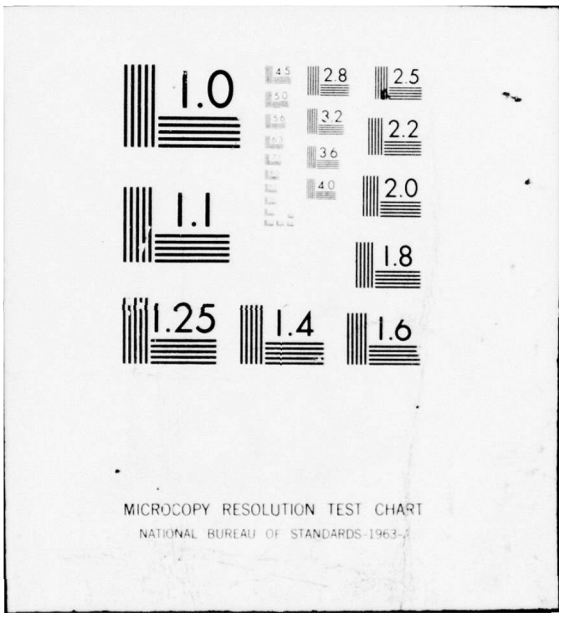
AD-A047 118 ASSISTANT SECRETARY OF DEFENSE (MANPOWER RESERVE AFFA--ETC F/G 5/9
USE OF WOMEN IN THE MILITARY.(U)
MAY 77

UNCLASSIFIED NL

1 OF 2
AD
A047118




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD A047118

(11)

BACKGROUND STUDY

USE OF WOMEN IN THE MILITAR

COPY ... TO DDC DOES NOT PERMIT FULLY LEGIBLE PRODUCTION

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
(MANPOWER, RESERVE AFFAIRS, AND LOGISTICS)

DDC
DEC 5 19
B

MAY 1977

AD No. ___
DDC FILE COPY

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

Director, Resources and Requirements
Office of the Assistant Secretary of Defense
(Manpower, Reserve Affairs, and Logistics)
Washington, D. C. 20301

CLEARED
FOR OPEN PUBLICATION

MAY 26 1977 21

DIRECTORATE FOR FREEDOM OF INFORMATION
AND SECURITY REVIEW (OASD-PA)
DEPARTMENT OF DEFENSE

(9) Background Study

(6) USE OF WOMEN IN THE MILITARY.

Office of the Assistant Secretary of Defense
(Manpower, Reserve Affairs and Logistics)
Washington, D. C.

(11) May 1977

(12) 106p.

DDC
RECEIVED
DEC 5 1977
B

H10 390

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

AB

PREFACE

On January 27, 1977, Secretary Brown requested a priority analysis of the utilization of military manpower to determine where we can reduce requirements and realize personnel management economies. As part of that analysis, he requested a study on the use of women in the military.

The study was led by Commander Richard W. Hunter, USN, Office of the Deputy Assistant Secretary of Defense (Planning and Requirements). The analysis focused on enlisted women. It drew on three primary sources: (1) information available in the Office of the Secretary of Defense and the Defense Manpower Data Center files; (2) specific data submitted by the Services in response to tasking for this study; and (3) the results of related studies by other government offices and private organizations. Martin Binkin and Shirley Bach of the Brookings Institution were preparing a book entitled Women and the Military during the period of research on this paper. Their cooperation was indispensable, as was the participation of the Service action officers and the reviewing authorities in the Services, the Joint Staff and the Office of the Secretary of Defense.

This paper is a background analysis. It examines the performance of enlisted women in the military from a number of perspectives including promotion, retention, cost, and potential problems. The potential to use more women is addressed in terms of the market, the quality of accessions and the limits on the number of officer and enlisted women who can be used based on the current laws and policies. Finally, the Services' projected strength and accession plans are considered.

The appendices to this paper include the original correspondence which requested data from the Services, and information provided by the Services to the Office of the Secretary of Defense during the study.

ACCESSION for
NTIS White Section
DDC Buff Section
UNANNOUNCED
JUSTIFICATION
BY
DISTRIBUTION/AVAILABILITY CODES
Dist. AVAIL. and/or SPECIAL
A 23

Preceding Page BLANK - NOT FILMED

Executive Summary

Purpose: On January 27, 1977, Secretary of Defense Brown requested a priority analysis of military manpower utilization, including the utilization of women in the military. This study was undertaken to gather and analyze data on the use of enlisted women serving on active duty in the military. While there seems to be little problem in obtaining enough well qualified officers in the military, there may be problems in obtaining enough high quality enlisted men. For this reason, this study focuses primarily on enlisted women. Its purpose is to evaluate the current use of enlisted women serving on active duty in the military and to estimate how many enlisted women could be used by 1982. A subsequent effort will address women in the reserve components.

Approach: The information collected routinely by the Office of the Secretary of Defense and the data files of the Defense Manpower Data Center were used to evaluate the growth in the number of enlisted women, and their relative performance from various management perspectives. The Services submitted data requested in specific formats from which estimates were made of the potential to use more enlisted women. Previous studies by both private and public organizations were reviewed. Both the savings and potential problems of additional women were addressed.

Findings: The following are among the study's findings:

- The number of enlisted women on active duty more than tripled from 1971 through 1976;
- Active duty women are being promoted the same as, or at higher rates than, men in all occupations open to women;
- Women on active duty are retained at about the same overall rates as men, although they have higher loss rates than men in non-traditional occupations;
- The Services have made significant progress in expanding the use of women in non-traditional skills; and Although
- The Navy, Air Force and Marine Corps are planning significant increases in the number of enlisted women on active duty in the 1978 to 1982 period. The Army's current plan, however, calls for no growth in enlisted women after 1979.
- 10 USC 6015, which precludes women from serving in Navy ships, limits the number of women the Navy can use. The Navy's growth plan approaches that limit by 1983. Many positions on ships could be filled by women if this law were changed or repealed.

- There are more high quality women willing to enlist than are now accepted.

- Significant savings and quality improvement are possible through the expanded use of enlisted women. Cost avoidance could exceed $1 billion annually by 1982.

- There are still many unanswered questions, including: What are the costs in terms of flexibility, response to uncertainty, readiness, and deployability of having more women in the military who are precluded from combat service? What is the impact of women with small children on these factors? What is the comparative lost time of men and women, and what impact does it have? Will more or fewer women be willing to enlist, if they are required to serve in combat support units, aboard ships, or in non-traditional skills? We need answers to these questions.

- Continued expansion of the number of enlisted women used in the military can be an important factor in making the all-volunteer force continue to work.

Contents

	Page
Introduction	1
Background	2
General Analysis	5
- Female Strength	5
- Accession Changes	6
- Women By Grade	6
- Promotion	7
- Retention	8
- Loss from Skills	11
- Distribution by Occupational Group	13
- Concentration of Women	14
- Potential to Use Women	15
- Accession Plan	18
- The Market	20
- Quality of Accessions	22
- Cost Comparisons	23
- Physical Differences	25
- Lost Time	27
- Deployability	28
- Combat Restrictions	29
- Summary	29
Service Analysis	31
- Army	31
- Navy	37
- Air Force	40
- Marine Corps	44
Conclusions	46
Appendices	
A. Request for Data from Services	A1
B. Additional Army Comments	B1
C. Additional Navy Comments	C1
D. Additional Air Force Comments	D1
E. Additional Marine Corps Comments	E1

Preceding Page BLANK - FILMED

Charts and Tables

Number	Subject	Page
Chart 1	Comparison of Mean Earnings: Military vs. Civilian Male and Female	21
Table 1	Female Enlisted Personnel (000s) and Percent of Total Enlisted Personnel by Service at End Fiscal Year	5
Table 2	Female Enlisted Non-Prior Service Accessions (000s) and Percent of Total Non-Prior Service by Service	6
Table 3	Enlisted Personnel by Sex and Service as of 30 June 1976 (Percent of the Male/Female Force Segments in Each Paygrade)	7
Table 4	Mean Enlisted Paygrade by Service, Sex and Year Group as of 30 June 1976	7
Table 5	Mean Enlisted Paygrade by Occupation, Sex, Selected Year Group and Service as of 30 June 1976	8
Table 6	Number of FY 71 to FY 76 Accessions Remaining on Active Duty as of 30 June 1976 by Sex and Service	9
Table 7	Percent Attrition by Length of Service and Sex: FY 71-FY 76 Accession Cohorts	11
Table 8	Attrition: Percent Attrition as of 30 June 1976 by Sex and DoD Occupational Group: FY 73 to FY 75 Enlisted Non-Prior Service Accessions	12
Table 9	Percentage of Enlisted Women by Occupational Group End FY 76	13
Table 10	Percent of Total Enlisted Positions Filled by Women by Occupational Group at End FY 76	14
Table 11	Service Data Submission on Potential Use of Women	15
Table 12	Enlisted Women by Service in Thousands	18
Table 13	Enlisted Women Strength (STR) and Accession (ACC) Plans by Fiscal Year in Thousands	19
Table 14	Characteristics of Male and Female Recruits, Fiscal Year 1973-76, By Service	22
Table 15	Proportion of Enlisted Non-Prior Service Recruits with a High School Diploma by Sex, Fiscal Years 1971 to 1976	23
Table 16	Marginal Cost of Recruiting	24

Number	Subject	Page
Table 17	Comparison of Physical Stature of 18 Year Old Men and Women	25
Table 18	Comparison of Lost Time for Enlisted Men and Women in the Navy	28
Table 19	Total Number of Army Women on Active Duty at End FY (000)	32
Table 20	Summary of Army Data Submissions	32
Table 21	Limits on Army Women in Non-Combat Units	33
Table 22	Army Female Accession Consistent with Filling All Positions Open to Women in a Given Grade	34
Table 23	Alternatives for Enlisted Women in the Army	37
Table 24	Summary Navy Data Submissions	38
Table 25	Total Number of Navy Women on Active Duty at End FY (000)	40
Table 26	Summary of Air Force Data Submissions (000)	41
Table 27	Total Number of Air Force Women on Active Duty at End FY (000)	42
Table 28	Summary of Marine Corps Data Submissions (000)	44
Table 29	Total Number of Marine Corps Women on Active Duty at End FY (000)	45

USE OF WOMEN IN THE MILITARY

INTRODUCTION

To put this study in context, one must remember that the overriding issue is maintaining the combat effectiveness of the armed forces. Within that context, the use of women in the military is a question of increasing importance, for two reasons. First is the movement within the society to provide equal economic opportunity for American women. Second, and more important, use of more women can be a significant factor in making the all-volunteer force continue to work in the face of a declining youth population.

There has been little problem to date in getting enough well qualified officers, and the future looks good for meeting officer needs. There may, however, be problems in obtaining enough high quality enlisted men. Because of this need, this paper will focus on the 1.8 million enlisted positions. How many of these positions can and should be filled by women?

Recruiting more high school graduate women for active duty in the all-volunteer force can have two effects: (1) improve quality or (2) save money. We measure quality by test scores and level of education (whether or not the enlistee has completed high school). In the current recruiting market, high quality women can be recruited at about the same cost as low quality men. Substituting women for men could improve the quality of the force, at no extra cost. (See page 24)

Women and low quality men are cheaper to recruit than high quality men because they are attracted at no additional cost by the recruiting and advertising effort which is necessary to recruit sufficient numbers of high quality men.

Recruiting additional high quality women in lieu of high quality men would result in reductions in recruiting costs. The marginal recruiting cost is expected to rise sharply, as the supply of qualified 18-20 year old males shrinks in the 1980s. A decrease in youth unemployment would make the market even tighter. The success of the all-volunteer force may well depend on reducing the number of young male high school graduates the Department needs to recruit each year. This is potentially the major benefit of using more women, but it is not without costs. (1) Women tend to be physically weaker than men which limits some of the work they can do. (2) Presently women are excluded from combat units and positions calling for combat skills. This reduces assignment flexibility. (See page 25)

Most of the other arguments favoring both more and less women in the military have centered on emotionalism and have been supported by unsubstantiated generalities, or isolated examples. It is the intention of this paper to report where the Defense Department stands on the use of women in the military and what factual information is available as to where we can expect to be in the next five years.

Because there are so many unknowns in this area, many people have cautioned against moving too rapidly in expanding the number of women in service. For example, the Army response to requests for information for this study stated, "We should err on the side of national security until such time as we have confidence that the basic mission of the Army can be accomplished with significantly more female content in the active force." Clearly we should err on the side of national security, but what does that mean? 1/

The tradeoff in today's recruiting market is between a high quality female and a low quality male. The average woman available to be recruited is smaller, weighs less, and is physically weaker than the vast majority of male recruits. She is also much brighter, better educated (a high school graduate), scores much higher on the aptitude tests and is much less likely to become a disciplinary problem. (See pages 22-25.)

To put the question bluntly: Is recruiting a male high school dropout in preference to a smaller, weaker, but higher quality female erring on the side of national security, in view of the kinds of jobs which must be done in today's military? The answer to that question is central to the decision on how many women should be used in the various Services. Sometimes the answer will be yes, and sometimes it will be no, but the question continues to be relevant. It will be addressed in some detail during this report.

The Department of Defense is striving to make the all-volunteer force continue to work. It is in this context that the expanded use of women serving on active duty in the military must be evaluated. A subsequent study will address the 45,000 women serving in the reserve components.

BACKGROUND

Prior to World War II, the military forces of the United States were almost exclusively male, notwithstanding the legendary women warriors such as Molly Pitcher, Deborah Sampson, and Lucy Brewer. Of course, there were many women who served as nurses, cooks, launderesses, seamstresses, and in other female pursuits of the day.

1/ The Army staff explained that to err on the side of national security means that men have proven themselves in ground combat for centuries -- we know the Army will fight effectively with men. We do not know this for women.

With the industrial revolution of the 19th Century, American women were developing skills which were becoming increasingly relevant to both the battlefield and the support of military operations. During World War I, over the protests of General Pershing, the Army held fast to its prohibition against enlisted women; but the Navy and Marine Corps admitted some 13,000 women into clerical skills in the shore establishment. After the war, these services returned to their all male compositions.

The massive mobilization of World War II created conditions for significant numbers of women to enter the military services. About 350,000 women served in one of the four military services and many others served in quasi-military support units, such as the WASP whose 800 women pilots ferried war planes around the world. During World War II, American women showed their competence in essentially every occupation except direct combat. They drove trucks, changed tires, repaired airplanes, rigged parachutes. Some were gunnery instructors. Others were air traffic controllers and naval air navigators.

Eventually, 2,000 Army women served in the Mediterranean theater of operations and 8,000 in Europe. Some 5,000 women served in Australia, New Guinea and the Philippines. Women served in the North African and Italian campaigns. The first WAC unit landed in Normandy on D+38. The WACs followed close behind the fighting forces. Food, quarters, and supplies were the same as those available to the men. Some operated within 12 miles of the front line. Statistics from the European theater of operations, where women lived in conditions similar to noncombatant men, show that women had the same casualty rate (0.5%) as noncombatant men and a lower hospitalization rate (2.2% vs. 2.5%). Women developed psychological disorders less frequently than men. Their venereal disease rate was one-sixth that of men. The WAC pregnancy rate was negligible. Their disciplinary rates were much lower than those of men. 1/

During demobilization following World War II, the number of women in the military declined from 266,000 or 2.2% of 12.1 million man force in 1945, to just over 14,000 or 1% of the 1.4 million man force in 1948. Positions again became restricted to the more traditional roles for women, but the passage of the Women's Armed Forces Integration Act of 1948 did give American women the opportunity for the first time to follow a military career.

With the advent of the Korean War, an unsuccessful effort was made to recruit some 100,000 women to meet the rapidly expanding manpower requirements. Young women just were not interested in serving, perhaps because of the unpopularity of that war at the time. Between 1948 and 1969, even including nurses, the percentage of women in the military never exceeded 1.5% and averaged 1.2% of total active strength.

1/ Women in the Army Study, Ch. 2.

In mid-1960s, two major factors began to combine to change the role of women in the military again. One was the pressure from the expanding role of women in the society in general, where they were entering the labor force in ever increasing proportions and filling many positions which were previously for men only. The second factor was the increasing need for military manpower to meet the demands of the Vietnam conflict.

In 1967, Congress removed the 2% limit on the number of women who could be in the military, removed the prohibition to women officers holding permanent commissions above grade O-5 and eliminated the existing differences in the retirement laws which had applied to women. Although Congress had removed the limit on the percentage of the force which could be women, the growth in the number of women was slow until 1971, as discussed in the next section. During the next five years, through 30 September 1976, the number of women, including both officers and enlisted, increased rapidly to over 5% of the total active military strength.

GENERAL ANALYSIS:

The central issue of this paper is meeting DoD's enlisted manpower requirements -- this is where the all-volunteer force will succeed or fail, and this is where most of our recruiting money and effort are aimed. This analysis therefore concentrates on the use of enlisted women. Women officers will be addressed only briefly, in each of the service sections that follow this general analysis (pages 31-46).

This analysis will consider the growth in the number of enlisted women from a series of perspectives using data from the following sources: (1) Information available in the office of the Secretary of Defense and the Defense Manpower Data Center files; (2) Specific data submitted by the Services in response to tasking for this study; and (3) the results of previous studies by other government offices and private organizations.

Female Strength

Table 1 shows the number of enlisted women in thousands and the percent of the total force they represent by fiscal year. The low point for the ten year period was in 1967, the same year Congress removed the limits on the number of women. The growth in the number of women was slow, it took four years for the percentage of enlisted women to increase a half of a percentage point, from 0.76% in 1967 to 1.28% in 1971. In the next five years, from 1971 to 1976, the percentage of enlisted women in the military increased more than three fold, to 5.33% in 1976. This is more than twice the World War II percentage. While the Department of Defense was reducing its enlisted strength from 2.3 million to 1.8 million, it increased the number of women from 30 thousand to 95 thousand. Almost half of that increase was in the Army alone.

TABLE 1

FEMALE ENLISTED PERSONNEL (000s) AND PERCENT OF TOTAL ENLISTED PERSONNEL BY SERVICE AT END FISCAL YEAR

	ARMY		NAVY		MARINE CORPS		AIR FORCE		DOD TOTAL	
Fiscal Year	No.	%	No.	%	No.	%	No.	%	No.	%
1966	9.2	0.85	5.4	0.82	1.7	0.70	5.0	0.67	21.3	0.78
1967	9.7	0.75	5.5	0.83	2.1	0.81	5.2	0.68	22.6	0.76
1968	10.7	0.76	5.7	0.84	2.6	0.90	6.1	0.80	25.1	0.80
1969	10.7	0.80	5.8	0.84	2.4	0.86	7.4	1.02	26.3	0.87
1970	11.5	1.00	5.8	0.95	2.1	0.90	9.0	1.37	28.4	1.07
1971	11.8	1.22	5.9	1.09	2.0	1.04	10.1	1.62	29.9	1.28
1972	12.3	1.80	6.3	1.22	2.0	1.16	11.7	1.95	32.4	1.64
1973	16.5	2.41	9.2	1.87	2.0	1.12	15.0	2.63	42.6	2.22
1974	26.3	3.90	13.4	2.81	2.4	1.41	19.5	3.68	61.6	3.33
1975	37.7	5.56	17.5	3.75	2.8	1.60	25.2	5.01	83.3	4.56
1976	43.8	6.46	19.3	4.21	3.1	1.77	29.2	6.08	95.4	5.33

Accession Changes

As Table 1 shows, the Army, Navy, and Air Force have made large increases in the number of women in the military in the last five years. This increase is the result of expanded female, non-prior service, accessions. Table 2 shows the numbers of women recruited during these years and what percentage of the total non-prior service accessions they represent.

TABLE 2

FEMALE ENLISTED NON-PRIOR SERVICE ACCESSIONS (000s) AND PERCENT OF TOTAL NON-PRIOR SERVICE BY SERVICE

	ARMY		NAVY		MARINE CORPS		AIR FORCE		DoD TOTAL	
Fiscal Year	No.	%	No.	%	No.	%	No.	%	No.	%
1972	6.0	3	2.2	2	0.7	1	4.6	5	13.6	3
1973	8.3	4	4.9	5	0.7	1	6.2	7	20.3	5
1974	15.1	8	6.8	8	0.9	2	8.0	11	30.9	8
1975	18.4	10	6.4	7	1.3	2	10.0	13	35.9	9
1976	15.8	9	5.0	6	1.4	2	8.8	12	30.9	8

All Services have increased both the number of women accessions and the percent of total accessions which are women by two to three fold over the five years. Table 2 also shows that Navy female accessions peaked in 1974, and that Army accessions peaked in 1975. The Air Force plan calls for even larger accessions in 1977 and 1978 than shown on Table 2, followed by a reduction to stabilize at a strength growth rate of 2,000 women per year. 1/

Women by Grade

As a result of the recent rapid build-up and to a lesser extent to previous retention experience, a relatively larger percentage of women are in pay grades E-1 through E-4 and a relatively larger percentage of men are in each pay grade E-5 through E-9, as shown on Table 3.

1/ Both Tables 1 and 2 show that the Marine Corps did not follow the trend of the other Services. The current Marine Corps plan is to more than double their female content over the next five years. Future plans are discussed in more detail in the Service Sections which follow this general analysis.

TABLE 3

Enlisted Personnel by Sex and Service as of 30 June 1976
(Percent of the Male/Female Force Segments in Each Paygrade)

	Army		Navy		Marine Corps		Air Force		DoD	
Grade	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
E-1	9.32	9.85	5.79	7.15	13.63	12.04	3.96	8.47	7.41	8.95
E-2	14.35	17.33	15.32	17.84	18.92	20.42	8.34	18.36	13.46	17.85
E-3	15.40	22.18	16.93	32.26	20.79	23.52	18.97	38.58	17.29	29.28
E-4	23.81	34.47	19.65	30.45	16.95	20.39	24.44	28.81	22.22	31.47
E-5	16.47	12.77	17.85	10.16	13.76	15.17	20.86	4.75	17.72	9.86
E-6	11.02	2.41	14.83	1.60	8.25	5.87	12.85	0.63	12.21	1.81
E-7	7.10	0.77	7.10	0.43	5.07	1.73	7.42	0.27	6.98	0.58
E-8	1.96	0.20	1.78	0.07*	1.92	0.65*	2.11	0.10	1.95	0.16
E-9	0.58	0.02*	0.75	0.04*	0.71	0.20*	1.05	0.04*	0.76	0.04

*Cell contains 25 or fewer personnel.

