United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Office of the Director
Reston, Virginia 20192

In Reply Refer To:
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OCT 07 1997

MEMORANDUM

To: Distribution

From: Barbara J. Ryan
Associate Director

Subject: REPORT--Women in the U.S. Geological Survey, June 1996, by Jane Wallace

Attached is a copy of the report Status of Women in the U.S. Geological Survey, June 1996 by Jane Wallace. This is Jane's seventh and final report in a series dating back to June 1977.

In the approximately 20 years reflected in the report, the percentage of women in the USGS workforce has increased from about 28 percent to 35 percent (Table 1, page 3) and particularly noteworthy is the shift from part time and/or intermittent positions to full time positions. In 1977, 57 percent of the USGS women were in full time positions and 43 percent in part time positions. Twenty years later, 89 percent of the USGS women were in full time positions and 11 percent were in part time or intermittent positions. It appears, however, that much of the progress in terms of overall percentage of women in the work force, and the shift from part time to full time positions occurred during the first decade. This report, for the first time, also includes data from our Biological Resources Division. Figure 15, page 57 shows some striking similarities between this division and the Geologic Division.

As our Human Resources Council is creating a human resources management strategy, and as our strategic plan for increasing work force diversity is about to be issued, the release of this report is timely. The report not only provides an historical perspective of our demographics, but also provides data which should help us evaluate the effectiveness of our human resource strategies. I encourage you to use this report to initiate some candid discussion about what actions actually produce our intended results for increasing the diversity of our workforce.

I want to thank Jane Wallace for both her candor and steadfast support for work force diversity over her entire career. I also thank each of you, in advance for your review and results-focused action.

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STATUS OF WOMEN IN THE U.S. GEOLOGICAL SURVEY June 1996

Jane H. Wallace
June 1997

STATUS OF WOMEN IN THE U.S. GEOLOGICAL SURVEY: June 1996
(With Selected Updates and Sections on the Biological Resources Division and the Buyouts)

Jane H. Wallace

Part I. Women in the U.S. Geological Survey

Introduction. This is the seventh and final report in a series of studies on the status of women in the U.S. Geological Survey (USGS) and provides data through June 1996, with some updates. This revision incorporates data from reports as of June 1977, 1984, 1988, 1990, 1992, and 1994. The occupational information uses the categories provided by the Office of Personnel Management, prior to the "sunsetting" of that portion of the Federal Personnel Manual. A section on the status of women in the Biological Resources Division, which was merged into the USGS in October 1996, is included. In addition, there is a section that shows the impact of recent buyouts on the employment of both men and women in the USGS.

This report, as did its 6 predecessors, brings together a number of indices against which to evaluate the changing status of the women personnel of the USGS. These include: overall number of men and women; occupational categories (the PATCO Groups: Professional, Administrative, Technician/Aide, Clerical, and Other); grade levels; promotion rates as educed from date of latest promotion (the only information readily available), information concerning monetary awards; recognition by honor awards; and various other items that offer measures of the changing status of women. Information is provided for minority women in Part II.

The principal sources for preparation of this report continue to be: The USGS Alphabetical Roster, Female Employment Roster, Male Employment Roster, Employee Counts within Occupational Groups with Grades, and Grade Distribution - Fulltime Paid General Schedule Employees and for members of the SES (USGS Personnel Report No. 557). Mr. Adrian (Jerry) Sira was the source of these reports for many years, and his assistance in the preparation of these reports is appreciated. Mr. William P. Reilly generously provided updated material for use in the discussion of monetary awards.

Difficulty was encountered in the utilization of statistical data because of overlapping organizational codes, inclusion of groups of individuals in organizations in holding patterns prior to realignment within the appropriate entities, and other factors that resulted in sifting data to achieve comparability with prior reports. Information for the Office of Human Resources, the Administrative and Information Systems Divisions, and financial personnel from the former U.S. Bureau of Mines (USBM) have been, whenever possible, combined as the Office of Program Support. In addition, former employees of the USBM engaged in minerals work are now incorporated with the Geologic Division. As this is the final report prepared for this series, some information

will be repeated as previously presented so that the accumulated information over 20 years will be in a single resource.

The "ancient" history included in the 1994 status report is worthy of repetition, as it indicates the comparative paucity of women geologists in December 1962 from a printout prepared at that time. There were 66 women geologists in fulltime permanent positions. Their grades ranged from GS-05 to GS-14 and were distributed as follows: GS-05 (1), GS-07 (7), GS-09 (11), GS-11 (22), GS-12 (13), GS-13 (10), and GS-14 (2). The average grade for these women was 10.74. There were 61 in the Geologic Division, 3 in the Water Resources Division, one in the Conservation Division (now the Minerals Management Service), and one in the Office of the Director. In December 1996, there were 125 women in fulltime permanent positions as geologists in the grades GS-07 to GS/GM-15, distributed as follows: GS-07 (2), GS-09 (12), GS-11 (14), GS-12 (27), GS/GM-13 (42), GS/GM-14 (21), and GS/GM-15 (7). Of these, there were 117 in the Geologic Division, 7 in the Water Resources Division, and one in the Biological Resources Division. The average grade was 12.36. In June 1994, the data for this group showed a total of 186 women in fulltime permanent positions as geologists. Their average grade was 12.01. The diminution in overall numbers no doubt results from the effects of recent buyouts and a major reduction in force.

General Patterns. From June 1977 to June 1996, there has been a net decrease of 128 women on the rolls in all positions (Fulltime and Parttime or Intermittent), while the total bureau employment has dropped by 2,952 (Table 1). The most significant of the changes is the fact that the ratio of women in fulltime positions vis a vis parttime or intermittent has changed from 1.3:1 to 8.1:1. This change for the better is occasioned by management's efforts to provide fulltime career opportunities to women employees. Equally significant is the absolute increase in the twenty-year period of the number in fulltime positions occupied by women from 1,878 to 2,818.

In Table 2. data are provided, showing the distribution of women personnel (fulltime, paid) by organization, showing the total population, population of women, women as percentage of the work force, and average grade for June 1984, June 1990, and June 1996. The increase in the average grade of women in fulltime positions from 7.85 in June 1984 to 8.88 in June 1996 is significant in view of the reduction of the overall average grade within the bureau from 10.32 to 10.14 in the same period.

Grade Structure. Substantial progress has been made by women in the 20 years since the first STATUS REPORT was issued, as evidenced by the data in Table 3. The decreases resulting from the buyouts, reductions in force, and normal turnover are evident when comparisons are made between 1994 and 1996 data, when a net loss of 121 among fulltime paid women employees occurred. Of these, the vast majority of losses were in the grades GS-4 through GS-8. Although a total of 10 GS-14's and GS-15's were lost, a net gain of 27 GS-12's and GS-13's occurred, which augurs well for the potential of more high-level women in the future. Figure 1. shows, year-by-year, the numbers of men and women in positions in the grades GS/GM-12/15 from mid-year 1979 through midyear 1996.

Date	WOMEN					Total Bureau Employment	Bureau Percentage Women
	Number Fulltime	Percentage Fulltime	Number PT/Int	Percentage PT/Int	Total Women		
June 1977	1,878	57.0%	1,414	43.0%	3,292	11,916*/	27.6%
June 1984	2,158	53.0%	1,918	47.0%	4,076	12,132	33.6%
June 1988	2,843	79.2%	746	20.8%	3,589	10,729	33.5%
June 1990	3,022	82.6%	635	17.4%	3,657	10,604	34.5%
June 1992	3,282	84.4%	607	15.6%	3,889	11,194	34.7%
June 1994	3,020	84.9%	538	15.1%	3,558	10,141	35.1%
June 1996	2,818	89.1%	346	10.9%	3,164	8,964	35.3%

Table 1. USGS: Total population of women, showing type of appointment, total employment, and percentage of women in workforce. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996. [*/ Excludes Conservation Division.]

Division/Office	BUREAU Fulltime Employment			W O M E N Population			% of Workforce			Average Grade			FULLTIME EMPLOYEES Division/Office -------Average Grade------		
	6/84	6/90	6/96	6/84	6/90	6/96	6/84	6/90	6/96	6/84	6/90	6/96	6/84	6/90	6/96
Off of Director	63	60	52	38	41	36	60.3%	68.3%	69.2%	9.31	9.58	10.81	11.22	11.07	11.94
Program Support */	516	568	583	299	359	377	57.9%	63.2%	64.7%	8.00	8.75	9.83	9.69	9.97	10.55
Geologic	2,099	2,438	1,764	568	821	622	27.1%	33.7%	35.3%	8.55	8.61	9.41	11.45	11.02	11.27
National Mapping	1,781	1,648	1,346	485	495	430	27.2%	30.0%	31.9%	7.24	7.98	9.32	9.38	9.73	10.36
Water Resources	2,974	4,104	4,400	597	1,162	1,334	20.1%	28.3%	30.3%	7.50	7.20	8.20	10.16	9.31	9.55
USGS TOTALS	7,433	8,818	8,145	1,987	2,878	2,799	26.7%	32.6%	34.4%	7.85	8.14	8.88	10.32	9.94	10.14

*/ Includes Administrative Division, Human Resources, Information Systems, and former USBM Finance personnel.

Table 2. USGS: Fulltime (Paid) GS/GM- personnel by organization, showing total population, population of women, women as percentage of workforce, and average grade. June 1984, June 1990, and June 1996.

Grade	WOMEN						
	June 1977	June 1984	June 1988	June 1990	June 1992	June 1994	June 1996
GS-18*/	0	0	0	0	0	0	0
GS-17*/	0	0	0	0	0	0	0
GS-16*/	0	0	0	0	0	0	0
GS-15	7	10	17	20	32	37	31
GS-14	13	33	49	66	82	106	102
GS-13	45	83	131	176	210	231	249
GS-12	69	172	225	261	340	371	380
GS-11	144	238	339	361	422	387	369
GS-10	11	11	11	13	16	22	18
GS-09	203	273	331	392	382	397	350
GS-08	38	60	94	105	114	123	131
GS-07	226	308	423	439	497	440	438
GS-06	280	336	412	426	427	351	327
GS-05	451	263	357	350	355	295	219
GS-04	208	122	200	188	201	117	103
GS-03	78	51	44	43	55	22	51
GS-02	15	26	14	31	26	18	28
GS-01	3	1	0	7	4	3	3
TOTALS	1,791	1,987	2,647	2,878	3,163	2,920	2,799
	6.78	7.85	7.96	8.14	8.35	8.82	8.88
SES Members	0	1	0	0	0	1	4
ST-3104	0	0	0	1	0	0	0
SL-	0	0	0	0	0	0	0

*/Members of the Senior Executive Service and those in SL- schedule were included in GS-16/18 data in earlier years. See below.

Table 3. USGS: Grade distribution of fulltime (paid), GS/GM, Senior Executive (ES). Lone Worker Scientists (ST-3104), and Senior Level (SL), by sex: W O M E N. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996.

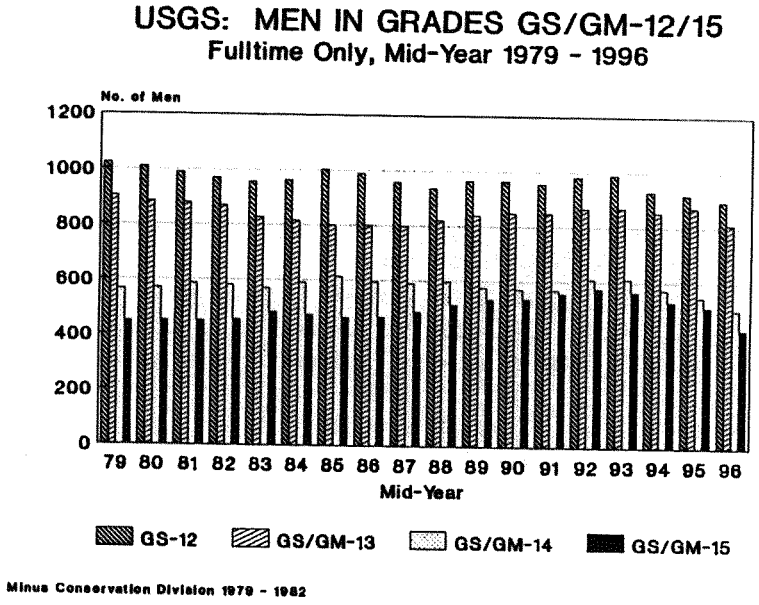
Grade	MEN						
	June 1977	June 1984	June 1988	June 1990	June 1992	June 1994	June 1996
GS-18*/	3	0	0	0	0	0	0
GS-17*/	11	1	1	1	0	0	0
GS-16*/	46	10	3	3	0	0	0
GS-15	396	476	515	537	577	530	430
GS-14	525	590	599	572	610	572	501
GS-13	830	816	822	849	867	854	812
GS-12	1,074	962	936	964	980	930	894
GS-11	1,053	1,003	929	932	985	922	883
GS-10	128	159	156	171	171	180	188
GS-09	843	705	791	766	781	716	599
GS-08	152	121	156	151	145	151	164
GS-07	340	256	342	341	373	288	307
GS-06	141	101	165	175	176	200	146
GS-05	192	132	245	233	327	254	181
GS-04	94	67	134	140	232	132	127
GS-03	47	29	41	62	88	37	67
GS-02	15	17	25	40	24	10	39
GS-01	2	1	3	3	1	5	8
TOTALS	5,892	5,446	5,863	5,940	6,337	5,781	5,346
	10.92	11.22	10.84	10.81	10.79	10.89	10.80
*Members of the Senior Executive Service and those in SL- schedule were included in GS-16/18 data in earlier years. See below.							
SES Members	0	47	49	49	48	39	16
ST-3104	4	18	25	22	39	32	16
SL-	0	0	0	0	4	5	8

Table 3. USGS: Grade distribution of fulltime (paid) GS/GM, Senior Executive (ES), Lone Worker Scientists (ST-3104), and Senior Level (SL), by sex: M E N. June 1977, June 1984 June 1988, June 1990, June 1992, June 1994, and June 1996--Continued.

