	0	90,998
Human Services, Agency of	215,000	0	0	0	215,000	0	0
Transportation, Agency of	1,081,391	0	0	0	0	1,081,391	0
Virginia	35,552,565	2,445,328	179,664	5,985,898	3,829,173	19,782,914	3,329,588
Aging and Rehabilitative Services, Department of	32,746	0	0	0	32,746	0	0
Agriculture and Consumer Services, Department of	2,362,121	2,362,121	0	0	0	0	0
Commonwealth Health Research Board	1,399,997	0	0	0	1,399,997	0	0
Environmental Quality, Department of	103,612	0	0	103,612	0	0	0
Forensic Science, Department of	971,793	0	0	0	0	0	971,793
Forestry, Department of	577,211	0	0	577,211	0	0	0
Foundation for Healthy Youth	884,774	0	0	0	884,774	0	0
Innovative Technology, Center for	6,074,557	83,207	179,664	846,179	1,511,656	1,166,056	2,287,795
Institute for Advanced Learning and Research	60,000	0	0	0	0	0	60,000
Marine Resources Commission	1,885,300	0	0	1,885,300	0	0	0
Mines, Minerals and Energy, Department of	903,212	0	0	903,212	0	0	0
Social Services, Department of	10,000	0	0	0	0	0	10,000
Transportation, Department of	18,616,858	0	0	0	0	18,616,858	0
Wildlife Resources, Department of	1,670,384	0	0	1,670,384	0	0	0
Washington	57,239,095	17,505,768	6,731,672	23,572,042	1,260,394	4,890,000	3,279,219
Agriculture, Department of	2,974,886	2,974,886	0	0	0	0	0
Alfalfa Seed Commission	34,000	34,000	0	0	0	0	0
Asparagus Commission	70,000	70,000	0	0	0	0	0

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Blueberry Commission	252,900	252,900	0	0	0	0	0
Commerce, Department of	4,686,545	0	4,686,545	0	0	0	0
Dairy Products Commission	30,000	0	0	30,000	0	0	0
Ecology, Department of	1,053,172	0	0	1,053,172	0	0	0
Fish and Wildlife, Department of	9,811,591	0	1,583,549	8,228,042	0	0	0
Fruit Commission	146,911	0	0	0	146,911	0	0
Grain Commission	2,121,448	2,121,448	0	0	0	0	0
Health, Department of	1,113,483	0	0	0	1,113,483	0	0
Hop Commission	281,762	281,762	0	0	0	0	0
Labor and Industries, Department of	3,279,219	0	0	0	0	0	3,279,219
Mint Commission	73,825	73,825	0	0	0	0	0
Natural Resources, Department of	13,196,143	0	461,578	12,734,565	0	0	0
Oilseeds Commission	44,448	44,448	0	0	0	0	0
Pesticide Registration, Commission on	438,075	438,075	0	0	0	0	0
Potato Commission	760,097	760,097	0	0	0	0	0
Puget Sound Partnership	1,526,263	0	0	1,526,263	0	0	0
Pulse Crops Commission	159,243	159,243	0	0	0	0	0
Red Raspberry Commission	307,500	307,500	0	0	0	0	0
Transportation, Department of	4,890,000	0	0	0	0	4,890,000	0
Tree Fruit Research Commission	9,668,382	9,668,382	0	0	0	0	0
Turfgrass Seed Commission	64,018	64,018	0	0	0	0	0
Wine Commission	255,184	255,184	0	0	0	0	0
West Virginia	10,862,315	10,000	1,390,229	3,939,496	712,330	2,028,215	2,782,045
Agriculture, Department of	202,365	10,000	0	0	192,365	0	0
Geological and Economic Survey	1,854,645	0	1,153,441	208,920	0	0	492,284
Higher Education Policy Commission	5,483,928	0	236,788	2,445,414	519,965	0	2,281,761
Justice and Community Services, Division of	8,000	0	0	0	0	0	8,000
Natural Resources, Department of	1,285,162	0	0	1,285,162	0	0	0
Transportation, Department of	2,028,215	0	0	0	0	2,028,215	0
Wisconsin	14,340,014	1,060,099	0	5,423,223	1,000,000	4,106,692	2,750,000
Agriculture, Trade and Consumer Protection, Department of	985,099	985,099	0	0	0	0	0
Economic Development Corporation	3,825,000	75,000	0	0	1,000,000	0	2,750,000
Natural Resources, Department of	5,423,223	0	0	5,423,223	0	0	0
Transportation, Department of	4,106,692	0	0	0	0	4,106,692	0
Wyoming	6,391,060	661,674	1,651,390	2,043,931	61,640	1,240,805	731,620
Agriculture, Department of	561,674	561,674	0	0	0	0	0
Business Council	847,500	100,000	77,520	0	0	0	669,980
Corrections, Department of	123,280	0	0	0	61,640	0	61,640

