



National Center for Science and  
Engineering Statistics

# Survey of State Government Research and Development: FY 2023

Data Tables | NSF 25-309 | November 13, 2024

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## General Notes

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These tables present the results of the FY 2023 Survey of State Government Research and Development (R&D), conducted by the Census Bureau under an interagency agreement with the National Center for Science and Engineering Statistics within the U.S. National Science Foundation. The Census Bureau employed a methodology similar to one they use to collect data from state and local governments on other 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, the District of Columbia, and Puerto Rico participated in the survey. 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 asked for expenditures on 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.

NCSES has reviewed this product for unauthorized disclosure of confidential information and approved its release (NCSES-DRN24-047).

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TABLE 1

## State government expenditures for R&amp;D and R&amp;D plant, by state: FY 2023

(Dollars)

State	R&D and R&D plant expenditures	R&D expenditures <sup>a</sup>	R&D plant expenditures <sup>b</sup>
United States <sup>c</sup>	3,068,515,424	3,034,601,074	33,914,350
Alabama	83,778,649	83,778,649	0
Alaska	19,451,112	19,451,112	0
Arizona	14,011,612	14,011,612	0
Arkansas	9,521,076	9,521,076	0
California	594,541,351	594,541,351	0
Colorado	39,665,229	39,665,229	0
Connecticut	55,924,506	55,924,506	0
Delaware	3,584,063	3,584,063	0
District of Columbia	10,563,918	10,563,918	0
Florida	229,599,833	222,882,689	6,717,144
Georgia	20,739,193	20,739,193	0
Hawaii	5,280,407	5,280,407	0
Idaho	19,339,867	18,670,602	669,265
Illinois	46,577,558	45,907,372	670,186
Indiana	24,179,311	24,179,311	0
Iowa	9,809,708	9,809,708	0
Kansas	10,364,853	10,364,853	0
Kentucky	37,765,916	37,765,916	0
Louisiana	31,663,714	31,663,714	0
Maine	48,207,657	47,576,007	631,650
Maryland	46,489,603	46,489,603	0
Massachusetts	53,356,349	48,424,086	4,932,263
Michigan	22,654,435	22,654,435	0
Minnesota	22,732,170	22,732,170	0
Mississippi	10,030,897	10,030,897	0
Missouri	17,210,400	17,210,400	0
Montana	9,956,071	9,956,071	0
Nebraska	29,171,378	29,171,378	0
Nevada	4,072,717	4,072,717	0
New Hampshire	2,521,016	2,521,016	0
New Jersey	99,832,733	99,832,733	0
New Mexico	2,337,788	2,337,788	0
New York	493,826,578	486,576,578	7,250,000
North Carolina	37,106,613	36,106,613	1,000,000
North Dakota	25,822,123	25,822,123	0
Ohio	117,471,257	117,471,257	0
Oklahoma	28,885,260	28,885,260	0
Oregon	40,257,488	40,257,488	0
Pennsylvania	99,487,575	99,487,575	0
Rhode Island	4,635,868	4,635,868	0
South Carolina	53,419,952	53,419,952	0
South Dakota	5,727,211	5,227,211	500,000
Tennessee	67,457,255	67,457,255	0
Texas	282,261,790	282,261,790	0
Utah	10,119,476	10,119,476	0
Vermont	2,833,206	2,833,206	0
Virginia	67,654,247	57,260,560	10,393,687
Washington	61,630,102	60,479,947	1,150,155
West Virginia	8,731,717	8,731,717	0
Wisconsin	16,366,530	16,366,530	0

TABLE 1

**State government expenditures for R&D and R&D plant, by state: FY 2023**

(Dollars)

State	R&D and R&D plant expenditures	R&D expenditures <sup>a</sup>	R&D plant expenditures <sup>b</sup>
Wyoming	9,886,086	9,886,086	0
Puerto Rico <sup>d</sup>	49,491,102	47,543,226	1,947,876

<sup>a</sup> State R&D expenditures do not include R&D plant.<sup>b</sup> State R&D plant expenditures include acquisition of land, facilities, major equipment, and major building renovations intended primarily for R&D use.<sup>c</sup> U.S. total reflects all 50 states and the District of Columbia.<sup>d</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 2

## State government expenditures for R&amp;D and R&amp;D plant, by state and performer: FY 2023

(Dollars)

State	R&D expenditures <sup>a</sup>								R&D plant expenditures <sup>h</sup>		
	All R&D expenditures	Intramural performers <sup>b</sup>	Extramural performers <sup>c</sup>					All other <sup>g</sup>	All R&D plant expenditures	Intramural	Extramural
			Total	Higher education institutions	Companies and individuals <sup>d</sup>	Nonprofit organizations <sup>e</sup>	Other governments <sup>f</sup>				
United States <sup>i</sup>	3,034,601,074	741,613,066	2,292,988,008	1,229,894,644	597,851,734	325,965,825	58,291,567	80,984,238	33,914,350	23,760,554	10,153,796
Alabama	83,778,649	8,885,851	74,892,798	18,357,900	1,215,357	53,329,500	1,990,041	0	0	0	0
Alaska	19,451,112	14,118,929	5,332,183	707,567	2,698,817	0	784,713	1,141,086	0	0	0
Arizona	14,011,612	2,901,013	11,110,599	4,296,040	6,499,559	0	315,000	0	0	0	0
Arkansas	9,521,076	391,998	9,129,078	7,594,303	876,241	400,829	257,705	0	0	0	0
California	594,541,351	97,801,248	496,740,103	218,194,624	143,433,375	64,035,082	15,823,082	55,253,940	0	0	0
Colorado	39,665,229	10,548,105	29,117,124	9,208,168	18,619,670	0	1,186,426	102,860	0	0	0
Connecticut	55,924,506	29,335,244	26,589,262	2,035,295	22,357,867	0	7,875	2,188,225	0	0	0
Delaware	3,584,063	1,600,464	1,983,599	917,009	973,253	0	93,337	0	0	0	0
District of Columbia	10,563,918	7,041,016	3,522,902	851,907	270,401	2,046,290	354,304	0	0	0	0
Florida	222,882,689	53,921,437	168,961,252	96,667,036	6,012,904	66,211,572	69,740	0	6,717,144	6,717,144	0
Georgia	20,739,193	2,930,709	17,808,484	10,326,984	4,257,065	1,811,783	1,412,652	0	0	0	0
Hawaii	5,280,407	628,842	4,651,565	2,472,730	2,066,607	80,000	32,228	0	0	0	0
Idaho	18,670,602	7,349,090	11,321,512	7,231,429	562,811	371,967	2,856,071	299,234	669,265	0	669,265
Illinois	45,907,372	554,067	45,353,305	39,963,806	4,548,609	806,010	34,880	0	670,186	335,093	335,093
Indiana	24,179,311	1,902,083	22,277,228	12,315,640	9,961,588	0	0	0	0	0	0
Iowa	9,809,708	1,366,776	8,442,932	7,597,858	818,225	24,154	2,695	0	0	0	0
Kansas	10,364,853	2,166,223	8,198,630	6,017,483	154,363	11,248	2,015,536	0	0	0	0
Kentucky	37,765,916	4,842,218	32,923,698	28,970,060	3,952,108	0	1,530	0	0	0	0
Louisiana	31,663,714	10,567,296	21,096,418	17,592,263	3,117,754	47,934	258,811	79,656	0	0	0
Maine	47,576,007	12,319,129	35,256,878	3,169,145	30,097,800	1,888,267	101,666	0	631,650	43,316	588,334
Maryland	46,489,603	622,465	45,867,138	34,185,779	11,431,359	0	0	250,000	0	0	0
Massachusetts	48,424,086	1,690,736	46,733,350	15,167,081	17,624,471	2,067,506	93,604	11,780,688	4,932,263	100,000	4,832,263
Michigan	22,654,435	143,576	22,510,859	13,783,149	1,300,681	4,998,043	2,428,986	0	0	0	0
Minnesota	22,732,170	3,138,073	19,594,097	13,127,427	3,758,666	170,354	2,537,650	0	0	0	0
Mississippi	10,030,897	2,030,108	8,000,789	5,025,882	494,973	1,146,667	1,333,267	0	0	0	0
Missouri	17,210,400	4,589,925	12,620,475	6,846,948	5,496,089	171,666	105,772	0	0	0	0
Montana	9,956,071	3,806,428	6,149,643	5,275,871	9,055	412,189	452,528	0	0	0	0
Nebraska	29,171,378	74,500	29,096,878	25,871,076	3,093,032	112,770	20,000	0	0	0	0
Nevada	4,072,717	256,192	3,816,525	2,867,745	69,300	0	879,480	0	0	0	0
New Hampshire	2,521,016	89,546	2,431,470	279,470	1,464,456	0	687,544	0	0	0	0
New Jersey	99,832,733	3,917,853	95,914,880	52,920,552	1,556,739	41,432,589	5,000	0	0	0	0
New Mexico	2,337,788	781,067	1,556,721	813,963	312,327	30,000	400,431	0	0	0	0
New York	486,576,578	286,453,348	200,123,230	126,493,029	37,796,428	26,242,293	279,491	9,311,989	7,250,000	7,250,000	0

**TABLE 2**  
**State government expenditures for R&D and R&D plant, by state and performer: FY 2023**

(Dollars)

State	R&D expenditures <sup>a</sup>								R&D plant expenditures <sup>h</sup>		
	All R&D expenditures	Intramural performers <sup>b</sup>	Extramural performers <sup>c</sup>					All other <sup>g</sup>	All R&D plant expenditures	Intramural	Extramural
			Total	Higher education institutions	Companies and individuals <sup>d</sup>	Nonprofit organizations <sup>e</sup>	Other governments <sup>f</sup>				
North Carolina	36,106,613	16,335,642	19,770,971	11,297,102	8,030,154	337,015	106,700	0	1,000,000	1,000,000	0
North Dakota	25,822,123	981,502	24,840,621	14,469,584	7,382,680	461,683	2,526,674	0	0	0	0
Ohio	117,471,257	641,094	116,830,163	38,256,245	78,180,697	127,565	265,656	0	0	0	0
Oklahoma	28,885,260	1,434,856	27,450,404	17,955,918	3,764,509	4,062,147	1,667,830	0	0	0	0
Oregon	40,257,488	19,770,459	20,487,029	11,220,208	3,690,000	3,913,105	1,663,716	0	0	0	0
Pennsylvania	99,487,575	16,987,160	82,500,415	48,476,231	624,184	33,382,908	17,092	0	0	0	0
Rhode Island	4,635,868	236,546	4,399,322	1,889,803	2,199,530	237,000	72,989	0	0	0	0
South Carolina	53,419,952	32,709,409	20,710,543	6,780,967	699,643	12,760,948	468,985	0	0	0	0
South Dakota	5,227,211	273,454	4,953,757	3,379,907	1,311,405	37,445	225,000	0	500,000	0	500,000
Tennessee	67,457,255	175,000	67,282,255	8,163,359	59,118,896	0	0	0	0	0	0
Texas	282,261,790	1,993,899	280,267,891	224,879,502	52,747,989	965,656	1,674,744	0	0	0	0
Utah	10,119,476	7,748,094	2,371,382	1,617,856	753,526	0	0	0	0	0	0
Vermont	2,833,206	2,163,824	669,382	358,495	290,850	20,037	0	0	0	0	0
Virginia	57,260,560	20,744,159	36,516,401	17,549,067	14,203,660	551,095	4,068,259	144,320	10,393,687	8,315,001	2,078,686
Washington	60,479,947	26,263,518	34,216,429	17,661,416	10,027,553	976,419	5,169,251	381,790	1,150,155	0	1,150,155
West Virginia	8,731,717	4,773,515	3,958,202	3,147,745	51,957	3,500	705,000	50,000	0	0	0
Wisconsin	16,366,530	5,377,653	10,988,877	3,877,962	4,223,711	228,352	2,658,402	450	0	0	0
Wyoming	9,886,086	4,237,727	5,648,359	1,768,058	3,648,840	52,237	179,224	0	0	0	0
Puerto Rico <sup>j</sup>	47,543,226	30,716,521	16,826,705	7,636,361	5,868,235	0	3,322,109	0	1,947,876	1,764,602	183,274

<sup>a</sup> State R&D expenditures do not include R&D plant.

<sup>b</sup> 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.

<sup>c</sup> Extramural performers are those outside the department or agency who perform R&D.

<sup>d</sup> Companies and individuals include individuals under contract for research projects.

<sup>e</sup> Nonprofit organizations, including foundations.

<sup>f</sup> Other governments include federal government departments and agencies; other departments or agencies within the state; other state governments; and county, city, special district, or regional local governments.

<sup>g</sup> All other performers not elsewhere classified.

<sup>h</sup> State R&D plant expenditures include acquisition of land, facilities, major equipment, and major building renovations intended primarily for R&D use.

<sup>i</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>j</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.



TABLE 3

## State government expenditures for R&amp;D, by state: FYs 2006–23

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>a</sup>	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	2,444,115,617	2,529,759,356	2,655,773,116	3,034,601,074
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	29,812,345	88,219,991	83,778,649
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	19,671,388	17,157,228	19,451,112
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	15,011,508	7,946,421	14,011,612
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	9,908,767	9,759,708	9,521,076
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	520,234,299	490,081,806	594,541,351
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	38,436,248	37,073,342	39,665,229
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	55,050,702	60,578,799	55,924,506
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	3,338,773	3,446,375	3,584,063
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	8,128,666	10,560,754	10,563,918
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	178,360,429	180,145,644	222,882,689
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	18,798,826	24,988,379	20,739,193
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	10,315,823	6,337,851	5,280,407
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	18,210,054	20,444,262	18,670,602
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	32,739,430	32,230,820	45,907,372
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	10,485,205	12,104,856	24,179,311
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	11,877,131	10,579,028	10,636,720	9,809,708
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	15,002,554	17,633,236	10,364,853
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	29,737,068	34,881,537	37,765,916
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	31,965,852	32,115,461	31,843,839	31,663,714
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	32,392,463	24,812,470	47,576,007
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	28,212,493	31,280,581	46,489,603
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	23,307,621	23,616,423	48,424,086
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	29,718,391	30,525,914	22,654,435
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	22,483,420	25,093,959	22,732,170
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	11,143,362	9,788,541	10,030,897
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	14,009,154	12,430,684	17,210,400
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	8,447,295	9,752,216	9,956,071
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	31,337,947	32,687,157	29,171,378
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	4,222,929	3,643,395	4,072,717
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	8,675,207	9,222,505	2,521,016
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	59,793,415	65,020,915	99,832,733
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	3,054,817	3,456,227	2,337,788
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	417,246,309	506,283,025	486,576,578
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	36,870,713	38,818,576	36,106,613
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	35,139,613	17,874,336	25,822,123

TABLE 3

## State government expenditures for R&amp;D, by state: FYs 2006–23

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	55,336,431	70,471,571	117,471,257
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	55,989,692	27,646,238	28,885,260
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	37,419,218	33,801,166	40,257,488
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	93,621,093	88,557,830	99,487,575
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	10,226,630	8,361,413	4,635,868
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	44,557,581	50,056,315	53,419,952
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	3,193,289	4,595,753	5,227,211
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	9,587,206	38,959,330	67,457,255
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	255,731,862	247,609,284	282,261,790
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	8,316,189	8,837,531	10,119,476
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	1,535,157	1,460,157	2,833,206
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	44,445,646	40,253,504	57,260,560
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	56,690,210	60,886,219	60,479,947
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	9,013,091	9,180,282	8,731,717
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	15,239,075	19,060,693	16,366,530
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	6,865,263	5,657,338	9,886,086
Puerto Rico <sup>b</sup>	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	17,058,786	47,543,226

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

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

State R&amp;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&amp;D.

**Source(s):**

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

TABLE 4

## State government expenditures for R&amp;D for all performers, by state and source of funds: FY 2023

(Dollars)

State	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
United States <sup>b</sup>	3,034,601,074	742,245,878	2,292,355,196
Alabama	83,778,649	16,054,899	67,723,750
Alaska	19,451,112	7,296,267	12,154,845
Arizona	14,011,612	4,679,113	9,332,499
Arkansas	9,521,076	3,269,056	6,252,020
California	594,541,351	31,928,041	562,613,310
Colorado	39,665,229	6,114,448	33,550,781
Connecticut	55,924,506	21,341,245	34,583,261
Delaware	3,584,063	1,721,282	1,862,781
District of Columbia	10,563,918	8,515,771	2,048,147
Florida	222,882,689	25,903,893	196,978,796
Georgia	20,739,193	16,287,488	4,451,705
Hawaii	5,280,407	2,563,321	2,717,086
Idaho	18,670,602	11,364,333	7,306,269
Illinois	45,907,372	25,771,315	20,136,057
Indiana	24,179,311	9,162,767	15,016,544
Iowa	9,809,708	5,714,355	4,095,353
Kansas	10,364,853	2,627,935	7,736,918
Kentucky	37,765,916	9,546,502	28,219,414
Louisiana	31,663,714	18,445,998	13,217,716
Maine	47,576,007	37,765,217	9,810,790
Maryland	46,489,603	1,336,954	45,152,649
Massachusetts	48,424,086	8,462,093	39,961,993
Michigan	22,654,435	9,084,859	13,569,576
Minnesota	22,732,170	8,729,109	14,003,061
Mississippi	10,030,897	8,564,182	1,466,715
Missouri	17,210,400	6,265,084	10,945,316
Montana	9,956,071	6,762,205	3,193,866
Nebraska	29,171,378	3,354,005	25,817,373
Nevada	4,072,717	1,518,169	2,554,548
New Hampshire	2,521,016	696,744	1,824,272
New Jersey	99,832,733	3,174,803	96,657,930
New Mexico	2,337,788	1,770,272	567,516
New York	486,576,578	213,112,444	273,464,134
North Carolina	36,106,613	7,435,519	28,671,094
North Dakota	25,822,123	2,813,356	23,008,767
Ohio	117,471,257	6,092,750	111,378,507
Oklahoma	28,885,260	7,359,723	21,525,537
Oregon	40,257,488	16,966,844	23,290,644
Pennsylvania	99,487,575	12,247,746	87,239,829
Rhode Island	4,635,868	3,666,349	969,519
South Carolina	53,419,952	34,218,558	19,201,394
South Dakota	5,227,211	1,549,087	3,678,124
Tennessee	67,457,255	21,382,255	46,075,000
Texas	282,261,790	29,590,735	252,671,055
Utah	10,119,476	1,301,894	8,817,582
Vermont	2,833,206	2,608,039	225,167
Virginia	57,260,560	21,236,524	36,024,036
Washington	60,479,947	16,343,423	44,136,524
West Virginia	8,731,717	3,970,816	4,760,901

TABLE 4

**State government expenditures for R&D for all performers, by state and source of funds: FY 2023**

(Dollars)

State	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Wisconsin	16,366,530	10,491,049	5,875,481
Wyoming	9,886,086	4,067,042	5,819,044
Puerto Rico <sup>c</sup>	47,543,226	23,575,491	23,967,735

<sup>a</sup> State and all others category includes companies; nonprofit organizations; other state governments; and city, county, regional, or other local governments.

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 5

## State government expenditures for R&amp;D for intramural performers, by state and source of funds: FY 2023

(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 <sup>a</sup>	741,613,066	330,196,996	374,463,127	7,611,901	9,340,269	16,180,534	3,820,239
Alabama	8,885,851	5,362,860	2,983,621	3,570	49,726	0	486,074
Alaska	14,118,929	4,446,385	6,611,844	3,060,700	0	0	0
Arizona	2,901,013	1,833,935	1,067,078	0	0	0	0
Arkansas	391,998	155,472	236,526	0	0	0	0
California	97,801,248	6,452,601	91,230,650	117,997	0	0	0
Colorado	10,548,105	2,677,246	7,856,742	0	0	14,117	0
Connecticut	29,335,244	12,815,756	16,519,488	0	0	0	0
Delaware	1,600,464	482,103	1,118,361	0	0	0	0
District of Columbia	7,041,016	5,922,231	1,118,785	0	0	0	0
Florida	53,921,437	15,408,355	34,178,921	18,770	55,777	3,638,602	621,012
Georgia	2,930,709	2,670,800	0	0	0	259,909	0
Hawaii	628,842	628,842	0	0	0	0	0
Idaho	7,349,090	6,285,004	947,747	15,820	12,311	88,208	0
Illinois	554,067	0	554,067	0	0	0	0
Indiana	1,902,083	640,523	1,261,560	0	0	0	0
Iowa	1,366,776	790,341	411,891	0	164,544	0	0
Kansas	2,166,223	1,362,879	746,217	0	0	0	57,127
Kentucky	4,842,218	3,311,421	1,530,797	0	0	0	0
Louisiana	10,567,296	7,776,412	2,790,884	0	0	0	0
Maine	12,319,129	9,237,122	2,315,084	1,181	755,391	0	10,351
Maryland	622,465	325,652	296,813	0	0	0	0
Massachusetts	1,690,736	175,660	1,215,076	300,000	0	0	0
Michigan	143,576	96,095	47,481	0	0	0	0
Minnesota	3,138,073	1,655,657	1,482,416	0	0	0	0
Mississippi	2,030,108	1,193,240	374,157	462,711	0	0	0
Missouri	4,589,925	1,538,039	3,051,886	0	0	0	0
Montana	3,806,428	2,707,280	1,038,300	0	60,848	0	0
Nebraska	74,500	0	74,500	0	0	0	0
Nevada	256,192	186,169	70,023	0	0	0	0
New Hampshire	89,546	71,637	17,909	0	0	0	0
New Jersey	3,917,853	622,467	3,295,386	0	0	0	0
New Mexico	781,067	601,104	179,963	0	0	0	0
New York	286,453,348	157,405,093	105,631,778	1,319,969	8,131,629	12,179,698	1,785,181
North Carolina	16,335,642	520,035	15,815,607	0	0	0	0
North Dakota	981,502	540,406	441,096	0	0	0	0
Ohio	641,094	355,768	285,326	0	0	0	0
Oklahoma	1,434,856	1,047,254	387,602	0	0	0	0
Oregon	19,770,459	13,713,869	5,605,775	450,815	0	0	0
Pennsylvania	16,987,160	9,082,034	7,785,126	120,000	0	0	0
Rhode Island	236,546	236,546	0	0	0	0	0
South Carolina	32,709,409	22,615,194	9,188,685	160,036	0	0	745,494
South Dakota	273,454	191,504	81,950	0	0	0	0
Tennessee	175,000	140,000	35,000	0	0	0	0
Texas	1,993,899	1,202,045	791,854	0	0	0	0
Utah	7,748,094	358,994	7,389,100	0	0	0	0
Vermont	2,163,824	2,112,389	51,435	0	0	0	0

TABLE 5

**State government expenditures for R&D for intramural performers, by state and source of funds: FY 2023**

(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
Virginia	20,744,159	7,285,245	13,066,261	277,653	0	0	115,000
Washington	26,263,518	7,809,141	17,063,967	1,280,367	110,043	0	0
West Virginia	4,773,515	2,257,270	2,516,245	0	0	0	0
Wisconsin	5,377,653	4,410,314	967,339	0	0	0	0
Wyoming	4,237,727	1,480,607	2,734,808	22,312	0	0	0
Puerto Rico <sup>b</sup>	30,716,521	17,691,128	13,025,393	0	0	0	0

<sup>a</sup> U.S. total reflects all 50 states and the District of Columbia.<sup>b</sup> 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.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 6

## State government expenditures for R&amp;D by intramural performers, by state: FYs 2006–23

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>a</sup>	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	638,536,132	630,788,241	660,308,336	694,421,461	675,326,278	695,882,555	741,613,066
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	17,295,499	12,081,222	8,885,851
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	13,677,498	11,600,345	14,118,929
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	3,522,494	2,039,798	2,901,013
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	170,429	220,653	391,998
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	80,243,824	80,750,013	75,581,146	83,587,677	83,800,192	87,712,398	97,801,248
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	11,957,421	8,651,485	10,548,105
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	27,217,883	28,200,758	29,335,244
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	1,894,419	1,568,167	1,600,464
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	3,705,656	4,320,240	7,041,016
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	50,793,339	51,395,556	53,921,437
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	2,016,590	2,884,258	2,930,709
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	2,311,413	201,790	628,842
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	7,124,769	7,278,248	7,349,090
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	554,067	554,067	554,067
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	470,344	660,237	1,902,083
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	2,959,513	3,091,936	2,912,086	1,366,776
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	1,294,643	1,500,273	2,166,223
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	1,946,017	4,434,431	4,842,218
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	10,774,371	9,555,840	10,033,831	10,567,296
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	10,370,488	12,208,306	12,319,129
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	878,718	864,022	622,465
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	1,208,652	1,636,998	1,690,736
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	237,018	254,848	143,576
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	2,458,490	3,038,564	3,138,073
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	2,005,582	2,820,168	2,030,108
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	6,455,476	4,338,958	4,589,925
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	2,846,129	3,400,729	3,806,428
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	2,128,727	2,114,433	74,500
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	237,064	208,642	256,192
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	27,186	136,953	89,546
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	3,006,539	3,317,395	3,917,853
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	1,535,533	1,110,427	781,067
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	259,432,614	274,950,816	286,453,348
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	17,422,714	17,505,611	16,335,642
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	294,748	131,121	981,502

TABLE 6

## State government expenditures for R&amp;D by intramural performers, by state: FYs 2006–23

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	1,808,996	1,106,388	641,094
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	2,575,950	1,946,574	1,434,856
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	16,083,800	16,703,743	19,770,459
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	8,172,000	13,041,479	16,987,160
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	8,118,721	5,438,324	236,546
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	27,709,617	29,595,672	32,709,409
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	359,853	237,313	273,454
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	1,289,255	314,273	175,000
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	2,686,856	2,368,161	1,993,899
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	5,326,711	6,375,939	7,748,094
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	596,129	1,170,646	2,163,824
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	16,183,098	15,546,707	20,744,159
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	21,349,303	24,507,566	26,263,518
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	3,378,070	3,803,985	4,773,515
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	4,401,850	5,209,332	5,377,653
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	2,339,942	2,228,619	4,237,727
Puerto Rico <sup>b</sup>	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	11,176,340	30,716,521

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

<sup>a</sup> U.S. total reflects all 50 states and the District of Columbia.<sup>b</sup> 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&amp;D and services performed by others in support of an internal R&amp;D project. State R&amp;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&amp;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&amp;D, by state and type of R&amp;D: FY 2023

(Dollars)

State	All intramural R&D expenditures	Type of R&D		
		Basic research	Applied research	Experimental development
United States <sup>a</sup>	741,613,066	120,979,634	577,325,662	43,307,770
Alabama	8,885,851	169,000	8,118,182	598,669
Alaska	14,118,929	0	12,608,511	1,510,418
Arizona	2,901,013	600,000	2,301,013	0
Arkansas	391,998	0	391,998	0
California	97,801,248	1,570,299	92,023,983	4,206,966
Colorado	10,548,105	0	10,479,336	68,769
Connecticut	29,335,244	10,003,419	18,770,809	561,016
Delaware	1,600,464	0	1,600,464	0
District of Columbia	7,041,016	5,929,590	1,055,714	55,712
Florida	53,921,437	1,123,832	51,516,677	1,280,928
Georgia	2,930,709	288,936	2,494,314	147,459
Hawaii	628,842	0	198,717	430,125
Idaho	7,349,090	0	7,349,090	0
Illinois	554,067	110,813	443,254	0
Indiana	1,902,083	321,746	1,529,943	50,394
Iowa	1,366,776	0	1,366,776	0
Kansas	2,166,223	509,345	1,656,878	0
Kentucky	4,842,218	47,954	4,794,264	0
Louisiana	10,567,296	5,792,622	4,774,674	0
Maine	12,319,129	5,530,721	6,651,797	136,611
Maryland	622,465	0	0	622,465
Massachusetts	1,690,736	203,170	1,057,482	430,084
Michigan	143,576	35,000	108,576	0
Minnesota	3,138,073	0	3,138,073	0
Mississippi	2,030,108	0	906,562	1,123,546
Missouri	4,589,925	0	4,589,925	0
Montana	3,806,428	0	3,692,054	114,374
Nebraska	74,500	0	29,800	44,700
Nevada	256,192	0	256,192	0
New Hampshire	89,546	0	1,696	87,850
New Jersey	3,917,853	334,238	3,024,632	558,983
New Mexico	781,067	0	781,067	0
New York	286,453,348	72,009,629	210,409,452	4,034,267
North Carolina	16,335,642	1,762,688	14,572,954	0
North Dakota	981,502	0	981,502	0
Ohio	641,094	604,979	36,115	0
Oklahoma	1,434,856	595,534	339,878	499,444
Oregon	19,770,459	5,840,729	10,366,383	3,563,347
Pennsylvania	16,987,160	0	367,167	16,619,993
Rhode Island	236,546	236,546	0	0
South Carolina	32,709,409	2,058,077	29,951,248	700,084
South Dakota	273,454	6,634	250,820	16,000
Tennessee	175,000	0	0	175,000
Texas	1,993,899	226,869	1,641,355	125,675
Utah	7,748,094	0	7,748,094	0
Vermont	2,163,824	0	2,163,824	0
Virginia	20,744,159	2,958,612	14,186,660	3,598,887
Washington	26,263,518	77,999	24,239,515	1,946,004
West Virginia	4,773,515	364,865	4,408,650	0

TABLE 7

**State government expenditures for intramural R&D, by state and type of R&D: FY 2023**

(Dollars)

State	All intramural R&D expenditures	Type of R&D		
		Basic research	Applied research	Experimental development
Wisconsin	5,377,653	0	5,377,653	0
Wyoming	4,237,727	1,665,788	2,571,939	0
Puerto Rico <sup>b</sup>	30,716,521	17,202,293	6,014,228	7,500,000

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

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 8

## State government expenditures for R&amp;D, by state and function of R&amp;D: FY 2023

(Dollars)

State	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
United States <sup>b</sup>	3,034,601,074	147,887,810	373,458,008	591,276,952	1,292,800,801	315,134,417	314,043,086
Alabama	83,778,649	584,939	751,370	53,882,774	10,847,247	5,360,260	12,352,059
Alaska	19,451,112	74,015	742,896	12,740,515	268,294	5,625,392	0
Arizona	14,011,612	1,810,237	0	1,552,790	7,868,651	2,064,934	715,000
Arkansas	9,521,076	4,804,257	50,000	2,270,144	242,686	1,936,385	217,604
California	594,541,351	11,794,814	225,709,133	63,966,691	234,563,834	49,446,825	9,060,054
Colorado	39,665,229	1,999,706	3,247,418	10,539,540	8,971,048	4,408,335	10,499,182
Connecticut	55,924,506	4,521,698	2,928,267	12,908,890	24,164,742	3,907,816	7,493,093
Delaware	3,584,063	0	50,500	2,096,191	0	1,437,372	0
District of Columbia	10,563,918	0	0	1,848,077	7,909,103	623,962	182,776
Florida	222,882,689	17,742,469	188,602	66,897,373	122,453,101	15,501,144	100,000
Georgia	20,739,193	2,513,762	8,294,642	2,927,411	0	7,003,378	0
Hawaii	5,280,407	1,007,998	710,125	513,210	508,672	1,735,402	805,000
Idaho	18,670,602	6,558,129	0	9,232,224	0	2,862,749	17,500
Illinois	45,907,372	15,345	0	32,327,079	516,000	10,233,989	2,814,959
Indiana	24,179,311	500,000	748,289	3,866,329	0	12,624,242	6,440,451
Iowa	9,809,708	113,850	0	1,945,868	0	7,117,988	632,002
Kansas	10,364,853	3,625,892	139,676	1,716,521	0	3,882,450	1,000,314
Kentucky	37,765,916	588,967	143,957	7,622,379	19,723,210	8,125,749	1,561,654
Louisiana	31,663,714	177,190	626,150	11,664,250	1,139,543	8,562,086	9,494,495
Maine	47,576,007	10,182,623	0	7,640,976	11,660,337	1,185,950	16,906,121
Maryland	46,489,603	235,327	188,034	439,038	43,682,169	1,886,593	58,442
Massachusetts	48,424,086	0	27,660,771	3,317,234	7,473,568	7,849,400	2,123,113
Michigan	22,654,435	4,028,064	200,000	702,204	8,046,672	6,977,495	2,700,000
Minnesota	22,732,170	4,568,674	153,294	4,711,365	250,000	13,048,837	0
Mississippi	10,030,897	207,791	0	7,059,347	0	2,763,759	0
Missouri	17,210,400	2,751,815	0	7,666,807	3,449,500	3,342,278	0
Montana	9,956,071	3,466,168	0	4,658,143	0	1,831,760	0
Nebraska	29,171,378	2,498,518	172,926	2,068,739	20,069,625	1,239,135	3,122,435
Nevada	4,072,717	204,134	0	920,333	170,477	1,330,439	1,447,334
New Hampshire	2,521,016	66,591	0	1,641,411	0	723,467	89,547
New Jersey	99,832,733	0	0	7,057,203	80,740,965	2,596,557	9,438,008
New Mexico	2,337,788	0	0	1,566,851	0	770,937	0
New York	486,576,578	9,199,446	52,943,590	30,403,179	295,176,385	14,085,670	84,768,308
North Carolina	36,106,613	14,087,083	1,659,524	2,906,002	8,484,484	7,864,239	1,105,281
North Dakota	25,822,123	3,054,183	18,378,646	659,780	874,605	1,820,328	1,034,581
Ohio	117,471,257	0	5,992,718	49,445,763	20,000,000	5,432,652	36,600,124
Oklahoma	28,885,260	1,050,099	1,459,455	2,389,244	17,774,197	4,740,677	1,471,588
Oregon	40,257,488	803,998	1,250,000	22,483,060	4,980,964	8,590,054	2,149,412
Pennsylvania	99,487,575	5,019,941	3,878,560	18,896,798	62,664,377	4,800,272	4,227,627
Rhode Island	4,635,868	150,000	349,934	2,199,338	249,596	1,687,000	0
South Carolina	53,419,952	2,902,813	587,345	31,915,915	14,095,324	2,339,150	1,579,405
South Dakota	5,227,211	3,250,774	37,445	34,950	0	1,904,042	0
Tennessee	67,457,255	0	50,851	0	0	3,234,659	64,171,745
Texas	282,261,790	2,086,663	0	11,126,708	244,640,010	24,220,565	187,844
Utah	10,119,476	1,317	0	7,388,968	0	2,729,191	0
Vermont	2,833,206	0	0	79,783	1,818,036	935,387	0
Virginia	57,260,560	3,598,429	438,598	18,131,290	5,142,800	19,463,187	10,486,256
Washington	60,479,947	12,929,594	7,987,717	28,731,394	1,357,424	6,136,300	3,337,518