Grade	BUREAU TOTALS						
	June 1977	June 1984	June 1988	June 1990	June 1992	June 1994	June 1996
GS-18*/	3	0	0	0	0	0	0
GS-17*/	11	1	1	1	0	0	0
GS-16*/	46	10	3	3	0	0	0
GS-15	403	486	532	557	609	567	461
GS-14	538	623	648	638	692	678	603
GS-13	875	899	953	1,025	1,077	1,085	1,061
GS-12	1,143	1,134	1,161	1,225	1,320	1,301	1,274
GS-11	1,197	1,241	1,268	1,293	1,407	1,309	1,252
GS-10	139	170	167	184	187	202	206
GS-09	1,046	978	1,122	1,158	1,163	1,113	949
GS-08	190	181	250	256	259	274	295
GS-07	566	564	765	780	870	728	745
GS-06	421	437	577	601	603	551	473
GS-05	643	395	602	583	682	549	400
GS-04	302	189	334	328	433	249	230
GS-03	125	80	85	105	143	59	118
GS-02	30	43	39	71	50	28	67
GS-01	5	2	3	10	5	8	11
TOTALS	7,683	7,433	8,510	8,818	9,500	8,701	8,145
	9.95	10.32	9.94	9.94	9.89	10.19	10.14
SES Members	0	48	49	49	48	40	20
ST-3104	4	18	25	23	35	32	16
SL-	0	0	0	0	4	5	8

*/Members of the Senior Executive Service and those in SL- schedule were included in GS-16/18 data in earlier years. See below.

Table 3. USGS: Grade distribution of fulltime (paid), GS/GM, Senior Executive (ES), Lone Worker Scientists (ST-3104), and Senior Level (SL): B U R E A U. June 1977, June 1984 June 1988, June 1990, June 992, June 1994, and June 1996--Continued.



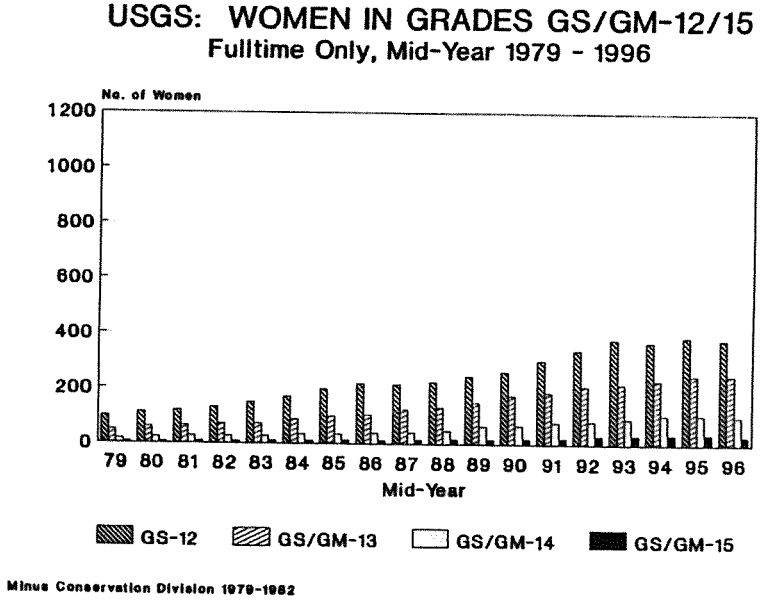


Figure 1. USGS: Distribution of personnel in fulltime (paid) positions, GS/GM-12/15, by sex. Midyear (June or July, depending on availability). 1979-1996.

A review of the participation of women in the Senior Executive Service (SES) and as Senior Advisors (SL), as of March 1997, provided a startling revelation! Of the 28 SES members in the USGS, seven are women, or one-quarter of the entire group. Two of these are employed in the Office of the Director -- the Associate Directors for Operations and for Programs; three are in the Water Resources Division -- the Assistant Chief Hydrologist for Operations, the Regional Hydrologist for the Southeastern Region, and the Chief, Office of Hydrologic Research; and two are in the Biological Resources Division. In addition, for the first time in USGS history, women have been appointed to positions as Senior Advisors (SL). These two positions are in the National Mapping Division -- one as the Senior Program Advisor for Data and Information Delivery and the other as Senior Program Advisor for Data Production and Integration. There are currently no women among the 14 Senior Research Scientists (ST). In fact, in the many years of the existence of this group (the ST's) and its predecessor the PL's (Public Law that enacted lone worker research positions), there has been only one woman, who departed for academia where the opportunities appeared to be better.

Table 4 provides information on the distribution of women in fulltime positions in the grades GS/GM-11/15 by Division or Office for June 1977, June 1984, June 1990, June 1992, June 1994, and June 1996. Despite the impact of the Buyouts and the major Reduction-in-Force in the Geologic Division, the overall number of women in these grades has remained relatively steady from June 1994 to June 1996, though as noted earlier there was the loss of 10 (6 of these went to SES and SL positions) in the GS/GM-14 and GS/GM-15 groups. Of the approximately 2,800 women in fulltime positions (paid) in June 1996, 40% were at the GS/GM-11/15 level. On an even more encouraging note, the number of women in GS/GM-11/15 positions has increased by 853 since June 1977 (at that time there were only 7 women at the GS-15) and by 595 since June 1984 (there were 9 GS/GM-15's).

Promotion Rates. There are no available data which directly measure the promotion progress of USGS employees, but there are data which provide the date of latest promotion. Figure 2 charts the date of latest promotion for women employees in permanent fulltime positions, for the Bureau as a whole, and for each of the organizations existing in June 1996. Only 58 women or 2.3% of those in the fulltime permanent group have received no promotions since joining the USGS. Some came at the GS/GM-15 level, and others in the group have relatively short tenure. The periods covered by the bar charts are pre-1989, 1989-1992, and 1993-June 1996. In summary, more than 51.3% of USGS women in fulltime positions have been promoted during the last 3 1/2 years covered by this report. An additional 31.1% were promoted in the 4-year period (1989-1992), during which an intensive drive was in effect to advance women into higher-level positions, and the remaining 15.3% were last promoted prior to 1989.

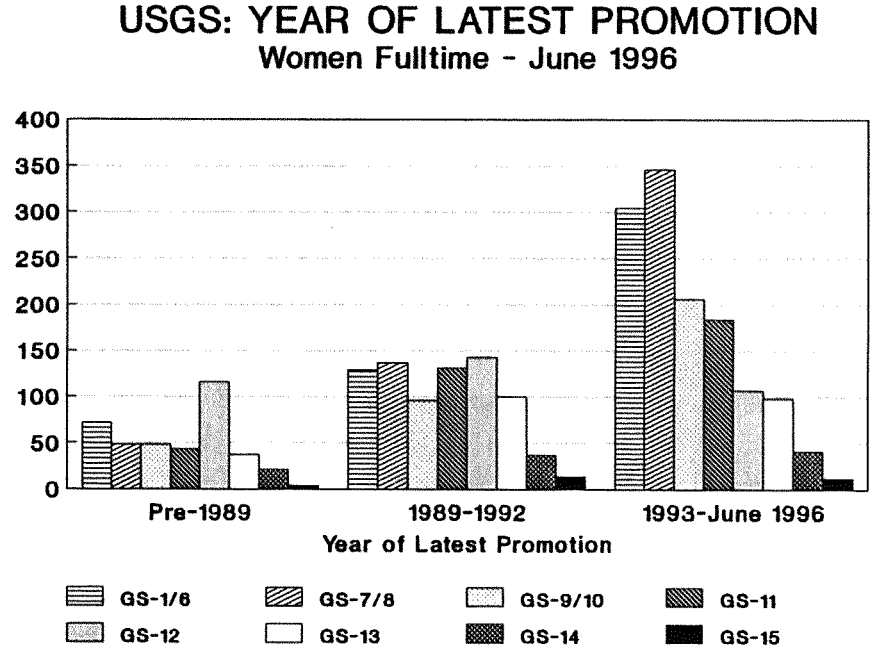
Occupational Groups. Tables 5-10 provide details on the occupational groups (PATCO Groups: Professional, Administrative, Technician/Aide, Clerical, and Other) for both men and women, fulltime, parttime/intermittent, for June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996. They bring together all previous information from the "Status" reports, cast, or recast, in the PATCO groups current as of February 22, 1991, as set forth in the now "sunsetted" Federal Personnel Manual Supplement, 292-1.

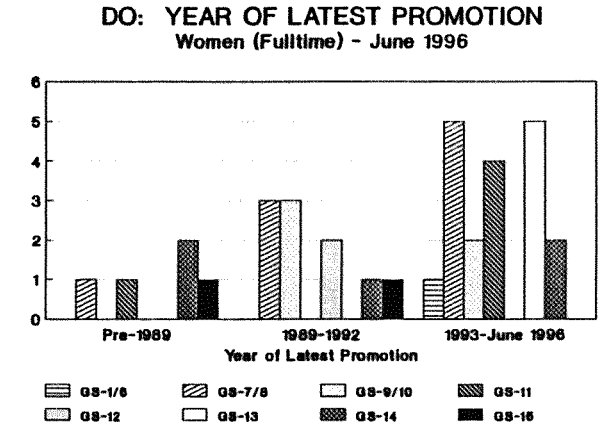
Division/Office	GS-11 6/77	6/84	6/90	6/92	6/94	6/96	GS-12 6/77	6/84	6/90	6/92	6/94	6/96
Office of the Director	1	3	5	4	3	5	1	4	5	7	5	2
Office of Program Support	20	20	25	32	28	27	19	35	49	67	70	81
Geologic Division	61	83	112	109	100	72	29	73	102	127	126	93
National Mapping Division	44	62	77	93	82	90	9	22	31	39	43	45
Water Resources Division	18	70	142	184	174	175	11	38	74	100	127	159
Totals	144	238	361	422	387	369	69	172	261	340	371	380

Division/Office	GS-13 6/77	6/84	6/90	6/92	6/94	6/96	GS-14 6/77	6/84	6/90	6/92	6/94	6/96
Office of the Director	2	4	2	0	1	5	0	2	6	6	6	7
Office of Program Support	8	24	48	60	61	69	2	12	14	16	22	23
Geologic Division	27	35	70	79	87	78	11	16	25	36	47	41
National Mapping Division	4	7	21	22	29	33	0	1	9	12	13	11
Water Resources Division	4	13	35	49	53	64	0	3	12	12	18	20
Totals	45	83	176	210	231	249	13	34	66	82	106	102

Division/Office	GS-15 6/77	6/84	6/90	6/92	6/94	6/96	Division/Office Totals 6/77	6/84	6/90	6/92	6/94	6/96
Office of the Director	3	1	1	2	2	2	7	14	19	19	17	21
Office of Program Support	1	1	4	4	3	3	50	92	140	179	186	203
Geologic Division	3	5	12	12	15	9	131	212	321	363	375	293
National Mapping Division	0	0	1	4	7	8	57	92	139	170	174	187
Water Resources Division	0	2	2	10	10	9	33	126	265	355	382	427
Totals	7	9	20	32	37	31	278	536	884	1,086	1,134	1,131

Table 4. USGS: Distribution of grade levels of fulltime (paid) GS/GM-11/15 women by Division/Office. June 1977, June 1984, June 1990, June 1992, June 1994, and June 1996.