TABLE 21

State agency expenditures for R&D, by state, department or agency, and function of R&D: FY 2020

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other ^a
Enhanced Oil Recovery Institute	1,500,000	0	1,500,000	0	0	0	0
Game and Fish Department	1,689,237	0	0	1,689,237	0	0	0
State Geological Survey	184,676	0	73,870	110,806	0	0	0
Transportation, Department of	1,240,805	0	0	0	0	1,240,805	0
Water Development Office	243,888	0	0	243,888	0	0	0

^a Other functions include, but are not limited to, corrections, criminal justice, education, forensic science, labor, public safety, and social services.

^b U.S. total reflects all 50 states and the District of Columbia.

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

Technical Notes

Survey Overview (FY 2020 survey cycle)

Purpose. The Survey of State Government Research and Development is the only source for comprehensive uniform statistics regarding the extent of R&D activity performed and funded by departments and agencies in each of the nation's 50 state governments, the government of the District of Columbia, and the government of Puerto Rico.

Data collection authority. The information is solicited under the National Science Foundation (NSF) Act of 1950, as amended; the America COMPETES Reauthorization Act of 2010; and Title 13, United States Code, § 8(b). It is collected under Office of Management and Budget control number 0607-0933, expiration date 31 July 2023.

Survey contractor. The Census Bureau, under NSF interagency agreement number NCSE-1947523, collected, processed, and tabulated the statistics in this report.

Survey sponsor. The National Center for Science and Engineering Statistics (NCSES) within NSF.

Key Survey Information

Frequency. Annual.

Initial survey year. 2006.

Reference period. State governments' fiscal year ending in 2020.

Response unit. State government departments, agencies, commissions, public authorities, institutions, and other entities that operate separately or somewhat autonomously from the central state government—but where the state government maintains administrative or fiscal control over their activities—with the capacity to perform or fund R&D; units are collectively referred to as *agencies*.

Sample or census. Census.

Population size. The population comprised 726 agencies from the 50 state governments, the District of Columbia, and Puerto Rico with the capacity to perform or fund R&D during FY 2020.

Sample size. Not applicable.

Survey Design

Target population. State government departments, agencies, commissions, public authorities, institutions, and other entities that operate separately or somewhat autonomously from the central state government but where the state government maintains administrative or fiscal control over their activities, as defined by the Census Bureau's [Government Finance and Employment Classification Manual](#) (see chapter 1), and that funded or performed R&D for state government FY 2020. Several industry-specific state commissions, which are generally chartered by state legislatures but are administered independently, are considered state agencies and are included in the survey's population. State-run colleges and universities, which are canvassed as part of NCSES's Higher Education Research and Development (HERD) Survey, are excluded from the survey frame. State-run laboratories or experiment stations controlled by state universities are also excluded from the respondent universe, as are any entities determined to be nonprofit or private, as defined by the Census Bureau government classification criteria. However, because agricultural experiment stations in Connecticut are legally organized as a state government-dependent agency and because they are not affiliated with any university system, they are included in the survey's population.

Sampling frame. The total universe includes all state government–dependent units, including those for the District of Columbia and Puerto Rico, with the capacity to perform and fund R&D, identified with the aid of a state coordinator who is appointed by the governor of each state.

Sample design. The Survey of State Government Research and Development is a census. For the FY 2020 survey, state coordinators were provided with a list of agencies that were previously identified from the FY 2019 survey cycle as having the potential to perform or fund R&D. In addition, these lists included agencies identified from a systematic review of state session laws and additional review of agencies reporting to the Census Bureau’s [Census of Governments](#) program by Census Bureau and NCSSES staff. Coordinators were asked to review this list and add agencies that they believed were involved with R&D and were not already identified. State coordinators also made adjustments to the agency universe to remove agencies that have never had any qualifying R&D to report to NCSSES, to address organizational changes within their respective states since the previous survey, and to provide updated agency contact information.

