

Part II

Tables

Table 1. Total R&D by Agency

Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request		Chg. from FY 2000	
				Amount	Percent	Amount	Percent
Department of Defense (military)	39,282	38,576	41,846	3,270	8.5%	2,564	6.5%
("S&T" 6.1,6.2,6.3 + Medical)	8,667	7,609	9,363	1,754	23.1%	696	8.0%
(All Other DOD R&D)	30,615	30,967	32,482	1,516	4.9%	1,868	6.1%
National Aeronautics and Space Admin.	9,777	10,040	10,298	258	2.6%	521	5.3%
Department of Energy	7,117	7,639	7,994	355	4.7%	878	12.3%
Health and Human Services	18,082	19,168	20,829	1,661	8.7%	2,747	15.2%
(National Institutes of Health)	17,102	18,094	19,597	1,503	8.3%	2,495	14.6%
National Science Foundation	2,863	3,431	3,240	-190	-5.5%	377	13.2%
Department of Agriculture	1,763	1,824	1,953	129	7.1%	190	10.8%
Department of the Interior	573	590	597	7	1.2%	24	4.2%
Department of Transportation	606	778	701	-78	-10.0%	94	15.5%
Environmental Protection Agency	647	673	686	13	2.0%	39	6.0%
Department of Commerce	1,073	1,148	1,111	-37	-3.3%	38	3.5%
(NOAA)	591	594	638	44	7.5%	47	8.0%
(NIST)	458	497	419	-78	-15.7%	-39	-8.5%
Department of Education	233	271	263	-8	-2.9%	30	13.0%
Agency for International Development	122	98	124	26	26.6%	2	1.7%
Department of Veterans Affairs	655	655	684	29	4.5%	29	4.5%
Nuclear Regulatory Commission	53	53	53	0	-0.2%	0	-0.2%
Smithsonian Institution	113	122	119	-3	-2.3%	6	5.5%
Tennessee Valley Authority	33	32	32	0	0.0%	-1	-3.0%

(continued)

Table 1. (continued)

	FY 2000 Estimate	FY 2001 Request	FY 2001 Approved	Action by Congress			
				Chg. from Request		Chg. from FY 2000	
				Amount	Percent	Amount	Percent
Corps of Engineers	53	42	39	-3	-7.1%	-14	-26.4%
Labor	71	42	42	0	0.0%	-29	-40.8%
Housing and Urban Development	45	62	53	-9	-13.9%	8	18.6%
Justice	77	74	128	54	73.4%	51	66.6%
U.S. Postal Service ¹	45	45	45	0	0.0%	0	0.0%
Social Security Administration	25	42	30	-12	-28.6%	5	20.0%
Treasury	6	6	6	0	0.0%	0	0.0%
All Other	21	17	18	1	4.1%	-3	-15.7%
TOTAL R&D	83,334	85,427	90,891	5,464	6.4%	7,557	9.1%
Defense R&D	42,583	41,981	45,543	3,562	8.5%	2,960	7.0%
Nondefense R&D	40,751	43,446	45,348	1,901	4.4%	4,597	11.3%
"21st Century Research Fund" ²	40,028	42,918	44,861	1,943	4.5%	4,833	12.1%
"FS&T" ³	51,975	53,702	57,639	3,937	7.3%	5,664	10.9%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

FY 2001 Approved figures are adjusted to reflect a 0.22 percent across-the-board cut to most discretionary programs.

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. Please see Appendix 1 for details.

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 2001 Budget (budget authority in millions of dollars)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Health and Human Services	9,834	10,399	11,255	856	8.2%	1,422	14.5%
<i>(National Institutes of Health)</i>	9,832	10,397	11,252	855	8.2%	1,421	14.5%
National Science Foundation	2,492	2,987	2,831	-156	-5.2%	339	13.6%
Department of Defense ("6.1")	1,161	1,217	1,310	93	7.6%	149	12.8%
Department of Energy	2,237	2,376	2,412	37	1.6%	176	7.9%
National Aeronautics & Space Admin.	1,947	1,895	1,981	87	4.6%	35	1.8%
Department of Agriculture	692	740	756	16	2.1%	64	9.2%
Department of the Interior	61	63	64	1	2.0%	4	5.8%
Smithsonian Institution	102	108	105	-3	-2.5%	3	3.2%
Environmental Protection Agency	58	58	62	5	8.0%	4	7.3%
Department of Commerce	41	53	51	-2	-4.6%	10	25.1%
All Other	342	363	378	15	4.3%	36	10.7%
TOTAL Est. Basic Research	18,965	20,259	21,207	948	4.7%	2,242	11.8%

AAAS estimates of basic research based on FY 2001 appropriations bills and historical trends for agencies and programs.

