

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work
(budget authority in millions of dollars) **(Revised July '01)**

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
TOTAL R&D (Conduct of R&D and R&D Facilities)					
Defense (military)	39,960	42,743	48,454	5,711	13.4%
<i>S&T (6.1-6.3 + medical)</i>	8,632	9,420	8,843	-577	-6.1%
<i>All Other DOD R&D</i>	31,328	33,324	39,611	6,287	18.9%
Health and Human Services	18,182	20,859	23,496	2,637	12.6%
<i>Nat'l Institutes of Health</i>	17,234	19,710	22,395	2,685	13.6%
NASA	9,494	9,925	9,967	41	0.4%
Energy	6,956	7,744	7,399	-346	-4.5%
Nat'l Science Foundation	2,931	3,279	3,226	-52	-1.6%
Agriculture	1,776	1,959	1,801	-158	-8.1%
Commerce	1,174	1,201	1,110	-91	-7.6%
<i>NOAA</i>	643	726	772	47	6.4%
<i>NIST</i>	471	421	313	-108	-25.7%
Interior	618	631	593	-39	-6.1%
Transportation	607	747	798	51	6.8%
Environ. Protection Agency	558	609	569	-40	-6.5%
Veterans Affairs	645	703	722	19	2.7%
Education	238	265	259	-6	-2.3%
Int'l Assistance Programs	200	216	206	-10	-4.6%
Smithsonian	114	118	118	0	0.0%
Labor	16	22	13	-9	-40.9%
Nuclear Reg. Comm.	53	50	67	17	34.0%
Corps of Engineers	48	60	46	-14	-23.3%
Housing and Urban Dev.	45	54	43	-11	-20.4%
Justice	73	90	74	-16	-17.8%
Social Security	25	42	42	0	0.0%
Postal Service	42	45	46	1	2.2%
Treasury	14	7	8	1	14.3%
Total R&D	83,769	91,371	99,057	7,686	8.4%
Defense R&D	43,161	46,243	51,996	5,753	12.4%
Nondefense R&D	40,608	45,128	47,061	1,933	4.3%

(continued)

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work

Table II-1 (continued). R&D in the FY 2002 Budget by Agency and Character of Work
(budget authority in millions of dollars) (Revised July '01)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
BASIC RESEARCH					
(Please see Chapter 3 for a discussion of these data)					
Defense (military)	1,139	1,317	1,304	-13	-1.0%
Health and Human Services	10,099	11,537	12,973	1,436	12.4%
<i>Nat'l Institutes of Health</i>	<i>10,097</i>	<i>11,535</i>	<i>12,971</i>	<i>1,436</i>	<i>12.4%</i>
NASA	2,148	2,556	2,466	-90	-3.5%
Energy	2,263	2,372	2,347	-25	-1.1%
Nat'l Science Foundation	2,540	2,796	2,799	3	0.1%
Agriculture	684	743	717	-26	-3.5%
Commerce	39	42	40	-2	-4.3%
NOAA	0	0	0	0	-
NIST	39	42	40	-2	-4.3%
Interior	52	57	54	-3	-5.1%
Transportation	10	17	21	4	23.4%
Environ. Protection Agency	58	105	98	-7	-6.7%
Veterans Affairs	266	290	304	14	4.8%
Education	2	2	2	0	0.0%
Int'l Assistance Programs	42	51	49	-2	-3.9%
Smithsonian	103	105	102	-3	-2.9%
Labor	2	2	2	0	0.0%
Corps of Engineers	3	3	3	0	0.0%
Justice	20	20	21	1	5.0%
Total BASIC RESEARCH	19,470	22,015	23,302	1,287	5.8%
Defense	1,184	1,369	1,355	-14	-1.0%
Nondefense	18,286	20,645	21,946	1,301	6.3%

(continued)

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work

Table II-1 (continued). R&D in the FY 2002 Budget by Agency and Character of Work
(budget authority in millions of dollars) (Revised July '01)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
APPLIED RESEARCH					
(Please see Chapter 3 for a discussion of these data)					
Defense (military; incl. Med.)	3,704	4,088	3,724	-364	-8.9%
Health and Human Services	7,787	9,038	10,073	1,035	11.5%
<i>Nat'l Institutes of Health</i>	<i>6,896</i>	<i>7,943</i>	<i>9,017</i>	<i>1,074</i>	<i>13.5%</i>
NASA	1,542	1,688	1,811	124	7.3%
Energy	1,886	2,224	2,127	-98	-4.4%
Nat'l Science Foundation	184	220	218	-2	-0.9%
Agriculture	835	921	828	-93	-10.1%
Commerce	857	953	947	-6	-0.6%
NOAA	601	692	741	49	7.1%
NIST	239	254	199	-55	-21.6%
Interior	520	537	503	-34	-6.3%
Transportation	397	460	509	49	10.5%
Environ. Protection Agency	387	370	345	-26	-6.9%
Veterans Affairs	367	399	403	4	1.0%
Education	151	165	167	2	1.2%
Int'l Assistance Programs	152	162	154	-8	-4.9%
Smithsonian	0	0	0	0	- -
Labor	14	20	11	-9	-45.0%
Nuclear Reg. Comm.	53	50	67	17	34.0%
Corps of Engineers	20	14	14	0	0.0%
Housing and Urban Dev.	45	54	43	-11	-20.4%
Justice	26	38	20	-18	-47.4%
Social Security	25	42	42	0	0.0%
Treasury	6	7	7	0	0.0%
Total APPLIED RESEARCH	18,958	21,450	22,013	563	2.6%
Defense	5,105	5,737	5,460	-277	-4.8%
Nondefense	13,853	15,713	16,552	839	5.3%

(continued)

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work

Table II-1 (continued). R&D in the FY 2002 Budget by Agency and Character of Work (budget authority in millions of dollars) (Revised July '01)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Total RESEARCH (basic + applied)					
(Please see Chapter 3 for a discussion of these data)					
Defense (military; incl. Med.)	4,843	5,405	5,028	-377	-7.0%
Health and Human Services	17,886	20,575	23,046	2,471	12.0%
<i>Nat'l Institutes of Health</i>	16,993	19,478	21,988	2,510	12.9%
NASA	3,690	4,243	4,277	34	0.8%
Energy	4,149	4,597	4,474	-123	-2.7%
Nat'l Science Foundation	2,724	3,016	3,017	1	0.0%
Agriculture	1,518	1,664	1,545	-119	-7.1%
Commerce	896	995	987	-8	-0.8%
NOAA	601	692	741	49	7.1%
NIST	278	296	239	-57	-19.2%
Interior	572	594	557	-37	-6.2%
Transportation	407	477	530	53	11.0%
Environ. Protection Agency	445	475	442	-33	-6.9%
Veterans Affairs	633	689	707	18	2.6%
Education	153	167	169	2	1.2%
Int'l Assistance Programs	194	213	203	-10	-4.7%
Smithsonian	103	105	102	-3	-2.9%
Labor	16	22	13	-9	-40.9%
Nuclear Reg. Comm.	53	50	67	17	34.0%
Corps of Engineers	23	17	17	0	0.0%
Housing and Urban Dev.	45	54	43	-11	-20.4%
Justice	46	58	41	-17	-29.3%
Social Security	25	42	42	0	0.0%
Treasury	6	7	7	0	0.0%
Total RESEARCH	38,428	43,464	45,314	1,850	4.3%
Defense	6,289	7,106	6,816	-291	-4.1%
Nondefense	32,139	36,358	38,498	2,140	5.9%

(continued)

