



## State Government Research and Development: Fiscal Year 2009

Detailed Statistical Tables | NSF 12-331 | September 2012

Michael Yamaner,  
Project Officer  
Research and Development Statistics Program  
(703) 292-7815

### General Notes

These tables present the results of the National Science Foundation (NSF) FY 2009 Survey of State Government R&D, conducted for NSF by the U.S. Census Bureau. The Census Bureau employed a methodology similar to that used to collect data from state and local governments on other censuses and surveys.

The survey was distributed to more than 400 departments, agencies, independent commissions, and other state-run entities within the 50 states, Puerto Rico, and the District of Columbia that were considered likely to conduct or fund research and development activities. Respondents that did not have qualifying R&D activity were not required to complete the questionnaire beyond a screening question. All states and the District of Columbia participated in the survey (Puerto Rico was given the survey but was unable to identify a state coordinator in time). These states distributed the survey to 438 agencies, 422 of which responded.[1] Of those, 251 reported conducting or funding R&D in FY 2009. Respondents were requested to provide statistics on their total R&D expenditures and amounts for internal and external performers, the amount devoted to basic research activities, the amount for which the federal government was an original source of funds, and the amount of money allocated to particular fields of study. An additional question was asked about the amount of expenditures for the construction and acquisition of R&D facilities.

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### Note

[1] The District of Columbia and Puerto Rico are referred to as states throughout this report.

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TABLE 1. All state government expenditures, state agency expenditures for R&D and R&D plant, and gross domestic product, by state: FY 2009

(Thousands of dollars)

State	All state government expenditures	State agency expenditures		Gross domestic product
		R&D	R&D plant	
United States	1,839,254,991	1,210,114	102,614	14,083,682,000
Alabama	26,422,115	12,929	0	166,819,000
Alaska	11,337,809	7,741	0	45,861,000
Arizona	31,516,818	21,483	133	249,711,000
Arkansas	16,168,717	11,766	0	98,795,000
California	254,334,062	146,793	2,515	1,847,048,000
Colorado	24,886,401	14,850	1,030	250,664,000
Connecticut	25,683,688	27,088	0	227,550,000
Delaware	7,360,953	2,067	0	60,660,000
District of Columbia	12,588,627	487	0	98,892,000
Florida	75,688,040	66,514	759	732,782,000
Georgia	41,452,427	6,663	0	394,117,000
Hawaii	11,199,768	13,976	0	65,428,000
Idaho	8,217,478	6,052	0	53,661,000
Illinois	68,449,721	19,656	0	631,970,000
Indiana	32,718,561	47,550	0	259,894,000
Iowa	18,303,986	11,285	613	136,062,000
Kansas	15,832,222	12,305	0	122,544,000
Kentucky	26,853,131	13,939	80	155,789,000
Louisiana	31,098,759	8,427	0	205,117,000
Maine	8,780,506	6,400	50,000	50,039,000
Maryland	36,023,284	21,093	0	285,116,000
Massachusetts	47,910,538	4,358	0	360,538,000
Michigan	59,191,176	14,951	1,500	369,671,000
Minnesota	36,308,889	16,656	2,742	258,499,000
Mississippi	19,246,076	9,732	0	94,406,000
Missouri	28,650,820	16,070	0	237,955,000
Montana	6,267,753	7,200	0	34,999,000
Nebraska	9,034,186	4,475	0	86,411,000
Nevada	12,056,208	1,511	0	125,037,000
New Hampshire	6,956,174	2,187	0	59,086,000
New Jersey	62,044,123	15,147	0	471,946,000
New Mexico	17,111,701	1,656	0	76,871,000
New York	163,706,192	126,122	9,584	1,094,104,000
North Carolina	48,585,352	51,404	2,840	407,032,000
North Dakota	4,486,613	16,423	0	31,626,000
Ohio	71,600,146	121,852	5,354	462,015,000
Oklahoma	21,355,940	15,931	0	142,388,000
Oregon	24,381,062	12,429	0	167,481,000
Pennsylvania	77,564,247	102,958	6,148	546,538,000
Rhode Island	7,346,662	1,383	0	47,470,000
South Carolina	28,663,666	28,600	0	158,786,000
South Dakota	4,109,493	4,607	0	38,255,000
Tennessee	27,815,474	3,882	0	243,849,000
Texas	110,725,780	49,381	4,041	1,146,647,000
Utah	15,568,462	26,443	15,000	111,301,000
Vermont	5,449,237	739	0	24,625,000
Virginia	42,052,695	17,930	0	409,732,000
Washington	43,443,430	14,529	0	331,639,000

TABLE 1. All state government expenditures, state agency expenditures for R&D and R&D plant, and gross domestic product, by state: FY 2009

(Thousands of dollars)

State	All state government expenditures	State agency expenditures		Gross domestic product
		R&D	R&D plant	
West Virginia	11,481,561	10,357	4	61,043,000
Wisconsin	35,646,272	24,942	0	239,613,000
Wyoming	5,577,990	7,195	272	36,760,000

NOTE: The District of Columbia and Puerto Rico are referred to as states in this report; Puerto Rico was unable to complete FY 2009 survey in allotted time frame.

SOURCES: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D; U.S. Census Bureau, Governments Division, 2009 Annual Survey of State Government Finances, December 2010; U.S. Census Bureau, Governments Division, 2009 Annual Survey of State & Local Government Finances, October 2011; Bureau of Economic Analysis, Gross Domestic Product by State, June 2011.

TABLE 2. State agency expenditures for R&D and R&D plant, by state and R&D performer: FY 2009  
(Dollars)

State	R&D						R&D plant
	All R&D expenditures	Internal performers	Total	External performers			
				Academic Institutions	Companies and individuals <sup>a</sup>	Other <sup>b</sup>	
United States	1,210,113,524	318,264,391	891,849,133	530,354,012	255,889,116	105,606,005	102,614,371
Alabama	12,929,167	9,138,896	3,790,271	3,790,271	0	0	0
Alaska	7,741,467	6,387,016	1,354,451	1,264,451	90,000	0	0
Arizona	21,483,423	7,373,390	14,110,033	13,173,778	936,255	0	132,982
Arkansas	11,765,900	768,453	10,997,447	10,304,092	631,975	61,380	0
California	146,793,247	25,144,000	121,649,247	56,843,299	37,514,864	27,291,084	2,515,000
Colorado	14,849,581	9,395,554	5,454,027	3,896,294	1,193,264	364,469	1,030,000
Connecticut	27,088,088	12,663,055	14,425,033	4,540,756	8,395,227	1,489,050	0
Delaware	2,066,752	1,021,115	1,045,637	745,637	300,000	0	0
District of Columbia	487,411	0	487,411	487,411	0	0	0
Florida	66,513,756	10,356,355	56,157,401	34,942,344	19,668,724	1,546,333	759,009
Georgia	6,662,887	3,500,000	3,162,887	3,162,887	0	0	0
Hawaii	13,976,364	3,268,044	10,708,320	3,672,334	6,884,681	151,305	0
Idaho	6,052,058	1,897,225	4,154,833	1,590,540	175,633	2,388,660	0
Illinois	19,656,490	5,445,719	14,210,771	7,700,351	2,675,865	3,834,555	0
Indiana	47,549,928	941,982	46,607,946	14,312,538	32,295,408	0	0
Iowa	11,284,860	953,909	10,330,951	6,442,409	3,358,242	530,300	612,848
Kansas	12,305,385	1,598,127	10,707,258	9,561,563	0	1,145,695	0
Kentucky	13,938,692	6,241,919	7,696,773	5,888,316	1,752,314	56,143	79,641
Louisiana	8,426,835	5,021,302	3,405,533	3,375,999	29,534	0	0
Maine	6,400,019	1,566,832	4,833,187	580,192	4,155,387	97,608	50,000,000
Maryland	21,093,331	5,683,023	15,410,308	12,639,508	2,603,800	167,000	0
Massachusetts	4,358,097	1,112,793	3,245,304	3,055,392	189,912	0	0
Michigan	14,950,709	7,850,696	7,100,013	5,794,052	1,281,061	24,900	1,500,000
Minnesota	16,655,913	1,974,655	14,681,258	6,616,048	6,294,846	1,770,364	2,742,321
Mississippi	9,731,915	8,215,940	1,515,975	1,443,375	72,600	0	0
Missouri	16,070,147	9,405,566	6,664,581	3,083,125	1,029,646	2,551,810	0
Montana	7,200,442	1,304,712	5,895,730	3,959,233	1,927,122	9,375	0
Nebraska	4,474,695	125,000	4,349,695	2,787,532	89,035	1,473,128	0
Nevada	1,510,607	342,744	1,167,863	1,066,068	101,795	0	0
New Hampshire	2,186,780	1,022,378	1,164,402	497,846	494,051	172,505	0
New Jersey	15,146,838	4,278,027	10,868,811	7,025,185	939,000	2,904,626	0
New Mexico	1,655,529	535,531	1,119,998	1,061,998	38,000	20,000	0
New York	126,122,333	35,113,898	91,008,435	55,454,319	18,510,081	17,044,035	9,584,344
North Carolina	51,404,202	42,451,251	8,952,951	6,686,231	690,950	1,575,770	2,840,000
North Dakota	16,423,175	575,503	15,847,672	7,126,441	8,124,958	596,273	0
Ohio	121,851,617	4,310,001	117,541,616	56,408,715	60,733,997	398,904	5,354,097
Oklahoma	15,930,878	2,709,663	13,221,215	8,182,080	4,097,885	941,250	0
Oregon	12,428,875	6,389,857	6,039,018	4,850,756	340,857	847,405	0
Pennsylvania	102,958,404	2,992,367	99,966,037	71,251,200	7,743,779	20,971,058	6,147,888
Rhode Island	1,382,531	0	1,382,531	1,161,561	220,970	0	0
South Carolina	28,599,885	24,161,908	4,437,977	3,020,566	257,955	1,159,456	0
South Dakota	4,607,427	424,407	4,183,020	3,408,853	593,488	180,679	0
Tennessee	3,881,687	129,100	3,752,587	3,752,587	0	0	0
Texas	49,381,346	4,763,897	44,617,449	30,940,587	2,915,264	10,761,598	4,040,775
Utah	26,442,711	10,715,649	15,727,062	15,727,062	0	0	15,000,000
Vermont	738,707	738,707	0	0	0	0	0
Virginia	17,929,519	8,759,184	9,170,335	7,960,679	1,187,932	21,724	0
Washington	14,528,728	6,940,712	7,588,016	6,759,910	550,710	277,396	0

TABLE 2. State agency expenditures for R&D and R&D plant, by state and R&D performer: FY 2009  
(Dollars)

State	R&D						R&D plant
	All R&D expenditures	Internal performers	External performers				
			Total	Academic Institutions	Companies and individuals <sup>a</sup>	Other <sup>b</sup>	
West Virginia	10,357,006	2,555,126	7,801,880	7,257,503	0	544,377	3,600
Wisconsin	24,942,415	5,329,091	19,613,324	3,978,419	13,511,285	2,123,620	0
Wyoming	7,194,765	4,670,112	2,524,653	1,121,719	1,290,764	112,170	271,866

<sup>a</sup> Includes individuals under contract for research projects.

<sup>b</sup> Includes federal government; nonprofit organizations; city, county, regional, or other local governments; other departments/agencies within same state; and other state governments.

NOTES: The District of Columbia and Puerto Rico are referred to as states in this report; Puerto Rico was unable to complete FY 2009 survey in allotted time frame. Internal performers include employees within same state department/agency and services performed by others in support of internal R&D project. External performers include academic institutions, companies and individuals, and other noninternal performers.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 3. State agency expenditures for R&D for all performers, by state and source of funds: FY 2009  
(Dollars)

State	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
United States	1,210,113,524	298,111,382	912,002,142
Alabama	12,929,167	8,118,750	4,810,417
Alaska	7,741,467	2,956,434	4,785,033
Arizona	21,483,423	6,610,846	14,872,577
Arkansas	11,765,900	3,578,975	8,186,925
California	146,793,247	19,033,606	127,759,641
Colorado	14,849,581	4,612,094	10,237,487
Connecticut	27,088,088	6,759,922	20,328,166
Delaware	2,066,752	566,184	1,500,568
District of Columbia	487,411	487,411	0
Florida	66,513,756	13,605,050	52,908,706
Georgia	6,662,887	2,918,071	3,744,816
Hawaii	13,976,364	10,716,399	3,259,965
Idaho	6,052,058	1,486,193	4,565,865
Illinois	19,656,490	9,253,274	10,403,216
Indiana	47,549,928	4,681,045	42,868,883
Iowa	11,284,860	1,949,200	9,335,660
Kansas	12,305,385	5,619,610	6,685,775
Kentucky	13,938,692	4,755,755	9,182,937
Louisiana	8,426,835	4,678,601	3,748,234
Maine	6,400,019	1,304,294	5,095,725
Maryland	21,093,331	4,234,200	16,859,131
Massachusetts	4,358,097	996,924	3,361,173
Michigan	14,950,709	10,630,836	4,319,873
Minnesota	16,655,913	4,864,789	11,791,124
Mississippi	9,731,915	7,859,485	1,872,430
Missouri	16,070,147	5,828,985	10,241,162
Montana	7,200,442	2,249,403	4,951,039
Nebraska	4,474,695	1,162,077	3,312,618
Nevada	1,510,607	1,242,142	268,465
New Hampshire	2,186,780	1,257,828	928,952
New Jersey	15,146,838	4,293,720	10,853,118
New Mexico	1,655,529	1,324,423	331,106
New York	126,122,333	17,692,538	108,429,795
North Carolina	51,404,202	8,477,435	42,926,767
North Dakota	16,423,175	1,901,407	14,521,768
Ohio	121,851,617	5,141,853	116,709,764
Oklahoma	15,930,878	5,120,111	10,810,767
Oregon	12,428,875	4,363,246	8,065,629
Pennsylvania	102,958,404	5,975,911	96,982,493
Rhode Island	1,382,531	0	1,382,531
South Carolina	28,599,885	22,877,576	5,722,309
South Dakota	4,607,427	3,704,813	902,614
Tennessee	3,881,687	3,131,170	750,517
Texas	49,381,346	22,174,250	27,207,096
Utah	26,442,711	5,593,015	20,849,696
Vermont	738,707	610,565	128,142
Virginia	17,929,519	11,699,611	6,229,908
Washington	14,528,728	6,422,311	8,106,417

TABLE 3. State agency expenditures for R&D for all performers, by state and source of funds: FY 2009  
(Dollars)

State	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
West Virginia	10,357,006	3,733,032	6,623,974
Wisconsin	24,942,415	8,656,553	16,285,862
Wyoming	7,194,765	1,199,459	5,995,306

<sup>a</sup> "Other" includes companies; nonprofit organizations; other state governments; and city, county, regional, or other local governments.

NOTE: The District of Columbia and Puerto Rico are referred to as states in this report; Puerto Rico was unable to complete FY 2009 survey in allotted time frame.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.



TABLE 4. State agency expenditures for R&D for internal performers, by state and source of funds: FY 2009  
(Dollars)

State	All R&D for internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
United States	318,264,391	126,042,475	170,951,238	21,270,678
Alabama	9,138,896	5,672,713	3,453,207	12,976
Alaska	6,387,016	2,036,873	4,182,143	168,000
Arizona	7,373,390	4,742,669	2,097,848	532,873
Arkansas	768,453	352,656	415,797	0
California	25,144,000	3,927,000	19,726,000	1,491,000
Colorado	9,395,554	2,454,095	5,820,128	1,121,331
Connecticut	12,663,055	4,382,333	7,827,713	453,009
Delaware	1,021,115	170,449	786,178	64,488
District of Columbia	0	0	0	0
Florida	10,356,355	4,702,407	5,617,112	36,836
Georgia	3,500,000	0	0	3,500,000
Hawaii	3,268,044	2,114,211	1,146,436	7,397
Idaho	1,897,225	354,029	837,696	705,500
Illinois	5,445,719	2,750,854	2,646,425	48,440
Indiana	941,982	428,491	513,491	0
Iowa	953,909	0	953,909	0
Kansas	1,598,127	1,016,419	581,708	0
Kentucky	6,241,919	4,268,192	1,973,727	0
Louisiana	5,021,302	3,645,388	1,244,144	131,770
Maine	1,566,832	668,684	898,148	0
Maryland	5,683,023	2,282,000	3,363,523	37,500
Massachusetts	1,112,793	541,224	571,569	0
Michigan	7,850,696	4,527,751	3,022,945	300,000
Minnesota	1,974,655	615,306	305,399	1,053,950
Mississippi	8,215,940	6,343,510	1,805,868	66,562
Missouri	9,405,566	1,702,185	7,698,058	5,323
Montana	1,304,712	898,783	405,929	0
Nebraska	125,000	0	0	125,000
Nevada	342,744	0	342,744	0
New Hampshire	1,022,378	150,260	872,118	0
New Jersey	4,278,027	1,409,445	2,863,582	5,000
New Mexico	535,531	428,425	107,106	0
New York	35,113,898	6,342,108	28,723,590	48,200
North Carolina	42,451,251	5,411,944	31,293,732	5,745,575
North Dakota	575,503	218,151	341,352	16,000
Ohio	4,310,001	125,984	4,184,017	0
Oklahoma	2,709,663	1,363,000	1,346,663	0
Oregon	6,389,857	2,093,203	2,240,728	2,055,926
Pennsylvania	2,992,367	1,693,319	1,299,048	0
Rhode Island	0	0	0	0
South Carolina	24,161,908	21,993,839	2,168,069	0
South Dakota	424,407	325,552	98,855	0
Tennessee	129,100	129,100	0	0
Texas	4,763,897	2,368,000	2,395,897	0
Utah	10,715,649	5,593,015	3,622,634	1,500,000
Vermont	738,707	610,565	128,142	0
Virginia	8,759,184	4,517,492	4,103,106	138,586
Washington	6,940,712	3,618,275	1,980,097	1,342,340

TABLE 4. State agency expenditures for R&D for internal performers, by state and source of funds: FY 2009  
(Dollars)

State	All R&D for internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
West Virginia	2,555,126	1,328,135	892,339	334,652
Wisconsin	5,329,091	3,945,926	1,207,287	175,878
Wyoming	4,670,112	1,778,515	2,845,031	46,566

<sup>a</sup> Includes companies; nonprofit organizations; other state governments; and city, county, regional, or other local governments.

NOTES: The District of Columbia and Puerto Rico are referred to as states in this report; Puerto Rico was unable to complete FY 2009 survey in allotted time frame. Internal performers include department/agency's own employees and services performed by others in support of internal R&D project.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 5. State agency expenditures for all R&D and for basic research, by state: FYs 2007 and 2009  
(Dollars)

State	All R&D expenditures (FY 2009)	Basic research expenditures		
		FY 2007	FY 2009	
			Total	% all FY 2009 R&D expenditures
United States	1,210,113,524	222,160,301	275,566,418	22.8
Alabama	12,929,167	2,820,000	3,593,454	27.8
Alaska	7,741,467	0	12,000	0.2
Arizona	21,483,423	11,086,318	11,707,101	54.5
Arkansas	11,765,900	5,576,500	9,617,326	81.7
California	146,793,247	8,300,000	35,520,583	24.2
Colorado	14,849,581	2,191,512	0	0.0
Connecticut	27,088,088	12,657,444	11,210,858	41.4
Delaware	2,066,752	194,100	433,925	21.0
District of Columbia	487,411	0	0	0.0
Florida	66,513,756	14,857,209	23,162,631	34.8
Georgia	6,662,887	0	0	0.0
Hawaii	13,976,364	163,629	2,580,750	18.5
Idaho	6,052,058	1,103,979	1,427,235	23.6
Illinois	19,656,490	341,087	2,425,000	12.3
Indiana	47,549,928	400,000	691,102	1.5
Iowa	11,284,860	216,041	175,059	1.6
Kansas	12,305,385	1,539,475	4,751,538	38.6
Kentucky	13,938,692	780,900	7,492,067	53.8
Louisiana	8,426,835	0	0	0.0
Maine	6,400,019	85,000	1,521,800	23.8
Maryland	21,093,331	5,255,907	567,000	2.7
Massachusetts	4,358,097	0	449,407	10.3
Michigan	14,950,709	2,540,000	706,282	4.7
Minnesota	16,655,913	1,765,369	1,500,000	9.0
Mississippi	9,731,915	3,875,000	4,729,701	48.6
Missouri	16,070,147	119,940	482,401	3.0
Montana	7,200,442	0	0	0.0
Nebraska	4,474,695	1,247,735	2,029,884	45.4
Nevada	1,510,607	180,986	162,302	10.7
New Hampshire	2,186,780	168,470	673,860	30.8
New Jersey	15,146,838	8,264,568	4,064,261	26.8
New Mexico	1,655,529	0	0	0.0
New York	126,122,333	27,400,226	29,064,000	23.0
North Carolina	51,404,202	2,729,150	5,297,534	10.3
North Dakota	16,423,175	4,397,674	5,765,951	35.1
Ohio	121,851,617	1,722,183	1,583,315	1.3
Oklahoma	15,930,878	3,282,165	5,349,576	33.6
Oregon	12,428,875	0	732,763	5.9
Pennsylvania	102,958,404	63,114,545	51,558,530	50.1
Rhode Island	1,382,531	1,349,465	0	0.0
South Carolina	28,599,885	0	0	0.0
South Dakota	4,607,427	120,000	0	0.0
Tennessee	3,881,687	0	3,752,587	96.7
Texas	49,381,346	1,395,035	7,571,304	15.3
Utah	26,442,711	0	15,727,062	59.5
Vermont	738,707	0	0	0.0
Virginia	17,929,519	2,099,796	5,539,199	30.9
Washington	14,528,728	5,055,450	1,254,833	8.6

TABLE 5. State agency expenditures for all R&D and for basic research, by state: FYs 2007 and 2009  
(Dollars)

State	All R&D expenditures (FY 2009)	Basic research expenditures		
		FY 2007	FY 2009	
			Total	% all FY 2009 R&D expenditures
West Virginia	10,357,006	17,512,415	8,802,237	85.0
Wisconsin	24,942,415	1,405,500	1,600,000	6.4
Wyoming	7,194,765	4,798,060	280,000	3.9
Puerto Rico	NA	47,468	NA	NA

NA = not available; Puerto Rico was unable to complete FY 2009 survey in allotted time frame.

