



Table 1. Total R&D by Agency
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
Department of Defense (military)	37,975	35,065	39,109	4,044	11.5%	1,134	3.0%
("S&T" 6.1,6.2,6.3 + Medical)	7,791	7,386	8,652	1,265	17.1%	861	11.0%
(All Other DOD R&D)	30,184	27,679	30,457	2,778	10.0%	274	0.9%
National Aeronautics and Space Admin.	9,715	9,770	9,778	8	0.1%	63	0.6%
Department of Energy	6,974	7,467	7,232	-235	-3.1%	258	3.7%
Health and Human Services	15,750	16,047	18,094	2,047	12.8%	2,344	14.9%
(National Institutes of Health)	14,971	15,289	17,125	1,835	12.0%	2,153	14.4%
National Science Foundation	2,714	2,890	2,854	-36	-1.2%	140	5.2%
Department of Agriculture	1,638	1,850	1,693	-156	-8.5%	56	3.4%
Department of the Interior	567	584	562	-22	-3.8%	-5	-0.9%
Department of Transportation	603	836	643	-193	-23.1%	40	6.7%
Environmental Protection Agency	669	645	645	1	0.1%	-23	-3.5%
Department of Commerce	1,075	1,172	1,096	-76	-6.5%	21	2.0%
(NOAA)	600	600	617	17	2.8%	17	2.8%
(NIST)	468	565	473	-92	-16.3%	5	1.0%
Department of Education	224	276	246	-30	-10.7%	22	10.0%
Agency for International Development	143	94	143	49	51.9%	0	-0.1%
Department of Veterans Affairs	674	663	665	2	0.4%	-9	-1.3%
Nuclear Regulatory Commission	49	47	47	0	-0.5%	-2	-4.5%
Smithsonian Institution	138	146	143	-3	-2.2%	5	3.5%
Tennessee Valley Authority	35	35	35	0	0.0%	0	0.0%
Corps of Engineers	40	32	31	-1	-4.4%	-9	-23.5%

(continued)

Table 1. (continued)

	FY 1999 Estimate	FY 2000 Request	FY 2000 Approved	Action by Congress			
				Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
Labor	70	43	87	44	102.7%	17	24.5%
Housing and Urban Development	48	50	45	-5	-10.3%	-3	-6.6%
Justice	71	48	52	4	7.5%	-19	-27.3%
U.S. Postal Service ¹	77	78	78	0	0.0%	1	1.3%
Social Security Administration	37	24	25	1	4.1%	-12	-32.5%
Treasury	13	13	13	0	0.0%	0	0.0%
All Other	52	30	30	0	0.0%	-22	-42.3%
TOTAL R&D	79,350	77,904	83,346	5,442	7.0%	3,996	5.0%
Defense R&D	41,208	38,483	42,497	4,014	10.4%	1,288	3.1%
Nondefense R&D	38,142	39,422	40,850	1,428	3.6%	2,708	7.1%
"21st Century Research Fund" ²	36,943	38,111	39,854	1,743	4.6%	2,910	7.9%
"FS&T" ³	48,326	49,404	52,058	2,654	5.4%	3,732	7.7%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities.

Includes rescissions, supplementals, and emergency appropriations.

All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ Financed out of postal revenues.

² An alternative measure of the federal investment in science and technology proposed by the Clinton Administration.

Includes both R&D and non-R&D programs.

³ An alternative measure of the federal investment in science and technology proposed by the National Academy of Sciences.

Please see Appendix 1 for details.

Table 2. Estimated Basic Research by Agency
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Health and Human Services	8,429	8,590	9,623	1,033	12.0%	1,194	14.2%
<i>(National Institutes of Health)</i>	<i>8,427</i>	<i>8,588</i>	<i>9,619</i>	<i>1,031</i>	<i>12.0%</i>	<i>1,192</i>	<i>14.1%</i>
National Science Foundation	2,333	2,514	2,473	-40	-1.6%	141	6.0%
Department of Defense ("6.1")	1,108	1,113	1,167	54	4.9%	59	5.4%
Department of Energy	2,225	2,281	2,253	-28	-1.2%	28	1.2%
National Aeronautics & Space Admin.	2,140	2,466	2,526	60	2.5%	386	18.0%
Department of Agriculture	677	776	710	-66	-8.5%	33	4.8%
Department of the Interior	51	53	53	0	0.7%	2	4.3%
Smithsonian Institution	128	136	133	-3	-2.4%	5	3.7%
Environmental Protection Agency	83	79	79	0	0.1%	-4	-4.7%
Department of Commerce	36	38	38	-1	-2.1%	2	4.2%
All Other	65	55	56	1	1.0%	-9	-13.9%
TOTAL Est. Basic Research	17,276	18,101	19,112	1,011	5.6%	1,836	10.6%