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work

Table II-1 (continued). R&D in the FY 2002 Budget by Agency and Character of Work
(budget authority in millions of dollars) (Revised July '01)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount Percent	
DEVELOPMENT					
Defense (military)	35,021	37,160	43,246	6,086	16.4%
<i>S&T (6.3 Development)</i>	3,789	4,015	3,815	-200	-5.0%
<i>All Other DOD Develop.</i>	31,233	33,146	39,431	6,285	19.0%
Health and Human Services	44	39	28	-11	-28.2%
<i>Nat'l Institutes of Health</i>	0	0	0	0	--
NASA	2,716	2,696	2,755	60	2.2%
Energy	1,907	2,094	1,855	-239	-11.4%
Nat'l Science Foundation	0	0	0	0	--
Agriculture	111	120	124	4	3.3%
Commerce	131	145	72	-73	-50.3%
<i>NOAA</i>	19	24	19	-5	-22.0%
<i>NIST</i>	70	74	36	-38	-50.8%
Interior	29	32	30	-2	-6.2%
Transportation	186	255	250	-5	-1.9%
Environ. Protection Agency	92	100	93	-7	-7.2%
Veterans Affairs	12	14	15	1	7.1%
Education	85	98	90	-8	-8.2%
Int'l Assistance Programs	6	3	3	0	0.0%
Corps of Engineers	15	10	10	0	0.0%
Justice	27	32	33	1	3.1%
Postal Service	42	45	46	1	2.2%
Total Development	40,424	42,841	48,650	5,808	13.6%
Defense	36,292	38,489	44,546	6,057	15.7%
Nondefense	4,132	4,353	4,104	-249	-5.7%

(continued)

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work

Table II-1 (continued). R&D in the FY 2002 Budget by Agency and Character of Work
(budget authority in millions of dollars) (Revised July '01)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount Percent	
Total CONDUCT OF R&D (basic + applied research, development)					
Defense (military)	39,865	42,565	48,274	5,709	13.4%
<i>S&T (6.1-6.3 + medical)</i>	8,632	9,420	8,843	-577	-6.1%
<i>All Other DOD Conduct</i>	31,233	33,146	39,431	6,285	19.0%
Health and Human Services	17,930	20,614	23,074	2,460	11.9%
<i>Nat'l Institutes of Health</i>	16,993	19,478	21,988	2,510	12.9%
NASA	6,405	6,939	7,033	94	1.4%
Energy	6,057	6,690	6,329	-362	-5.4%
Nat'l Science Foundation	2,724	3,016	3,017	1	0.0%
Agriculture	1,629	1,783	1,669	-115	-6.4%
Commerce	1,027	1,140	1,059	-81	-7.1%
<i>NOAA</i>	620	716	759	44	6.1%
<i>NIST</i>	348	370	276	-94	-25.5%
Interior	601	625	587	-39	-6.2%
Transportation	594	732	780	48	6.5%
Environ. Protection Agency	537	575	535	-40	-6.9%
Veterans Affairs	645	703	722	19	2.7%
Education	238	265	259	-6	-2.3%
Int'l Assistance Programs	200	216	206	-10	-4.6%
Smithsonian	103	105	102	-3	-2.9%
Labor	16	22	13	-9	-40.9%
Nuclear Reg. Comm.	53	50	67	17	34.0%
Corps of Engineers	38	27	27	0	0.0%
Housing and Urban Dev.	45	54	43	-11	-20.4%
Justice	73	90	74	-16	-17.8%
Social Security	25	42	42	0	0.0%
Postal Service	42	45	46	1	2.2%
Treasury	6	7	7	0	0.0%
Total Conduct of R&D	78,852	86,306	93,964	7,658	8.9%
Defense	42,580	45,595	51,362	5,766	12.6%
Nondefense	36,272	40,711	42,602	1,892	4.6%

(continued)

Table II-1. R&D in the FY 2002 Budget by Agency and Character of Work

Table II-1 (continued). R&D in the FY 2002 Budget by Agency and Character of Work (budget authority in millions of dollars) (Revised July '01)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount Percent	
R&D Facilities and Capital Equipment					
Defense (military)	95	178	180	2	1.1%
Health and Human Services	253	245	422	177	72.4%
<i>Nat'l Institutes of Health</i>	242	232	407	175	75.5%
NASA	3,089	2,987	2,934	-53	-1.8%
Energy	899	1,054	1,070	16	1.5%
Nat'l Science Foundation	207	263	209	-53	-20.2%
Agriculture	147	176	133	-43	-24.6%
Commerce	147	62	51	-11	-17.7%
NOAA	23	10	13	3	30.0%
NIST	123	51	37	-14	-27.4%
Interior	17	6	6	0	0.0%
Transportation	14	15	18	3	19.9%
Environ. Protection Agency	21	34	34	0	0.0%
Veterans Affairs	0	0	0	0	--
Housing and Urban Dev.	0	0	0	0	--
Corps of Engineers	10	33	19	-14	-42.4%
Treasury	8	0	1	1	--
Smithsonian	11	13	16	3	23.1%
Total R&D Facils.	4,917	5,065	5,093	28	0.5%
Defense	580	648	634	-13	-2.1%
Nondefense	4,337	4,417	4,458	41	0.9%

Source: AAAS, based on OMB data for R&D for FY 2002, agency budget justifications, and information from agency budget offices.

Note: The projected inflation rate between FY 2001 and FY 2002 is 2.1 percent.

See individual agency tables for more information.

Note: FY 2002 DOD figures revised to reflect amended FY 2002 budget request.

FY 2001 figures adjusted to reflect rescissions and supplementals in Public Law 107-20.

Table II-2. R&D in the Department of Defense

Table II-2. R&D in the Department of Defense (REVISED July '01)
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount Percent	
Research, Development, Test, and Evaluation (RDT&E)					
Basic Research ("6.1")	1,139	1,317	1,304	-13	-1.0%
Applied Research ("6.2")	3,409	3,676	3,659	-17	-0.5%
Total Research	4,548	4,993	4,963	-30	-0.6%
Adv. Tech. Development ("6.3")	3,789	4,015	3,815	-200	-5.0%
Total Science & Technology	8,337	9,008	8,778	-230	-2.6%
Demons. and Valid. ("6.4")	6,514	7,993	11,381	3,388	42.4%
Eng. & Manufacturing Dev. ("6.5")	8,879	8,893	10,249	1,356	15.3%
Management Support ("6.6")	3,076	2,639	2,786	146	5.5%
Operational Sys. Dev. ("6.7")	11,947	12,961	14,235	1,274	9.8%
BA Adjustment	-46	-180	0	180	-100.0%
Total RDT&E	38,706	41,315	47,429	6,115	14.8%
Medical Research ¹	295	412	65	-347	-84.1%
Other Appropriations ²	959	1,017	959	-57	-5.6%
Total DOD R&D	39,959	42,743	48,454	5,711	13.4%
Total Conduct of R&D	39,865	42,565	48,274	5,709	13.4%
Total R&D Facilities & Equip.	95	178	180	2	1.1%

Source: OMB data for R&D for FY 2002, *Budget of the United States Government FY 2002*, DOD "RDT&E Programs" (R-1), FY 2002 DOD budget amendment.

Note: FY 2002 DOD figures revised to reflect amended FY 2002 budget request.
FY 2001 figures adjusted to reflect FY 2001 supplemental appropriations.

¹ Medical research appropriated in Defense Health Programs, not RDT&E.

These funds are not included in "6.2" (applied research).

² R&D support in military personnel, O&M, and other appropriations. Includes R&D on chemical agents and munition destruction.

Character of work ("6.x" categories) are expressed in total obligational authority (TOA).

BA Adjustment converts TOA into budget authority.

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

Please see Chapter 6 for a discussion of DOD R&D.