TABLE 8

**State government expenditures for R&D, by state and function of R&D: FY 2023**

(Dollars)

State	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
West Virginia	8,731,717	43,500	1,640,120	3,460,082	250,155	2,086,106	1,251,754
Wisconsin	16,366,530	2,447,261	500,000	7,574,828	503,000	4,310,941	1,030,500
Wyoming	9,886,086	619,736	3,597,455	3,481,963	70,000	746,932	1,370,000
Puerto Rico <sup>c</sup>	47,543,226	140,343	61,401	276,257	34,008,519	1,641,919	11,414,787

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

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 9

## State government expenditures for agriculture-related R&amp;D, by state: FYs 2009–23

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>a</sup>	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	119,859,705	127,263,681	147,887,810
Alabama	0	0	0	0	0	0	250,000	0	0	0	0	0	104,373	326,726	584,939
Alaska	15,000	687,500	713,500	99,934	750,856	217,231	217,141	0	0	0	0	0	26,000	0	74,015
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	1,071,301	1,311,266	1,810,237
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	6,614,526	5,336,054	4,804,257
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	6,934,080	7,753,869	11,794,814
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	2,739,142	1,028,351	1,999,706
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	4,142,888	4,321,687	4,521,698
Delaware	0	0	0	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	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	15,279,858	14,851,847	17,742,469
Georgia	0	0	0	0	0	0	0	0	0	0	633,607	255,642	0	0	2,513,762
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	524,528	932,423	1,007,998
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	6,008,990	8,109,741	6,558,129
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	2,019,400	1,977,021	15,345
Indiana	0	0	0	177,000	268,000	250,000	250,000	250,000	250,000	350,000	141,876	100,000	500,279	500,000	500,000
Iowa	0	0	0	0	0	0	0	0	0	0	0	60,000	170,448	179,657	113,850
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	3,548,954	4,457,312	3,625,892
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	517,000	290,727	588,967
Louisiana	0	0	0	0	0	27,333	9,167	2,500	49,066	38,750	270,090	636,415	274,427	289,750	177,190
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	1,891,592	1,542,730	10,182,623
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	0	0	235,327
Massachusetts	0	0	0	0	0	34,227	0	37,631	0	0	50,000	0	0	0	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	1,216,089	2,756,984	4,028,064
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	4,789,550	4,545,874	4,568,674
Mississippi	0	0	0	0	0	84,209	0	49,896	0	1,027,288	599,632	1,213,684	1,564,195	114,017	207,791
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	1,185,569	2,327,790	2,751,815
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	2,841,089	3,359,243	3,466,168
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	3,234,030	3,326,551	2,498,518
Nevada	0	0	0	0	0	10,000	0	0	0	140,823	184,774	188,146	237,064	208,642	204,134
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	160,563	26,047	66,591
New Jersey	0	0	0	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	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	8,731,413	8,293,408	9,199,446
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	14,123,005	14,078,340	14,087,083
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	3,177,142	3,145,930	3,054,183

TABLE 9

## State government expenditures for agriculture-related R&amp;D, by state: FYs 2009–23

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Ohio	0	0	0	0	0	0	0	200,000	0	0	0	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	1,329,150	1,514,338	1,050,099
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	205,647	583,164	803,998
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	2,601,164	3,446,582	5,019,941
Rhode Island	0	0	0	166,820	40,000	0	0	0	43,868	50,000	49,042	45,615	53,000	99,985	150,000
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	1,839,876	1,770,038	2,902,813
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	2,013,292	2,486,260	3,250,774
Tennessee	0	0	0	0	0	0	0	0	0	150,000	0	0	0	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	932,510	1,353,356	2,086,663
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	0	305,965	1,317
Vermont	0	490,900	652,700	503,308	538,173	384,878	407,694	50,000	0	0	0	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	3,118,841	3,267,434	3,598,429
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	11,882,329	13,620,631	12,929,594
West Virginia	0	0	151,428	206,137	93,033	0	0	0	0	25,000	25,000	10,000	166,685	244,126	43,500
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	1,558,082	2,539,311	2,447,261
Wyoming	264,295	176,596	147,226	493,909	452,098	125,000	0	222,087	280,776	528,197	429,282	661,674	531,634	640,504	619,736
Puerto Rico <sup>b</sup>	649,048	0	0	507,174	649,048	550,000	683,157	na	na	na	na	na	na	258,249	140,343

na = not applicable; did not report to survey.

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

State R&amp;D expenditures by function were surveyed beginning with the FY 2009 survey. State R&amp;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&amp;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&amp;D, by state: FYs 2009–23

(Dollars)

State	2009 <sup>a</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>b</sup>	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	390,847,851	410,273,614	325,615,797	373,458,008
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	178,809	667,842	751,370
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	500,000	731,152	742,896
Arizona	NA	267,174	1,702,776	6,243,529	7,630,643	1,547,000	658,000	216,988	0	0	0	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	50,000	0	50,000
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	267,900,000	191,774,566	225,709,133
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	2,846,991	2,602,115	3,247,418
Connecticut	NA	358,778	553,640	571,414	588,724	1,714,724	1,944,337	240,000	0	0	0	4,083,058	3,627,099	2,919,711	2,928,267
Delaware	NA	0	0	0	0	0	10,000	0	0	13,683	24,256	20,800	46,054	10,495	50,500
District of Columbia	NA	0	0	0	0	0	75,000	0	0	29,500	0	520,000	0	0	0
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	554,984	1,012,306	188,602
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	9,067,079	7,759,750	8,294,642
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	4,216,265	282,042	710,125
Idaho	NA	0	0	0	0	401,783	274,051	178,178	260,435	237,898	0	0	206,624	0	0
Illinois	NA	190,000	0	21,110	225,000	5,885,366	4,333,344	390,473	66,300	0	0	0	0	0	0
Indiana	NA	0	0	0	383,432	657,307	354,693	125,478	0	2,298,615	268,086	95,000	24,787	0	748,289
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	0	0	0
Kansas	NA	0	0	0	0	0	0	0	0	0	0	0	0	132,471	139,676
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	171,000	386,000	140,000	143,957
Louisiana	NA	0	0	0	0	0	0	0	790,430	756,017	2,875,376	2,613,811	1,936,715	927,353	626,150
Maine	NA	5,000	5,000	821,675	480,594	415,000	986,000	1,311,000	0	0	0	0	31,830	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	0	2,000,000	188,034
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	5,044,038	7,048,706	27,660,771
Michigan	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	200,000
Minnesota	NA	1,243,965	249,201	1,702,500	122,084	327,995	897,117	387,372	0	0	0	0	0	0	153,294
Mississippi	NA	1,550,000	1,250,000	0	0	22,914	1,739	0	0	0	0	0	0	0	0
Missouri	NA	0	0	0	0	0	0	0	0	0	0	500,000	0	0	0
Montana	NA	835,942	405,260	187,163	1,200	332,678	0	0	178,300	0	0	0	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	350,000	157,872	172,926
Nevada	NA	0	0	0	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	15,000	0	0
New Jersey	NA	500,000	0	437,685	0	0	0	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	79,323	0	0
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	60,426,855	65,172,565	52,943,590
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	1,574,989	1,680,920	1,659,524
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	24,409,679	9,398,767	18,378,646

TABLE 10

## State government expenditures for energy-related R&amp;D, by state: FYs 2009–23

(Dollars)

State	2009 <sup>a</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	8,291,260	9,364,131	5,992,718
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	550,284	883,335	1,459,455
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	2,400,000	1,659,775	1,250,000
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	1,009,207	457,337	3,878,560
Rhode Island	NA	0	0	0	0	2,000	1,200	104,121	131,554	48,106	0	0	0	136,999	349,934
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	474,350	562,345	587,345
South Dakota	NA	0	0	0	0	3,779	26,862	11,135	22,447	181,466	39,853	16,021	1,968	0	37,445
Tennessee	NA	0	35,764	6,553	0	0	0	213,026	0	106,514	106,514	106,514	0	0	50,851
Texas	NA	0	0	374,013	447,132	0	0	0	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	0	0	0
Vermont	NA	300,000	300,000	167,769	179,391	223,802	239,382	0	0	0	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	409,898	412,180	438,598
Washington	NA	0	0	0	0	148,000	0	1,916,700	8,197,974	3,309,037	7,621,218	6,731,672	11,573,426	15,236,975	7,987,717
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	872,617	1,333,732	1,640,120
Wisconsin	NA	0	0	250,000	150,000	30,000	30,000	0	0	66,000	0	0	0	0	500,000
Wyoming	NA	0	0	386,452	182,082	356,188	349,552	538,491	1,323,767	71,133	184,398	1,651,390	1,217,483	1,150,355	3,597,455
Puerto Rico <sup>c</sup>	NA	100,000	100,000	106,470	220,000	422,494	400,000	na	na	na	na	na	na	0	61,401

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

<sup>a</sup> 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 the other category and in the environment and natural resources category.

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> 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&amp;D, by state: FYs 2009–23

(Dollars)

State	2009 <sup>a</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>b</sup>	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	448,489,450	444,593,349	556,643,092	591,276,952
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	6,080,232	70,126,266	53,882,774
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	9,713,200	10,015,251	12,740,515
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	1,682,113	1,140,215	1,552,790
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	1,143,026	1,558,599	2,270,144
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	46,696,431	64,903,411	63,966,691
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	11,287,126	7,762,275	10,539,540
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	11,706,792	11,877,203	12,908,890
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	2,125,080	2,229,910	2,096,191
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	1,821,400	1,976,600	1,848,077
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	57,586,211	57,744,843	66,897,373
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	3,132,706	12,722,663	2,927,411
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	320,500	632,000	513,210
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	9,473,386	9,482,216	9,232,224
Illinois	56,800	0	0	0	0	0	0	0	0	0	0	0	18,525,888	17,723,231	32,327,079
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	720,153	352,281	3,866,329
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	2,994,029	3,688,099	1,945,868
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	7,217,311	8,280,611	1,716,521
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	2,237,368	2,406,089	7,261,361	7,622,379
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	10,483,689	10,092,683	11,664,250
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	7,542,075	7,605,622	7,640,976
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	900,754	410,466	439,038
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	2,752,268	3,522,905	3,317,234
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	1,690,204	880,828	702,204
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	3,612,375	4,929,165	4,711,365
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	4,036,645	6,374,191	7,059,347
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	10,111,070	7,213,438	7,666,807
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	3,873,284	4,371,611	4,658,143
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	5,465,378	4,079,403	2,068,739
Nevada	0	32,942	47,582	46,905	45,408	170,494	192,802	83,663	4,967	100,000	128,914	222,553	439,233	474,700	920,333
New Hampshire	155,000	100,000	111,000	0	0	262,850	331,476	744,520	642,613	74,981	101,215	113,525	593,070	1,406,171	1,641,411
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	2,940,457	5,608,633	7,057,203
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	1,550,674	1,950,400	1,566,851
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	31,482,716	21,860,827	30,403,179
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	5,733,496	6,263,664	2,906,002
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	918,049	624,754	659,780

TABLE 11

## State government expenditures for environment and natural resources-related R&amp;D, by state: FYs 2009–23

(Dollars)

State	2009 <sup>a</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	31,774,578	49,888,407	49,445,763
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	2,291,905	3,000,003	2,389,244
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	17,198,988	18,199,863	22,483,060
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	10,393,255	13,890,852	18,896,798
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	9,014,506	6,658,944	2,199,338
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	27,217,435	29,745,041	31,915,915
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	0	0	34,950
Tennessee	0	0	320,000	856,000	866,500	583,092	571,871	1,085,874	863,020	901,162	906,097	919,243	233,025	314,273	0
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	11,309,543	6,661,241	11,126,708
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	4,995,663	5,847,503	7,388,968
Vermont	0	75,000	75,000	115,469	102,379	252,928	90,683	153,931	50,195	49,859	308,227	282,511	274,477	63,773	79,783
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	7,597,646	10,742,492	18,131,290
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	20,929,359	22,916,358	28,731,394
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	3,183,300	2,433,225	3,460,082
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	6,879,700	7,047,780	7,574,828
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	2,542,859	2,086,841	3,481,963
Puerto Rico <sup>c</sup>	136,021	100,000	100,000	201,685	244,845	205,623	150,000	na	na	na	na	na	na	796,996	276,257

na = not applicable; did not report to survey.

<sup>a</sup> 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 the other category and in the environment and natural resources category.<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&amp;D expenditures by function were surveyed beginning with the FY 2009 survey. State R&amp;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&amp;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&amp;D, by state: FYs 2009–23

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>a</sup>	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	1,077,323,751	1,099,491,524	1,292,800,801
Alabama	0	0	0	0	0	1,000,000	2,829,600	0	0	980,000	1,080,000	2,000,000	2,163,596	1,751,080	10,847,247
Alaska	0	0	0	0	0	0	0	930,260	1,591,735	506,881	320,476	474,542	866,695	534,187	268,294
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	8,467,153	3,518,749	7,868,651
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	200,000	275,000	242,686
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	142,503,729	173,274,157	234,563,834
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	9,548,470	8,813,647	8,971,048
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	27,271,532	26,085,781	24,164,742
Delaware	0	0	0	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	5,983,318	8,244,141	7,909,103
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	93,311,821	92,302,255	122,453,101
Georgia	0	0	0	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	37,500	1,033,000	508,672
Idaho	0	0	0	0	0	30,226	130,045	148,927	111,453	376,277	338,288	212,000	0	0	0
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	295,040	400,000	516,000
Indiana	20,304,740	0	0	135,000	708,497	10,000,000	0	0	2,849,998	299,865	600,000	0	300,000	0	0
Iowa	0	0	0	0	0	0	0	56,706	79,418	0	61,000	0	0	0	0
Kansas	1,040,411	0	0	0	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	16,082,555	16,829,567	19,723,210
Louisiana	0	0	0	0	0	0	0	0	1,287,883	1,231,812	1,532,501	2,800,226	1,160,113	1,196,008	1,139,543
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	12,612,119	9,873,473	11,660,337
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	25,100,000	26,227,112	43,682,169
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	6,574,962	7,689,115	7,473,568
Michigan	0	0	0	0	0	0	0	2,122,805	134,052	0	88,488	0	20,000,000	20,662,258	8,046,672
Minnesota	0	0	0	0	0	2,500,000	2,500,000	56,970	0	0	0	0	0	0	250,000
Mississippi	0	0	0	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	592,500	242,500	3,449,500
Montana	822,627	822,299	848,774	202,778	39,483	577,157	642,384	389,076	491,415	311,826	311,826	0	0	0	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	19,480,431	19,918,950	20,069,625
Nevada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170,477
New Hampshire	0	0	0	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	48,281,316	46,820,754	80,740,965
New Mexico	0	0	0	0	0	15,000	25,000	25,000	25,000	0	0	0	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	289,740,653	308,203,902	295,176,385
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	3,665,704	5,202,825	8,484,484
North Dakota	100,000	0	0	0	0	0	0	0	0	0	29,510	349,127	5,182,820	3,313,396	874,605

TABLE 12

## State government expenditures for health-related R&amp;D, by state: FYs 2009–23

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	2,141,824	0	20,000,000
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	17,077,727	16,139,607	17,774,197
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	5,127,824	3,779,289	4,980,964
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	72,166,914	61,719,253	62,664,377
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	411,325	363,485	249,596
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	10,768,594	13,374,650	14,095,324
South Dakota	0	0	0	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	0	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	222,983,844	214,612,352	244,640,010
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	5,350	0	0
Vermont	0	132,198	190,117	160,853	170,780	170,047	252,706	139,055	166,047	166,047	210,747	215,000	163,373	553,199	1,818,036
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	4,132,097	2,963,275	5,142,800
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	1,367,538	1,362,789	1,357,424
West Virginia	0	0	0	0	0	179,292	179,280	566,871	892,283	1,050,330	1,296,852	712,330	293,814	241,625	250,155
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	1,000,000	1,314,143	503,000
Wyoming	0	0	0	0	0	0	0	0	0	0	250,000	61,640	261,500	656,000	70,000
Puerto Rico <sup>b</sup>	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	11,118,968	34,008,519

na = not applicable; did not report to survey.

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

State R&amp;D expenditures by function were surveyed beginning with the FY 2009 survey. State R&amp;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&amp;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&amp;D, by state: FYs 2009–23

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>a</sup>	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	300,352,569	290,871,093	315,134,417
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	2,211,001	3,692,380	5,360,260
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	8,565,493	4,808,710	5,625,392
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	3,179,987	1,414,933	2,064,934
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	376,215	1,079,240	1,936,385
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	47,716,505	39,260,000	49,446,825
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	3,791,995	3,395,841	4,408,335
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	2,408,289	2,971,742	3,907,816
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	1,167,639	1,205,970	1,437,372
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	289,382	245,919	623,962
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	11,527,555	14,134,393	15,501,144
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	6,599,041	4,505,966	7,003,378
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	5,013,530	2,793,386	1,735,402
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	2,144,749	2,852,305	2,862,749
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	9,430,989	9,782,913	10,233,989
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	8,261,486	9,312,575	12,624,242
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	6,942,156	6,142,926	7,117,988
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	3,237,535	3,765,115	3,882,450
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	8,931,685	8,781,665	8,125,749
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	9,185,327	10,065,406	8,562,086
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	1,500,000	1,558,635	1,185,950
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	2,211,739	2,643,003	1,886,593
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	3,767,017	4,050,000	7,849,400
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	6,812,098	6,225,844	6,977,495
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	14,081,495	15,618,920	13,048,837
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	5,542,522	3,300,333	2,763,759
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	2,120,015	2,646,956	3,342,278
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	1,732,922	1,971,362	1,831,760
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	1,735,953	1,270,607	1,239,135
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	1,588,437	1,632,800	1,330,439
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	605,207	734,656	723,467
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	5,440,354	7,239,506	2,596,557
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	1,316,767	1,400,300	770,937
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	11,189,625	10,073,889	14,085,670
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	10,882,065	9,103,250	7,864,239
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	1,204,774	1,298,374	1,820,328

TABLE 13

## State government expenditures for transportation-related R&amp;D, by state: FYs 2009–23

(Dollars)

State	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	6,276,848	6,349,868	5,432,652
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	4,963,501	4,292,220	4,740,677
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	3,638,363	7,385,549	8,590,054
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	5,576,553	4,100,235	4,800,272
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	185,472	900,000	1,687,000
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	2,646,350	2,581,949	2,339,150
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	1,178,029	2,109,493	1,904,042
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	6,683,667	5,399,804	3,234,659
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	20,505,965	24,982,335	24,220,565
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	3,315,176	2,684,063	2,729,191
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	1,097,307	843,185	935,387
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	18,505,828	16,489,762	19,463,187
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	7,528,900	4,527,700	6,136,300
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	2,257,746	2,260,000	2,086,106
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	2,176,168	4,217,027	4,310,941
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	1,105,147	768,083	746,932
Puerto Rico <sup>b</sup>	200,000	180,000	180,000	200,000	200,000	560,000	560,000	na	na	na	na	na	na	0	1,641,919

na = not applicable; did not report to survey.

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

State R&amp;D expenditures by function were surveyed beginning with the FY 2009 survey. State R&amp;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&amp;D.

**Source(s):**

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

TABLE 14

## State government expenditures for R&amp;D for other functions not separately identified, by state: FYs 2009–23

(Dollars)

State	2009 <sup>a</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>b</sup>	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	155,473,832	177,356,368	255,887,929	314,043,086
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	19,074,334	11,655,697	12,352,059
Alaska	0	0	0	0	0	0	0	0	0	0	0	0	0	1,067,928	0
Arizona	134,587	742,869	361,685	0	0	0	0	0	0	139,859	0	559,621	610,954	561,258	715,000
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	1,525,000	1,510,815	217,604
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	8,483,554	13,115,803	9,060,054
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	8,222,524	13,471,113	10,499,182
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	5,894,102	12,402,675	7,493,093
Delaware	0	0	0	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	34,566	94,094	182,776
Florida	860,000	295,290	1,961,528	933,175	2,205,335	0	0	0	0	0	0	88,406	100,000	100,000	100,000
Georgia	2,500,000	200,000	200,000	400,000	0	0	0	0	0	0	0	31,813	0	0	0
Hawaii	6,906,722	0	0	0	0	667,972	773,071	846,154	0	1,054,083	1,436,565	1,806,130	203,500	665,000	805,000
Idaho	0	0	0	0	0	0	0	211,098	0	368,772	436,773	242,114	376,305	0	17,500
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	2,468,113	2,347,655	2,814,959
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	678,500	1,940,000	6,440,451
Iowa	31,512,943	105,480	710,999	22,475	22,484	522,607	457,808	431,450	421,109	497,171	337,061	417,493	472,395	626,038	632,002
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	998,754	997,727	1,000,314
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	1,413,739	1,578,217	1,561,654
Louisiana	0	0	577,544	862,067	573,126	0	0	0	13,674,007	13,078,673	8,712,529	4,259,471	9,075,190	9,272,639	9,494,495
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	8,814,847	4,232,010	16,906,121
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	0	0	58,442
Massachusetts	0	0	486,173	0	0	0	0	0	2,972,231	3,425,000	6,870,000	6,775,000	5,169,336	1,305,697	2,123,113
Michigan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,700,000
Minnesota	192,945	0	0	0	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	0	0	0
Missouri	0	0	0	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	0	50,000	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	1,072,155	3,933,774	3,122,435
Nevada	0	0	0	0	0	0	0	4,078,492	9,131,829	6,120,737	6,584,759	3,055,388	1,958,195	1,327,253	1,447,334
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	7,301,367	7,055,631	89,547
New Jersey	310,000	750,000	0	0	0	0	0	0	0	0	3,111,979	3,543,318	3,131,288	5,352,022	9,438,008
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	108,053	105,527	0
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	15,675,047	92,678,434	84,768,308
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	891,454	2,489,577	1,105,281
North Dakota	13,828,867	133,500	263,000	164,400	372,000	0	0	0	0	0	0	223,743	247,149	93,115	1,034,581

TABLE 14

## State government expenditures for R&amp;D for other functions not separately identified, by state: FYs 2009–23

(Dollars)

State	2009 <sup>a</sup>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	6,851,921	4,869,165	36,600,124
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	29,777,125	1,816,735	1,471,588
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	8,848,396	2,193,526	2,149,412
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	1,874,000	4,943,571	4,227,627
Rhode Island	0	0	0	200,000	0	479,906	107,997	1,434,966	778,812	489,904	580,675	540,100	562,327	202,000	0
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	1,610,976	2,022,292	1,579,405
South Dakota	0	0	0	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	2,670,514	33,245,253	64,171,745
Texas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187,844
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	0	0	0
Vermont	0	0	0	0	0	0	415,612	0	0	0	0	90,998	0	0	0
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	10,681,336	6,378,361	10,486,256
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	3,408,658	3,221,766	3,337,518
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	2,238,929	2,667,574	1,251,754
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	3,625,125	3,942,432	1,030,500
Wyoming	0	0	0	0	0	0	0	1,191,380	1,067,653	1,037,337	788,160	731,620	1,206,640	355,555	1,370,000
Puerto Rico <sup>c</sup>	1,731,697	601,391	587,869	350,654	940,348	795,212	757,107	na	na	na	na	na	na	4,884,573	11,414,787

na = not applicable; did not report to survey.

<sup>a</sup> 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 the other category and in the environment and natural resources category.<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.**Note(s):**

State R&amp;D expenditures by function were surveyed beginning with the FY 2009 survey. State R&amp;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&amp;D. Other R&amp;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&amp;D funded from federal sources, by state: FYs 2006–23

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States <sup>a</sup>	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	607,588,752	619,502,305	701,256,752	742,245,878
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	6,067,898	10,458,091	16,054,899
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	11,068,861	8,260,099	7,296,267
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	5,070,319	3,330,756	4,679,113
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	983,181	1,840,818	3,269,056
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	25,470,130	20,301,828	31,928,041
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	6,546,643	4,972,373	6,114,448
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	15,879,739	14,622,416	21,341,245
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	1,355,648	1,533,976	1,721,282
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	6,245,794	8,368,175	8,515,771
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	25,068,596	27,469,288	25,903,893
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	17,725,257	16,555,047	16,287,488
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	8,334,826	3,397,342	2,563,321
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	9,698,956	11,009,398	11,364,333
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	17,876,553	17,698,320	25,771,315
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	6,875,499	7,098,396	9,162,767
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	4,841,194	5,359,474	5,714,355
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	8,343,437	9,188,967	2,627,935
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	7,548,030	10,566,579	9,546,502
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	19,251,675	19,523,775	17,690,354	18,445,998
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	12,263,843	13,633,417	37,765,217
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	2,005,962	1,732,396	1,336,954
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	6,047,993	7,056,757	8,462,093
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	6,912,826	6,869,738	9,084,859
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	7,689,513	8,566,979	8,729,109
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	9,061,908	7,914,852	8,564,182
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	4,240,386	4,836,862	6,265,084
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	5,600,354	5,647,319	6,762,205
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	6,288,269	3,981,578	3,354,005
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	2,001,509	2,068,342	1,518,169
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	631,502	756,259	696,744
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	5,466,394	6,943,253	3,174,803
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	2,152,671	2,479,360	1,770,272
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	166,507,446	246,154,735	213,112,444
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	11,005,615	9,627,170	7,435,519
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	6,863,870	1,904,626	2,813,356

TABLE 15

## State government expenditures for R&amp;D funded from federal sources, by state: FYs 2006–23

(Dollars)

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	8,732,356	8,153,111	6,092,750
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	7,560,791	7,056,971	7,359,723
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	14,233,548	13,854,858	16,966,844
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	10,315,593	10,203,586	12,247,746
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	6,631,735	5,740,186	3,666,349
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	27,721,413	29,762,759	34,218,558
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	725,396	1,338,277	1,549,087
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	7,551,808	16,915,160	21,382,255
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	23,447,625	27,162,975	29,590,735
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	1,701,485	1,669,847	1,301,894
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	1,081,618	1,295,178	2,608,039
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	19,106,082	16,230,355	21,236,524
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	17,162,043	15,068,376	16,343,423
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	5,247,993	4,275,461	3,970,816
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	5,893,866	9,117,475	10,491,049
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	3,124,556	3,516,837	4,067,042
Puerto Rico <sup>b</sup>	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	6,129,178	23,575,491

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

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

State R&amp;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&amp;D.

**Source(s):**

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

TABLE 16

## State government expenditures for R&amp;D funded from federal sources, by state and federal agency: FY 2023

(Dollars)

State	Total federal	DOC	DOD	DOE	DOI	DOT	ED	EPA	HHS	NSF	USDA	Other <sup>a</sup>
United States <sup>b</sup>	742,245,878	29,353,091	7,662,944	26,923,475	130,798,506	200,308,037	26,353,624	6,544,107	209,054,618	19,250,687	32,923,447	53,073,342
Alabama	16,054,899	509,698	176,233	237,993	2,629,994	3,585,700	6,042,815	0	0	459,536	72,570	2,340,360
Alaska	7,296,267	0	0	0	2,573,877	4,410,223	0	157,499	0	0	0	154,668
Arizona	4,679,113	0	0	0	1,285,940	1,714,947	0	0	0	0	1,678,226	0
Arkansas	3,269,056	0	0	0	1,706,279	1,057,028	0	0	0	505,749	0	0
California	31,928,041	0	0	0	1,539,483	29,320,159	0	504,405	0	0	126,894	437,100
Colorado	6,114,448	0	0	0	1,598,311	4,153,335	0	83,114	0	0	279,688	0
Connecticut	21,341,245	0	0	0	6,456,950	3,563,898	0	0	2,909,977	0	3,865,421	4,544,999
Delaware	1,721,282	0	0	0	453,696	1,083,888	0	155,291	0	28,407	0	0
District of Columbia	8,515,771	0	0	0	0	645,391	0	57,777	7,710,583	0	0	102,020
Florida	25,903,893	5,537,650	44,500	332,645	8,884,668	4,320,669	0	412,665	0	76,203	3,659,979	2,634,914
Georgia	16,287,488	0	0	8,663,914	1,678,486	5,945,088	0	0	0	0	0	0
Hawaii	2,563,321	0	430,125	0	0	1,325,037	0	0	197,435	0	537,463	73,261
Idaho	11,364,333	0	0	4,894,982	2,827,387	2,621,898	0	0	0	0	1,020,066	0
Illinois	25,771,315	0	0	0	13,572,171	8,043,895	0	0	0	0	0	4,155,249
Indiana	9,162,767	0	0	0	43,734	7,881,115	0	0	0	0	584,132	653,786
Iowa	5,714,355	0	0	0	1,428,367	3,804,770	0	0	0	0	240,747	240,471
Kansas	2,627,935	0	0	0	0	2,182,766	0	348,532	0	0	0	96,637
Kentucky	9,546,502	0	0	0	5,237,651	4,260,897	0	0	0	0	47,954	0
Louisiana	18,445,998	14,872	0	0	5,350,506	6,800,000	0	0	0	4,411,110	0	1,869,510
Maine	37,765,217	1,975,804	0	0	2,696,654	1,052,660	12,956	0	6,622,085	131,161	37,813	25,236,084
Maryland	1,336,954	0	0	0	0	1,336,954	0	0	0	0	0	0
Massachusetts	8,462,093	533,020	192,587	0	0	5,913,816	0	26,843	1,795,827	0	0	0
Michigan	9,084,859	0	0	0	18,223	5,544,756	0	268,559	2,639,979	0	489,367	123,975
Minnesota	8,729,109	0	0	0	1,595,297	5,988,111	0	0	250,000	0	895,701	0
Mississippi	8,564,182	977,315	0	0	3,102,983	2,626,207	0	0	0	0	207,791	1,649,886
Missouri	6,265,084	0	237,474	0	1,292,950	2,673,822	0	62,272	0	0	1,323,567	674,999
Montana	6,762,205	0	0	0	3,218,274	1,680,200	0	17,345	0	0	1,822,761	23,625
Nebraska	3,354,005	0	0	0	1,438,527	810,841	0	0	0	0	1,104,637	0
Nevada	1,518,169	0	0	0	33,965	1,332,000	0	8,070	0	0	144,134	0
New Hampshire	696,744	0	0	0	0	696,744	0	0	0	0	0	0
New Jersey	3,174,803	156,000	0	0	149,078	1,698,844	0	753,698	204,034	0	0	213,149
New Mexico	1,770,272	0	0	0	1,126,334	616,750	0	27,188	0	0	0	0
New York	213,112,444	9,504,476	5,473,806	5,739,380	597,380	2,517,866	206,340	1,322,452	171,117,348	13,254,279	3,188,490	190,627
North Carolina	7,435,519	0	0	0	148,500	7,283,786	0	0	0	0	0	3,233
North Dakota	2,813,356	0	0	0	1,062,138	1,751,218	0	0	0	0	0	0

TABLE 16

**State government expenditures for R&D funded from federal sources, by state and federal agency: FY 2023**

(Dollars)

State	Total federal	DOC	DOD	DOE	DOI	DOT	ED	EPA	HHS	NSF	USDA	Other <sup>a</sup>
Ohio	6,092,750	273,083	0	0	1,288,140	4,382,998	141,000	7,529	0	0	0	0
Oklahoma	7,359,723	0	0	0	1,668,344	3,797,299	0	0	1,467,391	0	426,689	0
Oregon	16,966,844	511,350	809,014	4,179,801	6,418,111	3,007,398	456,836	0	622,361	0	292,876	669,097
Pennsylvania	12,247,746	36,712	0	0	8,589,508	2,510,272	0	85,000	0	0	1,026,254	0
Rhode Island	3,666,349	236,546	0	0	1,889,803	1,540,000	0	0	0	0	0	0
South Carolina	34,218,558	8,816,031	299,205	149,412	14,661,731	1,781,843	0	12,979	7,792,940	0	694,683	9,734
South Dakota	1,549,087	0	0	0	0	1,549,087	0	0	0	0	0	0
Tennessee	21,382,255	0	0	50,851	0	2,587,727	18,743,677	0	0	0	0	0
Texas	29,590,735	0	0	0	4,323,971	19,989,727	0	0	2,018,723	0	2,190,406	1,067,908
Utah	1,301,894	0	0	0	0	1,133,570	0	167,007	0	0	1,317	0
Vermont	2,608,039	0	0	0	0	790,003	0	0	1,818,036	0	0	0
Virginia	21,236,524	0	0	30,000	6,911,891	5,885,643	750,000	283,754	536,075	0	986,111	5,853,050
Washington	16,343,423	270,534	0	939,608	3,604,425	4,882,200	0	1,646,342	1,351,824	0	3,648,490	0
West Virginia	3,970,816	0	0	0	1,782,877	1,668,885	0	0	0	384,242	79,812	55,000
Wisconsin	10,491,049	0	0	0	4,521,420	3,960,999	0	135,786	0	0	1,872,844	0
Wyoming	4,067,042	0	0	1,704,889	1,390,482	595,107	0	0	0	0	376,564	0
Puerto Rico <sup>c</sup>	23,575,491	0	0	0	0	0	0	34,880	6,526,388	2,846	0	17,011,377

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.