Source: Active Military Master Files for 30 June 1976

Promotion

Some people may look at Table 3 and conclude that the lower percentage of women in the senior grades is the result of prejudicial promotion policies. Such is clearly not the case, as shown on Table 4. Women with the same number of years of service have as high mean pay grades as their male cohorts, if not higher.

TABLE 4

Mean Enlisted Paygrade by Service, Sex, and Year Group
as of 30 June 1976

	Army		Navy		Marine Corps		Air Force	
Years	Male	Female	Male	Female	Male	Female	Male	Female
1	1.80	2.03	2.04	1.99	1.67	1.81	1.80	1.75
2	3.15	3.43	2.91	3.10	2.85	3.26	2.98	3.02
3	3.81	3.99	3.42	3.55	3.53	4.12	3.36	3.42
4	4.24	4.50	4.07	4.06	4.06	4.85	3.97	3.99
5	4.59	4.84	4.52	4.63	4.57	4.99	4.11	4.08
6	4.88	5.02	4.83	4.82	5.01	5.39	4.31	4.25
7	5.13	5.21	5.05	4.99	5.40	5.72	4.55	4.46
8	5.27	5.40	5.26	5.13	5.57	6.00	4.76	4.74
9	5.42	5.58	5.39	5.27	5.74	6.07	4.94	4.96
10	5.56	5.73	5.56	5.60	5.92	6.23*	5.06	5.05
11	5.78	5.96	5.71	5.71	6.20	6.38*	5.20	5.14
12	6.00	6.21	5.78	5.96*	6.35	6.75*	5.29	5.30
13	6.18	6.38	5.97	6.00	6.50	6.67*	5.46	5.31
14	6.30	6.43	6.14	6.13*	6.68	7.00*	5.59	5.55
15	6.46	6.73	6.24	6.29*	6.78	7.20*	5.81	5.94
16	6.62	6.78	6.31	6.18	6.89	7.00*	5.93	5.77*
17	6.72	6.94	6.48	6.20*	6.99	7.40*	6.04	5.79*
18	6.82	7.09	6.62	6.52*	7.17	7.22*	6.17	6.03
19	6.91	7.00	6.73	6.33*	7.27	8.00*	6.31	6.59
20	6.96	7.11	6.93	6.50*	7.29	8.12*	6.40	6.22*
20+	7.70	7.60	7.42	7.26	8.17	8.50*	7.28	7.40

*Cell Contains 25 or fewer personnel.

Source: Active Military Master Files for 30 June 1976

NOTE: A higher percentage of women enter at an advanced pay grade for education or experience.

Table 5 factors the mean pay grade information for first term personnel into major occupational categories (using one digit DoD occupational codes).

TABLE 5

Mean Enlisted Paygrade by Occupation, Sex, Selected Year Group and Service as of 30 June 1976

	Elec Eq Repair		Comm/ Intel		Med/Den		Tech		Admin		Maint		Crafts		Svcs/ Sup	
Army	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Year 1	2.34	2.43	2.18	2.38	2.48	2.69	2.82	3.46	2.28	2.52	2.22	2.43	2.29	2.45	2.19	2.35
2	3.22	3.24	3.17	3.40	3.30	3.68	3.70	4.06	3.23	3.53	3.15	3.25	3.39	3.41	3.27	3.27
3	3.94	4.05	3.84	3.94	4.04	4.20	4.12	4.22	3.82	4.00	3.78	3.86	3.89	3.91*	3.82	3.92
4	4.55	4.43*	4.34	4.41	4.55	4.73	4.52	4.37	4.32	4.44	4.23	4.21*	4.28	4.00*	4.29	4.37
Navy																
Year 1	3.29	3.56	2.46	2.86	2.25	2.26	2.27	2.50	2.26	2.27	2.51	2.30	2.34	2.00*	2.07	2.15
2	3.56	3.56	3.00	3.39	3.02	3.11	3.11	3.49	3.02	3.27	3.06	3.39	3.00	3.43*	2.74	3.04
3	3.96	3.97	3.62	3.78	3.37	3.40	3.60	3.75	3.70	3.88	3.60	3.86	3.44	3.53*	3.36	3.53
4	4.34	4.27	4.24	4.20	4.10	3.90	4.13	4.06	4.21	4.20	4.22	4.00	4.06	4.20*	3.86	4.00
Marine Corps																
Year 1	2.32	3.50*	2.10	2.10*	--	--	2.48	3.30*	2.09	2.20	2.14	2.57*	1.97	2.29*	2.03	2.10
2	3.22	3.13	2.95	3.11	--	--	3.14	4.34	3.10	3.33	2.96	3.09	2.87	3.15	2.77	3.10
3	3.99	3.94*	3.67	4.00	--	--	3.63	4.59*	3.81	4.16	3.60	3.92*	3.56	4.25*	3.39	3.56*
4	4.51	4.90*	4.23	5.10*	--	--	4.21	5.00*	4.39	4.81	4.15	5.00*	4.14	5.00*	3.89	5.00*
Air Force																
Year 1	2.22	2.12	2.12	2.11	2.03	1.97	2.05	2.16	2.00	2.00	2.08	2.01	1.99	2.02	2.14	2.00
2	3.02	3.03	3.00	3.00	2.98	3.01	3.00	3.22	2.98	3.02	2.98	3.02	2.96	3.01	2.97	2.99
3	3.49	3.45	3.37	3.40	3.30	3.31	3.33	3.49	3.34	3.43	3.32	3.43	3.24	3.39	3.33	3.44
4	3.99	3.99	3.98	3.99	3.97	3.99	3.99	4.11	3.97	3.99	3.97	3.97	3.95	3.95	3.96	3.99

*Cell contains 25 or fewer personnel.

Source: *Active Military Master Files for 30 June 1976*

NOTE: A higher percentage of women enter at an advanced paygrade because of education or experience.

First tour enlisted women have somewhat higher mean pay grades than men in the areas of administration and medical/dental which have long been open to women. Women are, also, holding their own in the non-traditional areas of crafts, electronic equipment repair, technical and maintenance. Since enlisted men and women in each skill area compete in a common promotion system, these higher grades for women apparently indicate better relative performance. This may, in part, reflect the higher entrance standards for women. Grade differences are less in the Air Force, where the quality differences between average men and average women also are less.

Retention

Are women retained in service at the same rate as men; or do they attrite at higher rates because of marriage, pregnancy, non-adaptability and other causes which could be postulated? Between 1960 and 1970 enlisted women had shorter terms of service, in part because women who became pregnant were discharged. However, experience since 1970 is just the reverse. A study of accessions for years 1971 through 1976, reveals that women are being retained at a higher rate than men.

Table 6 shows the number of male and female accessions in each of the six years and what percentage of them were still on active duty at the end of June 1976. For example, Table 6 shows that 14.1% of the 293,345 males who entered the Army in FY 71 were still on active duty on June 30, 1976, while 22.7% of the 5,600 females who entered in FY 71 remained on active duty on June 30, 1976. For DoD as a whole, women had higher retention than men in all six years.

TABLE 6

Number of FY71 to FY76 Accessions Remaining on Active Duty as of 30 June 1976 by Sex and Service

	Male		Female	
	Accessions	Percent on AD 6/76	Accessions	Percent on AD 6/76
FY71 *				
Army	293,345	14.1	5,600	22.7
Navy	73,748	21.4	2,377	19.1
Marines	51,882	19.0	714	24.9
Air Force	89,582	25.0	4,383	24.6
DOD	508,557	17.6	13,074	22.8
FY72 *				
Army	176,376	22.0	5,958	27.2
Navy	84,926	22.1	2,170	25.0
Marines	53,893	22.2	717	25.2
Air Force	80,550	28.5	4,744	30.8
DOD	395,745	23.4	13,589	28.0
FY73 *				
Army	194,706	26.3	8,336	34.6
Navy	88,665	43.0	4,949	45.7
Marines	48,255	41.1	691	23.3
Air Force	85,612	55.4	6,339	54.5
DOD	417,238	37.5	20,315	43.1
FY74				
Army	164,885	53.4	15,083	59.1
Navy	83,071	60.5	6,693	64.6
Marines	43,529	55.8	850	39.2
Air Force	64,203	69.7	8,174	66.1
DOD	355,688	58.3	30,800	61.6
FY75				
Army	161,759	72.1	18,540	73.9
Navy	89,433	75.7	6,459	79.3
Marines	54,081	73.3	1,325	65.4
Air Force	63,486	80.7	9,752	79.0
DOD	368,759	74.6	36,076	75.9
FY76				
Army	163,009	85.3	15,791	86.0
Navy	79,298	89.3	5,009	90.0
Marines	50,213	86.1	1,261	82.3
Air Force	62,630	91.6	8,614	90.1
DOD	355,150	87.4	30,675	87.7

Source: MARDAC Report Number 3058, "Separation Rates from Service for Accession Cohorts by Length of Service, Sex and Race"

* NOTE: Some of Army's male accessions were draftees and all Services had male draft-induced volunteers.

Table 7 contains a breakdown of the annual loss rates for each of the six year groups discussed in Table 6. Note the very high first year loss rates for women who entered service in 1971 and 1972. These high losses may reflect the very strict policies then in effect for women, particularly discharge for pregnancy. During those same years, the Services, especially the Army, had a limited discharge policy for men. They did not want to encourage men to dropout to evade combat service. Since 1972, both policies have been liberalized to permit women to have children on active duty and men to be released who do not want to stay in the military.

The Army states that when quality is held constant, first term men are retained at about a 10% higher rate than women. But quality in the recruiting market is not constant. Tables 6 and 7 show that the first term attrition of women is lower than it is for men.

Comparing male and female attrition in the third year of service for the Army, third and fourth year for the Marine Corps and fourth year for the Navy and Air Force, on Table 7, demonstrates that women generally have reenlisted at higher rates than men. Only limited information is available at this time on the career behavior of women, since only very small numbers of women have progressed through entire careers. From the limited data available, it appears that women may leave active duty after reenlisting at higher rates than men. Such behavior, if it continues to occur, would reduce the relative number of women in senior enlisted positions, but also would reduce future retirement costs. Retention of career women is another area where we need more experience and better data before definitive judgments can be made.

TABLE 7

PERCENT ATTRITION** BY LENGTH OF SERVICE AND SEX:
FY 71-FY 76 ACCESSION COHORTS

Length of Service	FY71		FY72		FY73		FY74		FY75		FY76	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Army												
0-11 Months	9.9	26.4	12.7	23.2	11.9	12.4	20.2	19.2	20.8	18.8	14.7*	14.0*
12-23 Months	40.0	24.1	16.6	21.5	14.6	19.2	13.6	13.0	7.1*	7.3*		
24-35 Months	21.4	10.5	22.5	10.7	25.4	11.3	12.8*	8.7*				
36-47 Months	13.1	13.5	24.5	15.2	21.8*	18.5*						
48-Present	1.5	2.8	1.7*	2.2*								
Cumulative	85.9	77.3	78.0	72.8	73.7	65.4	46.6	40.9	27.9	26.1	14.7	14.0
Navy												
0-11 Months	14.4	22.4	16.0	20.4	14.7	18.9	18.0	16.4	17.1	14.3	10.7*	10.0*
12-23 Months	12.6	16.3	11.0	13.1	12.0	13.0	12.8	12.3	7.2*	6.4*		
24-35 Months	9.0	15.9	9.6	16.2	14.7	11.2	8.7*	6.7*				
36-47 Months	19.2	22.7	22.1	22.3	15.6*	11.2*						
48-Present	23.4	3.6	19.2*	3.0*								
Cumulative	78.6	80.9	77.9	75.0	57.0	54.3	39.5	35.4	24.3	20.7	10.7	10.0
Marines												
0-11 Months	21.2	27.0	9.5	27.1	12.0	34.6	13.8	24.6	18.0	24.1	13.9*	17.7*
12-23 Months	12.2	19.8	15.2	18.3	12.6	16.1	13.4	22.2	8.7*	10.5*		
24-35 Months	20.9	12.9	26.5	14.8	22.6	18.8	17.0*	14.0*				
36-47 Months	12.1	10.9	13.0	10.3	11.7*	7.2*						
48-Present	14.6	4.5	13.5*	4.3*								
Cumulative	81.0	75.1	77.7	74.8	58.9	76.7	44.2	60.8	26.7	34.6	13.9	17.7
Air Force												
0-11 Months	9.1	24.9	11.8	22.0	13.2	17.1	13.0	16.9	11.9	14.0	8.4*	9.9*
12-23 Months	9.3	16.8	9.6	14.7	14.4	14.2	12.2	12.1	7.4*	7.4*		
24-35 Months	7.4	9.7	9.2	9.2	7.4	8.4	5.1*	4.9*				
36-47 Months	26.4	12.4	17.0	10.5	9.6*	5.8*						
48-Present	22.8	11.6	23.9*	12.8*								
Cumulative	75.0	75.4	71.5	69.2	44.6	45.5	30.3	33.9	19.3	21.0	8.4	9.9
DOD												
0-11 Months	11.6	25.2	12.8	22.5	12.8	17.9	17.6	18.1	18.0	16.9	12.6*	12.3*
12-23 Months	27.7	20.0	13.8	17.7	13.8	16.0	13.1	12.9	7.4*	7.2*		
24-35 Months	17.1	11.3	17.6	11.3	19.1	10.6	11.0*	7.4*				
36-47 Months	16.2	14.7	20.9	14.4	16.8*	12.4*						
48-Present	9.8	6.0	11.6*	6.1*								
Cumulative	82.4	77.2	76.6	72.0	62.5	56.9	41.7	38.4	25.4	24.1	12.6	12.3

SOURCE: MARDAC Report Number 3058, "Separation Rates from Service for Accession Cohorts by Length of Service, Sex and Race"

* Includes end of service losses. Prior to 1973 there were draftees, draft induced volunteers and men on some two year enlistments.

** Latest experience, but incomplete.

Based on this data, one could conclude that as career potential increases for women and the quality of accessions remain high, the retention of women in the military is comparable to that of men, in spite of some sociological pressures, such as marriage and family, which tend to limit women's continuous participation in the labor market.

Losses from Skills

In previous sections, it was shown that women were promoted at rates similar to men in a wide variety of skills and that overall retention of women compared favorably with men. The loss rates of women from occupation groups is very different, as shown in Table 8.

These losses from occupation groups represent people who have switched to a different skill, as well as those who have left the Service.

TABLE 8

ATTRITION

PERCENT ATTRITION** AS OF 30 JUNE 1976 BY SEX AND DoD OCCUPATIONAL GROUP: FY 73 TO FY 75 ENLISTED NON-PRIOR SERVICE ACCESSIONS

	Elec Eq Repair		Comm/ Intel		Med/Den		Tech		Admin		Maint		Crafts		Svcs/ Sup	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
FY73 Accessions																
Army	79.5	93.4	68.6	40.3	68.6	28.9	69.4	69.3	69.3	40.8	78.1	95.3	80.2	96.9	70.4	84.7
Navy	43.3	65.0	48.4	28.4	34.4	16.0	52.4	27.7	58.1	27.0	39.6	87.1	37.0	90.4	75.4	78.4
Marines	70.9	78.4	60.4	80.0	--	--	56.2	56.3*	63.2	49.5	57.1	98.8	64.2	88.2*	48.6	84.4
Air Force	25.2	63.8	41.0	21.8	42.3	25.5	30.0	41.6	41.3	20.5	32.7	82.0	39.6	74.5	37.5	63.5
DoD	50.9	76.3	56.9	30.7	54.0	24.6	53.0	48.5	59.6	30.1	52.6	90.2	55.1	88.1	58.4	76.8
FY74 Accessions																
Army	48.3	77.3	33.0	18.9	45.1	9.8	31.6	30.0	37.9	17.5	41.4	87.6	41.6	89.0	40.9	43.3
Navy	23.7	39.1	28.6	18.3	24.1	9.6	39.7	17.6	45.4	16.2	22.5	70.4	22.4	83.0	58.2	60.7
Marines	52.9	76.8	38.4	36.5	--	--	40.2	33.3*	44.3	27.7	36.3	88.6	44.8	84.6	28.9	71.7
Air Force	15.9	23.7	27.1	24.1	24.7	21.0	14.3	22.4	28.8	19.1	22.4	35.4	25.8	50.2	24.5	36.2
DoD	31.1	43.0	31.6	20.2	35.9	12.0	28.7	25.2	38.1	18.1	31.1	60.0	32.6	73.6	36.3	43.8
FY75 Accessions																
Army	25.6	38.1	16.3	8.8	21.5	6.2	14.9	14.2	18.7	9.2	19.3	38.4	18.4	35.2	18.1	15.7
Navy	7.7	22.2	11.7	6.5	13.3	4.3	36.7	13.3	26.5	11.4	11.1	49.0	10.3	75.9	31.2	34.1
Marines	43.9	24.5	16.9	32.8	--	--	23.1	9.1	16.2	14.7	19.8	54.2	21.2	25.9	11.7	17.8
Air Force	7.4	13.9	14.9	16.5	15.3	6.4	6.1	9.6	10.1	5.9	10.8	20.6	9.1	18.4	8.5	13.1
DoD	14.9	23.4	15.0	9.7	19.4	6.0	14.2	12.5	17.0	8.8	15.0	31.1	13.8	27.5	15.2	16.1

* Includes end of service losses.
** Cell contains 25 or fewer accessions.

Losses from the most non-traditional skills are much higher for women than men. In electronic equipment repair, 76% of the 1973 female accessions had left the occupation group by the end of fiscal year 1976 as compared to 51% for male. In the same year group, 90% of the women had left maintenance as compared with 53% of the men. In crafts, 88% of the women were gone and 55% of the men. Even in services and supply handling, 77% of the women had left that skill as compared with 58% of the men. 1/ Those women in the more traditional skills had much lower loss rates than men. In administration, only 30% of the women had left at the end of three years as compared to 60% for the men. In communications/intelligence, 31% of the women were gone as compared to 57% of the men. In medical/dental, there was a 25% loss rate for women and 54% for men.

1/ These high loss rates in non-traditional skills should be viewed in the context of small sample sizes and the newness of women being assigned in such skills.

There are two possible explanations of these data: (1) many women who do not adjust well in non-traditional skills may be leaving the Service; (2) women who try non-traditional occupations may be migrating to the more traditional ones. In either case, these higher losses from non-traditional skills may represent inefficient use of training resources.

Distribution by Occupation Group

Table 9 shows the distribution of women in each service as a percentage of the total in each occupation group. For DoD as a whole, 33 percent of the women are in the administrative/clerical group. Twenty percent of the women are in the "other" category which includes those in training and reflects the distortion resulting from the rapid growth in the number of women. Only 11 percent of the women are in one of the four more non-traditional areas (electronic equipment repair, technical, maintenance or craftsman).

TABLE 9

PERCENTAGE OF ENLISTED WOMEN BY OCCUPATIONAL GROUP
END FY 76

OCCUPATIONAL GROUP	ARMY	NAVY	USMC	USAF**	DOD
0 Infantry, Gun Crew, Seamanship	0	0	0	0	0
1 Elec. Equipment Repair	1	4	3	6	3
2 Communications and Intelligence	14	14	5	9	12
3 Medical and Dental	16	21	*	11	15
4 Other Technical	2	2	3	2	2
5 Administrative and Clerical	32	25	54	37	33
6 Electrical/Mechanical Repair (Maintenance)	4	2	2	10	5
7 Craftsmen	1	0	2	2	1
8 Service and Supply	10	2	11	8	8
9 Other	21	29	21	15	21
TOTAL	100	100	100	100	100

* Covered by Naval Personnel.
** Air Force has readjusted the conversion of AFSC to DoD occupational codes, reducing the number of people in administration and increasing the number in other occupations, subsequent to the effective date of this table.
SOURCE: MARDAC Run 3036

Concentration of Women

It is also relevant to consider the concentration of women in these occupational groups. Table 10 shows what percentage of the people in each occupational group are women. About 18% of enlisted people in the medical/dental field are women, as are 11% of the administrative/clerical field.

TABLE 10

PERCENT OF TOTAL ENLISTED POSITIONS FILLED BY WOMEN
BY OCCUPATIONAL GROUP AT END FY 76

OCCUPATIONAL GROUP	ARMY	NAVY	USMC	USAF **	DOD
0 Infantry, Gun Crew, Seamanship	0	0	0	0	0
1 Elec. Equipment Repair	2	1	1	3	2
2 Communications and Intelligence	10	7	1	7	8
3 Medical and Dental	22	14	*	16	18
4 Other Technical	6	8	3	4	5
5 Administrative and Clerical	13	11	7	11	11
6 Electrical/Mecahnical Repair	2	0	0	3	1
7 Craftsmen	2	0	2	2	1
8 Service and Supply	6	2	1	4	4
9 Other	8	6	2	12	8
TOTAL	6	4	2	6	5

* Covered by Naval Personnel.
** Air Force has readjusted the conversion of AFSC to DoD occupational codes, reducing the number of people in administration and increasing the number in other occupations, subsequent to the effective date of this table.
SOURCE: MARDAC Run 3036.

The data in Table 10 do not lead to the conclusion that there are too many women, even in the traditional women occupations.

The limits on the use of women are associated with policies, which, for example:

(1) Prohibit women from specific types of units, e.g., combat units and ships.

(2) Limit or restrict the assignment of women in units in certain locations.

(3) Disallow the assignment of women to certain stations because of the lack of living facilities which provide appropriate separation of men and women.

(4) Reserve positions to protect a rotation base to provide alternative assignments for men who have filled positions at sea or overseas.

These service-specific limitations will be discussed in the sections on each Service, pages 31 through 46.