AAAS estimates of basic research based on FY 2000 appropriations bills and historical trends for agencies and programs.
Includes across-the-board reduction. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

**Table 3. Major Functional Categories of R&D
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Defense ¹	41,208	38,483	42,497	4,014	10.4%	1,288	3.1%
Nondefense ²	38,142	39,422	40,850	1,428	3.6%	2,708	7.1%
Space	8,518	8,704	8,606	-98	-1.1%	88	1.0%
Health	16,379	16,664	18,689	2,025	12.2%	2,310	14.1%
Energy	1,173	1,353	1,282	-71	-5.2%	109	9.3%
General Science	5,365	5,668	5,498	-170	-3.0%	133	2.5%
Natural Resources & Environment	2,088	2,104	2,070	-34	-1.6%	-18	-0.9%
Agriculture	1,427	1,608	1,479	-128	-8.0%	53	3.7%
Transportation	1,799	1,902	1,815	-87	-4.6%	15	0.8%
Commerce	474	571	479	-92	-16.2%	5	1.0%
International	194	123	172	49	39.7%	-22	-11.4%
All Other	724	725	760	35	4.8%	36	5.0%
TOTAL R&D	79,350	77,904	83,346	5,442	7.0%	3,996	5.0%

AAAS estimates of R&D in FY 2000 appropriations bills based on historical trends for agencies and programs.

Includes across-the-board reduction. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

Includes conduct of R&D and R&D facilities. Classifications generally follow the government's budget function categories except health (which here includes health R&D in HHS and VA).

¹ Includes DOD R&D and atomic energy defense R&D in DOE.

² Includes all R&D not in defense (domestic and international discretionary programs).

**Table 4. Department of Defense by Program
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
Research, Development, Test, and Evaluation:							
Basic Research ("6.1")	1,108	1,113	1,167	54	4.9%	59	5.4%
Applied Research ("6.2")	3,151	2,959	3,388	429	14.5%	237	7.5%
Advanced Tech. Development ("6.3")	3,532	3,314	3,822	508	15.3%	290	8.2%
TOTAL Science and Technology	7,791	7,386	8,378	991	13.4%	587	7.5%
Demonstration/Validation ("6.4")	7,237	5,580	6,536	955	17.1%	-701	-9.7%
Engineering and Manuf. Dev. ("6.5")	7,931	7,538	8,623	1,085	14.4%	692	8.7%
RDT&E Management Support ("6.6")	2,930	2,406	2,550	144	6.0%	-380	-13.0%
Operational Systems Dev. ("6.7")	11,554	11,465	12,101	636	5.5%	547	4.7%
BA Adjustment	-38	0	0	--	--	--	--
TOTAL RDT&E	37,405	34,375	38,187	3,812	11.1%	783	2.1%
Other Appropriations ¹	570	690	648	-42	-6.2%	78	13.6%
Medical research ²	0	0	274	274	--	274	--
TOTAL DOD R&D	37,975	35,065	39,109	4,044	11.5%	1,134	3.0%

AAAS estimates. Includes conduct of R&D and R&D facilities. Includes rescissions, supplementals, and emergency appropriations.

Includes across-the-board cut. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ R&D support in military personnel, military construction, and other DOD appropriations.

² The FY 2000 Defense bill appropriates some medical R&D in a separate account. In FY 1999, these programs were in the Army ("6.3").

**Table 5. Department of Defense by Agency
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Research, Development, Test, and Evaluation:							
Army	5,032	4,426	5,227	801	18.1%	195	3.9%
Navy	8,640	7,984	9,020	1,036	13.0%	380	4.4%
Air Force	13,683	13,078	14,250	1,172	9.0%	567	4.1%
Defense Agencies	9,757	8,609	9,394	784	9.1%	-363	-3.7%
<i>(Defense Adv. Research Projects Agcy.)</i>	<i>1,930</i>	<i>2,003</i>	<i>1,849</i>	<i>-154</i>	<i>-7.7%</i>	<i>-82</i>	<i>-4.2%</i>
<i>(Ballistic Missile Defense Organization)</i>	<i>3,845</i>	<i>2,944</i>	<i>3,429</i>	<i>484</i>	<i>16.5%</i>	<i>-416</i>	<i>-10.8%</i>
<i>(Other)</i>	<i>3,982</i>	<i>3,662</i>	<i>4,116</i>	<i>454</i>	<i>12.4%</i>	<i>134</i>	<i>3.4%</i>
Director of Test and Evaluation	259	253	265	11	4.5%	6	2.5%
Dir. of Operational Test & Evaluation	34	24	31	7	28.2%	-3	-8.6%
TOTAL RDT&E	37,405	34,375	38,187	3,812	11.1%	783	2.1%
Other Appropriations ¹	570	690	648	-42	-6.2%	78	13.6%
Medical research ²	0	0	274	274	--	274	--
TOTAL DOD R&D	37,975	35,065	39,109	4,044	11.5%	1,134	3.0%

AAAS estimates. Includes conduct of R&D and R&D facilities. Includes rescissions, supplementals, and emergency appropriations. Includes across-the-board cut. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ R&D support in military personnel, military construction, and other DOD appropriations.