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

FY 2001 Approved figures adjusted to reflect 0.22 percent across-the-board cut for most discretionary programs.

Table 3. Major Functional Categories of R&D**Congressional Action on R&D in the FY 2001 Budget (budget authority in millions)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Defense ¹	42,583	41,981	45,543	3,562	8.5%	2,960	7.0%
Nondefense ²	40,751	43,446	45,348	1,901	4.4%	4,597	11.3%
Space	8,746	9,106	9,324	218	2.4%	578	6.6%
Health	18,663	19,742	21,422	1,680	8.5%	2,759	14.8%
Energy	1,264	1,350	1,381	31	2.3%	117	9.3%
General Science	5,501	6,400	6,241	-159	-2.5%	740	13.5%
Natural Resources & Environment	2,076	2,136	2,199	63	2.9%	123	5.9%
Agriculture	1,552	1,587	1,716	129	8.1%	164	10.6%
Transportation	1,637	1,712	1,675	-38	-2.2%	37	2.3%
Commerce	481	553	471	-82	-14.8%	-10	-2.0%
International	142	114	140	26	22.9%	-2	-1.3%
All Other	690	746	779	33	4.5%	89	12.9%
TOTAL R&D	83,334	85,427	90,891	5,464	6.4%	7,557	9.1%

AAAS estimates of R&D in FY 2001 appropriations bills based on historical trends for agencies and programs.

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 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	FY 2001 Approved	Action by Congress			
				Chg. from Request Amount	Percent	Chg. from FY 2000 Amount	Percent
Research, Development, Test, and Evaluation:							
Basic Research ("6.1")	1,161	1,217	1,310	93	7.6%	149	12.8%
Applied Research ("6.2")	3,410	3,144	3,673	528	16.8%	262	7.7%
Advanced Tech. Development ("6.3")	3,826	3,182	3,967	785	24.7%	141	3.7%
TOTAL Science and Technology	8,397	7,543	8,949	1,406	18.6%	552	6.6%
Demonstration/Validation ("6.4")	6,524	6,810	7,800	991	14.5%	1,276	19.6%
Engineering and Manuf. Dev. ("6.5")	8,689	8,661	8,641	-20	-0.2%	-48	-0.6%
RDT&E Management Support ("6.6")	2,552	2,434	2,614	180	7.4%	62	2.4%
Operational Systems Dev. ("6.7")	12,188	12,415	12,780	366	2.9%	593	4.9%
BA Adjustment	68	1	0	--	--	--	--
TOTAL RDT&E	38,419	37,863	40,785	2,922	7.7%	2,366	6.2%
Other Appropriations ¹	655	647	647	0	0.0%	-8	-1.3%
Medical research ²	270	66	414	348	527.4%	144	53.4%
TOTAL DOD R&D	39,344	38,576	41,846	3,270	8.5%	2,502	6.4%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million. Changes calculated from unrounded figures. FY 2001 Approved figures adjusted to reflect rescissions and general reductions.

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

² Medical research appropriated in Defense Health Programs, not RDT&E. These funds are not included in "6.2."

**Table 5. Department of Defense by Agency
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request		Chg. from FY 2000	
				Amount	Percent	Amount	Percent
Research, Development, Test, and Evaluation:							
Army	5,204	5,260	6,242	981	18.7%	1,038	19.9%
Navy	9,001	8,477	9,372	895	10.6%	371	4.1%
Air Force	14,487	13,686	13,926	241	1.8%	-561	-3.9%
Defense Agencies	9,431	10,238	11,019	780	7.6%	1,588	16.8%
<i>(Defense Adv. Research Projects Agcy.)</i>	1,876	1,951	1,997	46	2.4%	121	6.4%
<i>(Ballistic Missile Defense Organization)</i>	3,428	3,943	4,195	252	6.4%	768	22.4%
<i>(Other)</i>	4,127	4,344	4,826	482	11.1%	699	16.9%
Director of Test and Evaluation	265	0	0	0	--	-265	-100.0%
Dir. of Operational Test & Evaluation	31	202	227	25	12.4%	196	630.8%
TOTAL RDT&E	38,419	37,863	40,785	2,922	7.7%	2,366	6.2%
Other Appropriations ¹	655	647	647	0	0.0%	-8	-1.3%
Medical research ²	270	66	414	348	527.4%	144	53.4%
TOTAL DOD R&D	39,344	38,576	41,846	3,270	8.5%	2,502	6.4%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million. Changes calculated from unrounded figures. FY 2001 Approved figures adjusted to reflect rescissions and general reductions.