Potential to Use Women

The Services were asked to submit data from their 1977 manpower programs to permit the evaluation of the potential to use women. Table 11 summarizes part of that submission. A complete definition of the entries in Table 11 is included in the original request for data, included at Appendix A.

TABLE 11

SERVICE DATA SUBMISSION ON POTENTIAL USE OF WOMEN
Enlisted Positions and Strengths (000s)
(Lines A through I are Structure Spaces*)

Poistions Authorized for 30 September 1977		Army	Navy	Air Force	Marine Corps	DoD Total
A	Total Positions (less Individuals)	566.6	381.8	415.3	137.8	1,501.5
B/C	Combat and Combat Support	281.0	229.9	27.4	100.1	638.4
D	Net A-(B/C)	285.6	151.9	387.9	37.7	863.1
E	Rotation Base	23.3	84.2	0	28.4	135.9
F	Physiological Limits	0	0	0	0	0
G	Other Limits	217.0	38.0	72.1	2.4	339.5
H	Open to Women H=D-(E+F+G)	45.2	29.7	315.8	6.9	397.6
I	Women in Structure Spaces	35.3	15.8**	29.7	2.4	85.7
	Lines J and K are total women (including Individuals)					
Strength						
J	Women on 30 Sept. 1976	44.4	19.3	31.0	3.1	97.8
K	Women Planned FY 1982	50.4	28.5	48.2	6.7	131.8

* Transients, patients and prisoners, students and trainees are excluded from structure spaces and carried as "Individuals". They are excluded from lines A through I, but included in total people in lines J and K.

** Navy data was adjusted for Individuals based on service-wide rate of 5% for TPP and 13% for students and trainees.

Line "A" represents the total number of structure enlisted positions. Structure positions are the manpower positions in units. They exclude transients, prisoners, patients under treatment, students, and trainees. Line "A" represents the base of positions for both men and women.

Line "B/C" contains the positions designated by the Services as combat or combat support from which women are excluded under present policies. Line "D" (line "A" minus line "B/C") is the net positions which theoretically could be available to women. Notice the differences between the Services in the relative numbers of spaces available after

the exclusion of the combat positions. In the Air Force, 93% of the positions are available. The Army has 50% available and the Navy 40%. The Marine Corps has only 27%. The combat unit structure, with the associated restrictions, creates the largest difference in the relative number of women which the various Services could accommodate effectively.

Positions must be provided in the United States for men who must serve aboard ship or in "men-only" overseas units. These positions are called the rotation base. Some of these rotation base positions will be in combat units in the United States, which also exclude women; but there are not enough of these positions. Additional non-combat positions must be reserved for rotation. These are positions which could be filled with women if it were not for this rotation base problem. Line "E" shows the total number of these non-combat positions which are reserved for men for rotation base reasons which otherwise could be filled by either men or women.

The difference among the Services is very marked. The Air Force has identified no need for such non-combat rotational positions at this time. In the Army, they represent 8% of the positions which remain after the exclusion for combat and combat support. In the Navy and Marine Corps, the rotation base is a major factor. For the Navy, it represents 55% of the positions remaining after the combat exclusion; and for the Marine Corps, it is 75% of the positions remaining after the combat exclusion.

In line "F" the Services were asked to identify those positions closed to women for physiological reasons, such as stature or strength. While lack of strength is raised by the Service leaders as the most common problem in expanding the use of enlisted women, no positions were identified in the Service submissions as being closed to women for physiological reasons. This area needs attention.

The Services each have other restrictions which are applied to further limit the number of positions open to women. The extent of these limitations is shown in line "G". It is largest for the Army, at 217,000 positions or 76% of the positions which remained after the combat exclusion. Limitations on the concentration of women in various units and personnel management constraints are the major limiting factors in the Army. These exclusions are discussed in more detail in the Army Section of Service Analysis, pages 31 through 37.

The Air Force precludes women from about 45% of its overseas authorizations or 72,000 positions because of inadequate facilities at those locations to accommodate unmarried women. Lack of separation of men and women is the major problem. For example, the Air Force considers living quarters where men and women share the same hall as unacceptable. Facility limitations are the largest single limitation to the number of women serving in the Air Force.

The Navy limits 38,000 additional spaces for reasons similar to both the Army and Air Force. They have some limits on overseas facilities, and they have skills with disproportionately small number of junior positions ashore. The Marine Corps limits an additional 2,400 positions for similar reasons.

Line "H" shows the number of positions which are open to women, based on the Service submissions. It should not be interpreted as the number of positions that should be filled by women -- the numbers in line "H" appear to be more than the number of women the Air Force should have, and fewer than the Army should have. These problems will be discussed later.

Line "I" shows the number of women serving in such structure spaces. A comparison of lines "H" and "I" indicates some measure of what the Services consider the potential for growth in the use of women.

From this analysis the Air Force would appear to have a tremendous potential to use women, up to 315,800 in structure positions, plus TPP, students and trainees. The Air Force has progressed well in opening positions to women, increasing from 5,000 in 1966 to 29,000 in 1976. In addition, the Air Force is developing sexless criteria to insure that people, male or female, can perform the functions of specific positions. Work is progressing in developing standards for strength which will exclude many women and some men from those positions where such strength is essential. Such positions are not closed to women, but cannot be filled by many women.

An additional limit to the rate of increase of women in the Air Force is Service reluctance to create personnel management distortions by making very large changes in the number of women accessions over short periods of time.

The Marine Corps has room for growth. As noted previously, the Marine Corps did not have the rapid increase in women experienced by the other Services in the first half of this decade.

Line "J" shows the total number of enlisted women in each Service at beginning of fiscal year 1977, and line "K" shows the planned strength at the end of fiscal year 1982. These numbers include students, trainees, transients, patients and prisoners. The Marine Corps is planning a major growth during this period more than doubling the number of enlisted women marines. The other Services are planning more moderate growth. The Air Force plan calls for 55% growth, the Navy for 48% growth, and the Army for a 14% growth through 1982. 1/ These rates are consistent with the limitations used by the Services as shown in Table 12. Significantly larger growth rates would require restructuring the current limiting policies of the Services. Such possible changes are discussed in the individual Service sections beginning on page 31.

Table 12 shows the actual number of enlisted women for end of fiscal year 1976 and the end of the transition quarter and the annual projected end strengths through 1982 from the March Service submissions.

1/ As shown in Table 1, Army has the highest percentage of enlisted women of any Service; and the Air Force has had the highest growth rate since 1966.

TABLE 12

ENLISTED WOMEN BY SERVICE IN THOUSANDS

	Actual		Projected					
	FY 76	FY TQ	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82
Army	43.8	44.4	46.3	48.4	50.4	50.4	50.4	50.4
Navy	19.3	19.3	20.1	20.5	22.5	24.7	26.4	28.5
Air Force	29.2	31.0	34.6	40.2	42.3	44.3	46.3	48.2
Marine Corps	3.1	3.1	3.5	3.7	4.6	5.3	5.8	6.7
TOTAL	95.4	97.8	104.5	112.7	119.7	124.6	128.8	133.8

Table 12 contains the strength based on latest accession plans submitted in response to a request for data for this study. Navy, Air Force, and Marine Corps plans have undergone major changes during the last year. The Navy and Marine Corps have increased while the projection of the number of female accessions in the Air Force through 1982 has been revised downwards, as explained in the next section.

Accession Plan

In May 1976 the Services submitted program objective memoranda (POMs) for fiscal years 1978-1982. Among the data submitted were accession programs. Following development of the President's budget for fiscal year 1978, the five year defense plan (FYDP) was updated. It contains the accession plan to support the strengths in the President's budget.

Both the POMs and the FYDPs contain accession data to support their enlisted women strengths. Table 13 compares by Service the data in the May 1976 POM and January 1977 FYDP with the strength and associated accessions for the Service proposals submitted in March 1977 for this study.

TABLE 13

ENLISTED WOMEN STRENGTH (STR) AND ACCESSION (ACC) PLANS
BY FISCAL YEAR IN THOUSANDS

	FY 77		FY 78		FY 79		FY 80		FY 81		FY 82	
	Str	Acc	Str	Acc	Str	Acc	Str	Acc	Str	Acc	Str	Acc
ARMY												
MAY 76 POM	47.3	17.5	47.4	14.1	50.4	17.4	50.4	16.0	50.4	15.3	50.4	16.0
JAN 77 FYDP	46.3	14.6	48.3	14.5	50.4	14.4	50.4	13.5	50.4	13.5	50.4	13.6
March 77 Plan	46.3	15.8	48.4	15.6	50.4	15.5	50.4	14.6	50.4	14.5	50.4	14.7
NAVY												
MAY 76 POM	19.8	4.4	20.3	4.2	20.5	4.2	20.6	4.2	21.2	4.2	21.2	4.2
JAN 77 FYDP	19.8	4.4	20.1	4.2	20.1	4.2	20.1	4.2	20.1	4.2	20.1	4.2
March 77 Plan	19.8	4.4	20.5	4.8	22.5	5.6	24.7	6.0	26.4	6.0	28.5	6.5
AIR FORCE												
MAY 76 POM	34.3	10.0	42.4	13.0	51.4	13.6	60.1	13.9	67.5	12.8	74.8	12.8
JAN 77 FYDP	34.6	10.0	40.2	13.1	47.6	13.8	54.7	13.8	60.1	12.0	65.8	12.0
March 77 Plan	34.6	10.0	40.2	13.1	42.3	8.1	44.3	7.7	46.3	8.1	48.2	8.1
MARINE CORPS												
MAY 76 POM	3.4	1.3	3.5	1.3	3.6	1.3	3.7	1.3	3.7	1.3	3.7	1.3
JAN 77 FYDP	3.5	1.5	3.7	2.3	4.6	2.3	5.3	2.3	5.8	3.0	6.7	3.0
March 77 Plan	3.5	1.5	3.7	2.3	4.6	2.3	5.3	2.3	5.8	3.0	6.7	3.0

The Army has consistently moved toward a goal of 50,400 enlisted women, although their estimate of accessions required to achieve that goal has changed with the different submissions.

The Navy March plan represents a major increase above previous proposals. The Marine Corps significantly expanded the number of women they plan to have between the POM submission and the FYDP.

The Air Force, however, is moving in the opposite direction. Each of their successive submissions has lowered both the planned female enlisted strength and accessions.

The Air Force derived their POM and FYDP figures, which are considerably higher than the Air Force's current plan, using straight-line projections of FY 1978 procurement rates. Subsequent changes in female procurement percentages and revised loss rates led to the adjustment in female accession levels shown in their current proposal.

The Market

Questions concerning market conditions arise as the Services consider using increasing numbers of women. How many young women would enlist in the military services? Do these women want to enter non-traditional skills, or do they desire employment in the more traditional areas? Would expanding non-traditional jobs or opening shipboard service to women increase or decrease the number of women desiring to enlist in the Navy? These questions are of importance to the Department of Defense as we consider expanding the numbers of women being used in the military, and the areas in which they may serve. At present, we really do not know the answers. However, a recent study indicates that, while women enlist in the Navy for about the same reasons that men do, many may become dissatisfied with non-traditional jobs. 1/

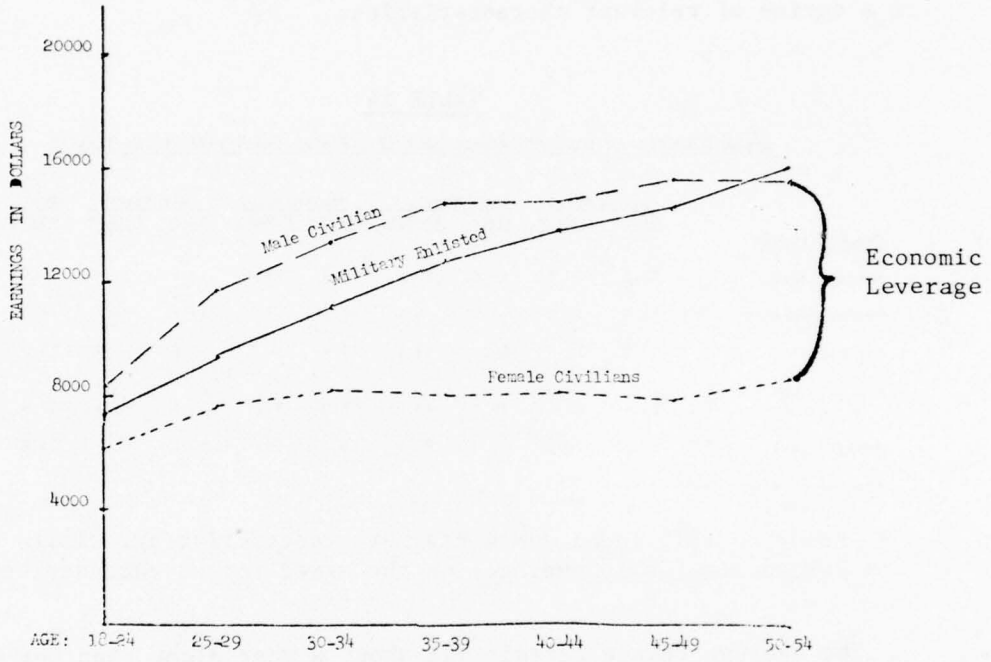
To date, with the exception of the Korean War experience discussed in the background section, the Services have been able to fill the positions open to women with high quality recruits with a minimum of effort. There has been little market analysis and little effort to stimulate female accessions. One reason for the ease in recruiting women may be the relative advantage which the military enjoys in the job market for women.

1/ Patricia J. Thomas, Why Women Enlist: The Navy As An Occupational Choice, San Diego, California, Naval Personnel Research and Development Center, March 1977.

Martin Binkin and Shirley Bach of the Brookings Institution in their study of women and the military argue that the Services have strong economic leverage in competing for women. As shown on Chart #1, the military compensation is considerably higher than the annual earnings of the average high school graduate woman who works full-time, year around.

CHART 1

Comparison of Mean Annual Earnings of Civilian Year-round, Full-time Wage and Salary Workers with at Least Four Years of High School but Less than Four Years of College by Sex and Age, and Military Enlisted Personnel by Age, Calendar Year 1975



SOURCE: Binkin-Bach Study.

The military women are paid the same as military men. As shown previously in this paper, women are promoted at the same rates as their male cohorts. The above chart shows that there is a considerable difference in the compensation of civilian men and civilian women who are high school graduates (but not college graduates), and who are full-time, year-round employees. This difference between civilian and military pay places the Services in a much stronger position in the labor market when competing for women than when competing for men.

The experience of the Services in recruiting women to date and the Binkin-Bach economic analysis would seem to indicate that there should be an ample supply of high quality women desiring to enter the military to meet the levels of growth projected by the Services or even for considerable increases to those levels.

The questions raised in the beginning of this section, however, form a basis of research which is needed to determine the market potential should major policy changes increase the demand for women many-fold or should policies change to require women to serve part of their career in combat units or aboard ship.

Quality of Accessions

Table 14 compares the average male and female accessions by service for a series of relevant characteristics.

TABLE 14

CHARACTERISTICS OF MALE AND FEMALE RECRUITS, FISCAL YEARS 1973-76, BY SERVICE

	Army		Navy		Marine Corps		Air Force		Dept. of Defense	
Characteristic	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Average age*	19.1	20.2	18.6	19.8	18.5	19.3	19.1	20.0	18.9	20.0
Percent married	14.0	14.0	6.1	4.4	5.2	1.4	17.1	13.7	11.6	11.6
Percent black	23.9	19.0	10.4	10.1	19.9	16.2	14.0	15.3	18.5	16.1
Percent high school graduates	54.1	88.4	70.4	98.6	48.0	90.9	85.8	93.0	62.9	91.7
Average test score**	51.8	73.2	58.2	62.9	56.1	66.7	62.3	62.7	55.8	66.0
Percent on Active Duty 30 June 1976	58	68	67	70	65	58	73	74	64	70

* Prior to 1975 young women had more restrictive age limits than men.

** Percentile (50 is average) on the armed forces entrance test.

The average female recruit was about a year older than her male counterpart. They had the same propensity to be married. She was less likely to be black (16.1% versus 18.5%), and much more likely to have graduated from high school (91.7% compared with 62.9%). She scored about ten points higher on the entrance tests. Seventy percent of the women accessions during the period were still on active duty at the end of June 1976, as compared with 64% of the male accessions. Only in the Marine Corps was the percentage of women accessions on active duty lower than for the men.

The best known indicator of prospective success in the military is the possession of a high school diploma. Table 15 compares the percentage of male and female recruits who had high school diplomas when they enlisted.

TABLE 15

PROPORTION OF ENLISTED NON-PRIOR SERVICE RECRUITS WITH A HIGH SCHOOL DIPLOMA BY SEX, FISCAL YEARS 1971 TO 1976

	Fiscal Years					
	1971	1972	1973	1974	1975	1976
Male Recruits	68.3	66.8	65.5	58.1	52.5	66.7
Female Recruits	93.9	94.4	95.2	91.7	90.6	91.1
TOTAL RECRUITS	68.9	67.8	66.9	60.8	65.0	68.7

From Tables 14 and 15, it is obvious that the average woman recruit is brighter and more likely to have a high school diploma than the average male recruit. The comparison favors women even more when we compare recruits at the margin, the lowest quality male recruits and the women who would replace them. The marginal male recruit is either a mental group IV or a high school dropout. He could be replaced by a woman who is much more likely than he to be a high school graduate with an average or better test score. *This conclusion is especially true for* the Army.

As male recruiting pressure tightens, these differences in quality between the marginal male and female accession can be expected to widen further.

Cost Comparisons

Pay of men and women in the military is the same if they are of the same grade and longevity, have the same skills, are in the same dependency status, and have similar access to public quarters and messing facilities. In other words, the military provides equal pay to similar people whether they are male or female. In the past, women tended to cost less than men, because more of them were unmarried. As shown in Table 14, now about 11% of both men and women recruits are married. Higher medical costs for the dependents of men tend to be balanced by the higher medical costs of women on active duty. On balance, the cost of men and women on active duty is about the same.

The marginal cost of recruiting represents a major difference in the cost of men and women. In order to obtain sufficient numbers of young men who have graduated from high school and test average or above on the entrance tests, the Services each maintain large recruiting and advertising programs. These recruiting and advertising programs attract more high quality women and lower quality men than are presently used. Assuming that there is no additional cost to attract women or lower quality men, the following are the comparative marginal costs for men and women, excluding enlistment bonuses:

TABLE 16

MARGINAL COST OF RECRUITING*

	Army	Navy	Marine Corps	Air Force
High Quality Men	$3,700	$1,950	$2,050	$870
High Quality Women	$ 150	$ 150	$ 150	$150
Lower Quality Men	$ 150	$ 150	$ 150	$150

* Excludes enlistment bonuses.

Enlistment bonuses are now paid predominately to people entering the combat arms in the Army and Marine Corps. While women will liberate men to serve in combat arms, it is not clear that the bonus will cease to be necessary. But without increased numbers of women, the cost of attracting current levels of male high school graduates could increase markedly. The enlistment bonuses for 1976 were $68.5 million and for 1977 will cost $54 million. For 1978 they are estimated to cost $75 million. The requirement to recruit about 225,000 male high school graduates from a shrinking population base could drive bonus costs up rapidly, conceivably by over $1 billion per year.

Martin Binkin and Shirley Bach, in chapter 6 of their Brookings study, estimated that maintaining the 1976 level of 225,000 male high school graduates could cost upwards to $6 billion more per year by 1982, if the number of women accessions is not increased and if the Services should attempt to use across the board military pay increases to attract sufficient numbers of young men. This $6 billion figure assumes pay raise increases to all military personnel in order to meet the cost of the marginal recruit. Selective enlistment bonuses could produce similar results for considerably less; but, as shown above, even such bonuses could result in increases of more than a billion dollars. If women can do enough of the jobs which must be done, considerable savings can be realized.

Women accessions may be used either to upgrade the quality of the force by recruiting high quality women in lieu of low quality men at the same cost or to save costs by replacing high school graduate men with women of the same quality for lower recruiting costs and avoidance of future increases in enlistment bonuses.

Binkin and Bach, after a rather detailed analysis, concluded their cost chapter with the following observation: "Far and away the most important financial consequence of increasing the proportion of women in the military ... is the prospect of being able to maintain desired quality standards among volunteers without incurring large increases in military payroll ... Indeed, whether or not this nation can sustain its armed forces solely by voluntary means could well depend on how effectively the female labor resource is employed."

In addition to the costs discussed above, there are other costs, difficult to quantify, associated with more women in the military. These costs include:

- o Reduced performance because of physical differences
- o Lost time for pregnancy and abortions
- o Restrictions on deployability
- o Sociological limitations on use of women in combat.

Physical Differences

In many jobs in the military, physical characteristics are important. Table 17 compares the height and weight of 18 year old men and women.

TABLE 17

COMPARISON OF PHYSICAL STATURE OF 18 YEAR OLD MEN AND WOMEN

Percent at or Exceeding the Measurement	Height (Feet and Inches) Men	Women	Weight (Pounds) Men	Women
5%	6'2"	5'8"	212	183
10%	6'1"	5'7"	196	160
25%	6'0"	5'6"	168	140
50%	5'10"	5'4"	152	126
75%	5'8"	5'2"	139	115
90%	5'6"	5'1"	128	105
95%	5'5"	5'0"	119	100

SOURCE: National Center for Health Statistics, Monthly Vital Statistics Report, (HRA) 76-1120, Vol. 25, No. 3, Supplement, U.S. Department of Health, Education and Welfare, June 22, 1976.