Data Collection and Processing Methods

Data collection. For FY 2020, due to the COVID pandemic, letters were not mailed to the office of each state governor, to the governor of Puerto Rico, or to the mayor of the District of Columbia, asking them to appoint a state coordinator who would provide updates to the universe of state government–dependent agencies that had the capacity to perform or fund R&D during FY 2020 (see “Appendix”). Instead, e-mails were sent to all the state coordinators from 2019 asking if they would be willing to continue to serve as the coordinators for 2020. On a flow basis, state coordinators were sent a spreadsheet of agencies and contacts that were surveyed for the FY 2019 Survey of State Government Research and Development and asked to add agencies that might have some R&D, remove agencies from the survey universe that no longer perform or fund R&D or have been reorganized, and update agency points of contact. Once the state coordinators completed updates to the list of active agencies to be surveyed, they then sent introductory e-mails to the agency respondents stating that respondents would be receiving an e-mail with instructions and the survey form to be completed and e-mailed back to the Census Bureau. The state coordinators sent the updated spreadsheet of agencies and contacts back to the Census Bureau. After receiving the list of updated agencies, agencies identified as having the potential to perform or fund R&D were then e-mailed the survey form. Upon completion by all agencies within a state, the state coordinators were provided with a spreadsheet of agency responses to review the survey results before they were provided to NCSSES for final analysis and dissemination.

Mode. State agencies were e-mailed a fillable form with auto summations and edits built in and were asked to complete the form. State coordinators were given a spreadsheet of potential state agencies and contact information to review and revise as necessary to add agencies to be surveyed, remove others from the survey as inactive, or make corrections to agency points of contact.

Response rates. Response rates were calculated for the FY 2020 Survey of State Government Research and Development and are available in [table A-1](#).

All 50 state governments and the District of Columbia participated in the survey. A total of 21 of 52 state coordinators updated their spreadsheet. However, only 10 of 52 state coordinators officially responded to verify the final aggregate data for their states. For those agencies that did not have a coordinator appointed, final aggregate data files were sent to staff at NCSSES for review. Some or all agencies submitted data in those states where the coordinator did not verify data officially. A coordinator was not appointed in Illinois, Kentucky, Massachusetts, New Mexico, New York, Pennsylvania, Utah, and Virginia. Historically, NCSSES has partnered with the Puerto Rico Institute of Statistics to collect information on R&D spending from Puerto Rico agencies. The Institute conducts its own survey of R&D activities in the territory and uses the NCSSES survey questions for its collections of government agencies and provides the results to NCSSES. The Puerto Rico Institute of Statistics did respond to multiple requests for information. Even though NCSSES communicated with Puerto Rico this year, no data were received for FY 2020 from the 17 agencies in Puerto Rico that previously provided data to NCSSES.

The final agency response was 699 of 726 agencies (96.3%). If agencies were unable to answer the survey request, staff from the Census Bureau and NCSES compiled R&D estimates from publicly available financial statements in lieu of a direct response when such materials were available. This includes data for the following state agencies: Kansas Corn Commission, Kansas Soybean Commission, and Massachusetts MassVentures.

In addition to the 17 agencies in Puerto Rico, the following agencies did not respond to the survey and as a result may contribute to an undercount in their states' public expenditures for R&D activities:

- California Department of Toxic Substances Control
- Idaho Department of Health and Welfare
- Maine Department of Environmental Protection
- Minnesota Department of Health
- New Hampshire Coastal Marine Natural Resources
- New Mexico Museum of Natural History and Science
- Ohio Industrial Commission
- Washington Department of Social and Health Services

Of the 699 agencies that responded, 391 (55.9%) reported having some R&D activity in FY 2020.

Data editing. After all of the agencies in a state have submitted responses, a spreadsheet of aggregated agency data is sent to the coordinators. They were asked to perform a final verification of aggregated agency data. Initial agency data submissions were received via fillable forms e-mailed to the Census Bureau analyst. Basic logical edit checks, review of respondent comments, and comparisons of data from previous surveys allowed Census Bureau and NCSES staff to detect data errors and work with respondents to correct them. Census Bureau and NCSES staff also conducted follow-up calls to agencies with data changes of plus or minus 50% and at least \$1 million in R&D between FY 2019 and FY 2020 to ensure the accuracy of the survey data.