NOTE: The District of Columbia and Puerto Rico are referred to as states in this report.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 6. State R&D expenditures by state and type of R&D: FY 2009  
(Dollars)

State	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
United States	1,210,113,524	66,748,642	318,359,498	284,144,944	243,798,130	297,062,310
Alabama	12,929,167	0	7,694,078	0	3,485,318	1,749,771
Alaska	7,741,467	15,000	6,449,300	0	1,277,167	0
Arizona	21,483,423	220,751	6,705,485	11,775,750	2,624,700	156,737
Arkansas	11,765,900	7,056,169	345,832	0	881,000	3,482,899
California	146,793,247	6,235,149	23,701,098	0	40,057,000	76,800,000
Colorado	14,849,581	416,336	8,317,796	4,029,968	1,424,481	661,000
Connecticut	27,088,088	1,378,304	5,814,050	15,904,192	3,777,288	214,254
Delaware	2,066,752	0	1,516,752	200,000	250,000	100,000
District of Columbia	487,411	0	0	487,411	0	0
Florida	66,513,756	19,410,440	17,934,886	18,478,377	9,830,053	860,000
Georgia	6,662,887	0	0	0	4,162,887	2,500,000
Hawaii	13,976,364	233,394	4,497,068	0	2,339,180	6,906,722
Idaho	6,052,058	1,352,291	3,381,390	0	1,318,377	0
Illinois	19,656,490	18,096	9,325,324	4,107,400	5,369,057	836,613
Indiana	47,549,928	0	1,821,645	20,304,740	4,000,000	21,423,543
Iowa	11,284,860	0	0	0	6,463,700	4,821,160
Kansas	12,305,385	784,957	365,000	1,040,411	7,416,636	2,698,381
Kentucky	13,938,692	0	2,875,387	3,150,948	4,228,240	3,684,117
Louisiana	8,426,835	0	1,708,953	0	6,717,882	0
Maine	6,400,019	501,243	1,969,352	1,187,173	563,379	2,178,872
Maryland	21,093,331	336,650	6,853,050	8,801,328	2,209,280	2,893,023
Massachusetts	4,358,097	13,193	1,309,059	2,305,655	629,000	101,190
Michigan	14,950,709	206,282	8,641,326	0	6,103,101	0
Minnesota	16,655,913	987,608	1,566,712	0	13,908,648	192,945
Mississippi	9,731,915	0	6,255,823	0	1,993,130	1,482,962
Missouri	16,070,147	168,096	10,133,435	272,900	5,495,716	0
Montana	7,200,442	1,199,654	1,871,061	822,627	876,558	2,430,542
Nebraska	4,474,695	1,276,949	2,063,981	35,043	1,014,814	83,908
Nevada	1,510,607	0	0	0	1,510,607	0
New Hampshire	2,186,780	38,005	157,372	0	1,167,264	824,139
New Jersey	15,146,838	0	2,974,000	7,709,498	4,153,340	310,000
New Mexico	1,655,529	0	0	0	1,655,529	0
New York	126,122,333	1,869,720	22,642,345	46,038,312	12,445,993	43,125,963
North Carolina	51,404,202	10,568,425	30,919,615	0	9,000,000	916,162
North Dakota	16,423,175	935,619	587,710	107,368	963,611	13,828,867
Ohio	121,851,617	0	6,306,109	41,320,535	10,308,223	63,916,750
Oklahoma	15,930,878	1,610,660	2,552,285	5,796,835	3,818,308	2,152,790
Oregon	12,428,875	134,857	8,279,562	1,008,735	2,705,721	300,000
Pennsylvania	102,958,404	852,734	9,395,553	73,403,595	5,815,684	13,490,838
Rhode Island	1,382,531	0	397,587	984,944	0	0
South Carolina	28,599,885	421,699	25,183,342	0	2,476,225	518,619
South Dakota	4,607,427	0	2,538,117	0	2,069,310	0
Tennessee	3,881,687	0	0	129,100	3,752,587	0
Texas	49,381,346	1,972,975	24,750,247	123,000	22,535,124	0
Utah	26,442,711	1,000,000	6,149,899	10,409,824	800,000	8,082,988
Vermont	738,707	0	0	0	738,707	0
Virginia	17,929,519	806,328	4,005,964	810,000	9,443,286	2,863,941
Washington	14,528,728	4,462,763	7,754,560	26,275	2,285,130	0

TABLE 6. State R&D expenditures by state and type of R&D: FY 2009  
(Dollars)

State	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
West Virginia	10,357,006	0	1,804,769	0	950,000	7,602,237
Wisconsin	24,942,415	0	15,201,270	3,373,000	5,030,145	1,338,000
Wyoming	7,194,765	264,295	3,641,349	0	1,756,744	1,532,377

NOTE: The District of Columbia and Puerto Rico are referred to as states in this report; Puerto Rico was unable to complete FY 2009 survey in allotted time frame.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 7. State agency expenditures for R&D by state: FYs 2007 and 2009  
(Dollars)

State	FY 2007	FY 2009
United States	1,135,005,112	1,210,113,524
Alabama	9,065,725	12,929,167
Alaska	9,526,100	7,741,467
Arizona	20,442,635	21,483,423
Arkansas	7,658,199	11,765,900
California	91,842,652	146,793,247
Colorado	11,924,981	14,849,581
Connecticut	29,285,710	27,088,088
Delaware	2,611,108	2,066,752
District of Columbia	2,009,000	487,411
Florida	51,968,573	66,513,756
Georgia	4,886,946	6,662,887
Hawaii	22,643,330	13,976,364
Idaho	2,739,006	6,052,058
Illinois	28,372,676	19,656,490
Indiana	40,534,381	47,549,928
Iowa	6,790,053	11,284,860
Kansas	11,752,696	12,305,385
Kentucky	11,960,634	13,938,692
Louisiana	6,587,314	8,426,835
Maine	27,525,552	6,400,019
Maryland	40,298,691	21,093,331
Massachusetts	5,600,189	4,358,097
Michigan	32,849,159	14,950,709
Minnesota	10,529,048	16,655,913
Mississippi	7,343,892	9,731,915
Missouri	15,567,277	16,070,147
Montana	8,200,230	7,200,442
Nebraska	4,043,480	4,474,695
Nevada	1,748,776	1,510,607
New Hampshire	1,685,178	2,186,780
New Jersey	19,981,741	15,146,838
New Mexico	672,921	1,655,529
New York	128,361,166	126,122,333
North Carolina	37,607,109	51,404,202
North Dakota	9,908,722	16,423,175
Ohio	114,086,509	121,851,617
Oklahoma	10,731,050	15,930,878
Oregon	7,389,914	12,428,875
Pennsylvania	103,973,448	102,958,404
Rhode Island	1,771,949	1,382,531
South Carolina	31,969,826	28,599,885
South Dakota	5,473,603	4,607,427
Tennessee	4,549,998	3,881,687
Texas	29,650,947	49,381,346
Utah	2,752,228	26,442,711
Vermont	1,529,805	738,707
Virginia	15,486,526	17,929,519
Washington	23,333,431	14,528,728
West Virginia	22,179,830	10,357,006

TABLE 7. State agency expenditures for R&D by state: FYs 2007 and 2009

(Dollars)

State	FY 2007	FY 2009
Wisconsin	13,774,600	24,942,415
Wyoming	19,500,357	7,194,765
Puerto Rico	2,326,241	NA

NA = not available; Puerto Rico was unable to complete FY 2009 survey in allotted time frame.

NOTE: The District of Columbia and Puerto Rico are referred to as states in this report.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of State Government R&D.



TABLE 8. State agency expenditures for R&amp;D funded from federal sources, by state: FYs 2007 and 2009

(Dollars)

State	FY 2007	FY 2009
United States	279,267,900	298,111,382
Alabama	4,968,557	8,118,750
Alaska	4,945,800	2,956,434
Arizona	5,436,201	6,610,846
Arkansas	1,224,152	3,578,975
California	13,491,703	19,033,606
Colorado	4,684,285	4,612,094
Connecticut	6,906,959	6,759,922
Delaware	844,200	566,184
District of Columbia	1,621,000	487,411
Florida	9,439,483	13,605,050
Georgia	2,763,180	2,918,071
Hawaii	17,593,176	10,716,399
Idaho	1,276,787	1,486,193
Illinois	1,990,000	9,253,274
Indiana	4,017,815	4,681,045
Iowa	2,424,713	1,949,200
Kansas	4,107,233	5,619,610
Kentucky	6,315,996	4,755,755
Louisiana	4,125,505	4,678,601
Maine	65,000	1,304,294
Maryland	7,228,749	4,234,200
Massachusetts	1,200,525	996,924
Michigan	3,910,171	10,630,836
Minnesota	3,083,506	4,864,789
Mississippi	6,272,085	7,859,485
Missouri	4,962,973	5,828,985
Montana	1,837,440	2,249,403
Nebraska	1,275,191	1,162,077
Nevada	1,115,700	1,242,142
New Hampshire	1,599,228	1,257,828
New Jersey	4,040,714	4,293,720
New Mexico	538,337	1,324,423
New York	7,858,707	17,692,538
North Carolina	13,118,979	8,477,435
North Dakota	3,713,936	1,901,407
Ohio	8,253,286	5,141,853
Oklahoma	3,296,216	5,120,111
Oregon	2,470,211	4,363,246
Pennsylvania	5,321,876	5,975,911
Rhode Island	403,939	0
South Carolina	29,773,259	22,877,576
South Dakota	3,847,153	3,704,813
Tennessee	3,638,000	3,131,170
Texas	19,853,357	22,174,250
Utah	1,880,823	5,593,015
Vermont	783,845	610,565
Virginia	9,427,028	11,699,611
Washington	8,091,640	6,422,311
West Virginia	5,008,707	3,733,032

TABLE 8. State agency expenditures for R&D funded from federal sources, by state: FYs 2007 and 2009  
(Dollars)

State	FY 2007	FY 2009
Wisconsin	6,316,820	8,656,553
Wyoming	10,903,754	1,199,459
Puerto Rico	0	NA

NA = not available; Puerto Rico was unable to complete FY 2009 survey in allotted time frame.

NOTE: The District of Columbia and Puerto Rico are referred to as states in this report.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of State Government R&D.

TABLE 9. State agency expenditures for R&D and R&D plant, by department, state, and R&D performer: FY 2009  
(Dollars)

Department or agency	R&D			R&D plant
	All R&D expenditures	Internal performers	External performers	
United States	1,210,113,524	318,264,391	891,849,133	102,614,371
Alabama	12,929,167	9,138,896	3,790,271	0
Conservation and Natural Resources, Department of	3,286,899	2,554,175	732,724	0
Forensic Science, Department of	301,434	301,434	0	0
Geological Survey	2,287,062	2,287,062	0	0
Marine Environmental Sciences Consortium	3,568,454	3,568,454	0	0
Transportation, Department of	3,485,318	427,771	3,057,547	0
Alaska	7,741,467	6,387,016	1,354,451	0
Fish and Game, Department of	1,807,000	1,602,000	205,000	0
Natural Resources, Department of	4,657,300	4,657,300	0	0
Transportation and Public Facilities, Department of	1,277,167	127,716	1,149,451	0
Arizona	21,483,423	7,373,390	14,110,033	132,982
Agriculture, Department of	220,751	0	220,751	132,982
Biomedical Research Commission	11,748,000	448,000	11,300,000	0
Environmental Quality, Department of	349,330	34,000	315,330	0
Game and Fish Department	4,988,520	4,703,887	284,633	0
Geological Survey	827,122	775,469	51,653	0
Health Services, Department of	27,750	27,750	0	0
Juvenile Corrections, Department of	19,838	19,572	266	0
Schools for the Deaf and Blind	2,312	2,312	0	0
Transportation, Department of	3,299,800	1,362,400	1,937,400	0
Arkansas	11,765,900	768,453	10,997,447	0
Beef Council	107,743	0	107,743	0
Catfish Promotion Board	44,482	0	44,482	0
Corn and Grain Sorghum Promotion Board	515,125	0	515,125	0
Forestry Commission	300,686	300,686	0	0
Game and Fish Commission	345,832	0	345,832	0
Highway and Transportation Department	881,000	153,000	728,000	0
Rice Research and Promotion Board	2,600,000	0	2,600,000	0
Science and Technology Authority	4,833,430	314,767	4,518,663	0
Soybean Promotion Board	1,800,000	0	1,800,000	0
Wheat Promotion Board	337,602	0	337,602	0
California	146,793,247	25,144,000	121,649,247	2,515,000
Energy Commission	88,700,000	11,900,000	76,800,000	0
Food and Agriculture, Department of	7,587,842	0	7,587,842	0
Transportation, Department of	40,057,000	8,444,000	31,613,000	0
Water Resources, Department of	10,448,405	4,800,000	5,648,405	2,515,000
Colorado	14,849,581	9,395,554	5,454,027	1,030,000
Economic Development, Office of	2,475,000	0	2,475,000	1,000,000
Natural Resources, Department of	8,134,132	7,480,482	653,650	30,000
Public Health and Environment, Department of	1,754,968	388,999	1,365,969	0
Public Safety, Department of	661,000	636,000	25,000	0
Transportation, Department of	1,824,481	890,073	934,408	0
Connecticut	27,088,088	12,663,055	14,425,033	0
Agricultural Experiment Station	8,556,478	8,556,478	0	0
Agriculture, Department of	140,714	87,443	53,271	0
Children and Families, Department of	288,151	4,000	284,151	0
Environmental Protection, Department of	1,456,308	0	1,456,308	0
Mental Health and Addiction Services, Department of	3,304,437	2,065,082	1,239,355	0
Public Health, Department of	9,300,858	90,000	9,210,858	0
Transportation, Department of	4,041,142	1,860,052	2,181,090	0

TABLE 9. State agency expenditures for R&D and R&D plant, by department, state, and R&D performer: FY 2009  
(Dollars)

Department or agency	R&D			R&D plant
	All R&D expenditures	Internal performers	External performers	
Delaware	2,066,752	1,021,115	1,045,637	0
Agriculture, Department of	83,190	0	83,190	0
Economic Development Office	300,000	0	300,000	0
Geological Survey	823,128	823,128	0	0
Natural Resources and Environmental Control, Department of	610,434	197,987	412,447	0
Transportation, Department of	250,000	0	250,000	0
District of Columbia	487,411	0	487,411	0
Health, Department of	487,411	0	487,411	0
Florida	66,513,756	10,356,355	56,157,401	759,009
Agriculture and Consumer Services, Department of	9,346,686	1,123,244	8,223,442	0
Citrus, Department of	12,171,000	1,352,000	10,819,000	0
Environmental Protection, Department of	8,237,640	4,831,111	3,406,529	0
Fish and Wildlife Conservation Commission	8,290,000	3,050,000	5,240,000	0
Health, Department of	18,180,877	0	18,180,877	0
Space Florida	457,500	0	457,500	759,009
Transportation, Department of	9,830,053	0	9,830,053	0
Georgia	6,662,887	3,500,000	3,162,887	0
Herty Advanced Materials Development Center	3,500,000	3,500,000	0	0
Transportation, Department of	3,162,887	0	3,162,887	0
Hawaii	13,976,364	3,268,044	10,708,320	0
Agriculture, Department of	32,000	0	32,000	0
Business Economic Development, Department of	7,196,722	350,000	6,846,722	0
Land and Natural Resources, Department of	4,698,462	1,990,640	2,707,822	0
Transportation, Department of	2,049,180	927,404	1,121,776	0
Idaho	6,052,058	1,897,225	4,154,833	0
Agriculture, Department of	56,200	56,200	0	0
Barley Commission	109,594	0	109,594	0
Bean Commission	59,462	0	59,462	0
Environmental Quality, Department of	91,190	60,557	30,633	0
Fish and Game, Department of	587,000	463,700	123,300	0
Potato Commission	643,000	643,000	0	0
Transportation, Department of	1,318,377	136,968	1,181,409	0
Water Resources, Department of	2,703,200	536,800	2,166,400	0
Wheat Commission	484,035	0	484,035	0
Illinois	19,656,490	5,445,719	14,210,771	0
Commerce and Economic Opportunity, Department of	94,436	0	94,436	0
Natural Resources, Department of	10,085,597	4,141,291	5,944,306	0
Public Health, Department of	4,107,400	0	4,107,400	0
Transportation, Department of	5,369,057	1,304,428	4,064,629	0
Indiana	47,549,928	941,982	46,607,946	0
Criminal Justice Institute	205,000	205,000	0	0
Economic Development Corporation	41,523,283	0	41,523,283	0
Natural Resources, Department of	1,821,645	336,982	1,484,663	0
Transportation, Department of	4,000,000	400,000	3,600,000	0
Iowa	11,284,860	953,909	10,330,951	612,848
Energy Independence, Office of	3,894,451	0	3,894,451	612,848
Lottery, Department of	175,059	175,059	0	0
Revenue, Department of	751,650	751,650	0	0
Transportation, Department of	6,463,700	27,200	6,436,500	0

TABLE 9. State agency expenditures for R&D and R&D plant, by department, state, and R&D performer: FY 2009  
(Dollars)

Department or agency	R&D			R&D plant
	All R&D expenditures	Internal performers	External performers	
Kansas	12,305,385	1,598,127	10,707,258	0
Technology Enterprise Corporation	4,184,830	0	4,184,830	0
Transportation, Department of	6,970,598	1,543,127	5,427,471	0
Wheat Commission	784,957	0	784,957	0
Wildlife and Parks, Department of	365,000	55,000	310,000	0
Kentucky	13,938,692	6,241,919	7,696,773	79,641
Energy Policy, Governor's Office for	3,637,000	0	3,637,000	0
Environmental Education Council	47,117	0	47,117	0
Fish and Wildlife Resources, Department of	2,690,029	1,836,879	853,150	79,641
Highways, Department of	4,228,240	4,228,240	0	0
Natural Resources, Department of	558	0	558	0
Nature Preserves Commission	184,800	176,800	8,000	0
Public Health, Department of	3,150,948	0	3,150,948	0
Louisiana	8,426,835	5,021,302	3,405,533	0
Environmental Quality, Department of	141,357	6,731	134,626	0
Transportation and Development, Department of	6,717,882	4,122,437	2,595,445	0
Wildlife and Fisheries, Department of	1,567,596	892,134	675,462	0
Maine	6,400,019	1,566,832	4,833,187	50,000,000
Conservation, Department of	408,100	350,600	57,500	0
Drug Enforcement Agency	8,685	0	8,685	0
Environmental Protection, Department of	550,000	550,000	0	0
Fire Marshal's Office	3,963	3,963	0	0
Marine Resources, Department of	734,693	414,024	320,669	0
Technology Institute	4,131,199	0	4,131,199	50,000,000
Transportation, Department of	563,379	248,245	315,134	0
Maryland	21,093,331	5,683,023	15,410,308	0
Business and Economic Development, Department of	1,305,523	1,305,523	0	0
Health and Mental Hygiene, Department of	8,701,328	0	8,701,328	0
Natural Resources, Department of	6,220,000	3,500,000	2,720,000	0
Technology Development Corporation	2,137,500	337,500	1,800,000	0
Transportation, Department of	2,728,980	540,000	2,188,980	0
Massachusetts	4,358,097	1,112,793	3,245,304	0
Conservation and Recreation, Department of	240,091	240,091	0	0
Environmental Protection, Department of	421,661	161,800	259,861	0
Fish and Game, Department of	660,500	560,000	100,500	0
Mental Health, Department of	2,208,037	109,402	2,098,635	0
Technology Collaborative	198,808	0	198,808	0
Transportation Planning, Office of	629,000	41,500	587,500	0
Michigan	14,950,709	7,850,696	7,100,013	1,500,000
Agriculture, Department of	206,282	0	206,282	0
Natural Resources, Department of	8,642,826	6,713,624	1,929,202	1,500,000
Transportation, Department of	6,101,601	1,137,072	4,964,529	0
Minnesota	16,655,913	1,974,655	14,681,258	2,742,321
Agriculture, Department of	1,918,097	906,316	1,011,781	0
Forest Resources Council	130,342	0	130,342	0
Pollution Control Agency	698,826	0	698,826	0
Transportation, Department of	13,908,648	1,068,339	12,840,309	2,742,321
Mississippi	9,731,915	8,215,940	1,515,975	0
Innovative Geospatial Solutions, Enterprise for	5,075,000	5,075,000	0	0
Technology Alliance	1,032,962	256,000	776,962	0
Transportation, Department of	1,518,130	1,518,130	0	0