Table II-3. DOD R&D by Departments and Agencies

Table II-3. DOD R&D by Military Departments and Agencies (REVISED July '01)

(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Research, Development, Test, and Evaluation (RDT&E)					
Army	5,330	6,247	6,694	447	7.2%
Navy	9,044	9,555	11,123	1,568	16.4%
Air Force	14,511	14,190	14,344	154	1.1%
Defense Agencies	9,525	11,098	15,051	3,953	35.6%
<i>Ballistic Missile Defense Org.</i>	3,457	4,204	7,036	2,832	67.4%
<i>Def. Adv. Res. Projects Agency</i>	1,850	2,010	2,281	271	13.5%
<i>Secretary of Defense</i>	1,177	1,506	1,595	89	5.9%
<i>Classified Agencies</i>	1,737	1,965	2,492	527	26.8%
<i>Other</i>	1,304	1,412	1,646	233	16.5%
Director of Test and Evaluation	265	0	0	0	--
Director of Operational Test & Eval	31	223	217	-6	-2.5%
Total RDT&E	38,706	41,315	47,429	6,115	14.8%
Medical Research ¹	295	412	65	-347	-84.1%
Other Appropriations ²	959	1,017	959	-57	-5.6%
Total DOD R&D	39,960	42,743	48,454	5,711	13.4%

Source: OMB data for R&D for FY 2002, *Budget of the United States**Government FY 2002*, DOD "RDT&E Programs" (R-1), FY 2002 DOD budget amendment.**Note: FY 2002 DOD figures revised to reflect amended FY 2002 budget request.****FY 2001 figures adjusted to reflect FY 2001 supplemental appropriations.**¹ Medical research appropriated in Defense Health Programs, not RDT&E.² R&D support in military personnel, O&M, and other appropriations.**DOD Military Budget (in BILLIONS of dollars discretionary budget authority)**

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
RDT&E (see above)	38.7	41.3	47.4	6.1	14.8%
Military Personnel	73.8	76.0	82.3	6.3	8.3%
Operations and Maintenance	108.1	112.4	125.7	13.3	11.8%
Procurement	55.0	61.9	61.6	-0.3	-0.5%
Military Construction	5.1	5.4	5.9	0.5	10.1%
Family Housing	3.5	3.7	4.1	0.4	10.4%
Revolving and Management Funds	3.1	1.2	2.5	1.2	101.8%
Allowances, Offsets, Other	0.0	0.0	-0.5	-0.5	--
Total DOD Discret. Budget	287.3	301.9	328.9	27.0	9.0%

DOD military budget only (excludes civilian activities of the Corps of Engineers).

Table II-4. DOD R&D by Character of Work

Table II-4. Department of Defense R&D by Character of Work (REVISED July '01)
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount	Percent
Current Dollars					
Basic Research	1,139	1,317	1,304	-13	-1.0%
Applied Research ¹	3,704	4,088	3,724	-364	-8.9%
Total Research	4,843	5,405	5,028	-377	-7.0%
Development	35,021	37,160	43,246	6,086	16.4%
Total Conduct of R&D	39,865	42,565	48,274	5,709	13.4%
R&D Facilities ²	95	178	180	2	1.1%
Total DOD R&D	39,960	42,743	48,454	5,711	13.4%
Constant FY 2001 Dollars					
Basic Research	1,163	1,317	1,277	-40	-3.0%
Applied Research ¹	3,783	4,088	3,648	-440	-10.8%
Total Research	4,946	5,405	4,925	-480	-8.9%
Development	35,765	37,160	42,357	5,197	14.0%
Total Conduct of R&D	40,711	42,565	47,282	4,717	11.1%
R&D Facilities ²	97	178	176	-2	-1.0%
Total DOD R&D	40,808	42,743	47,458	4,715	11.0%

Source: OMB data for R&D for FY 2002, *Budget of the United States*

Government FY 2002, DOD "RDT&E Programs" (R-1), FY 2002 DOD budget amendment.

Note: FY 2002 DOD figures revised to reflect amended FY 2002 budget request.

FY 2001 figures adjusted to reflect FY 2001 supplemental appropriations.

¹ Includes medical research appropriated outside RDT&E.

² Includes expenses for major capital equipment used for R&D.

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

Please see Chapter 6 for a discussion of DOD R&D.

Table II-5. DOD Funding for Basic Research ("6.1")

Table II-5. Department of Defense Funding for Basic Research ("6.1") (REVISED July '01)
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
Army					
In-House Indep. Research	14	14	15	0	3.4%
Defense Research Sciences	123	137	138	2	1.2%
Univ. & Indus. Research Ctrs.	65	59	69	10	16.6%
Total Army	201	210	222	12	5.7%
Navy					
In-House Indep. Research	15	16	16	0	0.6%
Defense Research Sciences	352	378	390	12	3.2%
Total Navy	367	394	406	12	3.1%
Air Force					
Defense Research Sciences	208	213	221	8	3.8%
Total Air Force	208	213	221	8	3.8%
Defense Agencies					
In-House Indep. Research	2	2	2	0	5.4%
Defense Research Sciences	63	109	121	12	11.2%
Univ. Research Initiatives*	223	314	262	-52	-16.5%
Gov't / Industry University Res.	6	7	3	-3	-48.6%
Force Health Protection	25	29	27	-2	-8.2%
Chem. and Bio. Defense	43	40	39	0	-1.2%
Total Defense Agencies	362	500	455	-46	-9.1%
Total DOD					
In-House Indep. Research	31	33	33	1	2.1%
Defense Research Sciences	746	836	870	34	4.1%
Univ. Research Initiatives *	223	314	262	-52	-16.5%
Gov't / Industry University Res.	6	7	3	-3	-48.6%
Chem. and Bio. Defense	43	40	39	0	-1.2%
Univ. & Indus. Research Ctrs.	65	59	69	10	16.6%
Force Health Protection	25	29	27	-2	-8.2%
Total DOD Basic Research	1,139	1,317	1,304	-13	-1.0%

Source: OMB data for R&D for FY 2002, *Budget of the United States**Government FY 2002*, DOD "RDT&E Programs" (R-1), FY 2002 DOD budget amendment.**Note: FY 2002 DOD figures revised to reflect amended FY 2002 budget request.****FY 2001 figures adjusted to reflect FY 2001 supplemental appropriations.**

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

* - Includes DEPSCoR program; FY 2002 includes High Energy Laser Research Initiative.

Table II-6. DOD R&D Trends, FY 1965-2002

Table II-6. Trends in Department of Defense R&D, FY 1965 - FY 2002 (**REVISED July '01**)
(budget authority in millions of dollars)

Fiscal Year	Basic Research ¹		Total DOD R&D	
	Current Dollars	Constant FY 2001 \$	Current Dollars	Constant FY 2001 \$
1965	347	1,601	6,865	31,665
1970	323	1,238	7,491	28,701
1975	305	861	9,167	25,874
1980	552	1,076	14,150	27,583
1985	851	1,264	31,632	46,977
1986	954	1,383	35,000	50,756
1987	894	1,262	37,136	52,412
1988	897	1,226	38,126	52,105
1989	951	1,252	38,578	50,771
1990	931	1,181	37,869	48,030
1991	1,155	1,410	37,209	45,424
1992	1,140	1,356	37,779	44,944
1993	1,312	1,524	38,848	45,139
1994	1,179	1,341	35,510	40,387
1995	1,175	1,308	35,349	39,351
1996	1,098	1,199	35,783	39,053
1997	1,032	1,105	37,238	39,864
1998	1,012	1,068	37,569	39,655
1999	1,064	1,107	38,888	40,479
2000	1,139	1,163	39,960	40,808
2001 (estimate)	1,317	1,317	42,743	42,743
2002 (budget)	1,304	1,277	48,454	47,458

Source: National Science Foundation historical reports, the R-1, and OMB data on R&D for FY 2002. Constant dollar conversions based on OMB's GDP deflators.

Note: FY 2002 DOD figures revised to reflect amended FY 2002 budget request. FY 2001 figures adjusted to reflect FY 2001 supplemental appropriations.

¹ Budget authority for DOD "6.1" category. Some figures reflect later DOD revisions.

Please see Chapter 6 for a discussion of DOD R&D.