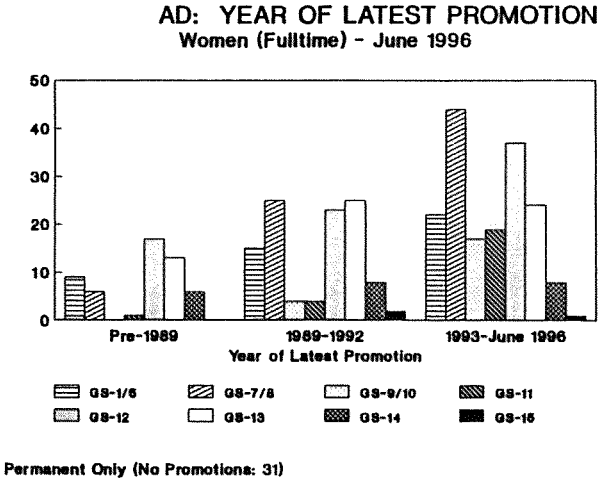
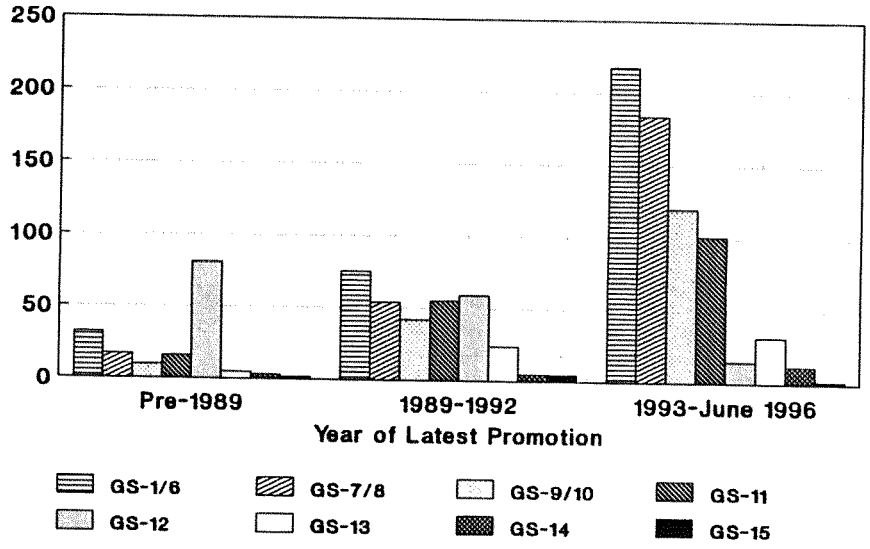


Figure 2. USGS: Year of latest promotion for women in fulltime, permanent positions, GS/GM-01/15 for Division/Office. June 1996.



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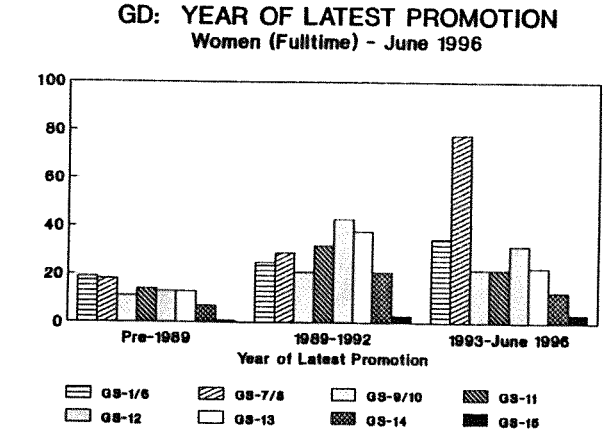

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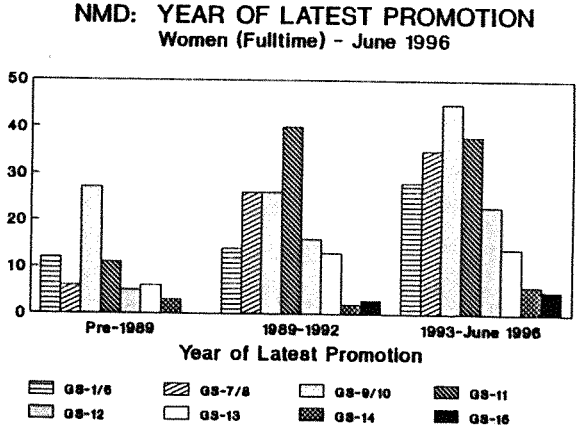

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Figure 2. USGS: Year of latest promotion for women in fulltime, permanent positions, GS/GM-01/15 for Division/Office. June 1996--Continued.

OCCUPATIONAL GROUP	Women Fulltime							Women PT/WAE						
	6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
Professional	241	408	639	697	840	865	800	182	318	182	159	146	149	107
Administrative	295	343	468	526	584	580	610	36	65	34	39	44	42	32
Technicians and Aides	488	714	920	954	1,079	957	927	342	473	224	189	221	161	119
Clerical	756	510	672	676	612	473	397	626	634	188	141	109	67	69
Other	12	41	29	44	66	67	59	1	0	6	10	22	41	18
PATCO TOTALS	1,792	2,016	2,728	2,897	3,181	2,942	2,793	1,167	1,490	634	538	542	460	345
WB/WG/WL/WS/WW/XL/XP/XS (Hourly Wages)	12	11	13	16	10	11	15	0	1	2	1	1	1	0
GG/GW/YV	74	131	102	109	91	67	10	247	427	110	96	64	77	1
GRAND TOTALS	1,878	2,158	2,843	3,022	3,282	3,020	2,818	1,414	1,918	746	635	607	538	346

Table 5. USGS: Composition of work force, showing occupational (PATCO) groups and other categories, except as noted: **W O M E N.** PATCO data include the following schedules: EX, ES, FC, GM, GS, SL, and ST. Data are shown by type of appointment (Fulltime, Parttime/Intermittent) and sex. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996.

OCCUPATIONAL GROUP	Men Fulltime							Men PT/WAE						
	6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
Professional	3,418	3,360	3,485	3,499	3,682	3,423	3,011	665	778	381	305	295	204	89
Administrative	316	389	446	457	517	488	493	28	36	15	15	15	11	6
Technicians and Aides	2,094	1,752	2,008	1,959	2,067	1,789	1,664	803	541	151	122	146	85	77
Clerical	72	40	74	61	74	48	72	59	70	22	17	20	17	21
Other	54	44	61	78	122	157	144	3	2	4	17	21	53	48
PATCO TOTALS	5,954	5,585	6,074	6,054	6,462	5,905	5,384	1,558	1,427	573	476	497	370	241
WB/WG/WL/WS/WW/XL/XP/XS (Hourly Wages)	317	201	178	196	193	169	149	41	45	14	5	8	3	7
GG/GH/YY	191	172	165	124	100	80	17	563	626	136	92	45	56	2
GRAND TOTALS	6,462	5,958	6,417	6,374	6,755	6,154	5,550	2,162	2,098	723	573	550	429	250

Table 5. USGS: Composition of work force, showing occupational (PATCO) groups and other categories, except as noted: M E N. PATCO data include the following schedules: EX, ES, FC, GM, GS, SL, and ST. Data are shown by type of appointment (Fulltime, Parttime/Intermittent) and sex. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996--Continued.

OCCUPATIONAL GROUP	BUREAU Fulltime 6/77	6/84	6/88	6/90	6/92	6/94	6/96	TOTALS PT/WAE 6/77	6/84	6/88	6/90	6/92	6/94	6/96
Professional	3,659	3,768	4,124	4,196	4,522	4,288	3,811	827	1,096	563	464	441	353	196
Administrative	611	732	914	983	1,101	1,068	1,103	64	101	49	54	59	53	38
Technicians and Aides	2,582	2,466	2,928	2,913	3,146	2,746	2,591	1,145	1,014	375	311	367	246	196
Clerical	828	550	746	737	686	521	469	685	704	210	158	129	84	90
Other	66	85	90	122	188	224	203	4	2	10	27	43	94	66
PATCO TOTALS	7,746	7,601	8,802	8,951	9,643	8,847	8,177	2,725	2,917	1,207	1,014	1,039	830	586
WB/WG/WL/WS/WW/XL/XP/XS (Hourly Wages)	329	212	191	212	203	180	164	41	46	16	. 6	9	4	7
GG/GW/YV	265	303	267	233	191	147	27	810	1,053	246	188	109	133	3
GRAND TOTALS	8,340	8,116	9,260	9,396	10,037	9,174	8,368	3,576	4,016	1,469	1,208	1,157	967	596

Table 5. USGS: Composition of work force, showing occupational (PATCO) groups and other categories, except as noted: B U R E A U. PATCO data include the following schedules: EX, ES, FC, GM, GS, SL, and ST. Data are shown by type of appointment (Fulltime, Parttime/Intermittent) and sex. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996--Continued.

Series No.	OCCUPATIONAL GROUP: Professional	Women Fulltime							Women PT/WAE						
		6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
0020	Community Planning	1	0	1	1	1	1	1	0	1	0	0	0	0	0
0101	Social Science	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0110	Economics	0	0	0	0	0	0	1	0	0	0	0	0	0	0
0150	Geography	8	4	4	4	12	12	18	6	4	3	4	1	1	2
0170	History	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0180	Psychology	0	0	0	1	1	1	0	0	0	0	0	0	0	0
0193	Archaeology	0	0	0	0	0	0	0	1	0	0	1	0	0	0
0401	General Biological Science	2	3	4	6	14	14	18	2	5	2	1	2	1	0
0403	Microbiology	0	0	0	0	2	3	2	0	0	0	1	0	0	0
0408	Ecology	0	0	0	0	1	1	1	0	0	0	0	0	0	0
0410	Zoology	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0430	Botany	2	1	2	2	3	3	2	3	5	6	4	5	6	4
0435	Plant Physiology	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0460	Forestry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0470	Soil Science	0	1	1	3	1	2	1	0	1	0	0	0	0	0
0510	Accounting	2	7	15	17	22	27	32	0	0	0	1	1	0	0
0801	General Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0808	Architecture	0	0	0	0	1	1	1	0	0	0	0	0	0	0
0810	Civil Engineering	2	3	5	6	1	2	4	0	2	2	0	0	1	0
0819	Environmental Engineering	0	0	0	0	2	4	2	0	0	0	0	0	1	0
0830	Mechanical Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0840	Nuclear Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0850	Electrical Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0854	Computer Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0855	Electronics Engineering	0	0	1	3	3	3	3	0	0	0	0	0	0	0
0861	Aerospace Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0880	Mining Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0881	Petroleum Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0893	Chemical Engineering	0	0	1	1	1	1	0	0	0	0	0	0	0	0
1015	Museum Curator	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1102	Contracting	13	27	30	33	38	38	37	0	2	1	1	2	2	0
1301	General Physical Science	7	8	10	14	33	29	40	3	11	3	3	4	7	6
1306	Health Physics	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1310	Physics	1	1	1	1	0	0	0	2	1	1	1	1	1	1
1313	Geophysics	4	6	28	30	37	38	27	11	20	14	12	6	7	3
1315	Hydrology	28	95	178	201	239	257	272	17	54	39	35	47	47	48
1320	Chemistry	31	38	57	54	68	69	55	20	25	13	14	7	7	8
1330	Astronomy and Space Science	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1340	Meteorology	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1350	Geology	88	129	195	198	223	215	148	82	171	92	68	59	54	25
1360	Oceanography	0	2	3	2	2	3	3	2	2	1	1	1	1	0
1370	Cartography	25	54	68	82	98	103	101	2	5	3	6	5	9	7
1386	Photographic Technology	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1410	Librarian	17	20	22	22	22	21	18	5	2	0	3	2	2	2
1515	Operations Research	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1520	Mathematics	10	7	11	11	7	5	3	5	6	2	3	1	0	0
1529	Mathematical Statistician	0	0	0	2	2	1	0	0	1	0	0	0	0	0
1530	Statistician	0	0	0	0	0	0	1	0	0	0	0	0	0	0
1550	Computer Science	0	2	2	3	6	11	9	0	0	0	0	2	2	1
1730	Education Research	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTALS	241	408	639	697	840	865	800	162	318	182	159	146	149	107

Table 6. USGS: Composition of work force, showing series number, occupation title, type of appointment (Fulltime, Parttime/Intermittent), and sex, by PATCO Group: PROFESSIONAL. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996

