

Table 1. Total R&D by Agency

Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	Percent
Department of Defense (military)	42,743	48,454	50,134	1,680	3.5%	7,390	17.3%
("S&T" 6.1,6.2,6.3 + Medical)	9,420	8,827	10,527	1,700	19.3%	1,107	11.8%
(All Other DOD R&D)	33,324	39,627	39,607	-20	-0.1%	6,283	18.9%
National Aeronautics and Space Admin.	9,925	9,967	10,301	334	3.4%	375	3.8%
Department of Energy	7,744	7,399	8,122	723	9.8%	378	4.9%
Health and Human Services	20,859	23,496	24,145	650	2.8%	3,287	15.8%
(National Institutes of Health)	19,710	22,395	22,822	428	1.9%	3,113	15.8%
National Science Foundation	3,279	3,226	3,527	301	9.3%	249	7.6%
Department of Agriculture	1,959	1,801	2,139	338	18.8%	180	9.2%
Department of the Interior	631	593	673	80	13.5%	41	6.5%
Department of Transportation	747	798	853	55	6.9%	106	14.2%
Environmental Protection Agency	609	569	702	133	23.4%	93	15.3%
Department of Commerce	1,201	1,110	1,354	244	22.0%	153	12.7%
(NOAA)	726	772	836	64	8.3%	111	15.3%
(NIST)	421	313	493	180	57.6%	72	17.1%
Department of Education	265	259	265	6	2.5%	0	0.1%
Agency for International Development	200	193	204	11	5.7%	4	2.0%
Department of Veterans Affairs	703	722	733	11	1.5%	30	4.3%
Nuclear Regulatory Commission	50	67	68	1	2.0%	18	36.6%
Smithsonian Institution	118	118	119	1	0.7%	1	0.7%
Tennessee Valley Authority	0	0	0	0	--	0	--

(continued)

Table 1. (continued)

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
Corps of Engineers	60	46	51	5	11.5%	-9	-14.5%
Labor	22	13	19	6	46.2%	-3	-13.6%
Housing and Urban Development	54	43	69	26	60.7%	15	28.0%
Justice	90	74	104	30	40.5%	14	15.6%
U.S. Postal Service ¹	45	46	46	0	0.0%	1	2.2%
Social Security Administration	42	42	42	0	0.0%	0	0.0%
Treasury	7	8	8	0	0.0%	1	14.3%
All Other	16	13	15	2	17.3%	-1	-4.7%
TOTAL R&D	91,371	99,057	103,694	4,638	4.7%	12,324	13.5%
Defense R&D	46,243	51,996	53,928	1,932	3.7%	7,685	16.6%
Nondefense R&D	45,128	47,061	49,766	2,706	5.7%	4,638	10.3%
"FS&T" ²	47,138	49,572	52,373	2,802	5.7%	5,235	11.1%

AAAS estimates of R&D in FY 2002 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 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

¹ Financed out of postal revenues.

² An alternative measure of the federal investment in science and technology proposed by the Office of Management and Budget.

Includes both R&D and non-R&D programs. Please see Appendix 1 for details.

**Table 2. Estimated Research (Basic and Applied) by Agency
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	Percent
Health and Human Services	20,575	23,046	23,539	493	2.1%	2,964	14.4%
<i>National Institutes of Health</i>	<i>19,478</i>	<i>21,988</i>	22,348	360	1.6%	2,870	14.7%
National Science Foundation	3,016	3,017	3,266	249	8.3%	250	8.3%
Department of Defense	5,405	5,028	6,056	1,028	20.4%	651	12.0%
Department of Energy	4,597	4,474	4,802	329	7.3%	206	4.5%
National Aeronautics & Space Admin.	4,243	4,277	4,523	246	5.7%	280	6.6%
Department of Agriculture	1,664	1,545	1,693	148	9.5%	29	1.7%
Department of the Interior	594	557	629	72	12.9%	35	5.9%
Environmental Protection Agency	475	442	552	110	24.8%	77	16.3%
Department of Commerce	995	987	1,136	149	15.1%	142	14.3%
NOAA	692	741	772	31	4.2%	80	11.6%
NIST	296	239	358	118	49.5%	62	20.9%
Department of Transportation	477	530	563	33	6.3%	86	18.0%
Department of Veterans Affairs	689	707	718	11	1.5%	29	4.2%
Department of Education	167	169	173	4	2.5%	6	3.7%
All Other	568	535	596	61	11.4%	28	4.9%
TOTAL Est. Research	43,464	45,314	48,246	2,932	6.5%	4,782	11.0%

AAAS estimates of basic and applied research based on FY 2002 appropriations bills and historical trends for agencies and programs.