Table II-7. NSF R&D

Table II-7. R&D in the National Science Foundation
(budget authority in millions of dollars) *

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
1. Research and Related Activities (R&RA)					
Mathematical and Physical Sciences (MPS)					
Mathematical Sciences	106	121	141	20	16.5%
Astronomical Sciences	123	149	156	8	5.1%
Physics	168	188	184	-4	-2.1%
Chemistry	139	154	153	0	0.0%
Materials Research	191	210	205	-4	-2.1%
Multidisciplinary Activities	30	30	23	-7	-21.8%
Total MPS	756	851	864	13	1.5%
Engineering (ENG)					
Bioengineering & Env. Sys.	34	39	38	-1	-1.9%
Chemical & Transport Systems Design, Manufacture, & Industrial Innovation	44	51	50	-1	-1.1%
Electrical & Commun. Sys.	109	126	126	0	-0.4%
Engineering Edu. & Centers	45	54	57	3	5.8%
Civil & Mechanical Systems	98	107	107	0	0.0%
	48	53	52	-1	-2.0%
Total ENG	380	431	431	0	0.1%
Biological Sciences (BIO)					
Molecular and Cellular Bioscis.	106	124	121	-3	-2.4%
Integrative Biology & Neurosci.	95	112	113	1	0.9%
Environmental Biology	89	110	112	2	1.7%
Biological Infrastructure	65	75	72	-2	-3.1%
Plant Genome Research	63	65	65	0	0.2%
Total BIO	418	485	483	-2	-0.5%
Geosciences (GEO)					
Atmospheric Sciences	164	188	187	-2	-1.0%
Earth Sciences	102	116	117	1	0.8%
Ocean Sciences	221	258	255	-3	-1.0%
Total GEO	488	562	559	-4	-0.6%
Computer and Information Science and Engineering (CISE)					
Computer-Communications Res	60	65	64	-1	-1.7%
Information and Intelligent Sys.	41	49	48	-1	-1.7%
Experimental and Integrative Activities	58	61	58	-3	-5.2%
(continued)					

Table II-7. NSF R&D

Table II-7 (continued). R&D in the National Science Foundation
(budget authority in millions of dollars) *

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Adv. Networking Infra. and Res.	61	66	64	-1	-1.7%
Adv. Compu. Infra. and Res.	78	82	80	-1	-1.7%
Information Tech. Research	90	155	155	0	0.0%
Total CISE	389	478	470	-8	-1.6%
Social, Behavioral, and Economic Sciences (SBE)					
Social & Economic Scis.	61	66	66	0	-0.4%
Behavioral & Cognitive Scis.	46	57	57	0	-0.4%
Int'l. Coop. Sci. Activities	40	26	25	-1	-2.4%
Science Resources Studies	15	16	16	0	-1.0%
Total SBE	162	164	163	-1	-0.8%
US Polar Programs					
Polar Research Programs	190	211	214	3	1.5%
Antarctic Logistical Support	68	62	63	0	0.2%
Total Polar Programs	258	273	277	3	1.2%
Integrative Activities	129	98	81	-17	-17.5%
BA Adjustment *	-7	0	0	0	--
Total R&RA *	2,973	3,343	3,327	-16	-0.5%
2. Major Research Equipment	93	122	96	-25	-20.8%
3. Education & Human Resources (EHR)					
Educational System Reform	113	110	45	-65	-59.0%
Elem., Secondary, & Informal	186	203	166	-37	-18.3%
Undergraduate Education	117	141	133	-8	-5.9%
Graduate Education	79	88	96	8	8.8%
Human Resource Develop.	77	91	90	0	-0.3%
Math & Science Partnerships	0	0	200	200	--
Res., Eval. And Commun.	56	68	68	0	-0.2%
EPSCoR ¹	56	85	75	-10	-11.8%
BA Adjustment *	7	0	0	0	--
Total EHR	691	786	872	87	11.0%

(continued)

Table II-7. NSF R&D

Table II-7 (continued). R&D in the National Science Foundation
(budget authority in millions of dollars) *

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
4. Salaries and Expenses	149	161	170	10	5.9%
5. Inspector General	6	6	7	0	7.8%
Total NSF Budget *	3,912	4,417	4,473	56	1.3%
Deduct non-R&D Activities:					
<i>R&RA non-R&D</i>	266	325	336	11	3.5%
<i>EHR non-R&D</i>	560	646	733	87	13.4%
<i>Salaries and Expenses</i>	149	161	170	10	5.9%
<i>Inspector General</i>	6	6	7	0	7.8%
Total NSF R&D	2,931	3,279	3,226	-52	-1.6%
Conduct of R&D	2,724	3,016	3,017	1	0.0%
R&D Facilities	207	263	209	-53	-20.2%

Source: NSF budget justification and Quantitative Data Tables.

* - Directorate detailed figures are in obligations. BA adjustment converts obligations to budget authority.

Does not include funding from H-1B Nonimmigrant Petitioner Fees.

¹ Experimental Program to Stimulate Competitive Research. FY 2001 includes \$10 million for Innovation Partnership Activities (\$4 million in FY 2000).

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

Please see Chapter 7 for information on the NSF budget.

Table II-8. HHS R&D

Table II-8. R&D in the Department of Health and Human Services
(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Health					
National Institutes of Health	17,234	19,710	22,395	2,685	13.6%
Centers for Disease Control	470	517	568	51	9.9%
Food and Drug Administration	132	138	140	2	1.4%
Health Care Financing Admin.	43	139	55	-84	-60.4%
Health Resources & Svcs. Admin.	24	26	28	2	7.7%
Departmental Management	45	47	10	-37	-78.7%
Healthcare Research and Quality ¹	165	226	255	29	12.8%
Total Health R&D	18,113	20,803	23,451	2,648	12.7%
Human Services					
Admin. For Children and Families	37	25	27	2	8.0%
Office of Aging	32	31	18	-13	-41.9%
Total Human Services R&D	69	56	45	-11	-19.6%
Total HHS R&D	18,182	20,859	23,496	2,637	12.6%
Dept. of Health and Human Services Budget (includes R&D components above)					
Food and Drug Administration	1,050	1,122	1,212	90	8.0%
Health Resources & Svcs. Admin.	4,802	6,927	5,202	-1,725	-24.9%
Indian Health Services	2,426	2,734	2,812	78	2.9%
Centers for Disease Control	2,981	3,955	3,961	6	0.2%
National Institutes of Health	17,837	20,468	23,219	2,751	13.4%
Substance Abuse & Mental Health	2,651	2,957	3,029	72	2.4%
Medicaid	117,744	128,853	142,423	13,570	10.5%
Medicare ²	200,588	218,960	229,861	10,901	5.0%
Admin. for Children and Families	36,981	43,149	45,786	2,637	6.1%
Admin. on Aging	933	1,103	1,098	-5	-0.5%
Other ³	4,456	6,142	14,260	8,118	132.2%
Total HHS Budget	392,449	436,370	472,863	36,493	8.4%

Source: *Budget of the United States Government FY 2002*, OMB R&D data for FY 2002 and agency budget justification. Includes budget authority from appropriations, permanent appropriations, and trust funds.

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

¹ Formerly the Agency for Health Care Policy and Research.

Figures reflect estimated R&D program levels from all receipts, not just appropriated BA.

² Net BA after subtracting receipts from premiums, etc.

³ Includes offsetting receipts. Includes Administration drug benefit proposal (FY 01-02).

Please see Chapter 8 for a discussion of HHS R&D.

