

**Table 3I. Federal obligations for applied research, by detailed field of science & engineering: Department of the Interior, fiscal years 1970-2003**

[Dollars in thousands]

Page 1 of 5

Field of science & engineering	1970	1971	1972	1973	1974	1975	1976
Total, all fields .....	81,105	95,145	104,261	111,420	94,817	179,109	205,128
Life sciences, total .....	11,830	14,632	12,793	14,760	14,247	37,897	40,215
Biol & agricultural, total .....	11,800	14,605	12,728	14,696	14,185	37,817	40,155
Biol (excl environmental) .....	NA	NA	NA	NA	NA	NA	NA
Environmental biology .....	NA	NA	NA	NA	NA	NA	NA
Agricultural .....	NA	NA	NA	NA	NA	NA	NA
Medical sciences, total .....	0	0	0	42	42	53	40
Clinical medical .....	0	0	0	0	0	0	0
Other medical .....	0	0	0	42	42	53	40
Life sciences, n.e.c. ....	30	27	65	22	20	27	20
Psychology, total .....	58	66	185	254	244	315	243
Biological aspects .....	0	0	160	0	0	0	0
Social aspects .....	58	66	25	254	244	315	243
Psychological sciences, n.e.c. ....	0	0	0	0	0	0	0
Physical sciences, total .....	5,173	5,451	6,456	6,461	4,932	5,139	5,988
Astronomy .....	0	0	0	0	0	0	31
Chemistry .....	4,664	4,886	5,687	5,753	4,239	4,394	5,200
Physics .....	509	565	769	708	693	745	757
Physical sciences, n.e.c. ....	0	0	0	0	0	0	0
Environmental sciences, total .....	24,219	28,288	35,761	40,155	40,269	70,844	73,465
Atmospheric sciences .....	4,870	6,642	6,802	6,592	4,070	4,229	4,821
Geological sciences .....	18,221	20,472	26,958	31,237	33,825	58,230	59,320
Oceanography .....	1,109	1,150	1,648	1,942	2,004	7,537	8,718
Environmental sciences, n.e.c. ....	19	24	353	384	370	848	606
Math & computer sciences, total .....	949	1,355	1,366	1,086	1,073	1,996	2,332
Mathematics .....	NA	NA	NA	NA	NA	NA	1,702
Computer sciences .....	NA	NA	NA	NA	NA	NA	579
Math & computer sciences, n.e.c. ....	NA	NA	NA	NA	NA	NA	51
Engineering, total .....	37,579	43,543	44,145	46,247	31,925	56,607	76,509
Aeronautical .....	0	0	0	0	0	0	0
Astronautical .....	0	0	0	0	0	0	0
Chemical .....	14,233	14,727	15,869	16,739	5,427	8,574	12,374
Civil .....	5,347	5,902	7,558	7,616	7,764	9,881	12,793
Electrical .....	2,398	3,507	2,113	2,270	1,610	4,041	5,539
Mechanical .....	1,557	2,843	2,269	2,273	1,664	4,719	6,080
Metallurgy & materials .....	12,681	14,960	15,282	14,768	14,790	28,526	39,046
Engineering, n.e.c. ....	1,363	1,604	1,054	2,581	670	866	677
Social sciences, total .....	1,144	1,631	2,105	1,912	1,604	5,144	5,398
Anthropology .....	0	250	220	210	90	3,125	3,623
Economics .....	726	808	951	898	625	714	560
Political science .....	141	255	264	440	423	548	421
Sociology .....	156	176	242	190	302	467	440
Social sciences, n.e.c. ....	121	142	428	174	164	290	354
History .....	10	9	39	0	0	64	NA
Linguistics .....	0	0	0	0	0	0	NA
Other social sciences .....	111	133	389	174	164	226	NA
Other sciences, n.e.c. ....	153	179	1,450	545	523	1,167	978

See explanatory information, if any, and SOURCE at end of table.

**Table 3I. Federal obligations for applied research, by detailed field of science & engineering: Department of the Interior, fiscal years 1970-2003**

[Dollars in thousands]