Imputation. No statistical methods were used to account for the majority of nonresponding agencies. A ratio of historic state data was used to impute two nonresponding larger agencies known to have R&D in the past, namely the Kentucky Department of Fish and Wildlife Resources and the Louisiana Department of Education. All state and national totals are aggregates of reported agency data. Each state government's organizational structure, laws, and delegation of powers within its purview are unique. There are no formally established methods of imputation for state government agencies that account for these structural differences. This is consistent with basic statistical methods used by the Census Bureau's Census of Governments, Survey of State Government Finance. Therefore, R&D expenditures may be underestimated in states where agencies failed to respond. When agency financial reports were publicly available, some agency research expenditures were compiled by staff from the Census Bureau and NCSES.

Weighting. Not applicable.

Variance estimation. Not applicable.

Survey Quality Measures

Sampling error. Not applicable.

Coverage error. In addition to a Census Bureau review of state session laws to identify agencies with the capacity to fund R&D, NCSSES utilizes the expertise of an appointed state coordinator to assist in identifying state government agencies that have the capacity to perform or fund R&D. State coordinators are also offered the opportunity to review survey responses from their respective state agencies before results were finalized for data release. In cases where the state coordinator refused to cooperate or where some agencies failed to respond to the survey, it is possible there may be an undercount of state government R&D activities. The undercount may occur despite efforts by NCSSES and Census Bureau staff to conduct additional queries and outreach with state agencies that did not appoint a state coordinator. In other instances, the appointed state coordinator could misinterpret the survey definition and examples of qualifying R&D activities and thus fail to identify all state government–dependent units with the capacity to perform or fund R&D.

Nonresponse error. Of the 726 agencies in the survey universe, 699 (96.3%) responded to the survey. Of the 699 respondents, 391 (55.9%) reported having R&D activities in FY 2020. A ratio of historic state data was used to impute two nonresponding larger agencies known to have R&D in the past, namely the Kentucky Department of Fish and Wildlife Resources and the Louisiana Department of Education. No other imputation was used for the other nonresponding agencies because the other agencies historically have reported not having R&D.

Measurement error. The most common form of nonsampling error in the Survey of State Government Research and Development is in respondents' interpretation of the survey definition of qualifying R&D activities. To mitigate any potential misinterpretations, several steps were taken. NCSSES provided a series of examples specific to the types of activities performed or funded by state government agencies in the survey questionnaire's definitions and examples. All responses, including the initial agency data submissions and final state coordinator verifications, were received via e-mail or phone. Census Bureau staff performed basic logical edit checks and reviewed respondent comments, allowing staff to detect errors and work with state respondents to correct them. Despite these efforts, some of the data reported could include expenditures for non-R&D activities, such as non-R&D salaries, commercialization, environmental testing, or routine survey or monitoring work. Similarly, some state data may also exclude minor R&D expenditure amounts from agencies not surveyed.

Data Comparability

State government R&D totals can display considerable volatility between survey cycles. For example, state agency expenditures are influenced by several national and state-specific factors, and large changes (either increases or decreases) are not unusual, especially for discretionary spending items such as R&D. States often will create special funds to support specific research activities for a limited time. These funds may have a one-time appropriation from the legislature and expire within 2–5 fiscal years; state agencies obligate those funds for specific R&D projects, depending on availability and expiration of funding authority as well as other program-specific and administrative considerations. Data reported are agency direct expenditures for R&D in a given fiscal year, not obligations. As such, in the case of multiyear grants to extramural performers, an agency's expenditures for that fiscal year may be greater than its obligations because expenditures may include spending from the previous year's appropriations, depending on the specific budget authority granted by the legislature. It is likely that some portion of the reported changes reflects measurement and coverage errors. In the case of R&D funds for extramural performers, some agencies were able to report only multi-year obligations rather than single-year expenditures.

The survey asked about state agencies' expenditures for R&D at the end of FY 2020. Most states and Puerto Rico have a fiscal year that begins 1 July and ends the following 30 June. For example, FY 2020 is the state fiscal period beginning on 1 July 2019 and ending on 30 June 2020. There are, however, five exceptions to the 30 June fiscal year end: New York (ends 31 March), Texas (ends 31 August), Alabama (ends 30 September), and the District of Columbia and Michigan (ends 30 September). For comparability, all states, the District of Columbia, and Puerto Rico are surveyed at the same time.