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

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> 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, FY 2023.

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
United States <sup>c</sup>	3,034,601,074	741,613,066	2,292,988,008	33,914,350	23,760,554	10,153,796
Alabama	83,778,649	8,885,851	74,892,798	0	0	0
Commerce, Department of	54,419,133	0	54,419,133	0	0	0
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	2,637,830	0	2,637,830	0	0	0
Economic and Community Affairs, Department of	3,255,511	0	3,255,511	0	0	0
Education, Department of	6,883,453	989,326	5,894,127	0	0	0
Forensic Sciences, Department of	231,757	231,757	0	0	0	0
Geological Survey	2,971,380	2,971,380	0	0	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	3,913,492	3,913,492	0	0	0	0
Supercomputer Authority	4,204,072	0	4,204,072	0	0	0
Transportation, Department of	5,262,021	779,896	4,482,125	0	0	0
Alaska	19,451,112	14,118,929	5,332,183	0	0	0
Energy Authority	242,896	0	242,896	0	0	0
Environmental Conservation, Department of	192,715	137,502	55,213	0	0	0
Housing Finance Corporation	500,000	0	500,000	0	0	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	12,212,300	12,212,300	0	0	0	0
Railroad Corporation	3,098,866	1,221,457	1,877,409	0	0	0
Seafood Marketing Institute	74,015	0	74,015	0	0	0
Transportation and Public Facilities, Department of	3,130,320	547,670	2,582,650	0	0	0
Arizona	14,011,612	2,901,013	11,110,599	0	0	0
Agriculture, Department of	1,943,155	0	1,943,155	0	0	0
Deaf and Hard of Hearing	115,000	0	115,000	0	0	0
Game and Fish Department	1,419,872	1,299,872	120,000	0	0	0
Health Services, Department of	7,868,651	0	7,868,651	0	0	0
Juvenile Corrections, Department of	600,000	600,000	0	0	0	0
Transportation, Department of	2,064,934	1,001,141	1,063,793	0	0	0
Arkansas	9,521,076	391,998	9,129,078	0	0	0
Beef Council	76,605	0	76,605	0	0	0
Corn and Grain Sorghum Promotion Board	965,315	0	965,315	0	0	0
Economic Development Commission	605,749	0	605,749	0	0	0
Game and Fish Commission	1,966,097	248,065	1,718,032	0	0	0
Midwest Dairy Association, Arkansas Division	7,425	0	7,425	0	0	0
Natural Heritage Commission	208,588	102,653	105,935	0	0	0
Rice Research and Promotion Board	2,500,050	0	2,500,050	0	0	0
Soybean Promotion Board	1,221,170	0	1,221,170	0	0	0
Transportation, Department of	1,936,385	41,280	1,895,105	0	0	0
Wheat Promotion Board	33,692	0	33,692	0	0	0
California	594,541,351	97,801,248	496,740,103	0	0	0
Air Resources Board	17,641,553	10,629,196	7,012,357	0	0	0
Coachella Valley Mountains	215,912	0	215,912	0	0	0
Conservation, Department of	1,490,818	1,166,321	324,497	0	0	0
Corrections and Rehabilitation, Department of	6,466,366	0	6,466,366	0	0	0
Covered California	5,765,443	0	5,765,443	0	0	0
Dairy Council	69,421	0	69,421	0	0	0
Delta Stewardship Council	5,138,976	0	5,138,976	0	0	0
Emergency Services Governor's Office	2,020,000	120,000	1,900,000	0	0	0
Energy Commission	170,673,193	36,001,202	134,671,991	0	0	0

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Environmental Health Hazard Assessment, Office of	25,263,123	18,194,997	7,068,126	0	0	0
First 5 California (Children and Families Commission)	6,000,000	0	6,000,000	0	0	0
Food and Agriculture, Department of	6,187,795	0	6,187,795	0	0	0
Forestry and Fire Protection, Department of	16,600,000	2,600,000	14,000,000	0	0	0
Horse Racing Board	976,291	0	976,291	0	0	0
Housing and Community Development, Department of	79,000	79,000	0	0	0	0
Institute for Regenerative Medicine	152,261,013	0	152,261,013	0	0	0
Motor Vehicles, Department of	1,714,131	1,696,942	17,189	0	0	0
Parks And Recreation, Department of	3,297,362	0	3,297,362	0	0	0
Pesticide Regulation, Department of	20,772,486	13,757,992	7,014,494	0	0	0
Public Health, Department of	8,500,000	0	8,500,000	0	0	0
Public Utilities Commission, Executive Division	55,035,940	0	55,035,940	0	0	0
Resources Recycling and Recovery, Department of	250,112	0	250,112	0	0	0
San Diego River Conservancy	495,155	0	495,155	0	0	0
State Coastal Conservancy	751,289	0	751,289	0	0	0
State Water Resources Control Board	24,800,361	0	24,800,361	0	0	0
Toxic Substances Control, Department of	221,058	221,058	0	0	0	0
Transportation, Department of	49,446,825	13,234,540	36,212,285	0	0	0
Water Resources, Department of	12,407,728	100,000	12,307,728	0	0	0
Colorado	39,665,229	10,548,105	29,117,124	0	0	0
Agriculture, Department of	362,802	337,677	25,125	0	0	0
Economic Development and International Trade, Office of	22,767,255	0	22,767,255	0	0	0
Higher Education Competitive Research Authority	1,843,141	0	1,843,141	0	0	0
Natural Resources, Department of	6,892,590	6,826,610	65,980	0	0	0
Public Health and Environment, Department of	3,439,025	2,642,560	796,465	0	0	0
Transportation, Department of	4,153,335	741,258	3,412,077	0	0	0
Wine Industry Development Board	207,081	0	207,081	0	0	0
Connecticut	55,924,506	29,335,244	26,589,262	0	0	0
Agricultural Experiment Station	14,165,952	14,165,952	0	0	0	0
Energy and Environmental Protection, Department of	8,086,000	7,188,455	897,545	0	0	0
Innovation Inc.	22,043,617	0	22,043,617	0	0	0
Mental Health and Addiction Services, Department of	7,079,816	7,079,816	0	0	0	0
Social Services, Department of	641,305	391,305	250,000	0	0	0
Transportation, Department of	3,907,816	509,716	3,398,100	0	0	0
Delaware	3,584,063	1,600,464	1,983,599	0	0	0
Geological Survey	1,651,264	1,600,464	50,800	0	0	0
Natural Resources and Environmental Control, Department of	488,092	0	488,092	0	0	0
Sustainable Energy Utility	50,500	0	50,500	0	0	0
Transportation, Department of	1,394,207	0	1,394,207	0	0	0
District of Columbia	10,563,918	7,041,016	3,522,902	0	0	0
Energy and Environment, Department of	348,077	0	348,077	0	0	0
Health, Department of	7,909,103	5,929,590	1,979,513	0	0	0
Transportation, Department of	806,738	111,426	695,312	0	0	0
Water and Sewer Authority	1,500,000	1,000,000	500,000	0	0	0
Florida	222,882,689	53,921,437	168,961,252	6,717,144	6,717,144	0
Agriculture and Consumer Services, Department of	22,629,310	1,089,702	21,539,608	0	0	0
Citrus, Department of	2,067,852	93,920	1,973,932	0	0	0
Environmental Protection, Department of	60,125	0	60,125	0	0	0

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Fish and Wildlife Conservation Commission	60,990,297	51,516,677	9,473,620	3,080,144	3,080,144	0
Gaming Control Commission	100,000	0	100,000	0	0	0
Health, Department of	121,558,745	0	121,558,745	0	0	0
Space Florida	1,110,000	0	1,110,000	0	0	0
Transportation, Department of	14,366,360	1,221,138	13,145,222	3,637,000	3,637,000	0
Georgia	20,739,193	2,930,709	17,808,484	0	0	0
Commodity Commission, Agriculture, Department of	2,513,762	0	2,513,762	0	0	0
Natural Resources, Department of	2,297,557	0	2,297,557	0	0	0
Southern States Energy Board	9,213,432	2,930,709	6,282,723	0	0	0
Transportation, Department of	6,714,442	0	6,714,442	0	0	0
Hawaii	5,280,407	628,842	4,651,565	0	0	0
Agriculture, Department of	652,670	198,717	453,953	0	0	0
Business, Economic Development, and Tourism, Department of	2,447,125	430,125	2,017,000	0	0	0
Land and Natural Resources, Department of	445,210	0	445,210	0	0	0
Transportation, Department of	1,735,402	0	1,735,402	0	0	0
Idaho	18,670,602	7,349,090	11,321,512	669,265	0	669,265
Agriculture, Department of	1,020,066	0	1,020,066	0	0	0
Barley Commission	254,646	0	254,646	0	0	0
Bean Commission	33,575	0	33,575	0	0	0
Commerce, Department of	784,945	0	784,945	0	0	0
Dairy West	2,843,786	0	2,843,786	549,265	0	549,265
Fish and Game, Department of	9,232,224	7,136,173	2,096,051	0	0	0
Oilseed Commission	66,548	0	66,548	0	0	0
Pea and Lentil Commission	61,179	0	61,179	0	0	0
Potato Commission	650,880	0	650,880	0	0	0
Transportation Department	2,832,749	212,917	2,619,832	0	0	0
Wheat Commission	890,004	0	890,004	120,000	0	120,000
Illinois	45,907,372	554,067	45,353,305	670,186	335,093	335,093
Children and Family Services, Department of	2,814,959	0	2,814,959	0	0	0
Great Lakes - St. Lawrence River Basin	100,000	0	100,000	0	0	0
Midwest Dairy Association, Illinois Division	15,345	0	15,345	0	0	0
Natural Resources, Department of	27,317,164	0	27,317,164	0	0	0
Nature Preserves Commission	1,065,000	0	1,065,000	0	0	0
Nutrient Research and Education Council	3,844,915	0	3,844,915	0	0	0
Public Health, Department of	516,000	0	516,000	0	0	0
Transportation, Department of	10,233,989	554,067	9,679,922	670,186	335,093	335,093
Indiana	24,179,311	1,902,083	22,277,228	0	0	0
Economic Development Corporation	9,961,588	0	9,961,588	0	0	0
Natural Resources, Department of	4,366,329	1,828,814	2,537,515	0	0	0
Transportation, Department of	9,851,394	73,269	9,778,125	0	0	0
Iowa	9,809,708	1,366,776	8,442,932	0	0	0
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	632,002	632,002	0	0	0	0
Midwest Dairy Association, Iowa Division	113,850	0	113,850	0	0	0
Natural Resources, Department of	1,945,868	734,774	1,211,094	0	0	0
Transportation, Department of	7,117,988	0	7,117,988	0	0	0
Kansas	10,364,853	2,166,223	8,198,630	0	0	0
Corn Commission	375,941	0	375,941	0	0	0
Grain Sorghum Commission	553,341	0	553,341	0	0	0

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Midwest Dairy Association, Kansas Division	13,860	0	13,860	0	0	0
Soybean Commission	1,400,000	0	1,400,000	0	0	0
State Board of Regents	1,000,314	7,049	993,265	0	0	0
Sunflower Commission	11,248	0	11,248	0	0	0
Transportation, Department of	3,882,450	1,290,541	2,591,909	0	0	0
Water Office	1,805,720	868,633	937,087	0	0	0
Wheat Commission	1,321,979	0	1,321,979	0	0	0
Kentucky	37,765,916	4,842,218	32,923,698	0	0	0
Economic Development, Cabinet for	3,126,802	0	3,126,802	0	0	0
Fish and Wildlife Resources, Department of	7,566,970	4,794,264	2,772,706	0	0	0
Horse Racing Commission	140,153	0	140,153	0	0	0
Nature Preserves, Office of Kentucky	55,409	47,954	7,455	0	0	0
Postsecondary Education, Council on	11,029,618	0	11,029,618	0	0	0
Public Health, Department for	7,256,093	0	7,256,093	0	0	0
Soybean Promotion Board	502,893	0	502,893	0	0	0
Transportation Cabinet	8,087,978	0	8,087,978	0	0	0
Louisiana	31,663,714	10,567,296	21,096,418	0	0	0
Board of Regents	12,395,006	0	12,395,006	0	0	0
Coastal Protection and Restoration Authority	3,791,442	524,674	3,266,768	0	0	0
Transportation and Development, Department of	8,500,000	4,250,000	4,250,000	0	0	0
Wildlife and Fisheries, Department of	6,977,266	5,792,622	1,184,644	0	0	0
Maine	47,576,007	12,319,129	35,256,878	631,650	43,316	588,334
Agriculture, Conservation and Forestry, Department of	1,697,100	1,466,400	230,700	0	0	0
Aquaculture Innovation Center	587,473	587,473	0	0	0	0
Inland Fisheries and Wildlife, Department of	1,776,000	1,659,000	117,000	0	0	0
Marine Resources, Department of	2,790,668	2,663,978	126,690	0	0	0
MDI Biological Laboratory, Center for Biomedical Innovation	7,615,174	5,457,951	2,157,223	43,316	43,316	0
Technology Institute	31,923,642	0	31,923,642	588,334	0	588,334
Transportation, Department of	1,185,950	484,327	701,623	0	0	0
Maryland	46,489,603	622,465	45,867,138	0	0	0
Energy Administration	250,000	0	250,000	0	0	0
Health, Department of	15,000,000	0	15,000,000	0	0	0
Natural Resources, Department of	670,841	0	670,841	0	0	0
Technology Development Corporation	28,682,169	0	28,682,169	0	0	0
Transportation, Department of	1,886,593	622,465	1,264,128	0	0	0
Massachusetts	48,424,086	1,690,736	46,733,350	4,932,263	100,000	4,832,263
Clean Energy Technology Center	27,560,771	0	27,560,771	0	0	0
Environmental Protection, Department of	2,125,890	333,963	1,791,927	100,000	100,000	0
Fish and Game, Department of	262,343	26,915	235,428	0	0	0
Gaming Commission	1,363,550	220,350	1,143,200	0	0	0
MassVentures	400,000	200,000	200,000	0	0	0
Mental Health, Department of	2,761,879	0	2,761,879	0	0	0
Public Health, Department of	2,306,457	0	2,306,457	0	0	0
Technology Park Corporation	3,143,796	0	3,143,796	4,832,263	0	4,832,263
Transportation, Department of	7,849,400	609,508	7,239,892	0	0	0
Water Resources Authority	650,000	300,000	350,000	0	0	0
Michigan	22,654,435	143,576	22,510,859	0	0	0
Agriculture and Rural Development, Department of	3,846,005	35,000	3,811,005	0	0	0
Economic Development Corporation	5,000,000	0	5,000,000	0	0	0



TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Environmental, Great Lakes, and Energy, Department of	4,935,956	108,576	4,827,380	0	0	0
Health and Human Services	2,644,979	0	2,644,979	0	0	0
Transportation, Department of	6,227,495	0	6,227,495	0	0	0
Minnesota	22,732,170	3,138,073	19,594,097	0	0	0
Agriculture, Department of	4,966,177	1,006,689	3,959,488	0	0	0
Forest Resources Council	15,684	0	15,684	0	0	0
Health, Department of	250,000	150,000	100,000	0	0	0
Midwest Dairy Association, Minnesota Division	208,395	0	208,395	0	0	0
Natural Resources, Department of	2,101,074	1,981,384	119,690	0	0	0
Pollution Control Agency	230,894	0	230,894	0	0	0
Transportation, Department of	14,959,946	0	14,959,946	0	0	0
Mississippi	10,030,897	2,030,108	8,000,789	0	0	0
Agriculture and Commerce, Department of	207,791	0	207,791	0	0	0
Environmental Quality, Department of	1,649,886	100,727	1,549,159	0	0	0
Gulf States Marine Fisheries Commission	1,064,916	65,341	999,575	0	0	0
Marine Resources, Department of	1,927,800	1,123,546	804,254	0	0	0
Transportation, Department of	2,763,759	2,444	2,761,315	0	0	0
Wildlife, Fisheries, and Parks, Department of	2,416,745	738,050	1,678,695	0	0	0
Missouri	17,210,400	4,589,925	12,620,475	0	0	0
Agriculture, Department of	1,374,152	0	1,374,152	0	0	0
Conservation, Department of	7,416,216	4,589,925	2,826,291	0	0	0
Mental Health, Department of	242,500	0	242,500	0	0	0
Natural Resources, Department of	250,591	0	250,591	0	0	0
Technology Corporation	3,806,999	0	3,806,999	0	0	0
Transportation, Department of	3,342,278	0	3,342,278	0	0	0
Wine and Grape Board	777,664	0	777,664	0	0	0
Montana	9,956,071	3,806,428	6,149,643	0	0	0
Agriculture, Department of	3,466,168	0	3,466,168	0	0	0
Environmental Quality, Department of	63,976	63,976	0	0	0	0
Fish, Wildlife and Parks, Department of	4,472,983	3,277,294	1,195,689	0	0	0
Natural Resources and Conservation, Department of	68,874	18,077	50,797	0	0	0
Transportation, Department of	1,884,070	447,081	1,436,989	0	0	0
Nebraska	29,171,378	74,500	29,096,878	0	0	0
Agriculture, Department of	1,196,095	0	1,196,095	0	0	0
Corn Board	762,728	0	762,728	0	0	0
Dry Bean Commission	343,193	0	343,193	0	0	0
Economic Development, Department of	4,733,801	0	4,733,801	0	0	0
Game and Parks Commission	2,018,739	0	2,018,739	0	0	0
Grain Sorghum Board	3,000	0	3,000	0	0	0
Health and Human Services, Department of	18,879,659	0	18,879,659	0	0	0
Midwest Dairy Association, Nebraska Division	25,740	0	25,740	0	0	0
Natural Resources, Department of	50,000	0	50,000	0	0	0
Pea And Lentil Commission	30,372	0	30,372	0	0	0
Transportation, Department of	1,088,051	74,500	1,013,551	0	0	0
Wheat Board	40,000	0	40,000	0	0	0
Nevada	4,072,717	256,192	3,816,525	0	0	0
Agriculture, Department of	204,134	204,134	0	0	0	0
Conservation and Natural Resources, Department of	198,678	52,058	146,620	0	0	0
Economic Development, Governor's office of	2,190,905	0	2,190,905	0	0	0
Transportation, Department of	1,479,000	0	1,479,000	0	0	0

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
New Hampshire	2,521,016	89,546	2,431,470	0	0	0
Agriculture, Markets and Food, Department of	86,551	0	86,551	0	0	0
Environmental Services, Department of	1,563,535	0	1,563,535	0	0	0
Transportation, Department of	870,930	89,546	781,384	0	0	0
New Jersey	99,832,733	3,917,853	95,914,880	0	0	0
Children and Families, Department of	330,877	132,600	198,277	0	0	0
Community Affairs, Department of	15,489	14,769	720	0	0	0
Corrections, Department of	498,425	498,425	0	0	0	0
Environmental Protection, Department of	7,878,841	2,469,745	5,409,096	0	0	0
Health, Department of	79,121,918	0	79,121,918	0	0	0
Pinelands Commission	797,409	709,097	88,312	0	0	0
Secretary of Higher Education, Office of	8,500,000	0	8,500,000	0	0	0
State Parole Board, New Jersey	93,217	93,217	0	0	0	0
Transportation, Department of	2,596,557	0	2,596,557	0	0	0
New Mexico	2,337,788	781,067	1,556,721	0	0	0
Game and Fish, Department of	1,501,778	475,000	1,026,778	0	0	0
Transportation, Department of	770,937	306,067	464,870	0	0	0
Western State Air Resources Council	65,073	0	65,073	0	0	0
New York	486,576,578	286,453,348	200,123,230	7,250,000	7,250,000	0
Agriculture and Markets, Department of	6,775,611	2,582,000	4,193,611	0	0	0
Economic Development, Department of	98,660,735	0	98,660,735	0	0	0
Energy Research and Development Authority	55,115,891	8,551,208	46,564,683	0	0	0
Environmental Conservation, Department of	11,196,566	4,262,602	6,933,964	0	0	0
Health, Department of	42,199,899	26,751,347	15,448,552	0	0	0
Mental Health, Office of	170,362,799	149,760,923	20,601,876	7,250,000	7,250,000	0
People with Developmental Disabilities, Office of	2,317,096	2,317,096	0	0	0	0
Power Authority	9,265,322	2,975,989	6,289,333	0	0	0
Roswell Park Comprehensive Cancer Center	76,048,189	76,048,189	0	0	0	0
State Museum	11,121,948	10,729,590	392,358	0	0	0
Thoroughbred Breeding and Development Fund Corp	365,189	0	365,189	0	0	0
Transportation, Department of	3,147,333	2,474,404	672,929	0	0	0
North Carolina	36,106,613	16,335,642	19,770,971	1,000,000	1,000,000	0
Agriculture and Consumer Services, Department of	15,422,911	13,922,911	1,500,000	1,000,000	1,000,000	0
Biotechnology Center	7,770,931	0	7,770,931	0	0	0
Natural and Cultural Resources, Department of	2,135,087	1,762,688	372,399	0	0	0
Science Technology & Innovation, Office of	2,048,421	0	2,048,421	0	0	0
Transportation, Department of	8,572,434	650,043	7,922,391	0	0	0
Wine and Grape Growers Council	156,829	0	156,829	0	0	0
North Dakota	25,822,123	981,502	24,840,621	0	0	0
Agriculture, Department of	924,605	0	924,605	0	0	0
Dry Pea and Lentil Commission	257,308	0	257,308	0	0	0
Game and Fish, Department of	659,780	52,550	607,230	0	0	0
Historical Society of North Dakota	1,034,581	893,850	140,731	0	0	0
Industrial Commission	18,378,646	0	18,378,646	0	0	0
Midwest Dairy Association, North Dakota Division	6,435	0	6,435	0	0	0
Soybean Council	1,531,730	0	1,531,730	0	0	0
Transportation, Department of	1,820,328	35,102	1,785,226	0	0	0
Wheat Commission	1,208,710	0	1,208,710	0	0	0
Ohio	117,471,257	641,094	116,830,163	0	0	0
Development, Department of	88,778,286	0	88,778,286	0	0	0

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Education & Workforce, Department of	166,000	25,000	141,000	0	0	0
Mental Health and Addictions Services, Department of	20,000,000	0	20,000,000	0	0	0
Natural Resources, Department of	2,230,912	616,094	1,614,818	0	0	0
Transportation, Department of	5,432,652	0	5,432,652	0	0	0
Water Development Authority	863,407	0	863,407	0	0	0
Oklahoma	28,885,260	1,434,856	27,450,404	0	0	0
Advancement of Science and Technology, Center for the	8,294,382	0	8,294,382	0	0	0
Agriculture, Food, and Forestry, Department of	426,689	0	426,689	0	0	0
Grand River Dam Authority	455,000	250,000	205,000	0	0	0
Health, Department of	1,314,070	432,788	881,282	0	0	0
Human Services, Department of	174,930	174,930	0	0	0	0
Midwest Dairy Association, Oklahoma Division	4,950	0	4,950	0	0	0
Tobacco Settlement Endowment Trust	12,280,957	0	12,280,957	0	0	0
Transportation, Department of	4,240,128	573,370	3,666,758	0	0	0
Wildlife Conservation, Department of	1,694,154	3,768	1,690,386	0	0	0
Oregon	40,257,488	19,770,459	20,487,029	0	0	0
Agriculture, Department of	203,998	0	203,998	0	0	0
Business Development Department	12,000,000	0	12,000,000	0	0	0
Education, Department of	456,836	0	456,836	0	0	0
Fish and Wildlife, Department of	16,166,574	14,440,498	1,726,076	0	0	0
Forestry, Department of	700,000	350,000	350,000	0	0	0
Geology and Mineral Industries, Department of	1,118,540	1,118,540	0	0	0	0
Human Services, Department of	3,077,411	2,613,332	464,079	0	0	0
Transportation, Department of	3,836,183	1,049,358	2,786,825	0	0	0
Water Resources Department	1,526,296	188,083	1,338,213	0	0	0
Watershed Enhancement Board	1,171,650	10,648	1,161,002	0	0	0
Pennsylvania	99,487,575	16,987,160	82,500,415	0	0	0
Agriculture, Department of	2,817,440	0	2,817,440	0	0	0
Community and Economic Development, Department of	21,742,628	0	21,742,628	0	0	0
Conservation and Natural Resources, Department of	682,346	149,625	532,721	0	0	0
Environmental Protection, Department of	257,919	4,359	253,560	0	0	0
Fish and Boat Commission	163,584	143,542	20,042	0	0	0
Game Commission	16,916,509	16,509,634	406,875	0	0	0
Health, Department of	54,141,877	0	54,141,877	0	0	0
Susquehanna River Basin Commission	255,000	180,000	75,000	0	0	0
Transportation, Department of	2,510,272	0	2,510,272	0	0	0
Rhode Island	4,635,868	236,546	4,399,322	0	0	0
Commerce Corporation	749,530	0	749,530	0	0	0
Fish and Wildlife; Environmental Management, Department of	1,755,569	0	1,755,569	0	0	0
Marine Fisheries; Environmental Management, Department of	134,234	0	134,234	0	0	0
Narragansett Bay National Estuarine Research Reserve; Environmental Management, Department of	236,546	236,546	0	0	0	0
Transportation, Department of	1,687,000	0	1,687,000	0	0	0
Water Resources Board	72,989	0	72,989	0	0	0
South Carolina	53,419,952	32,709,409	20,710,543	0	0	0
Agriculture, Department of	1,229,068	0	1,229,068	0	0	0
Disabilities and Special Needs, Department of	12,227,417	0	12,227,417	0	0	0
Health and Environmental Control, Department of	1,824,716	1,824,716	0	0	0	0

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Natural Resources, Department of	29,190,303	28,539,233	651,070	0	0	0
Public Service Authority	512,345	0	512,345	0	0	0
Research Authority	2,075,537	0	2,075,537	0	0	0
Sea Grant Consortium	4,121,416	2,333,614	1,787,802	0	0	0
Transportation, Department of	2,239,150	11,846	2,227,304	0	0	0
South Dakota	5,227,211	273,454	4,953,757	500,000	0	500,000
Corn Utilization Council	37,445	0	37,445	0	0	0
Midwest Dairy Association, South Dakota Division	90,090	0	90,090	0	0	0
Nutrient Research and Education Council	1,479,262	0	1,479,262	0	0	0
Oilseeds Council	204,975	0	204,975	0	0	0
Pulse Crop Council	33,610	0	33,610	0	0	0
Soybean Research and Promotion Council	845,866	29,267	816,599	500,000	0	500,000
Transportation, Department of	1,904,042	244,187	1,659,855	0	0	0
Weed and Pest Control Commission	47,000	0	47,000	0	0	0
Wheat Commission	584,921	0	584,921	0	0	0
Tennessee	67,457,255	175,000	67,282,255	0	0	0
Education, Department of	57,171,745	0	57,171,745	0	0	0
Environment and Conservation, Department of	50,851	0	50,851	0	0	0
LaunchTN	7,000,000	0	7,000,000	0	0	0
Transportation, Department of	3,234,659	175,000	3,059,659	0	0	0
Texas	282,261,790	1,993,899	280,267,891	0	0	0
Agriculture, Department of	2,086,663	0	2,086,663	0	0	0
Alzheimer's Research and Care Consortium (TARCC)	4,384,547	0	4,384,547	0	0	0
Cancer Prevention and Research Institute	237,997,927	0	237,997,927	0	0	0
Environmental Quality, Commission on	2,255,204	63,981	2,191,223	0	0	0
Parks and Wildlife Department	5,484,621	1,578,191	3,906,430	0	0	0
State Health Services, Department of	2,257,536	351,727	1,905,809	0	0	0
Transportation, Department of	24,220,565	0	24,220,565	0	0	0
Water Development Board	3,574,727	0	3,574,727	0	0	0
Utah	10,119,476	7,748,094	2,371,382	0	0	0
Agriculture and Food, Department of	1,317	0	1,317	0	0	0
Environmental Quality, Department of	1,036,855	273,553	763,302	0	0	0
Natural Resources, Department of	6,352,113	6,352,113	0	0	0	0
Transportation, Department of	2,729,191	1,122,428	1,606,763	0	0	0
Vermont	2,833,206	2,163,824	669,382	0	0	0
Agriculture, Food, and Markets, Agency of	79,783	0	79,783	0	0	0
Human Services, Agency of	1,818,036	1,698,182	119,854	0	0	0
Transportation, Agency of	935,387	465,642	469,745	0	0	0
Virginia	57,260,560	20,744,159	36,516,401	10,393,687	8,315,001	2,078,686
Agriculture and Consumer Services, Department of	3,066,176	0	3,066,176	0	0	0
Behavioral Health and Developmental Services, Department of	5,100	5,100	0	0	0	0
Commonwealth Health Research Board	1,573,838	0	1,573,838	0	0	0
Education, Department of	1,115,000	865,000	250,000	0	0	0
Energy, Department of	1,321,426	1,283,426	38,000	0	0	0
Environmental Quality, Department of	382,014	146,816	235,198	0	0	0
Forensic Science, Department of	1,067,190	1,067,190	0	78,686	0	78,686
Forestry, Department of	481,630	481,630	0	0	0	0
Foundation for Healthy Youth	907,041	0	907,041	0	0	0
Innovation Partnership Corporation	18,076,226	2,366,008	15,710,218	2,000,000	0	2,000,000

TABLE 17

## State agency expenditures for R&amp;D and R&amp;D plant, by state, department or agency, and R&amp;D performer: FY 2023

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Institute for Advanced Learning and Research	68,000	68,000	0	0	0	0
Marine Resources Commission	2,314,260	558,126	1,756,134	0	0	0
Natural History, Museum of	1,001,282	1,001,282	0	0	0	0
Rail and Public Transportation	1,004,284	879,284	125,000	0	0	0
Social Services, Department of	1,050,000	1,050,000	0	0	0	0
Transportation, Department of	15,450,372	9,341,820	6,108,552	0	0	0
Wildlife Resources, Department of	8,376,721	1,630,477	6,746,244	8,315,001	8,315,001	0
Washington	60,479,947	26,263,518	34,216,429	1,150,155	0	1,150,155
Agriculture, Department of	3,880,349	0	3,880,349	0	0	0
Alfalfa Seed Commission	20,000	0	20,000	0	0	0
Asparagus Commission	33,000	0	33,000	0	0	0
Blueberry Commission	77,262	0	77,262	0	0	0
Commerce, Department of	7,387,066	0	7,387,066	1,113,341	0	1,113,341
Dairy Products Commission	20,000	0	20,000	0	0	0
Ecology, Department of	2,886,743	2,156,422	730,321	0	0	0
Fish and Wildlife, Department of	11,115,720	10,756,073	359,647	0	0	0
Fruit Commission	92,424	0	92,424	0	0	0
Grain Commission	2,050,158	0	2,050,158	0	0	0
Health, Department of	1,265,000	1,202,000	63,000	0	0	0
Hop Commission	141,228	0	141,228	36,814	0	36,814
Labor and Industries, Department of	3,337,518	3,337,518	0	0	0	0
Mint Commission	35,289	0	35,289	0	0	0
Natural Resources, Department of	11,714,582	6,748,718	4,965,864	0	0	0
Oilseeds Commission	69,887	0	69,887	0	0	0
Pesticide Registration, Commission on	427,997	0	427,997	0	0	0
Potato Commission	808,462	0	808,462	0	0	0
Puget Sound Partnership	3,615,000	115,000	3,500,000	0	0	0
Pulse Crops Commission	140,077	0	140,077	0	0	0
Red Raspberry Commission	179,481	0	179,481	0	0	0
Transportation, Department of	6,136,300	1,627,400	4,508,900	0	0	0
Tree Fruit Research Commission	4,484,773	320,387	4,164,386	0	0	0
Turfgrass Seed Commission	110,619	0	110,619	0	0	0
Wine Commission	451,012	0	451,012	0	0	0
West Virginia	8,731,717	4,773,515	3,958,202	0	0	0
Agriculture, Department of	43,500	43,500	0	0	0	0
Geological and Economic Survey	2,516,066	2,094,323	421,743	0	0	0
Higher Education Policy Commission	1,832,049	196,339	1,635,710	0	0	0
Justice and Community Services, Division of Administrative Services	105,395	105,395	0	0	0	0
Natural Resources, Division of	2,148,601	2,074,488	74,113	0	0	0
Transportation, Department of	2,086,106	259,470	1,826,636	0	0	0
Wisconsin	16,366,530	5,377,653	10,988,877	0	0	0
Agriculture, Trade and Consumer Protection, Department of	2,384,761	0	2,384,761	0	0	0
Economic Development Corporation	2,096,000	0	2,096,000	0	0	0
Natural Resources, Department of	7,574,828	5,100,602	2,474,226	0	0	0
Transportation, Department of	4,310,941	277,051	4,033,890	0	0	0
Wyoming	9,886,086	4,237,727	5,648,359	0	0	0
Agriculture, Department of	549,736	0	549,736	0	0	0
Business Council	2,010,000	0	2,010,000	0	0	0

TABLE 17

**State agency expenditures for R&D and R&D plant, by state, department or agency, and R&D performer: FY 2023**

(Dollars)

State and department or agency	R&D performers <sup>a</sup>			R&D plant <sup>b</sup>		
	All	Intramural	Extramural	All	Intramural	Extramural
Enhanced Oil Recovery Institute	2,049,753	476,536	1,573,217	0	0	0
Game and Fish Department	1,991,442	1,563,972	427,470	0	0	0
State Geological Survey	2,095,403	2,095,403	0	0	0	0
Transportation, Department of	746,932	101,816	645,116	0	0	0
Water Development Office	442,820	0	442,820	0	0	0
Puerto Rico <sup>d</sup>	47,543,226	30,716,521	16,826,705	1,947,876	1,764,602	183,274
Business Development Office, Economic Development & Commerce	7,190,000	0	7,190,000	0	0	0
Comprehensive Cancer Center	16,142,829	9,702,293	6,440,536	571,650	388,376	183,274
Economic Development & Commerce	528,263	0	528,263	0	0	0
Health, Department of	17,000,000	17,000,000	0	0	0	0
Innovation and Technology Services	3,453,922	1,905,123	1,548,799	0	0	0
Institute of Statistics	1,615,810	1,615,810	0	0	0	0
Science, Technology and Research Trust	1,612,402	493,295	1,119,107	1,376,226	1,376,226	0

<sup>a</sup> 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.