TABLE 9. State agency expenditures for R&D and R&D plant, by department, state, and R&D performer: FY 2009  
(Dollars)

Department or agency	R&D			R&D plant
	All R&D expenditures	Internal performers	External performers	
Wildlife, Fisheries, and Parks, Department of	2,105,823	1,366,810	739,013	0
Missouri	16,070,147	9,405,566	6,664,581	0
Conservation, Department of	9,394,690	7,473,511	1,921,179	0
Health and Senior Services, Department of	272,900	115,749	157,151	0
Natural Resources, Department of	906,841	383,744	523,097	0
Transportation, Department of	5,495,716	1,432,562	4,063,154	0
Montana	7,200,442	1,304,712	5,895,730	0
Agriculture, Department of	1,285,830	0	1,285,830	0
Commerce, Department of	3,553,037	178,311	3,374,726	0
Environmental Quality, Department of	30,790	15,841	14,949	0
Fish, Wildlife, and Parks, Department of	1,093,129	839,954	253,175	0
Transportation, Department of	1,237,656	270,606	967,050	0
Nebraska	4,474,695	125,000	4,349,695	0
Agriculture, Department of	316,067	0	316,067	0
Corn Board	515,746	0	515,746	0
Dry Bean Commission	125,000	125,000	0	0
Ethanol Board	59,051	0	59,051	0
Grain Sorghum Board	5,200	0	5,200	0
Natural Resources, Department of	1,986,474	0	1,986,474	0
Roads, Department of	1,014,814	0	1,014,814	0
Wheat Board	452,343	0	452,343	0
Nevada	1,510,607	342,744	1,167,863	0
Transportation, Department of	1,510,607	342,744	1,167,863	0
New Hampshire	2,186,780	1,022,378	1,164,402	0
Agriculture, Markets, and Food, Department of	38,005	0	38,005	0
Education, Department of	324,139	4,309	319,830	0
Environmental Services, Department of	2,372	0	2,372	0
Resources and Economic Development, Department of	655,000	655,000	0	0
Transportation, Department of	1,167,264	363,069	804,195	0
New Jersey	15,146,838	4,278,027	10,868,811	0
Autism, Council for Research/Treatment of	2,792,455	157,282	2,635,173	0
Brain Injury Research, Commission on	1,444,000	193,423	1,250,577	0
Environmental Protection, Department of	3,814,000	2,239,000	1,575,000	0
Science and Technology, Commission on	605,000	0	605,000	0
Spinal Cord Research, Commission on	2,338,043	338,877	1,999,166	0
Transportation, Department of	4,153,340	1,349,445	2,803,895	0
New Mexico	1,655,529	535,531	1,119,998	0
Transportation, Department of	1,655,529	535,531	1,119,998	0
New York	126,122,333	35,113,898	91,008,435	9,584,344
Agriculture and Markets, Department of	3,487,006	2,550,000	937,006	2,000,000
Energy Research and Development Authority	42,170,407	10,253,296	31,917,111	0
Environmental Conservation, Department of	5,851,093	1,259,217	4,591,876	0
Health, Department of	32,200,000	17,250,000	14,950,000	1,800,000
Science, Technology and Innovation, Foundation for	35,283,349	0	35,283,349	5,784,344
Transportation, Department of	7,130,478	3,801,385	3,329,093	0
North Carolina	51,404,202	42,451,251	8,952,951	2,840,000
Agriculture and Consumer Services, Department of	10,092,515	10,038,175	54,340	89,000
Environment and Natural Resources, Department of	30,811,687	29,863,076	948,611	2,746,000
Transportation, Department of	10,500,000	2,550,000	7,950,000	5,000

TABLE 9. State agency expenditures for R&D and R&D plant, by department, state, and R&D performer: FY 2009  
(Dollars)

Department or agency	R&D			R&D plant
	All R&D expenditures	Internal performers	External performers	
North Dakota	16,423,175	575,503	15,847,672	0
Agriculture, Department of	30,245	0	30,245	0
Health, Department of	7,368	7,368	0	0
Lignite Research Council	12,500,000	200,000	12,300,000	0
Mineral Resources, Department of	238,135	238,135	0	0
Oil and Gas Research Program	1,034,458	0	1,034,458	0
Renewable Energy Research Program	588,500	0	588,500	0
Soybean Council	706,798	0	706,798	0
Transportation, Department of	813,445	130,000	683,445	0
Water Commission	13,850	0	13,850	0
Wheat Commission	490,376	0	490,376	0
Ohio	121,851,617	4,310,001	117,541,616	5,354,097
Air Quality Development Authority	3,503,551	0	3,503,551	0
Development, Department of	111,125,353	3,395,874	107,729,479	5,354,097
Education, Department of	456,654	426,654	30,000	0
Natural Resources, Department of	2,160,336	160,336	2,000,000	0
Transportation, Department of	4,605,723	327,137	4,278,586	0
Oklahoma	15,930,878	2,709,663	13,221,215	0
Science and Technology, Center for the Advancement of	8,962,658	0	8,962,658	0
Transportation, Department of	4,120,111	363,000	3,757,111	0
Wheat Commission	501,446	0	501,446	0
Wildlife Conservation, Department of	2,346,663	2,346,663	0	0
Oregon	12,428,875	6,389,857	6,039,018	0
Fish and Wildlife, Department of	690,820	658,708	32,112	0
Forestry, Department of	1,281,242	169,714	1,111,528	0
Geology and Mineral Industries, Department of	4,685,127	4,645,128	39,999	0
Human Services, Department of	1,308,735	621,312	687,423	0
Transportation, Department of	2,705,721	294,995	2,410,726	0
Watershed Enhancement Board	1,757,230	0	1,757,230	0
Pennsylvania	102,958,404	2,992,367	99,966,037	6,147,888
Agriculture, Department of	852,734	0	852,734	0
Community and Economic Development, Department of	17,755,250	0	17,755,250	0
Conservation and Natural Resources, Department of	4,613,826	430,621	4,183,205	0
Environmental Protection, Department of	2,938,656	140,000	2,798,656	0
Fish and Boat Commission	60,901	49,000	11,901	0
Game Commission	1,597,758	1,423,829	173,929	0
Health, Department of	69,448,595	0	69,448,595	6,147,888
Transportation, Department of	5,690,684	948,917	4,741,767	0
Rhode Island	1,382,531	0	1,382,531	0
Economic Development Corporation	1,382,531	0	1,382,531	0
South Carolina	28,599,885	24,161,908	4,437,977	0
Agriculture, Department of	940,318	0	940,318	0
Natural Resources, Department of	23,521,908	23,521,908	0	0
Sea Grant Consortium	1,661,434	360,000	1,301,434	0
Transportation, Department of	2,476,225	280,000	2,196,225	0
South Dakota	4,607,427	424,407	4,183,020	0
Environment and Natural Resources, Department of	226,825	0	226,825	0
Game, Fish, and Parks, Department of	2,311,292	0	2,311,292	0
Transportation, Department of	2,069,310	424,407	1,644,903	0
Tennessee	3,881,687	129,100	3,752,587	0
Health, Department of	129,100	129,100	0	0

TABLE 9. State agency expenditures for R&D and R&D plant, by department, state, and R&D performer: FY 2009  
(Dollars)

Department or agency	R&D			R&D plant
	All R&D expenditures	Internal performers	External performers	
Transportation, Department of	3,752,587	0	3,752,587	0
Texas	49,381,346	4,763,897	44,617,449	4,040,775
Agriculture, Department of	1,847,975	0	1,847,975	0
Environmental Quality, Commission on	14,763,819	0	14,763,819	4,040,775
Health and Human Services Commission	123,000	123,000	0	0
Parks and Wildlife, Department of	8,130,217	2,891,717	5,238,500	0
Transportation, Department of	22,535,124	1,749,180	20,785,944	0
Water Development Board	1,981,211	0	1,981,211	0
Utah	26,442,711	10,715,649	15,727,062	15,000,000
Health, Department of	96,476	96,476	0	0
Natural Resources, Department of	8,000,000	8,000,000	0	0
Science Technology and Research Initiative	15,727,062	0	15,727,062	15,000,000
Transportation, Department of	2,619,173	2,619,173	0	0
Vermont	738,707	738,707	0	0
Transportation, Agency of	738,707	738,707	0	0
Virginia	17,929,519	8,759,184	9,170,335	0
Agriculture and Consumer Services, Department of	806,328	0	806,328	0
Consolidated Lab Services, Division of	810,000	810,000	0	0
Corrections, Department of	477,250	477,250	0	0
Criminal Justice Services, Department of	447,000	447,000	0	0
Forensic Science, Department of	227,630	227,630	0	0
Innovative Technology, Center for	1,642,061	493,253	1,148,808	0
Marine Resources Commission	3,184,779	0	3,184,779	0
Natural History, Museum of	821,185	821,185	0	0
Social Services, Department of	70,000	70,000	0	0
Transportation, Department of	9,443,286	5,412,866	4,030,420	0
Washington	14,528,728	6,940,712	7,588,016	0
Agriculture, Department of	179,149	0	179,149	0
Beef Commission	2,357	0	2,357	0
Fish and Wildlife, Department of	6,993,436	6,840,712	152,724	0
Grain Commission	3,321,400	0	3,321,400	0
Potato Commission	833,191	100,000	733,191	0
Puget Sound Partnership	761,124	0	761,124	0
Red Raspberry Commission	152,941	0	152,941	0
Transportation, Department of	2,285,130	0	2,285,130	0
West Virginia	10,357,006	2,555,126	7,801,880	3,600
Environmental Protection, Department of	1,554,769	714,369	840,400	0
Higher Education Policy Commission	7,602,237	640,757	6,961,480	0
Highways, Department of	1,200,000	1,200,000	0	3,600
Wisconsin	24,942,415	5,329,091	19,613,324	0
Commerce, Department of	12,406,980	0	12,406,980	0
Natural Resources, Department of	7,505,290	4,879,875	2,625,415	0
Transportation, Department of	5,030,145	449,216	4,580,929	0
Wyoming	7,194,765	4,670,112	2,524,653	271,866
Agriculture, Department of	264,295	0	264,295	0
Corrections, Department of	89,000	48,000	41,000	0
Employment, Research and Planning, Department of	1,443,377	1,443,377	0	0
Environmental Quality, Department of	150,000	0	150,000	0



TABLE 9. State agency expenditures for R&D and R&D plant, by department, state, and R&D performer: FY 2009  
(Dollars)

Department or agency	R&D			R&D plant
	All R&D expenditures	Internal performers	External performers	
Game and Fish Department	1,325,668	661,420	664,248	0
Geological Survey	2,165,681	1,827,100	338,581	0
Transportation, Department of	1,756,744	690,215	1,066,529	271,866

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 10. State agency expenditures for R&D for all performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
United States	1,210,113,524	298,111,382	912,002,142
Alabama	12,929,167	8,118,750	4,810,417
Conservation and Natural Resources, Department of	3,286,899	1,168,274	2,118,625
Forensic Science, Department of	301,434	245,471	55,963
Geological Survey	2,287,062	1,199,626	1,087,436
Marine Environmental Sciences Consortium	3,568,454	3,059,342	509,112
Transportation, Department of	3,485,318	2,446,037	1,039,281
Alaska	7,741,467	2,956,434	4,785,033
Fish and Game, Department of	1,807,000	451,000	1,356,000
Natural Resources, Department of	4,657,300	1,483,700	3,173,600
Transportation and Public Facilities, Department of	1,277,167	1,021,734	255,433
Arizona	21,483,423	6,610,846	14,872,577
Agriculture, Department of	220,751	87,536	133,215
Biomedical Research Commission	11,748,000	0	11,748,000
Environmental Quality, Department of	349,330	308,000	41,330
Game and Fish Department	4,988,520	3,237,429	1,751,091
Geological Survey	827,122	452,231	374,891
Health Services, Department of	27,750	27,750	0
Juvenile Corrections, Department of	19,838	0	19,838
Schools for the Deaf and Blind	2,312	0	2,312
Transportation, Department of	3,299,800	2,497,900	801,900
Arkansas	11,765,900	3,578,975	8,186,925
Beef Council	107,743	0	107,743
Catfish Promotion Board	44,482	0	44,482
Corn and Grain Sorghum Promotion Board	515,125	0	515,125
Forestry Commission	300,686	0	300,686
Game and Fish Commission	345,832	197,258	148,574
Highway and Transportation Department	881,000	692,000	189,000
Rice Research and Promotion Board	2,600,000	0	2,600,000
Science and Technology Authority	4,833,430	2,689,717	2,143,713
Soybean Promotion Board	1,800,000	0	1,800,000
Wheat Promotion Board	337,602	0	337,602
California	146,793,247	19,033,606	127,759,641
Energy Commission	88,700,000	2,000,000	86,700,000
Food and Agriculture, Department of	7,587,842	2,198,606	5,389,236
Transportation, Department of	40,057,000	14,578,000	25,479,000
Water Resources, Department of	10,448,405	257,000	10,191,405
Colorado	14,849,581	4,612,094	10,237,487
Economic Development, Office of	2,475,000	0	2,475,000
Natural Resources, Department of	8,134,132	1,197,541	6,936,591
Public Health and Environment, Department of	1,754,968	1,754,968	0
Public Safety, Department of	661,000	200,000	461,000
Transportation, Department of	1,824,481	1,459,585	364,896
Connecticut	27,088,088	6,759,922	20,328,166
Agricultural Experiment Station	8,556,478	3,147,255	5,409,223
Agriculture, Department of	140,714	140,714	0
Children and Families, Department of	288,151	111,680	176,471
Environmental Protection, Department of	1,456,308	348,619	1,107,689
Mental Health and Addiction Services, Department of	3,304,437	198,000	3,106,437
Public Health, Department of	9,300,858	35,000	9,265,858
Transportation, Department of	4,041,142	2,778,654	1,262,488

TABLE 10. State agency expenditures for R&D for all performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
Delaware	2,066,752	566,184	1,500,568
Agriculture, Department of	83,190	0	83,190
Economic Development Office	300,000	0	300,000
Geological Survey	823,128	0	823,128
Natural Resources and Environmental Control, Department of	610,434	441,184	169,250
Transportation, Department of	250,000	125,000	125,000
District of Columbia	487,411	487,411	0
Health, Department of	487,411	487,411	0
Florida	66,513,756	13,605,050	52,908,706
Agriculture and Consumer Services, Department of	9,346,686	777,531	8,569,155
Citrus, Department of	12,171,000	152,372	12,018,628
Environmental Protection, Department of	8,237,640	1,748,859	6,488,781
Fish and Wildlife Conservation Commission	8,290,000	2,390,000	5,900,000
Health, Department of	18,180,877	0	18,180,877
Space Florida	457,500	0	457,500
Transportation, Department of	9,830,053	8,536,288	1,293,765
Georgia	6,662,887	2,918,071	3,744,816
Herty Advanced Materials Development Center	3,500,000	0	3,500,000
Transportation, Department of	3,162,887	2,918,071	244,816
Hawaii	13,976,364	10,716,399	3,259,965
Agriculture, Department of	32,000	32,000	0
Business Economic Development, Department of	7,196,722	7,196,722	0
Land and Natural Resources, Department of	4,698,462	2,248,706	2,449,756
Transportation, Department of	2,049,180	1,238,971	810,209
Idaho	6,052,058	1,486,193	4,565,865
Agriculture, Department of	56,200	0	56,200
Barley Commission	109,594	0	109,594
Bean Commission	59,462	0	59,462
Environmental Quality, Department of	91,190	44,454	46,736
Fish and Game, Department of	587,000	122,600	464,400
Potato Commission	643,000	0	643,000
Transportation, Department of	1,318,377	1,173,639	144,738
Water Resources, Department of	2,703,200	145,500	2,557,700
Wheat Commission	484,035	0	484,035
Illinois	19,656,490	9,253,274	10,403,216
Commerce and Economic Opportunity, Department of	94,436	0	94,436
Natural Resources, Department of	10,085,597	5,838,423	4,247,174
Public Health, Department of	4,107,400	0	4,107,400
Transportation, Department of	5,369,057	3,414,851	1,954,206
Indiana	47,549,928	4,681,045	42,868,883
Criminal Justice Institute	205,000	205,000	0
Economic Development Corporation	41,523,283	0	41,523,283
Natural Resources, Department of	1,821,645	776,045	1,045,600
Transportation, Department of	4,000,000	3,700,000	300,000
Iowa	11,284,860	1,949,200	9,335,660
Energy Independence, Office of	3,894,451	0	3,894,451
Lottery, Department of	175,059	0	175,059
Revenue, Department of	751,650	0	751,650
Transportation, Department of	6,463,700	1,949,200	4,514,500
Kansas	12,305,385	5,619,610	6,685,775
Technology Enterprise Corporation	4,184,830	0	4,184,830
Transportation, Department of	6,970,598	5,469,610	1,500,988

TABLE 10. State agency expenditures for R&D for all performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
Wheat Commission	784,957	0	784,957
Wildlife and Parks, Department of	365,000	150,000	215,000
Kentucky	13,938,692	4,755,755	9,182,937
Energy Policy, Governor's Office for	3,637,000	0	3,637,000
Environmental Education Council	47,117	0	47,117
Fish and Wildlife Resources, Department of	2,690,029	1,642,605	1,047,424
Highways, Department of	4,228,240	3,082,592	1,145,648
Natural Resources, Department of	558	558	0
Nature Preserves Commission	184,800	30,000	154,800
Public Health, Department of	3,150,948	0	3,150,948
Louisiana	8,426,835	4,678,601	3,748,234
Environmental Quality, Department of	141,357	138,665	2,692
Transportation and Development, Department of	6,717,882	3,681,528	3,036,354
Wildlife and Fisheries, Department of	1,567,596	858,408	709,188
Maine	6,400,019	1,304,294	5,095,725
Conservation, Department of	408,100	147,600	260,500
Drug Enforcement Agency	8,685	8,685	0
Environmental Protection, Department of	550,000	0	550,000
Fire Marshal's Office	3,963	0	3,963
Marine Resources, Department of	734,693	700,656	34,037
Technology Institute	4,131,199	0	4,131,199
Transportation, Department of	563,379	447,353	116,026
Maryland	21,093,331	4,234,200	16,859,131
Business and Economic Development, Department of	1,305,523	0	1,305,523
Health and Mental Hygiene, Department of	8,701,328	0	8,701,328
Natural Resources, Department of	6,220,000	2,790,000	3,430,000
Technology Development Corporation	2,137,500	50,000	2,087,500
Transportation, Department of	2,728,980	1,394,200	1,334,780
Massachusetts	4,358,097	996,924	3,361,173
Conservation and Recreation, Department of	240,091	128,177	111,914
Environmental Protection, Department of	421,661	64,847	356,814
Fish and Game, Department of	660,500	315,000	345,500
Mental Health, Department of	2,208,037	0	2,208,037
Technology Collaborative	198,808	0	198,808
Transportation Planning, Office of	629,000	488,900	140,100
Michigan	14,950,709	10,630,836	4,319,873
Agriculture, Department of	206,282	40,000	166,282
Natural Resources, Department of	8,642,826	5,590,836	3,051,990
Transportation, Department of	6,101,601	5,000,000	1,101,601
Minnesota	16,655,913	4,864,789	11,791,124
Agriculture, Department of	1,918,097	709,627	1,208,470
Forest Resources Council	130,342	0	130,342
Pollution Control Agency	698,826	0	698,826
Transportation, Department of	13,908,648	4,155,162	9,753,486
Mississippi	9,731,915	7,859,485	1,872,430
Innovative Geospatial Solutions, Enterprise for	5,075,000	3,900,000	1,175,000
Technology Alliance	1,032,962	1,032,962	0
Transportation, Department of	1,518,130	1,347,262	170,868
Wildlife, Fisheries, and Parks, Department of	2,105,823	1,579,261	526,562
Missouri	16,070,147	5,828,985	10,241,162
Conservation, Department of	9,394,690	178,085	9,216,605
Health and Senior Services, Department of	272,900	272,900	0

