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A Cohort Analysis of Career Progression for Ethnic and Female Officers in the U.S. Navy

by

Lisa R. Werkhaven Lieutenant Commander, United States Navy B.S., Muskingum College, 1980

Submitted in partial fulfillment of the requirements for the degree of

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March 1993

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ABSTRACT

The goal of this thesis was to conduct a cohort analysis to compare the career opportunities, in terms of loss and promotion rates, of Black, Hispanic and female naval officers with those of white ethnic and male officers, respectively. Inventory and promotion data was compiled from the Officer Personnel Information System data file to compute ethnic/gender loss and promotion rates for year groups 1960-1991 in the Surface, General Unrestricted Line, Aviation and Submarine communities. Computation of loss and promotion rates was conducted in three stages. The first stage computed rates for each year group by year of service (YOS). The second stage computed rates averaged across year groups for each YOS. The third stage computed rates within milestone periods which grouped YOSs into six or seven significant periods in each community's career path. Rates were averaged for each milestone period across several year groups and all YOS's within that period. This study found differences in loss and promotion rates specific to each community and ethnic/gender group. In many cases, higher loss rates were accompanied by lower promotion rates for the ethnic and gender groups studied, with notable exceptions. Further research is recommended to determine reasons for differences in loss and promotion rates as well as to conduct a similar study in five to ten years, in which

time more data would become available.

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I. INTRODUCTION

The Navy of today is committed to achieving an officer and enlisted force fully representative of American acciety's varied ethnic composition and providing for equal career progression opportunities. In addition to recruitment, retention and promotion of quality personnel are key elements in defining these opportunities and are crucial to building and maintaining a professional force utilizing all available personnel resources.

A. BACKGROUND

On July 26, 1948, President Harry S. Truman issued Executive Order 9981, which called for "equality of treatment and opportunity for all persons in the armed services without regard to race, color, religion or national origin." (Northrup, 1979) About 30 years later, the percentage of minority officers participating in the Navy officer corps, particularly Blacks and Hispanics¹, has finally begun to increase slowly as shown in Table I.

	1976 ¹	1982 ¹	1987 ¹	1991²
Blacks	1.6	2.9	3.4	4.3
Hispanics	1.0	0.9	1.8	2.5
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Table I. MINORITY GROWTH IN THE NAVY'S OFFICER CORPS AS A PERCENTAGE OF TOTAL OFFICER FORCE

Although career opportunities have expanded for minority officers in the last 40 years, a 1987 Navy assessment of Equal Opportunity Programs indicated little progress in recruiting and retaining Black and Hispanic officers; wide disparities between Black and White officers in promotion rates to

Ethnic terminology used in this thesis is based on Department of Defense Military Equal Opportunity Program Directive 1350.2, December 23, 1988 which uses the following definitions:

- 1 Black (Not of Hispanic Origin). A person having origins in any of the original peoples of Africa.
- 2 Hispanic. A person having origins in any of the indigenous peoples of Mexico, Puerto Rico, Cuba, or Central or South America, or of other Spanish cultures, regardless of race.
- 3 White (Not of Hispanic Origin). A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

lieutenant commander, commander and captain; and failure of minority officers (and enlisted personnel) to enter technical career paths in representative numbers (Longo, 26 December 1988). These disparities led to formation of an Equal Opportunity Study Group in 1988 which resulted in the installation of new training programs and the revitalization of the Navy's affirmative action program.

As of 1991, recruitment, promotion and retention of minority officers have improved significantly. Recruitment goals of 7 percent Black and 4 percent Hispanic, to support achieving a minority officer inventory goal of 6 percent Black by the end of FY-2000 and 3 percent Hispanic by the end of FY-99, were essentially realized with the commissioning of 424 Black officers (6.6 percent of total) and 244 Hispanic officers (3.8 percent of total). Table II shows the progress of recruitment of minority officers from 1975 to 1991. As percentages of their own race/ethnic group, overall Black and Hispanic in-zone promotion rates were comparable to those of White officers on the FY-91 active duty promotion boards. Minority officer retention figures compare favorably with those of White officers. This is important because higher retention will rates increase minority demographic representation throughout the Navy. (1991 MEOA)

Table II.	PERCENTAGE OF	OFFICER ACCESSIONS	WHO	ARE	BLACK	AND
HISPANIC,	SELECTED YEARS	, 1975-1991				

	1975 ¹	1978 ¹	1981 ¹	1984 ¹	1987 ¹	1991 ²
Black	2.5	4.5	3.4	4.6	4.2	6.6
Hispanic	1.1	1.0	1.3	3.1	2.9	3.8

While the Navy has made progress towards attaining a more demographically balanced force, some concerns still remain regarding minority opportunities. Minorities continue to be underrepresented in the officer corps, especially in the senior ranks. Blacks now comprise 4.3 percent of the total officer force and Hispanics are 2.5 percent of the force. The minority officer inventory goal reflects the percentage of minorities with college degrees in the general population. Interim inventory goals of 4.1 percent Black and 2.2 percent were met in FY1991.

However, as Table III shows, there are much lower percentages of minorities in most of the higher officer paygrades (such as 0-6 through 0-8). Also, minorities are underrepresented in the technical fields, such as the submarine and aviation communities as shown in Table IV.

Table III. PERCENTAGE DISTRIBUTION OF MINORITY OFFICERS BY PAYGRADE FOR FY1991

Paygrade	0-1	0-2	0-3	0-4	0-5	0-6	0-7	0-8	0-9
Black	6.3	5.0	4.3	3.3	2.3	1.2	1.6	0.0	4.3
Hispanic	3.8	3.6	2.8	1.5	1.2	0.6	2.3	1.1	0.0

Table IV. PERCENTAGE OF MINORITY OFFICERS IN AVIATION, SUBMARINE, SURFACE, AND GENERAL UNRESTRICTED LINE COMMUNITIES FOR THIRD QTR FY1992

Community	Aviation	Submarine	Surface	GenURL
Black	2.16	1.07	5.46	10.19
Hispanic	2.57	1.25	3.06	2.62

Note: Reflecto -1 to -10 payerales

On a somewhat parallel course with minorities are female officers in the Navy. Although women (nurses) have been accorded formal Navy status since 1908, it has only been since the inception of the all-volunteer military in 1972 that women have become a significant and integral part of the Navy. Women comprised 11.3 percent of the total officer force (W-1 to O-10) in 1991 (1991 MEOA) compared to 2.3 percent in 1973 (GAO/NSIAD-89-210BR), and the types of jobs held by women have continued to expand.

However, concerns continue to arise regarding the full integration of women into the military and in particular the officer corps. Like minority officers, women are underrepresented in the senior ranks. Table V shows the percentage distribution of officers by gender in paygrades 0-1 through 0-9. Women continue to have small representation within the surface and aviation warfare communities (see Table V.2) and remain excluded from certain warfare disciplines, most notably the submarine and special warfare communities.

Table V.1. PERCENTAGE DISTRIBUTION OF OFFICERS BY GENDER AND PAYGRADE FOR FY1991

Gender	0-1	0-2	0-3	0-4	0-5	0-6	0-7	0-8	0-9
Female	13.8	11.5	12.6	12.9	7.9	3.6	1.6	1.1	0.0
Male	86.2	88.5	87.4	87.1	92.1	96.4	98.4	98.9	100

Table V.2. PERCENTAGE DISTRIBUTION OF FEMALE OFFICERS IN THE AVIATION, SURFACE AND GENERAL UNRESTRICTED LINE COMMUNITIES FOR FY1991

Community	Aviation	Surface	GenURL
Female	2.0	1.7	86.4
Male	98.0	98.3	13.6

Note: Reflects 0-1 to 0-10 pay grader

Promotion and retention of quality officers are key elements in maintaining a professional career force and ensuring maximum utilization of minorities and women in the Navy. Promotion rates are a predominant criterion in maintaining retention eligibility and defining successful career progression. The degree to which minorities and women

are retained has an important impact on their representation in the military. Additionally, retention of minorities and women is a factor in determining the number of minorities and women available and eligible for promotion to the higher pay grades and ranks within the career force. (Northrup, 1979) Underrepresentation of minorities and women in the upper ranks is mostly due to the fact that promotion is dependent on tenure (Eitelberg et al., 1989). An officer has to have a minimum amount of time in grade to be eligible for advancement to the next higher paygrade. For example, to be eligible for promotion to 0-6, an officer must exhibit successful career progression through promotion and retention to achieve eligibility criteria of minimum time in grade. Currently, it takes about 22 years for an officer to make 0-6. Accordingly, the earliest the Navy will be able to achieve 6 percent Black representation at the O-6 level is when year group 92 is promoted to Captain. This is also dependent on Black promotion and retention rates being comparable to those of other ethnic groups in that year group.