As shown in Table 17 above, only 5% of the 18 year old women are as tall as 75% of the men of the same age, while 95% of such men are taller than the average woman. Over 90% of the men weigh more than the average woman. Of women age 18 to 24, about 30% have a sitting height

of less than 31.9 inches and about 50% have a popliteal height of less than 16 inches. Both of these measures are less than the measurement of 95% of men in the same age group. [1/] Women have about 67% of the endurance of men and 55% of the muscular strength of men. [2/] Even when size is held coustant, women are only 80% as strong as men. [3/] An Army study showed that women undergoing a physical training program similar to that of men improved in physical strength only 24% as compared to 50% for men. [4/] There are other physiological differences, such as the ability to tolerate extremes in heat and cold where women seem to be at a relative disadvantage. [5/]

American women are generally smaller than American men. Oriental men also tend to be smaller than American men. Many of the problems faced in using more women in non-traditional positions in our armed forces were also faced in adapting equipment and procedures for the use of allied forces with men who are generally smaller than American men. The problems are not insurmountable, but the reality of these physiological differences should not be wished away in our efforts to avoid sexual discrimination or to substitute women for men in sustaining the all-volunteer force.

In some positions in the military these physiological differences may be a disadvantage and in others an advantage. Positions which require muscular strength above the level expected of many women should only be filled by people possessing the required strength. The Air Force is leading the way in developing tests of strength to be used to classify positions and be sure that either men or women who are assigned to such positions possess the needed strength. About 28% of the women

---

1/ U.S. Public Health Service (Department of Health, Education and Welfare) Weight, Height and Body Dimensions of Adults, United States 1960-1962, Series 11, No. 8, June 1965, pp. 26-31.

2/ Jean D. Watheys, M.D., "Women in the Work Environment", Paper presented to Annual Meeting of the Academy of Occupational Medicine, San Francisco, California, March 1974.

3/ James A. Peterson, PhD., "Physiological Differences Between Men and Women", Unpublished.

4/ Project 60: A Comparison of Two Types of Physical Training Programs on Performaning of 16-18 Year Old Women, U. S. Military Academy, West Point, New York, 1976.

5/ Richard L. Burse, et al, Differences Between Males and Females of Military Age and Their Physiological Response to Cold and Heat Environments, U. S. Army Research Institute of Environmental Medicine, 1975.

tested by the Air Force could lift 70 pounds to a height of six feet, which was the most stringent test. Virtually all women tested could lift 40 pounds to elbow height. This criteria would meet the strength needs of most non-combat jobs in the military.

By the time all of the latest equipment is installed, many of our ships, aircraft, land vehicles and other facilities become very cramped for space. We may be able to take advantage of the smaller size of women in manning such positions. However, the size differences could require redesign of various equipment to permit women to operate the equipment effectively and safely. This area may need considerable attention if more women are brought into the Service.

Lost Time

Lost time due to pregnancy, menstruation and abortion are often cited as inefficiencies associated with women. All of the evidence indicates that very little time is lost for menstruation by healthy women with good physical fitness. Pregnancy does account for considerable lost time.

The Army collected data during fiscal year 1976. For pregnancies terminated in abortion, the lost time approximates that of a minor illness, averaging 10-12 days, including 4.8 days of hospitalization.

According to the Army, approximately 8% of the women become pregnant each year and 5.4% of the women on active duty go to term and deliver a child each year. The average pregnancy carried to term causes 105 days lost time or 29% of a manyear. At any given time, 3.8% of the women can be expected to be pregnant or on postnatal convalescent leave. For the Army, some 40% of the women giving birth on active duty request release from active duty after postnatal leave. 1/

The Air Force reported similar results with approximately 8% of their women becoming pregnant each year. The Air Force reported that women have about twice the lost time as men due to medical absence. 2/ Much of this lost time is due to pregnancy and related female medical care.

The pregnancy problem is similar in the Navy and Marine Corps, but the Navy pointed out that lost time due to pregnancy and abortion should be weighed in the context of total lost time. Table 18 compares major lost time categories in the Navy for enlisted men and women.

1/ Women in the Army Study, Chapter 7.
2/ Biometrics Report No. 114.

TABLE 18

COMPARISON OF LOST TIME FOR ENLISTED MEN AND WOMEN IN THE NAVY

Lost Time Category	Lost Days as a % of Total Days Available	
	Women	Men
Alcohol Abuse	.09	.12
Drug Use	.02	.12
Unauthorized Absence (AWOL)	.05	.24
Returned Deserters	.07	.62
Abortion	.03	0
Pregnancy	.37	0
TOTAL	.63	1.10

Even though pregnancy is the major cause of lost time among women, they lose, on the average, only about half as much time as men. Men's lost time to desertion, alcoholism and drug abuse tend to result in the loss of several consecutive months, similar to pregnancy. Lost time for unauthorized absence is usually a matter of days lost, as is abortion. However, both desertions and unauthorized absences may correlate with unpleasantness of an individual's job. Women are less likely to be in such jobs than men, especially in the Navy. All Services are initiating studies of comparative lost time for men and women.

Deployability

Each Service has found that long periods of consecutive lost time hurt unit effectiveness and reduce the deployability of a unit. Should a unit need to deploy rapidly in an undermanned condition, it would be less capable of performing its mission.

While about 40% of all military women who become pregnant on active duty and go to term request early release, 60% continue to serve with small children. The Services believe that these women require more special considerations than most women without children or most men. They are often limited in the hours they can work and are restricted in attending field maneuvers and other special demands. Perhaps most serious is the limitations on deploying these women in case of national emergency.

Air Force data indicate that 14,000 or 40% of the women in the Air Force are married to military men. Often they are assigned to the same unit or at least the same base. When they have children, there is a real limitation on the deployability of both parents. Other men and women are the sole custodians of small children. They are also limited in their work assignments and, especially, in deployment during national emergency. These are important limitations which need more study and documentation to determine the potential impact on our current readiness and our responsiveness in case of national emergency. They are under review by all of the Services and the Office of the Secretary of Defense.

Combat Restrictions

There are sociological limitations on the use of women in combat. As the Women in the Army Study points out, women have fought well in various countries during periods of intense national crises; but today no major nation has women in combat jobs in their standing Army -- not even Israel. As more women are recruited, this restriction becomes increasingly relevant. Support people in peacetime often become combatants when a war breaks out. If a significant proportion of our peacetime force cannot make that transition, we may face serious shortages in early periods of a major conflict.

This problem can be minimized somewhat by reconsidering what is combat. Leading a bayonet charge is different from launching an ICBM from the United States or operating a fire control system for artillery behind the lines. There is a difference between the first wave of an amphibious invasion and controlling aircraft from an aircraft carrier or typing correspondence on a fleet oiler. Ground combat is fought under particularly harsh conditions. We are just beginning to assess the impact of field conditions on women. We need to reexamine the positions which are now closed to women because of the combat criteria, but we also need to look at the limits on flexibility which growing numbers of women impose on our ability to mobilize and fight a sustained conflict.

Summary

This general analysis has examined the threefold increase in female enlisted personnel which has occured since 1972, and concludes that women are concentrated in traditional skills, but are found in significant numbers in all of the non-combat skills. Women are promoted at least as rapidly as men, and now have slightly lower attrition rates than men during their initial enlistment. Women have a higher propensity to leave non-traditional occupations, and a higher propensity to remain in the more traditional ones.

Except for the Army, all of the Services plan to continue increasing the number of women. The Marine Corps plans to more than double the number of enlisted women from 1976 to end 1982, while the Air Force plans a 55% increase and the Navy expects a 48% increase over the same period. The Army is planning an increase of only 14% over the next five years, with no increase in enlisted women after reaching 50,400 in 1979.

There appears to be an adequate market of high quality women available to meet the growth patterns expected and probably to provide for a significantly larger demand. The average female accession in recent years compares very favorably with the average male recruit, and the marginal woman available to be recruited would appear to be of much higher quality than the marginal man she would replace.

The marginal cost of recruiting high quality men is significantly higher than for high quality women. The marginal cost difference is greatest in the Army and least in the Air Force. The cost avoidance of not placing excessive demand on the market for bright young male high school graduates may exceed $1 billion per year by 1982.

The nation may not be able to afford to use military pay increases to continue to attract such large numbers of young male high school graduates. The success of the volunteer force may well depend on the number of young women who join the military and how they are used.

SERVICE ANALYSIS

On January 27, 1977, the Secretary of Defense directed the ASD(M&RA) to undertake a priority analysis of the use of women in the military, as part of a larger analysis of military manpower utilization. The Services were asked to assist the analysis by:

(1) Prcviding data for their FY 1977 force structure on total positions, positions closed to women because of combat restrictions, non-combat positions closed because of rotation requirements for men filling combat positions, and non-combat positions closed to women for other reasons.

(2) Structuring and evaluating an alternative that would double the number of women from June 30, 1976 to September 1982.

(3) Discussing known limitations on the supply of women.

(4) Providing comparative data on performance of integrated units with similar "male only" units.

(5) Discussing other pertinent problems.

The tasking memorandum is at Appendix A. The following four sections summarize the data submitted by the Services and discuss Service-specific problems. One section is devoted to each Service.

Army

The Army submitted more information than any of the other Services. They have experienced the largest growth in both the number and percentage of women in the last five years and have devoted considerable study effort to the use of additional women during the past year. The Army needs more recruits than any other Service and is very sensitive to the need for quality accessions in the all-volunteer force environment.

The Army is currently in a planned expansion of women, driving toward a goal of 50,400 enlisted women by the end of fiscal year 1979. They argue strongly in their submission that they should not be forced to increase above that level of enlisted women until they have evaluated the impact of such increases. The Army presentation is quoted at Appendix B. The Army does project gradual increases in women officers. Table 19 shows the Army's March, 1977 plan.

TABLE 19

TOTAL NUMBER OF ARMY WOMEN ON ACTIVE DUTY AT END FY (000)
(MARCH, 1977 PLAN)

	Actual		Projected					
	FY 76	FY TQ	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82
Officers	4.8	5.1	5.9	6.7	7.3	7.9	8.5	9.0
Enlisted	43.9	44.4	46.3	48.4	50.4	50.4	50.4	50.4
TOTAL	48.7	49.5	52.2	55.1	57.7	58.3	58.9	59.4

An examination of both the alternative plan and the Army's current plan shows an intention to increase women officers by a higher percentage than enlisted women. The alternative plan would almost triple the number of women officers who were in the Army on 30 September 1976, while increasing enlisted women by 91%. The Army's current plan would increase women officers by 76% and enlisted women by only 14%.

Table 20 summarizes the Army data submission on the current force structure. (The meaning of rows A through I are discussed on pages 15-17.)

TABLE 20

SUMMARY OF ARMY DATA SUBMISSION
(000s)

		Enlisted	Officer	Total
Positions Authorized for End FY 77				
A	Total Military Structure Positions	566.6	85.6	652.2
B	Combat Unit Spaces	260.9	21.3	282.2
C	Combat Support Unit Spaces	20.1	9.3	29.4
D	Remainder A-(B+C)	285.6	55.0	340.6
E	Rotation Base	23.3	2.5	25.8
F	Physiological Limits	0	0	0
G	Other Limits	217.0	38.7	255.7
H	Open to Women Net D-(E+F+G)	45.2	13.8	59.0
Strength				
I	Actual Strength 30 Sept. 1976			
	a. Operating Strength	35.3	4.1	39.4
	b. Non-Operating Strength (individuals)	9.1	1.0	10.1
	c. Total	44.4	5.1	49.5

NOTE: Structure positions should be compared with operating strength rather than total strength.

Line "H" from the enlisted column of Table 20 shows an Army estimate of 45,200 enlisted positions as the maximum number of women who should serve in structure positions of the Army. This corresponds to about 57,000 enlisted women when individual requirements are added.

Line "D" on Table 20 shows some 285,000 enlisted positions in the Army after the combat and combat support units are removed. The policies which reduce this 285,600 to 45,200 are central to the issue of increasing the number of enlisted women above the Army's proposed level of 50,400.

About 23,300 positions are closed to provide for rotation of men from overseas units where women are not assigned. The remaining reduction of 217,000 non-combat positions deserves special attention.

In April 1975 Army developed the limitations on the percentages of women in non-combat units shown in Table 21 and began manning to those levels in February 1976.

TABLE 21

LIMITS ON ARMY WOMEN IN NON-COMBAT UNITS

Type Unit	Maximum % Women
- Units which operate forward of brigade near boundry	0%
- Units operating between division and brigade rear	10%
- Units operating between corps and division rear	15 to 30%
- Units operating behind corps rear boundry	25 to 45%
- Units not expected to leave CONUS in an emergency	25 to 50%

Those percentages tend to control the number of women which the Army says it can use, because they are major parameters in the analysis the Army uses to determine the number of women accessions.

The Army parametric analysis follows a six step process outlined in more detail in Appendix B. It takes authorized enlisted positions by grade, skill and unit for the future force. It applies these limitations on women by type of unit and for excluded skills. Women are precluded from positions using the more restrictive of the two screens.

For example, there can be no woman in a unit which would operate in the brigade area and not more than 10% in a unit operating at division level. Certain skills, such as infantrymen, combat engineer, and hawk fire control crewman are excluded no matter where the unit might operate. (See Appendix B for a complete list of the 31 skills to be closed to women for combat reasons.) Both screens would be applied by MOS. The lower of the two numbers would be used.

These steps account for closing about 68,000 positions to enlisted women.

The results of these first three steps of parametric analysis are inputted into the Army's Women Enlisted Expansion Model (WEEM). The WEEM applies further constraints on the number of positions open to women to insure that the positions provide for acceptable promotion, rotation, and management flexibility. The model is constructed to designate males over females. For example, E-3 clerk-typist positions in Army combat units are filled by men. Clerk-typist positions in major command headquarters or at the Pentagon in grades E-4 or E-5 could be filled by women. Some of them, however, are designated for men, to provide promotion opportunity for the male clerk-typists in combat units. Positions open to women are reduced in a similar fashion in solving any promotion, rotation, or management problems. The WEEM is also outlined in Appendix B.

As the result of the WEEM, 13 additional skills are to be closed to enlisted women. They include Defense Acquisition Radar Crewman, closed because of rotation base constraints, Operation Control Repairman, closed because of career progression constraints, and Concrete Paving Equipment Operator, closed because of lack of entry positions. For the complete list, see Appendix B. Many other skills, while still open to women, were sharply curtailed by the WEEM analysis. In addition to the 23,300 enlisted positions closed because of rotation base, the WEEM precluded women from about 149,000 enlisted positions because of promotion and other management constraints.

The parametric analysis takes the output from the WEEM and adds people to cover transients, patients, prisoners, students, and trainees.

The final step of the parametric analysis applies the constraints of the Army's Enlisted Force Management Plan (EFMP) using the objective grade structure and expected continuation rates to determine how many female accessions would be needed to meet the positions expected by grade. Table 22 shows the current limits by grade.

TABLE 22

ARMY FEMALE ACCESSIONS CONSISTENT WITH FILLING ALL POSITIONS OPEN TO WOMEN IN A GIVEN GRADE

Grade	Accessions/Year
E2-4	10,900 - 13,700
E5	21,300 - 29,500
E6	18,400 - 29,000
E7	21,600 - 39,200
E8	19,300 - 33,400
E9	15,400 - 24,300

The table shows that 10,900-13,700 female accessions per year would fill all positions open to women in grades E-2 through E-4 with women, given expected continuation rates and promotion policies. Similarly, 21,300-29,500 female accessions per year would fill all positions open to women in grade E-5 (but would provide more women in grades E-2 through E-4 than there are positions open to them). For men, the largest limiting grade would be used. For women, the smallest limiting grade, E-2 through E-4, is used to set steady state annual female enlisted accessions between 10,900 and 13,700, or between six and eight percent of planned total enlisted accessions.

Small changes in the parameters, such as the percentage of women authorized in the field units could significantly increase the number of women who could be used in pay grades E-2 through E-4. Similarly, acceptable changes in the promotion, rotation, or management requirements for men by MOS could significantly increase the number of women which could be used, especially in the limiting pay grades of E-2 through E-4. If enough females E-2 through E-4 could be used, the number of women accessions could be nearly doubled, as shown in the grade limitations in Table 22. That would permit a female steady state strength in excess of 100,000.

The Army submitted a report entitled Women in the Army Study, dated December 1976, in support of their arguments against further increases in women. While the study represents considerable effort, it is incomplete in several respects. For example, an entire chapter is devoted to the lost time problems associated with pregnancy and sole parent dependency, but no mention is made of areas where women have better lost time records than men. No mention was made of the lower disciplinary problems of women or the greater lost time to men because of higher rates of desertion, AWOL, drug use and alcohol abuse. No mention was made of the higher retention rates for women shown earlier in this report, which also result in greater productive time per person. Women may have about the same total lost time as men on the average; but, much more importantly, women would appear to have a propensity for much less lost time, than the low quality male accessions they would replace. The Army has initiated studies to obtain comparative data on lost time for men and women.

The Army is conducting tests which are showing interesting results. One such Army test, called Women Content in Units Test (MAX WAC), has been examining the performance of company level TOE units with various mixes of women. Preliminary results indicate that there is no significant difference in performance of units because of the percentage of women assigned. The tests will involve units with up to 35% women.

The Army has formed a steering group of general officers whose job it is to oversee the expansion of the number of women in the Army. The steering group also monitors ongoing programs. This group has cautioned the Army to be careful not to expand too rapidly and too far. They have also initiated a number of actions which have expanded the role of women in the Army, as the following examples indicate:

- Changing policy for command to permit women to command men.
- Causing enlistment options to be the same for men and women where feasible.
- Opening additional skill areas to women.
- Modifying overseas tour lengths to make them the same for men and women.
- Revising design criteria for barracks construction to make new barracks suitable for both men and women.

Martin Binkin and Shirley Bach in their study at the Brookings Institution entitled, Women and the Military, concluded that as many as 175,000 Army enlisted jobs could be filled by women without disrupting male career patterns, if women's assignments to non-combat jobs behind the brigade rear boundry were not restricted. The data submitted by the Army and summarized in the enlisted column of Table 20. indicate that there are 285,000 non-combat enlisted positions in the Army. These are reduced to 54,000 enlisted positions for women by the parametric analysis discussed above. A more balanced approach to the personnel management constraints in the Army procedure would increase that 54,000 considerably. How much is not clear at this time, but the Binkin-Bach 175,000 number may not be an unreasonable upper limit.

If officers are considered as well as enlisted, the upper limit on the number of women which can ultimately be used in the present Army is probably between 59,000 and 200,000. It is clear from examining the Army's parametric analysis that the 8% enlisted accession rate for women associated with 59,000 women positions is over-controlled. Relatively small adjustments in the limits imposed from brigade through corps for deployable units, or wider tolerences for promotion, rotation, and management flexibility, could increase the Army limit to 80,000, including 68,000 enlisted. This would permit enlisted female accessions of about 12% of total non-prior service enlisted accessions. Whether the correct number is 80,000 or 100,000 women or even the Binkin-Bach 200,000 women is not clear. Analysis of the impact on the Army as the number of women increase will be an important part of deciding that final number.

Table 23 summarizes the number of enlisted women in the Army after reaching steady state and the approximate percent of current enlisted accessions which would be necessary to reach and sustain those levels, under the various limiting cases discussed above:

TABLE 23

ALTERNATIVES FOR ENLISTED WOMEN IN THE ARMY

	Maximum Steady State Enlisted Women	Approximate Percent of Enlisted Accessions Which Would Need to be Female
Binkin-Bach Estimate	175,000	30%
Study Alternative Case	85,000	15%
Estimate from Adjustments	68,000	12%
Army Data*	57,000	9%
Army Plan	50,400	8%

* Table 20 adjusted for Individuals, see pages 32-33.

It will take the Army time to assimilate the four-fold increase it has made in women content in the last five years. Much of the problem in adjusting to women in new roles and units is psychological and requires some time for acceptance. The Army's approach is to move very slowly in the next few years.

Under the Army's plan to stabilize the number of enlisted women in the Army at 50,400, the number of accessions would actually drop from an FY 74-76 average of 16,400 per year to 14,900 in FY 79-82. This drop will occur as many of the current E-2 through E-4 women become more senior Non Commissioned Officers (NCOs). If the Army can use something near the current number of women in pay grades E-2 through E-4 each year, the overall number of enlisted women should be able to increase as more women become NCOs.

One solution to the women strength issue is to stabilize the annual female enlisted accession rate, and let the number of women in the Army grow gradually. As more experience is gained with these higher levels of female strength, accession plans could be reevaluated.

We have very little experience operating with high percentages of women. Even at the peak of World War II, the Army only had 2.2% women, compared to 6.5% on June 30, 1976. It appears the Army can use more enlisted women. They will help make the all-volunteer force succeed and will save money. But the growth must be watched to ensure that the fighting capability of the Army is strengthened, not weakened by additional enlisted women.

Navy

Table 24 summarizes the Navy data input from the 1977 force structure. (The meaning of rows A through I are discussed on pages 15-17.)

TABLE 24

SUMMARY OF NAVY DATA SUBMISSION (000s)

		Enlisted	Officer	Total
Positions Authorized for End FY 77				
A	Total Structure Positions	381.8	53.7	435.5
B	Spaces in Combat Units	229.9	16.1	248.5
C	Spaces in Combat Support Units		2.6	
D	Remainder A-(B+C)	151.9	35.1	187.0
E	Rotation Base	84.2	3.8	87.9
F	Physiological Limitations	0	0	0
G	Other Limitations*	38.0	14.8	52.8
H	Open to Women, Net D-(E+F+G)	29.7	16.5	46.2
Strength				
I	Actual Strength 30 Sept. 1976**			
	a. In structure positions***	15.8	3.3	19.1
	b. Individuals	3.5	.3	3.8
	c. Total	19.3	3.6	22.8

* Some of these positions are also restricted because of Section 6015 of Title 10, which precludes women from assignment to ships of the Navy except hospital ships and transports.

** Enlisted strength was adjusted between individuals and structure positions based on total distribution for men and women.

*** Women in structure positions, line Ia, should be compared with net structure positions, line H.

From Table 24 it can be seen that two major factors limit the Navy in the number of women which can be employed.

First, positions in combat and combat support ships and aircraft squadrons are closed to women. Section 6015 of Title 10 precludes the assignment of women to combatant aircraft and ships, other than hospital ships and transports. Since the Navy has no hospital ships or transports, this provision of the law excludes women from all operational units except a few aircraft squadrons and tug boats. This restriction eliminated over 250,000 positions shown in lines B, C, and G, of Table 24.