Table II-9. NIH R&D by Institute

Table II-9. R&D in the National Institutes of Health by Institute
(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Cancer	3,300	3,738	4,177	439	11.8%
Heart, Lung and Blood	2,025	2,299	2,567	268	11.7%
Dental & Cranofacial Research	269	306	342	36	11.7%
Diabetes & Digestive & Kidney Dis.	1,141	1,304	1,458	154	11.8%
Neurological Disorders and Stroke	1,030	1,177	1,316	139	11.8%
Allergy and Infectious Diseases	1,812	2,063	2,355	292	14.2%
General Medical Sciences	1,371	1,540	1,720	180	11.7%
Child Health & Human Dev.	861	979	1,097	118	12.0%
Eye	450	511	571	61	11.8%
Environmental Health Sciences ¹	503	566	632	66	11.7%
Aging	688	786	880	94	11.9%
Arthritis & Musculoskeletal & Skin	349	397	444	47	11.8%
Deafness & Commun. Disorders	264	301	337	36	11.8%
Mental Health	974	1,107	1,238	132	11.9%
Drug Abuse	687	781	907	126	16.2%
Alcohol Abuse and Alcoholism	293	341	382	41	12.1%
Nursing Research	90	105	118	13	11.9%
Research Resources	675	817	974	157	19.2%
Human Genome Research	336	382	427	45	11.7%
Complementary & Alternative Med.	78	89	100	11	12.3%
Fogarty International Center	43	50	56	6	11.8%
National Library of Medicine	215	246	276	29	11.9%
Office of the Director	162	188	232	45	23.8%
Minority Health/Health Disparities ²	98	132	158	26	20.0%
Biomed. Imaging/Bioengineering ³	0	2	40	38	1935.7%
Buildings and Facilities	165	154	307	153	99.4%
Total NIH Budget	17,880	20,361	23,112	2,751	13.5%
add Mandatory Funds	37	103	103	0	0.0%
<i>minus Est. Research Training</i>	<i>540</i>	<i>592</i>	645	<i>54</i>	<i>9.1%</i>
<i>minus Other Non-R&D</i>	<i>143</i>	<i>162</i>	175	<i>13</i>	<i>7.8%</i>
Total NIH R&D	17,234	19,710	22,394	2,685	13.6%

Source: OMB data for R&D for FY 2002 and NIH budget office documents.

¹ Funding for all years includes Superfund-related transfers and appropriations.

² New institute for FY 2001 created by Public Law 106-525. FY 2000 funding in Office of the Director adjusted for comparability.

³ New institute for FY 2001 created by Public Law 106-580.

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

Please see Chapter 8 for a discussion of NIH R&D.

Table II-10. NIH by Funding Mechanism

Table II-10. National Institutes of Health by Funding Mechanism
(budget authority in millions of dollars) ¹

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount	Percent
Research Project Grants ²	9,807	11,117	12,518	1,401	12.6%
{# of Non-Competing}	21,789	23,246	24,932	1,686	7.3%
{# of New / Competing}	8,880	9,158	9,158	0	0.0%
{Total # of Grants}	30,669	32,404	34,090	1,686	5.2%
SBIR / STTR Grants ³	362	414	474	59	14.3%
Research Centers	1,563	1,857	2,080	223	12.0%
Other Research	1,439	1,675	1,878	203	12.1%
R&D Contracts	1,164	1,326	1,595	268	20.2%
Intramural Research	1,761	1,959	2,159	200	10.2%
Research Mngmt. & Support	601	693	779	86	12.5%
Research Training	540	592	645	54	9.1%
Library of Medicine	215	246	276	29	11.9%
Office of the Director	162	188	232	45	23.8%
NIEHS Appropriation (Superfund)	60	63	70	7	11.7%
Buildings and Facilities	165	154	307	153	99.4%
Extramural Facilities Construction	77	78	100	22	28.2%
Mandatory Funds *	0	103	103	0	0.0%
Total NIH Programs	17,917	20,464	23,215	2,751	13.4%
<i>minus Mandatory funds *</i>	<i>-37</i>	<i>-103</i>	<i>-103</i>	<i>0</i>	<i>0.0%</i>
Total NIH Budget	17,880	20,361	23,112	2,751	13.5%

Source: NIH budget justification. Totals may not add due to rounding.

* Mandatory funds distributed by mechanism in FY 2000, listed separately FY 2001 and 2002.

¹ All NIH support, including non-R&D activities such as research training.

² Excludes SBIR / STTR grants.

³ Small Business Innovation Research / Small Business Technology Transfer.

Please see Chapter 8 for a discussion of the NIH budget.

Table II-11. Department of Energy R&D

Table II-11. R&D in the Department of Energy
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount	Percent
Summary of DOE R&D (see notes at end of table):					
1. Energy Supply *	333	409	284	-125	-30.5%
2. Science *	2,662	2,955	2,930	-25	-0.8%
3. Fossil Energy	290	396	296	-100	-25.3%
4. Energy Conservation *	410	441	316	-125	-28.3%
5. Atomic Energy Defense	3,201	3,499	3,542	42	1.2%
6. Clean Coal Technology ¹	0	0	0	0	--
7. Radioactive Waste Management	60	45	31	-13	-29.9%
Total DOE R&D	6,956	7,744	7,399	-346	-4.5%
Detail of DOE R&D:					
1. Energy Supply (does not include non-R&D components)					
Renewable Energy Resources *	268	328	227	-101	-30.8%
Nuclear Energy	66	81	57	-24	-29.4%
Total Energy Supply R&D	333	409	284	-125	-30.5%
2. Science (does not include non-R&D components) ²					
High-Energy Physics *	678	702	706	4	0.6%
- <i>Large Hadron Collider</i>	70	59	49	-10	-16.8%
Nuclear Physics	340	355	355	0	0.0%
Fusion Energy Sciences *	239	245	245	0	0.1%
Basic Energy Sciences					
Materials Sciences	389	443	434	-9	-2.0%
Chemical Sciences	198	217	219	2	1.0%
Engineering & Geosciences	36	40	39	-1	-2.1%
Energy Biosciences	30	33	32	-1	-2.5%
Equipment & Construction	100	259	280	21	8.3%
- <i>Spallation Neutron Source</i> ³	118	278	291	13	4.8%
Adjustment ²	4	-8	-8	0	0.0%
Total BES	756	984	997	13	1.3%
Advanced Scientific Computing Research * ⁴					
Math., Info. and Compu. Sci.	114	156	156	0	0.0%
Laboratory Technology Res.	8	10	7	-3	-28.2%
Adjustment ²	2	0	0	0	--
Total ASCR	124	166	163	-3	-1.6%

(continued)

Table II-11. Department of Energy R&D

Table II-11 (continued). R&D in the Department of Energy
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
Biological and Environmental Research					
Life Sciences	161	192	186	-6	-3.3%
Environmental Processes	123	130	129	0	-0.2%
Environmental Remediation	64	61	66	5	7.6%
Medical Apps./ Measurement	68	96	51	-45	-46.9%
Construction	0	2	10	8	300.8%
Adjustment ²	6	-1	-1	0	--
Total BER	422	481	442	-40	-8.2%
Energy Research Analyses *	1	1	1	0	2.5%
Small Bus. Innov. Research	84	0	0	0	--
Multiprogram Lab Support	19	22	22	0	0.0%
Total Science R&D *	2,662	2,955	2,930	-25	-0.8%
3. Fossil Energy R&D (does not include non-R&D components)					
Clean Coal Power Initiative ⁵	0	0	150	150	--
Fuels and Power Systems ⁵	208	324	160	-164	-50.7%
Oil Technology	56	67	30	-36	-54.4%
Natural Gas Research	31	45	21	-24	-53.4%
Cooperative R&D	7	8	0	-8	-100.0%
Plant and Capital Equipment	3	4	2	-2	-48.6%
Adjustments (deduct non R&D)	-14	-52	-67	-15	29.8%
Total Fossil Energy R&D	290	396	296	-100	-25.3%
4. Energy Conservation *	410	441	316	-125	-28.3%
5. Atomic Energy Defense Activities (does not include non-R&D components)					
National Nuclear Security Administration (NNSA) ⁶					
Weapons Activities					
Stockpile R&D	204	246	305	60	24.3%
Adv. Simulation & Computing	637	747	738	-9	-1.2%
ICF Ignition and High Yield	219	234	223	-11	-4.6%
Nat'l Ignition Facility Constr.	247	197	245	48	24.2%
Other construction	124	149	84	-64	-43.2%
All Other Weapons R&D	707	785	853	68	8.7%
Total Weapons Acts. R&D	2,138	2,357	2,449	92	3.9%