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

² Medical research appropriated in Defense Health Programs, not RDT&E.

**Table 6. National Aeronautics and Space Administration
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Summary of R&D by Appropriation:							
1. Human Space Flight (HSF)							
Space Station	2,323	2,115	2,110	-5	-0.2%	-213	-9.2%
Other	10	20	20	0	0.0%	10	93.7%
Total R&D HSF	2,333	2,135	2,130	-5	-0.2%	-204	-8.7%
2. Science, Aeronautics, and Technology (SAT)							
Space Science	2,193	2,399	2,483	84	3.5%	290	13.2%
Life & Microgravity Sciences	275	302	314	11	3.7%	39	14.2%
Earth Science	1,443	1,406	1,483	77	5.5%	40	2.8%
Aeronautics and Space Transp.	1,125	1,193	1,241	48	4.0%	116	10.3%
Mission Communications Serv.	406	529	524	-6	-1.1%	118	28.9%
Academic Programs	139	100	133	33	32.9%	-6	-4.2%
Total R&D SAT	5,581	5,929	6,177	248	4.2%	596	10.7%
3. Mission Support R&D	1,862	1,976	1,991	15	0.7%	128	6.9%
TOTAL NASA R&D	9,777	10,040	10,298	258	2.6%	521	5.3%

(continued)

Table 6. (continued)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
NASA Non-R&D Activities:							
Space Shuttle (in HSF)	2,980	3,166	3,132	-34	-1.1%	152	5.1%
Other Non-R&D in HSF	155	200	189	-10	-5.2%	34	22.3%
Mission Support Non-R&D	670	608	612	4	0.7%	-58	-8.6%
Inspector General	20	22	23	1	4.3%	3	14.7%
Total NASA Non-R&D Activities	3,824	3,995	3,956	-39	-1.0%	132	3.5%
TOTAL NASA Budget	13,601	14,035	14,254	219	1.6%	653	4.8%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

FY 2001 Approved figures are adjusted to reflect an across-the-board cut.

**Table 7. Department of Energy
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	FY 2001 Approved	Action by Congress			
				Chg. from Request Amount	Percent	Chg. from FY 2000 Amount	Percent
DOE Appropriations Containing R&D:							
1. Energy Supply R&D	364	468	444	-24	-5.1%	80	21.9%
2. Fossil Energy R&D	328	293	339	46	15.7%	11	3.4%
3. Energy Conservation	431	465	458	-6	-1.3%	27	6.3%
4. Science	2,638	2,969	3,001	31	1.1%	363	13.8%
5. Atomic Energy Defense Activities	3,301	3,405	3,697	293	8.6%	396	12.0%
6. Clean Coal Technology ¹	0	0	0	0	--	0	--
7. Radioactive Waste Management	55	40	55	15	38.8%	0	0.0%
TOTAL DOE R&D	7,117	7,639	7,994	355	4.7%	878	12.3%
Detail of selected appropriations:							
1. Energy Supply R&D							
Solar and Renewables	272	376	344	-32	-8.4%	72	26.3%
Nuclear Energy	92	92	100	8	8.4%	8	8.7%
TOTAL Energy Supply	364	468	444	-24	-5.1%	80	21.9%
4. Science							
High Energy Physics	693	704	707	3	0.4%	15	2.1%
Nuclear Physics	348	364	359	-5	-1.3%	12	3.3%

(continued)

Table 7. (continued)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Fusion Energy Sciences	245	244	249	5	1.9%	4	1.6%
Advanced Scientific Computing Research	128	182	168	-14	-7.8%	40	31.2%
Bio. and Environmental Research	433	444	494	50	11.2%	61	14.1%
Basic Energy Sciences	772	1,008	1,000	-7	-0.7%	229	29.7%
<i>(Spallation Neutron Source)</i>	118	281	279	-2	-0.9%	161	136.3%
Energy Research Analyses	1	1	1	0	-1.3%	0	-0.4%
Multiprogram Lab Support	19	22	22	0	-0.2%	3	15.3%
TOTAL Science	2,638	2,969	3,001	31	1.1%	363	13.8%
5. Atomic Energy Defense Activities							
National Nuclear Security Administration (NNSA) ²							
Naval Reactors	655	656	667	11	1.7%	13	2.0%
Weapons Activities	2,201	2,273	2,502	230	10.1%	301	13.7%
<i>(Nat'l Ignition Facility Construction)</i>	247	74	199	125	168.1%	-48	-19.6%
Nonproliferation & Verification R&D	183	191	207	16	8.3%	24	13.0%
Fissile Materials Disposition	63	71	71	0	0.0%	9	13.7%
Total NNSA R&D ²	3,101	3,191	3,448	257	8.0%	347	11.2%
Nuclear Safeguards and Security	27	26	26	0	-0.2%	-2	-5.7%
Intelligence	5	5	5	0	0.0%	0	0.0%
Environmental Management	167	182	218	36	19.8%	51	30.7%
TOTAL Atomic Defense R&D	3,301	3,405	3,697	293	8.6%	396	12.0%