As required by Department of Defense policy, the Navy monitors the career progression of minority and women officers and submits a report, the Military Equal Opportunity Assessment (MEOA), for the fiscal year. The MEOA provides a statistical analysis on ten selected categories of fair treatment, e.g., promotion, force composition, retention,

recruiting, for all service members through affirmative actions and other initiatives.

The MEOA collects promotion and retention statistics by fiscal year. Another method to monitor career progression would be to track officers within their respective commissioning year groups and determine their representation, promotion and loss rates as they mature in the system. These data could then be analyzed to compare rates within, as well as between, communities to determine if differences exist.

B. OBJECTIVE AND SCOPE

This thesis will examine the composition of selected Unrestricted Line communities of minority and women officers by year group and compute loss and promotion statistics for these cohorts. The study parallels the Navy's MEOA analysis but with one important distinction. Whereas the MEOA looks at statistics by fiscal year, this thesis will address statistical rates by individual commissioning year groups. Fiscal year studies of paygrades are based on data that are aggregates of several year groups. For instance, within the 0-3 paygrade in any fiscal year there could possibly exist up to 6 year groups. Retention rates may differ among these various year groups but are not individually observed because in a fiscal year analysis they are combined to report one rate for the entire O-3 paygrade. By tracking the year groups as they mature through their "career" for 30 years, retention and

promotion rates can be observed for each year group by years of service.

The analysis of data will be limited to reporting statistical trends and differences among the minority and women cohorts as compared to those of ethnic White and male officers, respectively. Only Black and Hispanic ethnic groups will be studied because they represent the largest minority ethnic groups in the United States as well as in the Navy. An analysis of gender representation is included in the study because of the increased emphasis on women brought on by their growing numbers and expanding assignment opportunities. Although a background discussion of minority and female participation in the Navy is included in Chapter II, a detailed historical account and analysis of statistical trends in terms of political, military, and social policies is beyond the scope of this thesis.

The study will focus on the Aviation Warfare, Submarine Warfare, Surface Warfare, and General Unrestricted Line (GenURL) communities. Since women are prohibited from permanent assignment aboard submarines, an analysis of gender representation in the Submarine community will not be conducted. Training and Administration of Reserve (TAR) Officers will not be included in the study since these officers have distinctly different career paths from their active-duty counterparts, as well as separate promotion

boards. The Unrest	ricted Line (URL) officer designators used
in the study will i	include the following:
General Unrestr 110X	ricted Line (GenURL) Community URL officer
Surface Warfare 111X	e Officer (SWO) Community URL officer qualified in Surface Warfare (includes nuclear trained SWOs)
116X	URL officer in training for Surface Warfare Qualification
Submarine Warfa	are Officer Community
112X	URL officer qualified in submarine Warfare (includes Nuclear and General Submarine Officer)
117X	URL officer in training for Submarine Warfare Qualification
Aviation Warfar	re Officer Community
130X	URL officer in the aviation community whose rating as pilot or Naval Flight Officer (NFO) has been terminated
131X	URL officer qualified for duty involving flying as pilot
132X	URL officer qualified for duty involving flying as NFO
137X	URL officer in training for duty involving flying as pilot
139X	URL officer in training for duty involving flying as NFO
The study will	be limited to the amount and type of data

The study will be limited to the amount and type of data available in the Officer Personnel Information System (OPIS) file maintained by the Navy Personnel Research and Development Center (NPRDC), San Diego, CA. Inventory and promotion data will be used to compute loss and promotion rates for year groups 1960 through 1991. Because some data are not available prior to 1975, year groups 1960 to 1974 will be incomplete. For instance, for year group 1960, rates for the first 14 YOS are missing due to the first availability of data in 1975.

C. OVERVIEW

Chapters II and III create a perspective for the study by presenting a brief history of the minority and female experience in the Navy officer corps and the Navy's promotion practices. Chapter IV identifies the source of data and outlines the methods and statistical procedures used in the study. Chapter V presents the research findings. Chapter VI contains conclusions drawn from the study.

II. MINORITIES AND WOMEN IN THE NAVY

This overview of the experience of minorities and women, particularly officers, in the U.S. Navy is presented to establish a context for this study. It is important to understand the pace and timeframe of the advances gained by these groups, in terms of social acceptance, cultural differences and access to job opportunities. Evidence of these advances would not show up in the senior ranks for about 15 to 20 years after their initial acceptance.

A. BLACKS IN THE NAVY

Blacks have fought in every major American conflict since colonial days. During the Revolutionary War, 1500 Black Americans served their country "manning boats, working sails, loading guns and piloting coastal vessels." (Baldwin, 1983) Following the Revolution, Blacks were prohibited from serving in the armed forces. However this did not stop Blacks from serving in the 1798-1800 naval war with France and in the War of 1812, presumably because of military manpower needs. (Northrup, 1979) A pattern developed wherein Blacks would be recruited to serve in a conflict only when there existed manpower shortages. They would be retained during the conflict but dismissed following the conclusion of the

conflict. This pattern became known as recruit-retain-andreject and would last until the Korean War. (Butler, 1992)

Black sailors continued to serve on an integrated basis during the Spanish-American War. Folicy during this timeframe decreed that Blacks would be limited to serving in the lower ranks. By the time of World War I informal Navy practices began to align themselves with the segregationist influences of the society at large. And, in fact, the Navy instituted a segregationist policy that restricted Blacks to serve in the messmen or steward branch. Ten thousand Black recruits served in World War I in this capacity. In the wake of post World War I reductions, enlistment of Black sailors was almost completely discontinued. (Northrup, 1979) In 1932, the Navy began recruiting Blacks again for messmen duties only.

Because of World War II and its need for manpower, the Selective Service Law of 1940 called citizens to service without regard to race, color or creed. The War Department decreed that Black accessions would be increased in numbers that reflect the proportion of Blacks in the general population. In April 1942, Blacks were accepted into all general service ratings but they were still trained in segregated units. In February 1946, the Navy lifted all service restrictions on Blacks. The Navy was also the first service to institute desegregation policies.

With the onset of the Korean War, demand for military manpower again increased. The need for manpower on the front

line forced the services to integrate combat units with Blacks from the rear supply units. Enlistment of Blacks grew to 4.3 percent of total enlistments for the Navy by the end of the War. (Northrup, 1979)

During the Vietnam Era, the racial turmoil seen in the civilian society spilled over into the military. Perceived injustices directed against Blacks on several naval vessels in 1972 led to racial tension and even violence. The Department of Defense and the Navy responded by establishing race relations and affirmative action programs. The Navy continues to make progress in the areas of equal opportunity and race relations as evidenced by the increasing numbers of minorities in the service and in the senior ranks.

Black men were serving in the Navy 169 years before the first Black officer was commissioned in 1944. (Baldwin, 1983) On March 17, 1944, 13 Black officers, known as the "Golden 13", were commissioned as line officers in the Naval Reserve. That same year saw the commissioning of 10 Black female officers into the Women's Auxiliary Volunteer Emergency Service (WAVES). (Longo, 1988) Towards the end of World War II there were 60 Black officers on active duty, but by the end of the war there were only four still on active duty. (Baldwin, 1983)

The first Black graduated from the Naval Academy in 1949 even though Blacks had enrolled as early as 1872. (Longo, 1988). On January 31, 1962, Samuel Gravely became the first

Black officer to assume command of a ship, the USS FLAGOUT. He went on to become the first Black officer to attain the rank of Captain and then Admiral. (Baldwin, 1983)

B. HISPANICS IN THE NAVY

Hispanics have participated in conflicts since the beginning of the European presence in the Americas. Unfortunately their military history has not been well documented. In addition, Hispanics have only been identified as an ethnic group by the Navy since 1977 (Zucca, 1984). Another problem in chronicling the Hispanic experience in the military is that racial/ethnic identification of military personnel is based on self-selection on the part of the individual. Various studies have found that many individuals with Spanish surnames do not identify themselves as Hispanics--which suggests that this method of self-selection results in an undercounting of persons who may be of Hispanic origin (Eitelberg et al., 1989).

During the Civil War, Hispanics fought for both the Union and the Confederacy. Most Mexican-Americans served in regular army or volunteer units on an integrated basis, although some served in predominantly Mexican units with their own officers. The most famous Hispanic participant in the Union forces was Admiral David G. Farragut, who distinguished himself in the battles for New Orleans and Mobile and is best known for saying, "Damn the torpedoes. Full speed ahead." Hispanics

were also among those who served in the Rough Riders during the Spanish-American War.