Series No.	OCCUPATIONAL GROUP: Professional	Men Fulltime							Men PT/WAE						
		6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
0020	Community Planning	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0101	Social Science	0	1	1	2	2	2	2	0	0	0	0	0	0	0
0110	Economics	4	6	7	6	8	7	8	1	3	0	0	0	0	0
0150	Geography	24	29	24	34	39	48	46	16	5	2	3	1	1	1
0170	History	0	0	0	0	0	0	0	1	1	0	0	0	0	0
0180	Psychology	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0193	Archaeology	0	0	0	0	0	0	0	1	2	0	0	0	0	0
0401	General Biological Science	23	10	8	5	23	21	31	6	4	2	1	1	4	1
0403	Microbiology	2	1	1	1	1	1	1	2	1	0	0	0	0	0
0408	Ecology	0	0	1	1	5	6	8	0	1	0	0	0	0	0
0410	Zoology	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0430	Botany	11	5	5	4	5	4	3	3	10	4	5	3	2	1
0435	Plant Physiology	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0460	Forestry	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0470	Soil Science	5	4	3	3	3	3	1	0	0	0	0	0	0	0
0510	Accounting	8	10	9	10	13	12	20	0	0	0	0	0	0	0
0801	General Engineering	5	4	6	5	5	5	5	1	1	1	1	3	3	3
0808	Architecture	0	0	0	0	1	1	1	0	0	0	0	0	0	0
0810	Civil Engineering	203	20	42	55	74	58	38	14	14	4	6	3	3	1
0819	Environmental Engineering	0	1	2	2	4	7	5	0	1	0	1	0	0	0
0830	Mechanical Engineering	3	4	4	4	6	6	5	2	4	2	1	2	0	0
0840	Nuclear Engineering	1	1	1	1	1	1	0	0	0	0	0	0	0	0
0850	Electrical Engineering	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0854	Computer Engineering	0	0	0	3	6	8	5	0	0	0	1	3	0	0
0855	Electronics Engineering	20	22	23	20	22	19	15	3	0	0	0	0	0	0
0861	Aerospace Engineering	0	1	1	1	1	1	0	0	0	0	0	0	0	0
0880	Mining Engineering	3	3	0	1	1	0	0	0	0	0	0	0	0	0
0881	Petroleum Engineering	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0893	Chemical Engineering	0	2	2	1	0	0	0	2	1	1	1	1	1	1
1015	Museum Curator	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1102	Contracting	35	29	23	16	17	13	15	0	1	0	0	0	0	0
1301	General Physical Science	127	84	85	94	114	112	166	15	18	11	11	7	9	6
1306	Health Physics	2	2	2	2	2	0	0	0	0	0	0	0	0	0
1310	Physics	20	12	8	4	4	3	2	7	7	4	1	0	0	0
1313	Geophysics	234	243	278	264	261	238	195	48	52	26	27	21	11	4
1315	Hydrology	1,295	1,330	1,393	1,403	1,490	1,427	1,370	156	195	107	80	95	61	45
1320	Chemistry	160	163	169	160	165	149	121	34	42	12	13	13	11	4
1330	Astronomy and Space Science	0	0	1	1	0	1	0	1	1	0	0	1	0	1
1340	Meteorology	1	3	1	1	1	0	0	0	1	0	0	0	0	0
1350	Geology	870	840	884	855	866	768	483	321	382	186	134	123	80	14
1360	Oceanography	16	15	22	25	26	25	22	4	10	5	3	5	5	3
1370	Cartography	294	473	436	462	454	407	375	8	11	6	6	5	4	1
1386	Photographic Technology	4	2	1	1	1	1	1	0	0	0	0	0	0	0
1410	Librarian	15	12	7	8	10	9	7	0	1	0	0	0	0	0
1515	Operations Research	3	1	2	3	3	4	4	1	0	0	0	0	0	0
1520	Mathematics	27	14	14	13	15	13	8	12	6	3	3	4	4	2
1529	Mathematical Statistician	0	3	3	4	4	4	3	2	0	2	2	1	1	1
1530	Statistician	0	2	1	1	1	1	4	1	1	2	3	1	1	0
1550	Computer Science	0	8	15	23	28	38	41	0	2	1	2	2	2	0
1730	Education Research	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	TOTALS	3,418	3,360	3,485	3,499	3,682	3,423	3,011	665	778	381	305	295	204	89

Table 6. USGS: Composition of work force, showing series number, occupation title, type of appointment (Fulltime, Parttime/Intermittent), and sex, by PATCO Group: PROFESSIONAL. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996.

Series No.	OCCUPATIONAL GROUP	BUREAU Fulltime							TOTALS PT/WAE						
	Professional	6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
0020	Community Planning	1	0	1	1	1	1	1	1	1	0	0	0	0	0
0101	Social Science	0	1	1	2	2	2	2	0	0	0	0	0	0	0
0110	Economics	4	6	7	6	8	7	9	1	3	0	0	0	0	0
0150	Geography	32	33	28	38	51	60	64	22	9	5	7	2	2	3
0170	History	0	0	0	0	0	0	0	1	1	0	0	0	0	0
0180	Psychology	0	0	0	1	1	1	0	0	0	0	0	0	0	0
0193	Archaeology	0	0	0	0	0	0	0	2	2	0	1	0	0	0
0401	General Biological Science	25	13	12	11	37	35	49	8	9	4	2	3	5	1
0403	Microbiology	2	1	1	1	3	4	3	2	1	0	1	0	0	0
0408	Ecology	0	0	1	1	6	7	9	0	1	0	0	0	0	0
0410	Zoology	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0430	Botany	13	6	7	6	8	7	5	6	15	10	9	8	8	5
0435	Plant Physiology	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0460	Forestry	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0470	Soil Science	5	5	4	6	4	5	2	0	1	0	0	0	0	0
0510	Accounting	10	17	24	27	35	39	52	0	0	0	1	1	0	0
0801	General Engineering	5	4	6	5	5	5	5	1	1	1	1	3	3	3
0808	Architecture	0	0	0	0	2	2	2	0	0	0	0	0	0	0
0810	Civil Engineering	205	23	47	61	75	60	42	14	16	6	6	3	4	1
0819	Environmental Engineering	0	1	2	2	6	11	7	0	1	0	1	0	1	0
0830	Mechanical Engineering	3	4	4	4	6	6	5	2	4	2	1	2	0	0
0840	Nuclear Engineering	1	1	1	1	1	1	0	0	0	0	0	0	0	0
0850	Electrical Engineering	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0854	Computer Engineering	0	0	0	3	6	8	5	0	0	0	1	3	0	0
0855	Electronics Engineering	20	22	24	23	25	22	18	3	0	0	0	0	0	0
0861	Aerospace Engineering	0	1	1	1	1	1	0	0	0	0	0	0	0	0
0880	Mining Engineering	3	3	0	1	1	0	0	0	0	0	0	0	0	0
0881	Petroleum Engineering	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0893	Chemical Engineering	0	2	3	2	1	1	0	2	1	1	1	1	1	1
1015	Museum Curator	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1102	Contracting	48	56	53	49	55	51	52	0	3	1	1	2	2	0
1301	General Physical Science	134	92	95	108	147	141	206	18	29	14	14	11	16	12
1306	Health Physics	2	2	2	2	2	0	0	0	0	0	0	0	0	0
1310	Physics	21	13	9	5	4	3	2	9	8	5	2	1	1	1
1313	Geophysics	238	249	306	294	298	276	222	59	72	40	39	27	18	7
1315	Hydrology	1,323	1,425	1,571	1,604	1729	1684	1642	173	249	146	115	142	108	93
1320	Chemistry	191	201	226	214	233	218	176	54	67	25	27	20	18	12
1330	Astronomy and Space Science	0	0	1	1	0	1	0	1	1	0	0	1	0	1
1340	Meteorology	1	3	1	1	1	0	0	0	1	0	0	0	0	0
1350	Geology	958	969	1,079	1,053	1089	983	631	403	553	278	202	182	134	39
1360	Oceanography	16	17	25	27	28	28	25	6	12	6	4	6	6	3
1370	Cartography	319	527	504	544	552	510	476	10	16	9	12	10	13	8
1386	Photographic Technology	4	2	1	1	1	1	1	0	0	0	0	0	0	0
1410	Librarian	32	32	29	30	32	30	25	5	3	0	3	2	2	2
1515	Operations Research	3	1	2	3	3	4	4	1	0	0	0	0	0	0
1520	Mathematics	37	21	25	24	22	18	11	17	12	5	6	5	4	2
1529	Mathematical Statistician	0	3	3	6	6	5	3	2	1	2	2	1	1	1
1530	Statistician	0	2	1	1	1	1	5	1	1	2	3	1	1	0
1550	Computer Science	0	10	17	26	34	49	50	0	2	1	2	4	4	1
1730	Education Research	0	0	0	0	0	0	0	0	0	0	0	0	1	0
		3,659	3,788	4,124	4,196	4,522	4,288	3,811	827	1,096	563	464	441	353	196

Table 6. USGS: Composition of work force, showing series number, occupation title, type of appointment (Fulltime, Parttime/Intermittent), and sex, by PATCO Group: PROFESSIONAL. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996.--Continued.

Series No.	OCCUPATIONAL GROUP: Technicians and Aides	Women Fulltime							Women PT/WAE						
		6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
0019	Safety Technician	0	0	0	0	0	1	1	0	0	0	0	0	0	0
0102	Social Science Aid/Tech	0	0	0	0	1	0	0	0	0	0	0	0	0	0
0203	Personnel Asst (GS-6/18)	10	20	26	28	26	20	20	0	2	4	3	4	3	0
0303	Genl Clerical&Admin (GS-6/18)	40	105	160	196	238	232	251	5	39	32	30	32	27	15
0326	Automation Assistant (GS-5/18)	0	0	0	0	29	45	39	0	0	0	0	2	6	5
0332	Computer Operation	5	15	16	14	11	8	3	6	5	1	0	0	0	0
0335	Computer Assistant (GS-5/18)	25	53	76	74	76	57	51	10	37	18	15	12	12	7
0344	Management Asst (GS-6/18)	1	8	6	6	7	4	4	1	1	1	1	1	1	0
0361	Equal Opportunity Asst	0	2	1	1	0	0	0	0	0	0	0	0	0	1
0392	General Communications	1	1	0	0	0	0	0	0	2	0	0	0	0	0
0393	Communications Spec	0	1	0	1	0	0	0	0	0	0	0	0	0	0
0404	Biological Technician	2	0	0	1	2	2	2	8	6	1	1	3	1	0
0503	Financial Asst (GS-6/18)	3	18	16	20	27	24	19	0	2	1	1	3	2	2
0525	Acctg Technician (GS-4/18)	0	31	1	44	39	41	46	0	21	3	5	3	4	5
0561	Budget Clerk/Assistant	0	0	48	0	12	7	7	0	0	0	0	2	0	0
0802	Engineering Technician	1	1	0	1	0	1	1	0	2	1	1	1	1	1
0817	Surveying Technician	1	1	0	0	0	0	0	0	0	0	0	0	0	0
0818	Engineering Drafting	0	0	0	0	0	0	0	0	2	0	0	0	0	0
0856	Electronics Technician	1	0	1	1	2	2	2	0	1	0	0	0	0	0
1001	Genl Arts & Info (GS-7/10)	2	15	11	11	12	6	4	0	3	3	2	2	2	1
1010	Exhibits Specialist	0	1	1	1	1	1	1	0	0	0	0	0	0	0
1016	Museum Specialist/Technician	0	0	1	1	2	2	0	0	7	0	0	1	1	0
1020	Illustrating	10	10	14	15	18	24	19	8	13	4	5	0	1	2
1060	Photography	4	6	3	3	2	2	1	0	0	1	1	1	1	1
1087	Editorial Assistant (GS-6/18)	29	39	64	49	60	55	43	2	24	18	16	10	10	5
1101	Genl Bus & Industry (GS-7/10)	0	0	0	0	0	0	3	0	1	0	0	0	0	0
1105	Purchasing	9	18	31	35	34	31	29	0	3	1	1	2	3	0
1106	Procurement Assistant(GS-6/18)	3	8	8	11	11	12	9	0	2	0	0	0	0	0
1152	Production Control	3	2	1	0	1	1	0	0	0	0	1	0	0	0
1311	Physical Science Technician	61	45	87	75	86	67	60	152	164	61	51	65	40	27
1316	Hydrologic Technician	67	70	116	133	160	128	147	73	70	44	31	54	32	35
1341	Meteorological Technician	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1371	Cartographic Technician	169	212	193	192	182	142	115	62	47	21	16	16	5	5
1411	Library Technician	34	28	34	37	37	33	28	14	18	9	8	7	7	6
1521	Mathematics Technician	4	0	0	0	0	0	0	0	0	0	0	0	0	0
1531	Statistical Assistant (GS-7/10)	1	0	0	0	0	0	14	0	0	0	0	0	1	0
1670	Equipment Specialist (GS-1/10)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1702	Education/Training Technician	1	2	3	0	1	2	2	1	1	0	0	0	0	0
1960	Quality Inspection	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2001	General Supply (GS-7/10)	1	0	1	1	1	1	0	0	0	0	0	0	0	0
2005	Supply Specialist (GS-7/18)	0	1	0	0	0	2	4	0	0	0	0	0	1	0
2102	Transportation Asst (GS-6/18)	0	1	0	1	1	2	1	0	0	0	0	0	0	1
2131	Freight Rate Spec (GS-7/18)	0	0	1	2	2	2	1	0	0	0	0	0	0	0
2181	Aircraft Operation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTALS	488	714	920	954	1,079	957	927	342	473	224	189	221	161	119

Table 8. USGS: Composition of work force, showing series number, occupation title, type of appointment (Fulltime, Parttime/Intermittent), and sex, by PATCO Group: **TECHNICIAN/AIDE**. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996.