Table 7. (continued)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
DOE R&D by Budget Function:							
Defense	3,301	3,405	3,697	293	8.6%	396	12.0%
General Science	2,638	2,969	3,001	31	1.1%	363	13.8%
Energy	1,178	1,265	1,296	31	2.5%	118	10.0%
DOE "FS&T" ³	6,372	6,881	7,225	344	5.0%	853	13.4%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

FY 2001 Approved figures adjusted to reflect general reductions in Science and Atomic Energy Defense accounts, and a 0.22 percent across-the-board reduction for all accounts.

¹ Budget authority is negative for some years because of enacted or proposed deferrals of previously appropriated funds.

Table does not reflect enacted or proposed deferrals. FY 2001 deferral is \$67 million.

² New semi-autonomous agency within DOE. FY 2000 figures adjusted for comparability with new account structure.

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

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Weapons Activities (NNSA)	4,321	4,594	5,004	410	8.9%	683	15.8%
Other NNSA Activities	1,375	1,584	1,571	-13	-0.8%	196	14.2%
Defense Environmental Restoration	4,466	4,552	4,964	412	9.1%	498	11.2%
Nuclear Waste and Other Defense	1,827	2,196	1,961	-236	-10.7%	134	7.3%
Total DOE defense	11,988	12,926	13,499	574	4.4%	1,511	12.6%
Science	2,815	3,151	3,180	29	0.9%	366	13.0%
Energy Supply	643	765	660	-105	-13.7%	17	2.7%
Fossil Energy	404	376	433	57	15.2%	29	7.1%
Energy Conservation	759	851	813	-37	-4.4%	55	7.2%
Other Energy Programs	298	472	439	-33	-7.0%	141	47.4%
Nondefense Environmental Mngmt.	307	286	277	-9	-3.1%	-30	-9.8%
Power Marketing Administrations	230	200	200	0	0.2%	-30	-13.2%
Departmental Administration	110	118	106	-11	-9.5%	-3	-2.9%
Total DOE Budget	17,553	19,142	19,608	466	2.4%	2,055	11.7%

Source: Department of Energy budget justification and FY 2001 appropriations bills.

DOE appropriations only (does not include offsets and other mandatory).

Includes R&D and non-R&D programs. FY 2001 Approved figures are adjusted to reflect a 0.22 percent across-the-board cut.

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

Excludes deferrals of funds in Clean Coal Technology and other deferrals. FY 2001 CCT deferral is \$67 million.

**Table 8. National Institutes of Health
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request		Chg. from FY 2000	
				Amount	Percent	Amount	Percent
Cancer	3,312	3,505	3,757	252	7.2%	446	13.5%
Heart, Lung and Blood	2,026	2,137	2,300	163	7.6%	273	13.5%
Dental and Cranofacial Research	269	284	306	22	7.8%	37	13.8%
Diabetes, Digestive and Kidney	1,141	1,209	1,303	94	7.8%	162	14.2%
Neurological Disorders and Stroke	1,030	1,085	1,176	92	8.4%	147	14.3%
Allergy and Infectious Diseases	1,797	1,906	2,043	137	7.2%	247	13.7%
General Medical Sciences	1,354	1,428	1,536	108	7.5%	182	13.4%
Child Health & Human Development	859	905	976	72	7.9%	117	13.6%
Eye	450	474	511	37	7.7%	61	13.4%
Environmental Health Sciences ¹	443	469	566	97	20.7%	123	27.8%
Aging	688	726	786	60	8.3%	98	14.3%
Arthritis & Musculoskeletal & Skin	349	369	397	28	7.6%	47	13.5%
Deafness and Comm. Disorders	264	278	301	23	8.1%	37	14.0%
Mental Health	975	1,031	1,107	76	7.3%	132	13.6%
Drug Abuse	687	725	781	56	7.7%	94	13.7%
Alcoholism and Alcohol Abuse	293	309	341	32	10.4%	47	16.2%
Nursing Research	90	93	104	12	12.8%	15	16.6%
Research Resources	675	714	817	103	14.5%	142	21.1%
Human Genome Research	336	358	382	25	6.9%	47	13.9%
Fogarty International Center	43	48	51	3	5.2%	7	16.6%