Page 2 of 5

Field of science & engineering	1977	1978	1979	1980	1981	1982	1983
Total, all fields .....	192,363	217,616	266,946	282,812	289,174	275,006	254,675
Life sciences, total .....	45,206	57,323	75,960	81,138	87,548	90,226	94,091
Biol & agricultural, total .....	45,113	57,228	75,800	81,003	87,548	90,226	93,616
Biol (excl environmental) .....	NA	41,205	60,649	38,860	55,347	50,133	55,209
Environmental biology .....	NA	15,265	14,081	40,756	27,421	32,822	36,521
Agricultural .....	NA	758	1,070	1,387	4,780	7,271	1,886
Medical sciences, total .....	50	60	95	79	0	0	475
Clinical medical .....	0	NA	NA	NA	NA	NA	NA
Other medical .....	50	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	43	35	65	56	0	0	0
Psychology, total .....	320	350	414	462	0	0	0
Biological aspects .....	0	0	414	0	0	0	0
Social aspects .....	320	350	0	323	0	0	0
Psychological sciences, n.e.c. ....	0	0	0	139	0	0	0
Physical sciences, total .....	6,844	7,807	6,553	6,400	7,274	10,240	5,526
Astronomy .....	27	0	0	0	0	0	0
Chemistry .....	5,895	6,796	5,308	4,448	5,290	3,703	4,418
Physics .....	922	1,011	942	1,552	1,277	905	984
Physical sciences, n.e.c. ....	0	0	303	400	707	5,632	124
Environmental sciences, total .....	80,775	91,880	109,933	111,154	125,255	95,792	83,217
Atmospheric sciences .....	6,564	7,890	9,398	10,784	10,165	6,914	4,371
Geological sciences .....	64,052	73,384	89,633	84,697	99,077	77,989	75,531
Oceanography .....	7,830	7,266	6,941	8,976	10,180	9,667	3,315
Environmental sciences, n.e.c. ....	2,329	3,340	3,961	6,697	5,833	1,222	0
Math & computer sciences, total .....	2,278	4,089	5,478	6,265	4,533	1,933	2,395
Mathematics .....	1,375	2,325	4,166	4,346	3,000	159	312
Computer sciences .....	807	1,654	1,192	1,821	1,203	1,619	2,083
Math & computer sciences, n.e.c. ....	96	110	120	98	330	155	0
Engineering, total .....	51,740	51,293	62,809	72,248	61,017	74,973	67,802
Aeronautical .....	0	0	0	0	0	0	0
Astronautical .....	0	0	161	0	0	0	0
Chemical .....	6,283	4,746	5,028	3,949	3,445	1,292	400
Civil .....	8,407	13,776	12,887	20,029	19,234	11,176	8,751
Electrical .....	774	820	1,178	560	4,351	959	638
Mechanical .....	5,119	4,560	6,232	6,381	4,646	1,556	909
Metallurgy & materials .....	30,427	25,910	35,762	40,809	27,255	27,865	22,287
Engineering, n.e.c. ....	730	1,481	1,561	520	2,086	32,125	34,817
Social sciences, total .....	4,598	4,174	4,980	4,391	3,537	1,832	1,601
Anthropology .....	2,606	2,270	2,283	2,300	1,056	883	950
Economics .....	788	559	845	548	289	392	15
Political science .....	480	640	750	600	0	0	70
Sociology .....	425	485	797	551	108	86	566
Social sciences, n.e.c. ....	299	220	305	392	2,084	471	0
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	602	700	819	754	10	10	43

See explanatory information, if any, and SOURCE at end of table.

**Table 3I. Federal obligations for applied research, by detailed field of science & engineering: Department of the Interior, fiscal years 1970-2003**

[Dollars in thousands]