² The FY 2000 Defense bill appropriates some medical R&D in a separate account. In FY 1999, these programs were in the Army ("6.3").

**Table 6. National Aeronautics and Space Administration
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Summary of R&D by Appropriation:							
1. Human Space Flight (HSF)							
Space Station	2,252	2,483	2,322	-161	-6.5%	70	3.1%
Other	20	6	6	0	-0.4%	-14	-69.8%
Total R&D HSF	2,272	2,489	2,328	-161	-6.5%	56	2.5%
2. Science, Aeronautics, and Technology (SAT)							
Space Science	2,119	2,197	2,177	-19	-0.9%	58	2.7%
Life & Microgravity Sciences	264	256	275	19	7.2%	11	4.3%
Earth Science	1,414	1,459	1,442	-17	-1.2%	28	2.0%
Aeronautics and Space Transp.	1,339	1,007	1,149	142	14.1%	-190	-14.2%
Mission Communications Serv.	380	406	403	-4	-0.9%	23	5.9%
Academic Programs	139	100	140	40	40.2%	2	1.2%
Total R&D SAT	5,654	5,425	5,585	161	3.0%	-69	-1.2%
3. Mission Support R&D							
TOTAL NASA R&D	9,715	9,770	9,778	8	0.1%	63	0.6%

(continued)

Table 6. (continued)

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
NASA Non-R&D Activities:							
Space Shuttle (in HSF)	2,998	2,986	3,000	14	0.5%	1	0.0%
Russian Cooperation (HSF)	53	0	0	0	--	-53	-100.0%
Other Non-R&D in HSF	157	163	162	-1	-0.4%	5	3.4%
Mission Support Non-R&D	721	638	641	2	0.4%	-81	-11.2%
Inspector General	20	21	20	-1	-4.2%	0	-0.4%
Total NASA Non-R&D Activities	3,950	3,809	3,823	14	0.4%	-127	-3.2%
TOTAL NASA Budget	13,665	13,578	13,601	22	0.2%	-64	-0.5%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

**Table 7. Department of Energy
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
DOE Appropriations Containing R&D:							
1. Energy Supply R&D ¹	373	440	366	-74	-16.8%	-7	-1.9%
2. Fossil Energy R&D	295	289	330	41	14.1%	35	11.9%
3. Energy Conservation	400	477	440	-37	-7.8%	40	10.0%
4. Science ¹	2,651	2,778	2,644	-135	-4.8%	-7	-0.3%
5. Atomic Energy Defense Activities	3,234	3,417	3,388	-30	-0.9%	154	4.8%
6. Clean Coal Technology ²	-40	10	10	0	-0.4%	50	-124.9%
7. Radioactive Waste Management	61	55	55	0	-0.4%	-7	-10.8%
TOTAL DOE R&D	6,974	7,467	7,232	-235	-3.1%	258	3.7%
Detail of selected appropriations:							
1. Energy Supply R&D ¹							
Solar and Renewables	297	353	275	-78	-22.0%	-22	-7.3%
Nuclear Energy	76	87	91	4	4.2%	15	19.3%
TOTAL Energy Supply	373	440	366	-74	-16.8%	-7	-1.9%
4. Science ¹							
High Energy Physics	689	692	692	0	0.0%	3	0.5%
(Large Hadron Collider)	65	70	70	0	-0.4%	5	7.3%
Nuclear Physics	334	343	347	4	1.1%	13	3.9%

(continued)

Table 7. (continued)

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Fusion Energy Sciences	222	223	246	24	10.6%	25	11.2%
Computational and Tech. Res.	156	199	130	-69	-34.6%	-26	-16.6%
Bio. and Environmental Research	433	411	435	24	5.8%	2	0.5%
Basic Energy Sciences	796	888	771	-117	-13.1%	-24	-3.0%
<i>(Spallation Neutron Source)</i>	130	214	117	-97	-45.1%	-13	-9.7%
Energy Research Analyses	1	1	1	0	-1.5%	0	8.5%
Multiprogram Lab Support	21	21	21	0	-1.5%	0	-1.4%
TOTAL Science	2,651	2,778	2,644	-135	-4.8%	-7	-0.3%
5. Atomic Energy Defense Activities							
Naval Reactors	650	644	655	10	1.6%	4	0.7%
Weapons Activities	2,180	2,390	2,341	-49	-2.0%	161	7.4%
<i>(Stockpile Stewardship)</i>	2,116	2,286	2,242	-44	-1.9%	126	5.9%
- ASCI ³	301	341	315	-26	-7.7%	14	4.6%
- <i>Inertial Confinement Fusion</i>	219	218	227	9	4.2%	8	3.4%
- <i>National Ignition Facility</i>	284	248	247	-1	-0.4%	-37	-13.0%
- <i>All Other</i>	1,312	1,480	1,453	-26	-1.8%	141	10.8%
Nuclear Safeguards & Security	24	27	37	10	35.9%	14	58.0%
Intelligence	4	4	4	0	0.0%	0	0.0%
Nonproliferation & Verification R&D	187	191	190	-1	-0.4%	3	1.5%
Fissile Materials Disposition	54	53	53	0	-0.4%	-1	-2.2%
Environmental Management	135	108	107	0	-0.4%	-27	-20.3%
TOTAL Atomic Defense	3,234	3,417	3,388	-30	-0.9%	154	4.8%