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

FY 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

**Table 3. Major Functional Categories of R&D
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
Defense ¹	46,243	51,996	53,928	1,932	3.7%	7,685	16.6%
Nondefense ²	45,128	47,061	49,766	2,706	5.7%	4,638	10.3%
Space	8,999	9,077	9,368	292	3.2%	369	4.1%
Health	21,506	24,173	24,818	646	2.7%	3,312	15.4%
Energy	1,340	994	1,379	384	38.7%	38	2.9%
General Science	6,234	6,156	6,545	389	6.3%	312	5.0%
Natural Resources & Environment	2,272	2,230	2,528	297	13.3%	255	11.2%
Agriculture	1,713	1,551	1,874	322	20.8%	161	9.4%
Transportation	1,673	1,688	1,785	98	5.8%	112	6.7%
Commerce	475	337	517	180	53.5%	42	8.8%
International	216	206	217	11	5.3%	1	0.5%
All Other	700	649	736	87	13.3%	36	5.1%
TOTAL R&D	91,371	99,057	103,694	4,638	4.7%	12,324	13.5%

AAAS estimates of R&D in FY 2002 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).

FY 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

**Table 4. Department of Defense by Program
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
Research, Development, Test, and Evaluation:							
Basic Research ("6.1")	1,317	1,304	1,383	79	6.0%	65	5.0%
Applied Research ("6.2")	3,676	3,659	4,212	553	15.1%	536	14.6%
Advanced Tech. Development ("6.3")	4,015	3,799	4,471	672	17.7%	457	11.4%
TOTAL Science and Technology	9,008	8,762	10,066	1,304	14.9%	1,058	11.7%
Demonstration/Validation ("6.4")	7,993	11,381	10,401	-981	-8.6%	2,407	30.1%
Engineering and Manuf. Dev. ("6.5")	8,893	10,249	11,022	772	7.5%	2,129	23.9%
RDT&E Management Support ("6.6")	2,639	2,802	2,847	45	1.6%	207	7.9%
Operational Systems Dev. ("6.7")	12,961	14,235	14,385	150	1.1%	1,424	11.0%
BA Adjustment	-180	0	0	--	--	--	--
TOTAL RDT&E	41,315	47,429	48,720	1,290	2.7%	7,405	17.9%
Other Appropriations ¹	1,017	959	953	-7	-0.7%	-64	-6.3%
Medical research ²	412	65	461	396	606.7%	49	12.0%
TOTAL DOD R&D	42,743	48,454	50,134	1,680	3.5%	7,390	17.3%

AAAS estimates of R&D in FY 2002 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 2002 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 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
Research, Development, Test, and Evaluation:							
Army	6,247	6,513	7,064	551	8.5%	817	13.1%
Navy	9,555	10,735	11,422	687	6.4%	1,867	19.5%
Air Force	14,190	14,344	14,528	184	1.3%	338	2.4%
Defense Agencies	11,098	15,620	15,475	-145	-0.9%	4,377	39.4%
<i>(Defense Adv. Research Projects Agcy.)</i>	2,010	2,281	2,293	11	0.5%	283	14.1%
<i>(Ballistic Missile Defense Organization)</i>	4,204	7,606	6,995	-610	-8.0%	2,791	66.4%
<i>(Other)</i>	4,884	5,733	6,187	454	7.9%	1,303	26.7%
Director of Test and Evaluation	0	0	0	0	--	0	--
Dir. of Operational Test & Evaluation	223	217	231	13	6.1%	8	3.5%
TOTAL RDT&E	41,315	47,429	48,720	1,290	2.7%	7,405	17.9%
Other Appropriations ¹	1,017	959	953	-7	-0.7%	-64	-6.3%
Medical research ²	412	65	461	396	606.7%	49	12.0%
TOTAL DOD R&D	42,743	48,454	50,134	1,680	3.5%	7,390	17.3%