(continued)

Table 8. (continued)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
National Library of Medicine	215	230	247	17	7.2%	32	14.7%
Office of the Director	282	309	214	-95	-30.9%	-68	-24.3%
Office of AIDS Research ²	0	[2,111]	0	--	--	--	--
Buildings and Facilities ³	165	149	154	5	3.3%	-12	-7.0%
Complementary and Alternative Medicine	69	72	89	17	23.2%	20	29.3%
Minority Health and Health Disparities ⁴	0	0	130	130	--	130	--
TOTAL NIH Budget	17,813	18,813	20,376	1,563	8.3%	2,563	14.4%
<i>Subtract:</i>							
<i>Estimated Research Training</i>	<i>550</i>	<i>564</i>	<i>611</i>	<i>47</i>	<i>8.3%</i>	<i>60</i>	<i>11.0%</i>
<i>Other Non-R&D</i>	<i>161</i>	<i>155</i>	<i>168</i>	<i>13</i>	<i>8.3%</i>	<i>7</i>	<i>4.4%</i>
TOTAL NIH R&D	17,102	18,094	19,597	1,503	8.3%	2,495	14.6%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

¹ FY 2001 Approved includes \$63 million appropriated to NIEHS in the VA-HUD bill.

² The FY 2001 request consolidates NIH-wide AIDS research into the Office of AIDS Research (\$2.1 bil.). FY 2001 request figures adjusted for comparability with FY 2000 and FY 2001 Approved figures, which distribute AIDS funds among the institutes.

³ FY 2000 includes advance appropriation of \$40 million. FY 2001 figures do not include \$26 million advance appropriation requested but not granted for FY 2002.

⁴ New institute for FY 2001 created by Public Law 106-525. Comparable FY 2000 and FY 2001 request funding is in Office of the Director. Another new institute, the National Institute of Biomedical Imaging and Bioengineering, was created in December, 2000. FY 2001 funding will be transferred from other institutes' budgets.

**Table 9. Department of Health and Human Services
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request		Chg. from FY 2000	
				Amount	Percent	Amount	Percent
National Institutes of Health	17,102	18,094	19,597	1,503	8.3%	2,495	14.6%
Centers for Disease Control	477	518	585	67	13.0%	108	22.7%
Food and Drug Administration	135	146	140	-6	-4.3%	5	3.4%
Health Care Financing Admin.	61	55	89	34	62.4%	28	46.4%
Health Resources & Services Admin.	15	15	47	32	213.3%	32	213.3%
Healthcare Research and Quality ¹	168	209	229	20	9.6%	61	36.4%
Admin. for Children & Families	41	43	51	8	19.6%	10	25.4%
Office of Aging	33	38	40	2	4.6%	7	20.4%
Departmental Administration	50	50	50	0	0.0%	0	0.0%
TOTAL HHS R&D	18,082	19,168	20,829	1,661	8.7%	2,747	15.2%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

¹ Formerly the Agency for Health Care Policy and Research.

**Table 10. National Science Foundation
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Research and Related Activities ¹ :							
Mathematical and Physical Sciences	758	881	844	-37	-4.2%	86	11.4%
Engineering	382	457	414	-43	-9.4%	32	8.3%
Biological Sciences	414	511	476	-35	-6.8%	62	14.9%
Geosciences	488	583	556	-27	-4.7%	68	13.9%
Computer and Info. Science and Eng.	388	529	483	-46	-8.6%	95	24.5%
Social, Behavioral and Econ. Scis.	146	175	176	1	0.7%	30	20.6%
US Polar Programs	253	285	282	-3	-1.1%	29	11.6%
Integrative Activities	129	119	111	-8	-6.9%	-18	-14.1%
Total Research and Related Activities ¹	2,958	3,541	3,343	-198	-5.6%	384	13.0%
Major Research Equipment	94	139	121	-17	-12.4%	28	29.8%
Education and Human Res. R&D	121	110	118	9	7.8%	-2	-1.9%
Subtract Non-R&D in R&RA ¹	-309	-358	-342	17	-4.6%	-32	10.5%
TOTAL NSF R&D	2,863	3,431	3,240	-190	-5.5%	377	13.2%

(continued)

Table 10. (continued)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Non-R&D Programs and Activities:							
Non-R&D in R&RA ¹	309	358	342	-17	-4.6%	32	10.5%
Other Education and Human Res.	570	619	667	48	7.8%	97	17.0%
Salaries and Expenses	149	158	161	3	1.7%	12	7.8%
Inspector General	5	6	6	0	-0.2%	1	15.0%
Total NSF Non-R&D Activities	1,034	1,142	1,176	34	3.0%	142	13.7%
TOTAL NSF Budget	3,897	4,572	4,416	-156	-3.4%	519	13.3%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

FY 2001 Approved figures are adjusted to reflect an across-the-board cut.