Series No.	OCCUPATIONAL GROUP: Technicians and Aides	Men Fulltime							Men PT/WAE						
		6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
0019	Safety Technician	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0102	Social Science Aid/Tech	0	1	0	1	1	0	0	0	0	0	0	0	0	0
0203	Personnel Asst (GS-6/18)	0	0	1	1	1	3	1	0	1	0	0	0	0	0
0303	Genl Clerical&Admin (GS-6/18)	7	8	22	15	17	18	39	4	0	1	1	2	0	0
0326	Automation Assistant (GS-5/18)	0	0	0	0	2	3	4	0	0	0	0	0	0	0
0332	Computer Operation	20	4	5	4	6	7	3	9	7	1	0	1	0	0
0335	Computer Assistant (GS-5/18)	12	21	31	26	26	24	28	10	14	5	1	2	1	2
0344	Management Asst (GS-6/18)	1	0	1	2	2	2	1	0	0	0	0	0	0	0
0361	Equal Opportunity Asst	0	0	1	1	1	1	1	0	0	0	0	0	0	0
0392	General Communications	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0393	Communications Spec	2	0	0	0	0	0	0	0	0	0	0	0	0	0
0404	Biological Technician	1	0	0	0	0	0	0	7	1	0	1	0	0	0
0503	Financial Asst (GS-6/18)	2	3	3	3	3	4	3	0	0	0	0	0	0	0
0525	Acctg Technician (GS-4/18)	0	1	2	1	3	7	5	0	2	0	0	0	0	0
0561	Budget Clerk/Assistant	0	0	0	0	0	1	2	0	0	0	0	0	0	0
0802	Engineering Technician	48	50	49	49	42	36	27	12	18	2	2	3	2	1
0817	Surveying Technician	2	3	0	0	0	0	0	0	0	0	0	0	0	0
0818	Engineering Drafting	1	0	1	0	0	0	0	0	1	0	0	0	0	0
0856	Electronics Technician	98	94	95	88	89	73	57	31	23	2	4	2	1	0
1001	Genl Arts & Info (GS-7/10)	0	15	10	7	4	4	2	0	1	1	1	0	0	0
1010	Exhibits Specialist	3	1	0	0	0	1	1	0	1	0	0	0	0	0
1016	Museum Specialist/Technician	0	4	7	3	3	3	3	0	3	0	0	0	0	0
1020	Illustrating	17	25	32	34	47	42	42	1	8	0	1	1	2	1
1060	Photography	59	58	54	51	47	39	21	4	6	2	3	1	1	1
1087	Editorial Assistant (GS-6/18)	0	1	1	1	1	2	1	1	1	0	0	0	0	0
1101	Genl Bus & Industry (GS-7/10)	0	0	0	0	0	0	2	0	0	0	0	0	0	0
1105	Purchasing	3	0	4	2	5	5	3	0	0	0	0	0	0	0
1106	Procurement Assistant(GS-6/18)	1	0	1	0	0	2	2	0	0	0	0	0	0	0
1152	Production Control	13	7	2	2	2	2	1	0	1	0	0	0	0	0
1311	Physical Science Technician	173	96	194	159	205	161	146	287	204	60	45	43	32	19
1316	Hydrologic Technician	732	745	995	1,015	1,129	1003	958	343	197	56	56	84	42	45
1341	Meteorological Technician	0	0	0	0	0	0	0	1	0	0	0	0	0	0
1371	Cartographic Technician	884	599	484	477	417	333	293	82	46	16	5	7	4	8
1411	Library Technician	1	5	9	11	9	8	8	5	4	4	2	0	0	0
1521	Mathematics Technician	0	1	0	0	0	0	0	3	1	1	0	0	0	0
1531	Statistical Assistant (GS-7/10)	0	0	0	0	0	0	4	0	0	0	0	0	0	0
1670	Equipment Specialist (GS-1/10)	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1702	Education/Training Technician	0	1	0	1	1	1	0	0	0	0	0	0	0	0
1960	Quality Inspection	2	1	0	0	0	0	0	0	0	0	0	0	0	0
2001	General Supply (GS-7/10)	5	2	2	1	1	1	1	1	0	0	0	0	0	0
2005	Supply Specialist (GS-7/18)	0	5	2	4	3	3	4	0	1	0	0	0	0	0
2102	Transportation Asst (GS-6/18)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2131	Freight Rate Spec (GS-7/18)	0	1	0	0	0	0	1	0	0	0	0	0	0	0
2181	Aircraft Operation	5	0	0	0	0	0	0	2	0	0	0	0	0	0
	TOTALS	2,094	1,752	2,008	1,959	2,087	1,789	1,664	803	541	151	122	146	85	77

Table 8. USGS: Composition of work force, showing series number, occupation title, type of appointment (Fulltime, Parttime/Intermittent), and sex, by PATCO Group: **TECHNICIAN/AIDE**. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996--Continued.

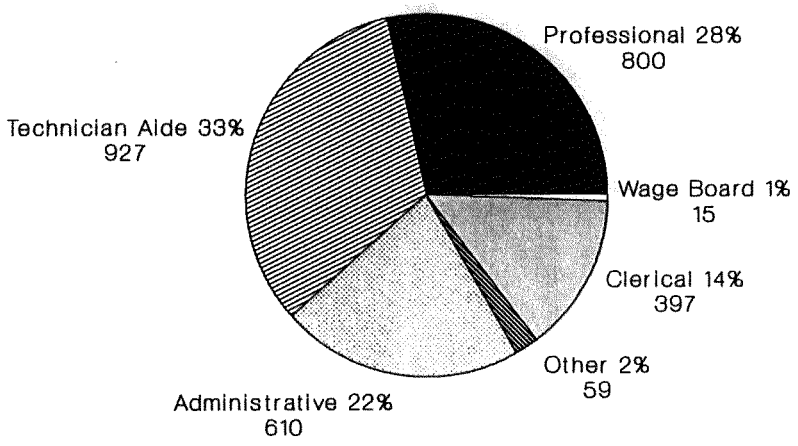
Series No.	OCCUPATIONAL GROUP: Technicians and Aides	BUREAU Fulltime 6/77	6/84	6/88	6/90	6/90	6/94	6/96	TOTALS PT/WAE 6/77	6/84	6/88	6/90	6/92	6/94	6/96
0019	Safety Technician	0	0	0	0	0	1	1	0	0	0	0	0	0	0
0102	Social Science Aid/Tech	0	1	0	1	2	0	0	0	0	0	0	0	0	0
0203	Personnel Asst (GS-6/18)	10	20	27	29	27	23	21	0	3	4	3	4	3	0
0303	Genl Clerical&Admin (GS-6/18)	47	113	182	211	253	250	290	9	39	33	31	34	27	15
0326	Automation Assistant (GS-5/18)	0	0	0	0	31	48	43	0	0	0	0	2	6	5
0332	Computer Operation	25	19	21	18	17	15	6	15	12	2	0	1	0	0
0335	Computer Assistant (GS-5/18)	37	74	107	100	102	81	79	20	51	23	16	14	13	9
0344	Management Asst (GS-6/18)	2	8	7	8	9	6	5	1	1	1	1	1	1	0
0361	Equal Opportunity Asst	0	2	2	2	1	1	1	0	0	0	0	0	0	1
0392	General Communications	1	1	0	0	0	0	0	0	2	0	0	0	0	0
0393	Communications Spec	2	1	0	1	0	0	0	0	0	0	0	0	0	0
0404	Biological Technician	3	0	0	1	2	2	2	15	7	1	2	3	1	0
0503	Financial Asst (GS-6/18)	5	21	19	23	30	28	22	0	2	1	1	3	2	2
0525	Acctg Technician (GS-4/18)	0	32	3	45	42	48	51	0	23	3	5	3	4	5
0561	Budget Clerk/Assistant	0	0	48	0	12	8	9	0	0	0	0	2	0	0
0802	Engineering Technician	49	51	49	50	42	37	28	12	20	3	3	4	3	2
0817	Surveying Technician	3	4	0	0	0	0	0	0	0	0	0	0	0	0
0818	Engineering Drafting	1	0	1	0	0	0	0	0	3	0	0	0	0	0
0856	Electronics Technician	99	94	96	89	91	75	59	31	24	2	4	2	1	0
1001	Genl Arts & Info (GS-7/10)	2	30	21	18	16	10	6	0	4	4	3	2	2	1
1010	Exhibits Specialist	3	2	1	1	1	2	2	0	1	0	0	0	0	0
1016	Museum Specialist/Technician	0	4	8	4	5	5	3	0	10	0	0	1	1	0
1020	Illustrating	27	35	46	49	65	66	61	9	21	4	6	1	3	3
1060	Photography	63	64	57	54	49	41	22	4	6	3	4	2	2	2
1087	Editorial Assistant (GS-6/18)	29	40	65	50	61	57	44	3	25	18	16	10	10	5
1101	Genl Bus & Industry (GS-7/10)	0	0	0	0	0	0	5	0	1	0	0	0	0	0
1105	Purchasing	12	18	35	37	39	36	32	0	3	1	1	2	3	0
1106	Procurement Assistant(GS-6/18)	4	8	9	11	11	14	11	0	2	0	0	0	0	0
1152	Production Control	16	9	3	2	3	3	1	0	1	0	1	0	0	0
1311	Physical Science Technician	234	141	281	234	291	228	206	439	368	121	96	108	72	46
1316	Hydrologic Technician	799	815	1,111	1,148	1289	1,131	1105	416	267	100	87	138	74	80
1341	Meteorological Technician	0	0	0	0	0	0	0	1	0	0	0	0	0	0
1371	Cartographic Technician	1,053	811	677	669	599	475	408	144	93	37	21	23	9	13
1411	Library Technician	35	33	43	48	46	41	36	19	22	13	10	7	7	6
1521	Mathematics Technician	4	1	0	0	0	0	0	3	1	1	0	0	0	0
1531	Statistical Assistant (GS-7/10)	1	0	0	0	0	0	18	0	0	0	0	0	1	0
1670	Equipment Specialist (GS-1/10)	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1702	Education/Training Technician	1	3	3	1	2	3	2	1	1	0	0	0	0	0
1960	Quality Inspection	2	1	0	0	0	0	0	0	0	0	0	0	0	0
2001	General Supply (GS-7/10)	6	2	3	2	2	2	1	1	0	0	0	0	0	0
2005	Supply Specialist (GS-7/18)	0	6	2	4	3	5	8	0	1	0	0	0	1	0
2102	Transportation Asst (GS-6/18)	0	1	0	1	1	2	1	0	0	0	0	0	0	1
2131	Freight Rate Spec (GS-7/18)	0	1	1	2	2	2	2	0	0	0	0	0	0	0
2181	Aircraft Operation	5	0	0	0	0	0	0	2	0	0	0	0	0	0
	TOTALS	2,582	2,466	2,928	2,913	3,146	2,746	2,591	1,145	1,014	375	311	367	246	196

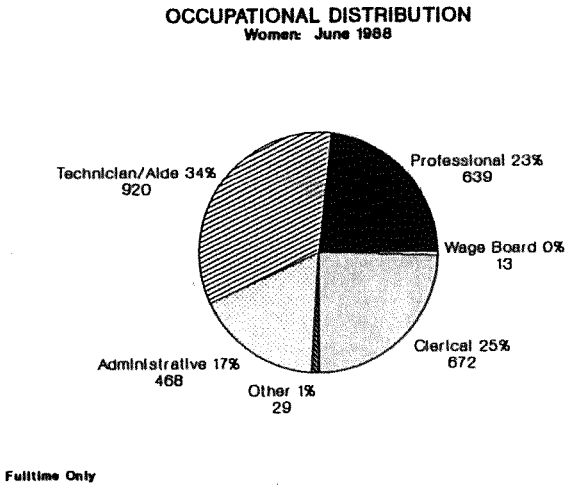
Table 8. USGS: Composition of work force, showing series number, occupation title, type of appointment (Fulltime, Parttime/Intermittent), and sex, by PATCO Group: **TECHNICIAN/AIDE**. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996--Continued.