Although historical records are incomplete, Hispanic Americans did participate in World War I. During this period, about one-third of the U.S. population were recent immigrants; and the likelihood was that many had little or no skill in Because of this, thousands of the estimated 3.8 English. million men who were drafted were found to have insufficient skill in English to complete military training. Inductees with limited or no ability in English were relegated to development battalions and assigned to menial jobs. Eventually, the language problem was identified as a barrier to training and the men were separated into language groups. Training then progressed in the native tongue of the draftees. This type of training became known as the "Camp Gordon Plan." By the time it took to identify and remedy the problem and to train the non-English speaking soldiers, the war was nearing an end and only a few saw combat.

During World War II an estimated 250,000 to 500,000 Hispanics served in the armed forces, which is approximately 2.5 to 5 percent of all persons who served during the war. With the exception of the 65th Infantry regiment from Puerto Rico, Hispanics were not in segregated units. Hispanic-Americans continue to serve their country with distinction in all the services up to the present. (<u>Hispanics in America's</u> <u>Defense</u>, 1983) Since the Vietnam War, Hispanic participation in the active forces has remained somewhat static, showing a slight increase in the last decade only. This is in stark contrast to their rapid increase in the general population which has been five times as fast as the rest of the population since 1980. Their number has grown 53 percent and is now 22.4 million, or about 9 percent of the U.S. total population.⁴ At this rate, Hispanics could overtake Blacks (30 million, or about 12 percent of the U.S. population) as the largest U.S. minority by year 2015 (Barringer, 1991).

In 1984, a workshop was sponsored by the Manpower R&D Program of the Office of Naval Research to discuss various subjects on Hispanic subpopulations and the naval service. The workshop stressed that "Hispanic Americans are not a monolithic group but, rather, a set of four or five subpopulations distinguished by degree of acculturation to the mainstream society, command of English, and beliefs and attitudes." (Sinaiko, et al., 1985) Since the growing Hispanic population is an important manpower resource for the military, a better understanding of their specific cultural attributes is a precursor to increasingly effective recruiting and retaining of Hispanic Americans in the Navy.

²These figures do not distinguish between legal and illegal residents.

C. WOMEN IN THE NAVY³

Women have served for and with the American Navy during the Revolutionary War, War of 1812 and Civil War. But it was not until 1908 that women were able to serve <u>in</u> the Navy with the establishment of the Navy Nurse Corps. During World War I the Navy autiorized the enlistment of women as yeomans. By the end of the war, 11,275 "yeomanettes" had served and all were separated within a few months of the war's end.

In 1942, the WAVES (Women Accepted for Volunteer Emergency Service) was formed to relieve men from support functions ashore so they could fight the war at sea. Approximately 86,000 female enlisted and officer personnel joined the war effort and performed in both traditional (administration, intelligence expert, communicator, etc.) and non-traditional (pilot, aviation mechanic, welder, etc.) jobs. The majority of women, like their male counterparts, were mustered out of the service in 1946.

1948 saw the passage of the Women's Armed Service Integration Act which incorporated women into the Active and Reserve forces. The law limited participation of women in several respects:

• Enlisted women's strength could not exceed 2 percent of total enlisted strength,

³ All of the information for this section was taken from RADM Roberta L. Hazard's keynote address to the Navy Women's National Convention, July 30, 1987, unless otherwise noted.

- Officer numbers could not exceed 10 percent of the female enlisted scrength, and
- Women could command only those activities comprised primarily of women.

Institutional progress for women coincided with the turbulent political, military and social changes that occurred in the 1960's and 1970's. In 1967, Department of Defensesponsored legislation removed the ceiling on women's numbers. Women were allowed to compete for promotion through the grade of Captain and were eligible for appointment to Flag rank.

Following conversion to the all-volunteer force, the Navy opened its doors to more women because of declining numbers of men willing to serve in the post Vietnam era. These increases were accompanied by major changes in personnel policies. These changes included ending the automatic discharge of pregnant women and those with minor dependents and providing equal family entitlements for married men and women soldiers. (Butler, 1992) The policies expanded opportunities for women, as well, allowing for more diversified assignments. Women were allowed to command shore units composed of men and women. Naval aviation was opened to women in 1972, and a pilot program was initiated to study the success of women who were assigned to ship's company on board USS SANCTUARY. Women were admitted into the senior War Colleges and some of the Staff By 1973, women were no longer managed separately Corps. within the enlisted ranks or in the URL and Staff Corps. The title "WAVES" was abolished.

In 1976, the military academies were opened to women, the first URL female Flag officer was selected and the remaining Staff and Restricted Line communities were opened to women. The Combat Exclusion Law (Title 10, Section 6015) was amended allowing women officers access to the surface warfare and special operation communities, albeit in restricted numbers. Also, enlisted women as well as female officers could be assigned to sea duty on board non-combatant auxiliary and support ships as well as Military Sealift Command ships.

In the 1980's the Limited Duty Officer program was opened to enlisted women. The process for selection to Flag rank was changed so that women, like men, are now chosen by the same selection board process.

Opportunities for women in the Navy have significantly improved in the last two decades. The final barrier to full integration, combat exclusion, continues to be debated by the military, Congress and society in general.

III. NAVY PROMOTION PROCESS

A. BACKGROUND

The military promotion system strives to ensure that adequate numbers of qualified officers in desired paygrades are available to fill vacated positions in the military hierarchy and, as a result, defines to a large extent the force structure. The system also serves as a reward for highperforming officers to ascend to positions of increased authority and responsibility. (Hansell, 1979)

The Navy's officer promotion system has undergone numerous revisions since World War II. The Officer Personnel Act of 1947 laid the foundation for today's officer personnel system and incorporated the up-or-out philosophy into the officer personnel management system. The up-or-out system provides for removal from active service, or, if eligible, retirement of an officer who has been passed over for promotion two or more times, depending on grade and number of years of service. (Hansell, 1979) The purpose of this policy is to encourage upward movement of only the best officers by providing at each rank more qualified officers than there are positions at the next higher rank (Eitelberg et al., 1989).

Various pieces of legislation were enacted following the Officer Personnel Act of 1947, including the Officer Grade

Limitation Act of 1954, which established limitations on the number of both Regular and Reserve officers who may serve on active duty in the grades of O-4 and above, temporary relief legislations in 1966, 1968, 1972, and 1974, and the Defense Officer Personnel Act of 1981 (DOPMA) (Hansell, 1979). Since 1973 the Navy's officer personnel management system has operated concurrently with the implementation of the allvolunteer force.

DOPMA, passed in December 1980 with an effective date of 15 September 1981, significantly revised the laws which govern the management of the entire Department of Defense (DoD) commissioned officer corps. It specifically addressed common provisions for accession, promotion, retention and attrition of DoD officers.

DOPMA provided for a single permanent promotion structure for each of the services. This eliminated the "running mate" system used by the Navy which linked staff officer promotions to lineal numbers in the URL. When the URL running mate was promoted, the staff officer was also promoted.

DOPMA established standardized career lengths of 30 years for captain, 26 years for commander and 20 years for lieutenant commander. The bill provides for selectivecontinuation procedures to allow officers who have been passed over twice for promotion to remain on active duty, depending on grade and years of service, until the normal retirement point.

DOPMA specified grade ceilings for 0-4 (lieutenant commander), 0-5 (commander) and 0-6 (captain). These three grades are known as "control grades" and the Secretary of Defense prescribes the size of each control grade for each of the services. The Secretary of the Navy then divides these authorizations each of grade among its competitive communities. By imposing limits to the number of lieutenant commanders, commanders, and captains who could be on active duty based on the overall force, DOPMA guidelines create a pyramid force structure. (Doyle, 1989)

B. THE NAVY'S PROMOTION PROCESS

The structure of the Navy's officer corps resembles a pyramid which rises from a broad base comprised of relatively inexperienced, junior officers to the upper echelon of a few Flag officers and topped by one Chief of Naval Operations. Primarily, accessions, entries into the system, occur at or near the base creating an internal personnel flow ascending to the top of the pyramid. Realistically, all who enter this hierarchy at the bottom cannot reach the top, but each officer has the same opportunity as his/her contemporaries to reach the top grade of his/her category. (Hansell, 1979) Specifically, each rank in the military pyramid supports or "feeds" the one above it, and promotion rates are dependent on attrition rates in the grade above.

DOPMA outlined a set of minimum promotion opportunity, promotion flow points (the number of years of commissioned service at which most officers would be promoted to the next higher grade) and minimum years in grade (YIG) as specified in Table VI.