¹ R&RA funds are not appropriated by directorate. The FY 2001 Approved directorate figures are AAAS estimates based on language in the FY 2001 appropriations bill.

**Table 11. Department of Commerce
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
National Oceanic and Atmospheric Administration (NOAA):							
TOTAL NOAA R&D	591	594	638	44	7.5%	47	8.0%
National Institute of Standards and Technology (NIST):							
Scientific & Technical Research	236	269	257	-12	-4.6%	21	8.8%
Advanced Technology Program R&D	115	148	123	-25	-17.1%	8	6.8%
III P ¹	0	44	5	-39	-89.7%	5	--
Construction	107	36	35	-1	-3.0%	-72	-67.4%
TOTAL NIST R&D	458	497	419	-78	-15.7%	-39	-8.5%
<i>(STRS, ATP Non-R&D Activities)</i>	74	94	73	-21	-22.1%	-1	-0.7%
<i>(Manufacturing Extension Partnership)</i>	104	114	105	-9	-8.1%	1	0.7%
<i>(Total NIST Budget)</i>	636	705	597	-108	-15.3%	-39	-6.1%
Technology Administration	1	1	1	0	0.0%	0	0.0%
Bureau of the Census	2	2	2	0	0.0%	0	0.0%
National Telecomm. and Info. Admin.	20	53	49	-4	-6.8%	29	147.0%
Economic Development Administration	1	1	1	0	0.0%	0	0.0%
TOTAL Commerce R&D	1,073	1,148	1,111	-37	-3.3%	38	3.5%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million. Changes calculated from unrounded figures. FY 2001 Approved figures adjusted to reflect across-the-board cut.

¹ Institute for Information Infrastructure Protection. FY 2001 Approved represents information infrastructure R&D in STRS.

**Table 12. Department of Agriculture
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Agricultural Research Service (ARS)							
Programs ¹	853	917	920	3	0.3%	67	7.8%
Buildings and Facilities	53	39	74	35	89.8%	21	39.7%
Total ARS R&D	906	956	994	38	4.0%	88	9.7%
Cooperative State Research, Education and Extension Service (CSREES):							
Total CSREES R&D	538	523	559	36	7.0%	21	4.0%
<i>(National Research Initiative)</i>	119	150	106	-44	-29.5%	-13	-11.1%
<i>(Special Research Grants)</i>	64	6	85	79	1236.9%	21	33.6%
<i>(Initiative for Future Agri. ²)</i>	120	120	120	0	0.0%	0	0.0%
<i>(CSREES Non-R&D Programs)</i>	528	562	540	-22	-4.0%	12	2.4%
<i>(Total CSREES Budget)</i>	1,066	1,085	1,099	14	1.3%	34	3.2%
Forest Service	211	237	237	0	0.0%	26	12.4%
Economic Research Service	64	55	67	12	21.6%	3	4.5%
Agricultural Marketing Service	5	6	6	0	-2.5%	1	17.0%

(continued)

Table 12. (continued)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Foreign Agricultural Service	1	1	1	0	0.0%	0	0.0%
Nat'l Agricultural Statistics Service	4	4	4	0	0.0%	0	0.0%
Grain Inspection	3	6	6	0	0.0%	3	100.0%
Animal & Plant Inspection Service	21	21	21	0	0.0%	0	0.0%
Office of the Secretary ³	10	15	58	43	286.7%	48	480.0%
Total USDA R&D	1,763	1,824	1,953	129	7.1%	190	10.8%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

FY 2001 Approved figures adjusted to reflect across-the-board cut.

¹ Includes spending from trust funds.

² Mandatory (non-appropriated) program of competitive grants for agricultural research.

³ Fund for Rural America, a mandatory program.

FY 2001 Approved includes \$50.5 million in R&D appropriations enacted in Public Law 106-224.