AAAS estimates of R&D in FY 2002 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 2002 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 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
Summary of R&D by Appropriation:							
1. Human Space Flight (HSF)							
Space Station *	2,113	2,087	1,724	-364	-17.4%	-389	-18.4%
Other HSF R&D	788	737	737	0	0.0%	-51	-6.5%
Total R&D HSF	2,901	2,825	2,461	-364	-12.9%	-440	-15.2%
2. Science, Aeronautics, and Technology (SAT)							
Space Science	2,625	2,786	2,849	63	2.2%	224	8.5%
Biological & Physical Research *	379	361	714	353	97.9%	336	88.6%
Earth Science	1,716	1,515	1,573	58	3.9%	-143	-8.3%
Aero-Space Technology	2,214	2,376	2,490	114	4.8%	275	12.4%
Academic Programs	133	154	231	77	50.2%	98	73.9%
Emergency Funds	0	0	33	33	--	33	--
Total R&D SAT	7,067	7,192	7,890	698	9.7%	823	11.6%
Less Non-R&D in SAT	-42	-50	-50	0	0.0%	-7	17.5%
TOTAL NASA R&D	9,925	9,966	10,301	334	3.4%	375	3.8%

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Table 6. (continued)

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
NASA Non-R&D Activities:							
Space Shuttle (in HSF)	3,119	3,284	3,284	0	0.0%	165	5.3%
Other Non-R&D in HSF	1,144	1,188	1,244	56	4.7%	100	8.7%
Non-R&D in SAT	42	50	50	0	0.0%	7	17.5%
Inspector General	23	24	24	0	0.0%	1	3.5%
Total NASA Non-R&D Activities	4,328	4,545	4,601	56	1.2%	273	6.3%
TOTAL NASA Budget	14,253	14,511	14,902	390	2.7%	648	4.5%

AAAS estimates of R&D in FY 2002 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 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

* - The FY 2002 Approved appropriation transfers Space Station research from the International Space Station account to the Biological and Physical Research account. The FY 2002 Approved transfer for Space Station research is \$284 million; there is an additional \$55 million in BPR for space station equipment.

**Table 7. Department of Energy
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
DOE Appropriations Containing R&D:							
1. Energy Supply R&D	409	284	417	133	46.8%	8	2.0%
2. Fossil Energy R&D	396	296	408	112	37.8%	12	3.0%
3. Energy Conservation	441	316	454	138	43.8%	14	3.1%
4. Science	2,955	2,930	3,018	88	3.0%	63	2.1%
5. Atomic Energy Defense Activities	3,499	3,542	3,794	252	7.1%	295	8.4%
6. Clean Coal Technology ¹	0	0	0	0	--	0	--
7. Radioactive Waste Management	45	31	31	0	0.0%	-13	-29.9%
TOTAL DOE R&D	7,744	7,399	8,122	723	9.8%	378	4.9%
Detail of selected appropriations:							
1. Energy Supply R&D							
Solar and Renewables	328	227	339	112	49.3%	11	3.3%
Nuclear Energy	81	57	78	21	36.7%	-3	-3.5%
TOTAL Energy Supply	409	284	417	133	46.8%	8	2.0%
4. Science							
High Energy Physics	702	706	706	0	0.0%	4	0.6%
Nuclear Physics	355	355	355	0	0.0%	0	0.0%

(continued)

Table 7. (continued)

	FY 2001 Estimate	FY 2002 Request	FY 2002 Approved	Action by Congress			
				Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	Percent
Fusion Energy Sciences	245	245	245	0	0.0%	0	0.1%
Advanced Scientific Computing Research	166	163	158	-5	-3.1%	-8	-4.6%
Bio. and Environmental Research	481	442	527	86	19.4%	46	9.6%
Basic Energy Sciences	984	997	1,004	7	0.7%	20	2.0%
<i>(Spallation Neutron Source)</i>	278	291	291	0	0.0%	13	4.8%
Energy Research Analyses	1	1	1	0	0.0%	0	2.5%
Multiprogram Lab Support	22	22	22	0	0.0%	0	0.0%
TOTAL Science	2,955	2,930	3,018	88	3.0%	63	2.1%
5. Atomic Energy Defense Activities							
National Nuclear Security Administration (NNSA)							
Naval Reactors	669	667	665	-2	-0.3%	-3	-0.5%
Weapons Activities	2,357	2,449	2,569	120	4.9%	212	9.0%
<i>Stockpile R&D</i>	246	306	349	44	14.2%	104	42.2%
<i>(Adv. Simulation and Computing)</i>	747	738	730	-8	-1.1%	-17	-2.3%
<i>(Inertial Confinement Fusion)</i>	234	223	261	39	17.3%	28	11.9%
<i>(Nat'l Ignition Facility Construction)</i>	197	245	245	0	0.0%	48	24.2%
<i>All Other Weapons R&D</i>	934	938	984	46	4.9%	50	5.4%
Nonproliferation & Verification R&D	204	195	309	114	58.5%	105	51.2%
Fissile Materials Disposition	62	67	67	0	0.0%	6	9.6%
Total NNSA R&D	3,292	3,379	3,611	232	6.9%	319	9.7%