TABLE 10. State agency expenditures for R&D for all performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
Natural Resources, Department of	906,841	718,549	188,292
Transportation, Department of	5,495,716	4,659,451	836,265
Montana	7,200,442	2,249,403	4,951,039
Agriculture, Department of	1,285,830	308,101	977,729
Commerce, Department of	3,553,037	0	3,553,037
Environmental Quality, Department of	30,790	30,790	0
Fish, Wildlife, and Parks, Department of	1,093,129	895,801	197,328
Transportation, Department of	1,237,656	1,014,711	222,945
Nebraska	4,474,695	1,162,077	3,312,618
Agriculture, Department of	316,067	199,119	116,948
Corn Board	515,746	151,107	364,639
Dry Bean Commission	125,000	0	125,000
Ethanol Board	59,051	0	59,051
Grain Sorghum Board	5,200	0	5,200
Natural Resources, Department of	1,986,474	0	1,986,474
Roads, Department of	1,014,814	811,851	202,963
Wheat Board	452,343	0	452,343
Nevada	1,510,607	1,242,142	268,465
Transportation, Department of	1,510,607	1,242,142	268,465
New Hampshire	2,186,780	1,257,828	928,952
Agriculture, Markets, and Food, Department of	38,005	38,005	0
Education, Department of	324,139	319,830	4,309
Environmental Services, Department of	2,372	0	2,372
Resources and Economic Development, Department of	655,000	0	655,000
Transportation, Department of	1,167,264	899,993	267,271
New Jersey	15,146,838	4,293,720	10,853,118
Autism, Council for Research/Treatment of	2,792,455	0	2,792,455
Brain Injury Research, Commission on	1,444,000	0	1,444,000
Environmental Protection, Department of	3,814,000	1,115,000	2,699,000
Science and Technology, Commission on	605,000	0	605,000
Spinal Cord Research, Commission on	2,338,043	0	2,338,043
Transportation, Department of	4,153,340	3,178,720	974,620
New Mexico	1,655,529	1,324,423	331,106
Transportation, Department of	1,655,529	1,324,423	331,106
New York	126,122,333	17,692,538	108,429,795
Agriculture and Markets, Department of	3,487,006	2,500,000	987,006
Energy Research and Development Authority	42,170,407	697,389	41,473,018
Environmental Conservation, Department of	5,851,093	2,983,876	2,867,217
Health, Department of	32,200,000	320,000	31,880,000
Science, Technology and Innovation, Foundation for	35,283,349	5,486,891	29,796,458
Transportation, Department of	7,130,478	5,704,382	1,426,096
North Carolina	51,404,202	8,477,435	42,926,767
Agriculture and Consumer Services, Department of	10,092,515	0	10,092,515
Environment and Natural Resources, Department of	30,811,687	1,427,435	29,384,252
Transportation, Department of	10,500,000	7,050,000	3,450,000
North Dakota	16,423,175	1,901,407	14,521,768
Agriculture, Department of	30,245	30,245	0
Health, Department of	7,368	5,951	1,417
Lignite Research Council	12,500,000	1,000,000	11,500,000
Mineral Resources, Department of	238,135	108,200	129,935
Oil and Gas Research Program	1,034,458	0	1,034,458
Renewable Energy Research Program	588,500	0	588,500

TABLE 10. State agency expenditures for R&D for all performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
Soybean Council	706,798	0	706,798
Transportation, Department of	813,445	757,011	56,434
Water Commission	13,850	0	13,850
Wheat Commission	490,376	0	490,376
<b>Ohio</b>	<b>121,851,617</b>	<b>5,141,853</b>	<b>116,709,764</b>
Air Quality Development Authority	3,503,551	0	3,503,551
Development, Department of	111,125,353	0	111,125,353
Education, Department of	456,654	0	456,654
Natural Resources, Department of	2,160,336	2,000,984	159,352
Transportation, Department of	4,605,723	3,140,869	1,464,854
<b>Oklahoma</b>	<b>15,930,878</b>	<b>5,120,111</b>	<b>10,810,767</b>
Science and Technology, Center for the Advancement of	8,962,658	0	8,962,658
Transportation, Department of	4,120,111	4,120,111	0
Wheat Commission	501,446	0	501,446
Wildlife Conservation, Department of	2,346,663	1,000,000	1,346,663
<b>Oregon</b>	<b>12,428,875</b>	<b>4,363,246</b>	<b>8,065,629</b>
Fish and Wildlife, Department of	690,820	518,115	172,705
Forestry, Department of	1,281,242	40,000	1,241,242
Geology and Mineral Industries, Department of	4,685,127	1,060,734	3,624,393
Human Services, Department of	1,308,735	405,607	903,128
Transportation, Department of	2,705,721	1,921,327	784,394
Watershed Enhancement Board	1,757,230	417,463	1,339,767
<b>Pennsylvania</b>	<b>102,958,404</b>	<b>5,975,911</b>	<b>96,982,493</b>
Agriculture, Department of	852,734	0	852,734
Community and Economic Development, Department of	17,755,250	0	17,755,250
Conservation and Natural Resources, Department of	4,613,826	146,334	4,467,492
Environmental Protection, Department of	2,938,656	169,910	2,768,746
Fish and Boat Commission	60,901	42,701	18,200
Game Commission	1,597,758	806,581	791,177
Health, Department of	69,448,595	0	69,448,595
Transportation, Department of	5,690,684	4,810,385	880,299
<b>Rhode Island</b>	<b>1,382,531</b>	<b>0</b>	<b>1,382,531</b>
Economic Development Corporation	1,382,531	0	1,382,531
<b>South Carolina</b>	<b>28,599,885</b>	<b>22,877,576</b>	<b>5,722,309</b>
Agriculture, Department of	940,318	60,940	879,378
Natural Resources, Department of	23,521,908	19,176,196	4,345,712
Sea Grant Consortium	1,661,434	1,433,505	227,929
Transportation, Department of	2,476,225	2,206,935	269,290
<b>South Dakota</b>	<b>4,607,427</b>	<b>3,704,813</b>	<b>902,614</b>
Environment and Natural Resources, Department of	226,825	182,035	44,790
Game, Fish, and Parks, Department of	2,311,292	1,702,048	609,244
Transportation, Department of	2,069,310	1,820,730	248,580
<b>Tennessee</b>	<b>3,881,687</b>	<b>3,131,170</b>	<b>750,517</b>
Health, Department of	129,100	129,100	0
Transportation, Department of	3,752,587	3,002,070	750,517
<b>Texas</b>	<b>49,381,346</b>	<b>22,174,250</b>	<b>27,207,096</b>
Agriculture, Department of	1,847,975	0	1,847,975
Environmental Quality, Commission on	14,763,819	0	14,763,819
Health and Human Services Commission	123,000	74,000	49,000
Parks and Wildlife, Department of	8,130,217	3,898,500	4,231,717
Transportation, Department of	22,535,124	18,201,750	4,333,374
Water Development Board	1,981,211	0	1,981,211

TABLE 10. State agency expenditures for R&D for all performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Source of funds	
		Federal government	State and other <sup>a</sup>
Utah	26,442,711	5,593,015	20,849,696
Health, Department of	96,476	96,476	0
Natural Resources, Department of	8,000,000	4,000,000	4,000,000
Science Technology and Research Initiative	15,727,062	0	15,727,062
Transportation, Department of	2,619,173	1,496,539	1,122,634
Vermont	738,707	610,565	128,142
Transportation, Agency of	738,707	610,565	128,142
Virginia	17,929,519	11,699,611	6,229,908
Agriculture and Consumer Services, Department of	806,328	26,619	779,709
Consolidated Lab Services, Division of	810,000	810,000	0
Corrections, Department of	477,250	0	477,250
Criminal Justice Services, Department of	447,000	255,400	191,600
Forensic Science, Department of	227,630	10,117	217,513
Innovative Technology, Center for	1,642,061	1,642,061	0
Marine Resources Commission	3,184,779	1,965,253	1,219,526
Natural History, Museum of	821,185	26,887	794,298
Social Services, Department of	70,000	35,000	35,000
Transportation, Department of	9,443,286	6,928,274	2,515,012
Washington	14,528,728	6,422,311	8,106,417
Agriculture, Department of	179,149	62,903	116,246
Beef Commission	2,357	0	2,357
Fish and Wildlife, Department of	6,993,436	3,618,275	3,375,161
Grain Commission	3,321,400	0	3,321,400
Potato Commission	833,191	0	833,191
Puget Sound Partnership	761,124	736,124	25,000
Red Raspberry Commission	152,941	0	152,941
Transportation, Department of	2,285,130	2,005,009	280,121
West Virginia	10,357,006	3,733,032	6,623,974
Environmental Protection, Department of	1,554,769	438,627	1,116,142
Higher Education Policy Commission	7,602,237	2,334,405	5,267,832
Highways, Department of	1,200,000	960,000	240,000
Wisconsin	24,942,415	8,656,553	16,285,862
Commerce, Department of	12,406,980	0	12,406,980
Natural Resources, Department of	7,505,290	4,329,930	3,175,360
Transportation, Department of	5,030,145	4,326,623	703,522
Wyoming	7,194,765	1,199,459	5,995,306
Agriculture, Department of	264,295	0	264,295
Corrections, Department of	89,000	28,000	61,000
Employment, Research and Planning, Department of	1,443,377	5,000	1,438,377
Environmental Quality, Department of	150,000	0	150,000
Game and Fish Department	1,325,668	377,072	948,596
Geological Survey	2,165,681	266,986	1,898,695
Transportation, Department of	1,756,744	522,401	1,234,343

<sup>a</sup> "Other" includes companies; nonprofit organizations; other state governments; and city, county, regional, or other local governments.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 11. State agency expenditures for R&D for internal performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D by internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
United States	318,264,391	126,042,475	170,951,238	21,270,678
Alabama	9,138,896	5,672,713	3,453,207	12,976
Conservation and Natural Resources, Department of	2,554,175	1,168,274	1,385,901	0
Forensic Science, Department of	301,434	245,471	55,963	0
Geological Survey	2,287,062	1,199,626	1,074,460	12,976
Marine Environmental Sciences Consortium	3,568,454	3,059,342	509,112	0
Transportation, Department of	427,771	0	427,771	0
Alaska	6,387,016	2,036,873	4,182,143	168,000
Fish and Game, Department of	1,602,000	451,000	1,151,000	0
Natural Resources, Department of	4,657,300	1,483,700	3,005,600	168,000
Transportation and Public Facilities, Department of	127,716	102,173	25,543	0
Arizona	7,373,390	4,742,669	2,097,848	532,873
Agriculture, Department of	0	0	0	0
Biomedical Research Commission	448,000	0	448,000	0
Environmental Quality, Department of	34,000	0	34,000	0
Game and Fish Department	4,703,887	3,237,429	1,126,162	340,296
Geological Survey	775,469	447,390	135,502	192,577
Health Services, Department of	27,750	27,750	0	0
Juvenile Corrections, Department of	19,572	0	19,572	0
Schools for the Deaf and Blind	2,312	0	2,312	0
Transportation, Department of	1,362,400	1,030,100	332,300	0
Arkansas	768,453	352,656	415,797	0
Beef Council	0	0	0	0
Catfish Promotion Board	0	0	0	0
Corn and Grain Sorghum Promotion Board	0	0	0	0
Forestry Commission	300,686	0	300,686	0
Game and Fish Commission	0	0	0	0
Highway and Transportation Department	153,000	109,600	43,400	0
Rice Research and Promotion Board	0	0	0	0
Science and Technology Authority	314,767	243,056	71,711	0
Soybean Promotion Board	0	0	0	0
Wheat Promotion Board	0	0	0	0
California	25,144,000	3,927,000	19,726,000	1,491,000
Energy Commission	11,900,000	0	11,900,000	0
Food and Agriculture, Department of	0	0	0	0
Transportation, Department of	8,444,000	3,733,000	4,711,000	0
Water Resources, Department of	4,800,000	194,000	3,115,000	1,491,000
Colorado	9,395,554	2,454,095	5,820,128	1,121,331
Economic Development, Office of	0	0	0	0
Natural Resources, Department of	7,480,482	1,197,541	5,561,610	721,331
Public Health and Environment, Department of	388,999	388,999	0	0
Public Safety, Department of	636,000	200,000	36,000	400,000
Transportation, Department of	890,073	667,555	222,518	0
Connecticut	12,663,055	4,382,333	7,827,713	453,009
Agricultural Experiment Station	8,556,478	3,147,255	4,956,214	453,009
Agriculture, Department of	87,443	87,443	0	0
Children and Families, Department of	4,000	0	4,000	0
Environmental Protection, Department of	0	0	0	0
Mental Health and Addiction Services, Department of	2,065,082	198,000	1,867,082	0
Public Health, Department of	90,000	35,000	55,000	0
Transportation, Department of	1,860,052	914,635	945,417	0



TABLE 11. State agency expenditures for R&amp;D for internal performers, by department, state, and source of funds: FY 2009

(Dollars)

Department or agency	All R&D by internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
Delaware	1,021,115	170,449	786,178	64,488
Agriculture, Department of	0	0	0	0
Economic Development Office	0	0	0	0
Geological Survey	823,128	0	758,640	64,488
Natural Resources and Environmental Control, Department of	197,987	170,449	27,538	0
Transportation, Department of	0	0	0	0
District of Columbia	0	0	0	0
Health, Department of	0	0	0	0
Florida	10,356,355	4,702,407	5,617,112	36,836
Agriculture and Consumer Services, Department of	1,123,244	777,491	345,753	0
Citrus, Department of	1,352,000	0	1,352,000	0
Environmental Protection, Department of	4,831,111	1,534,916	3,259,359	36,836
Fish and Wildlife Conservation Commission	3,050,000	2,390,000	660,000	0
Health, Department of	0	0	0	0
Space Florida	0	0	0	0
Transportation, Department of	0	0	0	0
Georgia	3,500,000	0	0	3,500,000
Herty Advanced Materials Development Center	3,500,000	0	0	3,500,000
Transportation, Department of	0	0	0	0
Hawaii	3,268,044	2,114,211	1,146,436	7,397
Agriculture, Department of	0	0	0	0
Business Economic Development, Department of	350,000	350,000	0	0
Land and Natural Resources, Department of	1,990,640	1,422,659	560,584	7,397
Transportation, Department of	927,404	341,552	585,852	0
Idaho	1,897,225	354,029	837,696	705,500
Agriculture, Department of	56,200	0	56,200	0
Barley Commission	0	0	0	0
Bean Commission	0	0	0	0
Environmental Quality, Department of	60,557	44,454	16,103	0
Fish and Game, Department of	463,700	79,500	321,700	62,500
Potato Commission	643,000	0	0	643,000
Transportation, Department of	136,968	109,575	27,393	0
Water Resources, Department of	536,800	120,500	416,300	0
Wheat Commission	0	0	0	0
Illinois	5,445,719	2,750,854	2,646,425	48,440
Commerce and Economic Opportunity, Department of	0	0	0	0
Natural Resources, Department of	4,141,291	1,691,404	2,401,447	48,440
Public Health, Department of	0	0	0	0
Transportation, Department of	1,304,428	1,059,450	244,978	0
Indiana	941,982	428,491	513,491	0
Criminal Justice Institute	205,000	205,000	0	0
Economic Development Corporation	0	0	0	0
Natural Resources, Department of	336,982	123,491	213,491	0
Transportation, Department of	400,000	100,000	300,000	0
Iowa	953,909	0	953,909	0
Energy Independence, Office of	0	0	0	0
Lottery, Department of	175,059	0	175,059	0
Revenue, Department of	751,650	0	751,650	0
Transportation, Department of	27,200	0	27,200	0
Kansas	1,598,127	1,016,419	581,708	0
Technology Enterprise Corporation	0	0	0	0
Transportation, Department of	1,543,127	976,419	566,708	0

TABLE 11. State agency expenditures for R&amp;D for internal performers, by department, state, and source of funds: FY 2009

(Dollars)

Department or agency	All R&D by internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
Wheat Commission	0	0	0	0
Wildlife and Parks, Department of	55,000	40,000	15,000	0
Kentucky	6,241,919	4,268,192	1,973,727	0
Energy Policy, Governor's Office for	0	0	0	0
Environmental Education Council	0	0	0	0
Fish and Wildlife Resources, Department of	1,836,879	1,155,600	681,279	0
Highways, Department of	4,228,240	3,082,592	1,145,648	0
Natural Resources, Department of	0	0	0	0
Nature Preserves Commission	176,800	30,000	146,800	0
Public Health, Department of	0	0	0	0
Louisiana	5,021,302	3,645,388	1,244,144	131,770
Environmental Quality, Department of	6,731	4,039	2,692	0
Transportation and Development, Department of	4,122,437	3,156,957	833,710	131,770
Wildlife and Fisheries, Department of	892,134	484,392	407,742	0
Maine	1,566,832	668,684	898,148	0
Conservation, Department of	350,600	90,100	260,500	0
Drug Enforcement Agency	0	0	0	0
Environmental Protection, Department of	550,000	0	550,000	0
Fire Marshal's Office	3,963	0	3,963	0
Marine Resources, Department of	414,024	379,988	34,036	0
Technology Institute	0	0	0	0
Transportation, Department of	248,245	198,596	49,649	0
Maryland	5,683,023	2,282,000	3,363,523	37,500
Business and Economic Development, Department of	1,305,523	0	1,305,523	0
Health and Mental Hygiene, Department of	0	0	0	0
Natural Resources, Department of	3,500,000	1,800,000	1,700,000	0
Technology Development Corporation	337,500	50,000	250,000	37,500
Transportation, Department of	540,000	432,000	108,000	0
Massachusetts	1,112,793	541,224	571,569	0
Conservation and Recreation, Department of	240,091	128,177	111,914	0
Environmental Protection, Department of	161,800	64,847	96,953	0
Fish and Game, Department of	560,000	315,000	245,000	0
Mental Health, Department of	109,402	0	109,402	0
Technology Collaborative	0	0	0	0
Transportation Planning, Office of	41,500	33,200	8,300	0
Michigan	7,850,696	4,527,751	3,022,945	300,000
Agriculture, Department of	0	0	0	0
Natural Resources, Department of	6,713,624	4,437,459	1,976,165	300,000
Transportation, Department of	1,137,072	90,292	1,046,780	0
Minnesota	1,974,655	615,306	305,399	1,053,950
Agriculture, Department of	906,316	599,937	305,399	980
Forest Resources Council	0	0	0	0
Pollution Control Agency	0	0	0	0
Transportation, Department of	1,068,339	15,369	0	1,052,970
Mississippi	8,215,940	6,343,510	1,805,868	66,562
Innovative Geospatial Solutions, Enterprise for	5,075,000	3,900,000	1,175,000	0
Technology Alliance	256,000	256,000	0	0
Transportation, Department of	1,518,130	1,347,262	170,868	0
Wildlife, Fisheries, and Parks, Department of	1,366,810	840,248	460,000	66,562
Missouri	9,405,566	1,702,185	7,698,058	5,323
Conservation, Department of	7,473,511	110,739	7,357,449	5,323
Health and Senior Services, Department of	115,749	115,749	0	0

TABLE 11. State agency expenditures for R&amp;D for internal performers, by department, state, and source of funds: FY 2009

(Dollars)