Figures 3 and 4 chart the distribution of occupational groups by men and women for June 1977, June 1988, and June 1996. Figure 5 compares these data for June 1996. In the twenty-year period since the first "Status" report, there has been little change in the overall distribution of occupations among men. The pie charts show variation in absolute numbers as the bureau has undergone reorganization and restructuring, but in terms of percentage there is little change. Such, fortunately, is not the case for the occupational distribution of women. In the same 20-year period, the number of women in professional positions has risen from 241 to 800, the number of technicians has gone from 488 to 927; and the number in positions in the administrative field have risen from 295 to 610. The substantial diminution in clerical positions from 756 to 397 is further evidence of the enlargement of the scope of women's opportunities for employment with the USGS in fields for which, as recently as 20 years ago, their participation was quite limited. Figures 6, 7, and 8 provide comparisons by sex of the distribution of occupations for men and women for the year 1977 and 1996. The changes discussed above become more evident in this presentation.

Supervisory and Managerial Positions. Tables 11 and 12 provide information on the numbers of men and women in managerial and supervisory roles for June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996. Because of Government efforts to reduce the ratio of supervisors to employees supervised, one might expect a substantial change in the number of women and men in supervisory positions. Such is not the case in the USGS where the number of supervisory positions held by men has risen from 626 to 751 in the last two years, and the number of women in such positions has gone from 217 to 233. These upward changes may reflect the continuing reorganization within the bureau and the effort better to define responsibilities. It should be noted that within the same period, the number of designations as program manager has fallen substantially: by 314 among men and by 45 among women. Presumably, some of these managers have been redesignated as supervisors because of changing roles. The ratio of supervisors to supervised as of June 1996 using the full employment data for that time (8,964) and the number of supervisors (both first and second line; as well as work leaders and supervisors with a small number of personnel -- the latter groups include 68 people) recorded as such (984) produces a ratio of 9.1:1. If the ratio is based on net employees supervised (7,980) without the inclusion of supervisors, then the ratio falls to 8.1:1.

Education Level. The charts in figure 9 show the levels of education for all women and men in fulltime **permanent** positions (GS/GM/ES/EX/FC/ST/SL/WG/WB), as of June 1996. Charts are provided for the Bureau as a whole, and separately for men and women. The numbers on these charts are **minima**. The data from which these charts were developed show many incumbents in positions that require undergraduate degrees for eligibility, but for which no educational level is indicated. Of the women in fulltime permanent positions for whom educational data are available, 28% hold BA/BS degrees and 15% hold MA/MS or PhD degrees. Of the men for whom educational data are provided, a total of 71% have reported degrees. Of these, 19% and 14% have MA/MS and PhD degrees respectively. The recent buyouts and the reduction-in-force have taken their toll among degree holders as evidenced by the following data for the whole bureau [first number is current number of degree holders; number in () is number in 1992 report - by type of degree]: BA/BS 2,647 (2,981); MA/MS 1,254 (1,397), and PhD 784 (955).





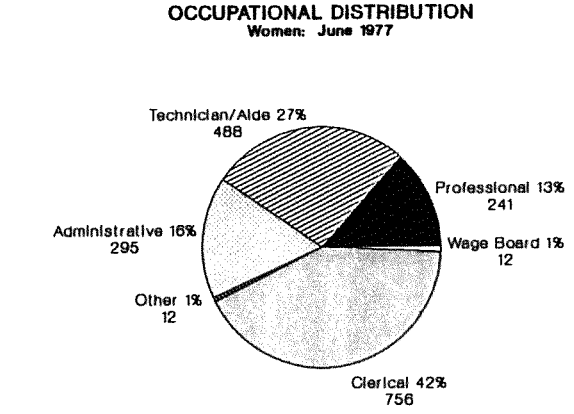
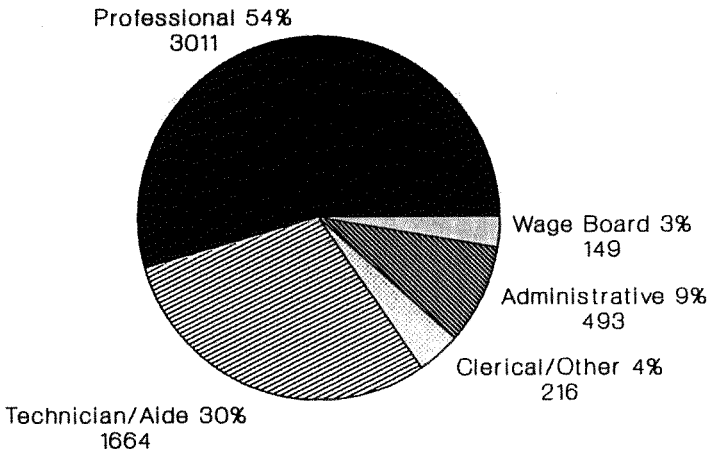
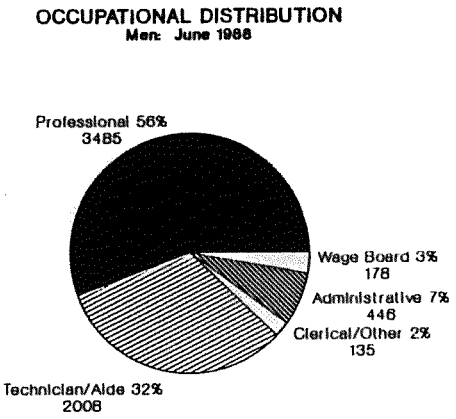


Figure 3. USGS: Women in fulltime positions, showing occupational (PATCO) groups. June 1977, June 1988, and June 1996.





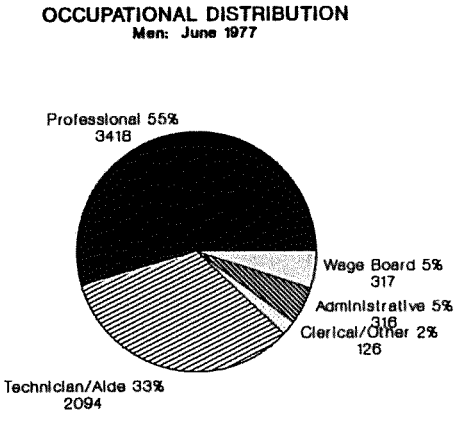
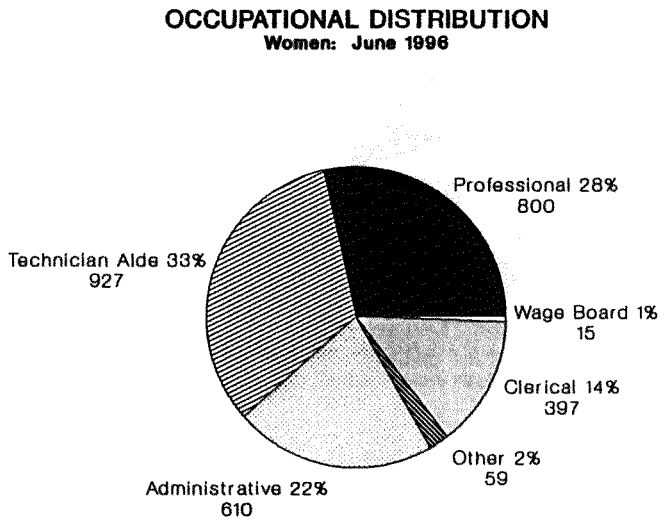


Figure 4. USGS: Men in fulltime positions, showing occupational (PATCO) groups. June 1977, June 1988, and June 1996.



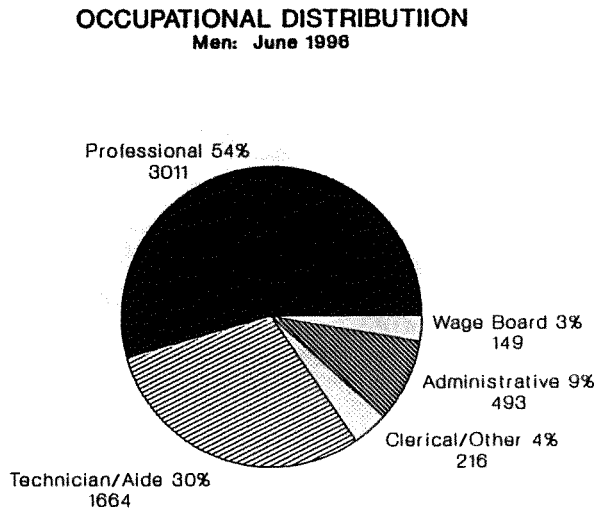


Figure 5. USGS: Distribution of occupational (PATCO) groups, by sex. June 1996.

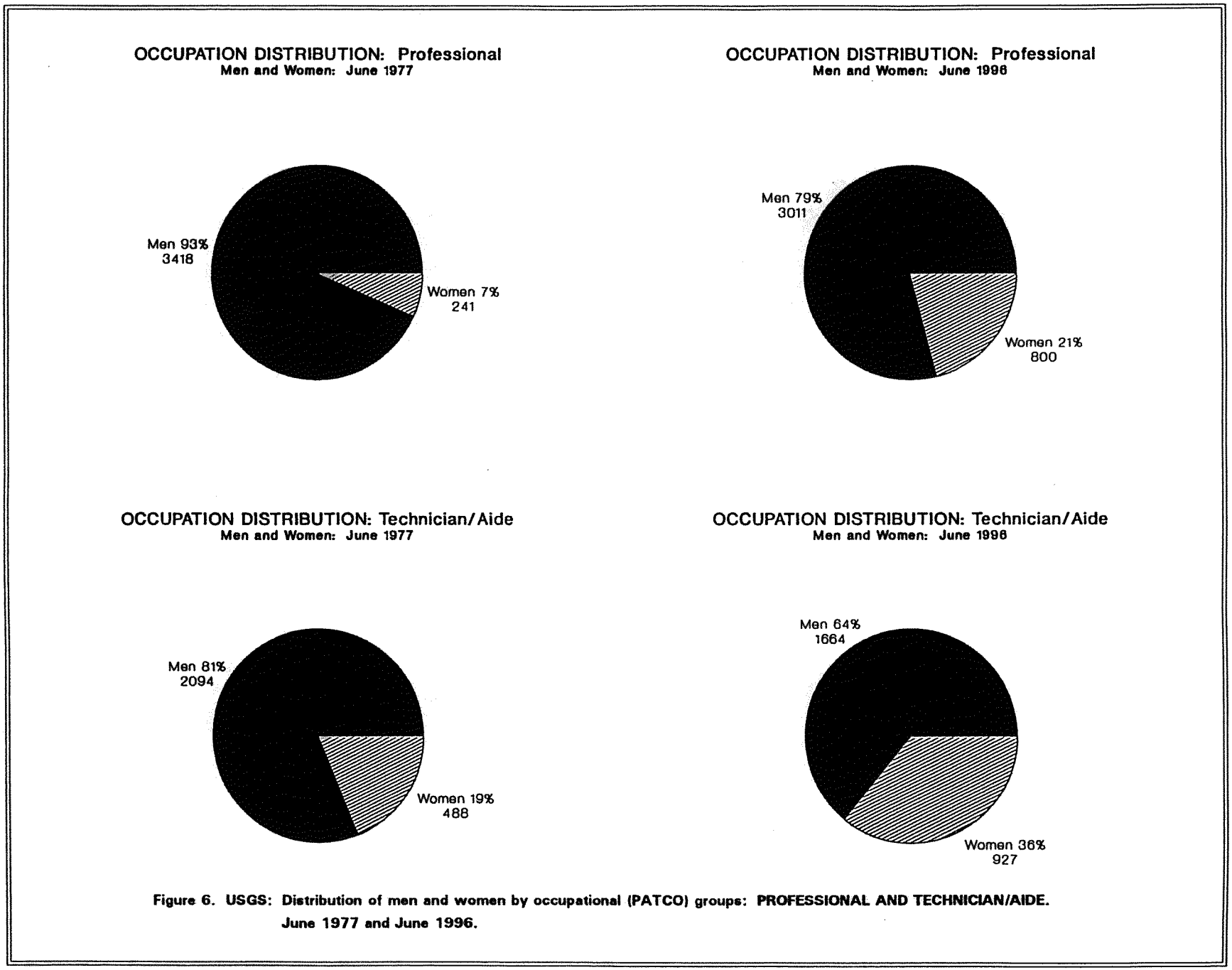
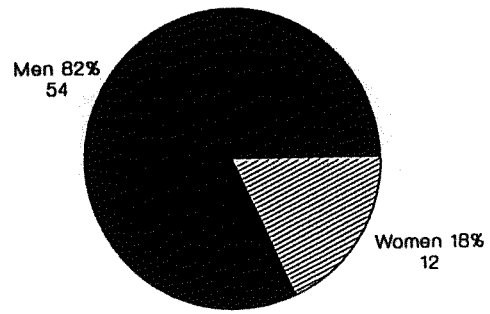
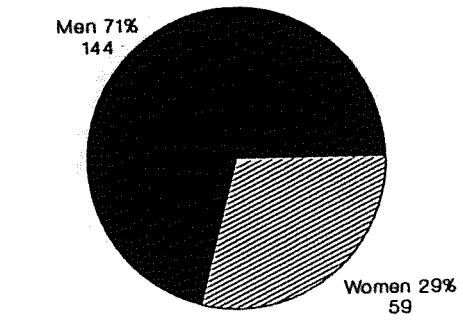
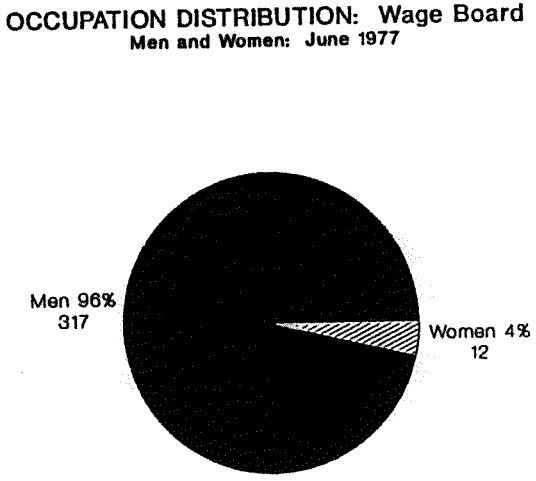


Figure 6. USGS: Distribution of men and women by occupational (PATCO) groups: PROFESSIONAL AND TECHNICIAN/AIDE. June 1977 and June 1996.