(continued)

Table 7. (continued)

	FY 2001 Estimate	FY 2002 Request	FY 2002 Approved	Action by Congress			
				Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
Nuclear Safeguards and Security	26	26	26	0	0.0%	0	0.0%
Intelligence	5	5	5	0	0.0%	0	0.0%
Environmental Management	176	131	151	20	15.2%	-25	-14.0%
TOTAL Atomic Defense R&D	3,499	3,542	3,794	252	7.1%	295	8.4%
DOE R&D by Budget Function:							
Defense	3,499	3,542	3,794	252	7.1%	295	8.4%
General Science	2,955	2,930	3,018	88	3.0%	63	2.1%
Energy	1,290	927	1,310	383	41.3%	20	1.6%

AAAS estimates of R&D in FY 2002 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 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

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

Excludes deferrals of funds in Clean Coal Technology and other deferrals. FY 2002 CCT deferral is \$40 million.

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

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
Weapons Activities (NNSA)	5,201	5,300	5,565	265	5.0%	364	7.0%
Other NNSA Activities	1,571	1,477	2,030	553	37.5%	459	29.2%
Defense Environmental Restoration	5,061	4,549	5,243	694	15.3%	182	3.6%
Nuclear Waste and Other Defense	1,970	2,030	2,074	44	2.2%	104	5.3%
Total DOE defense	13,803	13,355	14,912	1,557	11.7%	1,109	8.0%
Science	3,155	3,160	3,233	73	2.3%	78	2.5%
Energy Supply	661	505	667	162	32.0%	5	0.8%
Fossil Energy	539	449	583	134	29.8%	43	8.0%
Energy Conservation	815	756	913	157	20.8%	97	11.9%
Other Energy Programs	344	324	352	28	8.6%	9	2.5%
Nondefense Environmental Mngmt.	291	229	236	8	3.4%	-55	-18.8%
Power Marketing Administrations	202	205	208	2	1.2%	6	2.9%
Departmental Administration	106	115	105	-10	-8.5%	-1	-0.8%
Total DOE Budget	19,917	19,098	21,209	2,111	11.1%	1,292	6.5%

Source: Department of Energy budget justification and FY 2002 appropriations bills.

DOE appropriations only (does not include offsets and other mandatory). Includes R&D and non-R&D programs.

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 2002 CCT deferral is \$40 million.

FY 2002 Approved includes emergency funds transferred to DOE from funds appropriated in Public Law 107-38.

**Table 8. National Institutes of Health
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
Cancer	3,738	4,177	4,190	13	0.3%	452	12.1%
Heart, Lung and Blood	2,299	2,567	2,576	9	0.3%	277	12.0%
Dental and Cranofacial Research	306	342	343	1	0.4%	37	12.1%
Diabetes, Digestive and Kidney	1,304	1,458	1,467	9	0.6%	163	12.5%
Neurological Disorders and Stroke	1,177	1,316	1,328	12	0.9%	151	12.8%
Allergy and Infectious Diseases	2,063	2,355	2,527	172	7.3%	464	22.5%
General Medical Sciences	1,540	1,720	1,725	5	0.3%	185	12.0%
Child Health & Human Development	979	1,097	1,114	17	1.5%	135	13.8%
Eye	511	571	581	10	1.8%	71	13.9%
Environmental Health Sciences ¹	566	632	647	15	2.4%	81	14.4%
Aging	786	880	893	13	1.5%	107	13.6%
Arthritis & Musculoskeletal & Skin	397	444	449	5	1.2%	52	13.2%
Deafness and Comm. Disorders	301	337	342	5	1.6%	41	13.6%
Mental Health	1,107	1,238	1,249	10	0.8%	142	12.8%
Drug Abuse	781	907	888	-19	-2.1%	107	13.7%
Alcoholism and Alcohol Abuse	341	382	384	2	0.6%	44	12.8%
Nursing Research	105	118	120	3	2.3%	15	14.5%
Research Resources	817	974	1,012	38	3.9%	194	23.8%
Human Genome Research	382	427	430	3	0.7%	47	12.4%
Fogarty International Center	50	56	57	0	0.9%	6	12.8%