Second, the rotation base to provide shore duty for the men who serve in positions aboard ship eliminates another 88,000 positions. Indirectly, these restrictions may also be attributed to Section 6015. If women could serve aboard ships, they could also serve in the rotation base supporting the positions aboard ships.

Thus the effect of Section 6015 is to exclude women from more than three-quarters of the positions in the Navy.

Many ships of the Navy could accommodate women easily. If Section 6015 were repealed, women could serve on support ships without being directly involved in combat. Even if women served on major combatants, in the same skills they now perform ashore, their risk in case of war would be little different than the risk to Navy women in some shore jobs.

For instance in Vietnam, the chance of the enemy inflicting wounds on a woman aircontroller in Danang or Saigon was probably higher than on a male aircontroller on an aircraft carrier operating at either Yankee or Dixie station. The chance of becoming a casualty in a major war with the USSR is probably as high for a woman yeoman assigned to the NATO headquarters in Brussels, as to a male yeoman assigned to a replenishment ship in the central Atlantic.

The Navy has submitted legislation to slightly modify 6015. Women could serve in vessels such as training and research ships; but it would not permit women on auxillaries such as oilers and replenishment ships or on combatants such as cruisers and aircraft carriers, except for temporary duty. It would open 2,000-3,000 positions to women. To make more significant changes, Section 6015 would need to be repealed or drastically modified.

Senator William Proxmire proposed an amendment to the Military Procurement Authorization Act of 1978 on the floor of the Senate which would have implemented the Navy proposal and would have given the Secretary of Defense authority to determine which positions in the armed forces would be open to women. The Department of Defense supported that amendment. However, at the suggestion of Senator Sam Nunn, Senator Proxmire modified his amendment to direct the Secretary of Defense to study the issue and report within six months a definition of the term "combat" and make legislative recommendations. The Senate passed the modification. 1/

1/ Congressional Record, 95th Congress, 1st Session, vol. 123, No. 84, May 17, 1977, S7785-S7790.

Table 25 shows the current Navy proposal.

TABLE 25

TOTAL NUMBER OF NAVY WOMEN ON ACTIVE DUTY AT END FY (000)
(MARCH, 1977 PLAN)

	Actual		Projected						
	FY 76	FY TQ	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83
Officers	3.5	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0
Enlisted	19.2	19.3	19.6	20.5	22.5	24.7	26.4	28.5	30.3
TOTAL	22.7	22.8	23.5	24.5	26.7	29.1	31.0	33.3	35.4

In Appendix C, the Navy presents a convincing argument that the expansion of the number of women should not exceed their plan, which would reach 35,400 women, including officers, by the end of fiscal year 1983.

The Navy states that their plan will use women to fill jobs ashore to the maximum extent feasible within limitations on male sea/shore rotation, force structure, and current female statistical information and modeling. The Navy also cautions that they know very little about the likelihood of certain women to stay in the Service -- especially those in non-traditional skills.

There are some berthing problems which the Navy will have to identify and correct in order to meet their new plan. In addition, the Navy warns that it is not possible to quantify the impact of more women on unit effectiveness or personnel management. The reduction in positions ashore will have some adverse impact on male reenlistment. This is expected even in enlisted ratings that have more shore duty than sea duty. The extent of this impact is difficult to estimate. Additional discussion of these and related problems submitted by the Navy is provided in Appendix C.

Binkin and Bach estimate the Navy's potential to use enlisted women, to be 42,000, unless the current restrictions on sea assignment are removed.

Clearly the major action needed to provide better use of women in the Navy and permit them to make larger contributions to the defense effort of the Navy lies in obtaining repeal of Section 6015 of Title 10. In the meantime, the Navy's current plan, moving to 33,300 women by 1982 and 35,400 by 1983, appears to be near the maximum which can be expected as long as Section 6015 is in force.

Air Force

Table 26 presents a summary of the Air Force data submission. (The meaning of rows A through I are discussed on pages 15-17.)

TABLE 26

SUMMARY OF AIR FORCE DATA SUBMISSION (000s)

Positions Authorized for End FY 77	Enlisted	Officer	Total
A Structure Positions	415.3	90.2	505.5
B Combat Positions which Exclude Women)	27.4	36.3	63.7
C Combat Support which Exclude Women)			
D Remainder A-(B+C)	387.9	53.8	441.7
E Rotation Base	0	0	0
F Physiological Limits	0	0	0
G Other Limits (Facilities)	72.1	*	72.2
H Net D-(E+F+G)	315.8	53.8	369.6
Strength			
I Actual Women 30 Sept. 1976			
a. Women in Structure Positions	29.7	5.0	34.7
b. Individual	1.2	*	1.2
c. Total Women	31.0	5.0	36.0

* Less than 50.

NOTE: Women in structure positions, line Ia, should be compared with net spaces, line H.

Table 26 shows that there are more officer positions limited because of combat and combat support than enlisted. Unlike the other services, in the Air Force the officers carry the brunt of the combat duty. Aircrews are very officer intensive, and they are the ones who engage the enemy.

The only other constraint on the assignment of women is 72,000 enlisted positions overseas for which there are inadequate facilities for single women. This represents some 45% of such overseas enlisted authorizations. The Air Force has very strict rules on the joint use of facilities by men and women, which they believe are necessary for adequate privacy.

The Air Force has moved forward in providing equal opportunity for women within the constraints of Section 8549 of Title 10, which preclude women from serving in the crews of combat aircraft. Since the law was passed in 1948, the Air Force has considered all aircraft to be combat aircraft and has precluded women from serving on flight crews, although some women have served as flight attendants, especially on medevac flights. In 1976, the Air Force revised their interpretation of the law and initiated a test of women as pilots and navigators. The first group of women entered flight training in September 1976. The results of this test will provide experience on which to base future policies and objectives concerning women in aircrew positions.

The Air Force also restricts women from serving on ICBM crews, because such positions are combat related. This represents less than 1% of the positions in the Air Force and will have little impact on the number of enlisted women the Air Force can use. However, it is a strict interpretation of combat exclusion.

As shown on Table 26, the Air Force has over 369,000 officer and enlisted positions which could be filled by women. Some of them require considerable physical strength, and thus disqualify most women. It is the Air Force policy to try to identify the restricting factor in nonsex criteria and permit any man or woman to fill the position, as long as he or she meets those criteria. For example, a position may require an individual to lift 70 pounds to a height of six feet. Women and men who can meet the requirement are equally eligible.

This procedure appears to be the best way to handle the problem, but it does invalidate use of the numbers on Line "H" of Table 26 to conclude how many women can be effectively used by the Air Force.

The Air Force, like the Army and Navy, has experienced rapid and large growth in the number of women, increasing from 16,000 in 1972 to over 38,000 at present. The Air Force plans to continue increasing the number of enlisted women, but at a slower pace than in recent years. Table 27 shows the Air Force's current plan.

TABLE 27

TOTAL NUMBER OF AIR FORCE WOMEN ON ACTIVE DUTY AT END FY (000)
(MARCH, 1977 PLAN)

	Actual		Projected					
	FY 76	FY TQ	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82
Officers	4.8	5.0	5.4	5.8	6.5	7.2	7.9	8.6
Enlisted	29.2	31.0	34.6	40.2	42.3	44.3	46.3	48.2
TOTAL	34.0	36.0	40.0	46.0	48.8	51.5	54.2	56.8

The Air Force is currently in the middle of a major program to expand the number of women in the Air Force. The largest increase in end strength will occur in FY 1978, increasing the number of officer and enlisted women in the Air Force from 40,000 in 1977 to the 46,000 level in 1978. In response to the request for data for this study, the Air Force submitted their current plan, to be initiated in 1979, which continues to increase the number of women on active duty to reach 56,800 by 1982.

There appears to be considerable room for growth in the number of women in the Air Force. Binkin and Bach estimate a potential for the Air Force of up to 366,000 positions which could be filled by enlisted women. That would appear to be consistent with the findings of this study, but we would probably never want to fill all those positions with women. The major question is how fast should the number of women in the Air Force be increased.

There is a possible side benefit of reducing the number of high quality men recruited by the Air Force. Some of the high quality men not recruited by the Air Force will join one of the other Services who have more trouble recruiting sufficient numbers of such men. A 1973 study made in OSD(M&RA) estimated that one of every four qualified men rejected by the Air Force would join one of the other three Services. Weighed in terms of marginal recruiting costs, this does not represent very large savings. This spillover effect does not justify changing the number of women recruited by the Air Force. Any increase in Air Force women should be justified on the basis of its impact on the Air Force.

The Air Force arguments for its proposed growth plan are provided at Appendix D. Additional problems, including those related to pregnancy and women with small children are discussed as well. Again, it is clear that more information is needed on these subjects, as we move to larger numbers of women in the military.

Marine Corps

The data submitted by the Marine Corps is summarized in Table 28. (The meaning of rows A through I are discussed on pages 15-17.)

TABLE 28

SUMMARY OF MARINE CORPS DATA SUBMISSION (000s)

Positions Authroized for End FY 77	Enlisted	Officer	Total
A Total Structure Positions	137.8	15.0	152.8
B Combat (Fleet Marine Force)	98.8	8.5	107.3
C Combat Support (Non-FMF)	1.3	.9	2.2
D Remainder A-(B+C)	37.7	5.6	43.3
E Rotation Base (not in B or C)	28.4	3.9	32.3
F Physiological Limits	0	0	0
G Other Limits	2.4	.4	2.8
H Net D-(E+F+G)	6.9	.6	7.5
Strength			
I Actual Strength 30 Sept. 1976			
a. In Structure Positions	2.4	.4	2.8
b. Individuals	.6	*	.7
c. Total	3.1	.4	3.5

* Less than 50.

Many of the problems discussed in the Navy section concerning restrictions on shipboard duty under Section 6015 of Title 10 apply to the Marine Corps whose people are also expected to serve aboard ships. The Marine Corps included in the combat classification (line "B" of Table 28) all of the Force Troops of the Atlantic and Pacific Fleets, all the positions in the three Marine divisions, the three Marine air wings and the three Marine force service support groups. Future analysis should consider whether some of the positions in these organizations can be filled by women. Support units in Army divisions now have up to 10% women.

Under combat support in line "C" of Table 28, the Marine Corps included all of the remaining positions requiring infantry, artillery, tank and amphibian tractor and pilots and flight crews. All of these MOSs are closed to women.

As mentioned previously in the general analysis, the Marine Corps did not increase its percentage of women in the early 1970s as much as the other Services. The Marine Corps' current plan, which more than doubles the 1976 strength by 1982, is presented in Table 29.

TABLE 29

TOTAL NUMBER OF MARINE CORPS WOMEN ON ACTIVE DUTY AT END FY (000)
(MARCH, 1977 PLAN)

	Actual		Projected					
	FY 76	FY TQ	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82
Officers	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6
Enlisted	3.1	3.1	3.5	3.7	4.6	5.3	5.8	6.7
TOTAL	3.4	3.5	3.9	4.2	5.1	5.8	6.3	7.3

The Marine Corps has had more difficulty than any other Service in meeting recruiting goals. Numerical targets have been reduced to ensure acceptable quality. Recruiting more high quality women could help. On the other hand, it could exacerbate another problem the Marines have: Many Marines now face alternating overseas tours away from their families. If additional women were assigned primarily to positions in the United States, this rotational burden on men would be made worse. In moving from 3,400 military women in 1976 to 7,300 in 1982, the Marine Corps needs to find ways to relieve the rotation pressure on their men. If they do this, they may be able to use effectively more than 7,300 women.

Binkin and Bach estimate a potential of 15,000 women for the Marine Corps. That appears to be high, unless more positions can be made available to women in the divisions, wings, support groups and sea going forces.

The Marine Corps is still experiencing problems providing adequate billeting, since many of their barracks are not suited for the joint use of men and women. As the number of women increase, adjustments may be necessary in living facilities. Additional comments are in Appendix E.

This analysis of the Marine Corps indicates that they should not expand the number of women more rapidly than now planned.

CONCLUSIONS

During the past five years, all of the Services except the Marine Corps have increased the number of women several-fold. These increases have been made in spite of major reductions in the force structure and a shift of positions from support to combat units. The Marine Corps is now planning to more than double its number of women by 1982.

The Navy and the Air Force are planning more modest growth patterns over the next five years, but are still planning for 46% and 50% increases, respectively, by 1982.

The Army, which made the largest increases over the last five years, now has both a larger absolute number of women and a larger percentage of the positions in their force filled by women, than any other Service. The current Army plan, however, calls for only 20% growth over the next five years and much of that is concentrated in the officer ranks.

In view of the reduction in the number of young men expected in the labor market in the 1980s and 1990s, it would seem prudent that the Army should pursue a more ambitious program to find ways to use more high quality women to meet their enlisted requirements. It would appear that more realistic constraints in their personnel programs would permit significantly larger increases by 1982.

The cost of trying to maintain the current levels of male high school graduates could become prohibitive in the next few years.

During the course of this study it has become clear that there are still many unanswered questions, including:

-- What are the costs in terms of flexibility, response to uncertainty, readiness, and deployability of having more women in the military who are precluded from combat service?

-- What is the impact of women with small children on these factors?

-- What is the comparative lost time of men and women?

-- Will more or fewer women be willing to enlist, if they are required to serve in combat support units, aboard ships, or in non-traditional skills?

APPENDIX A

Request for Data from Services

Item	Page
John F. Ahearne Memo of 10 February 1977	A-3
Request for Information from Services	A-5
Formats A through I	A-7
Formats J, K, L	A-10
Format M	A-11

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

MANPOWER AND
RESERVE AFFAIRS

10 FEB 1977

MEMORANDUM FOR ASSISTANT SECRETARIES OF MILITARY DEPARTMENTS (M&RA)

SUBJECT: Study for Secretary Brown on Utilization of Women in the Armed Forces

Secretary Brown has requested that we complete by March 18, 1977, a priority analysis of military manpower utilization to determine where we can reduce requirements and realize personnel management economies. One area to be considered is utilization of women. The Services are requested to assist in five aspects of the study: provide data, structure and evaluate an alternative plan that would double the number of women in Service by 1982, discuss known supply limitations, submit comparative unit performance data, and discuss other pertinent problems. Attached is an outline of the intended study effort and more detail on the requested assistance.

My action officer for this study is CDR Richard Hunter, 3D970, X-79106. In order to meet the 18 March 1977 suspense date, Service inputs must be received no later than 0930, Saturday, 5 March 1977.

Enclosure

J. J. Ahearne

John [illegible]
Principal Deputy

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

5. Utilization of Women

Study Leader: DASD(Planning and Requirements).

Potential Benefits: Reduced recruiting costs and enlistment bonuses as a result of increased supply of high-quality enlistees, as well as improved force effectiveness.

Potential Costs/Disadvantages: Reduced job performance, increased numbers of people with restricted assignment potential, increased rotation demand on military men.

Sources of Information: 1972 Study by Central All-Volunteer Force Task Force; recent Service experience and analyses; and, possibly, current Brookings study. We will need to task Services for data, probably in two stages, the first of which is geared to the March 18 study completion date.

Analytical Approach:

1. Short Term

a. Potential for increased use of women: Review what jobs are closed to women as a result of what laws and what policies. Next, determine how many of the remaining positions are needed to provide a CONUS rotation base for men filling those jobs which are closed to women. After this review, we will know the number of positions which could be filled by women and what percentage of those positions are currently filled by women. This review should be broken down by Service, by occupation, separately for officers and enlisted.

b. Supply: Define the potential supply of women enlistees. Determine effect of tightening/loosening enlistment screens, and of going to same enlistment screens as for men.

c. Costs: Women are now cheaper to recruit, may have different turn-over rate, different dependency status, medical costs, other cost differences.

d. Performance: Units with women may perform better because women are smarter and better educated than the men they would replace, or worse because women are smaller and weaker. Develop table showing types of jobs with special mental or physical demands. Assess impact on performance of changing number of women in these jobs. Gather and assess data on unit and individual performance. Compare women and men with respect to job performance, behavior, absenteeism, other relevant measures.

e. Options: Structure and evaluate alternatives that would use significantly different numbers of women.

2. Longer Term: In the short term, we can only quickly evaluate the Service inputs. To meet the March 18 suspense, we will take what the Services provide us, check for obvious errors and glaring inconsistencies, and make recommendations. A more detailed analysis will take longer.

Other Points: We will not tackle the issue of whether women should serve in combat jobs, but will review what should be included in the definition of combat and combat support.

REQUEST FOR INFORMATION FROM SERVICES

The Services are requested to contribute to the Utilization of Women study by providing input in the following five areas by 0930, Saturday, 5 March 1977:

I. DATA. Provide FY 1977 data in the formats A through I, attached. Format A addresses the total number of military structured spaces. Formats B and C address spaces in combat and combat support units. Format D is the net of A-(B+C). Formats E through G address the remaining spaces which are not open to women because of rotation base, physiological limits and other considerations. Format H contains the net upper limit of structure spaces which could be filled by women. Format I contains the actual number of women at the beginning of FY 1977. If there are any changes planned that would preclude use of the FY 1977 data in structuring and evaluating alternatives for FY 1978-1982, provide separate tables for FY 1982.

II. ALTERNATIVE. Provide and evaluate an alternative plan to use additional women. The plan should assume the Services increase the numbers of women to the following levels:

Assumed Number of Women for Impact Analysis
Strength (000) at end FY

	ACTUAL	ASSUMED					
	1976	1977	1978	1979	1980	1981	1982
Army	50	*	*	*	*	*	100
Navy	23	*	*	*	*	*	46
Air Force	34	*	*	*	*	*	68
Marine Corps	3	*	*	*	*	*	6

* Service to provide numbers for intermediate years to reach FY 1982 assumed goal.

The analysis of the plan should show the number of women actually in the force at end of the transition quarter and projected under the plan for FY 1977 and FY 1982 for each two digit DoD occupational group, and by major activity (DPPC or other category convenient to Service) in the Formats J, K, L, attached. The analysis should also compare in Format M the total number of women assumed in the Alternative Plan with the number of women currently projected for each of the next five years. It also should provide an evaluation of the Alternative Plan's impact on personnel management and unit effectiveness. Data should be as specific and as quantified as practical.

III. SUPPLY. The Service should list any occupational groups or skills for which the Service has been unable to meet its programmed number for

women. OSD will evaluate data on women by test score and make other estimates of possible supply limitations. For the analysis in Part II, the Services should assume that they are not supply limited.

IV. PERFORMANCE. The Services should submit any studies available on the comparative performance of units with only men assigned and with both men and women assigned.

V. OTHER PROBLEMS. The Services should discuss other problems related to increasing the number of women in uniform. Supporting data should be as specific and as quantified as practical.

FORMATS A THROUGH I

Each format, A through I, should list requested data in the following structure using two digit DoD occupational groups.

Format Letter ---

Name

Enlisted

DoD Occupational Group Code	Name	E1*	E2*	E3*	E4*	E5	E6	E7	E8	E9	Total
01	Infantry										
02	Armor & Amphibious										
03	Combat Engineer										
04	Artillery/Gunnery										
05	Combat Aircrew										
06	Seamanship										
0-Total	Infantry, Guncrew Seamenship Specialist										
10	Radio/Radar										
11	Fire Control (Nonmiss)										
12	Missile Guidance										
13	Sonar Equipment										
14	Nuclear Weapons										
15	ADP Computers										
16	Teletype										
19	Other Electronic										
1 Total	Electronic Equip Repair etc.										
Enlisted Total											

* Lower enlisted may be grouped together if more convenient.

FORMATS A THROUGH I (CONT'D)

Format Letter		Name					Officer											
DoD Occupational Group Code	Name	W1	W2	W3	W4	Subtotal	01	02	03	04	05	06	07	08	09	010	Sub-total	TOTAL
1A	General Flag																	
1B	Executive																	
1 Total	General																	
2A	Fighter/Bomber																	
2B	Other Fixed Wing																	
2C	Helicopter Pilot																	
2D	Aircraft Crew																	
2E	Ground & Naval																	
2F	Missiles																	
2G	Operational Staff																	
2 Total	Tactical Operations																	
3A	Military Intelligence																	
3B	Communications Intelligence																	
3C	Counterintelligence																	
3 Total	Intelligence																	
	etc																	
Officer Total																		
TOTAL																		

FORMAT	NAME	DESCRIPTION
A	TOTAL	FY 1977 total number of military positions in each DoD occupation group.
B	COMBAT UNIT	FY 1977 total number of military positions in combat units* which would exclude women being assigned because of law or policy.
C.	COMBAT SUPPORT UNIT	FY 1977 total number of military positions in combat support units* which would exclude women being assigned because of law or policy.
D	REMAINDER	Formats A-(B+C).
E	ROTATION BASE	FY 1977 total number of military positions not in Format B or C, from which women are excluded in order to provide rotation base for the men filling positions listed in Formats B and C.
F	PHYSIOLOGICAL LIMITS	FY 1977 total military positions not in Formats B, C, or E from which women are excluded for reasons of size or strength.
G	OTHER LIMITS	FY 1977 total number of military positions not in Formats B, C, E, or F from which women are excluded for other reasons, and list reasons.
H	NET	Formats D-(E+F+G).
I	ACTUALS	Total number of women in positions by DoD occupational group and a separate entry for those in individuals account positions as of 30 September 1976.

* Define and list combat units and combat support units (by largest aggregation to which classification applies to all positions).

NOTE: Formats A through H address military structure spaces.