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

<sup>c</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>d</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
United States <sup>b</sup>	3,034,601,074	742,245,878	2,292,355,196
Alabama	83,778,649	16,054,899	67,723,750
Commerce, Department of	54,419,133	0	54,419,133
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	2,637,830	1,856,812	781,018
Economic and Community Affairs, Department of	3,255,511	0	3,255,511
Education, Department of	6,883,453	6,042,815	840,638
Forensic Sciences, Department of	231,757	0	231,757
Geological Survey	2,971,380	1,142,154	1,829,226
Marine Environmental Science Consortium, Dauphin Island Sea Lab	3,913,492	3,427,418	486,074
Supercomputer Authority	4,204,072	0	4,204,072
Transportation, Department of	5,262,021	3,585,700	1,676,321
Alaska	19,451,112	7,296,267	12,154,845
Energy Authority	242,896	0	242,896
Environmental Conservation, Department of	192,715	121,140	71,575
Housing Finance Corporation	500,000	0	500,000
Natural Resources, Department of; Division of Geological and Geophysical Surveys	12,212,300	2,727,100	9,485,200
Railroad Corporation	3,098,866	2,817,838	281,028
Seafood Marketing Institute	74,015	37,804	36,211
Transportation and Public Facilities, Department of	3,130,320	1,592,385	1,537,935
Arizona	14,011,612	4,679,113	9,332,499
Agriculture, Department of	1,943,155	1,811,144	132,011
Deaf and Hard of Hearing	115,000	0	115,000
Game and Fish Department	1,419,872	1,153,022	266,850
Health Services, Department of	7,868,651	0	7,868,651
Juvenile Corrections, Department of	600,000	0	600,000
Transportation, Department of	2,064,934	1,714,947	349,987
Arkansas	9,521,076	3,269,056	6,252,020
Beef Council	76,605	0	76,605
Corn and Grain Sorghum Promotion Board	965,315	0	965,315
Economic Development Commission	605,749	505,749	100,000
Game and Fish Commission	1,966,097	1,689,405	276,692
Midwest Dairy Association, Arkansas Division	7,425	0	7,425
Natural Heritage Commission	208,588	16,874	191,714
Rice Research and Promotion Board	2,500,050	0	2,500,050
Soybean Promotion Board	1,221,170	0	1,221,170
Transportation, Department of	1,936,385	1,057,028	879,357
Wheat Promotion Board	33,692	0	33,692
California	594,541,351	31,928,041	562,613,310
Air Resources Board	17,641,553	0	17,641,553
Coachella Valley Mountains	215,912	0	215,912
Conservation, Department of	1,490,818	459,600	1,031,218
Corrections and Rehabilitation, Department of	6,466,366	0	6,466,366
Covered California	5,765,443	0	5,765,443
Dairy Council	69,421	0	69,421
Delta Stewardship Council	5,138,976	1,539,483	3,599,493
Emergency Services Governor's Office	2,020,000	0	2,020,000
Energy Commission	170,673,193	0	170,673,193

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Environmental Health Hazard Assessment, Office of	25,263,123	0	25,263,123
First 5 California (Children and Families Commission)	6,000,000	0	6,000,000
Food and Agriculture, Department of	6,187,795	126,894	6,060,901
Forestry and Fire Protection, Department of	16,600,000	0	16,600,000
Horse Racing Board	976,291	0	976,291
Housing and Community Development, Department of	79,000	0	79,000
Institute for Regenerative Medicine	152,261,013	0	152,261,013
Motor Vehicles, Department of	1,714,131	0	1,714,131
Parks And Recreation, Department of	3,297,362	0	3,297,362
Pesticide Regulation, Department of	20,772,486	116,499	20,655,987
Public Health, Department of	8,500,000	0	8,500,000
Public Utilities Commission, Executive Division	55,035,940	0	55,035,940
Resources Recycling and Recovery, Department of	250,112	0	250,112
San Diego River Conservancy	495,155	0	495,155
State Coastal Conservancy	751,289	0	751,289
State Water Resources Control Board	24,800,361	365,406	24,434,955
Toxic Substances Control, Department of	221,058	0	221,058
Transportation, Department of	49,446,825	29,320,159	20,126,666
Water Resources, Department of	12,407,728	0	12,407,728
Colorado	39,665,229	6,114,448	33,550,781
Agriculture, Department of	362,802	362,802	0
Economic Development and International Trade, Office of	22,767,255	0	22,767,255
Higher Education Competitive Research Authority	1,843,141	0	1,843,141
Natural Resources, Department of	6,892,590	1,598,311	5,294,279
Public Health and Environment, Department of	3,439,025	0	3,439,025
Transportation, Department of	4,153,335	4,153,335	0
Wine Industry Development Board	207,081	0	207,081
Connecticut	55,924,506	21,341,245	34,583,261
Agricultural Experiment Station	14,165,952	6,197,219	7,968,733
Energy and Environmental Protection, Department of	8,086,000	6,456,950	1,629,050
Innovation Inc.	22,043,617	4,544,999	17,498,618
Mental Health and Addiction Services, Department of	7,079,816	578,179	6,501,637
Social Services, Department of	641,305	0	641,305
Transportation, Department of	3,907,816	3,563,898	343,918
Delaware	3,584,063	1,721,282	1,862,781
Geological Survey	1,651,264	482,103	1,169,161
Natural Resources and Environmental Control, Department of	488,092	155,291	332,801
Sustainable Energy Utility	50,500	0	50,500
Transportation, Department of	1,394,207	1,083,888	310,319
District of Columbia	10,563,918	8,515,771	2,048,147
Energy and Environment, Department of	348,077	57,777	290,300
Health, Department of	7,909,103	7,812,603	96,500
Transportation, Department of	806,738	645,391	161,347
Water and Sewer Authority	1,500,000	0	1,500,000
Florida	222,882,689	25,903,893	196,978,796
Agriculture and Consumer Services, Department of	22,629,310	3,841,336	18,787,974
Citrus, Department of	2,067,852	0	2,067,852
Environmental Protection, Department of	60,125	60,125	0
Fish and Wildlife Conservation Commission	60,990,297	17,681,763	43,308,534



TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Gaming Control Commission	100,000	0	100,000
Health, Department of	121,558,745	0	121,558,745
Space Florida	1,110,000	0	1,110,000
Transportation, Department of	14,366,360	4,320,669	10,045,691
Georgia	20,739,193	16,287,488	4,451,705
Commodity Commission, Agriculture, Department of	2,513,762	0	2,513,762
Natural Resources, Department of	2,297,557	1,678,486	619,071
Southern States Energy Board	9,213,432	8,663,914	549,518
Transportation, Department of	6,714,442	5,945,088	769,354
Hawaii	5,280,407	2,563,321	2,717,086
Agriculture, Department of	652,670	652,670	0
Business, Economic Development, and Tourism, Department of	2,447,125	430,125	2,017,000
Land and Natural Resources, Department of	445,210	155,489	289,721
Transportation, Department of	1,735,402	1,325,037	410,365
Idaho	18,670,602	11,364,333	7,306,269
Agriculture, Department of	1,020,066	1,020,066	0
Barley Commission	254,646	0	254,646
Bean Commission	33,575	0	33,575
Commerce, Department of	784,945	0	784,945
Dairy West	2,843,786	0	2,843,786
Fish and Game, Department of	9,232,224	7,722,369	1,509,855
Oilseed Commission	66,548	0	66,548
Pea and Lentil Commission	61,179	0	61,179
Potato Commission	650,880	0	650,880
Transportation Department	2,832,749	2,621,898	210,851
Wheat Commission	890,004	0	890,004
Illinois	45,907,372	25,771,315	20,136,057
Children and Family Services, Department of	2,814,959	0	2,814,959
Great Lakes - St. Lawrence River Basin	100,000	0	100,000
Midwest Dairy Association, Illinois Division	15,345	0	15,345
Natural Resources, Department of	27,317,164	17,727,420	9,589,744
Nature Preserves Commission	1,065,000	0	1,065,000
Nutrient Research and Education Council	3,844,915	0	3,844,915
Public Health, Department of	516,000	0	516,000
Transportation, Department of	10,233,989	8,043,895	2,190,094
Indiana	24,179,311	9,162,767	15,016,544
Economic Development Corporation	9,961,588	0	9,961,588
Natural Resources, Department of	4,366,329	1,281,652	3,084,677
Transportation, Department of	9,851,394	7,881,115	1,970,279
Iowa	9,809,708	5,714,355	4,095,353
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	632,002	240,471	391,531
Midwest Dairy Association, Iowa Division	113,850	0	113,850
Natural Resources, Department of	1,945,868	1,669,114	276,754
Transportation, Department of	7,117,988	3,804,770	3,313,218
Kansas	10,364,853	2,627,935	7,736,918
Corn Commission	375,941	0	375,941
Grain Sorghum Commission	553,341	0	553,341
Midwest Dairy Association, Kansas Division	13,860	0	13,860

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Soybean Commission	1,400,000	0	1,400,000
State Board of Regents	1,000,314	0	1,000,314
Sunflower Commission	11,248	0	11,248
Transportation, Department of	3,882,450	2,182,766	1,699,684
Water Office	1,805,720	445,169	1,360,551
Wheat Commission	1,321,979	0	1,321,979
Kentucky	37,765,916	9,546,502	28,219,414
Economic Development, Cabinet for	3,126,802	0	3,126,802
Fish and Wildlife Resources, Department of	7,566,970	5,237,651	2,329,319
Horse Racing Commission	140,153	0	140,153
Nature Preserves, Office of Kentucky	55,409	47,954	7,455
Postsecondary Education, Council on	11,029,618	0	11,029,618
Public Health, Department for	7,256,093	0	7,256,093
Soybean Promotion Board	502,893	0	502,893
Transportation Cabinet	8,087,978	4,260,897	3,827,081
Louisiana	31,663,714	18,445,998	13,217,716
Board of Regents	12,395,006	5,572,107	6,822,899
Coastal Protection and Restoration Authority	3,791,442	708,513	3,082,929
Transportation and Development, Department of	8,500,000	6,800,000	1,700,000
Wildlife and Fisheries, Department of	6,977,266	5,365,378	1,611,888
Maine	47,576,007	37,765,217	9,810,790
Agriculture, Conservation and Forestry, Department of	1,697,100	690,300	1,006,800
Aquaculture Innovation Center	587,473	470,720	116,753
Inland Fisheries and Wildlife, Department of	1,776,000	1,332,000	444,000
Marine Resources, Department of	2,790,668	2,230,207	560,461
MDI Biological Laboratory, Center for Biomedical Innovation	7,615,174	6,753,246	861,928
Technology Institute	31,923,642	25,236,084	6,687,558
Transportation, Department of	1,185,950	1,052,660	133,290
Maryland	46,489,603	1,336,954	45,152,649
Energy Administration	250,000	0	250,000
Health, Department of	15,000,000	0	15,000,000
Natural Resources, Department of	670,841	0	670,841
Technology Development Corporation	28,682,169	0	28,682,169
Transportation, Department of	1,886,593	1,336,954	549,639
Massachusetts	48,424,086	8,462,093	39,961,993
Clean Energy Technology Center	27,560,771	0	27,560,771
Environmental Protection, Department of	2,125,890	26,843	2,099,047
Fish and Game, Department of	262,343	69,059	193,284
Gaming Commission	1,363,550	0	1,363,550
MassVentures	400,000	0	400,000
Mental Health, Department of	2,761,879	576,012	2,185,867
Public Health, Department of	2,306,457	1,219,815	1,086,642
Technology Park Corporation	3,143,796	656,548	2,487,248
Transportation, Department of	7,849,400	5,913,816	1,935,584
Water Resources Authority	650,000	0	650,000
Michigan	22,654,435	9,084,859	13,569,576
Agriculture and Rural Development, Department of	3,846,005	613,342	3,232,663
Economic Development Corporation	5,000,000	0	5,000,000
Environmental, Great Lakes, and Energy, Department of	4,935,956	286,782	4,649,174

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Health and Human Services	2,644,979	2,639,979	5,000
Transportation, Department of	6,227,495	5,544,756	682,739
Minnesota	22,732,170	8,729,109	14,003,061
Agriculture, Department of	4,966,177	895,701	4,070,476
Forest Resources Council	15,684	0	15,684
Health, Department of	250,000	250,000	0
Midwest Dairy Association, Minnesota Division	208,395	0	208,395
Natural Resources, Department of	2,101,074	1,595,297	505,777
Pollution Control Agency	230,894	0	230,894
Transportation, Department of	14,959,946	5,988,111	8,971,835
Mississippi	10,030,897	8,564,182	1,466,715
Agriculture and Commerce, Department of	207,791	207,791	0
Environmental Quality, Department of	1,649,886	1,649,886	0
Gulf States Marine Fisheries Commission	1,064,916	1,064,916	0
Marine Resources, Department of	1,927,800	1,326,261	601,539
Transportation, Department of	2,763,759	2,626,207	137,552
Wildlife, Fisheries, and Parks, Department of	2,416,745	1,689,121	727,624
Missouri	17,210,400	6,265,084	10,945,316
Agriculture, Department of	1,374,152	1,315,952	58,200
Conservation, Department of	7,416,216	1,538,039	5,878,177
Mental Health, Department of	242,500	0	242,500
Natural Resources, Department of	250,591	62,272	188,319
Technology Corporation	3,806,999	674,999	3,132,000
Transportation, Department of	3,342,278	2,673,822	668,456
Wine and Grape Board	777,664	0	777,664
Montana	9,956,071	6,762,205	3,193,866
Agriculture, Department of	3,466,168	1,551,329	1,914,839
Environmental Quality, Department of	63,976	17,345	46,631
Fish, Wildlife and Parks, Department of	4,472,983	3,444,457	1,028,526
Natural Resources and Conservation, Department of	68,874	68,874	0
Transportation, Department of	1,884,070	1,680,200	203,870
Nebraska	29,171,378	3,354,005	25,817,373
Agriculture, Department of	1,196,095	1,104,637	91,458
Corn Board	762,728	0	762,728
Dry Bean Commission	343,193	0	343,193
Economic Development, Department of	4,733,801	0	4,733,801
Game and Parks Commission	2,018,739	1,438,527	580,212
Grain Sorghum Board	3,000	0	3,000
Health and Human Services, Department of	18,879,659	0	18,879,659
Midwest Dairy Association, Nebraska Division	25,740	0	25,740
Natural Resources, Department of	50,000	0	50,000
Pea And Lentil Commission	30,372	0	30,372
Transportation, Department of	1,088,051	810,841	277,210
Wheat Board	40,000	0	40,000
Nevada	4,072,717	1,518,169	2,554,548
Agriculture, Department of	204,134	144,134	60,000
Conservation and Natural Resources, Department of	198,678	42,035	156,643
Economic Development, Governor's office of	2,190,905	0	2,190,905
Transportation, Department of	1,479,000	1,332,000	147,000

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
New Hampshire	2,521,016	696,744	1,824,272
Agriculture, Markets and Food, Department of	86,551	0	86,551
Environmental Services, Department of	1,563,535	0	1,563,535
Transportation, Department of	870,930	696,744	174,186
New Jersey	99,832,733	3,174,803	96,657,930
Children and Families, Department of	330,877	204,034	126,843
Community Affairs, Department of	15,489	0	15,489
Corrections, Department of	498,425	119,932	378,493
Environmental Protection, Department of	7,878,841	779,821	7,099,020
Health, Department of	79,121,918	0	79,121,918
Pinelands Commission	797,409	278,955	518,454
Secretary of Higher Education, Office of	8,500,000	0	8,500,000
State Parole Board, New Jersey	93,217	93,217	0
Transportation, Department of	2,596,557	1,698,844	897,713
New Mexico	2,337,788	1,770,272	567,516
Game and Fish, Department of	1,501,778	1,126,334	375,444
Transportation, Department of	770,937	616,750	154,187
Western State Air Resources Council	65,073	27,188	37,885
New York	486,576,578	213,112,444	273,464,134
Agriculture and Markets, Department of	6,775,611	3,352,000	3,423,611
Economic Development, Department of	98,660,735	31,699,904	66,960,831
Energy Research and Development Authority	55,115,891	0	55,115,891
Environmental Conservation, Department of	11,196,566	2,095,026	9,101,540
Health, Department of	42,199,899	19,836,790	22,363,109
Mental Health, Office of	170,362,799	92,822,287	77,540,512
People with Developmental Disabilities, Office of	2,317,096	2,101,295	215,801
Power Authority	9,265,322	0	9,265,322
Roswell Park Comprehensive Cancer Center	76,048,189	58,317,994	17,730,195
State Museum	11,121,948	369,282	10,752,666
Thoroughbred Breeding and Development Fund Corp	365,189	0	365,189
Transportation, Department of	3,147,333	2,517,866	629,467
North Carolina	36,106,613	7,435,519	28,671,094
Agriculture and Consumer Services, Department of	15,422,911	0	15,422,911
Biotechnology Center	7,770,931	0	7,770,931
Natural and Cultural Resources, Department of	2,135,087	151,733	1,983,354
Science Technology & Innovation, Office of	2,048,421	0	2,048,421
Transportation, Department of	8,572,434	7,283,786	1,288,648
Wine and Grape Growers Council	156,829	0	156,829
North Dakota	25,822,123	2,813,356	23,008,767
Agriculture, Department of	924,605	0	924,605
Dry Pea and Lentil Commission	257,308	0	257,308
Game and Fish, Department of	659,780	588,608	71,172
Historical Society of North Dakota	1,034,581	473,530	561,051
Industrial Commission	18,378,646	0	18,378,646
Midwest Dairy Association, North Dakota Division	6,435	0	6,435
Soybean Council	1,531,730	0	1,531,730
Transportation, Department of	1,820,328	1,751,218	69,110
Wheat Commission	1,208,710	0	1,208,710
Ohio	117,471,257	6,092,750	111,378,507

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Development, Department of	88,778,286	0	88,778,286
Education & Workforce, Department of	166,000	141,000	25,000
Mental Health and Addictions Services, Department of	20,000,000	0	20,000,000
Natural Resources, Department of	2,230,912	1,568,752	662,160
Transportation, Department of	5,432,652	4,382,998	1,049,654
Water Development Authority	863,407	0	863,407
Oklahoma	28,885,260	7,359,723	21,525,537
Advancement of Science and Technology, Center for the	8,294,382	0	8,294,382
Agriculture, Food, and Forestry, Department of	426,689	426,689	0
Grand River Dam Authority	455,000	0	455,000
Health, Department of	1,314,070	1,314,070	0
Human Services, Department of	174,930	153,321	21,609
Midwest Dairy Association, Oklahoma Division	4,950	0	4,950
Tobacco Settlement Endowment Trust	12,280,957	0	12,280,957
Transportation, Department of	4,240,128	3,797,299	442,829
Wildlife Conservation, Department of	1,694,154	1,668,344	25,810
Oregon	40,257,488	16,966,844	23,290,644
Agriculture, Department of	203,998	0	203,998
Business Development Department	12,000,000	0	12,000,000
Education, Department of	456,836	456,836	0
Fish and Wildlife, Department of	16,166,574	11,507,143	4,659,431
Forestry, Department of	700,000	0	700,000
Geology and Mineral Industries, Department of	1,118,540	1,077,415	41,125
Human Services, Department of	3,077,411	915,237	2,162,174
Transportation, Department of	3,836,183	3,007,398	828,785
Water Resources Department	1,526,296	0	1,526,296
Watershed Enhancement Board	1,171,650	2,815	1,168,835
Pennsylvania	99,487,575	12,247,746	87,239,829
Agriculture, Department of	2,817,440	630,440	2,187,000
Community and Economic Development, Department of	21,742,628	0	21,742,628
Conservation and Natural Resources, Department of	682,346	0	682,346
Environmental Protection, Department of	257,919	0	257,919
Fish and Boat Commission	163,584	68,379	95,205
Game Commission	16,916,509	8,953,655	7,962,854
Health, Department of	54,141,877	0	54,141,877
Susquehanna River Basin Commission	255,000	85,000	170,000
Transportation, Department of	2,510,272	2,510,272	0
Rhode Island	4,635,868	3,666,349	969,519
Commerce Corporation	749,530	0	749,530
Fish and Wildlife; Environmental Management, Department of	1,755,569	1,755,569	0
Marine Fisheries; Environmental Management, Department of	134,234	134,234	0
Narragansett Bay National Estuarine Research Reserve; Environmental Management, Department of	236,546	236,546	0
Transportation, Department of	1,687,000	1,540,000	147,000
Water Resources Board	72,989	0	72,989
South Carolina	53,419,952	34,218,558	19,201,394
Agriculture, Department of	1,229,068	188,466	1,040,602
Disabilities and Special Needs, Department of	12,227,417	7,127,417	5,100,000
Health and Environmental Control, Department of	1,824,716	1,118,786	705,930

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Natural Resources, Department of	29,190,303	20,777,867	8,412,436
Public Service Authority	512,345	0	512,345
Research Authority	2,075,537	76,766	1,998,771
Sea Grant Consortium	4,121,416	3,147,413	974,003
Transportation, Department of	2,239,150	1,781,843	457,307
South Dakota	5,227,211	1,549,087	3,678,124
Corn Utilization Council	37,445	0	37,445
Midwest Dairy Association, South Dakota Division	90,090	0	90,090
Nutrient Research and Education Council	1,479,262	0	1,479,262
Oilseeds Council	204,975	0	204,975
Pulse Crop Council	33,610	0	33,610
Soybean Research and Promotion Council	845,866	0	845,866
Transportation, Department of	1,904,042	1,549,087	354,955
Weed and Pest Control Commission	47,000	0	47,000
Wheat Commission	584,921	0	584,921
Tennessee	67,457,255	21,382,255	46,075,000
Education, Department of	57,171,745	18,743,677	38,428,068
Environment and Conservation, Department of	50,851	50,851	0
LaunchTN	7,000,000	0	7,000,000
Transportation, Department of	3,234,659	2,587,727	646,932
Texas	282,261,790	29,590,735	252,671,055
Agriculture, Department of	2,086,663	1,926,663	160,000
Alzheimer's Research and Care Consortium (TARCC)	4,384,547	0	4,384,547
Cancer Prevention and Research Institute	237,997,927	0	237,997,927
Environmental Quality, Commission on	2,255,204	987,947	1,267,257
Parks and Wildlife Department	5,484,621	4,667,675	816,946
State Health Services, Department of	2,257,536	2,018,723	238,813
Transportation, Department of	24,220,565	19,989,727	4,230,838
Water Development Board	3,574,727	0	3,574,727
Utah	10,119,476	1,301,894	8,817,582
Agriculture and Food, Department of	1,317	1,317	0
Environmental Quality, Department of	1,036,855	167,007	869,848
Natural Resources, Department of	6,352,113	0	6,352,113
Transportation, Department of	2,729,191	1,133,570	1,595,621
Vermont	2,833,206	2,608,039	225,167
Agriculture, Food, and Markets, Agency of	79,783	0	79,783
Human Services, Agency of	1,818,036	1,818,036	0
Transportation, Agency of	935,387	790,003	145,384
Virginia	57,260,560	21,236,524	36,024,036
Agriculture and Consumer Services, Department of	3,066,176	484,901	2,581,275
Behavioral Health and Developmental Services, Department of	5,100	0	5,100
Commonwealth Health Research Board	1,573,838	0	1,573,838
Education, Department of	1,115,000	750,000	365,000
Energy, Department of	1,321,426	774,258	547,168
Environmental Quality, Department of	382,014	283,754	98,260
Forensic Science, Department of	1,067,190	180,165	887,025
Forestry, Department of	481,630	370,635	110,995
Foundation for Healthy Youth	907,041	0	907,041
Innovation Partnership Corporation	18,076,226	5,412,624	12,663,602

TABLE 18

## State agency expenditures for R&amp;D for all performers, by state, department or agency, and source of funds: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Institute for Advanced Learning and Research	68,000	0	68,000
Marine Resources Commission	2,314,260	1,894,767	419,493
Natural History, Museum of	1,001,282	0	1,001,282
Rail and Public Transportation	1,004,284	52,958	951,326
Social Services, Department of	1,050,000	525,000	525,000
Transportation, Department of	15,450,372	5,832,685	9,617,687
Wildlife Resources, Department of	8,376,721	4,674,777	3,701,944
Washington	60,479,947	16,343,423	44,136,524
Agriculture, Department of	3,880,349	2,810,997	1,069,352
Alfalfa Seed Commission	20,000	0	20,000
Asparagus Commission	33,000	0	33,000
Blueberry Commission	77,262	0	77,262
Commerce, Department of	7,387,066	0	7,387,066
Dairy Products Commission	20,000	0	20,000
Ecology, Department of	2,886,743	603,692	2,283,051
Fish and Wildlife, Department of	11,115,720	4,098,904	7,016,816
Fruit Commission	92,424	0	92,424
Grain Commission	2,050,158	0	2,050,158
Health, Department of	1,265,000	898,000	367,000
Hop Commission	141,228	0	141,228
Labor and Industries, Department of	3,337,518	489,824	2,847,694
Mint Commission	35,289	0	35,289
Natural Resources, Department of	11,714,582	495,313	11,219,269
Oilseeds Commission	69,887	0	69,887
Pesticide Registration, Commission on	427,997	0	427,997
Potato Commission	808,462	0	808,462
Puget Sound Partnership	3,615,000	1,245,000	2,370,000
Pulse Crops Commission	140,077	0	140,077
Red Raspberry Commission	179,481	0	179,481
Transportation, Department of	6,136,300	4,882,200	1,254,100
Tree Fruit Research Commission	4,484,773	808,662	3,676,111
Turfgrass Seed Commission	110,619	0	110,619
Wine Commission	451,012	10,831	440,181
West Virginia	8,731,717	3,970,816	4,760,901
Agriculture, Department of	43,500	43,500	0
Geological and Economic Survey	2,516,066	198,989	2,317,077
Higher Education Policy Commission	1,832,049	384,242	1,447,807
Justice and Community Services, Division of Administrative Services	105,395	55,000	50,395
Natural Resources, Division of	2,148,601	1,620,200	528,401
Transportation, Department of	2,086,106	1,668,885	417,221
Wisconsin	16,366,530	10,491,049	5,875,481
Agriculture, Trade and Consumer Protection, Department of	2,384,761	1,872,844	511,917
Economic Development Corporation	2,096,000	0	2,096,000
Natural Resources, Department of	7,574,828	4,657,206	2,917,622
Transportation, Department of	4,310,941	3,960,999	349,942
Wyoming	9,886,086	4,067,042	5,819,044
Agriculture, Department of	549,736	233,064	316,672
Business Council	2,010,000	0	2,010,000
Enhanced Oil Recovery Institute	2,049,753	1,704,889	344,864

TABLE 18

**State agency expenditures for R&D for all performers, by state, department or agency, and source of funds: FY 2023**

(Dollars)

State and department or agency	All R&D expenditures	Source of funds	
		Federal government	State and all others <sup>a</sup>
Game and Fish Department	1,991,442	1,486,635	504,807
State Geological Survey	2,095,403	47,347	2,048,056
Transportation, Department of	746,932	595,107	151,825
Water Development Office	442,820	0	442,820
Puerto Rico <sup>c</sup>	47,543,226	23,575,491	23,967,735
Business Development Office, Economic Development & Commerce	7,190,000	0	7,190,000
Comprehensive Cancer Center	16,142,829	5,884,363	10,258,466
Economic Development & Commerce	528,263	0	528,263
Health, Department of	17,000,000	17,000,000	0
Innovation and Technology Services	3,453,922	0	3,453,922
Institute of Statistics	1,615,810	197,833	1,417,977
Science, Technology and Research Trust	1,612,402	493,295	1,119,107

<sup>a</sup> 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.

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.



TABLE 19

## State agency expenditures for R&amp;D for intramural performers, by state, department or agency, and source of funds: FY 2023

(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 <sup>a</sup>	741,613,066	330,196,996	374,463,127	7,611,901	9,340,269	16,180,534	3,820,239
Alabama	8,885,851	5,362,860	2,983,621	3,570	49,726	0	486,074
Education, Department of	989,326	793,288	196,038	0	0	0	0
Forensic Sciences, Department of	231,757	0	231,757	0	0	0	0
Geological Survey	2,971,380	1,142,154	1,775,930	3,570	49,726	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	3,913,492	3,427,418	0	0	0	0	486,074
Transportation, Department of	779,896	0	779,896	0	0	0	0
Alaska	14,118,929	4,446,385	6,611,844	3,060,700	0	0	0
Environmental Conservation, Department of	137,502	72,383	65,119	0	0	0	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	12,212,300	2,727,100	6,424,500	3,060,700	0	0	0
Railroad Corporation	1,221,457	1,208,766	12,691	0	0	0	0
Transportation and Public Facilities, Department of	547,670	438,136	109,534	0	0	0	0
Arizona	2,901,013	1,833,935	1,067,078	0	0	0	0
Game and Fish Department	1,299,872	1,033,022	266,850	0	0	0	0
Juvenile Corrections, Department of	600,000	0	600,000	0	0	0	0
Transportation, Department of	1,001,141	800,913	200,228	0	0	0	0
Arkansas	391,998	155,472	236,526	0	0	0	0
Game and Fish Commission	248,065	105,574	142,491	0	0	0	0
Natural Heritage Commission	102,653	16,874	85,779	0	0	0	0
Transportation, Department of	41,280	33,024	8,256	0	0	0	0
California	97,801,248	6,452,601	91,230,650	117,997	0	0	0
Air Resources Board	10,629,196	0	10,629,196	0	0	0	0
Conservation, Department of	1,166,321	459,600	706,721	0	0	0	0
Emergency Services Governor's Office	120,000	0	120,000	0	0	0	0
Energy Commission	36,001,202	0	36,001,202	0	0	0	0
Environmental Health Hazard Assessment, Office of	18,194,997	0	18,194,997	0	0	0	0
Forestry and Fire Protection, Department of	2,600,000	0	2,600,000	0	0	0	0
Housing and Community Development, Department of	79,000	0	79,000	0	0	0	0
Motor Vehicles, Department of	1,696,942	0	1,578,945	117,997	0	0	0
Pesticide Regulation, Department of	13,757,992	0	13,757,992	0	0	0	0
Toxic Substances Control, Department of	221,058	0	221,058	0	0	0	0
Transportation, Department of	13,234,540	5,993,001	7,241,539	0	0	0	0
Water Resources, Department of	100,000	0	100,000	0	0	0	0
Colorado	10,548,105	2,677,246	7,856,742	0	0	14,117	0
Agriculture, Department of	337,677	337,677	0	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 2023**

(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
Natural Resources, Department of	6,826,610	1,598,311	5,214,182	0	0	14,117	0
Public Health and Environment, Department of	2,642,560	0	2,642,560	0	0	0	0
Transportation, Department of	741,258	741,258	0	0	0	0	0
Connecticut	29,335,244	12,815,756	16,519,488	0	0	0	0
Agricultural Experiment Station	14,165,952	6,197,219	7,968,733	0	0	0	0
Energy and Environmental Protection, Department of	7,188,455	5,632,585	1,555,870	0	0	0	0
Mental Health and Addiction Services, Department of	7,079,816	578,179	6,501,637	0	0	0	0
Social Services, Department of	391,305	0	391,305	0	0	0	0
Transportation, Department of	509,716	407,773	101,943	0	0	0	0
Delaware	1,600,464	482,103	1,118,361	0	0	0	0
Geological Survey	1,600,464	482,103	1,118,361	0	0	0	0
District of Columbia	7,041,016	5,922,231	1,118,785	0	0	0	0
Health, Department of	5,929,590	5,833,090	96,500	0	0	0	0
Transportation, Department of	111,426	89,141	22,285	0	0	0	0
Water and Sewer Authority	1,000,000	0	1,000,000	0	0	0	0
Florida	53,921,437	15,408,355	34,178,921	18,770	55,777	3,638,602	621,012
Agriculture and Consumer Services, Department of	1,089,702	1,029,912	59,790	0	0	0	0
Citrus, Department of	93,920	0	93,920	0	0	0	0
Fish and Wildlife Conservation Commission	51,516,677	14,378,443	32,804,073	18,770	55,777	3,638,602	621,012
Transportation, Department of	1,221,138	0	1,221,138	0	0	0	0
Georgia	2,930,709	2,670,800	0	0	0	259,909	0
Southern States Energy Board	2,930,709	2,670,800	0	0	0	259,909	0
Hawaii	628,842	628,842	0	0	0	0	0
Agriculture, Department of	198,717	198,717	0	0	0	0	0
Business, Economic Development, and Tourism, Department of	430,125	430,125	0	0	0	0	0
Idaho	7,349,090	6,285,004	947,747	15,820	12,311	88,208	0
Fish and Game, Department of	7,136,173	6,114,670	905,164	15,820	12,311	88,208	0
Transportation Department	212,917	170,334	42,583	0	0	0	0
Illinois	554,067	0	554,067	0	0	0	0
Transportation, Department of	554,067	0	554,067	0	0	0	0
Indiana	1,902,083	640,523	1,261,560	0	0	0	0
Natural Resources, Department of	1,828,814	581,908	1,246,906	0	0	0	0
Transportation, Department of	73,269	58,615	14,654	0	0	0	0
Iowa	1,366,776	790,341	411,891	0	164,544	0	0
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	632,002	240,471	226,987	0	164,544	0	0