(continued)

Table 8. (continued)

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	Percent
National Library of Medicine	246	276	278	2	0.7%	31	12.7%
Office of the Director	188	232	236	3	1.5%	48	25.6%
Buildings and Facilities	154	307	345	38	12.4%	191	124.1%
Complementary and Alternative Medicine	89	100	105	5	4.6%	16	17.4%
Biomed. Imaging/Bioengineering	2	40	112	72	178.5%	110	5570.1%
Minority Health and Health Disparities	132	158	158	-1	-0.4%	26	19.5%
TOTAL NIH Budget	20,361	23,112	23,556	444	1.9%	3,195	15.7%
add Mandatory Funds	103	103	103	0	0.0%	0	0.0%
<i>Subtract:</i>							
<i>Estimated Research Training</i>	592	645	658	12	1.9%	66	11.2%
<i>Other Non-R&D</i>	162	175	178	3	1.9%	16	9.9%
TOTAL NIH R&D	19,710	22,394	22,822	428	1.9%	3,113	15.8%

AAAS estimates of R&D in FY 2002 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 2002 Approved includes \$81 million appropriated to NIEHS in the VA-HUD and Defense bills.

FY 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

**Table 9. Department of Health and Human Services
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
National Institutes of Health	19,710	22,395	22,822	428	1.9%	3,113	15.8%
Centers for Disease Control	517	568	689	121	21.4%	172	33.3%
Food and Drug Administration	138	140	159	19	13.7%	21	15.4%
Centers for Medicare & Medicaid Services ¹	139	55	118	63	114.9%	-21	-15.0%
Health Resources & Services Admin.	26	28	28	0	0.0%	2	7.7%
Healthcare Research and Quality	226	255	248	-7	-2.9%	22	9.6%
Admin. for Children & Families	25	27	27	0	0.0%	2	8.0%
Office of Aging	31	18	33	15	83.9%	2	6.8%
Departmental Administration	47	10	21	11	105.0%	-27	-56.4%
TOTAL HHS R&D	20,859	23,496	24,145	650	2.8%	3,287	15.8%

AAAS estimates of R&D in FY 2002 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 Health Care Financing Administration.

FY 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

**Table 10. National Science Foundation
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	Percent
Research and Related Activities ¹ :							
Mathematical and Physical Sciences	851	864	922	59	6.8%	71	8.4%
Engineering	431	431	468	36	8.5%	37	8.5%
Biological Sciences	485	483	509	26	5.4%	24	4.9%
Geosciences	562	559	611	52	9.3%	48	8.6%
Computer and Info. Science and Eng.	478	470	516	45	9.7%	38	7.9%
Social, Behavioral and Econ. Scis.	164	163	169	6	3.5%	4	2.7%
US Polar Programs	273	277	298	22	7.8%	25	9.1%
Integrative Activities	98	81	107	26	32.1%	9	9.0%
Total Research and Related Activities ¹	3,343	3,327	3,599	272	8.2%	256	7.7%
Major Research Equipment	122	96	139	42	44.1%	17	14.1%
Education and Human Res. R&D	139	139	140	0	0.3%	0	0.3%
<i>Subtract Non-R&D in R&RA ¹</i>	<i>-325</i>	<i>-336</i>	<i>-350</i>	<i>-13</i>	<i>4.0%</i>	<i>-25</i>	<i>7.6%</i>
TOTAL NSF R&D	3,279	3,226	3,527	301	9.3%	249	7.6%

(continued)

Table 10. (continued)

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
Non-R&D Programs and Activities:							
Non-R&D in R&RA ¹	325	336	350	13	4.0%	25	7.6%
Other Education and Human Res.	646	733	735	2	0.3%	89	13.8%
Salaries and Expenses	161	170	170	0	0.0%	10	5.9%
Inspector General	6	7	7	0	0.0%	0	7.8%
Total NSF Non-R&D Activities	1,138	1,246	1,262	16	1.3%	124	10.9%
TOTAL NSF Budget	4,417	4,473	4,789	317	7.1%	373	8.4%

AAAS estimates of R&D in FY 2002 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 R&RA funds are not appropriated by directorate. The FY 2002 Approved directorate figures are AAAS estimates based on language in the FY 2002 appropriations bill.