FORMAT J, K, L

Women on Active Duty at End FY __ by DoD Occupation Code and Major Activity

DoD Occupation Group Code	Name	DPPC or other category convenient to Service
01	Infantry	
02	Armor & Amphibious	
03	Combat Engineer	
04	Artillery/Gunnery	
05	Combat Aircrew	
06	Seamanship	
0-Total	Infantry, Guncrew Seamenship Specialist	
10	Radio/Radar	
11	Fire Control (Nonmiss)	
	etc	
Enlisted Total		
1A	General Flag	
1B	Executive	
1 Total	General	
2A	Fighter/Bomber	
	etc	
Officer Total		
Individuals		
TOTAL		

NOTE: Format J is FY TQ Actual
Format K is FY 77 Alternative Plan
Format L is FY 82 Alternative Plan

FORMAT M

Total Number of women on Active Duty at End FY (000)

	Actual		Projected					
	FY 76	FY TQ	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82
Alternative Plan								
Current Plan								
Difference	0	0						

APPENDIX B

Additional Army Comments

Item	Page
Major General Joseph P. Kingston Memo to ASD(M&RA)	B-3
Utilization of Women in the Army (Army Comments)	B-4
Time Delay from Accessions to Stabilization	B-7
Outline of Army's Parametric Analysis	B-7
The Army's Women Enlisted Expansion Model (WEEM)	B-12
Combat and Combat Support Skills which Exclude Women	B-15
Non-Combat Skills which Preclude Women	B-16

DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR PERSONNEL
WASHINGTON, D.C. 20310

DAPE-ZB

MEMORANDUM THRU CHIEF OF STAFF, ARMY
ASSISTANT SECRETARY OF THE ARMY (M&RA)

FOR ASSISTANT SECRETARY OF DEFENSE (M&RA)

SUBJECT: Study for Secretary Brown on Utilization of Women in the Armed Forces

1. This memorandum responds to your requests regarding the Army's current plan for utilization of women and the OSD requested expanded plan which doubles the number of females in the active force by 1982.

2. The Army in a an effort to maximize the use of women, has studied the question in great detail. These studies indicate that the Army should not increase its women content over current plan at this time. They highlight the need for systematic study of the effectiveness of women in Army units and their impact on mission performance under conditions of deployment or in time of war. In addition, data must be collected and analyzed to determine the cost effectiveness of women soldiers. These efforts are underway. When the results of these studies become sufficiently clear, the Army will adjust its female force accordingly.

3. We should err on the side of national security until such time as we have confidence that the basic mission of the Army can be accomplished with significantly more female content in the active force.

RECOMMEND APPROVAL - VOSA

Incl

8 MAR 1977

Joseph P. Kingston

W. L. KENDALL
Lt Gen
Deputy to Director
of Army Staff

UTILIZATION OF WOMEN IN THE ARMY

The Army, which has the most arduous mission of land combat, today stands in the forefront of all the services with regard to the numbers of women being utilized and skills open to them. In the past five years, a fourfold increase has been made. This increase has placed women in skills, types of units, and locations on the battlefield where they have never served before. We have reviewed the recent past and the U.S. Army's women content and use of women exceeds every other army save Israel whose situation differs considerably from ours. None--including Israel--use women in a direct combat role. Our present position is that, while the Army has a long history of employing women in the force, only in recent years have non-traditional fields been extensively opened to them. Since then, numerous issues have been identified which require resolution. Some examples are the impact of women on unit readiness and deployability especially when pregnancy and sole parenthood are considered; limitations on the physical capabilities (strength, stamina, and endurance) of women; the requirement to develop and implement enhanced physical and tactical training programs for women to adequately prepare them for their expanded Army role; the need for males in the structure to provide for early combat replacement flow in the event of emergency; the impact on the reserve components, especially the Individual Ready Reserve, in view of the fact that women currently have no reserve obligation; and the need to assess the psychological and sociological factors involved in mixing males and females in the combat environment.

To give a degree of perspective to some of the problems indicated, it is enlightening to look at some of the details. With regard to pregnancy, Army data indicate that [redacted] 6.6% would be nondeployable (at any one time) because of pregnancy. Additionally, indications are that the number of women remaining on active duty during pregnancy and with dependents is rising, further complicating the Army's problem. In the area of performance, it has become apparent that the Army has women working in skills for which they are not physically capable. This has been brought out in surveys (based on field investigations) by Major Commanders and a General Accounting Office report. Until the physical requirements have been reassessed for each military skill and a screening method designed to evaluate potential accessions, no action should be taken to significantly increase women accessions. Other areas in which extensive research is required are in the psychological and sociological fields. While the Army has considerable information with regard to male performance on the battlefield, the surface has not been scratched with regard to women, and, also, on the impact of mixing males and females in units. The Women in the Army (WITA) Study, which was recently distributed to your office, expands on these topics and others. It outlines in great detail many of the factors which should be considered when reviewing women's programs and the Army's current study efforts with regard to women.

The Army's personnel management experience over the past five years has been that it is not desirable to assimilate women at an excessive rate. To do so results in unacceptable aberrations in the force such as promotion

stagnation, skill mismatch, and grade and skill imbalances. In order to rectify such shortcomings, it is necessary to implement undesirable personnel policies such as denying reenlistment to highly qualified personnel or offering retraining in other skills, forcing reclassification, establishing unequal promotion requirements, and reducitons in force.

Another significant facet of this situation is the availability of female personnel to fill the spaces which have been identified in the structure. Starting with enlisted personnel, the spaces are spread throughout the grade structure from E-1 to E-9 (an analogous situation exists in the officer structure). In order to fill these spaces with qualified personnel, an aging process is required. At red Tab A is a schematic which graphically depicts this process. The vertical axis shows the percentage of the desired goal which the current force provides. The horizontal axis shows the growth over the years of the various grade levels until the goal is reached. For a force of approximately 85,000 enlisted women, under present promotion guidelines, it would not be possible to reach the required levels of noncommissioned officers until 1991. [See page A-7]

In order to obtain the required data to more completely define the optimal size and use of the female force, the Army has ongoing the following actions:

The Army Research Institute (ARI) is conducting a field test (MAXWAC Test) to determine the validity of the TRADOC established maximum female enlisted content of units. To date, 25 company size units of 55 projected have been tested. The estimated completion date is 1 October 1977. A similar test for women officers is in the planning stage.

Training and Doctrine Command (TRADOC) completed in 1976 a general core program of instruction (augmented as required to meet specific male and female needs) applicable to the Basic Initial Entry Training (BIET) of both male and female soldiers. VCSA approved the concept in February 1977 and TRADOC is developing a cost analysis and implementation plan.

TRADOC is currently conducting a Physical Training Study to establish training policy and programs for <u>all</u> personnel which are compatible with AR 600-9 (The Army Physical Fitness and Weight Control Program). This effort will establish higher levels of physical fitness for women. Estimated completion date is February 1978. Some data available earlier.

In connection with the effort above, the Office of the Surgeon General has initiated research to establish the physical fitness standards needed to perform the tasks required in each of the military occupational specialties (MOS). This effort will result in screening procedures for new accessions to evaluate general physical fitness (as opposed to medical fitness) relating to strength, stamina, muscular coordination, vision, hearing, and other physical capacities for general military service and for specific MOS. Initial phase completed by Jan 78: Pretesting all was by May 77.

The Army Research Institute (ARI) has established a research project dedicated to examining the role of women in the Army. The goal is to provide a firm base of information to support policy on personnel management of female soldiers which is comparable to that available on male soldiers. A five year coordinated program is currently under development. (First useful output expected in about one year)

In order to assure the viability of all aspects of the women's program, ODCSPER has established a standing committee to review all life cycle events and related activities. The objective is to identify all significant issues and to insure that appropriate policy exists or to recommend remedial action.

ODCSPER is sponsoring a Women in the Army Symposium on 11-12 April 1977 with representation by all major Army commands. Invitations have also been extended to OSD agencies and the other services.

The Army is supporting an OSD initiative on a bill which would give women accessions the same six-year military obligation as males. It died in committee in the 94th Congress but it will be resubmitted as a part of the DOD package to the 95th Congress.

DATA. (Breakout of Military Structure Spaces and Actual Strengths.) At red Tab B is FY 1977 data on enlisted personnel and at red Tab C is FY 1977 data on officers in the formats requested.

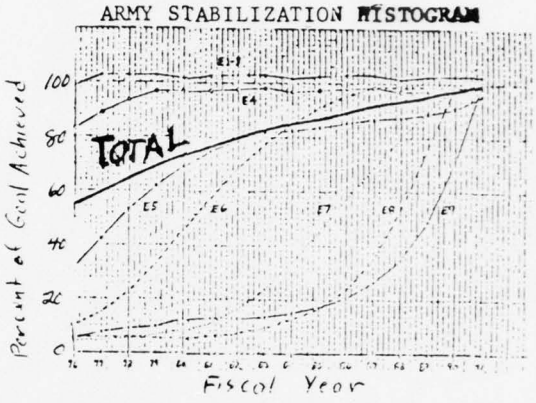
ALTERNATIVE. (OSD Requested Alternative Plan to Use Additional Women.) At red Tab D is the alternative plan to increase utilization of women in the Army to 100,000 in FY 1982. The spread of female content of 100,000 in the OSD requested Alternative Plan has been effected without regard to current management factors used in the Army's analytical procedures to determine optimum end strength and annual accession flow. In order to accommodate this expanded female content in the force structure, a number of assumptions, unsupported by experience factors or test analysis, were made. Content was spread in this manner: 15,000 female officers and 85,000 enlisted females. Neither the parametric analysis, the Women's Enlisted Expansion Model (WEEM) nor the Women Officer Strength Model (WOSM) support a force content of that magnitude. There is a need for a systematic collection and analysis of empirical data regarding cost, deployability and mission performance impact at a high female force content.

In summary, the Army recognizes that within the framework of its current policies it may be possible to accommodate increases in the female content beyond the current goals. However, the number of women which finally can be integrated into the force is unknown. It is the Army's position that any strength increase should not be arbitrary; rather it should be based on the information which we are developing in our current research initiatives. Until these data become available, the Army strongly recommends the continuation of the current phased plan to expand the use of women. This would result in a projected end strength of approximately 59,400 (50,400 (by FY 1979) enlisted, 9,000 officers by FY 1982). The Army believes that this is a sensible approach based on the tenets of equal opportunity for women and the necessity to field an Army which can accomplish its primary mission of land combat.

4 Incl
as

TIME DELAY FROM ACCESSIONS TO STABLIZATION

As part of their submission, the Army provided the following histogram showing the number of years required for the various grades to stabilize after a major change. The following histogram shows that an increase to about 85,000 enlisted women in 1976 would require 15 years to completely stabilize. Paygrades E1 through E3 stabilize almost immediately. Paygrade E9 requires 15 years. Because of the relatively larger percentage of the force in the junior paygrades, the total force would be about 80% stabilized in seven years.



OUTLINE OF THE ARMY'S PARAMETRIC ANALYSIS

The following analysis of the Army's parametric analysis was drawn from chapters 3 and 5 of the Women in the Army Study, Headquarters Department of the Army, 1976.

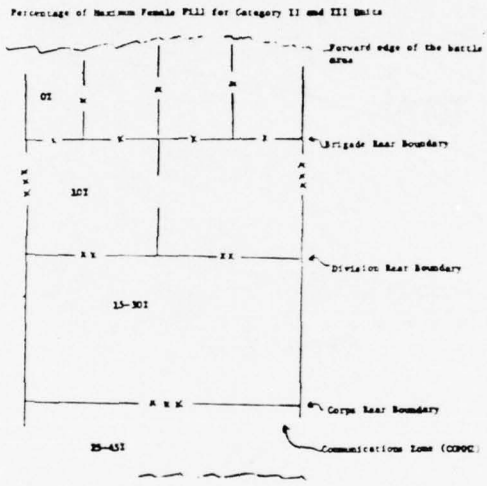
The following six steps summarize the Army's parametric analysis:

Step 1. Obtain total enlisted authorizations from the Personnel Structure and Composition System (PERSACS). It is mandatory to consider known major force structure changes. A trade-off must be made between how far ahead to project authorizations for future requirements and the diminishing accuracy of data the further into the future authorizations are projected. The example

in this study uses authorizations as of 30 September 1979 because it is the most accurate projection of future requirements that reflects the Army's 16 Division Force.

Step 2. Define authorizations to include only those authorizations in MOS's open to enlisted women and in Category II and III TOE units and TDA units. (2,521 of Army's 3,267 units) Limitations shown in Figure 1.

FIGURE 1



Step 3. Apply the unit considerations as developed by TRADOC and reviewed by the MACOMS to each of the 2,521 units to which women can be assigned under current Army policy. Each grade within an MOS is filled up to an MOS ceiling which is based on the WEEM Management Requirement. The MOS ceiling insures that job positions within an MOS are distributed throughout the Army in every possible unit in order to enhance the career opportunities for the enlisted force. The grade/MOS results are added up for the entire unit and compared to the unit ceilings and if necessary are adjusted downward so that the number

of potential positions for enlisted women within a unit does not exceed the ceiling. If the sum of grade/MOS results is less than the unit ceiling, the grade/MOS sum is the number of potential positions for the unit. These results are always rounded up, e.g., 1.15 = 2, to insure that the senior grades with their smaller authorizations are not factored out of the system.
NOTE: There is an option that allows for consideration of interchangeable positions. Based on the change in the procedure for designating interchangeable positions (Section E) and the fact that valid job positions using interchangeable positions are within 4% of the valid job positions without using interchangeable positions, the option was not used.

Steps 1 thru 3 are accomplished by a computerized routine at the US Army Management System Support Agency (USAMSSA). The results are valid job positions for enlisted women that meet the following considerations:

Combat Exclusions

No MOS within a unit is overloaded

No unit is overloaded

The positions determined to this point do not meet career progression and rotation requirements. These positions are, in essence, the maximum number of enlisted women the Army could use, given the current parameters, if the Army never moved anyone or never promoted anyone. These results form the input to WEEM (See Chapter 3, Section IV-H).
NOTE: The application of Steps 1 thru 3 on the Army National Guard and US Army Reserve portion of PERSACS result in a meaningful start-point for the further analysis of enlisted women in the Reserve Components since the Reserve Components are location dependent and the application of WEEM is not relevant.

Step 4. Apply Women Enlisted Expansion Model (WEEM). WEEM develops the maximum number of positions for enlisted women by grade and MOS in units to assure a balanced distribution of enlisted women within policy constraints, as shown in Figure 2.

FIGURE 2

WEEM COMPUTATION FORMAT

I	TOTAL REQUIRED (TQ) ENTERED
II	COMBAT REQUIRED (CR) ENTERED
III	NON-COMBAT REQUIRED (NCR) TQ - CR = NCR
IV	COMBAT RATIO CR / TQ = COMBAT RATIO
V	MALE NON-COMBAT REQUIRED (MNCR) MAXIMUM OF: PROMOTION REQUIREMENT ROTATION REQUIREMENT MANAGEMENT REQUIREMENT
VI	PROMOTION REQUIREMENT (PR) ENTERED
VII	ROTATION REQUIREMENT (RR) ENTERED
VIII	MANAGEMENT FACTOR (MF) ENTERED
IX	MANAGEMENT REQUIREMENT (MR) NCR X MF = MR
X	THEORETICAL WOMEN CONTENT (TWC) NCR - MNCR = TWC
XI	FACTORED INTERCHANGEABLE SPACES (FIS) ENTERED
XII	MAX WOMEN CONTENT (MWC) MWC = MINIMUM OF TWC OR FIS
XIII	GRADE SPACE RATIO (GSR) APPLICATION
XIV	CURRENT WAC CONTENT (CWC) ENTERED
XV	WOMEN POSITIONS AVAILABLE (WPA) MWC - CWC = WPA

Step 5. Reconstruct the force by determining the trained individuals required to support the WEEM output. Current data shows that the following percentages of the total trained force by grade could be expected to be in the trained individuals account (transients, patients, prisoners, and students):

Grade	Trained Individuals
E-2-4	8.76%
E-5	4.15%
E-6	3.85%
E-7	3.29%
E-8	4.03%
E-9	3.46%

These factors are used to determine the reconstructed force or the total trained assets by grade required to provide the trained assets in units as developed in Step 4.

Step 6. Apply Enlisted Force Management Plan (EFMP). EFMP contains the objective grade structure for the enlisted force (the distribution of grades that Congress and DoD will allow the Army to have at any one time) as well as the objective continuation rates (rate at which the force continues service from one particular year of service to the next). The NPS accession requirement to support a total trained requirement by grade plus the trainees required to support the total force can be determined by applying EFMP parameters to Step 5 results. In the example case the NPS accession requirements determined at the end of Step 6 are as follows:

Grade	NPS Requirement to Support Grade
E 2-4	10,900 - 13,700
E 5	21,300 - 29,500
E 6	18,400 - 29,000
E 7	21,600 - 39,200
E 8	19,300 - 33,400
E 9	15,400 - 24,300

In order to have jobs available for enlisted women commensurate with their grade, the lowest NPS requirement must be considered as the yearly accession program. This will facilitate year group management. It is obvious that in the example case the choke point exists at Grades E 2-4. NPS accessions required to support any of the top 5 grades would cause the number of enlisted women in Grades E 2-4 to far exceed the requirement in those grades; therefore, the yearly NPS accession program as determined in the example case should be in the range 10,900 - 13,700.

The Army's Women Enlisted Expansion Model (WEEM)

The following outline is summarized and often quoted from chapter 3 of the Women in the Army Study, Headquarters, Department of the Army, December 1976.

The Women Enlisted Expansion Model (WEEM) used in Step 4 of the parametric analysis resolves all dislocations by designating males over females, thus reducing the number of women until an acceptable personnel management solution is reached. It does not designate women over men in any category, even when small increases could resolve the dislocation. The WEEM estblishes the number of structured spaces which can be filled by women using the following procedures.

Step 1 - To determine authorizations available for females non-combat authorizations are developed by subtracting combat authorizations from total authorizations.

Step 2 - Promotion opportunity for combat/non-combat males is provided by first computing a combat ratio. This is accomplished by dividing the combat authorizations by the total authorizations. The highest combat ratio is then multiplied by the total authorizations providing the combat promotion requirement. The promotion requirement is determined by subtracting the combat promotion requirement from combat authorizations.

Step 3 - The rotation requirement computation was developed to compute the number of women a grade could contain and provide equal rotation opportunity for male and female. To accomplish this the rotation distribution is checked by each theater to insure possible movement of combat personnel. If movement is possible and combat positions do not exist in a theater, an adjusted combat space is calculated to provide movement of all personnel. For example, an adjusted combat space would be generated as follows:

	TOTAL	LONG TOUR	SHORT TOUR	CONUS TOUR
TOTAL	100	30	10	60
NON-CBT	75	30	5	40
CBT	25	0	5	20
ADJ NON-CBT	65	30	5	30
ADJ CBT	35	10	5	20

The adjusted combat space is a ratio of long tour to CONUS positions, then multiplied by the combat CONUS positions. Once the grade has movement potential, the number of females the grade can support and have an acceptable CONUS tour is computed. A mean CONUS tour length of 24 months is used with a minimum CONUS tour length of 12 months. Exceptional cases are considered individually.

Step 4 - The actual rotation requirement is determined by computing the spaces open to women by subtracting the supportable number of women from the non-combat authorizations. Then, compute the combat adjustment by subtracting the combat authorizations from the adjusted combat. The rotation requirement will be the sum of the spaces open to women and the combat adjustment, in cases where spaces open to women exceed the non-combat authorization the latter is the rotation requirement.

Step 5 - To insure male career development, a management requirement is determined by multiplying the non-combat requirements by the assignment consideration.

Step 6 - Male non-combat requirements are determined by using the maximum requirement computed as a result of Step 2 thru 5.

Step 7 - The theoretical content for women is calculated by subtracting the male non-combat requirement from the non-combat requirement.

Step 8 - Interchangeable spaces are compared to the theoretical calculation of the female content to insure that a greater number of women are not reflected in a particular grade than those developed by ODCSPER. The maximum female content is determined by taking the minimum of the theoretical or interchangeable spaces.

Step 9 - A grade space ratio is then computed to insure an aging process that permits normal career progression for females in the MOS. This ratio is computed by dividing the total required force spaces at the highest MOS grade level by the total required spaces at the next lower grade level. The female content at this grade level would then be divided by the ratio to establish the maximum woman content at the next lower grade. This step is repeated at each level down to the lowest grade.

Step 10 - In those cases where a grade reflects a maximum woman content of less than the grade space ratio each grade is restepped. This reverse grade space ratio (ratios derived in reverse order starting at the lowest grade and working up to the highest grade) is used to restructure the maximum woman content into the same proportion as the total strength authorizations. An example of the reverse grade space ratio is as follows:

GRADE	STRENGTH	MAXIMUM WOMAN CONTENT	RATIO	ADJ MAXIMUM WOMAN CONTENT
4	30	5		5
5	20	10	$\frac{20}{30} = .667$	3
6	10	5	$\frac{10}{20} = .5$	2

The maximum woman content for grade 5 is equal to the maximum woman content for grade 4 multiplied by the ratio derived from dividing the strength of grade 5 by grade 4. The process is repeated for each grade.

Step 11 - Total female positions available are computed by subtracting the current woman content from the maximum woman content.

Combat and Combat Support Skills Which Exclude Women

Taken from Annex A of Chapter 4 of the Women in the Army Study, Headquarters, Department of the Army, December 1976.

Combat/Combat Support Skills*

11B	Infantryman
11C	Infantry Indirect Fire Crewman
11D	Armor Reconnaissance Specialist
11E	Armor Crewman
11Z	Maneuver Combat Arms Sergeant
12B	Combat Engineer
12C	Bridge Specialist
12D	Powered Bridge Specialist
12E	Atomic Demolition Munition Specialist
12F	Combat Engineer Tracked Vehicle Crewman
12Z	Combat Engineer Senior Sergeant
13B	Field Artillery Crewman
13E	Field Artillery Cannon Operations/Fire Direction Assistant
**13W	Field Artillery Target Acquisition Senior Sergeant
**13Y	Cannon/Missile Senior Sergeant
13Z	Field Artillery Cannon Senior Sergeant
15B	Sergeant Missile Crewman
15D	Lance Missile Crewman
15E	Pershing Missile Crewman
15F	Honest John Rocket Crewman
15J	Lance/Honest John Operations/Fire Direction Assistant
**16B	Hercules Missile Crewman
**16C	Hercules Fire Control Crewman
**16D	Hawk Missile Crewman
**16E	Hawk Fire Control Crewman
16F	Light Air Defense Artillery Crewman
16P	Chaparral Crewman
16R	Vulcan Crewman
17K	Ground Surveillance Radar Crewman
54C	Smoke and Flame Specialist
82C	Artillery Surveyor

* Based on existing MOS as of Change 6, AR 611-201.