**Table 13. Department of Transportation
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request		Chg. from FY 2000	
				Amount	Percent	Amount	Percent
Federal Aviation Administration	226	284	292	8	2.9%	66	29.3%
Federal Highway Administration	257	314	272	-42	-13.5%	15	5.8%
Federal Transit Administration	17	14	14	0	-0.2%	-3	-17.1%
Nat'l Highway Traffic Safety Admin.	51	95	58	-38	-39.6%	7	13.8%
Federal Railroad Administration	25	29	28	-2	-5.2%	3	11.7%
Coast Guard	20	23	22	0	-0.2%	2	11.3%
Research and Special Programs	7	13	11	-3	-18.7%	4	54.0%
Office of the Secretary	3	5	3	-2	-32.5%	0	0.0%
Total DOT R&D	606	778	701	-78	-10.0%	94	15.5%
DOT Budget (includes R&D components):							
Federal Aviation Administration	9,997	11,222	11,983	761	6.8%	1,985	19.9%
Federal Highway Administration	28,727	30,358	33,373	3,014	9.9%	4,646	16.2%
Federal Transit Administration	5,785	6,321	6,257	-64	-1.0%	472	8.2%
Coast Guard	4,022	4,609	4,509	-100	-2.2%	487	12.1%
Federal Railroad Administration	735	1,056	724	-332	-31.4%	-11	-1.5%
All Other	989	1,186	1,143	-43	-3.6%	154	15.6%
Total DOT Budget	50,255	54,751	57,989	3,238	5.9%	7,734	15.4%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities. FY 2001 Approved figures adjusted to reflect across-the-board cut. 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.

Table 14. Department of the Interior

Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
U.S. Geological Survey:							
Surveys, Investigations, and Research (SIR):							
National Mapping	23	38	31	-6	-16.9%	9	37.7%
Geologic Resources	211	218	222	4	1.8%	10	4.9%
Water Resources	131	132	133	1	1.0%	2	1.9%
Biological Research	137	151	156	5	3.6%	19	14.1%
Total USGS R&D	502	539	543	4	0.8%	41	8.1%
<i>(USGS Non-R&D SIR Activities)</i>	312	357	340	-17	-4.7%	29	9.2%
<i>(Total USGS SIR Budget)</i>	813	895	883	-13	-1.4%	69	8.5%
Bureau of Reclamation	5	6	7	1	16.7%	2	40.0%
National Park Service	31	31	31	0	0.0%	0	0.0%
Bureau of Land Management	3	3	3	0	0.0%	0	0.0%
Minerals Management Service	32	11	13	2	18.2%	-19	-59.4%
TOTAL Interior R&D	573	590	597	7	1.2%	24	4.2%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities.

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

FY 2001 Approved figures include emergency and supplemental appropriations, and are adjusted to reflect an across-the-board cut.

**Table 15. Environmental Protection Agency
Congressional Action on R&D in the FY 2001 Budget (budget authority in millions of dollars)**

	FY 2000 Estimate	FY 2001 Request	Action by Congress				
			FY 2001 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2000 Amount	Chg. from FY 2000 Percent
Science and Technology ¹	497	493	537	44	8.9%	41	8.2%
Superfund	38	36	36	1	1.7%	-1	-3.9%
Leaking Underground Storage Tanks	1	1	1	0	-14.3%	0	0.0%
Oil Spill Response	1	1	1	0	-10.0%	0	0.0%
Other R&D Support Costs	111	142	111	-31	-22.0%	0	0.0%
TOTAL EPA R&D	647	673	686	13	2.0%	39	6.0%
EPA Budget:							
Science and Technology (incl. non-R&D) ²	681	710	732	22	3.1%	51	7.5%
Environ. Progs. and Management	1,895	2,099	2,083	-16	-0.7%	188	9.9%
Superfund ²	1,232	1,302	1,231	-71	-5.4%	-1	-0.1%
State and Tribal Assistance Grants	3,446	2,907	3,621	714	24.6%	175	5.1%
Buildings and Facilities	62	24	24	0	-0.5%	-38	-61.5%
Leaking Underground Storage Tanks	70	72	72	0	-0.1%	2	2.8%
Oil Spill Response	15	16	15	-1	-6.5%	0	-0.2%
Inspector General	32	34	34	0	0.1%	2	6.3%
TOTAL EPA Budget	7,433	7,163	7,812	648	9.0%	379	5.1%

AAAS estimates of R&D in FY 2001 appropriations bills. Includes conduct of R&D and R&D facilities. FY 2001 Approved adjusted to reflect across-the-board and supplementals. All figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ Does not include transfers from Superfund.

² Transfers from Superfund to S&T account recorded under S&T. All figures exclude funds (\$138 million in FY 2001) appropriated directly or transferred to NIEHS (in NIH) and Agency for Toxic Substances and Disease Registry.