A state's R&D priorities may be shaped by the state's unique legislative and budgeting processes. State budget practices vary considerably due to both political and historical reasons. Nineteen states enact biennial budgets. Of these states, Montana, Nevada, North Dakota, and Texas have both biennial legislative sessions and biennial budgets. The remaining 15 states of Connecticut, Hawaii, Indiana, Kentucky, Maine, Minnesota, Nebraska, New Hampshire, North Carolina, Ohio, Oregon, Virginia, Washington, Wisconsin, and Wyoming hold annual legislative sessions but maintain biennial budgeting. Only North Dakota and Wyoming enact consolidated 2-year budgets; other biennial budget states enact two annual budgets at one time. As such, the nature of a state's budget priorities for R&D may be determined on a biennial basis in some states; in others, however, it may be determined on an annual basis. In states with biennial budgets, the legislatures will often make supplemental appropriations to the second-year budget, which may result in further changes to the initial funding priorities.

The data exclude R&D expenditures by state governments that did not flow through state agencies' budgets. The state totals do not include direct appropriations from state legislatures to colleges and universities. Higher education institutions' expenditures from state government appropriations are available from NCSSES's HERD Survey (<https://www.nsf.gov/statistics/srvyherd/>). For FY 2020, state government agencies reported \$952 million in expenditures used to support R&D performance by academic institutions. A major factor for the difference between totals reported in NCSSES's HERD Survey and the Survey of State Government Research and Development is direct appropriations to state-run universities are included in the former but not in the latter. Another likely factor is the exclusion of R&D at agricultural experiment stations from the state survey totals because they are generally associated with land-grant colleges and universities and are canvassed on the HERD Survey.

Direct comparison of state agency expenditures should also be viewed with caution because state governments often reorganize departments and agencies such that some divisions and offices that were part of one agency may be moved to another agency. In other instances, entire departments may be reorganized into newly created departments. Although the FY 2020 Survey of State Government Research and Development encountered several instances of these organizational changes in several states, the survey itself is not designed to measure specific changes in state government organization. To account for these and other changes in the data, Census Bureau and NCSSES staff conducted follow-up calls for agencies with data changes of plus or minus 50% and at least \$1 million between FY 2019 and FY 2020 to ensure the accuracy of the survey data.

Data specific to state government agencies were first released with the FY 2009 survey results and are also included in the FY 2020 data tables. Specific agency-level data for FY 2006 and FY 2007 are not available.

The current Survey of State Government Research and Development has been conducted for FY 2006, FY 2007, FY 2009, FYs 2010–11, FYs 2012–13, FYs 2014–15, FY 2016, FY 2017, FY 2018, FY 2019, and FY 2020. (No survey was conducted for state governments for FY 2008.) Data presented in trend tables in this report are from the most recently completed survey cycle. References to prior-year data should be restricted to those published in this report for two reasons: (1) when completing the current year's survey, survey respondents may revise their prior year's data, and (2) NCSSES reviews data for prior years for consistency with current-year responses and, if necessary, may revise these data in consultation with respondents.

NCSSES has collected state government R&D data for FY 1964, FY 1965, FY 1967, FY 1968, FY 1972, FY 1973, and FY 1977 in collaboration with the Census Bureau's Census of Governments and related programs. For FY 1987, FY 1988, and FY 1995, data collections of state government R&D were conducted by nonfederal organizations that were supported by NSF grants. As a result of differences in the survey populations, in definitions of covered R&D activities, and in collection methods over time, the results of these historical surveys are not comparable with the statistics collected for the FY 2006 and subsequent Surveys of State Government Research and Development.

Changes in survey coverage and population. Each year, state coordinators update the universe of agencies most likely to have funded or performed R&D based on changes in funding authority, organization changes within the government, or other initiatives by the legislature. No survey was conducted for state governments for FY 2008. Beginning with the FY 2009 survey cycle, state coordinators were no longer able to overwrite the aggregate R&D data reported by state agencies to correct or modify the state total. Any changes or revisions were now required to be made at the state government agency level.

Changes in questionnaire.