TABLE 19

## State agency expenditures for R&amp;D for intramural performers, by state, department or agency, and source of funds: FY 2023

(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
Natural Resources, Department of	734,774	549,870	184,904	0	0	0	0
Kansas	2,166,223	1,362,879	746,217	0	0	0	57,127
State Board of Regents	7,049	0	7,049	0	0	0	0
Transportation, Department of	1,290,541	917,710	372,831	0	0	0	0
Water Office	868,633	445,169	366,337	0	0	0	57,127
Kentucky	4,842,218	3,311,421	1,530,797	0	0	0	0
Fish and Wildlife Resources, Department of	4,794,264	3,263,467	1,530,797	0	0	0	0
Nature Preserves, Office of Kentucky	47,954	47,954	0	0	0	0	0
Louisiana	10,567,296	7,776,412	2,790,884	0	0	0	0
Coastal Protection and Restoration Authority	524,674	28,258	496,416	0	0	0	0
Transportation and Development, Department of	4,250,000	3,400,000	850,000	0	0	0	0
Wildlife and Fisheries, Department of	5,792,622	4,348,154	1,444,468	0	0	0	0
Maine	12,319,129	9,237,122	2,315,084	1,181	755,391	0	10,351
Agriculture, Conservation and Forestry, Department of	1,466,400	464,400	1,002,000	0	0	0	0
Aquaculture Innovation Center	587,473	470,720	45,878	0	70,875	0	0
Inland Fisheries and Wildlife, Department of	1,659,000	1,215,000	444,000	0	0	0	0
Marine Resources, Department of	2,663,978	2,103,517	560,461	0	0	0	0
MDI Biological Laboratory, Center for Biomedical Innovation	5,457,951	4,596,023	165,880	1,181	684,516	0	10,351
Transportation, Department of	484,327	387,462	96,865	0	0	0	0
Maryland	622,465	325,652	296,813	0	0	0	0
Transportation, Department of	622,465	325,652	296,813	0	0	0	0
Massachusetts	1,690,736	175,660	1,215,076	300,000	0	0	0
Environmental Protection, Department of	333,963	26,843	307,120	0	0	0	0
Fish and Game, Department of	26,915	26,915	0	0	0	0	0
Gaming Commission	220,350	0	220,350	0	0	0	0
MassVentures	200,000	0	200,000	0	0	0	0
Transportation, Department of	609,508	121,902	487,606	0	0	0	0
Water Resources Authority	300,000	0	0	300,000	0	0	0
Michigan	143,576	96,095	47,481	0	0	0	0
Agriculture and Rural Development, Department of	35,000	35,000	0	0	0	0	0
Environmental, Great Lakes, and Energy, Department of	108,576	61,095	47,481	0	0	0	0
Minnesota	3,138,073	1,655,657	1,482,416	0	0	0	0
Agriculture, Department of	1,006,689	0	1,006,689	0	0	0	0
Health, Department of	150,000	150,000	0	0	0	0	0
Natural Resources, Department of	1,981,384	1,505,657	475,727	0	0	0	0

TABLE 19

## State agency expenditures for R&amp;D for intramural performers, by state, department or agency, and source of funds: FY 2023

(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
Mississippi	2,030,108	1,193,240	374,157	462,711	0	0	0
Environmental Quality, Department of	100,727	100,727	0	0	0	0	0
Gulf States Marine Fisheries Commission	65,341	65,341	0	0	0	0	0
Marine Resources, Department of	1,123,546	522,007	138,828	462,711	0	0	0
Transportation, Department of	2,444	1,955	489	0	0	0	0
Wildlife, Fisheries, and Parks, Department of	738,050	503,210	234,840	0	0	0	0
Missouri	4,589,925	1,538,039	3,051,886	0	0	0	0
Conservation, Department of	4,589,925	1,538,039	3,051,886	0	0	0	0
Montana	3,806,428	2,707,280	1,038,300	0	60,848	0	0
Environmental Quality, Department of	63,976	17,345	46,631	0	0	0	0
Fish, Wildlife and Parks, Department of	3,277,294	2,314,193	902,253	0	60,848	0	0
Natural Resources and Conservation, Department of	18,077	18,077	0	0	0	0	0
Transportation, Department of	447,081	357,665	89,416	0	0	0	0
Nebraska	74,500	0	74,500	0	0	0	0
Transportation, Department of	74,500	0	74,500	0	0	0	0
Nevada	256,192	186,169	70,023	0	0	0	0
Agriculture, Department of	204,134	144,134	60,000	0	0	0	0
Conservation and Natural Resources, Department of	52,058	42,035	10,023	0	0	0	0
New Hampshire	89,546	71,637	17,909	0	0	0	0
Transportation, Department of	89,546	71,637	17,909	0	0	0	0
New Jersey	3,917,853	622,467	3,295,386	0	0	0	0
Children and Families, Department of	132,600	5,757	126,843	0	0	0	0
Community Affairs, Department of	14,769	0	14,769	0	0	0	0
Corrections, Department of	498,425	119,932	378,493	0	0	0	0
Environmental Protection, Department of	2,469,745	155,500	2,314,245	0	0	0	0
Pinelands Commission	709,097	248,061	461,036	0	0	0	0
State Parole Board, New Jersey	93,217	93,217	0	0	0	0	0
New Mexico	781,067	601,104	179,963	0	0	0	0
Game and Fish, Department of	475,000	356,250	118,750	0	0	0	0
Transportation, Department of	306,067	244,854	61,213	0	0	0	0
New York	286,453,348	157,405,093	105,631,778	1,319,969	8,131,629	12,179,698	1,785,181
Agriculture and Markets, Department of	2,582,000	2,582,000	0	0	0	0	0
Energy Research and Development Authority	8,551,208	0	8,551,208	0	0	0	0
Environmental Conservation, Department of	4,262,602	1,292,726	2,969,876	0	0	0	0
Health, Department of	26,751,347	14,566,282	9,889,860	1,319,969	467,807	229,348	278,081

**TABLE 19**  
**State agency expenditures for R&D for intramural performers, by state, department or agency, and source of funds: FY 2023**

(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
Mental Health, Office of	149,760,923	76,195,991	66,000,000	0	4,616,886	2,037,264	910,782
People with Developmental Disabilities, Office of	2,317,096	2,101,295	0	0	215,801	0	0
Power Authority	2,975,989	0	2,710,989	0	265,000	0	0
Roswell Park Comprehensive Cancer Center	76,048,189	58,317,994	4,654,656	0	2,566,135	9,913,086	596,318
State Museum	10,729,590	369,282	10,360,308	0	0	0	0
Transportation, Department of	2,474,404	1,979,523	494,881	0	0	0	0
North Carolina	16,335,642	520,035	15,815,607	0	0	0	0
Agriculture and Consumer Services, Department of	13,922,911	0	13,922,911	0	0	0	0
Natural and Cultural Resources, Department of	1,762,688	0	1,762,688	0	0	0	0
Transportation, Department of	650,043	520,035	130,008	0	0	0	0
North Dakota	981,502	540,406	441,096	0	0	0	0
Game and Fish, Department of	52,550	39,375	13,175	0	0	0	0
Historical Society of North Dakota	893,850	473,530	420,320	0	0	0	0
Transportation, Department of	35,102	27,501	7,601	0	0	0	0
Ohio	641,094	355,768	285,326	0	0	0	0
Education & Workforce, Department of	25,000	0	25,000	0	0	0	0
Natural Resources, Department of	616,094	355,768	260,326	0	0	0	0
Oklahoma	1,434,856	1,047,254	387,602	0	0	0	0
Grand River Dam Authority	250,000	0	250,000	0	0	0	0
Health, Department of	432,788	432,788	0	0	0	0	0
Human Services, Department of	174,930	153,321	21,609	0	0	0	0
Transportation, Department of	573,370	458,696	114,674	0	0	0	0
Wildlife Conservation, Department of	3,768	2,449	1,319	0	0	0	0
Oregon	19,770,459	13,713,869	5,605,775	450,815	0	0	0
Fish and Wildlife, Department of	14,440,498	10,940,464	3,500,034	0	0	0	0
Forestry, Department of	350,000	0	350,000	0	0	0	0
Geology and Mineral Industries, Department of	1,118,540	1,077,415	41,125	0	0	0	0
Human Services, Department of	2,613,332	915,237	1,271,321	426,774	0	0	0
Transportation, Department of	1,049,358	777,938	271,420	0	0	0	0
Water Resources Department	188,083	0	164,042	24,041	0	0	0
Watershed Enhancement Board	10,648	2,815	7,833	0	0	0	0
Pennsylvania	16,987,160	9,082,034	7,785,126	120,000	0	0	0
Conservation and Natural Resources, Department of	149,625	0	149,625	0	0	0	0
Environmental Protection, Department of	4,359	0	4,359	0	0	0	0
Fish and Boat Commission	143,542	68,379	75,163	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 2023**

(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 Commission	16,509,634	8,953,655	7,555,979	0	0	0	0
Susquehanna River Basin Commission	180,000	60,000	0	120,000	0	0	0
Rhode Island	236,546	236,546	0	0	0	0	0
Narragansett Bay National Estuarine Research Reserve; Environmental Management, Department of	236,546	236,546	0	0	0	0	0
South Carolina	32,709,409	22,615,194	9,188,685	160,036	0	0	745,494
Health and Environmental Control, Department of	1,824,716	1,118,786	0	0	0	0	705,930
Natural Resources, Department of	28,539,233	20,126,797	8,412,436	0	0	0	0
Sea Grant Consortium	2,333,614	1,369,611	764,403	160,036	0	0	39,564
Transportation, Department of	11,846	0	11,846	0	0	0	0
South Dakota	273,454	191,504	81,950	0	0	0	0
Soybean Research and Promotion Council	29,267	0	29,267	0	0	0	0
Transportation, Department of	244,187	191,504	52,683	0	0	0	0
Tennessee	175,000	140,000	35,000	0	0	0	0
Transportation, Department of	175,000	140,000	35,000	0	0	0	0
Texas	1,993,899	1,202,045	791,854	0	0	0	0
Environmental Quality, Commission on	63,981	0	63,981	0	0	0	0
Parks and Wildlife Department	1,578,191	1,089,131	489,060	0	0	0	0
State Health Services, Department of	351,727	112,914	238,813	0	0	0	0
Utah	7,748,094	358,994	7,389,100	0	0	0	0
Environmental Quality, Department of	273,553	167,007	106,546	0	0	0	0
Natural Resources, Department of	6,352,113	0	6,352,113	0	0	0	0
Transportation, Department of	1,122,428	191,987	930,441	0	0	0	0
Vermont	2,163,824	2,112,389	51,435	0	0	0	0
Human Services, Agency of	1,698,182	1,698,182	0	0	0	0	0
Transportation, Agency of	465,642	414,207	51,435	0	0	0	0
Virginia	20,744,159	7,285,245	13,066,261	277,653	0	0	115,000
Behavioral Health and Developmental Services, Department of	5,100	0	5,100	0	0	0	0
Education, Department of	865,000	500,000	250,000	0	0	0	115,000
Energy, Department of	1,283,426	736,258	547,168	0	0	0	0
Environmental Quality, Department of	146,816	139,434	7,382	0	0	0	0
Forensic Science, Department of	1,067,190	180,165	887,025	0	0	0	0
Forestry, Department of	481,630	370,635	110,995	0	0	0	0
Innovation Partnership Corporation	2,366,008	381,720	1,984,288	0	0	0	0
Institute for Advanced Learning and Research	68,000	0	68,000	0	0	0	0
Marine Resources Commission	558,126	558,126	0	0	0	0	0

TABLE 19

## State agency expenditures for R&amp;D for intramural performers, by state, department or agency, and source of funds: FY 2023

(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
Natural History, Museum of	1,001,282	0	973,629	27,653	0	0	0
Rail and Public Transportation	879,284	52,958	826,326	0	0	0	0
Social Services, Department of	1,050,000	525,000	525,000	0	0	0	0
Transportation, Department of	9,341,820	2,805,591	6,536,229	0	0	0	0
Wildlife Resources, Department of	1,630,477	1,035,358	345,119	250,000	0	0	0
Washington	26,263,518	7,809,141	17,063,967	1,280,367	110,043	0	0
Ecology, Department of	2,156,422	465,218	1,684,604	0	6,600	0	0
Fish and Wildlife, Department of	10,756,073	4,098,904	5,496,274	1,064,071	96,824	0	0
Health, Department of	1,202,000	853,000	349,000	0	0	0	0
Labor and Industries, Department of	3,337,518	489,824	2,847,694	0	0	0	0
Natural Resources, Department of	6,748,718	495,313	6,030,490	216,296	6,619	0	0
Puget Sound Partnership	115,000	45,000	70,000	0	0	0	0
Transportation, Department of	1,627,400	1,346,000	281,400	0	0	0	0
Tree Fruit Research Commission	320,387	15,882	304,505	0	0	0	0
West Virginia	4,773,515	2,257,270	2,516,245	0	0	0	0
Agriculture, Department of	43,500	43,500	0	0	0	0	0
Geological and Economic Survey	2,094,323	198,989	1,895,334	0	0	0	0
Higher Education Policy Commission	196,339	196,339	0	0	0	0	0
Justice and Community Services, Division of Administrative Services	105,395	55,000	50,395	0	0	0	0
Natural Resources, Division of	2,074,488	1,555,866	518,622	0	0	0	0
Transportation, Department of	259,470	207,576	51,894	0	0	0	0
Wisconsin	5,377,653	4,410,314	967,339	0	0	0	0
Natural Resources, Department of	5,100,602	4,188,673	911,929	0	0	0	0
Transportation, Department of	277,051	221,641	55,410	0	0	0	0
Wyoming	4,237,727	1,480,607	2,734,808	22,312	0	0	0
Enhanced Oil Recovery Institute	476,536	235,472	241,064	0	0	0	0
Game and Fish Department	1,563,972	1,116,335	425,325	22,312	0	0	0
State Geological Survey	2,095,403	47,347	2,048,056	0	0	0	0
Transportation, Department of	101,816	81,453	20,363	0	0	0	0
Puerto Rico <sup>b</sup>	30,716,521	17,691,128	13,025,393	0	0	0	0
Comprehensive Cancer Center	9,702,293	0	9,702,293	0	0	0	0
Health, Department of	17,000,000	17,000,000	0	0	0	0	0
Innovation and Technology Services	1,905,123	0	1,905,123	0	0	0	0
Institute of Statistics	1,615,810	197,833	1,417,977	0	0	0	0
Science, Technology and Research Trust	493,295	493,295	0	0	0	0	0

<sup>a</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>b</sup> 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.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.



TABLE 20

## State agency expenditures for R&amp;D, by state, department or agency, and performer: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
United States <sup>g</sup>	3,034,601,074	741,613,066	2,292,988,008	1,229,894,644	597,851,734	325,965,825	58,291,567	80,984,238
Alabama	83,778,649	8,885,851	74,892,798	18,357,900	1,215,357	53,329,500	1,990,041	0
Commerce, Department of	54,419,133	0	54,419,133	1,000,000	419,133	53,000,000	0	0
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	2,637,830	0	2,637,830	2,637,830	0	0	0	0
Economic and Community Affairs, Department of	3,255,511	0	3,255,511	2,794,814	460,697	0	0	0
Education, Department of	6,883,453	989,326	5,894,127	5,125,000	335,527	329,500	104,100	0
Forensic Sciences, Department of	231,757	231,757	0	0	0	0	0	0
Geological Survey	2,971,380	2,971,380	0	0	0	0	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	3,913,492	3,913,492	0	0	0	0	0	0
Supercomputer Authority	4,204,072	0	4,204,072	4,204,072	0	0	0	0
Transportation, Department of	5,262,021	779,896	4,482,125	2,596,184	0	0	1,885,941	0
Alaska	19,451,112	14,118,929	5,332,183	707,567	2,698,817	0	784,713	1,141,086
Energy Authority	242,896	0	242,896	0	242,896	0	0	0
Environmental Conservation, Department of	192,715	137,502	55,213	29,390	25,823	0	0	0
Housing Finance Corporation	500,000	0	500,000	0	0	0	500,000	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	12,212,300	12,212,300	0	0	0	0	0	0
Railroad Corporation	3,098,866	1,221,457	1,877,409	0	1,877,409	0	0	0
Seafood Marketing Institute	74,015	0	74,015	18,037	55,978	0	0	0
Transportation and Public Facilities, Department of	3,130,320	547,670	2,582,650	660,140	496,711	0	284,713	1,141,086
Arizona	14,011,612	2,901,013	11,110,599	4,296,040	6,499,559	0	315,000	0
Agriculture, Department of	1,943,155	0	1,943,155	1,833,984	109,171	0	0	0
Deaf and Hard of Hearing	115,000	0	115,000	115,000	0	0	0	0
Game and Fish Department	1,419,872	1,299,872	120,000	120,000	0	0	0	0
Health Services, Department of	7,868,651	0	7,868,651	1,957,022	5,911,629	0	0	0
Juvenile Corrections, Department of	600,000	600,000	0	0	0	0	0	0
Transportation, Department of	2,064,934	1,001,141	1,063,793	270,034	478,759	0	315,000	0
Arkansas	9,521,076	391,998	9,129,078	7,594,303	876,241	400,829	257,705	0
Beef Council	76,605	0	76,605	76,605	0	0	0	0
Corn and Grain Sorghum Promotion Board	965,315	0	965,315	947,120	18,195	0	0	0
Economic Development Commission	605,749	0	605,749	0	605,749	0	0	0
Game and Fish Commission	1,966,097	248,065	1,718,032	1,030,819	171,803	257,705	257,705	0
Midwest Dairy Association, Arkansas Division	7,425	0	7,425	7,425	0	0	0	0
Natural Heritage Commission	208,588	102,653	105,935	25,441	80,494	0	0	0
Rice Research and Promotion Board	2,500,050	0	2,500,050	2,500,050	0	0	0	0
Soybean Promotion Board	1,221,170	0	1,221,170	1,078,046	0	143,124	0	0

**TABLE 20**  
**State agency expenditures for R&D, by state, department or agency, and performer: FY 2023**

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Transportation, Department of	1,936,385	41,280	1,895,105	1,895,105	0	0	0	0
Wheat Promotion Board	33,692	0	33,692	33,692	0	0	0	0
California	594,541,351	97,801,248	496,740,103	218,194,624	143,433,375	64,035,082	15,823,082	55,253,940
Air Resources Board	17,641,553	10,629,196	7,012,357	5,522,867	770,513	718,977	0	0
Coachella Valley Mountains	215,912	0	215,912	215,912	0	0	0	0
Conservation, Department of	1,490,818	1,166,321	324,497	324,497	0	0	0	0
Corrections and Rehabilitation, Department of	6,466,366	0	6,466,366	0	6,466,366	0	0	0
Covered California	5,765,443	0	5,765,443	1,010,236	4,755,207	0	0	0
Dairy Council	69,421	0	69,421	69,421	0	0	0	0
Delta Stewardship Council	5,138,976	0	5,138,976	3,686,564	687,308	140,290	624,814	0
Emergency Services Governor's Office	2,020,000	120,000	1,900,000	1,100,000	0	500,000	300,000	0
Energy Commission	170,673,193	36,001,202	134,671,991	10,263,090	110,605,549	12,618,014	1,185,338	0
Environmental Health Hazard Assessment, Office of	25,263,123	18,194,997	7,068,126	7,018,527	49,599	0	0	0
First 5 California (Children and Families Commission)	6,000,000	0	6,000,000	2,000,000	0	4,000,000	0	0
Food and Agriculture, Department of	6,187,795	0	6,187,795	6,064,903	0	55,698	67,194	0
Forestry and Fire Protection, Department of	16,600,000	2,600,000	14,000,000	9,500,000	0	4,500,000	0	0
Horse Racing Board	976,291	0	976,291	976,291	0	0	0	0
Housing and Community Development, Department of	79,000	79,000	0	0	0	0	0	0
Institute for Regenerative Medicine	152,261,013	0	152,261,013	116,674,576	3,610,592	31,975,845	0	0
Motor Vehicles, Department of	1,714,131	1,696,942	17,189	17,189	0	0	0	0
Parks And Recreation, Department of	3,297,362	0	3,297,362	3,297,362	0	0	0	0
Pesticide Regulation, Department of	20,772,486	13,757,992	7,014,494	1,877,611	0	5,136,883	0	0
Public Health, Department of	8,500,000	0	8,500,000	8,500,000	0	0	0	0
Public Utilities Commission, Executive Division	55,035,940	0	55,035,940	0	0	0	0	55,035,940
Resources Recycling and Recovery, Department of	250,112	0	250,112	0	250,112	0	0	0
San Diego River Conservancy	495,155	0	495,155	0	0	495,155	0	0
State Coastal Conservancy	751,289	0	751,289	202,884	109,370	417,034	22,001	0
State Water Resources Control Board	24,800,361	0	24,800,361	5,081,422	15,000,000	3,477,186	1,023,753	218,000
Toxic Substances Control, Department of	221,058	221,058	0	0	0	0	0	0
Transportation, Department of	49,446,825	13,234,540	36,212,285	24,205,471	1,128,759	0	10,878,055	0
Water Resources, Department of	12,407,728	100,000	12,307,728	10,585,801	0	0	1,721,927	0
Colorado	39,665,229	10,548,105	29,117,124	9,208,168	18,619,670	0	1,186,426	102,860
Agriculture, Department of	362,802	337,677	25,125	25,125	0	0	0	0
Economic Development and International Trade, Office of	22,767,255	0	22,767,255	4,540,496	18,128,899	0	0	97,860
Higher Education Competitive Research Authority	1,843,141	0	1,843,141	1,843,141	0	0	0	0

TABLE 20

## State agency expenditures for R&amp;D, by state, department or agency, and performer: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Natural Resources, Department of	6,892,590	6,826,610	65,980	60,980	0	0	0	5,000
Public Health and Environment, Department of	3,439,025	2,642,560	796,465	796,465	0	0	0	0
Transportation, Department of	4,153,335	741,258	3,412,077	1,734,880	490,771	0	1,186,426	0
Wine Industry Development Board	207,081	0	207,081	207,081	0	0	0	0
Connecticut	55,924,506	29,335,244	26,589,262	2,035,295	22,357,867	0	7,875	2,188,225
Agricultural Experiment Station	14,165,952	14,165,952	0	0	0	0	0	0
Energy and Environmental Protection, Department of	8,086,000	7,188,455	897,545	530,420	359,250	0	7,875	0
Innovation Inc.	22,043,617	0	22,043,617	45,000	21,998,617	0	0	0
Mental Health and Addiction Services, Department of	7,079,816	7,079,816	0	0	0	0	0	0
Social Services, Department of	641,305	391,305	250,000	250,000	0	0	0	0
Transportation, Department of	3,907,816	509,716	3,398,100	1,209,875	0	0	0	2,188,225
Delaware	3,584,063	1,600,464	1,983,599	917,009	973,253	0	93,337	0
Geological Survey	1,651,264	1,600,464	50,800	50,800	0	0	0	0
Natural Resources and Environmental Control, Department of	488,092	0	488,092	344,092	50,663	0	93,337	0
Sustainable Energy Utility	50,500	0	50,500	50,500	0	0	0	0
Transportation, Department of	1,394,207	0	1,394,207	471,617	922,590	0	0	0
District of Columbia	10,563,918	7,041,016	3,522,902	851,907	270,401	2,046,290	354,304	0
Energy and Environment, Department of	348,077	0	348,077	0	90,000	66,777	191,300	0
Health, Department of	7,909,103	5,929,590	1,979,513	0	0	1,979,513	0	0
Transportation, Department of	806,738	111,426	695,312	401,907	130,401	0	163,004	0
Water and Sewer Authority	1,500,000	1,000,000	500,000	450,000	50,000	0	0	0
Florida	222,882,689	53,921,437	168,961,252	96,667,036	6,012,904	66,211,572	69,740	0
Agriculture and Consumer Services, Department of	22,629,310	1,089,702	21,539,608	11,604,957	257,559	9,607,871	69,221	0
Citrus, Department of	2,067,852	93,920	1,973,932	111,134	862,798	1,000,000	0	0
Environmental Protection, Department of	60,125	0	60,125	0	60,125	0	0	0
Fish and Wildlife Conservation Commission	60,990,297	51,516,677	9,473,620	3,104,404	2,967,798	3,400,899	519	0
Gaming Control Commission	100,000	0	100,000	100,000	0	0	0	0
Health, Department of	121,558,745	0	121,558,745	69,355,943	0	52,202,802	0	0
Space Florida	1,110,000	0	1,110,000	10,000	1,100,000	0	0	0
Transportation, Department of	14,366,360	1,221,138	13,145,222	12,380,598	764,624	0	0	0
Georgia	20,739,193	2,930,709	17,808,484	10,326,984	4,257,065	1,811,783	1,412,652	0
Commodity Commission, Agriculture, Department of	2,513,762	0	2,513,762	2,513,762	0	0	0	0
Natural Resources, Department of	2,297,557	0	2,297,557	2,297,557	0	0	0	0
Southern States Energy Board	9,213,432	2,930,709	6,282,723	1,668,896	4,257,065	11,110	345,652	0
Transportation, Department of	6,714,442	0	6,714,442	3,846,769	0	1,800,673	1,067,000	0

**TABLE 20**  
**State agency expenditures for R&D, by state, department or agency, and performer: FY 2023**

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Hawaii	5,280,407	628,842	4,651,565	2,472,730	2,066,607	80,000	32,228	0
Agriculture, Department of	652,670	198,717	453,953	404,346	49,607	0	0	0
Business, Economic Development, and Tourism, Department of	2,447,125	430,125	2,017,000	0	2,017,000	0	0	0
Land and Natural Resources, Department of	445,210	0	445,210	332,982	0	80,000	32,228	0
Transportation, Department of	1,735,402	0	1,735,402	1,735,402	0	0	0	0
Idaho	18,670,602	7,349,090	11,321,512	7,231,429	562,811	371,967	2,856,071	299,234
Agriculture, Department of	1,020,066	0	1,020,066	533,865	0	186,967	0	299,234
Barley Commission	254,646	0	254,646	224,646	0	0	30,000	0
Bean Commission	33,575	0	33,575	33,575	0	0	0	0
Commerce, Department of	784,945	0	784,945	784,945	0	0	0	0
Dairy West	2,843,786	0	2,843,786	2,843,786	0	0	0	0
Fish and Game, Department of	9,232,224	7,136,173	2,096,051	888,582	0	0	1,207,469	0
Oilseed Commission	66,548	0	66,548	66,548	0	0	0	0
Pea and Lentil Commission	61,179	0	61,179	61,179	0	0	0	0
Potato Commission	650,880	0	650,880	494,366	156,514	0	0	0
Transportation Department	2,832,749	212,917	2,619,832	435,045	406,297	185,000	1,593,490	0
Wheat Commission	890,004	0	890,004	864,892	0	0	25,112	0
Illinois	45,907,372	554,067	45,353,305	39,963,806	4,548,609	806,010	34,880	0
Children and Family Services, Department of	2,814,959	0	2,814,959	2,814,959	0	0	0	0
Great Lakes - St. Lawrence River Basin	100,000	0	100,000	100,000	0	0	0	0
Midwest Dairy Association, Illinois Division	15,345	0	15,345	15,345	0	0	0	0
Natural Resources, Department of	27,317,164	0	27,317,164	23,161,915	4,155,249	0	0	0
Nature Preserves Commission	1,065,000	0	1,065,000	1,065,000	0	0	0	0
Nutrient Research and Education Council	3,844,915	0	3,844,915	3,554,905	0	290,010	0	0
Public Health, Department of	516,000	0	516,000	0	0	516,000	0	0
Transportation, Department of	10,233,989	554,067	9,679,922	9,251,682	393,360	0	34,880	0
Indiana	24,179,311	1,902,083	22,277,228	12,315,640	9,961,588	0	0	0
Economic Development Corporation	9,961,588	0	9,961,588	0	9,961,588	0	0	0
Natural Resources, Department of	4,366,329	1,828,814	2,537,515	2,537,515	0	0	0	0
Transportation, Department of	9,851,394	73,269	9,778,125	9,778,125	0	0	0	0
Iowa	9,809,708	1,366,776	8,442,932	7,597,858	818,225	24,154	2,695	0
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	632,002	632,002	0	0	0	0	0	0
Midwest Dairy Association, Iowa Division	113,850	0	113,850	113,850	0	0	0	0
Natural Resources, Department of	1,945,868	734,774	1,211,094	1,179,500	4,745	24,154	2,695	0
Transportation, Department of	7,117,988	0	7,117,988	6,304,508	813,480	0	0	0

TABLE 20

## State agency expenditures for R&amp;D, by state, department or agency, and performer: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Kansas	10,364,853	2,166,223	8,198,630	6,017,483	154,363	11,248	2,015,536	0
Corn Commission	375,941	0	375,941	375,941	0	0	0	0
Grain Sorghum Commission	553,341	0	553,341	553,341	0	0	0	0
Midwest Dairy Association, Kansas Division	13,860	0	13,860	13,860	0	0	0	0
Soybean Commission	1,400,000	0	1,400,000	1,400,000	0	0	0	0
State Board of Regents	1,000,314	7,049	993,265	993,265	0	0	0	0
Sunflower Commission	11,248	0	11,248	0	0	11,248	0	0
Transportation, Department of	3,882,450	1,290,541	2,591,909	1,232,490	94,363	0	1,265,056	0
Water Office	1,805,720	868,633	937,087	186,607	0	0	750,480	0
Wheat Commission	1,321,979	0	1,321,979	1,261,979	60,000	0	0	0
Kentucky	37,765,916	4,842,218	32,923,698	28,970,060	3,952,108	0	1,530	0
Economic Development, Cabinet for	3,126,802	0	3,126,802	1,648,739	1,478,063	0	0	0
Fish and Wildlife Resources, Department of	7,566,970	4,794,264	2,772,706	297,131	2,474,045	0	1,530	0
Horse Racing Commission	140,153	0	140,153	140,153	0	0	0	0
Nature Preserves, Office of Kentucky	55,409	47,954	7,455	7,455	0	0	0	0
Postsecondary Education, Council on	11,029,618	0	11,029,618	11,029,618	0	0	0	0
Public Health, Department for	7,256,093	0	7,256,093	7,256,093	0	0	0	0
Soybean Promotion Board	502,893	0	502,893	502,893	0	0	0	0
Transportation Cabinet	8,087,978	0	8,087,978	8,087,978	0	0	0	0
Louisiana	31,663,714	10,567,296	21,096,418	17,592,263	3,117,754	47,934	258,811	79,656
Board of Regents	12,395,006	0	12,395,006	12,395,006	0	0	0	0
Coastal Protection and Restoration Authority	3,791,442	524,674	3,266,768	625,146	2,482,309	0	79,657	79,656
Transportation and Development, Department of	8,500,000	4,250,000	4,250,000	3,750,000	500,000	0	0	0
Wildlife and Fisheries, Department of	6,977,266	5,792,622	1,184,644	822,111	135,445	47,934	179,154	0
Maine	47,576,007	12,319,129	35,256,878	3,169,145	30,097,800	1,888,267	101,666	0
Agriculture, Conservation and Forestry, Department of	1,697,100	1,466,400	230,700	96,200	74,500	0	60,000	0
Aquaculture Innovation Center	587,473	587,473	0	0	0	0	0	0
Inland Fisheries and Wildlife, Department of	1,776,000	1,659,000	117,000	50,000	0	67,000	0	0
Marine Resources, Department of	2,790,668	2,663,978	126,690	0	126,690	0	0	0
MDI Biological Laboratory, Center for Biomedical Innovation	7,615,174	5,457,951	2,157,223	1,685,517	0	471,706	0	0
Technology Institute	31,923,642	0	31,923,642	648,105	29,884,310	1,349,561	41,666	0
Transportation, Department of	1,185,950	484,327	701,623	689,323	12,300	0	0	0
Maryland	46,489,603	622,465	45,867,138	34,185,779	11,431,359	0	0	250,000
Energy Administration	250,000	0	250,000	0	0	0	0	250,000
Health, Department of	15,000,000	0	15,000,000	15,000,000	0	0	0	0