Table	VI.	DOPMA	PROM	OTION	FLOW	POINT,	PROMOTION	OPPORTUNITY
AND MI	INIMUN	M YEARS	S IN	GRADE				

Grade	Flow Point in YOS	Promotion Opportunity	Minimum YIG	
ENS to LTJG	2	All Qualified	18 months	
LTJG to LT	4	95%	2 years	
LT to LCDR	10 +/- 1	80%	3 years	
LCDR to CDR	16 +/- 1	70%	3 years	
CDR to CAPT	22 +/- 1	50%	3 years	

1990 Edition and (Doyle, 1969).

Promotion opportunities, along with the number of vacancies to be filled in each grade and individual community (competitive category), determine the number of officers eligible, or in-zone, for selection. For example, if there are 140 commander vacancies projected for the next fiscal year and the promotion opportunity is set at 70 percent, 140/0.7 or 200 officers in the grade of lieutenant commander would be in the promotion zone.

Annually naval promotion planners start the promotion process by determining the projected need for officers in each grade within each of the competitive categories (i.e., Line, Staff). Three factors are used in the process: authorized officer strength, promotion flow point and promotion opportunities. These factors are interrelated and a change in one will force a change in at least one of the others. (Doyle, 1989)

IV. DATA AND METHODOLOGY

A. DATA

Data from fiscal years 1975 through 1992 were obtained from the Officer Personnel Information System (OPIS) database which is maintained by the Navy Personnel Research and Development Center (NPRDC), San Diego, CA. OPIS is an aggregate data file extracted annually from the Officer Master File and consists of inventories and personnel flows, such as lateral movements, promotions, losses, etc. OPIS is arranged by count or frequency of record per fiscal year. Inventory and promotion data, arranged by community, ethnic group and gender, were extracted for use in computing personnel flows. The OPIS variable codes used in this study are listed in Appendix A.

OPIS is uniquely configured to study personnel data within a system. OPIS groups officers with the same characteristics into aggregate files or bins. However, because of this aggregation, OPIS cannot track an individual officer from bin to bin.

There are two characteristics of OPIS that can affect computed continuation rates. First, OPIS does not count losses and gains that occur in the same year. For example, an individual who enters the system during a particular year and
then leaves diffing that same year will not be counted as a loss or gain by OPIS. Second, OPIS does not recognize a change in year group caused by early promotion, per se. Rather, OPIS recognizes the early promotee's record by advancing it one year in YOS to match that of the new peer's year group. For instance, if an early promotee's record should have been counted in YOS 16 it will instead be counted in YOS 17 to give credit for one year's seniority which is equivalent to changing year groups. These two idiosyncracies can have an effect on the computation of continuation rates, but the effect is postulated to be negligible.

B. WORKING DEFINITIONS

1. Year Group (YG).

An officer's year group is determined by the fiscal year in which he/she is commissioned.

2. Years of Service (YOS).

Years of service is the number of years of active commission time served to date by an officer and is computed from the active commission base date. YOS in this study will be computed as the current fiscal year (FY) minus the officer's year group (YG). **YOS = FY - YG**

3. YOS/Grade Category

The YOS/grade category is the cell in a matrix at which point the YOS row and paygrade column intersect.

4. Inventories.

Inventories are the number of officers on active duty in each YOS/grade category at the beginning of a fiscal year. These beginning inventories, or stocks, are used to compute both promotion and attrition rates.

5. Losses.

Loss refers to the total loss of individuals from a system for whatever reason. In this study, a loss is defined as any officer leaving the community during a FY from among those who were there at the beginning of the FY. Officers who transfer out of one community but do not leave the Navy will also be counted as losses for purposes of this study. Losses will be computed as the difference between inventories in successive YOS categories of the same YG.

6. Lateral Transfer

A lateral transfer is a movement of an officer from one community to another, as such it is included in the losses of the originating community. Refer to section E.1.c. of this chapter for a more detailed explanation of the effect of lateral transfers on loss and promotion rates.

C. COHORT ANALYSIS

1. Cohort Analysis

A cohort is any group of individuals who join an organization (system) at about the same time. Cohort analysis, then, consists of tracking that group as it moves

through the system. In this study, each year group within a community/ethnic or community/gender category is a cohort and they are observed as to their loss and promotion behavior in the system. Typically, over a period of time the number of personnel remaining in the cohort will decrease due to losses. In this system each person may make one of three transitions during a period of one year:

- move to the next YOS but stay in the same grade;
- move to the next YOS and the next higher paygrade;
- move out of the system.

2. Loss Rates

"Of all the flows in a manpower system, [loss] is the most fundamental for manpower planning" (Bartholomew et al., 1991). Loss is partially under the control of management as a result of the up-or-out policy in the Navy, but as a whole it is outside management's control as a result of all the individual decisions to leave. Within the Navy manpower system, the number of jobs is controlled. Therefore opportunities for promotion and recruitment are created by vacancies resulting mainly from losses. Measures of loss, then, can be used as indicators of organizational health. (Bartholomew et al., 1991) Here, they will be used to compare the "health" of various cohorts.

3. Promotion Rates

Opportunities for promotion are created by vacancies resulting from losses. On the other hand, the promotion system in the Navy attempts to ensure that the right number of qualified people are available to fill those vacated positions within the military hierarchy.

The promotion rate, in this study, is computed by dividing the number of officers promoted to the next grade in a YOS/grade category by the beginning inventory in the YOS/grade category. For example, if there are 200 lieutenants in YOS 10 and 160 of them are promoted to lieutenant commander then the promotion rate for the lieutenant grade/YOS 10 category is 160/200 or 0.80.

D. METHODOLOGY

The Statistical Analysis System (SAS) program was used to convert OPIS fiscal year records into year group records. Matrix tables by YOS and paygrade were constructed showing inventories and promotion data for each year group by designator and by ethnic group or gender. The inventory data were imported into the spreadsheet software program, Quattro Pro. Promotion and attrition rates were computed using the spreadsheet program. Data inconsistencies, defined as data not consistent with time in grade or time in service requirements, occurred occasionally and were deleted from the inventory tables. For instance, the surface community, white

ethnic inventory table for YG 1987 showed 41 admirals at YOS 3. The 41 admirals were considered to be an anomaly since the minimum time in service requirement was not met for this grade. Therefore they were deleted from the inventory total for YOS 3. Figures 1 and 2 are examples of SAS generated inventory and promotion tables for YG 1983, surface community, white ethnic group. The promotion tables reflect the number of promotions to the paygrade at the top of the column.

YOS	ENS	LTJG	LT	TOTAL
1	937	0	0	937
2	1018	0	0	1018
3	6	1022	0	1028
4	1	903	0	904
5	0	43	640	683
6	0	0	565	565
7	0	0	471	471
8	0	0	391	391
9	0	0	343	343

Figure 1 Example of Inventory Matrix of YG 1983 Surface Community, White Ethnic Group

YOS	LTJG	LT	
2	1016	0	
3	2	0	
4	0	639	
5	0	19	

Figure 2 Example of Promotion Matrix of YG 1983 Surface Community, White Ethnic Group

E. DETERMINATION OF LOSS AND PROMOTION RATES

In order to study the career patterns of the cohorts in terms of loss and promotion rates, the analysis was carried out in three stages. The first stage computed the individual YOS rates for each year group cohort. Since the itemized accounting of rates in the first stage was too detailed to observe trends, it was decided to compute average rates across year groups for each YOS in the second stage. The analysis of these average rates focused on rate trends by YOS but it also proved to be difficult to analyze ethnic and gender differences. In the final stage YOS cells were grouped by career milestones thereby creating six or seven significant career periods within a career for each particular community. Then rates were computed for each significant period, for each year group. Average rates across year groups for each significant period were also computed so as to provide an averaged baseline against which to compare year group rates. A more comprehensive explanation of these stages is given in the following sections.

1. Individual Rates by YOS and YG

a. Loss Rates

Loss rates were computed for each YOS within a YG cohort. keferring to Figure 1, the loss rate for YOS 4 is computed as the total loss occurring between the beginning inventory total of YOS 4 and the beginning inventory total of

YOS 5 divided by the beginning inventory total of YOS 4. This equates to (904-683)/904 or 0.244 which is interpreted as a 24.4 percent loss rate occurring in YOS 4. Rates for all YOS's were computed in this manner for each year group.

Inventory and loss data for each of the matrices were consolidated into tables by community and ethnic or gender group. Appendix B contains inventories and Appendix C contains losses. Loss rates were similarly consolidated and are provided in Appendix F.

b. Promotion Rates

The promotion rates were computed by using both the inventory and promotion matrix tables. For example, in Figures 1 and 2, the number of lieutenants junior grade who were promoted to lieutenant during their YOS 4 was 639. This number was then divided by the inventory of lieutenants junior grade in YOS 4 or 903. The ratio equates to a promotion rate of 639/903 or 0.708. Therefore, 70.8 percent of the lieutenants junior grade in YOS 4 were promoted to lieutenant.