Department or agency	All R&D by internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
Natural Resources, Department of	383,744	365,944	17,800	0
Transportation, Department of	1,432,562	1,109,753	322,809	0
Montana	1,304,712	898,783	405,929	0
Agriculture, Department of	0	0	0	0
Commerce, Department of	178,311	0	178,311	0
Environmental Quality, Department of	15,841	15,841	0	0
Fish, Wildlife, and Parks, Department of	839,954	666,457	173,497	0
Transportation, Department of	270,606	216,485	54,121	0
Nebraska	125,000	0	0	125,000
Agriculture, Department of	0	0	0	0
Corn Board	0	0	0	0
Dry Bean Commission	125,000	0	0	125,000
Ethanol Board	0	0	0	0
Grain Sorghum Board	0	0	0	0
Natural Resources, Department of	0	0	0	0
Roads, Department of	0	0	0	0
Wheat Board	0	0	0	0
Nevada	342,744	0	342,744	0
Transportation, Department of	342,744	0	342,744	0
New Hampshire	1,022,378	150,260	872,118	0
Agriculture, Markets, and Food, Department of	0	0	0	0
Education, Department of	4,309	0	4,309	0
Environmental Services, Department of	0	0	0	0
Resources and Economic Development, Department of	655,000	0	655,000	0
Transportation, Department of	363,069	150,260	212,809	0
New Jersey	4,278,027	1,409,445	2,863,582	5,000
Autism, Council for Research/Treatment of	157,282	0	157,282	0
Brain Injury Research, Commission on	193,423	0	193,423	0
Environmental Protection, Department of	2,239,000	165,000	2,069,000	5,000
Science and Technology, Commission on	0	0	0	0
Spinal Cord Research, Commission on	338,877	0	338,877	0
Transportation, Department of	1,349,445	1,244,445	105,000	0
New Mexico	535,531	428,425	107,106	0
Transportation, Department of	535,531	428,425	107,106	0
New York	35,113,898	6,342,108	28,723,590	48,200
Agriculture and Markets, Department of	2,550,000	2,500,000	50,000	0
Energy Research and Development Authority	10,253,296	0	10,253,296	0
Environmental Conservation, Department of	1,259,217	481,000	730,017	48,200
Health, Department of	17,250,000	320,000	16,930,000	0
Science, Technology and Innovation, Foundation for	0	0	0	0
Transportation, Department of	3,801,385	3,041,108	760,277	0
North Carolina	42,451,251	5,411,944	31,293,732	5,745,575
Agriculture and Consumer Services, Department of	10,038,175	0	10,038,175	0
Environment and Natural Resources, Department of	29,863,076	3,861,944	21,005,557	4,995,575
Transportation, Department of	2,550,000	1,550,000	250,000	750,000
North Dakota	575,503	218,151	341,352	16,000
Agriculture, Department of	0	0	0	0
Health, Department of	7,368	5,951	1,417	0
Lignite Research Council	200,000	0	200,000	0
Mineral Resources, Department of	238,135	108,200	113,935	16,000
Oil and Gas Research Program	0	0	0	0
Renewable Energy Research Program	0	0	0	0

TABLE 11. State agency expenditures for R&D for internal performers, by department, state, and source of funds: FY 2009

(Dollars)

Department or agency	All R&D by internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
Soybean Council	0	0	0	0
Transportation, Department of	130,000	104,000	26,000	0
Water Commission	0	0	0	0
Wheat Commission	0	0	0	0
Ohio	4,310,001	125,984	4,184,017	0
Air Quality Development Authority	0	0	0	0
Development, Department of	3,395,874	0	3,395,874	0
Education, Department of	426,654	0	426,654	0
Natural Resources, Department of	160,336	125,984	34,352	0
Transportation, Department of	327,137	0	327,137	0
Oklahoma	2,709,663	1,363,000	1,346,663	0
Science and Technology, Center for the Advancement of	0	0	0	0
Transportation, Department of	363,000	363,000	0	0
Wheat Commission	0	0	0	0
Wildlife Conservation, Department of	2,346,663	1,000,000	1,346,663	0
Oregon	6,389,857	2,093,203	2,240,728	2,055,926
Fish and Wildlife, Department of	658,708	494,031	164,677	0
Forestry, Department of	169,714	40,000	129,714	0
Geology and Mineral Industries, Department of	4,645,128	1,020,735	1,588,467	2,035,926
Human Services, Department of	621,312	500,327	100,985	20,000
Transportation, Department of	294,995	38,110	256,885	0
Watershed Enhancement Board	0	0	0	0
Pennsylvania	2,992,367	1,693,319	1,299,048	0
Agriculture, Department of	0	0	0	0
Community and Economic Development, Department of	0	0	0	0
Conservation and Natural Resources, Department of	430,621	0	430,621	0
Environmental Protection, Department of	140,000	0	140,000	0
Fish and Boat Commission	49,000	36,750	12,250	0
Game Commission	1,423,829	707,652	716,177	0
Health, Department of	0	0	0	0
Transportation, Department of	948,917	948,917	0	0
Rhode Island	0	0	0	0
Economic Development Corporation	0	0	0	0
South Carolina	24,161,908	21,993,839	2,168,069	0
Agriculture, Department of	0	0	0	0
Natural Resources, Department of	23,521,908	21,609,839	1,912,069	0
Sea Grant Consortium	360,000	160,000	200,000	0
Transportation, Department of	280,000	224,000	56,000	0
South Dakota	424,407	325,552	98,855	0
Environment and Natural Resources, Department of	0	0	0	0
Game, Fish, and Parks, Department of	0	0	0	0
Transportation, Department of	424,407	325,552	98,855	0
Tennessee	129,100	129,100	0	0
Health, Department of	129,100	129,100	0	0
Transportation, Department of	0	0	0	0
Texas	4,763,897	2,368,000	2,395,897	0
Agriculture, Department of	0	0	0	0
Environmental Quality, Commission on	0	0	0	0
Health and Human Services Commission	123,000	74,000	49,000	0
Parks and Wildlife, Department of	2,891,717	908,045	1,983,672	0
Transportation, Department of	1,749,180	1,385,955	363,225	0
Water Development Board	0	0	0	0

TABLE 11. State agency expenditures for R&D for internal performers, by department, state, and source of funds: FY 2009  
(Dollars)

Department or agency	All R&D by internal performers	Source of funds		
		Federal government	State	Other <sup>a</sup>
Utah	10,715,649	5,593,015	3,622,634	1,500,000
Health, Department of	96,476	96,476	0	0
Natural Resources, Department of	8,000,000	4,000,000	2,500,000	1,500,000
Science Technology and Research Initiative	0	0	0	0
Transportation, Department of	2,619,173	1,496,539	1,122,634	0
Vermont	738,707	610,565	128,142	0
Transportation, Agency of	738,707	610,565	128,142	0
Virginia	8,759,184	4,517,492	4,103,106	138,586
Agriculture and Consumer Services, Department of	0	0	0	0
Consolidated Lab Services, Division of	810,000	750,000	0	60,000
Corrections, Department of	477,250	0	477,250	0
Criminal Justice Services, Department of	447,000	255,400	191,600	0
Forensic Science, Department of	227,630	10,117	217,513	0
Innovative Technology, Center for	493,253	493,253	0	0
Marine Resources Commission	0	0	0	0
Natural History, Museum of	821,185	26,887	715,712	78,586
Social Services, Department of	70,000	35,000	35,000	0
Transportation, Department of	5,412,866	2,946,835	2,466,031	0
Washington	6,940,712	3,618,275	1,980,097	1,342,340
Agriculture, Department of	0	0	0	0
Beef Commission	0	0	0	0
Fish and Wildlife, Department of	6,840,712	3,618,275	1,980,097	1,242,340
Grain Commission	0	0	0	0
Potato Commission	100,000	0	0	100,000
Puget Sound Partnership	0	0	0	0
Red Raspberry Commission	0	0	0	0
Transportation, Department of	0	0	0	0
West Virginia	2,555,126	1,328,135	892,339	334,652
Environmental Protection, Department of	714,369	112,999	266,718	334,652
Higher Education Policy Commission	640,757	255,136	385,621	0
Highways, Department of	1,200,000	960,000	240,000	0
Wisconsin	5,329,091	3,945,926	1,207,287	175,878
Commerce, Department of	0	0	0	0
Natural Resources, Department of	4,879,875	3,584,553	1,119,444	175,878
Transportation, Department of	449,216	361,373	87,843	0
Wyoming	4,670,112	1,778,515	2,845,031	46,566
Agriculture, Department of	0	0	0	0
Corrections, Department of	48,000	0	48,000	0
Employment, Research and Planning, Department of	1,443,377	1,208,177	235,200	0
Environmental Quality, Department of	0	0	0	0
Game and Fish Department	661,420	319,390	342,030	0
Geological Survey	1,827,100	172,598	1,607,936	46,566
Transportation, Department of	690,215	78,350	611,865	0

<sup>a</sup> Includes companies; nonprofit organizations; other state governments; and city, county, regional, or other local governments.

NOTE: Internal performers include department/agency's own employees and services performed by others in support of an internal R&D project.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 12. State agency expenditures by department, state, and type of performer: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Internal performers	External performers			
			Total R&D	Academic	Companies or individuals	Other performers <sup>a</sup>
United States	1,210,113,524	318,264,391	891,849,133	530,354,012	255,889,116	105,606,005
Alabama	12,929,167	9,138,896	3,790,271	3,790,271	0	0
Conservation and Natural Resources, Department of	3,286,899	2,554,175	732,724	732,724	0	0
Forensic Science, Department of	301,434	301,434	0	0	0	0
Geological Survey	2,287,062	2,287,062	0	0	0	0
Marine Environmental Sciences Consortium	3,568,454	3,568,454	0	0	0	0
Transportation, Department of	3,485,318	427,771	3,057,547	3,057,547	0	0
Alaska	7,741,467	6,387,016	1,354,451	1,264,451	90,000	0
Fish and Game, Department of	1,807,000	1,602,000	205,000	205,000	0	0
Natural Resources, Department of	4,657,300	4,657,300	0	0	0	0
Transportation and Public Facilities, Department of	1,277,167	127,716	1,149,451	1,059,451	90,000	0
Arizona	21,483,423	7,373,390	14,110,033	13,173,778	936,255	0
Agriculture, Department of	220,751	0	220,751	220,751	0	0
Biomedical Research Commission	11,748,000	448,000	11,300,000	11,300,000	0	0
Environmental Quality, Department of	349,330	34,000	315,330	308,000	7,330	0
Game and Fish Department	4,988,520	4,703,887	284,633	219,107	65,526	0
Geological Survey	827,122	775,469	51,653	45,220	6,433	0
Health Services, Department of	27,750	27,750	0	0	0	0
Juvenile Corrections, Department of	19,838	19,572	266	0	266	0
Schools for the Deaf and Blind	2,312	2,312	0	0	0	0
Transportation, Department of	3,299,800	1,362,400	1,937,400	1,080,700	856,700	0
Arkansas	11,765,900	768,453	10,997,447	10,304,092	631,975	61,380
Beef Council	107,743	0	107,743	107,743	0	0
Catfish Promotion Board	44,482	0	44,482	44,482	0	0
Corn and Grain Sorghum Promotion Board	515,125	0	515,125	515,125	0	0
Forestry Commission	300,686	300,686	0	0	0	0
Game and Fish Commission	345,832	0	345,832	259,452	25,000	61,380
Highway and Transportation Department	881,000	153,000	728,000	728,000	0	0
Rice Research and Promotion Board	2,600,000	0	2,600,000	2,600,000	0	0
Science and Technology Authority	4,833,430	314,767	4,518,663	3,911,688	606,975	0
Soybean Promotion Board	1,800,000	0	1,800,000	1,800,000	0	0
Wheat Promotion Board	337,602	0	337,602	337,602	0	0
California	146,793,247	25,144,000	121,649,247	56,843,299	37,514,864	27,291,084
Energy Commission	88,700,000	11,900,000	76,800,000	26,400,000	24,800,000	25,600,000
Food and Agriculture, Department of	7,587,842	0	7,587,842	4,728,894	1,202,864	1,656,084
Transportation, Department of	40,057,000	8,444,000	31,613,000	23,114,000	8,499,000	0
Water Resources, Department of	10,448,405	4,800,000	5,648,405	2,600,405	3,013,000	35,000
Colorado	14,849,581	9,395,554	5,454,027	3,896,294	1,193,264	364,469
Economic Development, Office of	2,475,000	0	2,475,000	1,650,000	825,000	0
Natural Resources, Department of	8,134,132	7,480,482	653,650	497,268	156,382	0
Public Health and Environment, Department of	1,754,968	388,999	1,365,969	1,001,500	0	364,469
Public Safety, Department of	661,000	636,000	25,000	0	25,000	0
Transportation, Department of	1,824,481	890,073	934,408	747,526	186,882	0
Connecticut	27,088,088	12,663,055	14,425,033	4,540,756	8,395,227	1,489,050
Agricultural Experiment Station	8,556,478	8,556,478	0	0	0	0
Agriculture, Department of	140,714	87,443	53,271	0	0	53,271
Children and Families, Department of	288,151	4,000	284,151	46,576	237,575	0
Environmental Protection, Department of	1,456,308	0	1,456,308	760,544	330,689	365,075
Mental Health and Addiction Services, Department of	3,304,437	2,065,082	1,239,355	1,239,355	0	0
Public Health, Department of	9,300,858	90,000	9,210,858	1,383,895	7,826,963	0
Transportation, Department of	4,041,142	1,860,052	2,181,090	1,110,386	0	1,070,704

TABLE 12. State agency expenditures by department, state, and type of performer: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Internal performers	External performers			
			Total R&D	Academic	Companies or individuals	Other performers <sup>a</sup>
Delaware	2,066,752	1,021,115	1,045,637	745,637	300,000	0
Agriculture, Department of	83,190	0	83,190	83,190	0	0
Economic Development Office	300,000	0	300,000	0	300,000	0
Geological Survey	823,128	823,128	0	0	0	0
Natural Resources and Environmental Control, Department of	610,434	197,987	412,447	412,447	0	0
Transportation, Department of	250,000	0	250,000	250,000	0	0
District of Columbia	487,411	0	487,411	487,411	0	0
Health, Department of	487,411	0	487,411	487,411	0	0
Florida	66,513,756	10,356,355	56,157,401	34,942,344	19,668,724	1,546,333
Agriculture and Consumer Services, Department of	9,346,686	1,123,244	8,223,442	5,948,842	2,274,600	0
Citrus, Department of	12,171,000	1,352,000	10,819,000	6,972,000	2,574,000	1,273,000
Environmental Protection, Department of	8,237,640	4,831,111	3,406,529	1,574,116	1,559,080	273,333
Fish and Wildlife Conservation Commission	8,290,000	3,050,000	5,240,000	500,000	4,740,000	0
Health, Department of	18,180,877	0	18,180,877	9,958,911	8,221,966	0
Space Florida	457,500	0	457,500	247,500	210,000	0
Transportation, Department of	9,830,053	0	9,830,053	9,740,975	89,078	0
Georgia	6,662,887	3,500,000	3,162,887	3,162,887	0	0
Herty Advanced Materials Development Center	3,500,000	3,500,000	0	0	0	0
Transportation, Department of	3,162,887	0	3,162,887	3,162,887	0	0
Hawaii	13,976,364	3,268,044	10,708,320	3,672,334	6,884,681	151,305
Agriculture, Department of	32,000	0	32,000	0	32,000	0
Business Economic Development, Department of	7,196,722	350,000	6,846,722	74,000	6,772,722	0
Land and Natural Resources, Department of	4,698,462	1,990,640	2,707,822	2,476,558	79,959	151,305
Transportation, Department of	2,049,180	927,404	1,121,776	1,121,776	0	0
Idaho	6,052,058	1,897,225	4,154,833	1,590,540	175,633	2,388,660
Agriculture, Department of	56,200	56,200	0	0	0	0
Barley Commission	109,594	0	109,594	0	0	109,594
Bean Commission	59,462	0	59,462	59,462	0	0
Environmental Quality, Department of	91,190	60,557	30,633	0	30,633	0
Fish and Game, Department of	587,000	463,700	123,300	123,300	0	0
Potato Commission	643,000	643,000	0	0	0	0
Transportation, Department of	1,318,377	136,968	1,181,409	552,343	0	629,066
Water Resources, Department of	2,703,200	536,800	2,166,400	371,400	145,000	1,650,000
Wheat Commission	484,035	0	484,035	484,035	0	0
Illinois	19,656,490	5,445,719	14,210,771	7,700,351	2,675,865	3,834,555
Commerce and Economic Opportunity, Department of	94,436	0	94,436	94,436	0	0
Natural Resources, Department of	10,085,597	4,141,291	5,944,306	2,497,938	2,576,275	870,093
Public Health, Department of	4,107,400	0	4,107,400	2,960,400	0	1,147,000
Transportation, Department of	5,369,057	1,304,428	4,064,629	2,147,577	99,590	1,817,462
Indiana	47,549,928	941,982	46,607,946	14,312,538	32,295,408	0
Criminal Justice Institute	205,000	205,000	0	0	0	0
Economic Development Corporation	41,523,283	0	41,523,283	9,227,875	32,295,408	0
Natural Resources, Department of	1,821,645	336,982	1,484,663	1,484,663	0	0
Transportation, Department of	4,000,000	400,000	3,600,000	3,600,000	0	0
Iowa	11,284,860	953,909	10,330,951	6,442,409	3,358,242	530,300
Energy Independence, Office of	3,894,451	0	3,894,451	536,209	3,358,242	0
Lottery, Department of	175,059	175,059	0	0	0	0
Revenue, Department of	751,650	751,650	0	0	0	0
Transportation, Department of	6,463,700	27,200	6,436,500	5,906,200	0	530,300
Kansas	12,305,385	1,598,127	10,707,258	9,561,563	0	1,145,695
Technology Enterprise Corporation	4,184,830	0	4,184,830	4,184,830	0	0

TABLE 12. State agency expenditures by department, state, and type of performer: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Internal performers	External performers			
			Total R&D	Academic	Companies or individuals	Other performers <sup>a</sup>
Transportation, Department of	6,970,598	1,543,127	5,427,471	4,281,776	0	1,145,695
Wheat Commission	784,957	0	784,957	784,957	0	0
Wildlife and Parks, Department of	365,000	55,000	310,000	310,000	0	0
Kentucky	13,938,692	6,241,919	7,696,773	5,888,316	1,752,314	56,143
Energy Policy, Governor's Office for	3,637,000	0	3,637,000	2,227,000	1,410,000	0
Environmental Education Council	47,117	0	47,117	47,117	0	0
Fish and Wildlife Resources, Department of	2,690,029	1,836,879	853,150	454,693	342,314	56,143
Highways, Department of	4,228,240	4,228,240	0	0	0	0
Natural Resources, Department of	558	0	558	558	0	0
Nature Preserves Commission	184,800	176,800	8,000	8,000	0	0
Public Health, Department of	3,150,948	0	3,150,948	3,150,948	0	0
Louisiana	8,426,835	5,021,302	3,405,533	3,375,999	29,534	0
Environmental Quality, Department of	141,357	6,731	134,626	134,626	0	0
Transportation and Development, Department of	6,717,882	4,122,437	2,595,445	2,565,911	29,534	0
Wildlife and Fisheries, Department of	1,567,596	892,134	675,462	675,462	0	0
Maine	6,400,019	1,566,832	4,833,187	580,192	4,155,387	97,608
Conservation, Department of	408,100	350,600	57,500	0	57,500	0
Drug Enforcement Agency	8,685	0	8,685	8,685	0	0
Environmental Protection, Department of	550,000	550,000	0	0	0	0
Fire Marshal's Office	3,963	3,963	0	0	0	0
Marine Resources, Department of	734,693	414,024	320,669	320,669	0	0
Technology Institute	4,131,199	0	4,131,199	25,000	4,093,699	12,500
Transportation, Department of	563,379	248,245	315,134	225,838	4,188	85,108
Maryland	21,093,331	5,683,023	15,410,308	12,639,508	2,603,800	167,000
Business and Economic Development, Department of	1,305,523	1,305,523	0	0	0	0
Health and Mental Hygiene, Department of	8,701,328	0	8,701,328	8,701,328	0	0
Natural Resources, Department of	6,220,000	3,500,000	2,720,000	1,820,000	900,000	0
Technology Development Corporation	2,137,500	337,500	1,800,000	400,000	1,400,000	0
Transportation, Department of	2,728,980	540,000	2,188,980	1,718,180	303,800	167,000
Massachusetts	4,358,097	1,112,793	3,245,304	3,055,392	189,912	0
Conservation and Recreation, Department of	240,091	240,091	0	0	0	0
Environmental Protection, Department of	421,661	161,800	259,861	132,949	126,912	0
Fish and Game, Department of	660,500	560,000	100,500	100,500	0	0
Mental Health, Department of	2,208,037	109,402	2,098,635	2,098,635	0	0
Technology Collaborative	198,808	0	198,808	198,808	0	0
Transportation Planning, Office of	629,000	41,500	587,500	524,500	63,000	0
Michigan	14,950,709	7,850,696	7,100,013	5,794,052	1,281,061	24,900
Agriculture, Department of	206,282	0	206,282	181,382	0	24,900
Natural Resources, Department of	8,642,826	6,713,624	1,929,202	1,929,202	0	0
Transportation, Department of	6,101,601	1,137,072	4,964,529	3,683,468	1,281,061	0
Minnesota	16,655,913	1,974,655	14,681,258	6,616,048	6,294,846	1,770,364
Agriculture, Department of	1,918,097	906,316	1,011,781	553,680	231,448	226,653
Forest Resources Council	130,342	0	130,342	84,447	45,895	0
Pollution Control Agency	698,826	0	698,826	321,282	124,290	253,254
Transportation, Department of	13,908,648	1,068,339	12,840,309	5,656,639	5,893,213	1,290,457
Mississippi	9,731,915	8,215,940	1,515,975	1,443,375	72,600	0
Innovative Geospatial Solutions, Enterprise for	5,075,000	5,075,000	0	0	0	0
Technology Alliance	1,032,962	256,000	776,962	764,362	12,600	0
Transportation, Department of	1,518,130	1,518,130	0	0	0	0
Wildlife, Fisheries, and Parks, Department of	2,105,823	1,366,810	739,013	679,013	60,000	0