(continued)

Table II-11. Department of Energy R&D

Table II-11 (continued). R&D in the Department of Energy
(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Nonproliferation & Verification	180	204	195	-9	-4.6%
Naval Reactors	655	669	667	-1	-0.2%
Fissile Materials Disposition	52	62	67	6	9.6%
Total NNSA R&D ⁶	3,024	3,292	3,379	87	2.6%
Nuclear Safeguards & Security	26	26	26	0	0.0%
Environmental Management	146	176	131	-45	-25.3%
Intelligence	5	5	5	0	0.0%
Total Atomic Defense R&D	3,201	3,499	3,542	42	1.2%
6. Clean Coal Technology ¹	0	0	0	0	- -
7. Radioactive Waste Management	60	45	31	-13	-29.9%
Total DOE R&D	6,956	7,744	7,399	-346	-4.5%
Conduct of R&D	6,057	6,690	6,329	-362	-5.4%
R&D Facilities	899	1,054	1,070	16	1.5%
DOE R&D by Function:					
Defense	3,201	3,499	3,542	42	1.2%
General Science	2,662	2,955	2,930	-25	-0.8%
Energy	1,093	1,290	927	-363	-28.1%

Source: DOE budget justification, OMB data for R&D, and agency supporting documents.

* FY 2002 figures have been modified to reflect amendments to the original request transferring funds to Renewable Energy Resources from Energy Conservation and to Fusion Energy Sciences from selected Science programs.

¹ Does not reflect previously appropriated funds in this program, nor rescissions and deferrals. True budget authority in this account is as follows: -\$146 million FY 2000; \$9 million FY 2001 (after \$95 mil. transfer to Fossil Energy); and \$82 million FY 2002.

² Does not include program direction, waste management, and other non-R&D costs. Adjustments align program costs with R&D, and adjust for use of prior-year balances.

³ Development and construction costs. Development costs are in Materials Sciences.

⁴ Formerly Computational and Technology Research.

⁵ New program in FY 2002 of cost-shared, competitively awarded R&D and demonstration projects of coal technologies. Follows on FY 2001 Power Plant Improvement Initiative (in Fuels and Power Systems) of demonstration projects funded through a transfer from Clean Coal Technology. Adjustments subtract demonstration (non R&D) costs.

(continued)

Table II-11. Department of Energy R&D

⁶ Semi-autonomous agency within DOE.

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

Please see Chapter 9 for a discussion of DOE R&D.

Department of Energy Budget (discretionary budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
DOE Defense Programs:					
National Nuclear Security Administration (NNSA):					
Weapons Activities	4,564	5,069	5,300	231	4.6%
Other Nuclear Security Acts.	1,383	1,571	1,477	-95	-6.0%
Total NNSA	5,946	6,641	6,777	136	2.0%
Defense Env. Restoration	4,586	4,966	4,549	-417	-8.4%
Defense Facilities Closure Projects	1,062	1,080	1,051	-30	-2.8%
EM Privatization	83	-32	142	174	-542.3%
Other Defense Activities	683	866	838	-28	-3.2%
Total DOE Defense	12,360	13,521	13,355	-165	-1.2%
Science	2,825	3,155	3,160	4	0.1%
Energy Supply	584	661	505	-156	-23.6%
Fossil Energy	397	541	449	-92	-17.1%
Energy Conservation	750	815	795	-21	-2.5%
Other Programs (net)	213	390	400	11	2.7%
Non-defense Environmental Mngmt	302	279	229	-51	-18.1%
Power Marketing Administrations	229	200	205	5	2.5%
Departmental Administration & IG	116	106	115	9	8.3%
Total DOE Budget	17,776	19,669	19,213	-456	-2.3%

Source: Department of Energy budget justification.

DOE appropriations only (discretionary).

Includes R&D and non-R&D components.

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

Please see Chapter 9 for a discussion of DOE R&D.

Table II-12. NASA R&D

Table II-12. R&D in the National Aeronautics and Space Administration
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
Summary of R&D by Appropriation:*					
1. Human Space Flight (HSF)					
International Space Station	2,323	2,113	2,087	-25	-1.2%
Other HSF R&D	691	788	737	-51	-6.4%
Total HSF R&D	3,014	2,901	2,825	-76	-2.6%
2. Science, Aeronautics and Technology (SAT)					
Space Science	2,524	2,625	2,786	162	6.2%
Biological & Physical Research	340	379	361	-18	-4.7%
Earth Science	1,690	1,716	1,515	-201	-11.7%
Aero-Space Technology	1,834	2,214	2,376	161	7.3%
Academic Programs	139	133	154	21	15.8%
Total SAT	6,528	7,067	7,192	125	1.8%
<i>minus non R&D in SAT</i>	<i>-47</i>	<i>-42</i>	<i>-50</i>	<i>-7</i>	<i>17.5%</i>
Total SAT R&D	6,481	7,024	7,142	118	1.7%
Total NASA R&D	9,494	9,925	9,967	41	0.4%
NASA Non-R&D Activities	4,107	4,328	4,545	217	5.0%
Total NASA Budget	13,602	14,253	14,511	258	1.8%
Detail of R&D in NASA Appropriations: *					
1. Human Space Flight (HSF)					
Russian Program Assurance	200	24	200	176	731.9%
Vehicle	950	717	743	26	3.6%
Crew Return Vehicle	75	90	75	-15	-16.5%
Research	394	457	284	-174	-38.0%
Operations Capability	704	825	786	-38	-4.7%
Total Int'l. Space Station	2,323	2,113	2,087	-25	-1.2%
Space Operations R&D	203	235	178	-57	-24.2%
Other HSF R&D incl. Support*	494	558	564	6	1.1%
<i>Minus Non-R&D in Space Sta.</i>	<i>-7</i>	<i>-6</i>	<i>-6</i>	<i>0</i>	<i>0.0%</i>
Total HSF R&D	3,014	2,901	2,825	-76	-2.6%

(continued)

Table II-12. NASA R&D

Table II-12 (continued). R&D in the National Aeronautics and Space Administration (budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
2. Science, Aeronautics and Technology (SAT)					
Space Science					
Chandra X-Ray Observatory	4	0	0	0	--
SIRTF ¹	123	118	106	-12	-10.5%
Hubble Space Telescope	184	180	162	-18	-9.9%
Relativity Mission	50	41	40	-1	-2.4%
TIMED ²	28	13	0	-13	-100.0%
Stratospheric Observatory	42	39	37	-2	-4.9%
Solar Terrestrial Relations	0	0	50	50	--
Gamma-Ray Large Area Tele.	0	0	19	19	--
Payload & Instru. Develop.	14	33	45	11	34.0%
Explorers	123	141	155	14	9.7%
Discovery	150	213	217	4	1.9%
Mars Exploration	249	428	431	3	0.8%
Mission Operations	79	85	105	20	23.4%
Technology Program	581	419	479	60	14.2%
Research Program	567	597	607	10	1.6%
Investments	0	13	0	-13	-100.0%
Institutional Support *	330	304	333	30	9.8%
Total Space Science	2,524	2,625	2,786	162	6.2%
Biological and Physical Research					
Adv. Human Support Tech.	30	31	31	0	0.9%
Biomedical Research	57	70	67	-3	-4.9%
Fundamental Space Biology	38	41	39	-1	-3.5%
Physical Sciences Research	109	131	130	-1	-0.4%
Space Product Development	14	14	15	1	6.0%
Health Research	9	12	9	-2	-19.8%
Mission Integration	17	15	0	-15	-98.6%
Investments/ Instit. Support *	66	66	70	4	5.7%
Total Bio. and Phys. Res.	340	379	361	-18	-4.7%
Earth Science					
Earth Observing System	480	414	372	-42	-10.2%
EOS Data Info. System	279	281	253	-29	-10.2%
Earth Explorers	163	141	85	-57	-40.1%
Earth Sci. Program Science	286	351	357	7	1.9%
Apps., Education, Outreach	84	114	63	-51	-44.6%