Occasionally, promotions occurred in two grades in the same YOS. In these cases, only the promotion rate for the higher grade was computed. Being promoted early to the higher grade rather than late to the lower grade reflects a more significant aspect of career progression. Appendices D and E contain promotion-eligible and promotion data, respectively. Promotion-eligibles are those officers in a YOS/grade category

who can be promoted to the next grade. In the example, above the promotion-eligible inventory is 903 which is the number of lieutenants junior grade in YOS 4 who can be promoted to lieutenant. Appendix G contains the promotion rates.

c. Effect of Lateral Movement on Loss and Promotion Rates

Personnel flows within a cohort involve the entering and leaving of individuals within YOS categories. As a result, inventory levels can increase or decrease from one YOS to the next depending on the amount of lateral movement, losses, and gains that occur. Losses include such factors as leaving active duty or the Navy altogether (for whatever reason), death, or transferring into another community. OPIS has separate loss and transfer in/out files, but the transfer data proved to be inconsistent when compared to the inventory data so these files were not used. Instead, losses were computed from the inventory file as the difference between successive YOS within a cohort. Any transfers into the community cohort could then offset or even overwhelm the number of transfers out of the community and thereby diminish the total effect of losses in terms of a loss rate. In some cases the inventory level actually increased from one YOS to the next one.

In theory, officers may laterally move between communities at any time, but generally transfers occur in the

early YOS's (1-6) before one's career path is fully entrenched. It is possible then that the true loss rate, especially in the early YOS categories, is underestimated. because this study focuses on However. community representation, the objectives will be met by analyzing the net effect between successive YOS categories. Figure 1 (refer to section D) also illustrates that if the inventory levels increase from one YOS to the next then the loss rate is taken to be zero

Promotion rates are similarly affected by lateral movement in and out of the community. OPIS records all promotions that occur in a YOS/grade category and any officers that transfer into the community after the beginning of the fiscal year will be included in the promotion file. Since promotion rates are computed by dividing the number of promotions to the next grade in a YOS/grade category (as obtained from the OPIS promotion file) by the number of officers in that YOS/grade category, the number of officers that are promoted could reflect a higher number than what was there at the beginning of the year. For example, there is a high incidence of lateral transfers in the GenURL community, especially in the early years of service. As such, it is not uncommon to have a promotion rate that exceeds 100 percent for promotion to lieutenant junior grade amongst some of the cohorts.

2. Average Rates by YOS

An average rate across all year groups available was computed for each YOS. The average rate can be used as a reference to compare the individual year group rates in order to determine how much promotion or loss rates were changing across year groups.

The estimating of a single set of rates over several year groups is accomplished by computing the ratio of total losses over the total inventories. For example, for the year groups 1972 through 1987, the average loss rate for YOS 4 in the surface community, white ethnic group (refer to Appendices B and C) was computed by dividing the sum of all losses occurring by the sum of all inventories as shown below:

$\frac{227 + 223 + 174 + 259 + 229 + 180 + 169 + 250 + 345 + 289 + 293 + 221 + 186 + 361 + 311 + 357}{1060 + 902 + 864 + 1102 + 1037 + 1101 + 968 + 1078 + 1090 + 993 + 1109 + 904 + 845 + 1270 + 1122 + 1217}$

$= \frac{4074}{16,662}$

= 0.245

The average promotion rate is similarly computed using promotion-eligible data in the denominator and promotion data in the numerator. Promotion rates were restricted to single grade promotions in each year of service in order to keep separate, for instance, promotion rates to LTJG and promotion rates to LT in YOS 3. Whenever such overlaps in promotions occurred, only the promotion rate to the higher grade was computed. Loss rates and promotion rates averaged across year groups are included in Appendices H and I, respectively.

3. Milestone Period Rates

Finally, to further examine career prospects, rates were combined to reflect six or seven significant YOS periods within each community. These periods were selected to reflect significant milestones within the career path of each community. For that reason they will be referred to as "milestone periods." Promotion windows, loss rate trends, leadership tours, end of obligatory requirements, retirement, etc., provided the framework in which to formulate these milestone periods. The 1990 edition of The Naval Officer's Career Planning Guidebook and discussions with officers in the various communities analyzed were used in defining the periods. The "Officer's Guidebook" contains figures depicting the professional development paths for each community and was the primary source used for this purpose. As the "Officer's Guidebook" points out, the figures "are included only to illustrate the general progression of assignments and promotions which [an officer] can expect. No two officers will follow identical career patterns; however, on the average, the successful [officer] will meet most of these career milestones in about the same sequence indicated." While this type of classification into milestone periods may oversimplify the normally complex career path of a naval officer, it serves the purpose of focusing on loss and promotion rates during critical junctures and thereby highlighting differences in those rates.

Combined rates were computed by milestone period for each year group. Also, rates were averaged for each milestone period across several year groups. These rates were calculated in the same manner as the average rates in Section 2 above. Loss rates and promotion rates by milestone period averaged across year groups are contained in Appendices J and K, respectively. Loss rates and promotion rates by milestone period and year group are contained in Appendices L and M, respectively.

a. Milestone Periods for Surface Warfare Community

The career path for the Surface Community (which includes both conventional and nuclear surface career paths) was broken down into seven milestone periods as follows:

<u>Milestone Period</u>	<u>Years of Service</u>	<u>Year Groups</u>
1	1 - 2	1975 - 1989
2	3 - 6	1973 - 1985
3	7 - 11	1969 - 1980
4	12 - 17	1964 - 1974
5	18 - 20	1960 - 1971
6	21 - 26	1960 - 1965
7	27 - 30	1960 - 1961

The year groups involved in the computations for each milestone period are also shown above. Not all of the year groups could be used in each milestone period because of the obvious limitations on data availability for all the year groups.

Milestone period 1 is characterized by a period of initial training. This training includes Surface Warfare

Officer's School and follow-on training for Engineering Officer of the Watch, Nuclear Power School or functional training related to specific billet assignments, as applicable. YOS 2, which is included in this milestone, is a period that overlaps both training and the first sea tour. Since it also covers a promotion period from ENS to LTJG, it is included in this first milestone period to distinguish it from the LTJG/LT tour in milestone period 2.

Milestone period 2 involves the significant events of the first sea tour, division officer tour and promotion to LT. It also includes the end of the typical four- or fiveyear, initial obligatory service incurred by the majority of officers and the screening process for department head.

Milestone period 3 includes further training (department head, graduate education, etc.), the department head tour afloat, and promotion to LCDR.

Milestone period 4 contains the XO afloat tour, promotion to CDR, and major shore tour.

Milestone period 5 contains the CDR command tour and the 20-year retirement period of eligibility. At this point, LCDRs denied continuation generally retire from the Navy.

Milestone period 6 involves significant tours ashore, promotion to CAPT, and major command tours.

Milestone period 7 continues with major command and shore tours leading to selection to Admiral.

b. Milestone Periods for General Unrestricted Line (GenURL) Community

The Coneral Unrestricted Line community provides the Navy with a community of officers who manage the fleet support establishment. Their career path was divided into seven periods as follows:

<u>Milestone Period</u>	<u>Years of Service</u>	Year Groups
1	1 - 2	1975 - 1989
2	3 - 6	1973 - 1985
3	7 - 11	1969 - 1980
4	12 - 16	1964 - 1975
5	17 - 20	1960 - 1971
6	21 - 25	1960 - 1966
7	26 - 30	1960 - 1961

The year groups involved in the computations for each milestone period are also given above:

Milestone period 1 includes the initial period of training related to specific billet assignments, partial first tour and promotion to LTJG.

Milestone period 2 involves the division officer tour, end of obligatory service requirements and promotion to LT.

Milestone period 3 contains the department head tour, promotion to LCDR and screen for XO.

Milestone period 4 includes the XO tour, promotion to CDR, and commander command screen.

Milestone period 5 consists of the CO tour, 20-year retirement period of eligibility and promotion to CAPT.

Milestone period 6 contains major shore command and also CAPT promotion.

Milescone period 7 continues with major command and shore tours leading to selection to Admiral.

c. Milestone Periods for Aviation Warfare Community

The career path for the Aviation Warfare Community which includes pilots, NFO3 and aviation generalists was broken down into six milestone periods as follows:

<u>Milestone Period</u>	<u>Years of Service</u>	<u>Year Groups</u>
1	1 - 2	1975 - 1989
2	3 - 7	1973 - 1984
3	8 - 12	1968 - 1979
4	13 - 18	1963 - 1973
5	19 - 25	1960 - 1966
6	26 - 30	1960 - 1961

The year groups involved in the computations for each milestone are also given above:

Milestone period 1 includes the initial student pilot or NFO training and follow-on training at the Fleet Readiness Squadron. It also covers the promotion cycle from ENS to LTJG.