Table A. Historical Table: Federal R&D by Agency, FY 1989-2001 in millions of constant FY 2000 dollars

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000**	2001***
(in millions of constant FY 2000 dollars)													
DOD	49,116	46,448	44,012	43,677	43,804	39,139	38,156	37,894	38,776	38,627	39,469	39,282	41,024
NASA	7,536	8,723	9,609	9,878	9,939	10,367	10,210	9,989	9,738	10,025	9,862	9,777	10,096
DOE	7,964	8,571	8,681	9,403	8,394	7,463	6,925	6,643	6,474	6,530	7,070	7,117	7,837
NIH *	9,613	9,944	10,619	11,127	11,152	11,544	11,617	12,099	12,722	13,479	15,220	17,102	19,212
NSF	2,243	2,120	2,240	2,280	2,270	2,472	2,586	2,532	2,525	2,571	2,710	2,863	3,177
USDA	1,450	1,500	1,645	1,756	1,654	1,685	1,605	1,575	1,621	1,605	1,670	1,763	1,915
Interior	611	651	733	743	732	780	721	605	616	551	506	573	585
DOT	415	434	486	718	700	706	719	636	637	606	616	606	687
EPA	506	520	543	569	560	648	598	511	620	655	679	647	672
Commerce	543	555	635	674	894	1,126	1,207	1,023	1,004	1,122	1,100	1,073	1,089
All Other *	1,846	2,032	2,113	2,346	2,131	2,408	2,238	1,900	2,255	2,310	2,467	2,532	2,812
Total R&D	81,843	81,499	81,316	83,172	82,230	78,338	76,581	75,407	76,987	78,080	81,370	83,334	89,107
Defense R&D	52,936	50,262	47,757	47,668	47,485	42,214	40,837	40,734	41,701	41,714	42,715	42,583	44,649
Nondef. R&D	28,906	31,237	33,559	35,504	34,745	36,125	35,744	34,672	35,286	36,367	38,655	40,751	44,458
Basic Res.	13,518	13,834	14,676	14,964	15,159	15,093	14,866	15,294	15,579	15,960	17,693	18,965	20,791

Source: AAAS Reports VII through XXV, based on OMB and agency R&D budget data.

Constant dollar conversions based on OMB's GDP deflators from the FY 2001 budget.

* Between FY 1991 and 1992, R&D from ADAMHA (HHS) transferred to NIH. ADAMHA R&D included in NIH totals for all years.

** - Latest estimate for FY 2000. *** - AAAS estimates of R&D in final FY 2001 appropriations.

The full version of this table ('76-'01) is available on the World Wide Web at www.aaas.org/spp/R&D/.

Table B. Total U.S. R&D, 1998-2000
(expenditures in millions of dollars)

(calendar years)	1998	1999	2000	% Change	% Share of
	Actual	Preliminary	Preliminary	1999-2000	Total ('00)
U.S. R&D by funding source:					
Federal Government	66,522	69,494	71,162	2.4%	26.9%
Industry	147,829	162,280	178,959	10.3%	67.7%
Universities and Colleges	5,166	5,534	5,951	7.5%	2.3%
Nonprofits	5,006	5,376	5,770	7.3%	2.2%
Nonfederal Government	1,993	2,143	2,322	8.4%	0.9%
Total U.S. R&D	226,515	244,828	264,165	7.9%	100.0%
U.S. R&D by performer:					
Federal Government	17,403	18,114	17,777	-1.9%	6.7%
Industry	167,102	182,017	199,170	9.4%	75.4%
Universities and Colleges	26,547	28,255	30,090	6.5%	11.4%
FFRDCs *	8,264	8,671	8,954	3.3%	3.4%
Nonprofits	7,198	7,772	8,174	5.2%	3.1%
Total U.S. R&D	226,515	244,828	264,165	7.9%	100.0%
U.S. R&D by character of work:					
Basic Research	40,892	42,515	45,471	7.0%	17.2%
<i>(from federal sources)</i>	20,289	21,361	22,441	5.1%	8.5%
<i>(from industry sources)</i>	13,366	13,436	14,777	10.0%	5.6%
Applied Research	45,866	52,269	56,704	8.5%	21.5%
Development	139,757	150,043	161,990	8.0%	61.3%
Total U.S. R&D	226,515	244,828	264,165	7.9%	100.0%
U.S. GDP** (billions)	8,760	9,255	9,708	4.9%	
U.S. R&D / GDP	2.59%	2.65%	2.72%		

Source: National Science Foundation, *National Patterns of R&D Resources 2000*.

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.