** Do not appear on current list of closed MOS in AR 611-201.

BEST AVAILABLE COPY

NON-COMBAT SKILLS WHICH PRECLUDE WOMEN FOR MANAGEMENT REASONS

Taken from Annex B of Chapter 4 of the Women in the Army Study, Headquarters, Department of the Army, December 1976.

Skills for Temporary Closing Based on Management Considerations*

MOS	TITLE	REASON
16J	Defense Acquisition Radar Crewman	Rotation Base
21G	Pershing Electronics Material Specialist	Rotation Base
24C	Improved Hawk Firing Section Mechanic	Rotation Base
24E	Improved Hawk Fire Control Mechanic	Rotation Base
24G	Improved Hawk Information Coordination Central Mechanic	Rotation Base
24K	Chaparral System Mechanic	No Entry Level Positions
24P	Defense Acquisition Radar Mechanic	Rotation Base
24Q	Hercules Electronics Mechanic	Rotation Base
25J	Operations Central Repairman	Career Progression
31D	Pershing Communications Specialist	Career Progression
45B	Sheridan Turret Mechanic	Rotation Base
45E	Missile Tank Turret Mechanic	Roation Base
62H	Concrete Paving Equipment Operator	No Entry Level Positions

*Based on existing MOS as of Change 6, AR 611-201.

BEST AVAILABLE COPY

APPENDIX C

Additional Navy Comments

Item	Page
Joseph T. McCullen, Jr. Memo to ASD(M&RA), 14 March 1977	C-3
Supply	C-6
CINCLANTFLT Endorsement on USS SANCTUARY (AH 17) Report	C-7
Other Problems	C-10
Additional McCullen Memo to ASD(M&RA), 17 March 1977	C-12
CHNAVPERS message on Male/Female Lost Time Comparisons	C-15

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON, D. C 20350

14 MAR 1977

MEMORANDUM FOR THE ASSISTANT SECRETARY OF DEFENSE (MANPOWER AND RESERVE AFFAIRS)

Subj: Study for Secretary Brown on Utilization of Women in the Armed Forces

Ref: (a) OSD(M&RA) memo of 10 February 1977, same subject
(b) DASD(M&RA) memo of 14 February 1977, subj: Medical Standards for New Accessions
(c) OSD(M&RA) memo of 11 February 1977, subj: Use of Military Manpower

Encl: (1) USN Data, Formats A to I
(2) USN Alternative, Formats J to M
(3) Supply -- USN
(4) Performance: Women Aboard USS SANTUARY (AH-17)
(5) Other Navy Problems
(6) USMC Utilization of Women

In response to reference (a), enclosures (1) through (6) are forwarded to assist in the analysis of utilization of women in the Armed Forces.

In December 1976, the Navy established a task force to continuously review a more effective utilization and possible expansion of the numbers of females in future years due to the concern over the declining numbers of male enlistment eligible personnel in that period. The study presented herein is based on the assumption that Title 10, USC, Section 6015 will remain unchanged with respect to the prohibition on assigning women to combatant aircraft and ships, other than hospital ships and transports. An amendment to Section 6015 would facilitate more effective utilization of females, and would require a reevaluation of current numerical goals.

The following comments are germane to the study:

Enclosure (1) forwards the requested billet data. Caution must be used in relating this data to any potential expansion of female utilization due to the following:

Statistics on female continuation in specific skill areas, especially non-traditional skills, are not available.

Requirements of force structure have not been considered.

Berthing limitations must be identified and corrected.

Subj: Study for Secretary Brown on Utilization of Women in the Armed Forces

In enclosure (1), availability of certain data required a deviation from the format of reference (a) as follows:

Sections containing enlisted data are presented by single digit DOD Code and by paygrade groupings E-4 and below, E-5 and 6, and E-7, 8, and 9. Individual rating tabs are provided as additional information. This format conforms with that used by Navy for enlisted women planning.

TAB G data for enlisted women is restricted to total numbers of billets by rating vice paygrade due to factors, such as berthing, which are not paygrade specific. As a result, after the rotation billets for males were subtracted by paygrade, other limits of TAB G were subtracted to compute the rating/DOD group totals tabulated in TAB H.

Enclosure (2) represents data supporting an alternative plan to expand from 23,000 women at the end of FY 76 to 35,429 by the end of FY 83. Navy did not achieve the stated goal of doubling the number of women for the following reasons:

Navy increased the number of enlisted women from 5,000 to 19,000 from 1972 to 1976. FY 77 and FY 78 are required to optimize that increase into the proper skill areas.

The rate of growth to 46,000 would result in "flooding" junior billets with more women than can be properly utilized. This problem occurred when the number of enlisted women was increased from 1972 through 1976.

As females comprise 81% of the Navy Nurse Corps, the number of women in this category can not be doubled. Navy Nurses represent about two-thirds of all women officers in the Navy. Accordingly, women officer growth was restricted to utilization in other areas.

This plan will utilize women to fill jobs ashore to the maximum extent feasible within limitations of male sea/shore rotation, force structure, and current female statistical information and modeling. Berthing problems must be identified and funds for corrective action must be programmed prior to implementing this plan. It is not possible to quantify the impact of implementing this plan on unit effectiveness or personnel management. In the enlisted force where the majority of women will be used, ratings currently with male sea/shore rotation of better than 3:3 will be forced to 3:3 but ratings between 3:3 and 4:3 will remain unchanged. This is expected to have an impact on male reenlistment but the magnitude cannot be predicted. This, in turn, will require an increase in Selective Reenlistment Bonus (SRB) to generate the flow into the male career force. This cost is estimated at $.5M to $1.0M for SRB.

Enclosures (3) and (4) represent information available on supply of women and performance, respectively. The numbers of women required by the alternative plan are predicted to be available, but supply in non-traditional skills, such as construction ratings, may be a problem due to

Subj: Study for Secretary Brown on Utilization of Women in the Armed Forces

the small female participation in these areas in the civilian work force. Currently, there is no problem in obtaining required skills. The only study available on performance directly related to this tasking concerns the assignment of women aboard the USS SANTUARY (AH-17) during the period October 1972 to October 1973.

Enclosure (5) discusses significant problem areas in more specific detail (many of these problems result from lack of needed data and hence, are not quantifiable):

Statistical information and computer modeling

Berthing

Force structure

Civilianization

10 USC 6015

With regard to the Marine Corps, our analysis shows there is also considerable potential for the utilization of more women. Although the data provided in enclosure (6) is not precisely that requested by the tasking, the analysis does identify the maximum number of women the Marine Corps could absorb under existing policy. In fact, the Marine Corps is embarked on a program which exceeds even the "Alternative Plan" level proposed by the study tasking.

In summary, the Department of the Navy proposes a major expansion in the role of females between FY-77 and FY-83. Such an expansion will improve recruiting by the exploitation of the currently under-utilized female market. However, such an increase will require developing the techniques required to manage an expanded female community and assuring berthing availability. Prior to implementing this plan, corrective action required to support it must be included in future budget requests.

J. T. McCullen

JOSEPH T. MCCULLEN, JR.
Assistant Secretary of the Navy
(Manpower and Reserve Affairs)

III. SUPPLY

1. Potential supply of women enlistees

The Navy has no current problem in recruiting women in the numbers required by individual skill areas and it is estimated that the Navy could significantly increase its input of high school diploma graduates/GED, school eligible women with minimal impact on male recruiting. The addition of women recruiting goals would decrement the male goals by an equivalent amount and thereby reduce the recruiting burden in that area. However, the increased goals projected might cause future problems in specific skills.

2. Effect of tightening/loosening enlistment screens, and of going to same enlistment screen for men

It is anticipated that tightening or loosening enlistment standards for women would not have an appreciable effect on the attainment of current female quotas. It should be noted however, that tightening enlistment standards increases the recruiting degree-of-difficulty and at some point will severely limit the existing market. Since the female quotas to date have been met with relative ease, the actual depth of the female market is unknown at this time. Loosening the standards would serve to open the Navy to larger numbers of women. However, the quality women would still be available to be recruited and the recruiting system will take the better quality before taking the second best. If lower quality women were recruited in lieu of the best qualified, then attrition and discipline problems could increase.

The impact of going to the same enlistment standards as for men would have the adverse impact of increasing the administrative burden in connection with screening women since many more could and probably would apply for enlistment.

The purpose of any recruiting standards is to identify and obtain the best possible recruits. If Navy could recruit all high school graduate accessions, we would do so. Because the potential for recruiting all high school graduate males is not there (or the cost is too high to attain that goal), Navy accepts non-high school graduate males. Since we are able to recruit all the high school diploma graduate/GED, school eligible women we need, and even increase this number, there is no advantage to the Navy to lower this standard.

DEPARTMENT OF THE NAVY
UNITED STATES ATLANTIC FLEET
HEADQUARTERS OF THE COMMANDER IN CHIEF
NORFOLK, VIRGINIA 23511

1000
Ser N171D/ 700
2 FEB 1974

THIRD ENDORSEMENT on CO, USS SANCTUARY (AH 17) ltr ser 351 of 19 Nov 1973

From: Commander in Chief U. S. Atlantic Fleet
To: Chief of Naval Personnel

Subj: Women Aboard USS SANCTUARY (AH 17); evaluation of

1. Forwarded.

2. Comments and recommendations:

a. It is clear from enclosure (1) that primary emphasis in continuing the program of assigning women to ships should be in developing a corps of senior female petty officers with seagoing experience. Assigning experienced females to supervisory positions would solve a large number of the problems encountered in SANCTUARY, including, specifically, good order in berthing compartments, handling of complaints of menstrual discomfort, and others.

b. Female enlisted personnel were and are being assigned to SANCTUARY on a voluntary basis. Neither females nor males are specifically screened for SANCTUARY, nor, under the "One Navy" concept, is such screening desirable. In general, if women are to be fully integrated into the Navy they should be assigned to ships with the same training and time in service as men. Special screening of females for assignment to forces afloat would be a discriminatory practice and is not recommended. Additionally, it should be noted that EPDOLANT does not have access to service records and thus does not have the capability to screen non-rated personnel; furthermore, there is generally little basis on which to screen first-termers.

c. In the future, women scheduled to report to ships should be better advised on clothing and personal belongings restrictions necessary to life afloat. It is questionable whether "...the average enlisted woman will require a small wardrobe."

d. While the legal status of women officers on board ship is at best unclear, there appears to be no law or regulation specifically prohibiting women standing watch as officer of

BEST AVAILABLE COPY

1000
Ser M171D/
27 FEB 1974

the Deck underway. Attention is invited to Article 1003 of U. S. Navy Regulations 1948 (continued in effect as CNO Regulations pursuant to NAVOP 56 of 1973). While Article 9003 of U. S. Navy Regulations 1973, in denying women eligibility for command at sea, does prohibit their becoming Command Duty Officers, this Article would not seem to be an impediment to women standing watch as Officer of the Deck underway. With respect to women officers, there is no apparent reason for the distinction made in SANCTUARY between Officer of the Deck underway and Officer of the Deck in port. Specific guidance on the legal status of women in ships should be issued, especially in light of the possible passage of the Equal Rights Amendment.

e. Particularly noteworthy in SANCTUARY's report is the statement that "women can perform every shipboard function with equal ease, expertise, and dedication as men do." Significant in this regard is the success of women on General Quarters repair parties and on General Emergency Teams, performance on which is a good gauge of general naval ability.

f. In general, the statements in paragraph (3), page 13-1, enclosure (1), do not represent severe problems, considering the nature of seagoing life. Not all male enlistees find themselves completely happy at sea either. Solutions to female complaints should be sought where possible, of course, but the same standards of maturity should be set for females as males.

g. Commanding Officers have sufficient authority to deal with persons having difficulty adjusting to mixed crews. Special authority is not required any more than in handling racial problems. Lieutenant Canfield's remarks in paragraph (3) of her memo, and CO, SANCTUARY's actions detailed in paragraph (8), page 13-2 of enclosure (1), are cogent here.

3. In Summary, given SANCTUARY's conclusion that "both men and women have merged into members of a common disciplined crew," the pilot program has clearly been a success. While

BEST AVAILABLE COPY

1000
Ser N171D/
FEB 1971

numerous difficulties developed, all are capable of solution or tolerable, if women will accept the challenge of going to sea.

R. D. Harris

[illegible] Staff

Copy to:
COMSERVLANT
COMSERVRON 2
CO, USS SANCTUARY (AH 17)

BEST AVAILABLE COPY

V. OTHER PROBLEMS

1. Statistical information and computer modeling - Navy currently is projecting women for future years on an all Navy basis or hand tracking specific skill areas. In general, due to the recent entry of women into many skill areas, significant statistical information is not available. Since it is not logical to assume the women BT will attrite or reenlist identically with the women YN, more detailed information is required. Specifically, female equivalents to the Navy's Ideal Force and Force Analysis Simulation Technique (FAST) projection models are required to achieve proper management control over an expanded number of women. When these models are developed, goals can be more accurately established and billets available for women utilized more effectively.

2. Berthing - Male and female enlisted personnel may be assigned accommodations in the same building if separate berthing areas and bath facilities are provided. Navy BEQ's vary in age and construction types from old, open bay, central head design to new, modular, individual rooms with private heads. Therefore, at the present time there are some overseas installations which have limits on the number of women who can be assigned for duty because of quarters construction and lack of adequate accommodations by the local economy. With the increase of women projected for FY83, this problem will become significant at other overseas installations. When our revised plan is approved, the overseas installations and number of women projected for assignment will be reconciled with existing berthing facilities. Military construction funds will be requested to modernize existing assets or construct new buildings to provide the necessary separation between males and females.

3. Force structure - Generally, the highest paygrades, both officer and enlisted, have a greater percentage of requirements ashore than lower grades. However, it is not possible to utilize women in all these billets because provisions must be made for a career progression from initial entry to these grades. For enlisted women the numbers of billets available at paygrades E-5 and 6 limit the total number of enlisted women. Even though a large number of billets are available at E-4 and below, these can not be fully utilized because eventually this procedure would advance excessive numbers of E-5 and E-6 women while simultaneously replacing males who are needed to fill E-5/6 billets afloat. For officers, large accessions will exceed the number of billets available for junior women and, as these year groups progress, the structure becomes progressively top heavy, attrition becomes high, or promotion opportunity must be severely restricted. Also, with current low accession levels, an increase in women will result in a shortage of males for the warfare requirements. These considerations are the primary reasons for Navy proposing a more moderate rate of growth than envisioned by DOD.

4, Civilianization - Because civilians and women can fill the same billets, electing to civilianize a billet can reduce the utilization of women. Exact numbers depend on the number of civilians and the paygrades of the military personnel replaced. The prime concern is that options being studied on utilization of women and civilians, when implemented, must be coordinated.

5. 10 USC 6015 - In formulating this study no change to 10 USC 6015 was postulated. The definition of combat and combat support was reduced to whether the billet required duty on combatant aircraft or ships, other than hospital ships or transports, because this is the applicable restriction for Navy. An amendment to section 6015 will require detailed refinement of the definition of combat and combat support based on mission requirements.

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON D C 20350

MAR

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (MANPOWER AND RESERVE AFFAIRS)

Subj: Study for Secretary Brown on Utilization of Women in the Armed Forces

Ref: (a) OSD(M&RA) memo of 10 Feb 1977; same subject
(b) ASN(M&RA) memo of 11 Mar 1977; same subject
(c) Foncon OSD(M&RA) Mr. Robert Stone and BUPERS CAPT Gauthier of 9 Mar 1977

Encl: (1) Revised Format M to Enclosure (2) of Reference (b)

Reference (a) tasked all services to study the utilization of women. Reference (b) is Navy's response to the subject study. This response did not specifically address the DOD proposal for Navy to double the number of women to 46,000 by end FY 82. The DOD proposal was not considered feasible for the following reasons:

- Navy increased the number of enlisted women from 5,000 to 19,000 from FY 73 to FY 76. FY 77 and FY 78 are required to optimize that increase into the proper skill areas.

- The rate of growth to 46,000 would result in "flooding" junior billets with more women than can be properly utilized. This problem occurred when the number of women was increased from FY 73 through FY 76.

- As females comprise 81% of the Navy Nurse Corps, the number of women in this category cannot be doubled. Navy Nurses represent about two-thirds of all women officers in the Navy. Accordingly, women officer growth was restricted to utilization in other areas.

By reference (c), Mr. Robert Stone tasked Navy to assess the impact of growth to 46,000 women by FY 82. Enclosure (1), a revised Format M to reference (b), examines the DOD proposal and the Navy plan and responds to the tasking in reference (c). A detailed assessment of the DOD alternative follows:

- Enlisted accessions under the DOD plan would commence at 7,800 in FY 78 and would increase to 10,200 by FY 82. However, the site of female recruit training, Orlando, Florida, is currently limited to

Subj: Study for Secretary Brown on Utilization of Women in the Armed Forces

8,000 females annually. For FY 78, 4,600 is the planned female accession and, on such short notice, attainment of the 7,800 required by the DOD proposal is not considered possible. The Navy plan allows an additional year to prepare for increased recruit training for women and will not exceed 6,500 women per year, the highest level trained to the present time.

- By FY 82, there would be 41,222 enlisted women on active duty under the DOD proposal of which 31,289 would be in paygrades E4 and below. However, for a total force of 41,222 enlisted women, 22,781 is the maximum number of E4 and below required by force structure considerations. These 8,508 women (31,289 minus 22,781) would be filling male billets ashore which are required to support the male sea duty requirements in paygrades E5 and E6. As a result, Navy would require an increase of 8,508 billets to support these additional female numbers and to sustain the growth of the male career force from paygrades E4 and below to E5 and E6.

- This increase in end strength of 8,508 is estimated to cost $85M per year. In contrast, as the Navy plan will reach a plateau of 20,398 women in paygrades E4 and below by the end of FY 83, no increase in end strength is required to support the professional growth of the male and the expansion of the female career force.

- The shore manning at E4 and below would be 50 percent enlisted women for the DOD proposal in comparison with one-third for the Navy Plan. In addition, more women will create more additional berthing problems than the Navy plan.

- The DOD proposal would require female reenlistment controls to prevent exceeding paygrades E5 and E6 structure billet limits depicted in Format H to reference (b). On the other hand, the Navy plan can accommodate these limits. As a result, females would not be permitted to reenlist while, simultaneously, the male retention would have to be improved through an increase in SRB. An estimate of the amount of SRB required is not available at this time.

- The DOD proposal will further exacerbate the 4:3 sea/shore rotation goal referred to in reference (b). This will have an adverse impact on our retention efforts.

In view of the above considerations, it is recommended that the Navy proposal be adopted as submitted in reference (b).

Capt, USN for

JOSEPH T. MCCULLEN, JR.
Assistant [illegible] of the
(Manpower and Reserve [illegible]

Format M (Revised)

Total Number of Women on Active Duty at End FY(000)

	Actual		Projected						
	FY 76	FY TQ	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83
DOD Plan	22.5	22.8	23.5	28.0	32.5	37.0	41.5	46.0	46.0
Navy Plan	22.5	22.8	23.5	24.5	26.7	29.1	31.0	33.3	35.4
Difference	0	0	0	3.5	5.8	7.9	10.5	12.7	10.6
Current Approved Plan	22.5	22.8	23.5	25.1	25.3	25.5	25.7	25.9	26.1

NOTE: (1) DOD group and rating numbers for the DOD Plan may be obtained by multiplying the enlisted section of Format L by 1.35 and substituting FY 82 for FY 83. No significance should be associated with any number in excess of those in the Navy proposal because such numbers will exceed berthing capacity, shore billets, and total rating billets in some cases.

(2) The current approved plan permits a growth to 21,134 enlisted women by FY 78 with no outyear goals established; women officers growth increase to a goal of 2000 unrestricted line women officers by FY 85.

UNCLASSIFIED C-15

PAGE	DRAFTER OR RELEASER TIME	PRECEDENCE	LMF	CLASS	CIC	FOR MESSAGE C	ER/COMMUNICATIONS CENTER ONLY
01 OF 02	0000000	RR RR		UUUU			221600Z NOV 76

BOOK MESSAGE HANDLING INSTRUCTIONS

FROM CHNAVPERS WASHINGTON DC

TO CINCLANTFLT NORFOLK VA

CINCUSNAVEUR LONDON UK

CINCPACFLT MAKALAPA HI

UNCLAS PERSONAL FOR ADM'S KIDD, BAGLEY, AND HAYWARD FROM WATKINS

//N00000//

MALE/FEMALE LOST TIME COMPARISON

1. PROVIDED HEREIN ARE THE STATISTICS I PRESENTED AT THE RECENT CINC'S CONFERENCE ON LOST TIME COMPARISONS. THESE ARE FORWARDED AS REFERENCE MATERIAL AND FOR PROMULGATION TO SUBORDINATE COMMANDS AS YOU DEEM APPROPRIATE. THEY ARE DERIVED FROM DATA AVAILABLE WITHIN BUPERS AND COVER SIGNIFICANT, BUT NOT ALL LOST TIME CATEGORIES (READ IN SEVEN COLUMNS TITLED AS FOLLOWS):

(1) LOST TIME CATEGORY

(2) NUMBER OF WOMEN

(3) WOMEN LOST DAYS

(4) WOMEN PERCENT OF LOST TIME TO DAYS AVAILABLE

(5) NUMBER OF MEN

DISTR:

DRAFTER: DCNP/RELEASER: CNP

DRAFTER TYPED NAME, TITLE, OFFICE SYMBOL, PHONE & DATE	SPECIAL INSTRUCTIONS
RADM W.L. MCDONALD, DCNP, 41101	DCNP OA
RELEASER TYPED NAME, TITLE, OFFICE SYMBOL, AND PHONE: JAMES D. WATKINS, VADM, CNP, OX41101	
RELEASER SIGNATURE	SECURITY CLASSIFICATION: UNCLASSIFIED
	DATE TIME GROUP: 221600Z NOV 76

DD FORM 1 JUL 73 173 (OCR) REPLACES DD FORM 173, 1 DEC 70 WHICH WILL BE USED

UNCLASSIFIED

PAGE	DRAFTER OR RELEASER TIME	PRECEDENCE	LMF	CLASS	CIC	FOR MESSAGE CENTER/COMMUNICATIONS CENTER ONLY
02 OF 02	DDDDDDDRR RR			UUUU		

BOOK | MESSAGE HANDLING INSTRUCTIONS

{6} MEN LOST DAYS

{7} MEN PERCENT OF LOST TIME TO DAYS AVAILABLE

{1}	{2}	{3}	{4}	{5}	{6}	{7}
ALCOHOL	115	6,095	.09	3,588	190,164	.12
DRUG	22	1,474	.02	2,820	188,940	.12
UNAUTHORIZED ABSENTEE	379	3,381	.05	31,836	381,714	.24
RETURNED DESERTER	67	4,520	.07	15,516	1,006,368	.62
ABORTION	508	1,680	.03	0	0	0
PREGNANCY	530	25,440	.37	0	0	0
TOTAL	1,621	42,790	.63	53,760	1,767,186	1.1

3. THESE STATISTICS SHOULD HELP DEFUSE THE EMOTIONALISM ASSOCIATED WITH THE INCORRECTLY PERCEIVED IMBALANCE OF LOST TIME ATTRIBUTED TO OUR NAVY WOMEN BECAUSE OF PREGNANCY.