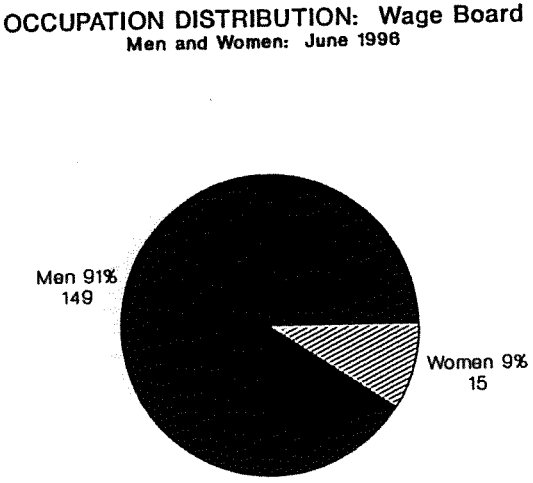


Figure 8. USGS: Distribution of men and women by occupational (PATCO) group: OTHER and WAGE BOARD. June 1977 and June 1996.

Grade	Managerial Positions													
	MEN							WOMEN						
	6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
ES-00/SL-00 */	51	39	49	48	42	39	0	0	1	0	0	0	1	0
GS-15	70	151	155	160	183	169	27	2	5	9	10	20	19	3
GS-14	44	85	114	122	143	133	28	0	4	3	14	22	32	8
GS-13	5	20	19	29	33	27	1	1	1	6	4	5	5	1
GS-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GS-11	1	1	0	0	0	0	0	0	0	0	0	0	0	0
GS-10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GS-09	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GS-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GS-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GS-06	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GS-05	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	171	296	337	359	401	368	56	3	11	18	28	47	57	12
All Other **/	1	4	3	2	1	2	0	0	0	0	0	0	0	0
USGS TOTALS	172	300	340	361	402	370	56	3	11	18	28	47	57	12

*/ Includes former GS-16/18's.

**/ Includes Managerial positions in: FC/ST categories.

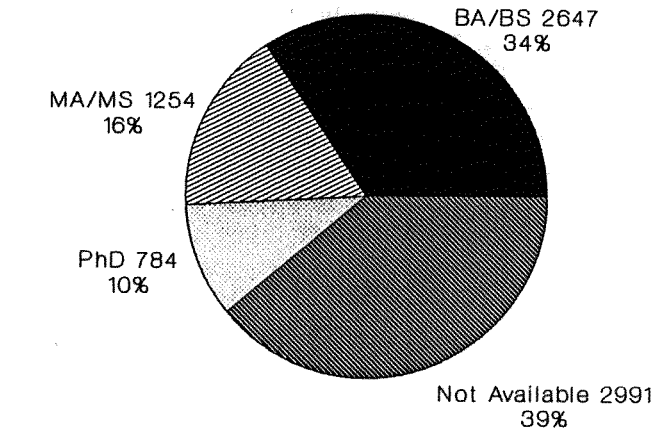
Table 11. USGS: Distribution of Managerial Positions by Grade and Sex. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994, and June 1996.

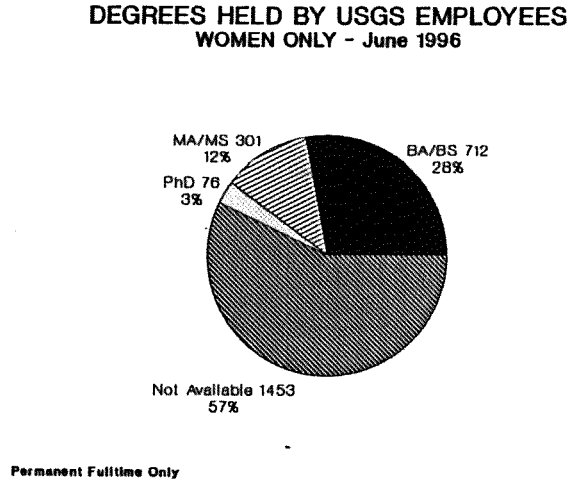
Grade	Supervisory Positions													
	MEN							WOMEN						
	6/77	6/84	6/88	6/90	6/92	6/94	6/96	6/77	6/84	6/88	6/90	6/92	6/94	6/96
ES-00/SL-00 */	1	1	0	0	0	0	19	0	0	0	0	0	0	4
GS-15	51	48	55	45	39	33	114	0	1	2	4	3	6	19
GS-14	110	126	124	104	83	86	161	3	12	20	14	14	24	34
GS-13	247	249	222	220	213	208	206	9	23	37	44	41	42	43
GS-12	263	211	188	187	160	164	130	7	19	29	35	50	52	60
GS-11	100	102	82	86	83	85	69	13	41	49	55	58	54	38
GS-10	16	11	15	20	21	26	29	2	1	0	1	1	0	0
GS-09	20	6	4	4	6	2	2	10	16	20	25	19	12	14
GS-08	1	6	3	1	3	0	1	3	5	5	17	15	14	9
GS-07	6	4	1	0	1	1	0	9	20	26	21	20	10	11
GS-06	2	3	0	0	0	0	0	6	5	4	2	2	0	0
GS-05	2	0	0	0	0	0	0	3	0	0	0	0	0	0
Subtotals	819	767	694	667	609	605	731	65	143	192	218	223	214	232
All Other **/	48	41	29	29	33	21	20	0	1	0	0	3	3	1
USGS TOTALS	867	808	723	696	642	626	751	65	144	192	218	226	217	233
Average GS Grade	12.43	12.56	12.71	12.63	12.55	12.54	13.03	9.75	10.56	10.96	10.93	11.05	11.59	11.99

*/ Includes former GS-16/18's.

**/ Includes Supervisory/Leader positions in: FC/ST/WL/WM/WS/XL/XS categories.

Table 12. USGS: Distribution of Supervisory Positions by Grade and Sex. June 1977, June 1984, June 1988, June 1990, June 1992, June 1994 and June 1996.





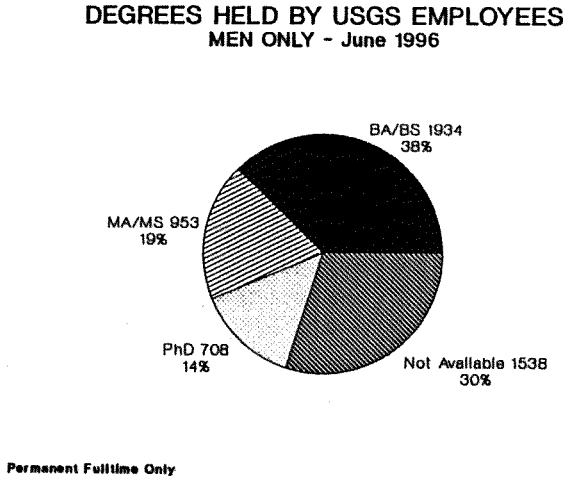


Figure 9. USGS: Educational levels of all employees in permanent fulltime positions, and by sex. June 1996.

Permanent Parttime Employment. In June 1996, there were 191 women in parttime (GS-) permanent positions, a decrease of 61 over the 2-year period since the prior report. Twenty-one women with permanent parttime positions participated in the buyout. Of the 191, 53.9% have college degrees, distributed as follows: BA/BS (67), MA/MS (32) and PhD (4). Of the total on the rolls in permanent parttime positions, minority women comprise 7.9% of the group, distributed as follows: Asian-American (5), African-American (6), and Hispanic (4). The distribution by occupation group for parttime women personnel is somewhat different from that overall for all women. In June 1996, the breakdown was as follows (Numbers in parentheses are percentages for total fulltime women employees): Professional 35.6% (27%); Administrative 12.6% (23%); Technician/Aide 30.4% (33%); Clerical and Other 21.4% (16%). No wage board employees were included in the parttime group. The Professional group includes: Geographer (1), Botanist (2), Physical Scientist (5), Geophysicist (1), Hydrologist (30), Chemist (7), Geologist (12), Cartographer (7), Librarian (2), and Computer Scientist (1).

Major Positions Held by Women in the USGS, as of March 1997.

The **Water Resources Division** continues its good efforts to afford women opportunities for leadership. The Division leads the bureau in the number of members of the SES as represented by the Assistant Chief Hydrologist for Operations, Chief, Office of Hydrologic Research, and the first Regional Hydrologist in the Division, operating the Southeastern Region. There are currently 4 District Chiefs, the principal operational positions for the Division: in Connecticut, Michigan, Nebraska, and Oklahoma. In addition, women are employed in the following major positions: Division administrative Officer, Administrative Officers for the Northeastern, Central, and Western Regions; the Congressional Liaison Specialist; Assistant to the Chief, and Senior Ground Water Quality Specialist, both in the Office of Water Quality; and Groundwater Database Management Specialist, Office of Ground Water; Chief, Financial Operations/Reporting Section; Chief, Office of Water Data Coordination, Deputy Assistant Chief Hydrologist for Water Information; Staff Hydrologist for Strategic Planning, Public Affairs Officer; Chief, Systems Support Unit; Chief, Branch of Administrative Management Systems; Special Assistant to the Assistant Chief Hydrologist for Research; and Chief, International Water Resources Program. Many women have other important roles in the Regional structure, including: two Project Chiefs in the Branch of Regional Research in the Eastern Region; Assistant Chief, Branch of Regional Research, Western Region; and two Project Chiefs in the Branch of Regional Research in the Western Region.

At the District level the following positions are held by women: Subdistrict Chief for Delaware; Chief, Hazardous Water Hydrology Section and District Water Quality Specialist both in the Maryland District; Chief, Hydrologic Surveillance and Investigations Section and Water Use Specialist, both in the New York District; Chief, National Water Quality Assessment (NAWQA) Study Unit in the Ohio District; Chief, Hydrologic Investigations Section and Chief, Bridge Scour Investigations Section, both in the Pennsylvania District; Staff Hydrologist, Projects Section, New Jersey District; and Staff Hydrologist to NAWQA, Richmond, Virginia. Additional positions at the District level include: Associate District Chief, Puerto Rico; Chief Hydrologic Investigation Section, Miami Subdistrict; Chief, Environmental Studies Section, Tampa Subdistrict; Assistant District Chief for Management Operations, District Surface Water Specialist, and District Water Quality

Specialist, all in North Carolina; Chief, Hydrologic Investigations Section, South Carolina District, and District Reports Specialist, Florida.

Among the positions held by women in the Colorado District are: Chief, NAWQA Study Unit, Associate District Chief, Assistant District Chief, Chief, Publications Section, and Team Leader, Rocky Mountain Arsenal Project Office. Other positions include: District Ground Water Specialist, Texas District; Chief, Hydrologic Surveillance Section, Iowa District; Chief, Contracts/Radchem Unit and Bio/Quality Assurance Unit, both in the National Water Quality Laboratory, Arvada, Colorado; and Chief, Operations Program, Branch of Analytical Services, in Arvada, Colorado. Additional major positions are held: Chief, Hydrologic Studies Section, Nevada District; District Water Quality Specialist and Assistant District Chief for Management Operations, both in the Alaska District; Chief, Other Federal Agencies/Federal Section, Chief, Glen Canyon Environmental Studies, and Chief, NAWQA Program, all three in the Arizona District; Project Chief and Senior Geographer, National Synthesis Program, NAWQA, both in the California District.