(continued)

Table 7. (continued)

	FY 1999 Estimate	FY 2000 Request	FY 2000 Approved	Action by Congress			
				Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
DOE R&D by Budget Function:							
Defense	3,234	3,417	3,388	-30	-0.9%	154	4.8%
General Science ¹	2,651	2,778	2,644	-135	-4.8%	-7	-0.3%
Energy ¹	1,089	1,271	1,201	-71	-5.6%	111	10.2%
DOE "FS&T" ⁴	6,133	6,645	6,401	-244	-3.7%	267	4.4%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ DOE has changed its appropriation account structure. Programs in the General Science and Research account and selected programs in Energy Supply have been shifted to the "Science" account. The table shows DOE programs under the new account structure.

² Negative for some years because of deferrals of previously appropriated funds. Table does not reflect FY 2000 deferral of \$156 million.

³ Accelerated Strategic Computing Initiative.

⁴ An alternative measure of the federal investment in science and technology proposed by the National Academy of Sciences. Please see Appendix 1 for details.

Table 7a. Department of Energy Budget (budget authority in millions of dollars)

	FY 1999 Estimate	FY 2000 Request	FY 2000 Approved	Action by Congress			
				Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
Weapons Activities	4,400	4,531	4,427	-104	-2.3%	27	0.6%
Defense Environmental Restoration	4,321	4,506	4,467	-38	-0.9%	147	3.4%
Nuclear Waste and Other Defense	3,660	3,147	3,076	-71	-2.3%	-584	-16.0%
Total DOE defense	12,381	12,184	11,971	-214	-1.8%	-410	-3.3%
Science ¹	2,698	2,835	2,789	-46	-1.6%	91	3.4%
Energy Supply ¹	770	841	637	-204	-24.3%	-133	-17.3%
Fossil Energy	384	364	417	53	14.7%	33	8.7%
Energy Conservation	628	838	742	-95	-11.4%	115	18.3%
Other Energy Programs	187	352	311	-41	-11.6%	124	66.3%
Nondefense Environmental Mngmt.	431	331	332	1	0.4%	-99	-22.9%
Power Marketing Administrations	238	200	261	61	30.7%	24	10.0%
Departmental Administration	141	153	128	-25	-16.3%	-12	-8.6%
Total DOE Budget	17,856	18,098	17,589	-509	-2.8%	-267	-1.5%

Source: Department of Energy budget justification and FY 2000 appropriations bills.

DOE appropriations only (does not include offsets and other mandatory). Includes across-the-board reduction.

Includes rescissions and emergency appropriations. Includes R&D and non-R&D programs.

All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ DOE has changed its appropriation account structure. Programs in the General Science and Research account and selected programs in Energy Supply have been shifted to the "Science" account. The table shows DOE programs under the new account structure.

Table 8. National Institutes of Health

Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Cancer	2,927	2,973	3,320	347	11.7%	392	13.4%
Heart, Lung and Blood	1,794	1,826	2,033	207	11.3%	239	13.3%
Dental and Cranofacial Research	234	244	269	25	10.3%	35	14.9%
Diabetes, Digestive and Kidney	994	1,021	1,143	122	12.0%	149	15.0%
Neurological Disorders and Stroke	903	921	1,031	110	11.9%	128	14.1%
Allergy and Infectious Diseases	1,570	1,614	1,796	182	11.3%	226	14.4%
General Medical Sciences	1,198	1,227	1,356	130	10.6%	159	13.2%
Child Health & Human Development	751	772	860	88	11.4%	109	14.5%
Eye	396	407	451	44	10.9%	55	13.9%
Environmental Health Sciences	376	398	443	45	11.4%	67	17.9%
Aging	597	615	688	73	11.8%	91	15.3%
Arthritis & Musculoskeletal & Skin	308	315	351	36	11.4%	42	13.7%
Deafness and Comm. Disorders	230	237	264	27	11.4%	34	14.9%
Mental Health	861	876	975	99	11.3%	113	13.2%
Drug Abuse	603	623	687	64	10.3%	84	13.9%
Alcoholism and Alcohol Abuse	260	265	293	27	10.3%	33	12.7%
Nursing Research	70	72	90	18	25.0%	20	28.4%
Research Resources	555	568	678	109	19.3%	123	22.1%
Human Genome Research	265	276	336	60	21.9%	71	26.9%
Fogarty International Center	35	36	44	7	20.1%	8	23.0%
National Library of Medicine	181	186	214	29	15.5%	33	18.2%