- FY 2009. The FY 2009 questionnaire was the first to collect state government R&D activities by governmental functions of agriculture, environment and natural resources, health, transportation, and other.
- FYs 2010 and 2011. The survey was reorganized as a biennial survey and collected 2 fiscal years of data on one questionnaire. In addition, the energy category was added to the list of specific government functions of R&D.
- FYs 2012 and 2013. A minor change to the instructions in question 1 for extramural performers was made from “R&D done for your department/agency” to “R&D funded by your department/agency” to ensure that all R&D-related projects that the agency funds regardless of the end result (i.e., grants) were properly included.
- FYs 2014 and 2015. The survey was revised to collect additional details about R&D funding and performance to better align with the Organisation for Economic Co-operation and Development (OECD) 2002 Frascati Manual, the most recent edition available at survey launch. These changes include source of funds for extramural R&D performance supported by federal funds, state funds, or other funds. For all federal funds received for both intramural and extramural R&D, respondents were asked how much was received from specific federal agencies. For intramural R&D performance, respondents were asked how much of federal, state, and other funding was classified as basic research, applied research, or experimental development.
- FY 2016. Survey reporting period changed from a biennial to annual survey. Questions remained the same with some minor additions to examples and wording changes. A remarks box was added for respondents to provide comments.
- FY 2017. The “other” category for Internal Sources of R&D was split into multiple categories: non-federal government funds, nonprofit organizations, businesses, and higher education institutions.
- FY 2018. No changes were made.
- FY 2019. A question asking about the amount of time it takes to complete survey. This question was added for administrative purposes.
- FY 2020. Two new questions were added asking for the number of intramural R&D personnel and the full-time-equivalents for researchers, technicians, and support staff. Data from these new questions are not available this year.

Changes in reporting procedures or classification.

- FY 2018. Online reporting was replaced with a fillable PDF with automated summations and edits built into the survey instrument.
- FY 2019. No changes were made.

Definitions

Applied research. Original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily toward a specific, practical aim or objective.

Basic research. Experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.

Construction and acquisition of facilities used primarily for R&D. Includes the acquisition of, construction of, and major repairs or alterations to structures, works, equipment, facilities, or land for use in R&D activities. Construction and acquisition of land and facilities used primarily for R&D includes major costs for construction and purchase of buildings to be primarily used as R&D facilities.

Experimental development. Systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes.

Performers, extramural. Those outside the department or agency who perform R&D under the administrative oversight or control of that department or agency. This may include projects for the department or agency as well as the department's or agency's extramural research programs. Extramural performers include the following:

- *Academic institutions.* Public or private universities and colleges.
- *Companies and individuals.* Performers under contract for research projects or that received grants for research projects.
- *Other.* Nonprofit organizations, including foundations; other departments or agencies within the state; other state governments; county, municipal, township, or other local governments; federal government.

Performers, intramural. Department's or agency's own employees who perform R&D, which includes R&D performed by those employees and services performed by others in support of an internal R&D project (e.g., laboratory testing).

Research and development. Comprise creative and systematic work undertaken in order to increase the stock of knowledge—including knowledge of humankind, culture, and society—and to devise new applications of available knowledge. Sources and examples of R&D funding include the following:

- *Federal government.* Grants, contracts, awards, and appropriations from the U.S. government.
- *State.* Appropriations from the state legislature, agricultural commodity assessments, bond funds, general funds, restricted funds, revenue funds, state grants, tobacco settlement funds, lottery proceeds, funds from other agencies within the state, and revenue from charges, fees, or fines.
- *Nonprofit organizations.* Includes funding from foundations.
- *Non-federal government.* Funding from other state governments, county, city, regional, or other local governments.
- *Businesses.* Grants and contracts from companies.
- *Higher education institutions.* Funding from public or private universities and colleges.
- *R&D employee count*
 - *Researchers.* For example, biologists, psychologists, research scientists and engineers, primary investigators, and R&D managers.
 - *Technicians.* Equivalent staff includes wildlife technicians, lab technicians, and field staff.
 - *Support staff.* For example, accountants, facilities management, grant specialist, and clerical staff.
- *Full-time equivalent R&D personnel.* Calculated as the total working hours spent working on R&D during your state government's fiscal year divided by the number of hours representing a full-time schedule within the same period.

Technical Tables

Table	Title
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A-1	Final response rates and agencies reporting R&D to the survey: FY 2020
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TABLE A-1

Final response rates and agencies reporting R&D to the survey: FY 2020

(Number and percent)

Agencies selected	Agencies surveyed	Responses		R&D reported	
		Number	Percent	Number	Percent
All agencies	726	699	96.3	391	55.9

Source(s):

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2020.

Acknowledgments and Suggested Citation

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