Page 3 of 5

Field of science & engineering	1984	1985	1986	1987	1988	1989	1990
Total, all fields .....	254,303	230,978	234,926	247,253	266,016	253,031	269,783
Life sciences, total .....	57,268	49,599	56,792	63,233	69,402	69,417	77,260
Biol & agricultural, total .....	57,268	49,599	56,792	63,115	69,367	69,415	77,180
Biol (excl environmental) .....	26,815	21,161	27,797	31,586	39,259	40,776	48,289
Environmental biology .....	28,797	25,684	27,150	29,618	27,853	26,734	26,886
Agricultural .....	1,656	2,754	1,845	1,911	2,255	1,905	2,005
Medical sciences, total .....	0	0	0	0	35	2	0
Clinical medical .....	NA	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	0	0	0	118	0	0	80
Psychology, total .....	0	0	0	0	0	0	0
Biological aspects .....	0	0	0	0	0	0	0
Social aspects .....	0	0	0	0	0	0	0
Psychological sciences, n.e.c. ....	0	0	0	0	0	0	0
Physical sciences, total .....	15,709	15,456	16,220	17,160	17,834	17,214	18,483
Astronomy .....	0	0	0	0	0	0	0
Chemistry .....	13,564	13,324	13,991	14,807	15,402	14,485	14,783
Physics .....	2,055	2,132	2,229	2,353	2,432	2,305	2,358
Physical sciences, n.e.c. ....	90	0	0	0	0	424	1,342
Environmental sciences, total .....	101,933	107,076	104,352	112,602	112,114	103,800	109,346
Atmospheric sciences .....	5,500	5,791	5,800	5,702	1,353	224	210
Geological sciences .....	91,667	97,327	90,246	93,421	95,768	85,783	92,861
Oceanography .....	4,195	3,958	8,306	8,638	8,953	10,697	10,580
Environmental sciences, n.e.c. ....	571	0	0	4,841	6,040	7,096	5,695
Math & computer sciences, total .....	6,914	7,364	7,934	8,544	8,871	8,918	9,669
Mathematics .....	1,405	1,203	1,254	1,317	1,356	1,292	1,359
Computer sciences .....	5,509	6,161	6,680	7,227	7,515	7,626	8,310
Math & computer sciences, n.e.c. ....	0	0	0	0	0	0	0
Engineering, total .....	70,743	50,068	48,178	44,088	55,890	51,782	52,795
Aeronautical .....	0	0	0	0	0	0	0
Astronautical .....	0	0	0	0	0	0	0
Chemical .....	4,510	4,764	4,728	5,016	5,130	5,820	5,823
Civil .....	7,414	6,595	5,222	3,264	2,368	3,564	3,155
Electrical .....	573	520	586	852	591	640	710
Mechanical .....	791	554	846	341	765	537	744
Metallurgy & materials .....	23,424	15,728	17,058	10,870	11,533	11,362	11,570
Engineering, n.e.c. ....	34,031	21,907	19,738	23,745	35,503	29,859	30,793
Social sciences, total .....	1,691	1,415	1,450	1,626	1,705	1,700	2,131
Anthropology .....	1,025	1,000	1,000	1,100	960	1,000	1,021
Economics .....	166	0	0	0	30	0	95
Political science .....	0	15	0	26	15	0	0
Sociology .....	500	400	450	500	700	700	1,015
Social sciences, n.e.c. ....	0	0	0	0	0	0	0
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	45	0	0	0	200	200	99

See explanatory information, if any, and SOURCE at end of table.

**Table 3I. Federal obligations for applied research, by detailed field of science & engineering: Department of the Interior, fiscal years 1970-2003**

[Dollars in thousands]

Page 4 of 5

Field of science & engineering	1991	1992	1993	1994	1995	1996	1997
Total, all fields .....	324,102	339,675	349,821	566,928	477,257	486,036	496,213
Life sciences, total .....	94,479	98,740	93,272	146,035	132,340	122,055	129,235
Biol & agricultural, total .....	94,179	98,640	93,072	146,035	132,340	122,055	129,235
Biol (excl environmental) .....	43,273	44,830	43,349	74,215	69,209	64,191	70,075
Environmental biology .....	47,723	50,056	45,445	71,635	62,930	57,623	58,571
Agricultural .....	3,183	3,754	4,278	185	201	241	589
Medical sciences, total .....	0	0	0	0	0	0	0
Clinical medical .....	NA	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	300	100	200	0	0	0	0
Psychology, total .....	0	0	0	0	0	0	0
Biological aspects .....	0	0	0	0	0	0	0
Social aspects .....	0	0	0	0	0	0	0
Psychological sciences, n.e.c. ....	0	0	0	0	0	0	0
Physical sciences, total .....	22,860	25,333	24,481	37,337	38,113	40,658	41,055
Astronomy .....	0	0	0	0	0	0	0
Chemistry .....	17,983	19,444	20,401	31,114	31,761	33,525	33,966
Physics .....	2,877	3,889	4,080	6,223	6,352	7,133	7,089
Physical sciences, n.e.c. ....	2,000	2,000	0	0	0	0	0
Environmental sciences, total .....	130,899	127,272	132,105	266,402	252,196	269,709	271,929
Atmospheric sciences .....	740	450	3,175	2,711	3,126	2,464	4,346
Geological sciences .....	109,417	113,807	108,136	249,830	236,427	251,679	253,634
Oceanography .....	10,921	11,025	18,821	12,078	12,643	15,078	13,182
Environmental sciences, n.e.c. ....	9,821	1,990	1,973	1,783	0	488	767
Math & computer sciences, total .....	11,174	11,778	12,759	18,296	18,139	18,319	18,613
Mathematics .....	1,839	2,056	2,452	2,996	3,049	3,146	3,247
Computer sciences .....	9,335	9,722	10,307	13,881	13,771	14,088	15,366
Math & computer sciences, n.e.c. ....	0	0	0	1,419	1,319	1,085	0
Engineering, total .....	60,724	72,554	76,754	85,165	21,475	21,409	21,177
Aeronautical .....	0	0	0	0	0	0	0
Astronautical .....	0	0	0	0	0	0	0
Chemical .....	7,123	8,963	8,776	12,591	12,318	12,422	13,175
Civil .....	3,767	4,937	9,809	7,528	7,864	8,389	7,593
Electrical .....	967	770	195	125	126	123	101
Mechanical .....	1,272	771	200	824	836	151	163
Metallurgy & materials .....	15,107	14,721	17,941	63,634	135	282	145
Engineering, n.e.c. ....	32,488	42,392	39,833	463	196	42	0
Social sciences, total .....	3,911	3,998	5,585	12,589	14,327	13,855	14,204
Anthropology .....	1,400	1,535	2,485	4,672	4,782	4,730	5,290
Economics .....	150	0	0	71	76	139	753
Political science .....	0	0	0	0	0	31	0
Sociology .....	1,260	1,400	2,000	1,124	1,852	564	77
Social sciences, n.e.c. ....	1,101	1,063	1,100	6,722	7,617	8,391	8,084
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	55	0	4,865	1,104	667	31	0