4. VERY RESPECTFULLY

DISTR:

DRAFTER TYPED NAME, TITLE, OFFICE SYMBOL, PHONE & DATE	SPECIAL INSTRUCTIONS
RELEASER: TYPED NAME, TITLE, OFFICE SYMBOL AND PHONE	
SIGNATURE	SECURITY CLASSIFICATION: UNCLASSIFIED / DATE TIME GROUP

DD FORM 1 JUL 73 173 (OCR) REPLACES DD FORM 173, 1 DEC 70 WHICH WILL BE USED

APPENDIX D

Additional Air Force Comments

Item	Page
James P. Goode Memo to ASD(M&RA), March 17, 1977	D-3
Evaluation of DoD Alternative Plan	D-4
Comments on Supply	D-5
Comments on Performance	D-6
Discussion of Other Problems	D-7
Air Force Alternative Plan	D-9

AD-A047 118 ASSISTANT SECRETARY OF DEFENSE (MANPOWER RESERVE AFFA--ETC F/G 5/9
USE OF WOMEN IN THE MILITARY.(U)
MAY 77

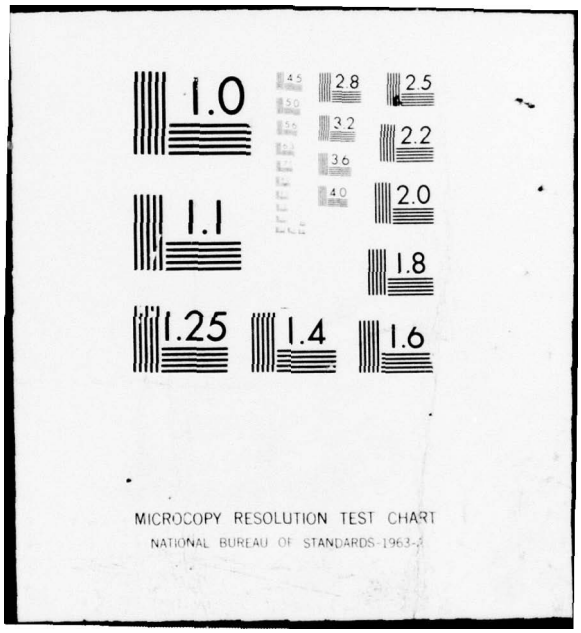
UNCLASSIFIED NL

2 OF 2
AD
A047118





END
DATE
FILMED
1 -78
DDC


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE ASSISTANT SECRETARY

17 F

MEMORANDUM FOR PRINCIPAL DEPUTY ASSISTANT SECRETARY
OFFICE OF THE ASSISTANT SECRETARY
OF DEFENSE (MANPOWER AND RESERVE
AFFAIRS)

SUBJECT: Study for Secretary Brown on Utilization of Women in the Armed Forces

The information requested by your memorandum on this subject, dated February 10, 1977, is attached.

The data groupings in this analysis clearly revealed that the DOD Occupational Group definitions are ambiguous. In a number of instances, an Air Force Specialty Code fits the definitions of more than one group. We understand that the Defense Manpower Data Center will initiate a review of these definitions and the service specialty conversions soon. We welcome this review and anticipate recommending several changes which should improve the value of future analyses using DOD Occupational Groupings. In the interim, we strongly recommend that this data not be released outside the Department of Defense.

Attachment 6 provides comments on an Air Force Alternative Plan for your consideration as a part of this study.

James P. Goodale

6 Attachments
1. Data in Formats A through M
2. Evaluation of DOD Alternative Plan
3. Comments on Supply
4. Comments on Performance
5. Discussion of Other Problems
6. Air Force Alternative Plan

EVALUATION OF DOD ALTERNATIVE PLAN

Provide and evaluate an alternative plan to use additional women. The plan should assure the Air Force increases the number of women to the following levels: (000)

	Actual	Assumed *					
	1976	1977	1978	1979	1980	1981	1982
Air Force	34	40	46	50	55	61	68

* DOD provided numbers for 1982 and asked Services to provide numbers for intermediate years to reach assumed goal.

Comments:

The data requested on this plan is provided in the previous attachment (Formats J, K, L, and M). As indicated on Format M, the DOD Alternative Plan would require the Air Force to reach a female force level of approximately 14,000 above the number which the Air Force would expect to have using the current plan through the end of FY 78 and a new plan (presently being finalized) to be implemented at the beginning of FY 79.

The previously approved Air Force plan brought us from 16,000 women in 1972 to slightly over 37,000 at present. The largest increase in female end-strength will take place next year to bring us to 46,000 - 48,000 women by FY 78. With such a large increase in female representation, we believe it would be difficult to accept a "doubling" by 1982. There are a number of factors to consider (e.g. facilities, pregnancy problems, join spouse assignments, career field distribution, etc.) which lead us to prefer to increase at a more deliberate pace than the DOD Plan requires.

There are matters we believe must be further explored before we commit the Air Force to an arbitrarily established goal which might unduly limit flexibility and possibly impact on readiness and mission effectiveness. More specific comments on these issues are included in the subsequent attachments.

COMMENTS ON SUPPLY

Information was requested on occupational groups or skills for which the Services have been unable to meet programmed numbers of women. The Services are to assume that they are not supply limited when commenting on the DOD "plan to double."

Comments:

The current Air Force female procurement plan attempted to achieve a representative distribution of women in non-traditional skill areas by distributing new accessions proportionally across the spectrum of non-combat skills. Additionally, the same prerequisite academic, physiological, and aptitudinal standards were maintained for males and females.

Female procurement goals have not been achieved in technical and other non-traditional career fields because of limited availability and a lower propensity for military service of qualified women. This consideration appears most pertinent when substantial numbers of females ~~are desired~~ to fill physically demanding or mechanically oriented jobs.

Of the women currently enrolled in AFROTC, approximately twice as many are in non-technical academic disciplines than are in technical (e.g. engineering, mathematics, etc.) areas. Most of those in the technical areas are subsidized by ROTC scholarships. Air Force experience indicates that a balanced distribution of women into all enlisted skills could not be achieved. *In fact, present* imbalances would probably be compounded by doubling the female accession rate.

Air Force Recruiting Service forecasts indicate that capability to support an annual intake rate of 25 - 30,000 women in administrative and general aptitude skill areas, 3 - 5,000 in electronic areas, but no increase in current accession levels for mechanical aptitude areas. Further, their forecasts indicate that over 50% of all potential female enlistees are not qualified for mechanical jobs (and that some of those currently accessed are only minimally qualified).

In view of the above, it is probable that significantly higher female representation could only be attained by concentrating procurement efforts in traditional and non-physically demanding skills. Air Force physical strength (X-Factor) entry standards for certain heavy/very heavy work specialities effectively eliminates a large part of the potential female resource from consideration for jobs other than traditional skills. Further civilianization of support jobs/functions could significantly reduce traditional job opportunities for women.

COMMENTS ON PERFORMANCE

Information was requested on the comparative performance of units with only men assigned and with both men and women assigned.

Comments:

The Air Force plan implemented in 1972 was designed to significantly increase the representation of women in the Air Force from 2.3% (in 1972) to over 8% (by the end of FY 78). Since that time, the Air Force has achieved a more representative distribution of women across the spectrum of non-combat skills. All fields were opened to women except those considered to be combat/combat related. This equates to three (3) officer utilization fields and seven (7) enlisted career areas. Personnel policies and procedures are essentially the same for male and female personnel, except where prohibited by law.

The Air Force has been gaining valuable experience from having women assigned in almost all career fields, types of units, geographical locations, and roles (including deployments for exercises and contingencies). Tests are currently underway to evaluate the utilization of women officers as pilots and navigators in non-combat aircraft and enlisted women as security police specialists. The results of these tests will influence subsequent policy determinations.

The Air Force Inspector General evaluated the utilization of women in the Air Force in 1976. The results indicated that the program to expand utilization in traditional and non-traditional skills has been successful. Problems needing additional evaluation included male/female differences in physical capability and continuing requirements for attention due to the traditional ingrained attitudes toward women. The Air Force addresses the physical differences through use of "X-Factor" strength measurements for both men and women. Attitudes toward women are addressed by on-going Human Relations Education Programs. Additional comments on problems encountered as more women are assimilated into Air Force military units are included in attachment 5.

Since women are assigned to all types of units, there is no data available comparing the performance of similar units/ missions based on the sex of assigned personnel.

DISCUSSION OF OTHER PROBLEMS

The Services were asked to discuss other problems related to increasing the number of women in uniform.

Comments:

An important constraint on an increase of females in the Armed Forces is that of facilities. Personnel assignment policies in the Air Force are based on eligibility and job qualifications. Facility limitations cause a significant constraint on equitable male/female assignment selections in the CONUS as well as overseas. The assignment of single and unaccompanied married female airmen in all grades is restricted/limited at most oversea installations. The net effect is that female airmen cannot be assigned to approximately 45% of overseas authorizations. Because of this factor, review of assignment distribution by sex shows males are assigned overseas disproportionately in relation to the relative male/female mix by job specialty. The selection of males out of turn for oversea requirements, because more eligible females cannot be accommodated, is a real-world consideration that can cause adverse morale impact. Construction and/or modification of existing facilities is a long lead-time factor and may be very costly.

Over 14,000 female officers and airmen are married to other military (primarily Air Force) members. This number is constantly increasing. We attempt to assign military spouses to the same geographical location whenever feasible so that they may establish a joint household. Over 3,500 join spouse assignments were effected in CY 76 to accomplish that end. This situation causes unique resource management problems (e.g. destabilizing influence of unprogrammed assignments, personal desires for collocation override optimum career development, inability to collocate results in reclassification or separation actions, etc.). When such couples have small children, they present special problems if they are jointly assigned to a unit with no-notice alert/contingency deployment requirements. We are presently studying the impacts caused by such situations when emergency child-care arrangements have not been made in advance by the military members or if dependent/non-combatant evacuation is ordered from an oversea area. Doubling female stength would probably double the number of join spouse assignments with associated impacts on force stability and mission effectiveness.

Data from the Air Force Surgeon General indicates about 8% of the female force becomes pregnant each year. A number of these women elect voluntary separation as a result of their pregnancy; however, over half of the women who become pregnant elect to remain on active duty. Doubling the number of females in the Air Force to 68,000 would mean approximately 5,500 pregnancies each year and about 3,000 women remaining on active duty with very young children in their families. Pregnant members are subject to temporary removal from deployment availability rosters and curtailment/reassignment from areas where appropriate medical support is not available. Those pregnant women who remain at their jobs have reduced productivity varying by each individual and her job/task environment during pregnancy, confinement, and convalescence. The average reduction of productivity varies from about two months (for non-hazardous jobs) to eight months (for hazardous jobs such as entomology, radiology, etc). The main impacts of pregnancy on organizations are separations at the option of the individual, reduced productivity during/following pregnancy, and less responsiveness from members in units with emergency war order commitments. The Air Force is attempting to compile data to quantify the magnitude of these types of problems.

The differences in physical strength requirements in various jobs/tasks and methods to measure the strength and stamina of potential members (to aid in proper job/person classification matches) are continuing problems. The Air Force developed the "X-Factor" medical profile to address these issues. Continuing research efforts will be required to refine the process of getting people (both male and female) in jobs they can physically accomplish. Recognition of this factor acknowledges that the resource of women who can perform heavy/very heavy work such as is expected of many military job specialties is naturally limited due to normal sexual differences in body structure. Increased accession of females into physically demanding specialties would be difficult to achieve.

Adjustments to the increased representation of women in the Air Force have been required and are being made on a continuing basis. The assimilation of increased numbers of women is being accomplished as long-standing traditions of a male-oriented Air Force are being adjusted. The gains that have been made have been substantial and the Air Force desires to provide increased opportunities for women and to utilize the resource of female talent available in our economy.

AIR FORCE ALTERNATIVE PLAN

The DOD Alternative Plan to double the number of women in the Air Force by 1982 has been addressed as requested. Although it would be possible to achieve the arbitrarily established number objective by 1982, we believe it would be more desirable for the Air Force and the Department of Defense to establish women procurement objectives in an alternate manner.

As the Air Force plan for women accessions approved in 1972 extended through the end of FY 78, we have not yet established the plan to be effected at the beginning of FY 79. We have, however, done extensive work toward the development of the plan we hope to implement. The plan is in the final coordination process within the Air Staff.

The objective in the study to develop the new Air Force female procurement plan was to design a plan that would be consistent with equal opportunity goals, provide additional employment opportunities for women, and serve the best interests of the Air Force. The methodology to arrive at female procurement objectives for each specialty area was developed in conjunction with the functional managers for each area utilizing all available experience data.

The proposed plan uses a mathematical formula methodology to determine the objective for each job specialty area. The first element in the formula is a "resource factor". Officer programs require college degrees for appointment/commissioning. Data on the numbers of women by academic discipline earning degrees expressed as a ratio to men in similar categories is a key element in the resource factor. Also consideration is given to the relative male/female mix of college graduates in the active labor market and to the relative male/female propensity for military service.

The airman accession goals would be computed by a formula similar to that used for officers. Since the basic resource pool for this category is high school production, the airman resource factor would be determined using ASVAB test results by basic enlistment criteria category, the relative male/female mix of high school graduates in the active labor market and the male/female propensity for military service.

After the resource factors are computed, the other key element in the formula is an "opportunity factor". Combat and facility restrictions are considered in developing the opportunity factor by job specialty. The objective for female procurement is determined by multiplying the resource and opportunity factors.

Changes in the basic data would be received, reviewed, and incorporated into the computational formulas annually. The plan would be responsive on a real-time basis to resource factor or opportunity factor adjustments. The female objectives would be applied against the immediate total procurement objectives and would experience shifts in individual job specialties from year to year. Such a plan provides a defensible and logical approach to the determination of female procurement objectives. It differs from the previous Air Force plan which established an arbitrary end-strength objective six years in the future. An arbitrary end-strength objective has proven to be very inflexible to administer and results in computing procurement goals backward from the arbitrary objective. This procedure has precision in arriving at numbers and sub-element goals; however, difficulties are encountered as shifts (e.g. continuation rates) occur which cause the initial planning to have been erroneous as we move through time. The DOD Alternative Plan to double the number of women to reach an end-strength of 68,000 by 1982 would present the same management difficulties which we would prefer to confront in another manner. In our opinion, the approach we are finalizing is a better alternative than the "plan to double". As indicated on Format M, Attachment 1, our proposed plan would be expected to continue the momentum the Air Force has established as a leader in the utilization of women.

In view of the major increases in the utilization of women that the Air Force has sustained since 1972 and the planned substantial increase during FY 78, the Air Force desires to be exempted from an imposed end-strength objective of 68,000 women by 1982. The female procurement plan to be implemented at the beginning of FY 79 will assure the Air Force will remain committed to expanding the utilization of women and will also assure insofar as possible that the increases made are deliberate, desirable, and sustainable without adversely impacting on Air Force readiness and mission effectiveness.

APPENDIX E

Additional Marine Corps Comments

Item	Page
Utilization of Women	E-3
Alternative	E-4
Supply	E-5
Performance	E-5
Other Problems	E-6

UTILIZATION OF WOMEN

I. DATA. Formats A, H and I are provided by grade and two digit occupational specialty and are also recapitulated below by total officer and enlisted. All other formats are recapitulated by total officer and enlisted only.

FORMAT	CATEGORY	TOTAL MILITARY SPACES OFFICER	ENLISTED
A	Total (see detailed format)	14965	137794
B 1/	Fleet Marine Forces (FMF)	8543	98813
C 2/	Non-FMF	867	1330
D	Remainder	5555	37651
E	Rotation Base (not in B or C)	3887	28415
F 3/	Physiological Limits	0	0
G 4/	Other Limits	1030	2355
H	Net (see detailed format)	638	6881
I	Actual (see detailed format)	402	3051

1/ FMF units to which restrictive classification applies to all positions:

1st, 2d, 3d Marine Division
1st, 2d, 3d Marine Wing
1st, 2d, 3d Force Service Support Group
Force Troops, Atlantic
Force Troops, Pacific

2/ No units to which restrictive classification applies to all positions. All manpower spaces requiring infantry (03), artillery (08), tank and amphibian tractor (18) and pilots/flight crew (75) MOS's are closed to women.

3/ In 1974 the Marine Corps contracted with the California State University at Los Angeles, California to review existing techniques and develop the management tools necessary to conduct a thorough task analysis of all

military occupational specialties (MOS's) for the purpose of evaluating the physical and environmental demands of jobs and developing criteria to be used in measuring an individual's capacity to meet those demands. While performance standards would apply to all military personnel, they would be particularly applicable to women. To date only the draft report has been received from California State University and the Marine Corps does not yet have a formal methodology that will define physiological limitations for MOS classification and assignment. Coordination with other research efforts underway in other services is ongoing.

4/ "Other limits" include considerations of grade structure and supporting promotion flow, and the opportunity for women to progress to pay grade E-9. It is possible to identify gross numbers of spaces that are technically suitable for woman assignment; however, the spread of those spaces by grade imposes practical limitations on our ability to fill them with women. Five hundred E-7 spaces could be identified in a particular occupational field; however, if there are only 400 suitable E-6 spaces, it is clear that the total E-7 spaces could not be filled. Under normal promotion policy and current continuation rates, the inventory will be characteristically pyramidal in grade structure. The importance of providing a woman Marine member the opportunity to progress to pay grade E-9 also creates certain assignment limitations. Some MOS's terminate at specified pay grades (e.g., E-5) with career progression to new MOS's as the Marine continues up the promotion ladder. In some instances manpower spaces were open in one MOS but not in the other. It is not reasonable to consider every space to be effectively open to women under these circumstances.

II. ALTERNATIVE. The recently approved Marine Corps Plan for expansion of the woman Marine force essentially parallels the proposed Alternative Plan. While it is reasonable to assume that the end FY77 distribution of women by DPPC will remain the same as the actual end FYTQ distribution, a similar assumption for FY82 cannot be made. Implementation of the Marine Corps Plan involves not only expansion in gross numbers, but also expanded assignment to a wider variety of military skills. Since the number of military spaces identified exceeds the 1982 target strength, and expansion beyond the 1982 level is expected, it is not possible to predict, with any degree of certainty, the extent to which particular spaces will be filled at the end of that fiscal year. Accordingly, Format L is not provided. The strength projections under the Alternative Plan are as follows:

Woman Marine Strength

ACTUAL	PLANNED					
1976	1977	1978	1979	1980	1981	1982
3449	3913	4205	5119	5818	6349	7288

See detailed Formats J, K and M for related analysis.

The impact of the Alternative Plan on personnel management and unit effectiveness was a major consideration in developing the grade and skill distribution of the increased woman Marine objective force. Since the analysis considered the expected grade profile of the woman Marine population, no problems are anticipated in matching the manpower space with a woman of required grade and skill. Control of entry level training input to specific skills will preclude over-population of occupational fields. Since the expansion took into account rotation base requirements and combat restrictions, personnel management of the woman Marine force should dovetail with managenent of the total force. A basic assumption of the original analysis was that unit effectiveness would be enhanced by increased utilization of women, particularly as they enter occupational specialties that have experienced recurring shortages of qualified male Marines. The confidence of field commanders in the high level of performance of women Marines and their request for increased numbers is further evidence that the proposed force expansion will upgrade unit effectiveness.

III. SUPPLY. The Marine Corps has experienced no problems in meeting programmed women Marine goals. Because of the high educational level of the female accessions, there is considerable flexibility in classifying them in a wide variety of skills. No supply problems are expected in increasing accession levels to meet the FY82 goals.

IV. PERFORMANCE. No formal study has analyzed the relative performance of units with and without women. The distribution of a relatively small female population to a wide variety of units would make it difficult to detect any quantifiable difference in unit performance. As the Marine Corps substantially expands its utilization of women, it is reasonable to expect a higher concentration of women in certain units. A performance comparison would then be possible and certainly desirable.

V. OTHER PROBLEMS. The requirement to provide separate billeting space for women will continue to create management problems. The physical configuration of most existing billeting spaces makes cohabitation of male and females in a single building most difficult, if not impossible. In many cases an entire building must be dedicated to women Marines and at certain commands where the female population is small, this represents inefficient use of billeting space. While increases in women Marines will generally provide for greater representation at most commands and increased barracks occupancy, similar problems will persist.