TABLE 12. State agency expenditures by department, state, and type of performer: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Internal performers	External performers			
			Total R&D	Academic	Companies or individuals	Other performers <sup>a</sup>
Missouri	16,070,147	9,405,566	6,664,581	3,083,125	1,029,646	2,551,810
Conservation, Department of	9,394,690	7,473,511	1,921,179	1,522,034	0	399,145
Health and Senior Services, Department of	272,900	115,749	157,151	0	0	157,151
Natural Resources, Department of	906,841	383,744	523,097	511,340	6,900	4,857
Transportation, Department of	5,495,716	1,432,562	4,063,154	1,049,751	1,022,746	1,990,657
Montana	7,200,442	1,304,712	5,895,730	3,959,233	1,927,122	9,375
Agriculture, Department of	1,285,830	0	1,285,830	1,285,830	0	0
Commerce, Department of	3,553,037	178,311	3,374,726	2,167,379	1,207,347	0
Environmental Quality, Department of	30,790	15,841	14,949	0	14,949	0
Fish, Wildlife, and Parks, Department of	1,093,129	839,954	253,175	253,175	0	0
Transportation, Department of	1,237,656	270,606	967,050	252,849	704,826	9,375
Nebraska	4,474,695	125,000	4,349,695	2,787,532	89,035	1,473,128
Agriculture, Department of	316,067	0	316,067	300,646	15,421	0
Corn Board	515,746	0	515,746	435,746	30,000	50,000
Dry Bean Commission	125,000	125,000	0	0	0	0
Ethanol Board	59,051	0	59,051	59,051	0	0
Grain Sorghum Board	5,200	0	5,200	5,200	0	0
Natural Resources, Department of	1,986,474	0	1,986,474	563,346	0	1,423,128
Roads, Department of	1,014,814	0	1,014,814	1,014,814	0	0
Wheat Board	452,343	0	452,343	408,729	43,614	0
Nevada	1,510,607	342,744	1,167,863	1,066,068	101,795	0
Transportation, Department of	1,510,607	342,744	1,167,863	1,066,068	101,795	0
New Hampshire	2,186,780	1,022,378	1,164,402	497,846	494,051	172,505
Agriculture, Markets, and Food, Department of	38,005	0	38,005	0	0	38,005
Education, Department of	324,139	4,309	319,830	0	319,830	0
Environmental Services, Department of	2,372	0	2,372	2,372	0	0
Resources and Economic Development, Department of	655,000	655,000	0	0	0	0
Transportation, Department of	1,167,264	363,069	804,195	495,474	174,221	134,500
New Jersey	15,146,838	4,278,027	10,868,811	7,025,185	939,000	2,904,626
Autism, Council for Research/Treatment of	2,792,455	157,282	2,635,173	500,000	0	2,135,173
Brain Injury Research, Commission on	1,444,000	193,423	1,250,577	781,124	0	469,453
Environmental Protection, Department of	3,814,000	2,239,000	1,575,000	1,251,000	24,000	300,000
Science and Technology, Commission on	605,000	0	605,000	100,000	505,000	0
Spinal Cord Research, Commission on	2,338,043	338,877	1,999,166	1,999,166	0	0
Transportation, Department of	4,153,340	1,349,445	2,803,895	2,393,895	410,000	0
New Mexico	1,655,529	535,531	1,119,998	1,061,998	38,000	20,000
Transportation, Department of	1,655,529	535,531	1,119,998	1,061,998	38,000	20,000
New York	126,122,333	35,113,898	91,008,435	55,454,319	18,510,081	17,044,035
Agriculture and Markets, Department of	3,487,006	2,550,000	937,006	887,006	0	50,000
Energy Research and Development Authority	42,170,407	10,253,296	31,917,111	7,452,199	17,927,153	6,537,759
Environmental Conservation, Department of	5,851,093	1,259,217	4,591,876	3,329,000	0	1,262,876
Health, Department of	32,200,000	17,250,000	14,950,000	14,950,000	0	0
Science, Technology and Innovation, Foundation for	35,283,349	0	35,283,349	25,996,377	93,572	9,193,400
Transportation, Department of	7,130,478	3,801,385	3,329,093	2,839,737	489,356	0
North Carolina	51,404,202	42,451,251	8,952,951	6,686,231	690,950	1,575,770
Agriculture and Consumer Services, Department of	10,092,515	10,038,175	54,340	13,390	40,950	0
Environment and Natural Resources, Department of	30,811,687	29,863,076	948,611	522,841	0	425,770
Transportation, Department of	10,500,000	2,550,000	7,950,000	6,150,000	650,000	1,150,000
North Dakota	16,423,175	575,503	15,847,672	7,126,441	8,124,958	596,273
Agriculture, Department of	30,245	0	30,245	30,245	0	0
Health, Department of	7,368	7,368	0	0	0	0

TABLE 12. State agency expenditures by department, state, and type of performer: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Internal performers	External performers			
			Total R&D	Academic	Companies or individuals	Other performers <sup>a</sup>
Lignite Research Council	12,500,000	200,000	12,300,000	5,000,000	7,300,000	0
Mineral Resources, Department of	238,135	238,135	0	0	0	0
Oil and Gas Research Program	1,034,458	0	1,034,458	480,000	554,458	0
Renewable Energy Research Program	588,500	0	588,500	318,000	270,500	0
Soybean Council	706,798	0	706,798	706,798	0	0
Transportation, Department of	813,445	130,000	683,445	137,172	0	546,273
Water Commission	13,850	0	13,850	13,850	0	0
Wheat Commission	490,376	0	490,376	440,376	0	50,000
Ohio	121,851,617	4,310,001	117,541,616	56,408,715	60,733,997	398,904
Air Quality Development Authority	3,503,551	0	3,503,551	2,255,841	1,247,710	0
Development, Department of	111,125,353	3,395,874	107,729,479	49,575,404	58,154,075	0
Education, Department of	456,654	426,654	30,000	30,000	0	0
Natural Resources, Department of	2,160,336	160,336	2,000,000	2,000,000	0	0
Transportation, Department of	4,605,723	327,137	4,278,586	2,547,470	1,332,212	398,904
Oklahoma	15,930,878	2,709,663	13,221,215	8,182,080	4,097,885	941,250
Science and Technology, Center for the Advancement of	8,962,658	0	8,962,658	5,184,254	3,778,404	0
Transportation, Department of	4,120,111	363,000	3,757,111	2,815,861	0	941,250
Wheat Commission	501,446	0	501,446	181,965	319,481	0
Wildlife Conservation, Department of	2,346,663	2,346,663	0	0	0	0
Oregon	12,428,875	6,389,857	6,039,018	4,850,756	340,857	847,405
Fish and Wildlife, Department of	690,820	658,708	32,112	32,112	0	0
Forestry, Department of	1,281,242	169,714	1,111,528	1,111,528	0	0
Geology and Mineral Industries, Department of	4,685,127	4,645,128	39,999	39,999	0	0
Human Services, Department of	1,308,735	621,312	687,423	683,000	0	4,423
Transportation, Department of	2,705,721	294,995	2,410,726	2,333,421	25,003	52,302
Watershed Enhancement Board	1,757,230	0	1,757,230	650,696	315,854	790,680
Pennsylvania	102,958,404	2,992,367	99,966,037	71,251,200	7,743,779	20,971,058
Agriculture, Department of	852,734	0	852,734	810,234	0	42,500
Community and Economic Development, Department of	17,755,250	0	17,755,250	15,555,250	0	2,200,000
Conservation and Natural Resources, Department of	4,613,826	430,621	4,183,205	1,045,326	3,137,879	0
Environmental Protection, Department of	2,938,656	140,000	2,798,656	644,820	1,921,505	232,331
Fish and Boat Commission	60,901	49,000	11,901	0	0	11,901
Game Commission	1,597,758	1,423,829	173,929	140,929	33,000	0
Health, Department of	69,448,595	0	69,448,595	50,964,269	0	18,484,326
Transportation, Department of	5,690,684	948,917	4,741,767	2,090,372	2,651,395	0
Rhode Island	1,382,531	0	1,382,531	1,161,561	220,970	0
Economic Development Corporation	1,382,531	0	1,382,531	1,161,561	220,970	0
South Carolina	28,599,885	24,161,908	4,437,977	3,020,566	257,955	1,159,456
Agriculture, Department of	940,318	0	940,318	682,363	257,955	0
Natural Resources, Department of	23,521,908	23,521,908	0	0	0	0
Sea Grant Consortium	1,661,434	360,000	1,301,434	1,131,753	0	169,681
Transportation, Department of	2,476,225	280,000	2,196,225	1,206,450	0	989,775
South Dakota	4,607,427	424,407	4,183,020	3,408,853	593,488	180,679
Environment and Natural Resources, Department of	226,825	0	226,825	200,778	26,047	0
Game, Fish, and Parks, Department of	2,311,292	0	2,311,292	1,563,172	567,441	180,679
Transportation, Department of	2,069,310	424,407	1,644,903	1,644,903	0	0
Tennessee	3,881,687	129,100	3,752,587	3,752,587	0	0
Health, Department of	129,100	129,100	0	0	0	0
Transportation, Department of	3,752,587	0	3,752,587	3,752,587	0	0
Texas	49,381,346	4,763,897	44,617,449	30,940,587	2,915,264	10,761,598
Agriculture, Department of	1,847,975	0	1,847,975	1,847,975	0	0

TABLE 12. State agency expenditures by department, state, and type of performer: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Internal performers	External performers			
			Total R&D	Academic	Companies or individuals	Other performers <sup>a</sup>
Environmental Quality, Commission on	14,763,819	0	14,763,819	4,262,509	389,407	10,111,903
Health and Human Services Commission	123,000	123,000	0	0	0	0
Parks and Wildlife, Department of	8,130,217	2,891,717	5,238,500	3,324,241	1,914,259	0
Transportation, Department of	22,535,124	1,749,180	20,785,944	20,785,944	0	0
Water Development Board	1,981,211	0	1,981,211	719,918	611,598	649,695
Utah	26,442,711	10,715,649	15,727,062	15,727,062	0	0
Health, Department of	96,476	96,476	0	0	0	0
Natural Resources, Department of	8,000,000	8,000,000	0	0	0	0
Science Technology and Research Initiative	15,727,062	0	15,727,062	15,727,062	0	0
Transportation, Department of	2,619,173	2,619,173	0	0	0	0
Vermont	738,707	738,707	0	0	0	0
Transportation, Agency of	738,707	738,707	0	0	0	0
Virginia	17,929,519	8,759,184	9,170,335	7,960,679	1,187,932	21,724
Agriculture and Consumer Services, Department of	806,328	0	806,328	784,604	0	21,724
Consolidated Lab Services, Division of	810,000	810,000	0	0	0	0
Corrections, Department of	477,250	477,250	0	0	0	0
Criminal Justice Services, Department of	447,000	447,000	0	0	0	0
Forensic Science, Department of	227,630	227,630	0	0	0	0
Innovative Technology, Center for	1,642,061	493,253	1,148,808	0	1,148,808	0
Marine Resources Commission	3,184,779	0	3,184,779	3,184,779	0	0
Natural History, Museum of	821,185	821,185	0	0	0	0
Social Services, Department of	70,000	70,000	0	0	0	0
Transportation, Department of	9,443,286	5,412,866	4,030,420	3,991,296	39,124	0
Washington	14,528,728	6,940,712	7,588,016	6,759,910	550,710	277,396
Agriculture, Department of	179,149	0	179,149	116,246	0	62,903
Beef Commission	2,357	0	2,357	2,357	0	0
Fish and Wildlife, Department of	6,993,436	6,840,712	152,724	152,724	0	0
Grain Commission	3,321,400	0	3,321,400	3,321,400	0	0
Potato Commission	833,191	100,000	733,191	680,191	53,000	0
Puget Sound Partnership	761,124	0	761,124	546,631	0	214,493
Red Raspberry Commission	152,941	0	152,941	152,941	0	0
Transportation, Department of	2,285,130	0	2,285,130	1,787,420	497,710	0
West Virginia	10,357,006	2,555,126	7,801,880	7,257,503	0	544,377
Environmental Protection, Department of	1,554,769	714,369	840,400	296,023	0	544,377
Higher Education Policy Commission	7,602,237	640,757	6,961,480	6,961,480	0	0
Highways, Department of	1,200,000	1,200,000	0	0	0	0
Wisconsin	24,942,415	5,329,091	19,613,324	3,978,419	13,511,285	2,123,620
Commerce, Department of	12,406,980	0	12,406,980	200,000	11,891,980	315,000
Natural Resources, Department of	7,505,290	4,879,875	2,625,415	2,111,695	207,635	306,085
Transportation, Department of	5,030,145	449,216	4,580,929	1,666,724	1,411,670	1,502,535
Wyoming	7,194,765	4,670,112	2,524,653	1,121,719	1,290,764	112,170
Agriculture, Department of	264,295	0	264,295	152,125	0	112,170
Corrections, Department of	89,000	48,000	41,000	41,000	0	0
Employment, Research and Planning, Department of	1,443,377	1,443,377	0	0	0	0
Environmental Quality, Department of	150,000	0	150,000	150,000	0	0
Game and Fish Department	1,325,668	661,420	664,248	603,599	60,649	0
Geological Survey	2,165,681	1,827,100	338,581	13,631	324,950	0
Transportation, Department of	1,756,744	690,215	1,066,529	161,364	905,165	0

<sup>a</sup> Includes federal government; nonprofit organizations; city, county, regional, or other local governments; other departments/agencies within state; and other state governments.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

TABLE 13. R&D expenditures by department, state, and type of R&D: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
United States	1,210,113,524	66,748,642	318,359,498	284,144,944	243,798,130	297,062,310
Alabama	12,929,167	0	7,694,078	0	3,485,318	1,749,771
Conservation and Natural Resources, Department of	3,286,899	0	2,423,899	0	0	863,000
Forensic Science, Department of	301,434	0	0	0	0	301,434
Geological Survey	2,287,062	0	1,701,725	0	0	585,337
Marine Environmental Sciences Consortium	3,568,454	0	3,568,454	0	0	0
Transportation, Department of	3,485,318	0	0	0	3,485,318	0
Alaska	7,741,467	15,000	6,449,300	0	1,277,167	0
Fish and Game, Department of	1,807,000	0	1,807,000	0	0	0
Natural Resources, Department of	4,657,300	15,000	4,642,300	0	0	0
Transportation and Public Facilities, Department of	1,277,167	0	0	0	1,277,167	0
Arizona	21,483,423	220,751	6,705,485	11,775,750	2,624,700	156,737
Agriculture, Department of	220,751	220,751	0	0	0	0
Biomedical Research Commission	11,748,000	0	0	11,748,000	0	0
Environmental Quality, Department of	349,330	0	349,330	0	0	0
Game and Fish Department	4,988,520	0	4,988,520	0	0	0
Geological Survey	827,122	0	692,535	0	0	134,587
Health Services, Department of	27,750	0	0	27,750	0	0
Juvenile Corrections, Department of	19,838	0	0	0	0	19,838
Schools for the Deaf and Blind	2,312	0	0	0	0	2,312
Transportation, Department of	3,299,800	0	675,100	0	2,624,700	0
Arkansas	11,765,900	7,056,169	345,832	0	881,000	3,482,899
Beef Council	107,743	107,743	0	0	0	0
Catfish Promotion Board	44,482	44,482	0	0	0	0
Corn and Grain Sorghum Promotion Board	515,125	515,125	0	0	0	0
Forestry Commission	300,686	300,686	0	0	0	0
Game and Fish Commission	345,832	0	345,832	0	0	0
Highway and Transportation Department	881,000	0	0	0	881,000	0
Rice Research and Promotion Board	2,600,000	2,600,000	0	0	0	0
Science and Technology Authority	4,833,430	1,350,531	0	0	0	3,482,899
Soybean Promotion Board	1,800,000	1,800,000	0	0	0	0
Wheat Promotion Board	337,602	337,602	0	0	0	0
California	146,793,247	6,235,149	23,701,098	0	40,057,000	76,800,000
Energy Commission	88,700,000	0	11,900,000	0	0	76,800,000
Food and Agriculture, Department of	7,587,842	5,485,149	2,102,693	0	0	0
Transportation, Department of	40,057,000	0	0	0	40,057,000	0
Water Resources, Department of	10,448,405	750,000	9,698,405	0	0	0
Colorado	14,849,581	416,336	8,317,796	4,029,968	1,424,481	661,000
Economic Development, Office of	2,475,000	250,000	0	2,225,000	0	0
Natural Resources, Department of	8,134,132	116,336	8,017,796	0	0	0
Public Health and Environment, Department of	1,754,968	0	0	1,754,968	0	0
Public Safety, Department of	661,000	0	0	0	0	661,000
Transportation, Department of	1,824,481	50,000	300,000	50,000	1,424,481	0
Connecticut	27,088,088	1,378,304	5,814,050	15,904,192	3,777,288	214,254
Agricultural Experiment Station	8,556,478	1,231,478	4,100,000	3,225,000	0	0
Agriculture, Department of	140,714	140,714	0	0	0	0
Children and Families, Department of	288,151	0	0	73,897	0	214,254
Environmental Protection, Department of	1,456,308	6,112	1,450,196	0	0	0
Mental Health and Addiction Services, Department of	3,304,437	0	0	3,304,437	0	0
Public Health, Department of	9,300,858	0	0	9,300,858	0	0
Transportation, Department of	4,041,142	0	263,854	0	3,777,288	0

TABLE 13. R&D expenditures by department, state, and type of R&D: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
Delaware	2,066,752	0	1,516,752	200,000	250,000	100,000
Agriculture, Department of	83,190	0	83,190	0	0	0
Economic Development Office	300,000	0	0	200,000	0	100,000
Geological Survey	823,128	0	823,128	0	0	0
Natural Resources and Environmental Control, Department of	610,434	0	610,434	0	0	0
Transportation, Department of	250,000	0	0	0	250,000	0
District of Columbia	487,411	0	0	487,411	0	0
Health, Department of	487,411	0	0	487,411	0	0
Florida	66,513,756	19,410,440	17,934,886	18,478,377	9,830,053	860,000
Agriculture and Consumer Services, Department of	9,346,686	6,758,977	2,587,709	0	0	0
Citrus, Department of	12,171,000	12,171,000	0	0	0	0
Environmental Protection, Department of	8,237,640	480,463	7,057,177	0	0	700,000
Fish and Wildlife Conservation Commission	8,290,000	0	8,290,000	0	0	0
Health, Department of	18,180,877	0	0	18,180,877	0	0
Space Florida	457,500	0	0	297,500	0	160,000
Transportation, Department of	9,830,053	0	0	0	9,830,053	0
Georgia	6,662,887	0	0	0	4,162,887	2,500,000
Herty Advanced Materials Development Center	3,500,000	0	0	0	1,000,000	2,500,000
Transportation, Department of	3,162,887	0	0	0	3,162,887	0
Hawaii	13,976,364	233,394	4,497,068	0	2,339,180	6,906,722
Agriculture, Department of	32,000	32,000	0	0	0	0
Business Economic Development, Department of	7,196,722	0	0	0	290,000	6,906,722
Land and Natural Resources, Department of	4,698,462	201,394	4,497,068	0	0	0
Transportation, Department of	2,049,180	0	0	0	2,049,180	0
Idaho	6,052,058	1,352,291	3,381,390	0	1,318,377	0
Agriculture, Department of	56,200	56,200	0	0	0	0
Barley Commission	109,594	109,594	0	0	0	0
Bean Commission	59,462	59,462	0	0	0	0
Environmental Quality, Department of	91,190	0	91,190	0	0	0
Fish and Game, Department of	587,000	0	587,000	0	0	0
Potato Commission	643,000	643,000	0	0	0	0
Transportation, Department of	1,318,377	0	0	0	1,318,377	0
Water Resources, Department of	2,703,200	0	2,703,200	0	0	0
Wheat Commission	484,035	484,035	0	0	0	0
Illinois	19,656,490	18,096	9,325,324	4,107,400	5,369,057	836,613
Commerce and Economic Opportunity, Department of	94,436	18,096	56,800	0	0	19,540
Natural Resources, Department of	10,085,597	0	9,268,524	0	0	817,073
Public Health, Department of	4,107,400	0	0	4,107,400	0	0
Transportation, Department of	5,369,057	0	0	0	5,369,057	0
Indiana	47,549,928	0	1,821,645	20,304,740	4,000,000	21,423,543
Criminal Justice Institute	205,000	0	0	0	0	205,000
Economic Development Corporation	41,523,283	0	0	20,304,740	0	21,218,543
Natural Resources, Department of	1,821,645	0	1,821,645	0	0	0
Transportation, Department of	4,000,000	0	0	0	4,000,000	0
Iowa	11,284,860	0	0	0	6,463,700	4,821,160
Energy Independence, Office of	3,894,451	0	0	0	0	3,894,451
Lottery, Department of	175,059	0	0	0	0	175,059
Revenue, Department of	751,650	0	0	0	0	751,650
Transportation, Department of	6,463,700	0	0	0	6,463,700	0
Kansas	12,305,385	784,957	365,000	1,040,411	7,416,636	2,698,381
Technology Enterprise Corporation	4,184,830	0	0	1,040,411	446,038	2,698,381