(continued)

Table II-12. NASA R&D

Table II-12 (continued). R&D in the National Aeronautics and Space Administration (budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Technology Infusion	95	115	96	-19	-16.5%
Mission Operations	48	58	52	-6	-9.6%
Investments	7	10	0	-10	-100.0%
Institutional Support *	248	232	237	5	2.3%
Total Earth Science	1,690	1,716	1,515	-201	-11.7%
Aero-Space Technology					
Aero-Space Res. & Tech.	985	1,242	1,358	116	9.3%
<i>Research and Tech. Base</i>	564	714	637	-77	-10.8%
<i>Focused Programs</i>	422	528	721	193	36.6%
- <i>Aviation System Capacity</i>	63	68	101	32	47.0%
- <i>Aviation Safety</i>	64	71	70	-1	-1.2%
- <i>Ultra Efficient Engine</i>	68	48	40	-8	-16.5%
- <i>2nd Generation RLV</i>	0	272	475	203	75.0%
- <i>X-33/X-34/Future-X</i>	183	18	0	-18	-100.0%
Aerospace Institut. Support *	709	810	871	61	7.5%
Commercial Tech. Programs	140	162	147	-16	-9.6%
Total Aero-Space Tech.	1,834	2,214	2,376	161	7.3%
Academic Programs					
Education Programs	85	77	72	-5	-6.8%
Minority Res. and Edu.	54	56	82	26	46.9%
Total Academic Programs	139	133	154	21	15.8%
Conduct of R&D	6,405	6,939	7,033	94	1.4%
R&D Facilities & Capital Equip.	3,089	2,987	2,934	-53	-1.8%

Source: OMB R&D data for FY 2002, agency budget justification, and agency documents.

* NOTE: The NASA budget accounts have been reorganized in FY 2002. Program support costs formerly funded in the Mission Support account are allocated to the HSF and SAT accounts. Most of these reallocated costs can be found in the Institutional Support lines within each program. Also, Space Operations costs are moved from SAT to HSF. FY 2000 and FY 2001 figures have been adjusted for comparability.

¹ Space Infrared Telescope Facility.

² Thermosphere, Ionosphere, Mesosphere Energetics and Dynamics.

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

Please see Chapter 10 for a discussion of NASA R&D.

Table II-12. NASA R&D

NASA Non-R&D Activities (budget authority in millions of dollars)					
	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Non R&D in SAT	47	42	50	7	17.5%
Non-R&D in Space Station (HSF)	7	6	6	0	0.0%
Space Shuttle (in HSF)	3,000	3,119	3,284	165	5.3%
Space Operations Non R&D (HSF) ¹	293	286	304	18	6.1%
Payload & ELV Non R&D (HSF)	70	90	91	1	1.4%
Safety, Mission Assurance (HSF)	43	47	48	0	0.8%
Investm./Support Non R&D (HSF) *	628	714	739	25	3.5%
Inspector General	20	23	24	1	3.5%
Total NASA Non-R&D Activities	4,107	4,328	4,545	217	5.0%

Source: *Budget of the United States Government FY 2002* and agency budget justification.

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

* NOTE: The NASA budget accounts have been reorganized in FY 2002. Program support costs formerly funded in the Mission Support account are allocated to the HSF and SAT accounts. Most of these reallocated costs can be found in the Institutional Support lines within each program. Also, Space Operations costs are moved from SAT to HSF. FY 2000 and FY 2001 figures have been adjusted for comparability.

Table II-13. U.S. Department of Agriculture R&D

Table II-13. R&D in the U.S. Department of Agriculture (**REVISED July '01**)
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02 Amount Percent	
Agricultural Research Service (ARS)					
Programs (conduct of R&D only)	773	850	851	1	0.1%
Buildings and Facilities ¹	135	161	118	-43	-26.9%
Total ARS R&D	908	1,012	969	-42	-4.2%
Cooperative State Research, Education, and Extension Service (CSREES)					
Research & Education Progs.	544	594	468	-125	-21.1%
<i>National Research Initiative</i>	119	106	106	0	0.0%
<i>Hatch Act (Ag. Experiment)</i>	181	180	180	0	0.0%
<i>Special Research Grants</i>	60	85	3	-83	-96.8%
<i>Integrative Activities</i>	17	19	19	0	0.0%
<i>Initiative for Future Agri.</i> ³	64	64	64	0	0.0%
<i>All Other</i>	104	139	97	-42	-30.5%
Total CSREES R&D ³	544	594	468	-125	-21.1%
Forest Service	215	246	250	4	1.5%
Economic Research Service	64	66	67	1	1.5%
Agricultural Marketing Service	5	5	5	0	0.0%
National Agricultural Statistics	4	4	4	0	0.0%
Animal and Plant Inspection	21	22	23	1	4.5%
Federal Grain Inspection	3	5	6	1	20.0%
Foreign Agricultural Service	1	1	1	0	0.0%
Office of the Secretary ²	10	5	8	3	60.0%
Total USDA R&D	1,776	1,959	1,801	-158	-8.1%

Source: OMB data for R&D for FY 2002, USDA budget documents, and USDA budget office.

¹ Includes repair and maintenance funded through the Programs account.

² Mandatory spending from the Fund for Rural America. R&D portion only.

³ Public Law 105-185 created a \$120 million a year mandatory (non-appropriated) program of competitive grants for agricultural research from FY 1999 to FY 2003.

Table shows R&D portions of the IFAFS program.

FY 2001 ARS and CSREES figures include mandatory R&D funds appropriated in the Agricultural Risk Protection Act and discretionary funds from the FY 2001 supplemental. Figures are rounded to the nearest million. Changes calculated from unrounded figures.

FY 2001 figures adjusted to reflect supplementals in Public Law 107-20.

Table II-14. Department of Commerce R&D

Table II-14. R&D in the Department of Commerce
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
National Oceanic and Atmospheric Administration (NOAA - Non R&D excluded)					
National Ocean Service	56	64	64	0	0.5%
Nat'l Marine Fisheries Srv.	254	311	329	19	6.0%
Oceanic and Atmos. Res.	257	269	290	21	7.8%
National Weather Service	20	23	28	5	20.4%
Other NOAA R&D	56	59	61	2	3.8%
Total NOAA R&D	643	726	772	47	6.4%
National Institute of Standards and Technology (NIST - Non-R&D components excluded)					
1. Scientific and Technical Research and Services (STRS)					
Electronics & Elec. Eng.	38	39	41	1	3.0%
Manufacturing Engineering	18	19	19	1	3.1%
Chemical Sci. and Tech.	33	35	38	4	10.9%
Physics	28	30	35	5	15.2%
Materials Science and Eng.	40	42	47	6	14.1%
Building and Fire Research	14	17	15	-2	-9.3%
Computer Sci./ Applied Math.	43	47	52	4	8.9%
Technology Assistance	3	3	4	0	3.1%
Critical Infrastructure	0	4	4	0	0.1%
Research Support / Equip.	31	31	36	5	16.3%
Total STRS R&D	248	268	292	24	8.9%
2. Advanced Tech. Program	116	118	0	-118	-100.0%
3. Construction	107	35	21	-14	-40.0%
Total NIST R&D	471	421	313	-108	-25.7%
Dept. Administration	1	1	1	0	0.0%
Nat'l Telecomm. & Info. Admin.	20	51	21	-30	-58.8%
- Telecommunication Sci. Res.	4	5	5	0	0.0%
- Tech. Opportunity Grants	16	46	16	-30	-65.2%
Bureau of the Census	38	2	2	0	0.0%
Economic Development Admin.	1	1	1	0	0.0%
Total Commerce R&D	1,174	1,201	1,110	-91	-7.6%

Source: OMB data for R&D, NOAA and NIST R&D documents, and agency budget summaries. Figures are rounded to the nearest million. Changes calculated from unrounded figures.