Milestone period 2 covers the significant events of the first squadron tour, division officer tour, shore tour and the end of obligatory service for flight training. It also includes the LT promotion.

Milestone period 3 involves follow-on sea tours with emphasis on the squadron department head tour. This period covers the LCDR promotion.

Milestone period 4 includes promotion to CDR, screen for command and squadron XO/CO tour.

Milestone period 5 contains major sea or shore command and senior shore tours. It also includes promotion to CAPT and the 20-year retirement period of eligibility.

Milestone 6 continues with major command and shore tours leading to selection to Admiral.

d. Milestone Periods for Submarine Warfare Community

The Submarine Warfare Community consists of nuclear trained submarine officers and general submarine officers (GSO). Their career path was divided into seven periods as follows:

Milestone Period	<u>Years of Service</u>	<u>Year Groups</u>
1	1 - 2	1975 - 1989
2	3 - 7	1973 - 1984
3	8 - 12	1968 - 1979
4	13 - 16	1963 - 1975
5	17 - 20	1960 - 1971
6	21 - 24	1960 - 1967
7	25 - 30	1960 - 1961

The year groups involved in the computations for each milestone period are also given above:

Milestone period 1 includes the initial training period (nuclear power school, nuclear prototype training, submarine officer basic course and, prior to 1985, GSO training) and promotion to LTJG.

Milestone period 2 covers the first sea tour, division officer tour, shore tour and the end of the

obligatory service requirement. It also includes promotion to LT and screen for department head (after 1985).

Milestone period 3 involves the department head sea tour, promotion to LCDR and screen for XO.

Milestone period 4 includes the XO sea tour, promotion to CDR and screen for CO.

Milestone period 5 includes CO tour, promotion to CAPT and the 20-year retirement period of eligibility.

Milestone period 6 covers senior shore and major command tours and also promotion to CAPT.

Milestone period 7 continues with major command and senior shore tours leading to selection to Admiral.

V. ANALYSIS

A. INTRODUCTION

The oldest of the four communities studied, the Surface Warfare community, has a long and established career path, substantial population sizes throughout the year groups and years of service (primarily with the White ethnic group) and reasonably good ethnic representation. For these reasons, the surface community was studied and analyzed first in order to develop the methodology. The General Unrestricted Line community is presented second because of its strong gender representation, followed by the Aviation and Submarine communities.

1. Analysis of Rates

This chapter is organized by community as described in the preceding chapter and further broken down by analysis of the various types of loss and promotion rates for the ethnic (Black, Hispanic) and gender (female) groups considered. Data and supporting graphs used in the analysis are included in Appendices H through Q and will not be individually referenced in the subsequent sections.

An analysis of loss rates averaged across year groups is included for every year of service because losses do occur in every year of service. On the other hand, promotions occur

mostly during "windows", and, therefore, it is best to analyze them by milestone period only. However, promotion rates averaged across year groups are included in Appendix I for general reference.

2. Effect of Population Size on Analysis

Unfortunately, the breakdown of communities by year groups and by ethnic or gender classification often reduces the community cohorts into very small populations. As the cohorts increase in age they continue to decrease in size because of losses and can eventually reach a size not conducive to statistical study. Generally, the rates are considered to be inadequate for further analysis when the population size used in computing the rates falls into a range somewhere below five or ten. Nevertheless, even these rates are included in the study, in order to establish a methodology and provide background data for possible future studies. Conclusions, however, will not be drawn about rates whenever the population size drops below that level.

B. ANALYSIS OF SURFACE WARFARE COMMUNITY

Available inventory levels do not reach above ten until YG 1970 for Black officers and YG 1977 for both Hispanic and female officers. Each milestone period reflects a promotion rate to one paygrade only. Specifically, period 1 includes promotion to LTJG, period 2 to LT, period 3 to LCDR, period 4 to CDR, periods 5 and 6 to CAPT and period 7 to Flag.

1. Black Officers

a. Black Loss Rates

Comparing loss rates for Black officers to those of White officers for each year of service averaged across available year groups, it appears that Black officers have higher loss rates in the first three years of service and then have lower loss rates for the next four years of service. Black loss rates are higher again for YOS 8-11 and then alternate from YOS 12 to 15 between higher and lower rates than Whites. *S*tarting with YOS 15, Blacks show again higher loss rates up through YOS 24 except for YOS 20 and 22. Beyond YOS 24 population sizes become too small to draw any conclusions.

The loss rates, as grouped into milestone periods indicate that Blacks experience somewhat higher loss rates during the initial training period (milestone period 1), during the "department head tour" (milestone period 3) and during the "XO period" (milestone period 4). Blacks have lower loss rates during the "division officer tour" (milestone period 2). In addition, they have lower rates during milestone periods 5 and 6 as well. Milestone 7 has too small of a population to warrant conclusions.

Comparing individual year group milestone loss rates for milestone period 1 shows that Blacks have higher loss rates than White officers in every YG except 1975, 1978,

1979 and 1989. In milestone period 2 Blacks have lower loss rates in all year groups except 1973, 1974, 1981 and 1985. Milestone periods 3 and 4 show no discernable increasing/decreasing trends from one year group to the next. Milestone period 5 shows a consistently lower rate pattern in the last three year groups studied (1969 - 1971) for Blacks compared to Whites. Milestone period 6 and 7 have small population sizes and analysis was not conducted.

b. Black Promotion Rates

Overall, Blacks demonstrate lower average promotion rates in milestone periods 1, 3 and 4 than those of White officers. Blacks have comparable average rates in milestone period 2 and substantially higher rates in milestone periods 5 and 6. However, the small population size in milestone period 6 may be artificially inflating the promotion rate. Analysis of milestone period 7 could not be accomplished because of small or nonexistent populations.

In milestone period 1, Blacks have slightly but consistently lower promotion rates than Whites with the exception of YGs 1975, 1978, 1979 and 1987. The promotion rate for Blacks in milestone period 2 fluctuated from being lower in YGs 1973 and 1974, then higher in YGs 1975 - 1978, then lower in YGs 1979 - 1982, then higher in YG 1984, ending lower in YG 1985. The promotion rates for milestone period 3 are higher for YG 1970 through YG 1975 and are lower for the

last five year groups studied (1976 - 1980) with the notable exception of YG 1979. The rates in milestone period 4 do not appear to follow a trend. Analysis for milestone periods 5 -7 was not conducted because of small population sizes.

2. Hispanic Officers

a. Hispanic Loss Rates

Average Hispanic loss rates are higher than those of White loss rates in the first six years of service except for YOS 4. The rates are lower for YOS 7 through 10 except for YOS 9 and then are higher for the next three years of service. No losses appear to occur in YOS 14, 16 and 17 probably because of small inventory figures. Higher rates are registered in YOS 15, and 18-21; however, the number of officers in these categories is small.

Hispanics show the same pattern as Surface Warfare Blacks for the first three milestone periods in that they have higher loss rates during milestone periods 1 and 3 and lower loss rates in milestone period 2. They differ in milestone period 4, where Hispanics show a slightly smaller loss rate as compared to White officers. Milestone 5 indicates a significant increase in loss rate, although the population size in milestones 5 through 7 are very small, which probably is inflating the loss rate.

Hispanic loss rates are unevenly distributed throughout the year groups as compared to White loss rates for

milestone period 1. Between YGs 1980 and 1985, Hispanics have higher loss rates with the exception of YG 1982, but since YG 1986 they show no losses. In milestone period 2 they had substantially lower rates for YGs 1974 - 1977. YGs 1978 -1981 show higher rates. In the last four year groups studied (1982 - 1985), Hispanics have lower rates, with the exception of YG 1983. In milestone period 3, Hispanics appear to have substantially higher loss rates in YGs 1970 to 1972, but this is probably due to small population sizes. From YG 1975 to YG 1980, they have higher loss rates except for YGs 1977 and 1979. Milestone periods 4 through 7 have small population sizes and therefore analysis was not conducted.

b. Hispanic Promotion Rates

Hispanics show lower promotion rates in milestone periods 1, 3, 4, and 5. They have a slightly higher promotion rate in milestone period 2. The notably higher promotion rate in milestone period 6 is probably due to a small population size. Analysis of milestone period 7 could not be accomplished because of small or nonexistent populations.