(continued)

Table 8. (continued)

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Office of the Director	257	263	282	20	7.5%	26	10.1%
Office of AIDS Research ¹	0	[1,834]	0	--	--	--	--
Buildings and Facilities ²	198	148	175	26	17.7%	-23	-11.5%
Complementary and Alternative Medicine ³	50	51	68	17	33.8%	18	37.0%
TOTAL NIH Budget	15,612	15,933	17,845	1,913	12.0%	2,233	14.3%
<i>Subtract:</i>							
<i>Estimated Research Training</i>	<i>511</i>	<i>512</i>	<i>573</i>	<i>61</i>	<i>12.0%</i>	<i>62</i>	<i>12.2%</i>
<i>Other Non-R&D</i>	<i>130</i>	<i>132</i>	<i>147</i>	<i>16</i>	<i>12.0%</i>	<i>17</i>	<i>13.2%</i>
TOTAL NIH R&D	14,971	15,289	17,125	1,835	12.0%	2,153	14.4%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes conduct of R&D and R&D facilities. Includes across-the-board reduction. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ The Office of AIDS Research (OAR) provides pass-through funding to the other Institutes for AIDS research.

Congress in FY 1999 allocated OAR funds directly to the Institutes. The FY 2000 request consolidated all AIDS research funded by the Institutes under the OAR line. Congress allocated FY 2000 AIDS funds directly to the Institutes.

The FY 2000 request figures distribute the OAR request among the Institutes for comparability.

² FY 2000 figures include \$40 million in advance appropriations.

³ New center created in FY 1999.

Totals do not include amounts transferred from Departmental Administration for matching funds (see Table 9).

Note: The FY 2000 omnibus bill delays the release of \$3 billion in FY 2000 NIH funds until September 29, 2000, one day before the end of FY 2000. The bill does not specify the distribution of the total among institutes.

**Table 9. Department of Health and Human Services
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
National Institutes of Health ¹	14,971	15,289	17,125	1,835	12.0%	2,153	14.4%
Centers for Disease Control ¹	438	478	484	6	1.2%	46	10.5%
Food and Drug Administration	104	111	105	-6	-5.8%	1	0.5%
Health Care Financing Admin.	50	55	63	8	13.9%	13	25.3%
Health Resources & Services Admin.	25	25	54	29	115.2%	29	115.2%
Health Care Policy and Research	100	27	109	82	301.9%	9	8.5%
Admin. for Children & Families	27	28	38	10	35.2%	11	40.2%
Office of Aging	18	18	32	14	80.2%	14	80.2%
Departmental Administration ¹	17	16	86	70	435.5%	69	404.0%
TOTAL HHS R&D	15,750	16,047	18,094	2,047	12.8%	2,344	14.9%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes conduct of R&D and R&D facilities. Includes across-the-board reduction.

All figures are rounded to the nearest million. Changes calculated from unrounded figures.

Includes emergency and supplemental appropriations.

¹ The Labor-HHS bill provides \$20 million in the Office of the Secretary's Public Health and Social Services Fund for transfer to NIH for partnerships with pharmaceutical and biotechnology companies to accelerate new antibiotics development.

There is also \$49 million for CDC for bioterrorism-related R&D. These funds are listed under Departmental Administration.

Note: The FY 2000 omnibus bill delays the release of \$3 billion in FY 2000 NIH funds until September 29, 2000, one day before the end of FY 2000. The bill does not specify the distribution of the total among institutes.

The bill also delays \$500 million in CDC funds and \$450 million in HRSA funds until September 29, 2000.