Women hold a number of major positions in the **Geologic Division.** Of such positions, those held by women at headquarters include: Assistant Chief Geologist for Information; Program Coordinator - Mineral Resource Program; Program Coordinator - Volcano Hazards Program; Program Coordinator - Critical Ecosystems Program; three positions as Program Scientist for Mineral Resource Program; Division Administrative Officer; Division Finance and Budget Officer; and Division Human Resources Officer. Field positions include: in the Eastern Region: Acting Eastern Regional Geologist; Associate Chief Scientist - Eastern Marine and Coastal Team; in the Central Region: Associate Regional Geologist; Associate Regional Geologist for Program; Regional Finance and Budget Officer; Central Region Chief Librarian; Central Region Publication Group Chief; Associate Chief Scientist - Operations - Mineral Resource Survey Team; Associate Chief Scientist - Cooperative Geologic Mapping Team; and Assistant Chief Scientist - Geologic Hazards Team, and in the Western Region: Regional Administrative Officer; Regional Finance and Budget Officer; Western Region Chief Librarian; Associate Chief Scientist - Western Mineral Resource Surveys Team, Alaska; Assistant Chief Scientist for Science Programs - Astrogeology Team; and Scientist in Charge - Alaska Volcano Observatory.

The **National Mapping Division** has the only women senior program advisors (2 SL's - the first women ever to hold such positions in the USGS) in the entire bureau. Included at Headquarters are: Senior Program Advisor for Data Production and Integration; Acting Associate Chief, Programs and Finances; Senior Program Advisor for Data and Information Delivery; Financial Officer, Administration and Finance; Computer Scientist for Product Development; two Computer Specialists for Data and Product Dissemination; Cartographer (Data Policy and Standards); Chief, External Coordination; Cartographer (External Coordination); Geographer (External Coordination); and Cartographer (Geographic Data Coordination). In the Mapping Applications Center: Acting Center Chief; Chief, Advanced Systems Center Operations Office; Chief, Information Services Branch; Program Coordinator, Programs and Partnerships Branch. In the Mid-Continent Mapping Center (Rolla, Missouri): Assistant Center Chief; Chief, Computer Services Section; Computer Scientist (Key software developer for spatial data transfer within NMD). In the Rocky Mountain Mapping Center: Assistant Center Chief; and Chief, Branch

of Information Services. In the Western Mapping Center: Chief, Earth Science Information Center-Western; and Chief, Technology Section. At the EROS Data Center (Sioux Falls, South Dakota): Chief, Science and Applications Branch; Chief, Data Management, Data Services Branch; Computer Scientist, and two Remote Sensing Scientists.

The **Office of Program Support** brings together three organizations, each of which has a long history of excellence in the placement of women in positions of major importance: In the Office of the Chief: Acting Associate Chief for Operations; and Administrative Officer. In the Office of Acquisition and Federal Assistance: Chief, Branch of Procurement Policy; Chief, Branch of Contract Administration; and Chief, Branch of Small Purchases. In the Office of Financial Management: Chief, Branch of Systems Coordination; Chief, Branch of Undelivered Orders; Acting Chief, Branch of Travel Management; Chief, Branch of Accounts Payable; and Acting Chief, Branch of Management Control and Reports. In the Office of Information Services: Acting Chief, Office of Information Services; and Chief, Branch of Telecommunications Services. Office of Management Services: Acting Chief, Branch of Property Management. In the Office of Human Resources: Chief, Branch of Employee/Labor Management Relations; Chief, Norcross (Georgia) Personnel; and Acting Chief, Classification and Position Management Branch, and Chief, Ethics Program Office. In the Office of Equal Opportunity: Chief, Office of Equal Opportunity; and Equal Employment Opportunity Manager (Central Region). In the Washington Administrative Service Center: Chief, Branch of Financial Systems and Customer Support; and Chief, Branch of Technical Support. In the Central Region Service Center: Chief, Branch of Management Services. In the Western Region Service Center: Chief, Branch of Facilities and Management Services; Chief, Branch of Procurement and Contracts; and Chief, Branch of Information Systems.

The **Office of the Director** now includes two women in top leadership positions for the entire bureau: Associate Director for Programs and Associate Director for Operations. Other major positions held by women include: Chief of Staff; Theme Coordinator for Hazards; Theme Coordinator for Environment; Staff Assistant for Assistant Secretary - Water and Science; Special Assistant to the Director/Deputy Ethics Counselor; Administrative Officer; Regional Director for Eastern Region; Outreach Coordinator - Eastern Region; Outreach Coordinator - Central Region; and Outreach Coordinator - Western Region. Many other women in the Office of the Director operate in key positions as public affairs specialists, budget analysts, and other specialty fields.

As this listing incorporates those major positions held by women in the spring of 1997, it is entirely appropriate to include positions from the **Biological Resources Division.** Many women in this Division have risen either to principal management positions or are charged with operating research programs. At headquarters: Assistant Chief Biologist for Information; Technology Innovations Manager; Program Manager for the National Biological Information Infrastructure; Program Manager for the Biological Status and Trends Program; Senior Ecologists; Constituent Relations Specialist; Senior Budget Analyst; and Senior Management Analyst. In the Eastern Region: Eastern Regional Chief Biologist; Senior Zoologist at the Smithsonian Institution; Senior Research Biologist at the Virgin Islands Field Station; Chief, Fish Health Laboratory, Leetown Science Center;

National Wildlife Health Center Field Response Team (4 women); Chief, Branch for Ecosystems Dynamics, Great Lakes Science Center; and Project Leader, Sirenia Project, Florida Caribbean Science Center.

In the Central Region: Senior Ecologist, Mountain Ecosystems Field Station; and Station Leader, Canyonlands National Park Field Station -- both from Midcontinent Ecological Science Center; Senior Fishery Biologist, Midwest Science Center; Chief, Forest Ecology Branch; and Chief, Technical Support Office - both from the National Wetlands Research Center; Administrative Officers at the National Wetlands Research Center and Midcontinent Ecological Science Center. In the Western Region: Director, California Pacific Science Center; Chief, Branch of Marine and Freshwater Ecology, Alaska Science Center; Senior Research Scientist, Cooperative Parks Study Unit; Senior Research Wildlife Biologist for Forest and Rangelands Ecosystem Science Center; and Administrative Officer, Western Regional Office. In the Cooperative Fish and Wildlife Research Units: Unit Supervisor; Unit Leader, Ohio State University; Acting Unit Leader, University of Vermont; Acting Unit Leader. University of West Virginia; Assistant Leader, University of Alaska; Assistant Unit Leader, University of Arizona; Assistant Unit Leader, University of Wisconsin; Assistant Unit Leaders (2), University of Massachusetts; Assistant Unit Leader, Auburn University; and Assistant Unit Leader, New Mexico State University.

Recognition through the Awards System. The USGS uses the various systems available to reward its outstanding employees. The awards available are honorary, monetary, and non-monetary recognition and informal honors.

Honor Awards. The Honor Awards Program was instituted in 1948 by the Department of the Interior, and the USGS has, throughout the Program's existence, been a major advocate of its use. The USGS has recognized many of its employees through this system, which includes 3 level of Honor Awards [370 DM 451, February 21, 1989, superseded by Human Resources Management Handbook, February 1996.] The earlier reference is used because it clearly defines the intent and nature of these awards.

The **Superior Service Award** (SSA) is given for significant acts, services or achievements that materially aid or affect the successful accomplishment of the Department's mission and is granted at the time of the superior accomplishment. Final approval for the SSA is at the bureau level.

The **Meritorious Service Award** (MSA) is granted for "an important contribution to science or management; a notable career; superior service in the administration or in the execution of duties, initiatives in devising new and improved work methods and procedures; superior achievement in improving safety or health of workers and employee morale; superior accomplishments in fostering the objective of equal opportunity or important contributions in the conservation of energy." For the USGS, final approval for the MSA is obtained from the Assistant Secretary - Water and Science.

The **Distinguished Service Award** (DSA) may be granted for "an important contribution to science; outstanding skill or ability in the performance of duty; an eminent career in the Department; an outstanding record in administration; an outstanding contribution to equal opportunity in Government; an outstanding contribution to

energy conservation; or any other exceptional contribution to the public service." The MSA is a pre-requisite for the DSA. For the USGS, final approval is obtained from the Assistant Secretary - Water and Science.

The upper portion of Table 13 provides information on the number of SSA's, MSA's, and DSA's granted to USGS employees during the period 1948-1996. Complete data are provided for the DSA and MSA from the program's inception in 1948 through 1996, and from 1981 through 1996 for the SSA. Data for the SSA are derived from the minutes of the Bureau Incentive Awards Committee, and those for the MSA are based on the date of approval by the Assistant Secretary - Water and Science. It is significant, that at the convocation held on December 9, 1996, which granted a total of 47 DSA's, three of the four women recipients were from the USGS. The lower portion of Table 13 provides information on the total number of DSA's and MSA's granted to employees of all bureaus and offices during the period 1948-1996 for DSA's and 1948-1992 for MSA's. During that period, the Department of the Interior has granted 1,930 DSA's. Of these, 422 or nearly 22% have been made to USGS employees. In this same period, 122 women have received the DSA. Of these, 24, or 19.7% have been granted to USGS women. This excellent use of major recognition for employees results from a carefully executed annual review of the eligibility of USGS personnel for this, as well as the other honor awards, for major contributions to science and/or the operation of the bureau.

Both the honor award and cash or non-monetary awards are useful recognition tools. Their availability permits supervisors to recognize and encourage individuals in positions where ceilings have been reached or which have limited growth potential, when opportunities for "bridging" or restructuring are constrained by budgetary or other factors.

Monetary Awards. These awards take a variety of forms. Data provided in this report include information on the following awards: Merit Performance Awards made to employees under legislation enacted for the Performance Management and Recognition System (GM-) (Table 14) through September 1993 when the PMRS was terminated; sustained performance awards (Figure 10) made to individuals ranging from members of the Senior Executive Service to summer employees are provided from 1987 through the termination of the award at the close of June 1996; Quality Step Increases (QSI's)(Figure 11) from 1987 through 1996; and monetary awards (Figure 12) for the 3-year period 1994-1996.

A summary of the number of individuals receiving awards (**NOT** the number of awards granted) for the period 1994-1996 (Table 15) shows the impact of the discontinuation of the sustained performance award in June 1995 and the new emphasis which is given to monetary recognition throughout the year, related to specific achievements rather than annual performance. The revised monetary awards system which replaced the Special Achievement Non-Recurring and Sustained Achievement Awards, are the On-the-Spot Award which provides net sums of $50 to $500 for immediate presentation and the Special Thanks for Achieving Results (STAR) Award consisting of gross awards ranging from $925, which are paid through the normal payroll process. These awards are given in amounts commensurate with the value of the accomplishment, considering the overall benefit to the Government.

U.S. GEOLOGICAL SURVEY

Period	Superior Service Awards				Meritorious Service Awards				Distinguished Service Awards			
	Recipients		USGS	Percent	Recipients		USGS	Percent	Recipients		USGS	Percent
	Men	Women	Total	Women	Men	Women	Total	Women	Men	Women	Total	Women
1995-96	113	49	162	30.2%	66	27	93	29.0%	18	3	21	14.3%
1993-94	161	48	209	23.0%	88	18	106	17.0%	13	3	16	18.8%
1991-92	112	49	161	30.4%	57	12	69	17.4%	21	2	23	8.7%
1989-90	82	33	115	28.7%	60	6	66	9.1%	9	0	9	0.0%
1987-88	96	26	122	21.3%	73	3	76	3.9%	17	1	18	5.6%
1985-86	58	18	76	23.7%	73	6	79	7.6%	20	1	21	4.8%
1983-84	41	22	63	34.9%	93	10	103	9.7%	13	0	13	0.0%
1981-82	43	13	56	23.2%	85	3	88	3.4%	13	0	13	0.0%
1948-80	NA	NA	NA	NA	742	120	862	13.9%	274	14	288	4.9%
USGS TOTALS	706	258	964	26.8%	1,337	205	1,542	13.3%	398	24	422	5.7%

U.S. DEPARTMENT OF THE INTERIOR

	Men	Women	Total	Percent Women	Men	Women	Total	Percent Women
DoI 1948-1992	NA	NA	NA	NA	5,835	1,025	6,860	14.9%	1,720	111	1,831	6.1%
DOI 1993-1996	NA	NA	NA	NA	NA	NA	NA	NA	88	11	99	11.1%
							DOI Total		1,808	122	1,930	6.3%

Table 13: USGS: Distribution of Honor Awards by sex in the USGS: 1948-1996 and overall distribution by sex in the Department of the Interior 1948-1992 with update for DSA's.