**Table 11. Department of Commerce
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
National Oceanic and Atmospheric Administration (NOAA):							
TOTAL NOAA R&D	726	772	836	64	8.3%	111	15.3%
National Institute of Standards and Technology (NIST):							
Scientific & Technical Research	268	292	279	-12	-4.2%	12	4.3%
Advanced Technology Program R&D	118	0	150	150	- -	31	26.6%
Construction	35	21	64	43	204.5%	29	82.8%
TOTAL NIST R&D	421	313	493	180	57.6%	72	17.1%
<i>(STRS, ATP Non-R&D Activities)</i>	72	69	82	13	18.9%	9	12.8%
<i>(Manufacturing Extension Partnership)</i>	105	106	107	0	0.2%	1	1.3%
<i>(Total NIST Budget)</i>	598	487	681	193	39.7%	82	13.8%
Departmental 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.	51	21	21	0	0.0%	-30	-58.8%
Economic Development Administration	1	1	1	0	0.0%	0	0.0%
TOTAL Commerce R&D	1,201	1,110	1,354	244	22.0%	153	12.7%

AAAS estimates of R&D in FY 2002 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 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

**Table 12. U.S. Department of Agriculture
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
Agricultural Research Service (ARS) Programs ¹	937	939	1,042	104	11.1%	105	11.2%
Buildings and Facilities ²	74	30	192	162	530.3%	118	158.7%
Total ARS R&D	1012	969	1,234	265	27.4%	223	22.0%
Cooperative State Research, Education and Extension Service (CSREES):							
Total CSREES R&D	594	468	532	64	13.7%	-61	-10.3%
<i>(National Research Initiative)</i>	106	106	120	15	13.9%	15	13.9%
<i>(Special Research Grants)</i>	85	3	97	94	3421.2%	12	13.5%
<i>(Hatch Act)</i>	180	180	180	0	0.0%	0	0.0%
<i>(Integrated Grants)</i>	19	19	19	0	2.4%	0	2.4%
<i>(Initiative for Future Agri. ³)</i>	64	64	0	-64	-100.0%	-64	-100.0%
<i>(CSREES Non-R&D Programs)</i>	540	521	499	-22	-4.2%	-41	-7.6%
<i>(Total CSREES Budget)</i>	1,134	990	1,031	42	4.2%	-102	-9.0%
Forest Service	246	250	265	15	6.1%	19	7.7%
Economic Research Service	66	67	67	0	0.3%	1	1.8%
Agricultural Marketing Service	5	5	5	0	0.0%	0	0.0%

(continued)

Table 12. (continued)

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	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	5	6	6	0	0.0%	1	20.0%
Animal & Plant Inspection Service	22	23	24	1	4.1%	2	8.8%
Office of the Secretary ⁴	5	8	0	-8	-100.0%	-5	-100.0%
Total USDA R&D	1,959	1,801	2,139	338	18.8%	180	9.2%

AAAS estimates of R&D in FY 2002 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 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

FY 2001 ARS and CSREES figures include mandatory R&D funds appropriated in the Agricultural Risk Protection Act (P.L. 106-224).

¹ Includes spending from trust funds.

² Includes repair and maintenance funded through the Programs account.

³ Mandatory (non-appropriated) program of competitive grants for agricultural research. R&D portion only.

The final Agriculture bill (P.L. 107-76) blocks FY 2002 spending.

⁴ Fund for Rural America, a mandatory program. R&D portion only. The final Agriculture bill (P.L. 107-76) blocks FY 2002 spending.

**Table 13. Department of Transportation
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	FY 2002 Approved	Action by Congress			
				Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	Percent
Federal Aviation Administration	301	276	373	97	35.2%	72	23.9%
Federal Highway Administration	294	374	322	-53	-14.1%	28	9.6%
Federal Transit Administration	13	5	13	8	161.1%	0	-0.2%
Nat'l Highway Traffic Safety Admin.	58	59	57	-2	-2.9%	-1	-1.7%
Federal Railroad Administration	28	31	32	1	2.2%	4	14.2%
Coast Guard	22	23	21	-2	-6.5%	-1	-4.7%
Research and Special Programs	9	10	8	-2	-20.3%	-2	-16.2%
Fed. Motor Carrier Safety Admin.	10	14	14	0	0.0%	4	43.8%
Office of the Secretary	11	5	12	7	130.9%	1	9.3%
Total DOT R&D	747	798	853	55	6.9%	106	14.2%
DOT Budget (includes R&D components):							
Federal Aviation Administration	11,981	12,927	14,123	1,196	9.3%	2,142	17.9%
Federal Highway Administration	33,433	32,530	33,214	685	2.1%	-218	-0.7%
Federal Transit Administration	6,254	6,747	6,881	134	2.0%	627	10.0%
Coast Guard	4,511	5,140	5,258	118	2.3%	747	16.6%
Federal Railroad Administration	744	651	840	188	28.9%	96	12.9%
All Other	1,137	1,122	1,410	288	25.6%	273	24.0%
Total DOT Budget	58,060	59,117	61,726	2,609	4.4%	3,666	6.3%