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Federal obligations for applied research, by detailed field of science & engineering: Department of the Interior, fiscal years 1970-2003**

[Dollars in thousands]

Page 5 of 5

Field of science & engineering	1998	1999	2000	2001	Preliminary	
					2002	2003
Total, all fields .....	454,119	550,910	496,642	511,008	537,914	496,341
Life sciences, total .....	106,997	145,103	122,543	145,129	154,187	152,594
Biol & agricultural, total .....	106,997	145,103	122,338	144,775	NA	NA
Biol (excl environmental) .....	56,903	75,131	66,673	72,859	NA	NA
Environmental biology .....	49,598	69,673	55,520	71,612	NA	NA
Agricultural .....	496	299	145	304	NA	NA
Medical sciences, total .....	0	0	0	0	NA	NA
Clinical medical .....	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	0	0	205	354	NA	NA
Psychology, total .....	0	0	18	0	0	0
Biological aspects .....	0	0	0	0	NA	NA
Social aspects .....	0	0	0	0	NA	NA
Psychological sciences, n.e.c. ....	0	0	18	0	NA	NA
Physical sciences, total .....	1,007	42	18	0	20	20
Astronomy .....	0	0	0	0	NA	NA
Chemistry .....	917	0	0	0	NA	NA
Physics .....	90	0	0	0	NA	NA
Physical sciences, n.e.c. ....	0	42	18	0	NA	NA
Environmental sciences, total .....	309,703	369,797	337,721	342,685	357,877	320,493
Atmospheric sciences .....	3,445	2,054	6,975	1,926	NA	NA
Geological sciences .....	162,215	196,486	173,763	186,343	NA	NA
Oceanography .....	17,491	18,028	19,499	12,878	NA	NA
Environmental sciences, n.e.c. ....	126,552	153,229	137,484	141,538	NA	NA
Math & computer sciences, total .....	6,874	6,813	4,809	7,384	6,981	7,269
Mathematics .....	904	1,052	684	1,371	NA	NA
Computer sciences .....	5,970	4,454	4,065	5,943	NA	NA
Math & computer sciences, n.e.c. ....	0	1,307	60	70	NA	NA
Engineering, total .....	8,653	11,972	11,114	11,499	14,264	11,767
Aeronautical .....	0	0	0	0	NA	NA
Astronautical .....	0	0	0	0	NA	NA
Chemical .....	3,094	4,938	3,404	2,682	NA	NA
Civil .....	4,468	5,545	6,177	6,950	NA	NA
Electrical .....	187	636	584	764	NA	NA
Mechanical .....	0	0	0	0	NA	NA
Metallurgy & materials .....	904	633	640	506	NA	NA
Engineering, n.e.c. ....	0	220	309	597	NA	NA
Social sciences, total .....	20,885	17,183	20,341	4,311	4,585	4,198
Anthropology .....	3,761	4,487	53	4	NA	NA
Economics .....	2,593	195	745	348	NA	NA
Political science .....	0	1,877	0	0	NA	NA
Sociology .....	1,543	3,028	1,643	3,111	NA	NA
Social sciences, n.e.c. ....	12,988	7,596	17,900	848	NA	NA
History .....	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	0	0	78	0	0	0

**KEY:** NA = Not applicable (indicates that the data collected for this table were not recorded at that level in that particular fiscal year, or that the agency or subagency did not exist as such or in that organization in that year)  
n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Federal Funds for Research and Development: Fiscal Years 2001, 2002, and 2003