TABLE 13. R&D expenditures by department, state, and type of R&D: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
Transportation, Department of	6,970,598	0	0	0	6,970,598	0
Wheat Commission	784,957	784,957	0	0	0	0
Wildlife and Parks, Department of	365,000	0	365,000	0	0	0
Kentucky	13,938,692	0	2,875,387	3,150,948	4,228,240	3,684,117
Energy Policy, Governor's Office for	3,637,000	0	0	0	0	3,637,000
Environmental Education Council	47,117	0	0	0	0	47,117
Fish and Wildlife Resources, Department of	2,690,029	0	2,690,029	0	0	0
Highways, Department of	4,228,240	0	0	0	4,228,240	0
Natural Resources, Department of	558	0	558	0	0	0
Nature Preserves Commission	184,800	0	184,800	0	0	0
Public Health, Department of	3,150,948	0	0	3,150,948	0	0
Louisiana	8,426,835	0	1,708,953	0	6,717,882	0
Environmental Quality, Department of	141,357	0	141,357	0	0	0
Transportation and Development, Department of	6,717,882	0	0	0	6,717,882	0
Wildlife and Fisheries, Department of	1,567,596	0	1,567,596	0	0	0
Maine	6,400,019	501,243	1,969,352	1,187,173	563,379	2,178,872
Conservation, Department of	408,100	10,000	398,100	0	0	0
Drug Enforcement Agency	8,685	0	0	0	0	8,685
Environmental Protection, Department of	550,000	0	550,000	0	0	0
Fire Marshal's Office	3,963	0	0	0	0	3,963
Marine Resources, Department of	734,693	0	734,693	0	0	0
Technology Institute	4,131,199	491,243	286,559	1,187,173	0	2,166,224
Transportation, Department of	563,379	0	0	0	563,379	0
Maryland	21,093,331	336,650	6,853,050	8,801,328	2,209,280	2,893,023
Business and Economic Development, Department of	1,305,523	0	0	0	0	1,305,523
Health and Mental Hygiene, Department of	8,701,328	0	0	8,701,328	0	0
Natural Resources, Department of	6,220,000	0	6,220,000	0	0	0
Technology Development Corporation	2,137,500	300,000	150,000	100,000	0	1,587,500
Transportation, Department of	2,728,980	36,650	483,050	0	2,209,280	0
Massachusetts	4,358,097	13,193	1,309,059	2,305,655	629,000	101,190
Conservation and Recreation, Department of	240,091	13,193	226,898	0	0	0
Environmental Protection, Department of	421,661	0	421,661	0	0	0
Fish and Game, Department of	660,500	0	660,500	0	0	0
Mental Health, Department of	2,208,037	0	0	2,208,037	0	0
Technology Collaborative	198,808	0	0	97,618	0	101,190
Transportation Planning, Office of	629,000	0	0	0	629,000	0
Michigan	14,950,709	206,282	8,641,326	0	6,103,101	0
Agriculture, Department of	206,282	206,282	0	0	0	0
Natural Resources, Department of	8,642,826	0	8,641,326	0	1,500	0
Transportation, Department of	6,101,601	0	0	0	6,101,601	0
Minnesota	16,655,913	987,608	1,566,712	0	13,908,648	192,945
Agriculture, Department of	1,918,097	987,608	737,544	0	0	192,945
Forest Resources Council	130,342	0	130,342	0	0	0
Pollution Control Agency	698,826	0	698,826	0	0	0
Transportation, Department of	13,908,648	0	0	0	13,908,648	0
Mississippi	9,731,915	0	6,255,823	0	1,993,130	1,482,962
Innovative Geospatial Solutions, Enterprise for	5,075,000	0	4,150,000	0	475,000	450,000
Technology Alliance	1,032,962	0	0	0	0	1,032,962
Transportation, Department of	1,518,130	0	0	0	1,518,130	0
Wildlife, Fisheries, and Parks, Department of	2,105,823	0	2,105,823	0	0	0

TABLE 13. R&D expenditures by department, state, and type of R&D: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
Missouri	16,070,147	168,096	10,133,435	272,900	5,495,716	0
Conservation, Department of	9,394,690	0	9,394,690	0	0	0
Health and Senior Services, Department of	272,900	0	0	272,900	0	0
Natural Resources, Department of	906,841	168,096	738,745	0	0	0
Transportation, Department of	5,495,716	0	0	0	5,495,716	0
Montana	7,200,442	1,199,654	1,871,061	822,627	876,558	2,430,542
Agriculture, Department of	1,285,830	871,160	414,670	0	0	0
Commerce, Department of	3,553,037	328,494	226,272	822,627	0	2,175,644
Environmental Quality, Department of	30,790	0	30,790	0	0	0
Fish, Wildlife, and Parks, Department of	1,093,129	0	1,093,129	0	0	0
Transportation, Department of	1,237,656	0	106,200	0	876,558	254,898
Nebraska	4,474,695	1,276,949	2,063,981	35,043	1,014,814	83,908
Agriculture, Department of	316,067	316,067	0	0	0	0
Corn Board	515,746	378,339	62,364	35,043	0	40,000
Dry Bean Commission	125,000	125,000	0	0	0	0
Ethanol Board	59,051	0	15,143	0	0	43,908
Grain Sorghum Board	5,200	5,200	0	0	0	0
Natural Resources, Department of	1,986,474	0	1,986,474	0	0	0
Roads, Department of	1,014,814	0	0	0	1,014,814	0
Wheat Board	452,343	452,343	0	0	0	0
Nevada	1,510,607	0	0	0	1,510,607	0
Transportation, Department of	1,510,607	0	0	0	1,510,607	0
New Hampshire	2,186,780	38,005	157,372	0	1,167,264	824,139
Agriculture, Markets, and Food, Department of	38,005	38,005	0	0	0	0
Education, Department of	324,139	0	0	0	0	324,139
Environmental Services, Department of	2,372	0	2,372	0	0	0
Resources and Economic Development, Department of	655,000	0	155,000	0	0	500,000
Transportation, Department of	1,167,264	0	0	0	1,167,264	0
New Jersey	15,146,838	0	2,974,000	7,709,498	4,153,340	310,000
Autism, Council for Research/Treatment of	2,792,455	0	0	2,792,455	0	0
Brain Injury Research, Commission on	1,444,000	0	0	1,444,000	0	0
Environmental Protection, Department of	3,814,000	0	2,854,000	650,000	0	310,000
Science and Technology, Commission on	605,000	0	120,000	485,000	0	0
Spinal Cord Research, Commission on	2,338,043	0	0	2,338,043	0	0
Transportation, Department of	4,153,340	0	0	0	4,153,340	0
New Mexico	1,655,529	0	0	0	1,655,529	0
Transportation, Department of	1,655,529	0	0	0	1,655,529	0
New York	126,122,333	1,869,720	22,642,345	46,038,312	12,445,993	43,125,963
Agriculture and Markets, Department of	3,487,006	987,006	0	2,500,000	0	0
Energy Research and Development Authority	42,170,407	774,714	13,025,991	330,312	7,796,776	20,242,614
Environmental Conservation, Department of	5,851,093	108,000	5,635,093	108,000	0	0
Health, Department of	32,200,000	0	0	32,200,000	0	0
Science, Technology and Innovation, Foundation for	35,283,349	0	1,500,000	10,900,000	0	22,883,349
Transportation, Department of	7,130,478	0	2,481,261	0	4,649,217	0
North Carolina	51,404,202	10,568,425	30,919,615	0	9,000,000	916,162
Agriculture and Consumer Services, Department of	10,092,515	10,038,175	0	0	0	54,340
Environment and Natural Resources, Department of	30,811,687	530,250	29,919,615	0	0	361,822
Transportation, Department of	10,500,000	0	1,000,000	0	9,000,000	500,000
North Dakota	16,423,175	935,619	587,710	107,368	963,611	13,828,867
Agriculture, Department of	30,245	30,245	0	0	0	0
Health, Department of	7,368	0	0	7,368	0	0

TABLE 13. R&D expenditures by department, state, and type of R&D: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
Lignite Research Council	12,500,000	0	0	0	0	12,500,000
Mineral Resources, Department of	238,135	0	12,060	0	40,166	185,909
Oil and Gas Research Program	1,034,458	0	480,000	0	0	554,458
Renewable Energy Research Program	588,500	0	0	0	0	588,500
Soybean Council	706,798	414,998	81,800	100,000	110,000	0
Transportation, Department of	813,445	0	0	0	813,445	0
Water Commission	13,850	0	13,850	0	0	0
Wheat Commission	490,376	490,376	0	0	0	0
Ohio	121,851,617	0	6,306,109	41,320,535	10,308,223	63,916,750
Air Quality Development Authority	3,503,551	0	3,503,551	0	0	0
Development, Department of	111,125,353	0	765,000	41,320,535	5,702,500	63,337,318
Education, Department of	456,654	0	0	0	0	456,654
Natural Resources, Department of	2,160,336	0	2,037,558	0	0	122,778
Transportation, Department of	4,605,723	0	0	0	4,605,723	0
Oklahoma	15,930,878	1,610,660	2,552,285	5,796,835	3,818,308	2,152,790
Science and Technology, Center for the Advancement of	8,962,658	854,878	205,622	5,796,835	80,424	2,024,899
Transportation, Department of	4,120,111	254,336	0	0	3,737,884	127,891
Wheat Commission	501,446	501,446	0	0	0	0
Wildlife Conservation, Department of	2,346,663	0	2,346,663	0	0	0
Oregon	12,428,875	134,857	8,279,562	1,008,735	2,705,721	300,000
Fish and Wildlife, Department of	690,820	0	690,820	0	0	0
Forestry, Department of	1,281,242	134,857	1,146,385	0	0	0
Geology and Mineral Industries, Department of	4,685,127	0	4,685,127	0	0	0
Human Services, Department of	1,308,735	0	0	1,008,735	0	300,000
Transportation, Department of	2,705,721	0	0	0	2,705,721	0
Watershed Enhancement Board	1,757,230	0	1,757,230	0	0	0
Pennsylvania	102,958,404	852,734	9,395,553	73,403,595	5,815,684	13,490,838
Agriculture, Department of	852,734	852,734	0	0	0	0
Community and Economic Development, Department of	17,755,250	0	2,600,000	3,955,000	0	11,200,250
Conservation and Natural Resources, Department of	4,613,826	0	4,613,826	0	0	0
Environmental Protection, Department of	2,938,656	0	523,068	0	125,000	2,290,588
Fish and Boat Commission	60,901	0	60,901	0	0	0
Game Commission	1,597,758	0	1,597,758	0	0	0
Health, Department of	69,448,595	0	0	69,448,595	0	0
Transportation, Department of	5,690,684	0	0	0	5,690,684	0
Rhode Island	1,382,531	0	397,587	984,944	0	0
Economic Development Corporation	1,382,531	0	397,587	984,944	0	0
South Carolina	28,599,885	421,699	25,183,342	0	2,476,225	518,619
Agriculture, Department of	940,318	421,699	0	0	0	518,619
Natural Resources, Department of	23,521,908	0	23,521,908	0	0	0
Sea Grant Consortium	1,661,434	0	1,661,434	0	0	0
Transportation, Department of	2,476,225	0	0	0	2,476,225	0
South Dakota	4,607,427	0	2,538,117	0	2,069,310	0
Environment and Natural Resources, Department of	226,825	0	226,825	0	0	0
Game, Fish, and Parks, Department of	2,311,292	0	2,311,292	0	0	0
Transportation, Department of	2,069,310	0	0	0	2,069,310	0
Tennessee	3,881,687	0	0	129,100	3,752,587	0
Health, Department of	129,100	0	0	129,100	0	0
Transportation, Department of	3,752,587	0	0	0	3,752,587	0
Texas	49,381,346	1,972,975	24,750,247	123,000	22,535,124	0
Agriculture, Department of	1,847,975	1,847,975	0	0	0	0



TABLE 13. R&D expenditures by department, state, and type of R&D: FY 2009  
(Dollars)

Department or agency	All R&D expenditures	Agriculture	Environment and natural resources	Health	Transportation	Other
Environmental Quality, Commission on	14,763,819	0	14,763,819	0	0	0
Health and Human Services Commission	123,000	0	0	123,000	0	0
Parks and Wildlife, Department of	8,130,217	0	8,130,217	0	0	0
Transportation, Department of	22,535,124	0	0	0	22,535,124	0
Water Development Board	1,981,211	125,000	1,856,211	0	0	0
Utah	26,442,711	1,000,000	6,149,899	10,409,824	800,000	8,082,988
Health, Department of	96,476	0	0	96,476	0	0
Natural Resources, Department of	8,000,000	1,000,000	4,000,000	0	0	3,000,000
Science Technology and Research Initiative	15,727,062	0	1,949,899	10,313,348	0	3,463,815
Transportation, Department of	2,619,173	0	200,000	0	800,000	1,619,173
Vermont	738,707	0	0	0	738,707	0
Transportation, Agency of	738,707	0	0	0	738,707	0
Virginia	17,929,519	806,328	4,005,964	810,000	9,443,286	2,863,941
Agriculture and Consumer Services, Department of	806,328	806,328	0	0	0	0
Consolidated Lab Services, Division of	810,000	0	0	810,000	0	0
Corrections, Department of	477,250	0	0	0	0	477,250
Criminal Justice Services, Department of	447,000	0	0	0	0	447,000
Forensic Science, Department of	227,630	0	0	0	0	227,630
Innovative Technology, Center for	1,642,061	0	0	0	0	1,642,061
Marine Resources Commission	3,184,779	0	3,184,779	0	0	0
Natural History, Museum of	821,185	0	821,185	0	0	0
Social Services, Department of	70,000	0	0	0	0	70,000
Transportation, Department of	9,443,286	0	0	0	9,443,286	0
Washington	14,528,728	4,462,763	7,754,560	26,275	2,285,130	0
Agriculture, Department of	179,149	179,149	0	0	0	0
Beef Commission	2,357	2,357	0	0	0	0
Fish and Wildlife, Department of	6,993,436	0	6,993,436	0	0	0
Grain Commission	3,321,400	3,321,400	0	0	0	0
Potato Commission	833,191	833,191	0	0	0	0
Puget Sound Partnership	761,124	0	761,124	0	0	0
Red Raspberry Commission	152,941	126,666	0	26,275	0	0
Transportation, Department of	2,285,130	0	0	0	2,285,130	0
West Virginia	10,357,006	0	1,804,769	0	950,000	7,602,237
Environmental Protection, Department of	1,554,769	0	1,554,769	0	0	0
Higher Education Policy Commission	7,602,237	0	0	0	0	7,602,237
Highways, Department of	1,200,000	0	250,000	0	950,000	0
Wisconsin	24,942,415	0	15,201,270	3,373,000	5,030,145	1,338,000
Commerce, Department of	12,406,980	0	7,695,980	3,373,000	0	1,338,000
Natural Resources, Department of	7,505,290	0	7,505,290	0	0	0
Transportation, Department of	5,030,145	0	0	0	5,030,145	0
Wyoming	7,194,765	264,295	3,641,349	0	1,756,744	1,532,377
Agriculture, Department of	264,295	264,295	0	0	0	0
Corrections, Department of	89,000	0	0	0	0	89,000
Employment, Research and Planning, Department of	1,443,377	0	0	0	0	1,443,377
Environmental Quality, Department of	150,000	0	150,000	0	0	0
Game and Fish Department	1,325,668	0	1,325,668	0	0	0
Geological Survey	2,165,681	0	2,165,681	0	0	0
Transportation, Department of	1,756,744	0	0	0	1,756,744	0

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D.

## Appendix A. Technical Notes

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The National Science Foundation (NSF) Survey of State Government R&D measures the extent of research and development activity performed and funded by each of the nation's 50 states, the District of Columbia, and Puerto Rico.[1] Results of the survey are useful to a variety of data users interested in R&D performance, including the National Science Board; the Office of Management and Budget; the Office of Science and Technology Policy and other science policy makers; institutional researchers; and private organizations.

### Scope of Survey

The survey covered state government departments, agencies, independent commissions, and other entities determined to be state run (defined as falling under the governor's jurisdiction). Several industry-specific state commissions, which are generally chartered by state legislatures but administered independently, were considered state agencies and are included in the survey. The survey excluded state-run colleges and universities, which are included as part of the NSF Survey of R&D Expenditures at Universities and Colleges, as well as state-run laboratories or experiment stations controlled by state universities. It also excluded entities determined to be nonprofit or private, as defined by Census Bureau government classification. Although the universe of interest covered all state-run entities except state-run colleges and universities, evidence showed that some state agencies were not involved in R&D activity and did not need to be surveyed.

### Survey Methodology

Using input from potential state coordinators, agency respondents, and R&D experts, survey staff developed a Web-based survey instrument for both the central state contacts and the state agency respondents. The survey was launched in June 2010 with a letter to governors asking for each state's participation.

Working with Census Bureau staff, governors' offices identified a state coordinator in each state to assist in collecting data from state agencies. Each coordinator was given a list of agencies in his or her state and asked to send the survey to any other state agencies that the coordinator believed could have conducted R&D. The list consisted of agencies that were preselected by the Census Bureau and NSF before the FY 2006 survey, as well as any agencies that had been added by the state coordinator over the previous two survey cycles. For the first time, state coordinators were also able to delete an agency that was preselected. They did so by informing Census Bureau staff that the agency in question funded or performed no R&D and would not in the future; 4 agencies were deleted through this process. Of the final count of 438 agencies for the FY 2009 survey, 392 were agencies that the coordinators provided initially, and 46 were those that coordinators added during the survey.

Before officially submitting the data for their state, coordinators performed a final verification of aggregated agency data. All responses, including the initial agency data submissions and final state coordinator verifications, were received via the Web form or e-mail. Basic logical edit checks, review of respondent comments, and comparisons of data from previous surveys allowed staff to detect data errors and work with state respondents to correct them.

### Survey Instrument

The respondent questionnaire consisted of one screening and five R&D expenditure data questions. The five R&D expenditure questions contained a total of 11 items.

**Screening Question:** The purpose of this question was twofold: (1) to reduce the burden on agency respondents who did not have qualifying R&D expenditures during FY 2009, and (2) to further clarify the scope of the survey for those agencies with R&D expenditure data to

report. Respondents who answered "No" to the screening question were not required to complete the remaining questions.

**Question 1:** The first seven data items were grouped as one question on the survey form. The purpose of this question was to allow the respondent to report all R&D expenditures for his or her agency, with the exception of R&D plant expenditures. The first three items were the R&D expenditures by the agency's internal performers (employees of the agency), broken out by source of funds (state, federal, and other). The next three items asked the respondent to report expenditures according to three types of external performers (academic performers, companies, and other). The final data item, the agency's total R&D expenditures, was calculated automatically as the respondent entered data, as a sum of the previous six items.

**Question 2:** This question asked respondents to report the total amount of basic research expenditures for their agency. This response could be less than or equal to the total R&D expenditures reported in Question 1.

**Question 3:** This question requested total R&D expenditures from federal sources, regardless of whether the R&D was performed internally or externally. This response could be less than or equal to the total expenditures reported in Question 1.

**Question 4:** This question, new to the survey for FY 2009, asked respondents to distribute their total R&D expenditures among five types of R&D (agriculture, environmental and natural resources, health, transportation, and other).

**Question 5:** The final question requested that respondents report expenditures on construction or acquisition of R&D facilities during FY 2009. This item was requested as a separate figure from the previous four questions on the survey to avoid skewing the total R&D expenditures amount with large, one-time agency expenditures for construction projects or the purchase of land or buildings.

The instrument also allowed respondents to provide comments for each question.

### **Data Limitations**

State coordinators in Iowa, Nevada, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, and the District of Columbia did not verify the aggregated agency data. At least one agency in each of the following states did not respond to the survey: Iowa (1), Nevada (1), New Jersey (1), New Mexico (4), Ohio (2), Oklahoma (2), Oregon (2), Rhode Island (2), and the District of Columbia (1).

Although every effort was made to exclude out-of-scope amounts, it is likely that some reported data include expenditures for non-R&D activities, such as commercialization, environmental testing, or routine survey work.