AAAS estimates of R&D in FY 2002 appropriations bills. 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. FY 2002 Approved includes emergency funds transferred to DOT from funds appropriated in Public Law 107-38.

**Table 14. Department of the Interior
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	FY 2002 Approved	Action by Congress			
				Chg. from Request Amount	Percent	Chg. from FY 2001 Amount	Percent
U.S. Geological Survey:							
Surveys, Investigations, and Research (SIR):							
National Mapping	28	26	28	1	4.2%	0	-0.6%
Geologic Resources	225	214	233	19	8.9%	7	3.3%
Water Resources	136	101	140	38	38.0%	4	2.8%
Biological Research	161	149	166	17	11.5%	6	3.6%
Total USGS R&D	549	491	567	76	15.4%	17	3.1%
<i>(USGS Non-R&D SIR Activities)</i>	333	323	347	25	7.7%	14	4.3%
<i>(Total USGS SIR Budget)</i>	883	813	914	101	12.4%	31	3.5%
Bureau of Reclamation	6	6	10	4	66.7%	4	66.7%
National Park Service	30	30	30	0	0.0%	0	0.0%
Bureau of Land Management	14	19	19	0	0.0%	5	35.7%
Minerals Management Service	32	47	47	0	0.0%	15	46.9%
TOTAL Interior R&D	631	593	673	80	13.5%	41	6.5%

AAAS estimates of R&D in FY 2002 appropriations bills. Includes conduct of R&D and R&D facilities.
All figures are rounded to the nearest million. Changes calculated from unrounded figures.

**Table 15. Environmental Protection Agency
Congressional Action on R&D in the FY 2002 Budget (budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Congress				
			FY 2002 Approved	Chg. from Request		Chg. from FY 2001	
				Amount	Percent	Amount	Percent
Science and Technology ¹	533	497	618	122	24.5%	86	16.1%
Superfund	37	37	37	0	0.0%	0	1.1%
Leaking Underground Storage Tanks	1	1	1	0	0.0%	0	0.0%
Oil Spill Response	1	1	1	0	0.0%	0	0.0%
Other R&D Support Costs	38	34	46	12	34.1%	7	18.8%
TOTAL EPA R&D	609	569	702	133	23.4%	93	15.3%
EPA Budget:							
Science and Technology (incl. non-R&D) ²	732	677	825	148	21.8%	93	12.8%
Environ. Progs. and Management	2,083	1,973	2,094	121	6.1%	10	0.5%
Superfund ²	1,231	1,231	1,274	43	3.5%	44	3.5%
State and Tribal Assistance Grants	3,621	3,289	3,738	450	13.7%	118	3.2%
Buildings and Facilities	24	25	25	0	0.0%	1	6.0%
Leaking Underground Storage Tanks	72	72	73	1	1.5%	1	1.5%
Oil Spill Response	15	15	15	0	0.2%	0	0.2%
Inspector General	34	34	34	0	0.0%	0	0.0%
TOTAL EPA Budget	7,812	7,317	8,079	762	10.4%	267	3.4%

AAAS estimates of R&D in FY 2002 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 Does not include transfers from Superfund.

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

FY 2002 Approved figures include emergency appropriations for domestic security and counterterrorism activities.