In milestone period 1, Hispanics have higher or even rates compared to White rates in YGs 1976 -1982. In YGs 1983 - 1986, they have lower or even rates as in the case of YG 1984. In the last three year groups studied (1987 - 1989), the rates are higher. In milestone period 2, the rates are distributed unevenly with no discernable trend noted. The

rates are higher in YGs 1972 - 1974 but then, with the exception of YG 1976, are all lower than White rates in the last six year groups studied (1975 - 1980). Analysis of milestone periods 4 - 7 was not conducted because of small population sizes.

3. Female Officers

a. Female Loss Rates

Comparing loss rates for each year of service as averaged across year groups, Surface Warfare females experience higher loss rates in the first two years of service but show substantially lower rates for YOS 3 through YOS 6 as compared to male officers. At YOS 7-9 the rates are substantially higher, then return to levels below those of males for YOS 10 and 11. YOS 12-15, except YOS 14, show higher rates, but the population size is small. Beyond YOS 15 loss rates appear to be nonexistent, because of small or zero population size.

Overall, female officers have higher loss rates in milestone periods 1 and 3 and a lower loss rate in milestone period 2. Milestone periods 4 - 7 were not analyzed because of small population sizes.

Comparing the individual year group milestone loss rates for female officers to male officers for milestone period 1, female officers do not show an increasing or decreasing trend from one year group to the next. Whereas, in

milestone period 2, females have lower loss rates, the rates for more recent year groups are increasing over time. In milestone period 3, loss rates increase from YG 1974 to YG 1976, and then show a decreasing trend from YG 1978 to YG 1980.

b. Female Promotion Rates

Female Surface Warfare officers have higher promotion rates than their male counterparts in milestone periods 1 and 2. However, these two milestone periods are comprised of YOS categories that are affected by lateral transfers into the community, as can be observed in the inventory tables (Appendix B). This effect may have an influence on the rates by artificially inflating them. Milestone period 3 rates are comparable to male rates, whereas milestone period 4 shows a lower rate for females. Because women have only been in the community since the mid 1970's they have not been around long enough to be present in the senior paygrades in sufficient numbers to warrant analysis beyond milestone period 3.

In milestone period 1, the promotion rates in YGs 1978 - 1979 are artificially high as a result of lateral transfers into the community. Higher and lower rates for females are about equal through YGs 1980 - 1989. In milestone period 2, the "transfer effect" is also seen in YGs 1976 -1978. With the exception of YG 1984, females have higher

promotion rates in YGs 1976 - 1985. However, the population size is too small in YGs 1975 or earlier to warrant analysis. In milestone period 3 females have higher promotion rates in the last five year groups studied (1976 - 1980). Analysis was not conducted for milestone periods 4 - 7 because of small population sizes. YG 1975 has a substantially lower promotion rate for female officers as compared to their male counterparts in that year group. Rates in YGs 1974 and earlier have small or zero population sizes that precludes further analysis.

4. Summary

The results indicate Black officers have higher loss rates and lower promotion rates compared to White officers in milestone periods 1, 3 and 4 in the Surface community. Hispanic officers have higher loss rates and lower promotion rates compared to White officers in milestone periods 1, 3 and 5, as well as, lower promotion rates in milestone period 4. Female officers have higher loss rates in milestone periods 1 and 3 and lower promotion rates in period 4 compared to male officers.

C. ANALYSIS OF GENERAL UNRESTRICTED LINE COMMUNITY

The Black population size in the GenURL community did not reach a value of ten or higher until YG 1972. Only three year groups, 1985, 1986 and 1989, had an Hispanic population of ten or greater. Eight of the year groups prior to 1972 had no

representation and the remaining four had a population size of one. The GenURL community has historically consisted of mostly women, thus the male population becomes the "minority" in this community. Five year groups, 1960 - 1963 and 1966, have available inventories of male officers less than ten. (1962 also has a female population size of less than ten.)

Each milestone period reflects a promotion rate to one paygrade only. Specifically, period 1 includes promotion to LTJG, period 2 to LT, period 3 to LCDR, period 4 to CDR, periods 5 and 6 to CAPT and period 7 to Flag.

1. Black Officers

a. Black Loss Rates

Average loss rates across year groups for the GenURL community indicate that Black officers have lower rates for the first seven years of service as compared to White officers. The rates alternate from YOS 8 to YOS 14 with YOS 11 showing a substantially higher loss rate compared to White officers in that category. From YOS 15 to YOS 20 Blacks experience no loss rates except for large peaks at YOS 16 and YOS 20. The population size diminishes or is nonexistent beyond YOS 20 and therefore precludes further analysis.

The loss rates, as grouped into milestone periods, indicate that Blacks experience lower rates during the first two milestone periods. For the next two milestone periods, periods 3 and 4, Blacks have higher loss rates relative to

White officers. Black loss rates are substantially lower than those of White officers in milestone period 5 and then increase to above the rate of White officers in milestone period 6. Analysis was not conducted for milestone period 7 because of small population sizes.

Comparing individual year group milestone loss rates for milestone period 1 shows that Blacks experience losses in only five of the 15 year groups included in the computations as compared to White officers. Of those five year groups that show losses, two year groups have lower rates, (YGs 1981, 1982) and two year groups have higher rates (YGs 1984, 1986). In milestone period 2, loss rates for Black officers were lower in every year group except YG 1979, as compared to white officers. The population sizes become too small in each year group for milestone periods 4 - 7 to continue analysis.

b. Black Promotion Rates

In comparing promotion rates, averaged across year groups in the milestone periods, Black officers have higher promotion rates in the first two periods as compared to White officers. Blacks appear to have lower promotion rates in milestone periods 3 and 4 and then have a higher rate in milestone period 5. There is a zero promotion rate for Black officers in milestone period 6; however, both milestone periods 6 and 7 have small or zero population sizes.

As for the promotion rates among the various year groups in milestone period 1, Black officers have higher rates than White officers in every year group studied except for YG 1989. The last three year groups indicate a decreasing trend in promotion rates as compared to an increasing trend noted in White promotion rates. In milestone period 2 Black officers have higher promotion rates in nine of the 13 year groups for which promotion rates were computed, with no increasing or decreasing trend noted. Of the last five year groups used in the computations for milestone period 3, Black officers have substantially lower promotion rates in four of the year groups (YGs 1976, 1978 - 1980). Prior to YG 1976, Blacks have higher promotion rates in four of six year groups studied. In milestone period 4, the promotion rate for Black officers fluctuated between YG 1970 and YG 1975 and were lower in four of these six year groups. Analysis was not conducted for year groups prior to YG 1970 due to small population sizes. Also, analysis was not conducted for milestone periods 5 - 7 because of small population sizes.

2. Hispanic Officers

a. Hispanic Loss Rates

Initially, Hispanics show no loss at YOS 1 (probably because of the "transfer effect") but then have higher loss rates for the next twelve years of service except for a significant lower rate at YOS 5 and a zero loss rate at

Beyond YOS 12, the population size is too small to continue analysis.

Comparing milestone period loss rates between Hispanic and White officers, Hispanic loss rates alternate between slightly higher rates in milestone period 1, slightly lower in milestone period 2 and then slightly higher again in milestone period 3. Milestone periods 4 - 7 have small population sizes that preclude further analysis.

The small Hispanic population in the GenURL community (only three year groups had inventories of ten or more officers) made analysis of milestone loss rates for each of the year groups difficult. In milestone period 1, Hispanics have higher loss rates than White officers in YGs 1977 - 1981, however, these year groups have small population sizes. From YG 1982 to YG 1989, Hispanics have zero loss rates except for YG 1985 and YG 1989, which have higher rates than White officers in those year groups. In milestone period 2, higher/lower loss rates are distributed across the year groups with no trend noted. Loss rates in milestone period 3 reflect small population sizes in the year groups studied, and no conclusions can be made as a result.

b. Hispanic Promotion Rates

Hispanic officers initially have higher promotion rates in milestone period 1 and then have slightly lower promotion rates in the next milestone period as compared to

White officers. They then have higher rates in milestone period 3 but fall below the rates of White officers in milestone period 4. Beyond milestone period 4, the population size becomes too small to continue analysis.

Comparing Hispanic promotion rates across the year groups in milestone period 1, shows that Hispanics have either higher rates or rates that are only slightly below those of White officers in almost every year group with the exception of YG 1978, which has a substantially lower rate. (YG 1988 has no Hispanic population). In milestone period 2, higher/lower piomotion rates alternate between the first half of the year groups studied and then show a period where Hispanic promotion rates are consistently lower (YGs 1981 -1984). YG 1985 has a notably higher Hispanic promotion rate as compared to White officers in this milestone period. The population sizes become too small in the remaining milestone periods to warrant further analysis.