**TABLE 20**  
**State agency expenditures for R&D, by state, department or agency, and performer: FY 2023**

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Natural Resources, Department of	670,841	0	670,841	670,841	0	0	0	0
Technology Development Corporation	28,682,169	0	28,682,169	17,395,809	11,286,360	0	0	0
Transportation, Department of	1,886,593	622,465	1,264,128	1,119,129	144,999	0	0	0
<b>Massachusetts</b>	<b>48,424,086</b>	<b>1,690,736</b>	<b>46,733,350</b>	<b>15,167,081</b>	<b>17,624,471</b>	<b>2,067,506</b>	<b>93,604</b>	<b>11,780,688</b>
Clean Energy Technology Center	27,560,771	0	27,560,771	292,585	15,775,956	0	0	11,492,230
Environmental Protection, Department of	2,125,890	333,963	1,791,927	996,986	784,941	10,000	0	0
Fish and Game, Department of	262,343	26,915	235,428	0	0	235,428	0	0
Gaming Commission	1,363,550	220,350	1,143,200	760,200	308,000	0	75,000	0
MassVentures	400,000	200,000	200,000	200,000	0	0	0	0
Mental Health, Department of	2,761,879	0	2,761,879	994,881	346,385	1,420,613	0	0
Public Health, Department of	2,306,457	0	2,306,457	2,097,771	184,189	0	0	24,497
Technology Park Corporation	3,143,796	0	3,143,796	2,584,766	225,000	51,465	18,604	263,961
Transportation, Department of	7,849,400	609,508	7,239,892	7,239,892	0	0	0	0
Water Resources Authority	650,000	300,000	350,000	0	0	350,000	0	0
<b>Michigan</b>	<b>22,654,435</b>	<b>143,576</b>	<b>22,510,859</b>	<b>13,783,149</b>	<b>1,300,681</b>	<b>4,998,043</b>	<b>2,428,986</b>	<b>0</b>
Agriculture and Rural Development, Department of	3,846,005	35,000	3,811,005	3,389,805	6,039	378,099	37,062	0
Economic Development Corporation	5,000,000	0	5,000,000	5,000,000	0	0	0	0
Environmental, Great Lakes, and Energy, Department of	4,935,956	108,576	4,827,380	87,869	566,441	4,173,070	0	0
Health and Human Services	2,644,979	0	2,644,979	2,644,979	0	0	0	0
Transportation, Department of	6,227,495	0	6,227,495	2,660,496	728,201	446,874	2,391,924	0
<b>Minnesota</b>	<b>22,732,170</b>	<b>3,138,073</b>	<b>19,594,097</b>	<b>13,127,427</b>	<b>3,758,666</b>	<b>170,354</b>	<b>2,537,650</b>	<b>0</b>
Agriculture, Department of	4,966,177	1,006,689	3,959,488	3,214,492	179,800	170,354	394,842	0
Forest Resources Council	15,684	0	15,684	15,684	0	0	0	0
Health, Department of	250,000	150,000	100,000	100,000	0	0	0	0
Midwest Dairy Association, Minnesota Division	208,395	0	208,395	208,395	0	0	0	0
Natural Resources, Department of	2,101,074	1,981,384	119,690	118,276	1,414	0	0	0
Pollution Control Agency	230,894	0	230,894	0	230,894	0	0	0
Transportation, Department of	14,959,946	0	14,959,946	9,470,580	3,346,558	0	2,142,808	0
<b>Mississippi</b>	<b>10,030,897</b>	<b>2,030,108</b>	<b>8,000,789</b>	<b>5,025,882</b>	<b>494,973</b>	<b>1,146,667</b>	<b>1,333,267</b>	<b>0</b>
Agriculture and Commerce, Department of	207,791	0	207,791	207,791	0	0	0	0
Environmental Quality, Department of	1,649,886	100,727	1,549,159	1,549,159	0	0	0	0
Gulf States Marine Fisheries Commission	1,064,916	65,341	999,575	613,628	47,013	0	338,934	0
Marine Resources, Department of	1,927,800	1,123,546	804,254	804,254	0	0	0	0
Transportation, Department of	2,763,759	2,444	2,761,315	269,855	415,460	1,081,667	994,333	0
Wildlife, Fisheries, and Parks, Department of	2,416,745	738,050	1,678,695	1,581,195	32,500	65,000	0	0

**TABLE 20**  
**State agency expenditures for R&D, by state, department or agency, and performer: FY 2023**

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Missouri	17,210,400	4,589,925	12,620,475	6,846,948	5,496,089	171,666	105,772	0
Agriculture, Department of	1,374,152	0	1,374,152	1,151,775	222,377	0	0	0
Conservation, Department of	7,416,216	4,589,925	2,826,291	2,622,718	0	160,073	43,500	0
Mental Health, Department of	242,500	0	242,500	242,500	0	0	0	0
Natural Resources, Department of	250,591	0	250,591	176,726	0	11,593	62,272	0
Technology Corporation	3,806,999	0	3,806,999	0	3,806,999	0	0	0
Transportation, Department of	3,342,278	0	3,342,278	1,875,565	1,466,713	0	0	0
Wine and Grape Board	777,664	0	777,664	777,664	0	0	0	0
Montana	9,956,071	3,806,428	6,149,643	5,275,871	9,055	412,189	452,528	0
Agriculture, Department of	3,466,168	0	3,466,168	3,466,168	0	0	0	0
Environmental Quality, Department of	63,976	63,976	0	0	0	0	0	0
Fish, Wildlife and Parks, Department of	4,472,983	3,277,294	1,195,689	1,195,689	0	0	0	0
Natural Resources and Conservation, Department of	68,874	18,077	50,797	50,797	0	0	0	0
Transportation, Department of	1,884,070	447,081	1,436,989	563,217	9,055	412,189	452,528	0
Nebraska	29,171,378	74,500	29,096,878	25,871,076	3,093,032	112,770	20,000	0
Agriculture, Department of	1,196,095	0	1,196,095	951,293	132,032	112,770	0	0
Corn Board	762,728	0	762,728	762,728	0	0	0	0
Dry Bean Commission	343,193	0	343,193	343,193	0	0	0	0
Economic Development, Department of	4,733,801	0	4,733,801	1,842,801	2,891,000	0	0	0
Game and Parks Commission	2,018,739	0	2,018,739	2,018,739	0	0	0	0
Grain Sorghum Board	3,000	0	3,000	3,000	0	0	0	0
Health and Human Services, Department of	18,879,659	0	18,879,659	18,879,659	0	0	0	0
Midwest Dairy Association, Nebraska Division	25,740	0	25,740	25,740	0	0	0	0
Natural Resources, Department of	50,000	0	50,000	0	50,000	0	0	0
Pea And Lentil Commission	30,372	0	30,372	30,372	0	0	0	0
Transportation, Department of	1,088,051	74,500	1,013,551	1,013,551	0	0	0	0
Wheat Board	40,000	0	40,000	0	20,000	0	20,000	0
Nevada	4,072,717	256,192	3,816,525	2,867,745	69,300	0	879,480	0
Agriculture, Department of	204,134	204,134	0	0	0	0	0	0
Conservation and Natural Resources, Department of	198,678	52,058	146,620	10,940	0	0	135,680	0
Economic Development, Governor's office of	2,190,905	0	2,190,905	2,190,905	0	0	0	0
Transportation, Department of	1,479,000	0	1,479,000	665,900	69,300	0	743,800	0
New Hampshire	2,521,016	89,546	2,431,470	279,470	1,464,456	0	687,544	0
Agriculture, Markets and Food, Department of	86,551	0	86,551	66,591	0	0	19,960	0
Environmental Services, Department of	1,563,535	0	1,563,535	107,877	1,360,958	0	94,700	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Transportation, Department of	870,930	89,546	781,384	105,002	103,498	0	572,884	0
New Jersey	99,832,733	3,917,853	95,914,880	52,920,552	1,556,739	41,432,589	5,000	0
Children and Families, Department of	330,877	132,600	198,277	78,277	0	120,000	0	0
Community Affairs, Department of	15,489	14,769	720	0	720	0	0	0
Corrections, Department of	498,425	498,425	0	0	0	0	0	0
Environmental Protection, Department of	7,878,841	2,469,745	5,409,096	3,993,634	708,327	702,135	5,000	0
Health, Department of	79,121,918	0	79,121,918	42,649,797	0	36,472,121	0	0
Pinelands Commission	797,409	709,097	88,312	0	88,312	0	0	0
Secretary of Higher Education, Office of	8,500,000	0	8,500,000	4,500,000	0	4,000,000	0	0
State Parole Board, New Jersey	93,217	93,217	0	0	0	0	0	0
Transportation, Department of	2,596,557	0	2,596,557	1,698,844	759,380	138,333	0	0
New Mexico	2,337,788	781,067	1,556,721	813,963	312,327	30,000	400,431	0
Game and Fish, Department of	1,501,778	475,000	1,026,778	722,336	274,442	30,000	0	0
Transportation, Department of	770,937	306,067	464,870	64,439	0	0	400,431	0
Western State Air Resources Council	65,073	0	65,073	27,188	37,885	0	0	0
New York	486,576,578	286,453,348	200,123,230	126,493,029	37,796,428	26,242,293	279,491	9,311,989
Agriculture and Markets, Department of	6,775,611	2,582,000	4,193,611	4,193,611	0	0	0	0
Economic Development, Department of	98,660,735	0	98,660,735	89,001,142	0	9,659,593	0	0
Energy Research and Development Authority	55,115,891	8,551,208	46,564,683	2,556,995	34,695,699	0	0	9,311,989
Environmental Conservation, Department of	11,196,566	4,262,602	6,933,964	4,848,213	1,800,000	11,241	274,510	0
Health, Department of	42,199,899	26,751,347	15,448,552	7,686,296	1,222,323	6,534,952	4,981	0
Mental Health, Office of	170,362,799	149,760,923	20,601,876	16,626,296	78,406	3,897,174	0	0
People with Developmental Disabilities, Office of	2,317,096	2,317,096	0	0	0	0	0	0
Power Authority	9,265,322	2,975,989	6,289,333	150,000	0	6,139,333	0	0
Roswell Park Comprehensive Cancer Center	76,048,189	76,048,189	0	0	0	0	0	0
State Museum	11,121,948	10,729,590	392,358	392,358	0	0	0	0
Thoroughbred Breeding and Development Fund Corp	365,189	0	365,189	365,189	0	0	0	0
Transportation, Department of	3,147,333	2,474,404	672,929	672,929	0	0	0	0
North Carolina	36,106,613	16,335,642	19,770,971	11,297,102	8,030,154	337,015	106,700	0
Agriculture and Consumer Services, Department of	15,422,911	13,922,911	1,500,000	1,300,000	200,000	0	0	0
Biotechnology Center	7,770,931	0	7,770,931	2,170,931	5,600,000	0	0	0
Natural and Cultural Resources, Department of	2,135,087	1,762,688	372,399	99,975	151,733	13,991	106,700	0
Science Technology & Innovation, Office of	2,048,421	0	2,048,421	0	2,048,421	0	0	0
Transportation, Department of	8,572,434	650,043	7,922,391	7,696,367	0	226,024	0	0
Wine and Grape Growers Council	156,829	0	156,829	29,829	30,000	97,000	0	0



**TABLE 20**  
**State agency expenditures for R&D, by state, department or agency, and performer: FY 2023**

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
North Dakota	25,822,123	981,502	24,840,621	14,469,584	7,382,680	461,683	2,526,674	0
Agriculture, Department of	924,605	0	924,605	0	890,994	33,611	0	0
Dry Pea and Lentil Commission	257,308	0	257,308	257,308	0	0	0	0
Game and Fish, Department of	659,780	52,550	607,230	446,489	0	160,741	0	0
Historical Society of North Dakota	1,034,581	893,850	140,731	0	0	140,731	0	0
Industrial Commission	18,378,646	0	18,378,646	10,873,069	6,491,686	0	1,013,891	0
Midwest Dairy Association, North Dakota Division	6,435	0	6,435	6,435	0	0	0	0
Soybean Council	1,531,730	0	1,531,730	1,531,730	0	0	0	0
Transportation, Department of	1,820,328	35,102	1,785,226	272,443	0	0	1,512,783	0
Wheat Commission	1,208,710	0	1,208,710	1,082,110	0	126,600	0	0
Ohio	117,471,257	641,094	116,830,163	38,256,245	78,180,697	127,565	265,656	0
Development, Department of	88,778,286	0	88,778,286	12,933,020	75,845,266	0	0	0
Education & Workforce, Department of	166,000	25,000	141,000	141,000	0	0	0	0
Mental Health and Addictions Services, Department of	20,000,000	0	20,000,000	20,000,000	0	0	0	0
Natural Resources, Department of	2,230,912	616,094	1,614,818	1,580,185	22,366	12,267	0	0
Transportation, Department of	5,432,652	0	5,432,652	2,887,406	2,313,065	115,298	116,883	0
Water Development Authority	863,407	0	863,407	714,634	0	0	148,773	0
Oklahoma	28,885,260	1,434,856	27,450,404	17,955,918	3,764,509	4,062,147	1,667,830	0
Advancement of Science and Technology, Center for the	8,294,382	0	8,294,382	4,334,873	3,719,509	240,000	0	0
Agriculture, Food, and Forestry, Department of	426,689	0	426,689	426,689	0	0	0	0
Grand River Dam Authority	455,000	250,000	205,000	160,000	45,000	0	0	0
Health, Department of	1,314,070	432,788	881,282	881,282	0	0	0	0
Human Services, Department of	174,930	174,930	0	0	0	0	0	0
Midwest Dairy Association, Oklahoma Division	4,950	0	4,950	4,950	0	0	0	0
Tobacco Settlement Endowment Trust	12,280,957	0	12,280,957	8,523,428	0	3,757,529	0	0
Transportation, Department of	4,240,128	573,370	3,666,758	1,998,928	0	0	1,667,830	0
Wildlife Conservation, Department of	1,694,154	3,768	1,690,386	1,625,768	0	64,618	0	0
Oregon	40,257,488	19,770,459	20,487,029	11,220,208	3,690,000	3,913,105	1,663,716	0
Agriculture, Department of	203,998	0	203,998	188,998	15,000	0	0	0
Business Development Department	12,000,000	0	12,000,000	4,900,000	3,600,000	3,500,000	0	0
Education, Department of	456,836	0	456,836	456,836	0	0	0	0
Fish and Wildlife, Department of	16,166,574	14,440,498	1,726,076	1,722,956	0	3,120	0	0
Forestry, Department of	700,000	350,000	350,000	50,000	75,000	75,000	150,000	0
Geology and Mineral Industries, Department of	1,118,540	1,118,540	0	0	0	0	0	0
Human Services, Department of	3,077,411	2,613,332	464,079	464,079	0	0	0	0

**TABLE 20**  
**State agency expenditures for R&D, by state, department or agency, and performer: FY 2023**

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Transportation, Department of	3,836,183	1,049,358	2,786,825	2,686,317	0	0	100,508	0
Water Resources Department	1,526,296	188,083	1,338,213	0	0	0	1,338,213	0
Watershed Enhancement Board	1,171,650	10,648	1,161,002	751,022	0	334,985	74,995	0
<b>Pennsylvania</b>	<b>99,487,575</b>	<b>16,987,160</b>	<b>82,500,415</b>	<b>48,476,231</b>	<b>624,184</b>	<b>33,382,908</b>	<b>17,092</b>	<b>0</b>
Agriculture, Department of	2,817,440	0	2,817,440	2,592,232	0	225,208	0	0
Community and Economic Development, Department of	21,742,628	0	21,742,628	6,317,628	0	15,425,000	0	0
Conservation and Natural Resources, Department of	682,346	149,625	532,721	254,594	0	261,035	17,092	0
Environmental Protection, Department of	257,919	4,359	253,560	0	253,560	0	0	0
Fish and Boat Commission	163,584	143,542	20,042	20,042	0	0	0	0
Game Commission	16,916,509	16,509,634	406,875	406,875	0	0	0	0
Health, Department of	54,141,877	0	54,141,877	36,670,212	0	17,471,665	0	0
Susquehanna River Basin Commission	255,000	180,000	75,000	0	75,000	0	0	0
Transportation, Department of	2,510,272	0	2,510,272	2,214,648	295,624	0	0	0
<b>Rhode Island</b>	<b>4,635,868</b>	<b>236,546</b>	<b>4,399,322</b>	<b>1,889,803</b>	<b>2,199,530</b>	<b>237,000</b>	<b>72,989</b>	<b>0</b>
Commerce Corporation	749,530	0	749,530	0	749,530	0	0	0
Fish and Wildlife; Environmental Management, Department of	1,755,569	0	1,755,569	1,755,569	0	0	0	0
Marine Fisheries; Environmental Management, Department of	134,234	0	134,234	134,234	0	0	0	0
Narragansett Bay National Estuarine Research Reserve; Environmental Management, Department of	236,546	236,546	0	0	0	0	0	0
Transportation, Department of	1,687,000	0	1,687,000	0	1,450,000	237,000	0	0
Water Resources Board	72,989	0	72,989	0	0	0	72,989	0
<b>South Carolina</b>	<b>53,419,952</b>	<b>32,709,409</b>	<b>20,710,543</b>	<b>6,780,967</b>	<b>699,643</b>	<b>12,760,948</b>	<b>468,985</b>	<b>0</b>
Agriculture, Department of	1,229,068	0	1,229,068	1,229,068	0	0	0	0
Disabilities and Special Needs, Department of	12,227,417	0	12,227,417	0	0	12,227,417	0	0
Health and Environmental Control, Department of	1,824,716	1,824,716	0	0	0	0	0	0
Natural Resources, Department of	29,190,303	28,539,233	651,070	612,821	0	3,786	34,463	0
Public Service Authority	512,345	0	512,345	30,000	0	482,345	0	0
Research Authority	2,075,537	0	2,075,537	1,375,894	699,643	0	0	0
Sea Grant Consortium	4,121,416	2,333,614	1,787,802	1,533,555	0	47,400	206,847	0
Transportation, Department of	2,239,150	11,846	2,227,304	1,999,629	0	0	227,675	0
<b>South Dakota</b>	<b>5,227,211</b>	<b>273,454</b>	<b>4,953,757</b>	<b>3,379,907</b>	<b>1,311,405</b>	<b>37,445</b>	<b>225,000</b>	<b>0</b>
Corn Utilization Council	37,445	0	37,445	0	0	37,445	0	0
Midwest Dairy Association, South Dakota Division	90,090	0	90,090	90,090	0	0	0	0
Nutrient Research and Education Council	1,479,262	0	1,479,262	1,411,262	68,000	0	0	0
Oilseeds Council	204,975	0	204,975	204,975	0	0	0	0
Pulse Crop Council	33,610	0	33,610	33,610	0	0	0	0

TABLE 20

State agency expenditures for R&D, by state, department or agency, and performer: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Soybean Research and Promotion Council	845,866	29,267	816,599	581,599	10,000	0	225,000	0
Transportation, Department of	1,904,042	244,187	1,659,855	426,450	1,233,405	0	0	0
Weed and Pest Control Commission	47,000	0	47,000	47,000	0	0	0	0
Wheat Commission	584,921	0	584,921	584,921	0	0	0	0
Tennessee	67,457,255	175,000	67,282,255	8,163,359	59,118,896	0	0	0
Education, Department of	57,171,745	0	57,171,745	5,103,700	52,068,045	0	0	0
Environment and Conservation, Department of	50,851	0	50,851	0	50,851	0	0	0
LaunchTN	7,000,000	0	7,000,000	0	7,000,000	0	0	0
Transportation, Department of	3,234,659	175,000	3,059,659	3,059,659	0	0	0	0
Texas	282,261,790	1,993,899	280,267,891	224,879,502	52,747,989	965,656	1,674,744	0
Agriculture, Department of	2,086,663	0	2,086,663	1,686,632	0	400,031	0	0
Alzheimer's Research and Care Consortium (TARCC)	4,384,547	0	4,384,547	4,384,547	0	0	0	0
Cancer Prevention and Research Institute	237,997,927	0	237,997,927	186,815,086	51,182,841	0	0	0
Environmental Quality, Commission on	2,255,204	63,981	2,191,223	1,737,947	453,276	0	0	0
Parks and Wildlife Department	5,484,621	1,578,191	3,906,430	3,164,921	130,310	553,868	57,331	0
State Health Services, Department of	2,257,536	351,727	1,905,809	1,905,809	0	0	0	0
Transportation, Department of	24,220,565	0	24,220,565	23,206,994	0	0	1,013,571	0
Water Development Board	3,574,727	0	3,574,727	1,977,566	981,562	11,757	603,842	0
Utah	10,119,476	7,748,094	2,371,382	1,617,856	753,526	0	0	0
Agriculture and Food, Department of	1,317	0	1,317	1,317	0	0	0	0
Environmental Quality, Department of	1,036,855	273,553	763,302	657,563	105,739	0	0	0
Natural Resources, Department of	6,352,113	6,352,113	0	0	0	0	0	0
Transportation, Department of	2,729,191	1,122,428	1,606,763	958,976	647,787	0	0	0
Vermont	2,833,206	2,163,824	669,382	358,495	290,850	20,037	0	0
Agriculture, Food, and Markets, Agency of	79,783	0	79,783	0	79,783	0	0	0
Human Services, Agency of	1,818,036	1,698,182	119,854	0	99,817	20,037	0	0
Transportation, Agency of	935,387	465,642	469,745	358,495	111,250	0	0	0
Virginia	57,260,560	20,744,159	36,516,401	17,549,067	14,203,660	551,095	4,068,259	144,320
Agriculture and Consumer Services, Department of	3,066,176	0	3,066,176	3,066,176	0	0	0	0
Behavioral Health and Developmental Services, Department of	5,100	5,100	0	0	0	0	0	0
Commonwealth Health Research Board	1,573,838	0	1,573,838	1,573,838	0	0	0	0
Education, Department of	1,115,000	865,000	250,000	250,000	0	0	0	0
Energy, Department of	1,321,426	1,283,426	38,000	38,000	0	0	0	0
Environmental Quality, Department of	382,014	146,816	235,198	90,878	0	0	0	144,320
Forensic Science, Department of	1,067,190	1,067,190	0	0	0	0	0	0

TABLE 20

## State agency expenditures for R&amp;D, by state, department or agency, and performer: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Forestry, Department of	481,630	481,630	0	0	0	0	0	0
Foundation for Healthy Youth	907,041	0	907,041	907,041	0	0	0	0
Innovation Partnership Corporation	18,076,226	2,366,008	15,710,218	1,472,176	14,179,660	0	58,382	0
Institute for Advanced Learning and Research	68,000	68,000	0	0	0	0	0	0
Marine Resources Commission	2,314,260	558,126	1,756,134	0	0	0	1,756,134	0
Natural History, Museum of	1,001,282	1,001,282	0	0	0	0	0	0
Rail and Public Transportation	1,004,284	879,284	125,000	0	0	0	125,000	0
Social Services, Department of	1,050,000	1,050,000	0	0	0	0	0	0
Transportation, Department of	15,450,372	9,341,820	6,108,552	6,108,552	0	0	0	0
Wildlife Resources, Department of	8,376,721	1,630,477	6,746,244	4,042,406	24,000	551,095	2,128,743	0
Washington	60,479,947	26,263,518	34,216,429	17,661,416	10,027,553	976,419	5,169,251	381,790
Agriculture, Department of	3,880,349	0	3,880,349	2,653,596	844,963	0	0	381,790
Alfalfa Seed Commission	20,000	0	20,000	20,000	0	0	0	0
Asparagus Commission	33,000	0	33,000	0	33,000	0	0	0
Blueberry Commission	77,262	0	77,262	0	77,262	0	0	0
Commerce, Department of	7,387,066	0	7,387,066	220,646	5,036,287	864,995	1,265,138	0
Dairy Products Commission	20,000	0	20,000	20,000	0	0	0	0
Ecology, Department of	2,886,743	2,156,422	730,321	710,101	20,220	0	0	0
Fish and Wildlife, Department of	11,115,720	10,756,073	359,647	17,856	0	0	341,791	0
Fruit Commission	92,424	0	92,424	92,424	0	0	0	0
Grain Commission	2,050,158	0	2,050,158	2,050,158	0	0	0	0
Health, Department of	1,265,000	1,202,000	63,000	63,000	0	0	0	0
Hop Commission	141,228	0	141,228	0	141,228	0	0	0
Labor and Industries, Department of	3,337,518	3,337,518	0	0	0	0	0	0
Mint Commission	35,289	0	35,289	35,289	0	0	0	0
Natural Resources, Department of	11,714,582	6,748,718	4,965,864	2,184,551	1,990,524	11,424	779,365	0
Oilseeds Commission	69,887	0	69,887	69,887	0	0	0	0
Pesticide Registration, Commission on	427,997	0	427,997	427,997	0	0	0	0
Potato Commission	808,462	0	808,462	515,226	109,954	0	183,282	0
Puget Sound Partnership	3,615,000	115,000	3,500,000	700,000	900,000	100,000	1,800,000	0
Pulse Crops Commission	140,077	0	140,077	140,077	0	0	0	0
Red Raspberry Commission	179,481	0	179,481	149,708	29,773	0	0	0
Transportation, Department of	6,136,300	1,627,400	4,508,900	4,164,100	223,000	0	121,800	0
Tree Fruit Research Commission	4,484,773	320,387	4,164,386	2,887,511	599,000	0	677,875	0
Turfgrass Seed Commission	110,619	0	110,619	110,619	0	0	0	0

TABLE 20

## State agency expenditures for R&amp;D, by state, department or agency, and performer: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Intramural performers <sup>a</sup>	Extramural performers <sup>b</sup>					
			Total	Higher education institutions	Companies and individuals <sup>c</sup>	Nonprofit organizations <sup>d</sup>	Other governments <sup>e</sup>	All other <sup>f</sup>
Wine Commission	451,012	0	451,012	428,670	22,342	0	0	0
West Virginia	8,731,717	4,773,515	3,958,202	3,147,745	51,957	3,500	705,000	50,000
Agriculture, Department of	43,500	43,500	0	0	0	0	0	0
Geological and Economic Survey	2,516,066	2,094,323	421,743	371,743	0	0	0	50,000
Higher Education Policy Commission	1,832,049	196,339	1,635,710	1,627,210	0	3,500	5,000	0
Justice and Community Services, Division of Administrative Services	105,395	105,395	0	0	0	0	0	0
Natural Resources, Division of	2,148,601	2,074,488	74,113	22,156	51,957	0	0	0
Transportation, Department of	2,086,106	259,470	1,826,636	1,126,636	0	0	700,000	0
Wisconsin	16,366,530	5,377,653	10,988,877	3,877,962	4,223,711	228,352	2,658,402	450
Agriculture, Trade and Consumer Protection, Department of	2,384,761	0	2,384,761	893,896	1,255,338	222,352	13,175	0
Economic Development Corporation	2,096,000	0	2,096,000	0	2,096,000	0	0	0
Natural Resources, Department of	7,574,828	5,100,602	2,474,226	1,755,225	628,551	6,000	84,000	450
Transportation, Department of	4,310,941	277,051	4,033,890	1,228,841	243,822	0	2,561,227	0
Wyoming	9,886,086	4,237,727	5,648,359	1,768,058	3,648,840	52,237	179,224	0
Agriculture, Department of	549,736	0	549,736	270,898	47,377	52,237	179,224	0
Business Council	2,010,000	0	2,010,000	0	2,010,000	0	0	0
Enhanced Oil Recovery Institute	2,049,753	476,536	1,573,217	64,854	1,508,363	0	0	0
Game and Fish Department	1,991,442	1,563,972	427,470	344,370	83,100	0	0	0
State Geological Survey	2,095,403	2,095,403	0	0	0	0	0	0
Transportation, Department of	746,932	101,816	645,116	645,116	0	0	0	0
Water Development Office	442,820	0	442,820	442,820	0	0	0	0
Puerto Rico <sup>h</sup>	47,543,226	30,716,521	16,826,705	7,636,361	5,868,235	0	3,322,109	0
Business Development Office, Economic Development & Commerce	7,190,000	0	7,190,000	3,595,000	3,595,000	0	0	0
Comprehensive Cancer Center	16,142,829	9,702,293	6,440,536	2,562,254	556,173	0	3,322,109	0
Economic Development & Commerce	528,263	0	528,263	360,000	168,263	0	0	0
Health, Department of	17,000,000	17,000,000	0	0	0	0	0	0
Innovation and Technology Services	3,453,922	1,905,123	1,548,799	0	1,548,799	0	0	0
Institute of Statistics	1,615,810	1,615,810	0	0	0	0	0	0
Science, Technology and Research Trust	1,612,402	493,295	1,119,107	1,119,107	0	0	0	0

<sup>a</sup> 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.<sup>b</sup> Extramural performers are those outside the department or agency who perform R&D.<sup>c</sup> Companies and individuals include individuals under contract for research projects.<sup>d</sup> Nonprofit organizations, including foundations.

<sup>e</sup> Other governments include federal government departments and agencies; other departments or agencies within the state; other state governments; and county, city, special district, or regional local governments.

<sup>f</sup> All other performers not elsewhere classified.

<sup>g</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>h</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
United States <sup>b</sup>	3,034,601,074	147,887,810	373,458,008	591,276,952	1,292,800,801	315,134,417	314,043,086
Alabama	83,778,649	584,939	751,370	53,882,774	10,847,247	5,360,260	12,352,059
Commerce, Department of	54,419,133	0	0	44,419,133	10,000,000	0	0
Conservation and Natural Resources, Department of; Wildlife and Freshwater Fisheries Division	2,637,830	0	0	2,637,830	0	0	0
Economic and Community Affairs, Department of	3,255,511	584,939	455,956	236,353	847,247	98,239	1,032,777
Education, Department of	6,883,453	0	0	0	0	0	6,883,453
Forensic Sciences, Department of	231,757	0	0	0	0	0	231,757
Geological Survey	2,971,380	0	295,414	2,675,966	0	0	0
Marine Environmental Science Consortium, Dauphin Island Sea Lab	3,913,492	0	0	3,913,492	0	0	0
Supercomputer Authority	4,204,072	0	0	0	0	0	4,204,072
Transportation, Department of	5,262,021	0	0	0	0	5,262,021	0
Alaska	19,451,112	74,015	742,896	12,740,515	268,294	5,625,392	0
Energy Authority	242,896	0	242,896	0	0	0	0
Environmental Conservation, Department of	192,715	0	0	0	192,715	0	0
Housing Finance Corporation	500,000	0	500,000	0	0	0	0
Natural Resources, Department of; Division of Geological and Geophysical Surveys	12,212,300	0	0	12,212,300	0	0	0
Railroad Corporation	3,098,866	0	0	0	0	3,098,866	0
Seafood Marketing Institute	74,015	74,015	0	0	0	0	0
Transportation and Public Facilities, Department of	3,130,320	0	0	528,215	75,579	2,526,526	0
Arizona	14,011,612	1,810,237	0	1,552,790	7,868,651	2,064,934	715,000
Agriculture, Department of	1,943,155	1,810,237	0	132,918	0	0	0
Deaf and Hard of Hearing	115,000	0	0	0	0	0	115,000
Game and Fish Department	1,419,872	0	0	1,419,872	0	0	0
Health Services, Department of	7,868,651	0	0	0	7,868,651	0	0
Juvenile Corrections, Department of	600,000	0	0	0	0	0	600,000
Transportation, Department of	2,064,934	0	0	0	0	2,064,934	0
Arkansas	9,521,076	4,804,257	50,000	2,270,144	242,686	1,936,385	217,604
Beef Council	76,605	76,605	0	0	0	0	0
Corn and Grain Sorghum Promotion Board	965,315	965,315	0	0	0	0	0
Economic Development Commission	605,749	0	50,000	95,459	242,686	0	217,604
Game and Fish Commission	1,966,097	0	0	1,966,097	0	0	0
Midwest Dairy Association, Arkansas Division	7,425	7,425	0	0	0	0	0
Natural Heritage Commission	208,588	0	0	208,588	0	0	0
Rice Research and Promotion Board	2,500,050	2,500,050	0	0	0	0	0
Soybean Promotion Board	1,221,170	1,221,170	0	0	0	0	0
Transportation, Department of	1,936,385	0	0	0	0	1,936,385	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Wheat Promotion Board	33,692	33,692	0	0	0	0	0
California	594,541,351	11,794,814	225,709,133	63,966,691	234,563,834	49,446,825	9,060,054
Air Resources Board	17,641,553	0	0	17,641,553	0	0	0
Coachella Valley Mountains	215,912	0	0	215,912	0	0	0
Conservation, Department of	1,490,818	0	0	1,101,821	34,500	0	354,497
Corrections and Rehabilitation, Department of	6,466,366	0	0	0	0	0	6,466,366
Covered California	5,765,443	0	0	0	5,765,443	0	0
Dairy Council	69,421	0	0	0	69,421	0	0
Delta Stewardship Council	5,138,976	0	0	5,138,976	0	0	0
Emergency Services Governor's Office	2,020,000	0	0	0	0	0	2,020,000
Energy Commission	170,673,193	0	170,673,193	0	0	0	0
Environmental Health Hazard Assessment, Office of	25,263,123	0	0	0	25,263,123	0	0
First 5 California (Children and Families Commission)	6,000,000	0	0	0	6,000,000	0	0
Food and Agriculture, Department of	6,187,795	6,187,795	0	0	0	0	0
Forestry and Fire Protection, Department of	16,600,000	0	0	16,600,000	0	0	0
Horse Racing Board	976,291	976,291	0	0	0	0	0
Housing and Community Development, Department of	79,000	0	0	0	0	0	79,000
Institute for Regenerative Medicine	152,261,013	0	0	0	152,261,013	0	0
Motor Vehicles, Department of	1,714,131	0	0	0	1,714,131	0	0
Parks And Recreation, Department of	3,297,362	0	0	3,297,362	0	0	0
Pesticide Regulation, Department of	20,772,486	4,630,728	0	3,383,820	12,757,938	0	0
Public Health, Department of	8,500,000	0	0	0	8,500,000	0	0
Public Utilities Commission, Executive Division	55,035,940	0	55,035,940	0	0	0	0
Resources Recycling and Recovery, Department of	250,112	0	0	250,112	0	0	0
San Diego River Conservancy	495,155	0	0	495,155	0	0	0
State Coastal Conservancy	751,289	0	0	751,289	0	0	0
State Water Resources Control Board	24,800,361	0	0	2,602,096	22,198,265	0	0
Toxic Substances Control, Department of	221,058	0	0	221,058	0	0	0
Transportation, Department of	49,446,825	0	0	0	0	49,446,825	0
Water Resources, Department of	12,407,728	0	0	12,267,537	0	0	140,191
Colorado	39,665,229	1,999,706	3,247,418	10,539,540	8,971,048	4,408,335	10,499,182
Agriculture, Department of	362,802	25,125	0	0	337,677	0	0
Economic Development and International Trade, Office of	22,767,255	1,787,500	3,203,540	401,927	7,836,906	250,000	9,287,382
Higher Education Competitive Research Authority	1,843,141	0	43,878	652,463	0	0	1,146,800
Natural Resources, Department of	6,892,590	0	0	6,842,590	0	5,000	45,000
Public Health and Environment, Department of	3,439,025	0	0	2,642,560	796,465	0	0



TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Transportation, Department of	4,153,335	0	0	0	0	4,153,335	0
Wine Industry Development Board	207,081	187,081	0	0	0	0	20,000
Connecticut	55,924,506	4,521,698	2,928,267	12,908,890	24,164,742	3,907,816	7,493,093
Agricultural Experiment Station	14,165,952	4,521,698	0	4,822,890	4,821,364	0	0
Energy and Environmental Protection, Department of	8,086,000	0	0	8,086,000	0	0	0
Innovation Inc.	22,043,617	0	2,928,267	0	12,263,562	0	6,851,788
Mental Health and Addiction Services, Department of	7,079,816	0	0	0	7,079,816	0	0
Social Services, Department of	641,305	0	0	0	0	0	641,305
Transportation, Department of	3,907,816	0	0	0	0	3,907,816	0
Delaware	3,584,063	0	50,500	2,096,191	0	1,437,372	0
Geological Survey	1,651,264	0	0	1,608,099	0	43,165	0
Natural Resources and Environmental Control, Department of	488,092	0	0	488,092	0	0	0
Sustainable Energy Utility	50,500	0	50,500	0	0	0	0
Transportation, Department of	1,394,207	0	0	0	0	1,394,207	0
District of Columbia	10,563,918	0	0	1,848,077	7,909,103	623,962	182,776
Energy and Environment, Department of	348,077	0	0	348,077	0	0	0
Health, Department of	7,909,103	0	0	0	7,909,103	0	0
Transportation, Department of	806,738	0	0	0	0	623,962	182,776
Water and Sewer Authority	1,500,000	0	0	1,500,000	0	0	0
Florida	222,882,689	17,742,469	188,602	66,897,373	122,453,101	15,501,144	100,000
Agriculture and Consumer Services, Department of	22,629,310	15,879,671	188,602	5,846,951	689,302	24,784	0
Citrus, Department of	2,067,852	1,862,798	0	0	205,054	0	0
Environmental Protection, Department of	60,125	0	0	60,125	0	0	0
Fish and Wildlife Conservation Commission	60,990,297	0	0	60,990,297	0	0	0
Gaming Control Commission	100,000	0	0	0	0	0	100,000
Health, Department of	121,558,745	0	0	0	121,558,745	0	0
Space Florida	1,110,000	0	0	0	0	1,110,000	0
Transportation, Department of	14,366,360	0	0	0	0	14,366,360	0
Georgia	20,739,193	2,513,762	8,294,642	2,927,411	0	7,003,378	0
Commodity Commission, Agriculture, Department of	2,513,762	2,513,762	0	0	0	0	0
Natural Resources, Department of	2,297,557	0	0	2,297,557	0	0	0
Southern States Energy Board	9,213,432	0	8,294,642	629,854	0	288,936	0
Transportation, Department of	6,714,442	0	0	0	0	6,714,442	0
Hawaii	5,280,407	1,007,998	710,125	513,210	508,672	1,735,402	805,000
Agriculture, Department of	652,670	533,998	0	0	118,672	0	0
Business, Economic Development, and Tourism, Department of	2,447,125	474,000	710,125	68,000	390,000	0	805,000

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Land and Natural Resources, Department of	445,210	0	0	445,210	0	0	0
Transportation, Department of	1,735,402	0	0	0	0	1,735,402	0
Idaho	18,670,602	6,558,129	0	9,232,224	0	2,862,749	17,500
Agriculture, Department of	1,020,066	1,020,066	0	0	0	0	0
Barley Commission	254,646	254,646	0	0	0	0	0
Bean Commission	33,575	33,575	0	0	0	0	0
Commerce, Department of	784,945	754,945	0	0	0	30,000	0
Dairy West	2,843,786	2,843,786	0	0	0	0	0
Fish and Game, Department of	9,232,224	0	0	9,232,224	0	0	0
Oilseed Commission	66,548	66,548	0	0	0	0	0
Pea and Lentil Commission	61,179	61,179	0	0	0	0	0
Potato Commission	650,880	633,380	0	0	0	0	17,500
Transportation Department	2,832,749	0	0	0	0	2,832,749	0
Wheat Commission	890,004	890,004	0	0	0	0	0
Illinois	45,907,372	15,345	0	32,327,079	516,000	10,233,989	2,814,959
Children and Family Services, Department of	2,814,959	0	0	0	0	0	2,814,959
Great Lakes - St. Lawrence River Basin	100,000	0	0	100,000	0	0	0
Midwest Dairy Association, Illinois Division	15,345	15,345	0	0	0	0	0
Natural Resources, Department of	27,317,164	0	0	27,317,164	0	0	0
Nature Preserves Commission	1,065,000	0	0	1,065,000	0	0	0
Nutrient Research and Education Council	3,844,915	0	0	3,844,915	0	0	0
Public Health, Department of	516,000	0	0	0	516,000	0	0
Transportation, Department of	10,233,989	0	0	0	0	10,233,989	0
Indiana	24,179,311	500,000	748,289	3,866,329	0	12,624,242	6,440,451
Economic Development Corporation	9,961,588	0	748,289	0	0	2,772,848	6,440,451
Natural Resources, Department of	4,366,329	500,000	0	3,866,329	0	0	0
Transportation, Department of	9,851,394	0	0	0	0	9,851,394	0
Iowa	9,809,708	113,850	0	1,945,868	0	7,117,988	632,002
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	632,002	0	0	0	0	0	632,002
Midwest Dairy Association, Iowa Division	113,850	113,850	0	0	0	0	0
Natural Resources, Department of	1,945,868	0	0	1,945,868	0	0	0
Transportation, Department of	7,117,988	0	0	0	0	7,117,988	0
Kansas	10,364,853	3,625,892	139,676	1,716,521	0	3,882,450	1,000,314
Corn Commission	375,941	173,904	139,676	62,361	0	0	0
Grain Sorghum Commission	553,341	553,341	0	0	0	0	0
Midwest Dairy Association, Kansas Division	13,860	13,860	0	0	0	0	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Soybean Commission	1,400,000	1,400,000	0	0	0	0	0
State Board of Regents	1,000,314	0	0	0	0	0	1,000,314
Sunflower Commission	11,248	11,248	0	0	0	0	0
Transportation, Department of	3,882,450	0	0	0	0	3,882,450	0
Water Office	1,805,720	151,560	0	1,654,160	0	0	0
Wheat Commission	1,321,979	1,321,979	0	0	0	0	0
Kentucky	37,765,916	588,967	143,957	7,622,379	19,723,210	8,125,749	1,561,654
Economic Development, Cabinet for	3,126,802	86,074	143,957	0	1,297,346	37,771	1,561,654
Fish and Wildlife Resources, Department of	7,566,970	0	0	7,566,970	0	0	0
Horse Racing Commission	140,153	0	0	0	140,153	0	0
Nature Preserves, Office of Kentucky	55,409	0	0	55,409	0	0	0
Postsecondary Education, Council on	11,029,618	0	0	0	11,029,618	0	0
Public Health, Department for	7,256,093	0	0	0	7,256,093	0	0
Soybean Promotion Board	502,893	502,893	0	0	0	0	0
Transportation Cabinet	8,087,978	0	0	0	0	8,087,978	0
Louisiana	31,663,714	177,190	626,150	11,664,250	1,139,543	8,562,086	9,494,495
Board of Regents	12,395,006	177,190	626,150	895,542	1,139,543	62,086	9,494,495
Coastal Protection and Restoration Authority	3,791,442	0	0	3,791,442	0	0	0
Transportation and Development, Department of	8,500,000	0	0	0	0	8,500,000	0
Wildlife and Fisheries, Department of	6,977,266	0	0	6,977,266	0	0	0
Maine	47,576,007	10,182,623	0	7,640,976	11,660,337	1,185,950	16,906,121
Agriculture, Conservation and Forestry, Department of	1,697,100	0	0	1,697,100	0	0	0
Aquaculture Innovation Center	587,473	587,473	0	0	0	0	0
Inland Fisheries and Wildlife, Department of	1,776,000	0	0	1,776,000	0	0	0
Marine Resources, Department of	2,790,668	0	0	2,790,668	0	0	0
MDI Biological Laboratory, Center for Biomedical Innovation	7,615,174	0	0	22,217	7,592,957	0	0
Technology Institute	31,923,642	9,595,150	0	1,354,991	4,067,380	0	16,906,121
Transportation, Department of	1,185,950	0	0	0	0	1,185,950	0
Maryland	46,489,603	235,327	188,034	439,038	43,682,169	1,886,593	58,442
Energy Administration	250,000	0	0	250,000	0	0	0
Health, Department of	15,000,000	0	0	0	15,000,000	0	0
Natural Resources, Department of	670,841	235,327	188,034	189,038	0	0	58,442
Technology Development Corporation	28,682,169	0	0	0	28,682,169	0	0
Transportation, Department of	1,886,593	0	0	0	0	1,886,593	0
Massachusetts	48,424,086	0	27,660,771	3,317,234	7,473,568	7,849,400	2,123,113
Clean Energy Technology Center	27,560,771	0	27,560,771	0	0	0	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Environmental Protection, Department of	2,125,890	0	0	2,125,890	0	0	0
Fish and Game, Department of	262,343	0	0	262,343	0	0	0
Gaming Commission	1,363,550	0	0	0	1,325,550	0	38,000
MassVentures	400,000	0	100,000	100,000	200,000	0	0
Mental Health, Department of	2,761,879	0	0	0	2,761,879	0	0
Public Health, Department of	2,306,457	0	0	0	2,306,457	0	0
Technology Park Corporation	3,143,796	0	0	479,001	579,682	0	2,085,113
Transportation, Department of	7,849,400	0	0	0	0	7,849,400	0
Water Resources Authority	650,000	0	0	350,000	300,000	0	0
Michigan	22,654,435	4,028,064	200,000	702,204	8,046,672	6,977,495	2,700,000
Agriculture and Rural Development, Department of	3,846,005	3,478,064	0	367,941	0	0	0
Economic Development Corporation	5,000,000	550,000	0	0	1,000,000	750,000	2,700,000
Environmental, Great Lakes, and Energy, Department of	4,935,956	0	200,000	334,263	4,401,693	0	0
Health and Human Services	2,644,979	0	0	0	2,644,979	0	0
Transportation, Department of	6,227,495	0	0	0	0	6,227,495	0
Minnesota	22,732,170	4,568,674	153,294	4,711,365	250,000	13,048,837	0
Agriculture, Department of	4,966,177	4,360,279	0	605,898	0	0	0
Forest Resources Council	15,684	0	0	15,684	0	0	0
Health, Department of	250,000	0	0	0	250,000	0	0
Midwest Dairy Association, Minnesota Division	208,395	208,395	0	0	0	0	0
Natural Resources, Department of	2,101,074	0	0	2,101,074	0	0	0
Pollution Control Agency	230,894	0	0	230,894	0	0	0
Transportation, Department of	14,959,946	0	153,294	1,757,815	0	13,048,837	0
Mississippi	10,030,897	207,791	0	7,059,347	0	2,763,759	0
Agriculture and Commerce, Department of	207,791	207,791	0	0	0	0	0
Environmental Quality, Department of	1,649,886	0	0	1,649,886	0	0	0
Gulf States Marine Fisheries Commission	1,064,916	0	0	1,064,916	0	0	0
Marine Resources, Department of	1,927,800	0	0	1,927,800	0	0	0
Transportation, Department of	2,763,759	0	0	0	0	2,763,759	0
Wildlife, Fisheries, and Parks, Department of	2,416,745	0	0	2,416,745	0	0	0
Missouri	17,210,400	2,751,815	0	7,666,807	3,449,500	3,342,278	0
Agriculture, Department of	1,374,152	1,374,152	0	0	0	0	0
Conservation, Department of	7,416,216	0	0	7,416,216	0	0	0
Mental Health, Department of	242,500	0	0	0	242,500	0	0
Natural Resources, Department of	250,591	0	0	250,591	0	0	0
Technology Corporation	3,806,999	599,999	0	0	3,207,000	0	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Transportation, Department of	3,342,278	0	0	0	0	3,342,278	0
Wine and Grape Board	777,664	777,664	0	0	0	0	0
Montana	9,956,071	3,466,168	0	4,658,143	0	1,831,760	0
Agriculture, Department of	3,466,168	3,466,168	0	0	0	0	0
Environmental Quality, Department of	63,976	0	0	63,976	0	0	0
Fish, Wildlife and Parks, Department of	4,472,983	0	0	4,472,983	0	0	0
Natural Resources and Conservation, Department of	68,874	0	0	68,874	0	0	0
Transportation, Department of	1,884,070	0	0	52,310	0	1,831,760	0
Nebraska	29,171,378	2,498,518	172,926	2,068,739	20,069,625	1,239,135	3,122,435
Agriculture, Department of	1,196,095	1,196,095	0	0	0	0	0
Corn Board	762,728	603,718	67,926	0	0	91,084	0
Dry Bean Commission	343,193	343,193	0	0	0	0	0
Economic Development, Department of	4,733,801	256,400	105,000	0	1,189,966	60,000	3,122,435
Game and Parks Commission	2,018,739	0	0	2,018,739	0	0	0
Grain Sorghum Board	3,000	3,000	0	0	0	0	0
Health and Human Services, Department of	18,879,659	0	0	0	18,879,659	0	0
Midwest Dairy Association, Nebraska Division	25,740	25,740	0	0	0	0	0
Natural Resources, Department of	50,000	0	0	50,000	0	0	0
Pea And Lentil Commission	30,372	30,372	0	0	0	0	0
Transportation, Department of	1,088,051	0	0	0	0	1,088,051	0
Wheat Board	40,000	40,000	0	0	0	0	0
Nevada	4,072,717	204,134	0	920,333	170,477	1,330,439	1,447,334
Agriculture, Department of	204,134	204,134	0	0	0	0	0
Conservation and Natural Resources, Department of	198,678	0	0	198,678	0	0	0
Economic Development, Governor's office of	2,190,905	0	0	502,255	170,477	70,839	1,447,334
Transportation, Department of	1,479,000	0	0	219,400	0	1,259,600	0
New Hampshire	2,521,016	66,591	0	1,641,411	0	723,467	89,547
Agriculture, Markets and Food, Department of	86,551	66,591	0	19,960	0	0	0
Environmental Services, Department of	1,563,535	0	0	1,563,535	0	0	0
Transportation, Department of	870,930	0	0	57,916	0	723,467	89,547
New Jersey	99,832,733	0	0	7,057,203	80,740,965	2,596,557	9,438,008
Children and Families, Department of	330,877	0	0	0	0	0	330,877
Community Affairs, Department of	15,489	0	0	0	0	0	15,489
Corrections, Department of	498,425	0	0	0	0	0	498,425
Environmental Protection, Department of	7,878,841	0	0	6,259,794	1,619,047	0	0
Health, Department of	79,121,918	0	0	0	79,121,918	0	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Pinelands Commission	797,409	0	0	797,409	0	0	0
Secretary of Higher Education, Office of	8,500,000	0	0	0	0	0	8,500,000
State Parole Board, New Jersey	93,217	0	0	0	0	0	93,217
Transportation, Department of	2,596,557	0	0	0	0	2,596,557	0
New Mexico	2,337,788	0	0	1,566,851	0	770,937	0
Game and Fish, Department of	1,501,778	0	0	1,501,778	0	0	0
Transportation, Department of	770,937	0	0	0	0	770,937	0
Western State Air Resources Council	65,073	0	0	65,073	0	0	0
New York	486,576,578	9,199,446	52,943,590	30,403,179	295,176,385	14,085,670	84,768,308
Agriculture and Markets, Department of	6,775,611	6,449,000	0	326,611	0	0	0
Economic Development, Department of	98,660,735	2,000,000	4,000,000	2,000,000	6,000,000	0	84,660,735
Energy Research and Development Authority	55,115,891	0	40,584,904	3,743,900	0	10,787,087	0
Environmental Conservation, Department of	11,196,566	0	0	11,196,566	0	0	0
Health, Department of	42,199,899	261,360	0	1,568,155	40,370,384	0	0
Mental Health, Office of	170,362,799	0	0	0	170,362,799	0	0
People with Developmental Disabilities, Office of	2,317,096	0	0	0	2,267,096	0	50,000
Power Authority	9,265,322	123,897	8,358,686	445,999	127,917	151,250	57,573
Roswell Park Comprehensive Cancer Center	76,048,189	0	0	0	76,048,189	0	0
State Museum	11,121,948	0	0	11,121,948	0	0	0
Thoroughbred Breeding and Development Fund Corp	365,189	365,189	0	0	0	0	0
Transportation, Department of	3,147,333	0	0	0	0	3,147,333	0
North Carolina	36,106,613	14,087,083	1,659,524	2,906,002	8,484,484	7,864,239	1,105,281
Agriculture and Consumer Services, Department of	15,422,911	13,922,911	1,500,000	0	0	0	0
Biotechnology Center	7,770,931	0	0	0	7,770,931	0	0
Natural and Cultural Resources, Department of	2,135,087	0	0	2,131,854	0	0	3,233
Science Technology & Innovation, Office of	2,048,421	7,343	159,524	65,953	713,553	0	1,102,048
Transportation, Department of	8,572,434	0	0	708,195	0	7,864,239	0
Wine and Grape Growers Council	156,829	156,829	0	0	0	0	0
North Dakota	25,822,123	3,054,183	18,378,646	659,780	874,605	1,820,328	1,034,581
Agriculture, Department of	924,605	50,000	0	0	874,605	0	0
Dry Pea and Lentil Commission	257,308	257,308	0	0	0	0	0
Game and Fish, Department of	659,780	0	0	659,780	0	0	0
Historical Society of North Dakota	1,034,581	0	0	0	0	0	1,034,581
Industrial Commission	18,378,646	0	18,378,646	0	0	0	0
Midwest Dairy Association, North Dakota Division	6,435	6,435	0	0	0	0	0
Soybean Council	1,531,730	1,531,730	0	0	0	0	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Transportation, Department of	1,820,328	0	0	0	0	1,820,328	0
Wheat Commission	1,208,710	1,208,710	0	0	0	0	0
Ohio	117,471,257	0	5,992,718	49,445,763	20,000,000	5,432,652	36,600,124
Development, Department of	88,778,286	0	5,975,466	46,368,696	0	0	36,434,124
Education & Workforce, Department of	166,000	0	0	0	0	0	166,000
Mental Health and Addictions Services, Department of	20,000,000	0	0	0	20,000,000	0	0
Natural Resources, Department of	2,230,912	0	17,252	2,213,660	0	0	0
Transportation, Department of	5,432,652	0	0	0	0	5,432,652	0
Water Development Authority	863,407	0	0	863,407	0	0	0
Oklahoma	28,885,260	1,050,099	1,459,455	2,389,244	17,774,197	4,740,677	1,471,588
Advancement of Science and Technology, Center for the	8,294,382	618,460	1,409,455	290,090	4,179,170	500,549	1,296,658
Agriculture, Food, and Forestry, Department of	426,689	426,689	0	0	0	0	0
Grand River Dam Authority	455,000	0	50,000	405,000	0	0	0
Health, Department of	1,314,070	0	0	0	1,314,070	0	0
Human Services, Department of	174,930	0	0	0	0	0	174,930
Midwest Dairy Association, Oklahoma Division	4,950	4,950	0	0	0	0	0
Tobacco Settlement Endowment Trust	12,280,957	0	0	0	12,280,957	0	0
Transportation, Department of	4,240,128	0	0	0	0	4,240,128	0
Wildlife Conservation, Department of	1,694,154	0	0	1,694,154	0	0	0
Oregon	40,257,488	803,998	1,250,000	22,483,060	4,980,964	8,590,054	2,149,412
Agriculture, Department of	203,998	203,998	0	0	0	0	0
Business Development Department	12,000,000	600,000	1,250,000	1,800,000	3,750,000	4,600,000	0
Education, Department of	456,836	0	0	0	0	0	456,836
Fish and Wildlife, Department of	16,166,574	0	0	16,166,574	0	0	0
Forestry, Department of	700,000	0	0	700,000	0	0	0
Geology and Mineral Industries, Department of	1,118,540	0	0	1,118,540	0	0	0
Human Services, Department of	3,077,411	0	0	0	1,230,964	153,871	1,692,576
Transportation, Department of	3,836,183	0	0	0	0	3,836,183	0
Water Resources Department	1,526,296	0	0	1,526,296	0	0	0
Watershed Enhancement Board	1,171,650	0	0	1,171,650	0	0	0
Pennsylvania	99,487,575	5,019,941	3,878,560	18,896,798	62,664,377	4,800,272	4,227,627
Agriculture, Department of	2,817,440	2,817,440	0	0	0	0	0
Community and Economic Development, Department of	21,742,628	2,202,501	3,625,000	875,000	8,522,500	2,290,000	4,227,627
Conservation and Natural Resources, Department of	682,346	0	0	682,346	0	0	0
Environmental Protection, Department of	257,919	0	253,560	4,359	0	0	0
Fish and Boat Commission	163,584	0	0	163,584	0	0	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Game Commission	16,916,509	0	0	16,916,509	0	0	0
Health, Department of	54,141,877	0	0	0	54,141,877	0	0
Susquehanna River Basin Commission	255,000	0	0	255,000	0	0	0
Transportation, Department of	2,510,272	0	0	0	0	2,510,272	0
Rhode Island	4,635,868	150,000	349,934	2,199,338	249,596	1,687,000	0
Commerce Corporation	749,530	150,000	349,934	0	249,596	0	0
Fish and Wildlife; Environmental Management, Department of	1,755,569	0	0	1,755,569	0	0	0
Marine Fisheries; Environmental Management, Department of	134,234	0	0	134,234	0	0	0
Narragansett Bay National Estuarine Research Reserve; Environmental Management, Department of	236,546	0	0	236,546	0	0	0
Transportation, Department of	1,687,000	0	0	0	0	1,687,000	0
Water Resources Board	72,989	0	0	72,989	0	0	0
South Carolina	53,419,952	2,902,813	587,345	31,915,915	14,095,324	2,339,150	1,579,405
Agriculture, Department of	1,229,068	1,179,068	50,000	0	0	0	0
Disabilities and Special Needs, Department of	12,227,417	0	0	0	12,227,417	0	0
Health and Environmental Control, Department of	1,824,716	453,263	0	0	1,371,453	0	0
Natural Resources, Department of	29,190,303	0	0	29,190,303	0	0	0
Public Service Authority	512,345	0	512,345	0	0	0	0
Research Authority	2,075,537	100,000	25,000	40,000	496,454	100,000	1,314,083
Sea Grant Consortium	4,121,416	1,170,482	0	2,685,612	0	0	265,322
Transportation, Department of	2,239,150	0	0	0	0	2,239,150	0
South Dakota	5,227,211	3,250,774	37,445	34,950	0	1,904,042	0
Corn Utilization Council	37,445	0	37,445	0	0	0	0
Midwest Dairy Association, South Dakota Division	90,090	90,090	0	0	0	0	0
Nutrient Research and Education Council	1,479,262	1,479,262	0	0	0	0	0
Oilseeds Council	204,975	170,025	0	34,950	0	0	0
Pulse Crop Council	33,610	33,610	0	0	0	0	0
Soybean Research and Promotion Council	845,866	845,866	0	0	0	0	0
Transportation, Department of	1,904,042	0	0	0	0	1,904,042	0
Weed and Pest Control Commission	47,000	47,000	0	0	0	0	0
Wheat Commission	584,921	584,921	0	0	0	0	0
Tennessee	67,457,255	0	50,851	0	0	3,234,659	64,171,745
Education, Department of	57,171,745	0	0	0	0	0	57,171,745
Environment and Conservation, Department of	50,851	0	50,851	0	0	0	0
LaunchTN	7,000,000	0	0	0	0	0	7,000,000
Transportation, Department of	3,234,659	0	0	0	0	3,234,659	0
Texas	282,261,790	2,086,663	0	11,126,708	244,640,010	24,220,565	187,844



TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Agriculture, Department of	2,086,663	2,086,663	0	0	0	0	0
Alzheimer's Research and Care Consortium (TARCC)	4,384,547	0	0	0	4,384,547	0	0
Cancer Prevention and Research Institute	237,997,927	0	0	0	237,997,927	0	0
Environmental Quality, Commission on	2,255,204	0	0	2,255,204	0	0	0
Parks and Wildlife Department	5,484,621	0	0	5,296,777	0	0	187,844
State Health Services, Department of	2,257,536	0	0	0	2,257,536	0	0
Transportation, Department of	24,220,565	0	0	0	0	24,220,565	0
Water Development Board	3,574,727	0	0	3,574,727	0	0	0
Utah	10,119,476	1,317	0	7,388,968	0	2,729,191	0
Agriculture and Food, Department of	1,317	1,317	0	0	0	0	0
Environmental Quality, Department of	1,036,855	0	0	1,036,855	0	0	0
Natural Resources, Department of	6,352,113	0	0	6,352,113	0	0	0
Transportation, Department of	2,729,191	0	0	0	0	2,729,191	0
Vermont	2,833,206	0	0	79,783	1,818,036	935,387	0
Agriculture, Food, and Markets, Agency of	79,783	0	0	79,783	0	0	0
Human Services, Agency of	1,818,036	0	0	0	1,818,036	0	0
Transportation, Agency of	935,387	0	0	0	0	935,387	0
Virginia	57,260,560	3,598,429	438,598	18,131,290	5,142,800	19,463,187	10,486,256
Agriculture and Consumer Services, Department of	3,066,176	3,066,176	0	0	0	0	0
Behavioral Health and Developmental Services, Department of	5,100	0	0	0	0	0	5,100
Commonwealth Health Research Board	1,573,838	0	0	0	1,573,838	0	0
Education, Department of	1,115,000	0	0	0	0	0	1,115,000
Energy, Department of	1,321,426	0	30,000	1,291,426	0	0	0
Environmental Quality, Department of	382,014	0	0	382,014	0	0	0
Forensic Science, Department of	1,067,190	0	0	0	0	0	1,067,190
Forestry, Department of	481,630	0	0	481,630	0	0	0
Foundation for Healthy Youth	907,041	0	0	0	907,041	0	0
Innovation Partnership Corporation	18,076,226	464,253	408,598	4,413,987	2,661,921	2,878,501	7,248,966
Institute for Advanced Learning and Research	68,000	68,000	0	0	0	0	0
Marine Resources Commission	2,314,260	0	0	2,314,260	0	0	0
Natural History, Museum of	1,001,282	0	0	1,001,282	0	0	0
Rail and Public Transportation	1,004,284	0	0	0	0	1,004,284	0
Social Services, Department of	1,050,000	0	0	0	0	0	1,050,000
Transportation, Department of	15,450,372	0	0	0	0	15,450,372	0
Wildlife Resources, Department of	8,376,721	0	0	8,246,691	0	130,030	0
Washington	60,479,947	12,929,594	7,987,717	28,731,394	1,357,424	6,136,300	3,337,518

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Agriculture, Department of	3,880,349	3,880,349	0	0	0	0	0
Alfalfa Seed Commission	20,000	20,000	0	0	0	0	0
Asparagus Commission	33,000	33,000	0	0	0	0	0
Blueberry Commission	77,262	77,262	0	0	0	0	0
Commerce, Department of	7,387,066	0	7,387,066	0	0	0	0
Dairy Products Commission	20,000	20,000	0	0	0	0	0
Ecology, Department of	2,886,743	0	0	2,886,743	0	0	0
Fish and Wildlife, Department of	11,115,720	0	0	11,115,720	0	0	0
Fruit Commission	92,424	0	0	0	92,424	0	0
Grain Commission	2,050,158	2,050,158	0	0	0	0	0
Health, Department of	1,265,000	0	0	0	1,265,000	0	0
Hop Commission	141,228	141,228	0	0	0	0	0
Labor and Industries, Department of	3,337,518	0	0	0	0	0	3,337,518
Mint Commission	35,289	35,289	0	0	0	0	0
Natural Resources, Department of	11,714,582	0	600,651	11,113,931	0	0	0
Oilseeds Commission	69,887	69,887	0	0	0	0	0
Pesticide Registration, Commission on	427,997	427,997	0	0	0	0	0
Potato Commission	808,462	808,462	0	0	0	0	0
Puget Sound Partnership	3,615,000	0	0	3,615,000	0	0	0
Pulse Crops Commission	140,077	140,077	0	0	0	0	0
Red Raspberry Commission	179,481	179,481	0	0	0	0	0
Transportation, Department of	6,136,300	0	0	0	0	6,136,300	0
Tree Fruit Research Commission	4,484,773	4,484,773	0	0	0	0	0
Turfgrass Seed Commission	110,619	110,619	0	0	0	0	0
Wine Commission	451,012	451,012	0	0	0	0	0
West Virginia	8,731,717	43,500	1,640,120	3,460,082	250,155	2,086,106	1,251,754
Agriculture, Department of	43,500	43,500	0	0	0	0	0
Geological and Economic Survey	2,516,066	0	1,449,102	1,066,964	0	0	0
Higher Education Policy Commission	1,832,049	0	191,018	244,517	250,155	0	1,146,359
Justice and Community Services, Division of Administrative Services	105,395	0	0	0	0	0	105,395
Natural Resources, Division of	2,148,601	0	0	2,148,601	0	0	0
Transportation, Department of	2,086,106	0	0	0	0	2,086,106	0
Wisconsin	16,366,530	2,447,261	500,000	7,574,828	503,000	4,310,941	1,030,500
Agriculture, Trade and Consumer Protection, Department of	2,384,761	2,384,761	0	0	0	0	0
Economic Development Corporation	2,096,000	62,500	500,000	0	503,000	0	1,030,500
Natural Resources, Department of	7,574,828	0	0	7,574,828	0	0	0

TABLE 21

## State agency expenditures for R&amp;D, by state, department or agency, and function of R&amp;D: FY 2023

(Dollars)

State and department or agency	All R&D expenditures	Agriculture	Energy	Environment and natural resources	Health	Transportation	Other <sup>a</sup>
Transportation, Department of	4,310,941	0	0	0	0	4,310,941	0
Wyoming	9,886,086	619,736	3,597,455	3,481,963	70,000	746,932	1,370,000
Agriculture, Department of	549,736	549,736	0	0	0	0	0
Business Council	2,010,000	70,000	500,000	0	70,000	0	1,370,000
Enhanced Oil Recovery Institute	2,049,753	0	2,049,753	0	0	0	0
Game and Fish Department	1,991,442	0	0	1,991,442	0	0	0
State Geological Survey	2,095,403	0	1,047,702	1,047,701	0	0	0
Transportation, Department of	746,932	0	0	0	0	746,932	0
Water Development Office	442,820	0	0	442,820	0	0	0
Puerto Rico <sup>c</sup>	47,543,226	140,343	61,401	276,257	34,008,519	1,641,919	11,414,787
Business Development Office, Economic Development & Commerce	7,190,000	0	0	0	0	0	7,190,000
Comprehensive Cancer Center	16,142,829	0	0	0	15,374,698	0	768,131
Economic Development & Commerce	528,263	0	0	160,000	220,000	80,000	68,263
Health, Department of	17,000,000	0	0	0	17,000,000	0	0
Innovation and Technology Services	3,453,922	0	0	0	0	1,548,799	1,905,123
Institute of Statistics	1,615,810	65,343	0	0	240,446	13,120	1,296,901
Science, Technology and Research Trust	1,612,402	75,000	61,401	116,257	1,173,375	0	186,369

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

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 22

## State government R&amp;D intramural personnel, by state, headcount, and full-time equivalent: FY 2023

(Number)

State	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
United States <sup>b</sup>	9,924	5,396	3,162	1,366	6,322.4	3,673.7	1,763.6	885.1
Alabama	99	66	15	18	97.1	66.0	14.3	16.8
Alaska	90	54	21	15	71.3	46.5	16.1	8.7
Arizona	33	16	11	6	32.5	15.5	11.0	6.0
Arkansas	129	86	26	17	54.0	33.5	15.5	5.0
California	636	522	19	95	520.0	430.9	5.9	83.2
Colorado	99	61	35	3	59.2	48.1	9.8	1.3
Connecticut	269	182	36	51	167.7	119.4	34.0	14.3
Delaware	18	12	1	5	18.0	12.0	1.0	5.0
District of Columbia	31	9	10	12	21.5	7.0	7.5	7.0
Florida	864	658	62	144	800.3	618.2	73.5	108.6
Georgia	9	4	1	4	7.4	4.5	1.0	1.9
Hawaii	12	5	1	6	4.9	1.5	0.2	3.2
Idaho	83	28	51	4	67.0	22.1	42.6	2.3
Illinois	9	5	2	2	6.1	3.8	1.5	0.8
Indiana	110	50	42	18	64.4	37.0	19.0	8.4
Iowa	23	18	4	1	11.9	10.0	1.9	0.0
Kansas	28	16	6	6	22.1	11.1	6.0	5.0
Kentucky	242	136	100	6	16.5	12.4	3.8	0.3
Louisiana	303	165	94	44	105.4	78.5	17.0	9.9
Maine	182	122	44	16	111.7	60.0	38.2	13.5
Maryland	20	4	9	7	10.9	0.0	6.9	4.0
Massachusetts	55	27	20	8	19.5	12.7	4.2	2.6
Michigan	4	1	2	1	0.7	0.5	0.0	0.2
Minnesota	83	50	23	10	61.1	42.0	12.9	6.2
Mississippi	137	42	84	11	38.4	16.3	21.0	1.1
Missouri	218	77	133	8	103.0	60.0	41.0	2.0
Montana	65	28	29	8	13.9	4.9	6.7	2.3
Nebraska	9	1	8	0	1.2	1.0	0.2	0.0
Nevada	9	5	4	0	1.2	0.4	0.8	0.0
New Hampshire	15	1	3	11	1.2	1.0	0.1	0.1
New Jersey	48	43	1	4	19.4	15.8	0.5	3.1
New Mexico	55	35	4	16	10.0	5.0	0.5	4.5
New York	3,175	1,464	1,279	432	2,283.3	1,006.9	887.5	388.9
North Carolina	191	62	103	26	166.0	46.5	97.0	22.5
North Dakota	18	16	1	1	18.0	16.0	1.0	1.0
Ohio	30	19	9	2	11.8	8.7	2.8	0.3
Oklahoma	28	13	11	4	15.3	8.5	5.0	1.8
Oregon	306	108	171	27	168.1	75.4	79.7	13.0
Pennsylvania	152	78	64	10	120.2	56.3	56.8	7.1
Rhode Island	3	2	1	0	2.5	2.0	0.5	0.0
South Carolina	465	209	188	68	243.6	151.7	61.9	30.0
South Dakota	7	6	0	1	6.5	6.0	0.0	0.5
Tennessee	5	2	0	3	5.0	2.0	0.0	3.0
Texas	69	37	8	24	35.6	21.9	8.0	5.7
Utah	70	47	12	11	38.6	29.6	7.0	2.0
Vermont	24	7	15	2	7.7	1.1	5.6	1.0
Virginia	365	223	85	57	267.9	204.0	34.0	29.9
Washington	786	449	223	114	259.4	155.3	76.2	27.9
West Virginia	110	82	12	16	76.4	52.7	10.5	13.2

TABLE 22

**State government R&D intramural personnel, by state, headcount, and full-time equivalent: FY 2023**

(Number)

State	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
Wisconsin	93	26	62	5	22.7	17.5	0.2	5.0
Wyoming	40	17	17	6	34.3	14.0	15.3	5.0
Puerto Rico <sup>c</sup>	222	75	66	81	195.5	67.6	51.5	76.4

<sup>a</sup> Researchers include R&D scientists and engineers and their managers.