**Table 10. National Science Foundation
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
Research and Related Activities ^{1,2} :							
Mathematical and Physical Sciences	734	754	756	2	0.3%	22	3.0%
Engineering	369	379	380	1	0.3%	11	3.0%
Biological Sciences	391	409	415	6	1.5%	24	6.1%
Geosciences	473	485	487	1	0.3%	14	2.9%
Computer and Info. Science and Eng.	299	423	390	-32	-7.7%	91	30.6%
Social, Behavioral and Econ. Scis.	137	143	143	0	0.3%	6	4.5%
US Polar Programs	245	251	254	3	1.2%	9	3.5%
Integrative Activities ¹	161	161	130	-31	-19.5%	-32	-19.6%
Total Research and Related Activities ^{1,2}	2,809	3,004	2,955	-49	-1.6%	146	5.2%
Major Research Equipment	90	85	95	10	11.3%	5	5.2%
Education and Human Res. R&D	108	108	108	0	0.0%	0	0.0%
<i>Subtract Non-R&D in R&RA</i> ²	-293	-307	-303	4	-1.3%	-10	3.5%
TOTAL NSF R&D	2,714	2,890	2,854	-36	-1.2%	140	5.2%

(continued)

Table 10. (continued)

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Non-R&D Programs and Activities:							
Non-R&D in R&RA ²	293	307	303	-4	-1.3%	10	3.5%
Other Education and Human Res.	554	570	586	16	2.8%	32	5.8%
Salaries and Expenses	144	149	148	-1	-0.4%	4	3.1%
Inspector General	5	5	5	0	-0.4%	0	4.4%
Total NSF Non-R&D Activities	996	1,032	1,043	11	1.1%	47	4.7%
TOTAL NSF Budget	3,710	3,921	3,897	-24	-0.6%	187	5.0%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities.

All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ R&RA figures include funding derived from the Intellectual Infrastructure fund in FY 1999.

² R&RA funds are not appropriated by directorate. The FY 2000 Approved directorate figures are AAAS estimates based on language in the FY 2000 appropriations bill.

**Table 11. Department of Commerce
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
National Oceanic and Atmospheric Administration:							
TOTAL NOAA R&D	600	600	617	17	2.8%	17	2.8%
National Institute of Standards and Technology:							
Scientific & Technical Research	233	240	235	-5	-2.1%	2	0.7%
Advanced Technology Program R&D	178	219	130	-88	-40.5%	-48	-27.0%
Construction	57	107	108	1	1.1%	51	90.4%
TOTAL NIST R&D	468	565	473	-92	-16.3%	5	1.0%
<i>(STRS, ATP Non-R&D Activities)</i>	72	70	59	-11	-15.2%	-13	-18.1%
<i>(Manufacturing Extension Partnership)</i>	107	100	104	5	4.6%	-2	-2.2%
<i>(Total NIST Budget)</i>	647	735	637	-98	-13.4%	-11	-1.6%
Bureau of the Census	2	2	2	0	0.0%	0	0.0%
National Telecomm. and Info. Admin.	4	4	4	0	0.0%	0	0.0%
Economic Development Administration	1	1	1	0	0.0%	0	0.0%
TOTAL Commerce R&D	1,075	1,172	1,096	-76	-6.5%	21	2.0%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

**Table 12. Department of Agriculture
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate*	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Agricultural Research Service (ARS)							
Programs ¹	811	857	851	-6	-0.7%	41	5.0%
Buildings and Facilities	56	45	52	8	17.5%	-4	-7.3%
Total ARS R&D	867	901	903	2	0.2%	36	4.2%
Cooperative State Research, Education and Extension Service (CSREES):							
Total CSREES R&D	462	595	479	-116	-19.6%	17	3.7%
<i>(National Research Initiative)</i>	119	200	119	-81	-40.6%	0	-0.4%
<i>(Special Research Grants)</i>	55	5	63	58	1136.7%	8	15.3%
<i>(Initiative for Future Agri. ²)</i>	0	120	0	-120	-100.0%	0	- -
Total CSREES R&D	462	595	479	-116	-19.6%	17	3.7%
<i>(CSREES Non-R&D Programs)</i>	463	473	472	0	-0.1%	10	2.1%
<i>(Total CSREES Budget)</i>	924	1,068	951	-117	-10.9%	27	2.9%
Forest Service	211	242	214	-28	-11.7%	3	1.3%
Economic Research Service	63	56	65	9	16.4%	2	3.4%
Alternative Agri. Res. and Commerc.	3	10	0	-10	-100.0%	-3	-100.0%
Agricultural Marketing Service	5	5	5	0	0.0%	0	0.0%

(continued)

Table 12. (continued)

	FY 1999 Estimate*	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
Foreign Agricultural Service	1	1	1	0	0.0%	0	0.0%
Nat'l Agricultural Statistics Service	3	3	3	0	-1.5%	0	-1.5%
Grain Inspection	3	3	3	0	-0.4%	0	-0.4%
Animal & Plant Inspection Service	20	18	20	2	11.1%	0	0.0%
Office of the Secretary ³	0	15	0	-15	-100.0%	0	--
Total USDA R&D	1,638	1,850	1,693	-156	-8.5%	56	3.4%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

* Adjusted to reflect rescissions enacted in Public Law 106-31.

¹ Includes spending from trust funds.