**Table. Federal Counter-Terrorism R&D, including Weapons of Mass Destruction
Congressional Action on R&D in the FY 2002 Budget**

(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Approved	Amount	Percent
Agriculture	37	52	195	143	276.4%
<i>(Agri. Research Service)</i>	36	49	191	143	294.6%
<i>(APHIS)</i>	1	3	3	0	0.0%
Commerce (NIST)	10	4	10	6	151.8%
Department of Defense	190	235	353	118	50.1%
Department of Energy	60	68	194	126	184.7%
<i>(NNSA)</i>	55	63	109	46	72.1%
<i>(Other Defense programs)</i>	5	5	85	80	1634.7%
Environmental Protection Agency	0	0	70	70	--
Health and Human Services	110	116	451	335	288.2%
<i>(AHRQ)</i>	5	0	0	0	--
<i>(CDC)</i>	32	37	130	93	256.0%
<i>(FDA)</i>	0	0	20	20	--
<i>(NIH)</i>	43	50	293	244	489.9%
<i>(Office of Secretary)</i>	30	30	8	(23)	-75.0%
Justice	45	43	71	28	65.3%
<i>(FBI)</i>	15	7	7	0	0.0%
<i>(Office of Justice Programs)</i>	30	36	64	28	77.8%
Nat'l Aeronautics and Space Admin.	0	0	33	33	--
State	7	5	6	1	24.0%
Transportation	51	55	101	47	85.2%
<i>(FAA)</i>	50	55	100	46	84.0%
<i>(FTA)</i>	1	0	1	1	700.0%
Treasury	2	1	1	0	0.0%
Total Terrorism R&D	511	579	1,484	905	156.5%

OMB data from OMB's *Annual Report to Congress on Combating Terrorism*, August 2001.
FY 2002 Approved figures are AAAS estimates of R&D in enacted FY 2002 appropriations bills, including emergency funds appropriated in Public Law 107-38 and allocated in appropriations bills. Figures include conduct of R&D and R&D facilities.
Figures do not include non-R&D counterterrorism activities.

Table. Congressional Earmarks for R&D by Agency and Program

Congressional Action on R&D in the FY 2002 Budget

(budget authority in millions of dollars)

	FY 2002 House	FY 2002 Senate	Final Congressional Action		
			FY 2002 Earmarks	FY 2002 R&D	Earmarks % of R&D
Defense (military)	288	171	336	50,134	0.7%
<i>(Army)</i>	111	32	120	7,064	1.7%
<i>(Navy)</i>	53	25	68	11,422	0.6%
<i>(Air Force)</i>	43	6	43	14,528	0.3%
<i>(Defense Agencies and Other)</i>	81	108	104	17,120	0.6%
National Aeronautics & Space Adm.	132	113	233	10,301	2.3%
<i>(Space Science)</i>	18	9	30	2,849	1.0%
<i>(Bio. And Phys. Research)</i>	5	0	15	714	2.1%
<i>(Earth Science)</i>	25	19	38	1,573	2.4%
<i>(Aero-Space Technology)</i>	48	32	83	2,490	3.4%
<i>(Academic Programs)</i>	35	53	67	231	28.9%
Energy	30	152	171	8,122	2.1%
<i>(Science programs)</i>	0	32	72	3,018	2.4%
<i>(Energy programs)</i>	5	84	27	1,310	2.0%
<i>(Defense programs)</i>	25	36	25	3,794	0.7%
Health and Human Services	0	0	31	24,145	0.1%
<i>(National Institutes of Health)</i>	0	0	0	22,822	0.0%
National Science Foundation	50	10	50	3,527	1.4%
<i>(Major Research Equipment)</i>	50	0	50	139	36.0%
Agriculture	182	283	369	2,139	17.3%
<i>(Agricultural Res. Service)</i>	86	176	257	1,234	20.8%
<i>(CSREES)</i>	91	100	107	532	20.1%
<i>(Forest Service)</i>	5	8	5	265	1.8%
Interior	0	13	14	673	2.1%
Transportation	18	38	63	853	7.4%
Environmental Protection Agency	11	33	62	702	8.9%
Commerce	27	21	72	1,354	5.3%
<i>(NOAA)</i>	18	0	31	836	3.7%
<i>(NIST)</i>	9	21	42	493	8.5%
Agency for Int'l Development	2	5	4	204	2.0%
Housing and Urban Development	0	10	30	69	43.6%
Department of Justice	0	5	29	104	27.9%
All Other	0	0	5	1,367	0.3%
Total	739	853	1,470	103,694	1.4%

AAAS estimates of R&D in FY 2002 House, Senate, and final (enacted) appropriations bills.

Includes conduct of R&D and R&D facilities. All figures are rounded to the nearest million.

Changes calculated from unrounded figures. Does not include non-R&D projects.

"Earmarks" are AAAS interpretations of unrequested, congressionally designated, performer-specific R&D projects contained in legislative language or committee report language.