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

TABLE 23

## State agency R&amp;D intramural personnel, by state, department or agency, headcount, and full-time equivalent: FY 2023

(Number)

State and department or agency	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
United States <sup>b</sup>	9,924	5,396	3,162	1,366	6,322.4	3,673.7	1,763.6	885.1
Alabama	99	66	15	18	97.1	66.0	14.3	16.8
Education, Department of	26	26	0	0	26.0	26.0	0.0	0.0
Forensic Sciences, Department of	2	2	0	0	2.0	2.0	0.0	0.0
Geological Survey	34	28	3	3	32.1	28.0	2.3	1.8
Marine Environmental Science Consortium, Dauphin Island Sea Lab	31	7	12	12	31.0	7.0	12.0	12.0
Transportation, Department of	6	3	0	3	6.0	3.0	0.0	3.0
Alaska	90	54	21	15	71.3	46.5	16.1	8.7
Environmental Conservation, Department of	6	1	1	4	0.8	0.5	0.1	0.2
Natural Resources, Department of; Division of Geological and Geophysical Surveys	62	40	15	7	62.0	40.0	15.0	7.0
Railroad Corporation	16	10	5	1	5.0	3.0	1.0	1.0
Transportation and Public Facilities, Department of	6	3	0	3	3.5	3.0	0.0	0.5
Arizona	33	16	11	6	32.5	15.5	11.0	6.0
Game and Fish Department	15	8	5	2	14.5	7.5	5.0	2.0
Juvenile Corrections, Department of	6	4	2	0	6.0	4.0	2.0	0.0
Transportation, Department of	12	4	4	4	12.0	4.0	4.0	4.0
Arkansas	129	86	26	17	54.0	33.5	15.5	5.0
Game and Fish Commission	120	80	25	15	49.0	30.0	15.0	4.0
Natural Heritage Commission	1	1	0	0	1.0	1.0	0.0	0.0
Transportation, Department of	8	5	1	2	4.0	2.5	0.5	1.0
California	636	522	19	95	520.0	430.9	5.9	83.2
Air Resources Board	74	61	3	10	73.1	61.0	2.4	9.7
Conservation, Department of	25	23	0	2	8.6	8.2	0.0	0.4
Emergency Services Governor's Office	1	0	0	1	1.0	0.0	0.0	1.0
Energy Commission	179	148	0	31	179.0	148.0	0.0	31.0
Environmental Health Hazard Assessment, Office of	133	98	0	35	123.4	91.5	0.0	31.9
Forestry and Fire Protection, Department of	26	12	10	4	10.0	5.0	0.0	5.0
Housing and Community Development, Department of	3	3	0	0	0.5	0.5	0.0	0.0
Motor Vehicles, Department of	18	14	0	4	15.1	11.6	0.0	3.5
Pesticide Regulation, Department of	88	80	0	8	34.3	33.6	0.0	0.7
Toxic Substances Control, Department of	15	13	2	0	1.5	1.5	0.0	0.0
Transportation, Department of	73	69	4	0	72.5	69.0	3.5	0.0
Water Resources, Department of	1	1	0	0	1.0	1.0	0.0	0.0
Colorado	99	61	35	3	59.2	48.1	9.8	1.3
Agriculture, Department of	34	5	29	0	9.1	1.8	7.3	0.0

TABLE 23

## State agency R&amp;D intramural personnel, by state, department or agency, headcount, and full-time equivalent: FY 2023

(Number)

State and department or agency	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
Natural Resources, Department of	38	30	6	2	23.5	20.7	2.5	0.3
Public Health and Environment, Department of	22	22	0	0	21.6	21.6	0.0	0.0
Transportation, Department of	5	4	0	1	5.0	4.0	0.0	1.0
Connecticut	269	182	36	51	167.7	119.4	34.0	14.3
Agricultural Experiment Station	103	59	32	12	103.0	59.0	32.0	12.0
Energy and Environmental Protection, Department of	54	50	4	0	27.0	25.0	2.0	0.0
Mental Health and Addiction Services, Department of	36	35	0	1	30.9	29.9	0.0	1.0
Social Services, Department of	32	32	0	0	2.2	2.2	0.0	0.0
Transportation, Department of	44	6	0	38	4.6	3.3	0.0	1.3
Delaware	18	12	1	5	18.0	12.0	1.0	5.0
Geological Survey	18	12	1	5	18.0	12.0	1.0	5.0
District of Columbia	31	9	10	12	21.5	7.0	7.5	7.0
Health, Department of	25	4	9	12	16.5	2.5	7.0	7.0
Transportation, Department of	2	1	1	0	1.5	1.0	0.5	0.0
Water and Sewer Authority	4	4	0	0	3.5	3.5	0.0	0.0
Florida	864	658	62	144	800.3	618.2	73.5	108.6
Agriculture and Consumer Services, Department of	11	4	7	0	11.0	4.0	7.0	0.0
Citrus, Department of	1	1	0	0	0.5	0.0	0.5	0.0
Fish and Wildlife Conservation Commission	832	649	42	141	775.0	612.0	57.0	106.0
Transportation, Department of	20	4	13	3	13.8	2.2	9.0	2.6
Georgia	9	4	1	4	7.4	4.5	1.0	1.9
Southern States Energy Board	9	4	1	4	7.4	4.5	1.0	1.9
Hawaii	12	5	1	6	4.9	1.5	0.2	3.2
Agriculture, Department of	10	5	1	4	2.9	1.5	0.2	1.2
Business, Economic Development, and Tourism, Department of	2	0	0	2	2.0	0.0	0.0	2.0
Idaho	83	28	51	4	67.0	22.1	42.6	2.3
Fish and Game, Department of	81	28	51	2	65.0	22.1	42.6	0.3
Transportation Department	2	0	0	2	2.0	0.0	0.0	2.0
Illinois	9	5	2	2	6.1	3.8	1.5	0.8
Transportation, Department of	9	5	2	2	6.1	3.8	1.5	0.8
Indiana	110	50	42	18	64.4	37.0	19.0	8.4
Natural Resources, Department of	80	40	28	12	49.0	27.0	15.0	7.0
Transportation, Department of	30	10	14	6	15.4	10.0	4.0	1.4
Iowa	23	18	4	1	11.9	10.0	1.9	0.0
Human Rights, Criminal and Juvenile Justice Planning, Division of, Department of	9	8	0	1	5.0	5.0	0.0	0.0

TABLE 23

## State agency R&amp;D intramural personnel, by state, department or agency, headcount, and full-time equivalent: FY 2023

(Number)

State and department or agency	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
Natural Resources, Department of	14	10	4	0	6.9	5.0	1.9	0.0
Kansas	28	16	6	6	22.1	11.1	6.0	5.0
State Board of Regents	2	2	0	0	0.1	0.1	0.0	0.0
Transportation, Department of	19	9	6	4	19.0	9.0	6.0	4.0
Water Office	7	5	0	2	3.0	2.0	0.0	1.0
Kentucky	242	136	100	6	16.5	12.4	3.8	0.3
Fish and Wildlife Resources, Department of	238	132	100	6	15.5	11.4	3.8	0.3
Nature Preserves, Office of Kentucky	4	4	0	0	1.0	1.0	0.0	0.0
Louisiana	303	165	94	44	105.4	78.5	17.0	9.9
Coastal Protection and Restoration Authority	11	7	0	4	7.5	6.5	0.0	1.0
Transportation and Development, Department of	52	36	12	4	52.0	36.0	12.0	4.0
Wildlife and Fisheries, Department of	240	122	82	36	45.9	36.0	5.0	4.9
Maine	182	122	44	16	111.7	60.0	38.2	13.5
Agriculture, Conservation and Forestry, Department of	12	9	1	2	11.0	9.0	1.0	1.0
Aquaculture Innovation Center	5	3	2	0	5.0	3.0	2.0	0.0
Inland Fisheries and Wildlife, Department of	60	60	0	0	5.0	5.0	0.0	0.0
Marine Resources, Department of	42	29	9	4	31.0	22.0	6.5	2.5
MDI Biological Laboratory, Center for Biomedical Innovation	59	19	30	10	55.7	19.0	26.7	10.0
Transportation, Department of	4	2	2	0	4.0	2.0	2.0	0.0
Maryland	20	4	9	7	10.9	0.0	6.9	4.0
Transportation, Department of	20	4	9	7	10.9	0.0	6.9	4.0
Massachusetts	55	27	20	8	19.5	12.7	4.2	2.6
Environmental Protection, Department of	34	14	16	4	7.0	3.0	3.0	1.0
Fish and Game, Department of	10	4	3	3	3.5	2.0	1.0	0.5
Gaming Commission	2	2	0	0	1.6	1.5	0.0	0.1
MassVentures	1	0	0	1	1.0	0.0	0.0	1.0
Transportation, Department of	6	6	0	0	6.0	6.0	0.0	0.0
Water Resources Authority	2	1	1	0	0.4	0.2	0.2	0.0
Michigan	4	1	2	1	0.7	0.5	0.0	0.2
Agriculture and Rural Development, Department of	1	1	0	0	0.5	0.5	0.0	0.0
Environmental, Great Lakes, and Energy, Department of	3	0	2	1	0.2	0.0	0.0	0.2
Minnesota	83	50	23	10	61.1	42.0	12.9	6.2
Agriculture, Department of	30	11	15	4	8.9	3.0	4.9	1.0
Health, Department of	3	2	0	1	2.2	2.0	0.0	0.2
Natural Resources, Department of	50	37	8	5	50.0	37.0	8.0	5.0



TABLE 23

## State agency R&amp;D intramural personnel, by state, department or agency, headcount, and full-time equivalent: FY 2023

(Number)

State and department or agency	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
Mississippi	137	42	84	11	38.4	16.3	21.0	1.1
Environmental Quality, Department of	11	3	0	8	0.3	0.2	0.0	0.1
Gulf States Marine Fisheries Commission	1	1	0	0	1.0	1.0	0.0	0.0
Marine Resources, Department of	9	8	1	0	4.0	3.8	0.2	0.0
Transportation, Department of	3	0	0	3	1.0	0.0	0.0	1.0
Wildlife, Fisheries, and Parks, Department of	113	30	83	0	32.1	11.3	20.8	0.0
Missouri	218	77	133	8	103.0	60.0	41.0	2.0
Conservation, Department of	218	77	133	8	103.0	60.0	41.0	2.0
Montana	65	28	29	8	13.9	4.9	6.7	2.3
Environmental Quality, Department of	5	4	1	0	0.7	0.5	0.2	0.0
Fish, Wildlife and Parks, Department of	50	21	26	3	9.4	3.2	5.2	1.0
Natural Resources and Conservation, Department of	2	2	0	0	0.2	0.2	0.0	0.0
Transportation, Department of	8	1	2	5	3.6	1.0	1.3	1.3
Nebraska	9	1	8	0	1.2	1.0	0.2	0.0
Transportation, Department of	9	1	8	0	1.2	1.0	0.2	0.0
Nevada	9	5	4	0	1.2	0.4	0.8	0.0
Agriculture, Department of	3	1	2	0	1.2	0.4	0.8	0.0
Conservation and Natural Resources, Department of	6	4	2	0	0.0	0.0	0.0	0.0
New Hampshire	15	1	3	11	1.2	1.0	0.1	0.1
Transportation, Department of	15	1	3	11	1.2	1.0	0.1	0.1
New Jersey	48	43	1	4	19.4	15.8	0.5	3.1
Children and Families, Department of	11	11	0	0	1.2	1.2	0.0	0.0
Community Affairs, Department of	3	2	0	1	0.2	0.1	0.0	0.1
Corrections, Department of	3	3	0	0	3.0	3.0	0.0	0.0
Environmental Protection, Department of	23	21	1	1	11.5	10.5	0.5	0.5
Pinelands Commission	5	5	0	0	1.0	0.0	0.0	1.0
State Parole Board, New Jersey	3	1	0	2	2.5	1.0	0.0	1.5
New Mexico	55	35	4	16	10.0	5.0	0.5	4.5
Game and Fish, Department of	52	35	4	13	7.0	5.0	0.5	1.5
Transportation, Department of	3	0	0	3	3.0	0.0	0.0	3.0
New York	3,175	1,464	1,279	432	2,283.3	1,006.9	887.5	388.9
Agriculture and Markets, Department of	14	13	1	0	8.0	7.0	1.0	0.0
Energy Research and Development Authority	33	20	0	13	26.5	20.0	0.0	6.5
Environmental Conservation, Department of	90	60	22	8	46.6	28.3	15.8	2.5
Health, Department of	342	239	75	28	213.1	142.0	51.1	20.0

TABLE 23

## State agency R&amp;D intramural personnel, by state, department or agency, headcount, and full-time equivalent: FY 2023

(Number)

State and department or agency	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
Mental Health, Office of	1,534	644	697	193	958.0	372.0	406.0	180.0
People with Developmental Disabilities, Office of	27	17	4	6	17.5	9.7	2.8	5.0
Power Authority	12	10	0	2	12.0	10.0	0.0	2.0
Roswell Park Comprehensive Cancer Center	1,039	436	427	176	919.2	392.9	359.4	166.9
State Museum	79	22	53	4	77.4	22.0	51.4	4.0
Transportation, Department of	5	3	0	2	5.0	3.0	0.0	2.0
North Carolina	191	62	103	26	166.0	46.5	97.0	22.5
Agriculture and Consumer Services, Department of	140	31	91	18	140.0	31.0	91.0	18.0
Natural and Cultural Resources, Department of	46	27	12	7	21.0	11.5	6.0	3.5
Transportation, Department of	5	4	0	1	5.0	4.0	0.0	1.0
North Dakota	18	16	1	1	18.0	16.0	1.0	1.0
Game and Fish, Department of	6	6	0	0	6.0	6.0	0.0	0.0
Historical Society of North Dakota	10	8	1	1	10.0	8.0	1.0	1.0
Transportation, Department of	2	2	0	0	2.0	2.0	0.0	0.0
Ohio	30	19	9	2	11.8	8.7	2.8	0.3
Education & Workforce, Department of	1	1	0	0	0.1	0.1	0.0	0.0
Natural Resources, Department of	29	18	9	2	11.7	8.6	2.8	0.3
Oklahoma	28	13	11	4	15.3	8.5	5.0	1.8
Grand River Dam Authority	7	2	4	1	2.0	1.0	1.0	0.0
Health, Department of	12	6	5	1	5.8	2.5	3.0	0.3
Human Services, Department of	2	0	1	1	0.5	0.0	0.0	0.5
Transportation, Department of	6	4	1	1	6.0	4.0	1.0	1.0
Wildlife Conservation, Department of	1	1	0	0	1.0	1.0	0.0	0.0
Oregon	306	108	171	27	168.1	75.4	79.7	13.0
Fish and Wildlife, Department of	202	56	135	11	97.6	37.4	56.2	4.0
Forestry, Department of	20	5	10	5	8.5	5.0	2.5	1.0
Geology and Mineral Industries, Department of	15	10	2	3	5.3	4.0	1.0	0.3
Human Services, Department of	46	16	24	6	41.0	14.0	20.0	7.0
Transportation, Department of	8	7	0	1	1.2	1.0	0.0	0.2
Water Resources Department	14	14	0	0	14.0	14.0	0.0	0.0
Watershed Enhancement Board	1	0	0	1	0.5	0.0	0.0	0.5
Pennsylvania	152	78	64	10	120.2	56.3	56.8	7.1
Conservation and Natural Resources, Department of	7	6	1	0	0.4	0.4	0.0	0.0
Environmental Protection, Department of	3	2	1	0	0.4	0.1	0.3	0.0
Fish and Boat Commission	10	10	0	0	0.3	0.3	0.0	0.0

TABLE 23

## State agency R&amp;D intramural personnel, by state, department or agency, headcount, and full-time equivalent: FY 2023

(Number)

State and department or agency	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
Game Commission	117	54	56	7	117.0	54.0	56.0	7.0
Susquehanna River Basin Commission	15	6	6	3	2.1	1.5	0.5	0.1
Rhode Island	3	2	1	0	2.5	2.0	0.5	0.0
Narragansett Bay National Estuarine Research Reserve; Environmental Management, Department of	3	2	1	0	2.5	2.0	0.5	0.0
South Carolina	465	209	188	68	243.6	151.7	61.9	30.0
Health and Environmental Control, Department of	94	51	4	39	7.9	5.3	0.9	1.7
Natural Resources, Department of	327	129	180	18	208.0	129.0	61.0	18.0
Sea Grant Consortium	29	16	4	9	25.0	16.0	0.0	9.0
Transportation, Department of	15	13	0	2	2.7	1.4	0.0	1.3
South Dakota	7	6	0	1	6.5	6.0	0.0	0.5
Soybean Research and Promotion Council	1	0	0	1	0.5	0.0	0.0	0.5
Transportation, Department of	6	6	0	0	6.0	6.0	0.0	0.0
Tennessee	5	2	0	3	5.0	2.0	0.0	3.0
Transportation, Department of	5	2	0	3	5.0	2.0	0.0	3.0
Texas	69	37	8	24	35.6	21.9	8.0	5.7
Environmental Quality, Commission on	6	0	0	6	0.6	0.0	0.0	0.6
Parks and Wildlife Department	38	19	7	12	23.3	12.5	7.0	3.8
State Health Services, Department of	25	18	1	6	11.7	9.4	1.0	1.3
Utah	70	47	12	11	38.6	29.6	7.0	2.0
Environmental Quality, Department of	3	3	0	0	0.6	0.6	0.0	0.0
Natural Resources, Department of	60	40	10	10	31.0	25.0	5.0	1.0
Transportation, Department of	7	4	2	1	7.0	4.0	2.0	1.0
Vermont	24	7	15	2	7.7	1.1	5.6	1.0
Human Services, Agency of	13	0	12	1	6.0	0.0	5.0	1.0
Transportation, Agency of	11	7	3	1	1.7	1.1	0.6	0.0
Virginia	365	223	85	57	267.9	204.0	34.0	29.9
Behavioral Health and Developmental Services, Department of	6	6	0	0	0.0	0.0	0.0	0.0
Education, Department of	5	3	1	1	2.5	1.5	0.5	0.5
Energy, Department of	18	14	3	1	18.0	14.0	3.0	1.0
Environmental Quality, Department of	3	3	0	0	0.3	0.3	0.0	0.0
Forensic Science, Department of	11	9	2	0	7.0	5.0	2.0	0.0
Forestry, Department of	13	1	12	0	10.5	1.0	9.5	0.0
Innovation Partnership Corporation	11	1	0	10	10.3	0.4	0.0	9.9
Institute for Advanced Learning and Research	2	1	1	0	1.0	1.0	0.0	0.0
Marine Resources Commission	2	1	1	0	2.0	1.0	1.0	0.0

TABLE 23

## State agency R&amp;D intramural personnel, by state, department or agency, headcount, and full-time equivalent: FY 2023

(Number)

State and department or agency	R&D personnel headcount				R&D personnel (full-time equivalent)			
	Total	Researchers <sup>a</sup>	Technicians	Support staff	Total	Researchers <sup>a</sup>	Technicians	Support staff
Natural History, Museum of	16	5	4	7	11.5	5.0	4.0	2.5
Rail and Public Transportation	2	2	0	0	2.0	2.0	0.0	0.0
Social Services, Department of	18	6	10	2	17.0	6.0	10.0	1.0
Transportation, Department of	79	38	15	26	52.8	33.8	4.0	15.0
Wildlife Resources, Department of	179	133	36	10	133.0	133.0	0.0	0.0
Washington	786	449	223	114	259.4	155.3	76.2	27.9
Ecology, Department of	49	22	24	3	15.3	5.4	9.1	0.8
Fish and Wildlife, Department of	576	333	155	88	147.0	79.0	56.0	12.0
Health, Department of	11	7	2	2	6.9	4.8	1.0	1.1
Labor and Industries, Department of	28	24	0	4	28.0	24.0	0.0	4.0
Natural Resources, Department of	100	54	36	10	44.2	35.1	6.1	3.0
Puget Sound Partnership	2	2	0	0	1.0	1.0	0.0	0.0
Transportation, Department of	8	4	0	4	7.0	3.0	0.0	4.0
Tree Fruit Research Commission	12	3	6	3	10.0	3.0	4.0	3.0
West Virginia	110	82	12	16	76.4	52.7	10.5	13.2
Agriculture, Department of	6	3	0	3	6.0	3.0	0.0	3.0
Geological and Economic Survey	34	21	8	5	34.0	21.0	8.0	5.0
Higher Education Policy Commission	3	0	0	3	1.2	0.0	0.0	1.2
Justice and Community Services, Division of Administrative Services	8	7	0	1	8.0	7.0	0.0	1.0
Natural Resources, Division of	58	50	4	4	26.2	21.7	2.5	2.0
Transportation, Department of	1	1	0	0	1.0	0.0	0.0	1.0
Wisconsin	93	26	62	5	22.7	17.5	0.2	5.0
Natural Resources, Department of	31	26	5	0	17.7	17.5	0.2	0.0
Transportation, Department of	62	0	57	5	5.0	0.0	0.0	5.0
Wyoming	40	17	17	6	34.3	14.0	15.3	5.0
Enhanced Oil Recovery Institute	11	6	3	2	5.5	3.0	1.5	1.0
Game and Fish Department	11	0	11	0	11.0	0.0	11.0	0.0
State Geological Survey	17	11	2	4	17.0	11.0	2.0	4.0
Transportation, Department of	1	0	1	0	0.8	0.0	0.8	0.0
Puerto Rico <sup>c</sup>	222	75	66	81	195.5	67.6	51.5	76.4
Comprehensive Cancer Center	126	44	30	52	126.0	44.0	30.0	52.0
Health, Department of	30	8	10	12	30.0	8.0	10.0	12.0
Innovation and Technology Services	11	0	7	4	2.9	0.0	1.7	1.2
Institute of Statistics	36	8	19	9	22.6	5.6	9.8	7.2
Science, Technology and Research Trust	19	15	0	4	14.0	10.0	0.0	4.0

<sup>a</sup> Researchers include R&D scientists and engineers and their managers.

<sup>b</sup> U.S. total reflects all 50 states and the District of Columbia.

<sup>c</sup> Puerto Rico is not included in U.S. total due to its classification as a U.S. territory.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

## Technical Notes

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### Survey Overview (FY 2023 Survey Cycle)

*Purpose.* The Survey of State Government Research and Development (R&D) 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, U.S. Code, § 8(b). It is collected under Office of Management and Budget control number 0607-0933, expiration date 30 June 2026. The disclosure review number is NCSES-DRN24-047.

*Survey contractor.* The Census Bureau, under NSF interagency agreement, 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.* FY 2006.

*Reference period.* State government fiscal year ending in 2023.

*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 589 agencies from the 50 U.S. state governments, the District of Columbia, and Puerto Rico with the capacity to perform or fund R&D during FY 2023. Agencies that reported \$0 R&D in the last three survey cycles were marked as inactive for this survey cycle to reduce respondent burden and will be reactivated in two years.

*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 2023. 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 the NCSES 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. For the FY 2023 survey, state coordinators were provided with a list of agencies that were previously identified from the FY 2022 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 by Census Bureau and NCSSES staff of agencies reporting to the Census Bureau's [Census of Governments](#) program. State 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 adjusted the agency universe to remove agencies that have never had any qualifying R&D to report to NCSSES, to add any agencies that were missing or could have R&D to report, to address organizational changes within their respective states since the previous survey, and to provide updated agency contact information.

*Sample design.* The Survey of State Government R&D is a census.

## Data Collection and Processing Methods

*Data collection.* For FY 2023, e-mails were sent to the chief of staff for all governors asking them to appoint a state coordinator. Census Bureau staff also reached out to prior state coordinators asking if they would be willing to continue to serve as the coordinators for the FY 2023 cycle. On a flow basis, state coordinators were sent a list of agencies and contacts that were surveyed for the FY 2022 Survey of State Government R&D 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 list 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 given their state agencies' aggregate data to review before final analysis and dissemination.

*Mode.* State agencies were e-mailed a fillable Portable Document Format (PDF) 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 2023 Survey of State Government R&D and are available in [table A-1](#).

All 50 U.S. state governments, the District of Columbia, and Puerto Rico participated in the survey. A total of 40 of 52 coordinators updated their spreadsheet of potential state agencies. However, only 19 of 52 coordinators officially responded to verify the final aggregate data. 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 Louisiana, Massachusetts, and Virginia.

Historically, NCSES has partnered with the Puerto Rico Institute of Statistics to collect information on R&D spending from Puerto Rico agencies. For FY 2023, the governor's office appointed a coordinator within the Department of Economic Development and Commerce. The Puerto Rico coordinator identified additional agencies that were performing or funding R&D, including some that had split apart from other agencies. Responses were received from 15 of the 19 agencies in Puerto Rico that were sent the survey. One agency was later removed because its data was included in another agency's response. Thus, the FY 2022 and FY 2023 data for Puerto Rico may not be directly comparable to each other.

The final agency response was 578 of 589 agencies (98.1%).

The following agencies did not respond to the survey and as a result may contribute to an undercount in the estimated public expenditures for R&D activities:

- Arkansas Department of Education
- Arkansas Livestock & Poultry Commission
- Georgia Soil and Water Conservation Commission
- Idaho Alfalfa and Clover Seed Commission
- Idaho Honey Commission
- Idaho Oilseed Commission
- Kentucky Department of Fish and Wildlife Resources
- Ohio Veterans Services
- Puerto Rico Department of Agriculture
- Puerto Rico Cardiovascular Center of Puerto Rico and the Caribbean
- Puerto Rico Department of Natural and Environmental Resources

Of the 578 agencies that responded, 396 (68.5%) reported having some R&D activity in FY 2023. Although the proportion of agencies reporting R&D activity was smaller in FY 2023 than FY 2022 (68.5% and 79.7%, respectively), the number of agencies reporting R&D activity was almost the same in both years (396 and 400, respectively). The number of agencies surveyed as potentially performing or funding R&D was greater in FY 2023 than in FY 2022 due to scheduled re-surveying of agencies that were previously inactive in R&D.

*Data editing.* 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 major data changes in R&D between FY 2022 and FY 2023 to ensure the accuracy of the survey data. Major data changes are dependent on the state and type of agency. After all the agencies in a state submitted responses, a spreadsheet of aggregated agency data was sent to the coordinators. They were asked to perform a final verification of aggregated agency data.

*Imputation.* Data were imputed for three agencies for this cycle because they are known to have had reported R&D in previous survey cycles, while the remaining nonresponding agencies have traditionally reported \$0 R&D in previous survey cycles. Idaho Oilseed Commission was imputed using the average of prior-year reporting patterns, and Kentucky Department of Fish and Wildlife Resources was imputed using the ratio method of the state totals for R&D. Kentucky Horse Racing Commission was imputed using data from their annual report. The reported total for Midwest Dairy was broken out across the divisions in Arkansas, Illinois, Iowa, Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, and South Dakota based on percentages each division contributed as per the organization's annual financial report. 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. No universally applied methods of imputation can be used across all state government agencies and still 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 imputation methods are needed, they are handled on an individual state-by-state basis.

*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 data are finalized for 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. However, no measures of coverage error are produced.

*Nonresponse error.* Of the 589 agencies in the survey universe, 578 (98.1%) responded to the survey. Of the 578 respondents, 396 (68.5%) reported having R&D activities in FY 2023. A mathematical statistical method was used to impute two nonresponding agencies known to have R&D in the past, namely Idaho Oilseed Commission and Kentucky Department of Fish and Wildlife Resources. Kentucky Horse Racing Commission was imputed using data from their annual report. No other imputation was used for the other nonresponding agencies because the other agencies historically have reported not having R&D. Nonresponse error is minimal.

*Measurement error.* The most common form of nonsampling error in the Survey of State Government R&D 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

The population of state agencies with the potential to perform R&D varies from year to year because R&D is highly discretionary at the state level. In addition, 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 multiyear obligations rather than single-year expenditures.

The survey asked about state agencies' expenditures for R&D at the end of FY 2023. Most states and Puerto Rico have a fiscal year that begins 1 July and ends the following 30 June. For example, FY 2023 is the state fiscal period beginning on 1 July 2022 and ending on 30 June 2023. There are, however, five exceptions to the 30 June fiscal year end: New York (ends 31 March); Texas (ends 31 August); and Alabama, the District of Columbia, and Michigan (all end 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 the NCSSES [HERD Survey](#). For FY 2023, state government agencies reported \$1.2 billion in expenditures used to support R&D performance by academic institutions. A major factor for the difference between totals reported in the HERD Survey and the Survey of State Government R&D is that 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 2023 Survey of State Government R&D 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 between FY 2022 and FY 2023, staff from the Census Bureau and NCSSES conducted follow-up calls for some agencies with major data changes, depending on the type of agency and state, 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 2023 data tables. Specific agency-level data for FY 2006 and FY 2007 are not available.

The current Survey of State Government R&D 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, FY 2020, FY 2021, FY 2022, and FY 2023. (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) NCSES reviews data for prior years for consistency with current-year responses and, if necessary, may revise these data in consultation with respondents.

NCSES 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 R&D.

*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: nonfederal 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 the survey was added for administrative purposes.

- FY 2020. Two new questions were added asking for the number of intramural R&D personnel and the number of full-time equivalent employees for researchers, technicians, and support staff. Data from these new questions are not available this year.
- FY 2021. The survey was restructured to group related questions together. For example, questions on expenditures for R&D performed internally by type of R&D, internal R&D employees, and internal full-time equivalent R&D personnel were moved to follow the internal R&D expenditures question. Similarly, questions on expenditures for R&D performed externally and expenditures for R&D performed externally by type of entity were moved to follow the internal R&D questions. All questions asking for crosscuts on the total R&D expenditures were moved to follow both internal and external R&D-related questions.
- FY 2022. The “other” category for “external performance of R&D” was split into multiple categories: nonprofit organizations, other governments (i.e., federal, federally funded research and development centers, other state governments, and local governments), and other performers not elsewhere classified. Expenditures for construction and acquisition of land and facilities was broken into internal and external. Neither one of these changes was published in the data tables.
- FY 2023. No changes were made.

#### *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.
- FYs 2019–21. No changes were made.
- FY 2022. Census Bureau staff reached out to Puerto Rico agencies directly with a Spanish-language version of the fillable PDF survey form. Puerto Rico did not report data for FYs 2016 through 2021 but resumed reporting in FY 2022. Between FYs 2005 and 2016, the Puerto Rico Institute of Statistics (PRIS) conducted its own survey of R&D. Staff from the Census Bureau and NCSES worked with staff at PRIS to ensure questions relevant to the Survey of State Government R&D were consistent with those asked by the PRIS during their survey. PRIS would send agency responses to the Census Bureau and NCSES for addition into the Survey of State Government R&D. Between FYs 2016 and 2022, PRIS suspended its own survey and Census Bureau staff provided a copy of the fillable PDF survey to the Puerto Rico Coordinator to send to agencies and provide responses back to the Census Bureau. However, agencies did not respond to requests from the coordinator in Puerto Rico during this time. For the FY 2022 survey, the coordinator in Puerto Rico recommended Census Bureau staff reach out to specific agencies identified by the coordinator for survey responses.
- FY 2023. 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.
- *Nonprofit organizations.* This would include foundations.
- *Other governments.* Government departments and agencies; other departments or agencies within the state; other state governments; and county, city, special district, or regional local governments either within their own state or in other states.
- *Other performers not elsewhere classified.*

*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.
- *Nonfederal 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

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Table	Title
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<a href="#">A-1</a>	Final response rates and agencies reporting R&D to the survey: FY 2023
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TABLE A-1

**Final response rates and agencies reporting R&D to the survey: FY 2023**

(Number and percent)

Agencies selected	Agencies surveyed (number)	Responses		R&D reported among respondents	
		Number	Percent	Number	Percent
All agencies	589	578	98.1	396	68.5

**Source(s):**

National Center for Science and Engineering Statistics, Survey of State Government Research and Development, FY 2023.

## Acknowledgments and Suggested Citation

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### Acknowledgments

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