² Mandatory (non-appropriated) program of competitive grants for agricultural research. The FY 2000 Agriculture bill prohibits the expenditure of FY 2000 funds.

³ Fund for Rural America, a mandatory program. The FY 2000 Agriculture bill prohibits the expenditure of FY 2000 funds.

**Table 13. Department of Transportation
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Federal Aviation Administration	226	246	245	-2	-0.7%	19	8.5%
Federal Highway Administration	258	459	287	-173	-37.6%	29	11.3%
Federal Transit Administration	17	19	13	-6	-30.8%	-3	-20.3%
Nat'l Highway Traffic Safety Admin.	50	59	50	-9	-14.6%	0	-0.4%
Federal Railroad Administration	22	24	25	1	2.4%	3	11.7%
Coast Guard	15	15	13	-2	-12.8%	-1	-7.0%
Research and Special Programs	7	8	7	0	-4.3%	0	5.8%
Office of the Secretary	9	4	2	-2	-47.6%	-6	-73.3%
Total DOT R&D	603	836	643	-193	-23.1%	40	6.7%
DOT Budget (includes R&D components):							
Federal Aviation Administration	9,814	10,131	10,013	-118	-1.2%	199	2.0%
Federal Highway Administration	27,367	28,599	28,828	229	0.8%	1,461	5.3%
Federal Transit Administration	5,390	6,088	5,775	-313	-5.1%	385	7.1%
Coast Guard	4,284	4,135	4,008	-127	-3.1%	-275	-6.4%
Federal Railroad Administration	778	658	732	74	11.3%	-46	-5.9%
All Other ¹	351	781	745	-36	-4.6%	394	112.4%
Total DOT Budget	47,983	50,393	50,103	-290	-0.6%	2,119	4.4%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities. Figures rounded to the nearest million. Changes calculated from unrounded figures.

DOT figures include budget authority (regular and emergency), limitations on obligations, and other budgetary resources.

¹ Includes Office of Secretary, NHTSA, RSPA, Maritime Administration, Bureau of Transportation Statistics, and others.

**Table 14. Department of the Interior
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
U.S. Geological Survey: ¹							
Surveys, Investigations, and Research (SIR):							
National Mapping	23	24	25	1	3.5%	2	8.1%
Geologic Resources	199	199	212	13	6.5%	13	6.4%
Water Resources	119	119	122	4	3.1%	3	2.7%
Biological Research	126	125	137	12	9.7%	12	9.2%
Integrated Science	30	48	0	-48	-100.0%	-30	-100.0%
Total USGS R&D	497	514	496	-18	-3.5%	-1	-0.2%
<i>(USGS Non-R&D SIR Activities)</i>	<i>301</i>	<i>324</i>	<i>324</i>	<i>0</i>	<i>0.1%</i>	<i>24</i>	<i>7.9%</i>
<i>(Total USGS SIR Budget)</i>	<i>798</i>	<i>838</i>	<i>821</i>	<i>-18</i>	<i>-2.1%</i>	<i>23</i>	<i>2.9%</i>
Bureau of Reclamation	10	10	9	-1	-12.8%	-1	-12.8%
National Park Service	34	34	30	-4	-11.8%	-4	-11.8%
Bureau of Land Management	1	1	1	0	0.0%	0	0.0%
Minerals Management Service	25	25	26	1	5.6%	1	5.6%
TOTAL Interior R&D	567	584	562	-22	-3.8%	-5	-0.9%

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities.

All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ USGS restructuring in FY 2000. FY 1999 figures adjusted for comparability.

**Table 15. Environmental Protection Agency
Congressional Action on R&D in the FY 2000 Budget (budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	Action by Congress				
			FY 2000 Approved	Chg. from Request		Chg. from FY 1999	
				Amount	Percent	Amount	Percent
EPA R&D:							
Science and Technology ¹	667	643	644	1	0.1%	-23	-3.4%
Other Accounts	1	0	0	0	--	-1	-100.0%
R&D from Trust Funds:							
Leaking Underground Storage Tanks	1	1	1	0	-0.4%	0	-0.4%
Oil Spill Response	1	1	1	0	-0.4%	0	10.7%
TOTAL EPA R&D	<u>669</u>	<u>645</u>	<u>645</u>	<u>1</u>	<u>0.1%</u>	<u>-23</u>	<u>-3.5%</u>
EPA Budget:							
Science and Technology (incl. non-R&D) ²	700	679	680	1	0.2%	-20	-2.8%
Environ. Progs. and Management	1,848	2,047	1,893	-154	-7.5%	45	2.4%
Superfund ²	1,460	1,463	1,357	-106	-7.3%	-103	-7.1%
State and Tribal Assistance Grants	3,407	2,838	3,453	615	21.7%	46	1.4%
Buildings and Facilities	57	63	62	-1	-1.0%	5	9.4%
Leaking Underground Storage Tanks	73	72	70	-2	-3.1%	-3	-4.5%
Oil Spill Response	15	16	15	-1	-6.6%	0	-0.4%
Inspector General	31	29	32	3	11.3%	1	4.1%
TOTAL EPA Budget	<u>7,591</u>	<u>7,207</u>	<u>7,563</u>	<u>356</u>	<u>4.9%</u>	<u>-28</u>	<u>-0.4%</u>

AAAS estimates of R&D in FY 2000 appropriations bills. Includes across-the-board reduction. Includes conduct of R&D and R&D facilities.