### **Data Comparability**

The current NSF Survey of State Government R&D has been conducted for FYs 2006, 2007, and 2009. 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 survey, survey respondent may revise their prior-year data, and (2) NSF reviews data for prior years for consistency with current-year responses, and if necessary may revise these data in consultation with respondents.

The previous NSF Survey of State Government R&D collected FY 1995 data. Prior to that effort, surveys were conducted for FYs 1987 and 1988, as well as two efforts in the 1970s. Because of differences in the survey populations, definition of covered R&D activities, and collection methods, the results of those surveys are not comparable with the statistics collected on the FYs 2006, 2007, and 2009 Survey of State Government R&D.

State R&D totals display considerable volatility between the surveys. Although total state agency R&D expenditures increased by 7% between FYs 2007 and 2009, 28 states reported overall increases, and 22 states plus the District of Columbia reported overall declines. Three states (Idaho, New Mexico, and Utah) reported combined agency R&D increases of more than 100% from FY 2007 to FY 2009; 6 states (Maine, Michigan, Vermont, the District of Columbia, West Virginia, and Wyoming) reported combined agency R&D decreases of 50% or more.

State agency expenditures are influenced by several national and state-specific factors, and large changes (positive or negative) are not unusual, especially for discretionary spending items, such as R&D. However, given that states have comparatively little experience in tracking and measuring R&D, it is likely that some portion of the reported changes reflects measurement and coverage errors. Census Bureau/NSF staff conducted follow-up calls for agencies with data changes of plus or minus 50% and at least \$1 million between FYs 2007 and 2009 to ensure the accuracy of the FY 2009 survey data.

The data exclude R&D expenditures of states that did not flow through state agencies' budgets. The state totals do not include direct appropriations from state legislatures to colleges and universities. In FY 2009, universities and colleges reported expending \$3.6 billion on separately budgeted R&D activities that were funded from all sources of state and local government support. State agencies reported \$0.5 billion in expenditures used to support R&D performance by academic institutions. A major factor for the difference between totals reported in the Academic and the State R&D surveys is direct appropriations/grants to state-run universities that are included in the former, but not the latter. Another likely factor is the exclusion of R&D at agricultural experiment stations from the state survey totals.

### **Response Rates**

Two response rates were calculated for the FY 2009 Survey of State Government R&D, one for agency-level responders and one for official data verification at the state level. All states and District of Columbia participated in the survey; however, only 42 out of 51 (82.4%) officially verified final state data (note: Unlike for previous years, Puerto Rico is not included in the FY 2009 survey totals). The eight states and District of Columbia that did not officially verify data had some or all agencies submit data. The final agency response was 422 out of 438 (96.3%). Table A-1 displays final agency response rates, as well as counts of agencies that identified themselves as having qualifying R&D expenditures for FY 2009.

### **National Totals and Imputations**

Statistical methods were not used to account for nonresponding agencies. All state and national totals are aggregates of reported agency data.

### **Definitions**

Survey respondents were given the following definition of R &D and other important terms:

*Research and development* is creative work conducted systematically to (1) extend scientific knowledge; or (2) devise new or improved applications, including materials, products, devices, processes, systems, or services.

Sources and examples of R&D funding include the following:

- **State.** State appropriations and grants, tobacco settlement funds, state lottery proceeds.
- **Federal government.** Grants, contracts, and appropriations from the U.S. government.
- **Other.** Grants and contracts from companies; nonprofit organizations (including foundations); other state governments; and city, county, regional, or other local governments.

*Basic research* is conducted primarily to acquire new knowledge without any specific product or process in mind.

*Construction and acquisition of facilities used primarily for R&D* includes major costs for new construction, major renovations, and purchase of land or buildings to be used primarily as R&D facilities.

*Performers—external* are those outside the department/agency who perform R&D under the administrative oversight or control of that department/agency. This may include projects for the department/agency, as well as its extramural research programs. External performers include the following:

- Academic institutions. Public or private universities and colleges.
- Companies and individuals. Includes those performers under contract for research projects or that received grants for research projects.
- Other. Nonprofit organizations, including foundations; other departments/agencies within the state; other state governments; city, county, regional, or other local governments; federal government.

*Performers—internal* are the department/agency's own employees who perform R&D and includes R&D performed by those employees and services performed by others in support of an internal R&D project (e.g., lab testing).

### **Data Availability**

Data from this and other NSF R&D surveys are available at <http://www.nsf.gov/statistics/>.

### **Technical Table**

Table

A-1 Final response rates and agencies reporting R&D to the survey: FY 2009

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### **Note**

[1] The District of Columbia and Puerto Rico are referred to as states in this report.

TABLE A-1. Final response rates and agencies reporting R&D to the survey: FY 2009

Agencies selected	Agencies surveyed	Responses		R&D reported	
		Agencies	Rate (%)	Agencies	% of responses
All agencies	438	422	96.3	251	59.5
Preselected	392	379	96.7	232	59.6
Added	46	43	93.5	19	58.1

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, FY 2009 Survey of State Government R&D Expenditures.

## Appendix B. Survey Materials

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- U.S. Census Bureau Director's letter "
- Survey Questionnaire "



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Economics and Statistics Administration**  
**U.S. Census Bureau**  
Washington, DC 20233-0001  
OFFICE OF THE DIRECTOR

June 25, 2010

The Honorable «GOVNAME»  
«GOVADDRESS1»  
«GOVADDRESS2»  
«GOVCITY», «GOVSTATE» «GOVZIP» «GOVZIP4»

Dear Governor «GOVLAST»:

I am writing to request that you appoint a coordinator for the *FY 2009 Survey of State Government Research and Development*. The U.S. Census Bureau is collaborating with the National Science Foundation (NSF) to collect research and development (R&D) expenditure information from the 50 states, the District of Columbia, and Puerto Rico. You may recall that your state participated in the FY 2006 and 2007 surveys. Your survey response will be compiled by the Census Bureau and forwarded to NSF, the federal agency charged with collecting and reporting national R&D statistics. These statistics are used to measure states' contributions to our nation's science and technology base, a building block of a strong U.S. economy.

Your state coordinator will have two critical roles. First, we ask the coordinator to confirm the names and contact information for your state departments and agencies that are most likely to contribute to R&D investments. These departments and agencies will receive the web survey questionnaire with five questions about R&D activities, which include both performing and funding R&D. Second, your coordinator serves as the authorizing official for your state's survey response after all departments and agencies complete their survey questionnaires. I am enclosing a copy of the FY 2009 survey questionnaire. An electronic copy is available at <http://harvester.census.gov/nsf/> under Survey Questions and Definitions (PDF).

Please contact Kenny Herrell, Census Bureau project manager for this survey, with your state coordinator selection by emailing [kenneth.herrell@census.gov](mailto:kenneth.herrell@census.gov) or calling 800-622-6193. For the FY 2007 survey, «MRMS» «CONTACTNAME» served as your state's survey coordinator.

Thank you in advance for your continuing help to complete a picture of our Nation's R&D expenditures by state governments.

Sincerely,

Robert M. Groves  
Director

Enclosure

cc: «CONTACTNAME»





# FY 2009 Survey of State Government R&D



## Reference Copy Only

Submit your survey responses at:

<http://harvester.census.gov/nsf>

**Survey Questions** [\(Click here\)](#)

**pages 2-6**

**Definitions and Examples** [\(Click here\)](#)

**pages 7-13**

The purpose of this survey is to measure your state's contributions toward scientific advancement and technological innovation. The results of this survey will be used to estimate national totals for R&D in conjunction with other data collected by the National Science Foundation from private industry, academic institutions, and the federal government.

OMB: 0607-0933

Expires: 04/30/2013

The U.S. Census Bureau is serving as the data collector for the National Science Foundation and your participation is voluntary. The authority for collection of this information is found under Title 13 U.S.C. Section 8(b).

# Survey Questions

## R&D Screener Question

**Did your department/agency do ANY of the following during FY 2009?** Your answer will determine whether you continue to the R&D Expenditure questions.

FY 2009 is your state's fiscal year ending in 2009.

- Had a division, branch, or office devoted to research or development
- Performed research or development activities using department/agency staff
- Funded research or development at another state or local government
- Funded universities or other nonprofit organizations to perform research or development activities
- Funded companies or individuals to perform research or development activities
- Performed or funded other research or development activities not specified above

Yes

No

If you select "No" your state survey coordinator will be notified that your department or agency does not have qualifying R&D activities for the FY 2009 survey.

**Note: You may provide comments for each question on the survey website.**

# R&D Expenditure Questions

## Question 1

**What were your department/agency R&D expenditures for FY 2009 by the following types of performers?**

- Include R&D from all sources, and report sources separately when your department/agency performs the R&D internally.
- Do NOT report expenditures for construction and acquisition of facilities used primarily for R&D; use Question 5.

See [Page 7](#) for R&D definitions and examples.

### Internal Performers

- R&D performed by your department's/agency's employees
- Services performed by others in support of an internal R&D project (e.g., lab testing)
- Administration/management of external R&D projects

Examples of expenditures:

- Salaries
- Equipment
- Benefits
- Indirect Costs
- Supplies
- Purchased Services
- Travel

### Expenditures by Internal Performers

### Sources of Expenditures

### Examples of Sources

\$

State Funds

State appropriations, state grants, tobacco settlement funds, lottery proceeds

\$

Federal Funds

Federal awards

\$

Other Funds

Funds from all other sources, such as: nonprofit organizations, companies, other state/local governments

### External Performers

- R&D done for your department/agency by:
- Academic institutions
  - Companies and individuals
  - Others

Examples of expenditures:

- Grants
- Payments for contracted R&D projects
- Reimbursable costs for R&D projects

**Exclude** pass-through grants for which you have no administrative oversight or control.

### Expenditures by External Performers

### Source of Expenditures

Academic Institutions

\$

All Funds (federal, state, other)

Companies and Individuals

\$

All Funds (federal, state, other)

Others

\$

All Funds (federal, state, other)

\$

**Total R&D Expenditures**

## R&D Expenditure Questions

### Question 2

How much of your total R&D expenditures reported in Question 1 were for basic research? You may provide an estimate, if necessary.

- **Basic research** is conducted primarily to acquire new knowledge without any specific product or process in mind.

See [Page 13](#) for examples that compare basic research, applied research, and development.

\$  Basic research expenditures (if none, enter "0")

**Note: You may provide comments for each question on the survey website.**

## R&D Expenditure Questions

### Question 3

How much of your total R&D expenditures reported in Question 1 were from federal funds? You may provide an estimate, if necessary.

- Include expenditures for internal and external performers
- Federal sources include grants, contracts, and appropriations from the United States government.
- **Exclude** any nonfederal matching amounts.

\$  R&D expenditures from federal funds (if none, enter "0")

**Note: You may provide comments for each question on the survey website.**

## R&D Expenditure Questions

### Question 4

How much of your total R&D expenditures reported in Question 1 were for each type of R&D below? You may provide an estimate, if necessary.

Expenditures	Type of R&D	Examples
\$ <input type="text"/>	Agriculture	Animal health Aquaculture Crop management Food and commodities Forestry
\$ <input type="text"/>	Environment and natural resources	Air and water quality Fish, game, and wildlife Marine and aquatic environments Geological survey Parks and preserves Soil and water conservation
\$ <input type="text"/>	Health	Biomedical research Mental health and addiction Public health
\$ <input type="text"/>	Transportation	Highways, roads and bridges Ports & waterways Public transportation Rail & freight Aviation
\$ <input type="text"/>	Other	R&D in other areas, such as: Corrections Education Energy Labor Public safety Social Services
\$ <input type="text"/>	<b>Total R&amp;D Expenditures</b>	

**Note: You may provide comments for each question on the survey website.**

## R&D Expenditure Questions

### Question 5

**What were your department/agency FY 2009 expenditures for construction and acquisition of facilities used primarily for R&D?**

Please include:

- Construction projects
- Major renovations of buildings
- Purchasing land or buildings

See [Page 7](#) for R&D definitions and examples.

\$  **Expenditures for construction and acquisition of facilities used primarily for R&D (if none, enter "0")**

**Note: You may provide comments for each question on the survey website.**

# Definitions & Examples

- A. [What does R&D mean?](#)
  - B. [What should be included/excluded in R&D?](#)
  - C. [What makes it R&D?](#)
  - D. [What are sources of R&D funding \(Question 1\)?](#)
  - E. [What does R&D performer mean \(Question 1\)?](#)
  - F. [What expenditures should be included/excluded?](#)
  - G. [What is the definition of Fiscal Year?](#)
  - H. [What is the definition of "construction and acquisition of facilities" \(Question 5\)?](#)
  - I. [What is the definition of basic research \(Question 2\)?](#)
- 

## A. What does R&D mean?

**Research and development (R&D)** is creative work conducted systematically to:

- 1) extend scientific knowledge, or
- 2) devise new or improved applications.

Applications can include materials, products, devices, processes, systems or services.

## B. What should be included/excluded in R&D?

<b><u>R&amp;D includes</u>, but is not limited to, activities that produce:</b>	<b><u>R&amp;D does NOT include:</u></b>
<ul style="list-style-type: none"><li>• Ideas that might be patented</li><li>• New or improved products or applications</li><li>• Findings that could be published in academic journals</li></ul>	<ul style="list-style-type: none"><li>• Program planning and evaluation</li><li>• Strategic planning</li><li>• Market research or analysis</li><li>• Economic / policy / feasibility studies</li><li>• Routine data collection / dissemination</li><li>• Management information systems</li><li>• Routine monitoring / testing</li><li>• General patient services</li><li>• Marketing products / services</li><li>• Business development services for new companies</li><li>• Protection of intellectual property (filing of patents, disclosures)</li><li>• Commercialization (includes promoting/producing the products/services from R&amp;D projects)</li></ul>



## Examples of classifying R&D in four situations

Activity	It IS R&D...	It is NOT R&D...
Technical assistance	You hire a technical consultant to test the disease resistance for the new fish species you are developing. (The assistance addresses the uncertainty of the science/technology aspects of the product or service.)	You hire a technical consultant to help you design the graphic design for the package to ship your new fish species when you begin offering it for sale to other states. (The assistance addresses the uncertainty of the marketing/production aspects of the product or service.)
Help for new businesses	You provide funding to new businesses to help them with the costs of building prototypes of products they are developing.	You provide funding for new technology companies to help them acquire basic skills to market their new products.
Consulting	You use a consultant to plan testing of a highway pavement material that your transportation research center is trying to develop.	You use a consultant to help you secure health and safety approval for your new pavement material.
Developing a product from your research	You hire a university research center to test a new type of grass you developed to test whether it will survive actual conditions along the coastline.	You hire a law firm to help you with the process for patenting the new grass that you developed.

## C. What makes it R&D?

What makes it R&D	When it is R&D	When it is NOT R&D
<p>R&amp;D is novel.</p> <ul style="list-style-type: none"> <li>• It increases our knowledge of the subject.</li> <li>• It hasn't been done before.</li> </ul>	<p>You are testing blood samples as part of a research project to find out the side effects of a new cancer treatment.</p>	<p>You are collecting information from samples of patients to estimate the incidence of chicken pox in the state's population.</p> <p>(You are using a standard approach to estimate the spread of chicken pox.)</p>
<p>R&amp;D creates solutions useful to others.</p> <ul style="list-style-type: none"> <li>• Others might benefit from the findings.</li> <li>• The findings can be generalized to other situations and locations.</li> </ul>	<p>You are testing a pavement on your highways that is currently used only at airports. Other states will want the results.</p>	<p>You are testing pavement on your state's highways to estimate how much you need to budget for pavement replacement over the next five years.</p> <p>(Other states will not benefit from your specific state information.)</p>
<p>The outcome of R&amp;D is uncertain.</p> <ul style="list-style-type: none"> <li>• The solution isn't obvious to an expert in that field.</li> </ul>	<p>Your research involves monitoring streams to determine whether a new program is increasing the population of a particular type of fish.</p>	<p>You are monitoring streams as part of plan to implement long-term monitoring for a particular type of fish.</p> <p>(The monitoring plan has already been tested and you are certain of the quality of the plan.)</p>

## D. What are sources of R&D funding (Question 1)?

Sources	Examples
State	State appropriations and grants, tobacco settlement funds, state lottery proceeds
Federal	Grants, contracts, and appropriations from the United States government
All other	Grants and contracts from: <ul style="list-style-type: none"> <li>• Companies</li> <li>• Nonprofit organizations, including foundations</li> <li>• Other state governments</li> <li>• City, county, regional, or other local governments</li> </ul>

## E. What does R&D performer mean (Question 1)?

**Performers** are the people who conduct the R&D.

<b>Internal Performers</b>	Those within your department/agency who perform R&D <ul style="list-style-type: none"> <li>• R&amp;D performed by your department's/agency's employees</li> <li>• Services performed by others in support of an internal R&amp;D project (e.g., lab testing)</li> <li>• Administration/management of external R&amp;D projects</li> </ul>
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<b>External Performers</b>	Those outside your department/agency who perform R&D under the administrative oversight or control of your department/agency. This may include projects for your department/agency, as well as your extramural research programs.
Academic institutions	Public or private universities and colleges
Companies and individuals	Companies or individuals under contract for research projects or that received grants for research projects
Others	Nonprofit organizations, including foundations Other departments/agencies within your state Other state governments City, county, regional, or other local governments Federal government

## F. What expenditures should be included/excluded?

**Expenditures** are amounts paid for current operations (Questions 1 through 4) and capital outlays (Question 5).

Respondents to this survey will be asked to report expenditures by performer of R&D. Please refer below for guidance on the types of expenditures to report for internal and external performers.

### Expenditures for your Department/Agency as Performer (Internal)

<b>Include:</b>	<b>Do NOT include:</b>
<ul style="list-style-type: none"><li>• Salaries, wages, and benefits</li><li>• Supplies</li><li>• Purchased services (e.g. lab testing)</li><li>• Travel</li><li>• Indirect or overhead costs for R&amp;D activities</li><li>• Equipment</li></ul>	<ul style="list-style-type: none"><li>• Agency and other fiduciary fund expenditures</li><li>• Intra-agency transactions</li><li>• Non-cash/In-kind payments</li></ul>

### Expenditures for Academic Institutions, Companies or Individuals, or Others as Performers (External)

<b>Include:</b>	<b>Do NOT include:</b>
<ul style="list-style-type: none"><li>• Grants</li><li>• Payments for contracted R&amp;D projects</li><li>• Reimbursable costs for R&amp;D projects</li></ul>	<ul style="list-style-type: none"><li>• Pass-through grants over which you have no administrative oversight or control</li><li>• Direct appropriations to state universities that are used for R&amp;D activities over which you have no oversight or control. (That information is reported by universities on NSF's Survey of Higher Education Institutions.)</li></ul>

## G. What is the definition of Fiscal Year?

**Fiscal Year** is your state's fiscal year ending in 2009.

For most states, this is the time period from July 1, 2008 through June 30, 2009.

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## H. What is the definition of “construction and acquisition of facilities” (Question 5)?

**Construction and Acquisition of Facilities Used Primarily for R&D** includes major costs for construction and purchase of buildings to be primarily used as R&D facilities. Include new construction, major renovations, and purchase of land or buildings.

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## I. What is the definition of basic research (Question 2)?

It may be helpful to compare the three components of R&D — basic research, applied research and development. Report all three types of research for Questions 1, 3, 4 and 5. Report only basic research for Question 2.

Below are definitions and examples.

**Basic research** (Question 2) is conducted primarily to acquire new knowledge without any specific product or process in mind.

**Applied research** is conducted with a specific practical objective.

**Development** is the systematic use of the knowledge or understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes.

Examples		
Basic research	Applied research	Development
You are studying the properties of blood to determine what affects coagulation.	You are conducting research on how a new chicken pox vaccine affects blood coagulation.	You are testing a newly developed chicken pox vaccine with various ages of school children before implementing it statewide.
You are studying the properties of molecules under various heat and cold conditions.	You are conducting research on the properties of particular substances under various heat and cold conditions with the objective of finding longer lasting components for pavement.	You are testing a newly developed pavement under various types of heat and cold conditions prior to using it on your state's highways.
You are studying the heart chambers of various fish species.	You are examining various levels of a toxic substance to determine the maximum safe level for fish in a stream.	You are designing a new system for monitoring a stream that will try out the results of your recent research in a real world situation.

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### National Center for Science and Engineering Statistics

John R. Gawalt  
*Director (Acting)*

Frederic J. Wendling  
*Deputy Director (Acting)*

Stephen Cohen  
*Chief Statistician*

John E. Jankowski  
*Program Director, Research and Development Statistics Program*



### National Center for Science and Engineering Statistics (NCSES)

The National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230, USA  
Tel: (703) 292-8780, FIRS: (800) 877-8339 | TDD: (800) 281-8749