Please see Chapter 12 for a discussion of Commerce R&D.

Table II-15. Department of Transportation R&D

Table II-15. R&D in the Department of Transportation
(budget authority in millions of dollars) *

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Federal Aviation Administration	220	301	276	-25	-8.3%
Federal Highway Administration	261	294	374	81	27.5%
- <i>Surface Transportation Res.</i>	66	73	114	40	54.9%
- <i>Intelligent Transportation Sys.</i>	45	51	74	23	45.5%
- <i>State Planning and Research</i>	132	153	147	-7	-4.4%
- <i>All Other</i>	17	16	40	24	150.0%
Federal Transit Administration	12	13	5	-8	-61.8%
Nat'l High. Traffic & Safety Adm.	51	58	59	1	1.3%
Federal Railroad Administration	25	28	31	3	11.7%
Office of the Secretary	5	11	5	-6	-52.7%
Research & Special Programs	7	9	10	0	5.2%
Coast Guard	20	22	23	0	2.0%
Nat'l Motor Carrier Safety Admin.	6	10	14	4	43.8%
Total DOT R&D	607	747	798	51	6.8%

Source: OMB data for R&D for FY 2002; agency budget justification; agency documents.

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

* - DOT budget includes budget authority, limitations on obligations, and other resources.

DOT Budget (includes R&D components; budget authority in millions): *

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Federal Highway Administration	29,958	36,319	35,330	-989	-2.7%
Federal Aviation Administration	10,946	11,976	12,957	981	8.2%
Federal Transit Administration	7,451	6,272	6,746	474	7.6%
Coast Guard	4,831	4,635	5,179	544	11.7%
Federal Railroad Administration	739	751	701	-50	-6.7%
Nat'l Highway Traffic Safety Admin.	367	404	419	15	3.7%
All Other ¹	732	892	864	-28	-3.1%
Miscellaneous Receipts	-278	-204	-262	-58	28.4%
Total DOT Budget *	54,746	61,045	61,934	889	1.5%

Source: *Budget of the United States Government FY 2002*.

* - DOT budget includes budget authority, limitations on obligations, and other resources.

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

Please see Chapter 12 for a discussion of DOT R&D.

Table II-16. Department of the Interior R&D

Table II-16. R&D in the Department of the Interior
(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
U.S. Geological Survey	506	549	491	-59	-10.7%
<i>National Mapping, Geography</i>	27	28	26	-1	-4.6%
<i>Geologic & Mineral Resources</i>	212	225	214	-12	-5.1%
<i>Water Resources</i>	131	136	101	-35	-25.5%
<i>Biological Research</i>	137	161	149	-11	-7.0%
Minerals Management Service	31	32	47	15	46.9%
National Park Service	27	30	30	0	0.0%
Bureau of Reclamation	5	6	6	0	0.0%
Bureau of Land Management	49	14	19	5	35.7%
Total Interior R&D	618	631	593	-39	-6.1%
Conduct of R&D	601	625	587	-39	-6.2%
R&D Facilities	17	6	6	0	0.0%

Source: OMB data for R&D for FY 2002 and agency supporting documents.

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

Dept. of the Interior Budget (includes R&D components above)
(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Bureau of Land Management	1,616	2,248	1,999	-249	-11.1%
Minerals Management Service	811	1,240	1,145	-95	-7.7%
Office of Surface Mining...	411	515	361	-154	-29.9%
Bureau of Reclamation	848	841	859	18	2.1%
U.S. Geological Survey	816	884	814	-70	-7.9%
U.S. Fish and Wildlife Service	1,498	1,895	1,783	-112	-5.9%
National Park Service	2,071	2,429	2,770	341	14.0%
Bureau of Indian Affairs	1,961	2,217	2,283	66	3.0%
Other	857	774	767	-7	-0.9%
Misc. Offsetting Receipts	-2,495	-3,587	-3,125	462	-12.9%
Total Interior Budget	8,394	9,456	9,656	200	2.1%

Source: *Budget of the United States Government FY 2002*.

Includes budget authority from appropriations, trust funds, and permanent appropriations.

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

Please see Chapter 12 for a discussion of Interior R&D.

Table II-17. Environmental Protection Agency R&D

Table II-17. R&D in the Environmental Protection Agency
(budget authority in millions of dollars)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Budget	Change FY 01-02	
				Amount	Percent
EPA R&D:					
Science and Technology ¹	535	569	534	-35	-6.2%
Leaking Undergrd. Storage Tanks	1	1	1	0	0.0%
Oil Spill Response	1	1	1	0	0.0%
Other R&D Support Costs	22	38	34	-4	-11.2%
Total EPA R&D	558	609	569	-40	-6.5%
Conduct of R&D	537	575	535	-40	-6.9%
R&D Facilities and Equipment	21	34	34	0	0.0%
EPA Budget (Includes R&D components above):					
Science and Technology ²	682	732	679	-53	-7.2%
Environmental Progs. and Mngmt.	1,897	2,083	1,973	-110	-5.3%
Superfund ²	1,362	1,230	1,230	0	0.0%
State and Tribal Assistance Grants	3,448	3,621	3,289	-332	-9.2%
Buildings and Facilities	62	24	25	1	4.2%
Leaking Undergrd. Storage Tanks	70	72	72	0	0.0%
Oil Spill Response	15	15	15	0	0.0%
Inspector General	32	34	34	0	0.0%
Total EPA Appropriations	7,568	7,811	7,317	-494	-6.3%

Source: OMB data for R&D for FY 2002, agency budget justification, information from agency budget office, and *Budget of the United States Government FY 2002*. Discretionary budget authority only. Excludes mandatory spending and offsets.

¹ Includes transfers from Superfund (\$38 mil. FY00; \$37 mil. FY 01 and 02).

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

Please see Chapter 12 for a discussion of EPA R&D.

Table II-18. Department of Education R&D

Table II-18. R&D in the Department of Education
(budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Edu. Research and Improvement	127	142	133	-9	-6.3%
Special Education and Rehab.	92	103	111	8	7.8%
Vocational and Adult Education	13	13	9	-4	-30.8%
Elementary and Secondary Ed.	0	0	0	0	--
Postsecondary Education	6	7	6	-1	-14.3%
Total Education R&D	238	265	259	-6	-2.3%
Conduct of R&D	238	265	259	-6	-2.3%
R&D Facilities	0	0	0	0	--

Source: OMB data for R&D for FY 2002 and agency budget justification.

Dept. of Education Budget (includes R&D components above)
(DISCRETIONARY budget authority in millions of dollars)

	FY 2000	FY 2001	FY 2002	Change FY 01-02	
	Actual	Estimate	Budget	Amount	Percent
Elementary/ Secondary Education	14,716	17,677	18,646	969	5.5%
Bilingual Education	406	460	460	0	0.0%
Special Education	6,036	7,440	8,426	986	13.3%
Rehab. Services / Disability Res.	2,707	2,806	2,930	124	4.4%
Vocational and Adult Education	1,682	1,826	1,802	-24	-1.3%
Higher Education	1,530	1,912	1,723	-189	-9.9%
Student Financial Assistance	9,375	10,674	11,674	1,000	9.4%
Other higher education	268	281	283	2	0.7%
Edu. Research, Stats. Assessmt.	591	722	382	-340	-47.1%
Dept. Management	489	524	543	19	3.6%
Other	144	154	154	0	0.0%
Total Education Budget	37,944	44,476	47,023	2,547	5.7%

Source: *Budget of the United States Government FY 2002*. Includes budget authority originally enacted as discretionary proposed to be reclassified as mandatory in FY 02 budget. Figures for all years have been adjusted to move advance appropriations back to the year of the appropriations bills in which they were enacted (for example, FY 02 advance appropriations, enacted in FY 01 Labor-HHS bill, have been moved to FY 01).

Please see Chapter 5 for a discussion of the Education budget.