All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ Includes budget authority for R&D transferred from Superfund account.

² Transfers from Superfund to S&T account recorded under S&T.

Table A. Trends in R&D, FY 1994-2000Percentage Changes in **Constant Dollars**

	FY 1994	FY 1999	FY 2000	% Chg. Constant \$	
	Actual	Estimate	Approved	FY 94-99	FY 94-00
<i>(budget authority in millions of current dollars):</i>					
Dept. of Defense	35,510	37,975	39,109	-1.9%	-1.0%
(DOD "S&T" (6.1-6.3)) ¹	8,283	7,791	8,652	-13.7%	-6.1%
NASA	9,406	9,715	9,778	-5.3%	-6.5%
Dept. of Energy	6,771	6,974	7,232	-5.6%	-4.0%
Nat'l Institutes of Health	10,474	14,971	17,125	31.1%	47.0%
NSF	2,243	2,714	2,854	11.0%	14.4%
Agriculture	1,528	1,638	1,693	-1.7%	-0.4%
Interior	708	567	562	-26.5%	-28.6%
Transportation	641	603	643	-13.8%	-9.8%
EPA	588	669	645	4.2%	-1.3%
Commerce	1,022	1,075	1,096	-3.5%	-3.6%
All Other	2,185	2,450	2,609	2.8%	7.4%
Total R&D	71,074	79,350	83,346	2.4%	5.4%
Defense R&D	38,299	41,208	42,497	-1.3%	-0.2%
Nondefense R&D	32,775	38,142	40,850	6.7%	12.1%
-Nondef. R&D minus NIH	22,301	23,171	23,725	-4.7%	-4.4%
Basic Research	13,693	17,276	19,112	15.7%	25.5%
"FS&T" ¹	43,002	48,326	49,404	3.1%	3.3%

Source: AAAS Report XX, OMB R&D data, and agency budget justifications.

FY 2000 figures are AAAS estimates of R&D in FY 2000 appropriations bills.

Constant-dollar changes calculated from OMB's GDP deflators.

¹ FY 2000 Approved includes medical R&D appropriated in a separate account.

These programs were previously appropriated in "6.3" accounts.

² An alternative measure of the federal investment in science and technology proposed by the National Academy of Sciences. Please see Appendix 1 for details.

Table B. Total U.S. R&D, 1997-1999
(expenditures in millions of dollars)

(calendar years)	1997	1998	1999	% Change
	Actual	Preliminary	Preliminary	1998-99
U.S. R&D by funding source:				
Federal Government	65,016	64,853	65,853	1.5%
Industry	136,394	151,105	169,312	12.0%
Universities and Colleges	4,842	5,366	5,838	8.8%
Nonprofits	3,436	3,686	3,913	6.2%
Nonfederal Government	1,898	1,974	2,085	5.6%
Total U.S. R&D	211,586	226,984	247,000	8.8%
U.S. R&D by performer:				
Federal Government	16,814	17,189	17,362	1.0%
Industry	155,409	168,291	185,892	10.5%
Universities and Colleges	25,136	26,684	28,256	5.9%
FFRDCs *	8,562	8,715	9,171	5.2%
Nonprofits	5,665	6,105	6,319	3.5%
Total U.S. R&D	211,586	226,984	247,000	8.8%
U.S. R&D by character of work:				
Basic Research	35,495	37,695	40,224	6.7%
(from federal sources)	19,328	20,186	21,020	4.1%
(from industry sources)	10,315	11,373	12,689	11.6%
Applied Research	47,453	51,722	56,462	9.2%
Development	128,638	137,566	150,315	9.3%
Total U.S. R&D	211,586	226,984	247,000	8.8%
U.S. GDP** (billions of dollars)	8,111	8,509	8,849	4.0%
U.S. R&D / GDP	2.61%	2.67%	2.79%	

Source: National Science Foundation, *National Patterns of R&D Resources 1999 Data Update*. The complete data are available at <http://www.nsf.gov/sbe/srs/stats.htm>.

* Federally Funded Research and Development Centers.

** Gross Domestic Product.

These data are based on performer surveys of expenditures for calendar years, and thus differ from data presented elsewhere in this report (agency budget authority data by fiscal year). These data also exclude R&D facilities.