3. Female Officers

a. Female Loss Rates

Female officers have lower average loss rates in every year of service except YOSs 20 and 25-27 as compared to the minority male officers. Analysis was stopped at YOS 28 because of small male population sizes. The corollary to these findings is that males have substantially higher loss rates in almost every YOS in the GenURL community.

Female officers show lower loss rates in every milestone period except for period 7. Female and male loss rates are substantially different in milestone periods 2, 3, 4 and 6.

Examining the breakdown of gender loss rates by year group in milestone period 1, shows that females exhibit loss rates in every year group, whereas males have loss rates in only seven of the 15 year groups used in the computations (YGs 1975, 1976, 1980, 1982, 1983, 1988 and 1989). However, females have lower loss rates, overall, when averaged across year groups, with higher loss rates in only two year groups (YGs 1976, 1980). In milestone period 2, females have a fairly consistent loss rate across all year groups and, without exception, have lower loss rates than their male counterparts. Males, on the other hand, show an increasing trend in loss rates in the last four year groups studied (YGs 1982 - 1985). In milestone period 3, females, again, have substantially lower loss rates in every year group studied as compared to male officers. Overall, female officers experience small loss rates during milestone period 4 and, except for YGs 1965 - 1967, they have lower rates than male officers. In milestone period 5, female officer loss rates are fairly consistent except for a peak at YG 1966. Of the ten year groups studied in milestone period 5, female loss rates are higher than male loss rates in only three year groups (1966, 1968, 1970). The loss rates fluctuate in size

from one year group to another. In milestone period 6, female officers have lower loss rates in every year group except YG 1960, in which the rates are even with those of male officers. In milestone period 7 females have a slightly higher loss rate than male officers in one of two year groups studied (YG 1961). The other year group (YG 1960) had a zero population of both male and female officers.

b. Female Promotion Rates

Comparing milestone period promotion rates with male officers, shows that females have higher promotion rates in six of the seven milestone periods, the exception being the first milestone period. The first milestone period generally experiences numerous transfers of males into the community, and the higher promotion rate for males during this period may be influenced by this "transfer effect".

In milestone period 1, females have lower promotion rates in eight of 15 year groups studied. A trend is beginning to develop over the last three year groups (1987 -1989). however, where the rates for males and females are about equal. In milestone period 2, promotion rates for females are higher in nine of 13 year groups studied with the difference between male and female rates being noticeably large in the last four year groups studied (1982 - 1985). Female officers have dramatically higher promotion rates than their male counterparts in every year group in milestone

period 3. In milestone period 4, higher/lower female promotion rates alternated from YG 1964 to YG 1967. Then, from YG 1968 to YG 1975 (the last eight year groups used in the computations), females have substantially higher promotion rates than males. Early promotion to Captain is contained in milestone period 5, and in that period promotions occurred in only three year groups for females (1967, 1969, 1970) and did not occur in any year groups for males. There is an overall decreasing trend in promotion rates for females in milestone period 6, but they have higher promotion rates than males for five of seven year groups. Males have slightly higher promotion rates in YGs 1964 and 1966. Analysis of milestone period 7 was not conducted because of small population sizes.

4. Summary

In the GenURL community, Black officers have higher loss rates and lower promotion rates compared to White officers in milestone periods 3 and 4, as well as, in milestone period 6, although period 6 has a small population size. Hispanic officers have higher loss rates compared to White officers in milestone periods 1 and 3 and lower promotion rates in periods 2 and 4. Female officers have higher loss rates in period 7 and lower promotion rates in period 1 compared to male officers. An opposite view to this finding is that male officers have higher loss rates and

corresponding lower promotion rates in milestone periods 2, 3, 4, 5 and 6.

D. ANALYSIS OF AVIATION WARFARE COMMUNITY

Available inventory levels for Black officers in the Aviation community first reached a size of ten in YG 1972. The Hispanic population size was greater than ten in only YGs 1975 and 1977 and continued above ten from YG 1980 on. The population size for females was at or greater than ten commencing with YG 1977.

Each milestone period reflects a promotion rate to one paygrade only. Specifically, milestone period 1 includes promotion to LTJG, period 2 to LT, period 3 to LCDR, period 4 to CDR, period 5 to CAPT and period 6 to Flag.

1. Black Officers

a. Black Loss Rates

Black officers in the Aviation community have higher average loss rates in the first five years of service with the rates in YOSs 1-3 being substantially higher than those of White officers. The rates become lower in the next three years of service (6-8). From YOS 9 to YOS 16, the rates are higher with the exception of YOS 12 and YOS 17. The rates then alternate with YOS 20 showing a substantially higher loss rate than that of White officers in the same year of service.

Analyzing milestone period loss rates shows that Black officers have a substantially higher rate as compared to

White officers in milestone period 1 and have slightly higher rates in milestone periods 2 and 3. The loss rate is again higher for Blacks in milestone period 4. Milestone period 5 shows lower Black loss rates than those of White officers. Blacks have a zero population size in milestone period 6.

In milestone period 1, Blacks have higher loss rates as compared to White officers in every year group studied except for YG 1988. While White loss rates remained somewhat consistent throughout the year groups, Black loss rates cycled from a high in YG 1975, then decreased down through YG 1883 and then increased through YG 1987. YGs 1988 and 1989 have smaller loss rates compared to all other Black year group loss rates in this milestone period. In milestone period 2, Blacks have higher loss rates compared to White officers in eight of 12 year groups included in the rate computations. YGs 1975, 1976, 1979, and 1980 are the exception and the rates in these year groups are notably lower than White loss rates. The last four year groups studied, (1981 - 1984) have higher loss rates than White officers but are decreasing in magnitude. The loss rates for Black officers in milestone period 3 fluctuate from one year group to the next. Loss rates for Black officers are higher in the last three year groups studied (1977 - 1979) as compared to White officers. In milestone period 4, Blacks experience loss rates in only five of 11 year groups studied with four of the five year groups showing higher loss rates than those of White
officers. White officers during this period experience consistently small loss rates. The variability of Black rates is probably due to small population sizes. The small population sizes in milestone periods 5 and 6 preclude further analysis.

b. Black Promotion Rates

Black officers have lower average promotion rates as compared to White officers in milestone periods 1 through 4, albeit the difference in the rates is slight in periods 2 and 3. It appears that Blacks have much higher promotion rates than White officers in milestone period 5; however, both milestone periods 5 and 6 have small population sizes, resulting in tenuous results.

In milestone period 1, Blacks have lower promotion rates in every year group except YG 1986 as compared to White officers. In milestone period 2, promotion rates fluctuate between being higher or lower than those of White officers from one year group to the next. However, in the last four year groups studied (1981 - 1984), Blacks have substantially lower rates in three of the year groups (YG 1982 has a slightly higher rate). Promotion rates fluctuate from year group to year group again in milestone period 3, but the differences in rates are somewhat more pronounced. Starting with YG 1970, Blacks have lower rates than White officers in three of four year groups (the rates are even in YG 1971),

then have higher rates from YG 1974 to YG 1976 and end with lower rates in the last three year groups studied (1977 -1979). YGs 1963, 1970, and 1971 registered zero promotion rates in milestone period 4. Of the remaining eight year groups studied, Black officers in five year groups have higher promotion rates than White officers and one year group shows even rates between the two groups of officers. Analysis was not conducted on milestone periods 5 and 6 because of small population sizes.

2. Hispanic Officers

a. Hispanic Loss Rates

Hispanic officers have substantially higher average loss rates in the first two years of service as compared to White officers. For the next six years of service, they have equal or lower rates with the exception of YOS 4. The rates become higher from YOS 9 to YOS 14 with the exception of YOS 13. Rates are lower from YOS 15 to YOS 21. Rates are then higher in YOS 22-25 except for YOS 23. Beyond YOS 23 the population size becomes too small to draw further conclusions.

Analyzing milestone average loss rates shows that Hispanic officers experience higher loss rates in all six periods, albeit the difference between Hispanic and White loss rates is slight in milestone periods 2 and 4. Analysis was not conducted on milestone periods 5 and 6 because of small population sizes.

In milestone period 1, Hispanics have higher loss rates in every year group studied except for YGs 1981, 1983, and 1985. In milestone period 2, Hispanics initially have higher loss rates as compared to White officers in the first three year groups studied (1973 - 1975) and then have lower or zero loss rates in the next three year groups (1976 - 1978). The rate is higher in YG 1979 but then becomes lower for the next four year groups (1980 - 1983) and ends with a substantially higher rate in the last year group studied In milestone period 3, the loss rates for Hispanic (1984). officers are higher than those of White officers in the first five year groups (1968 - 1972). Loss rates of zero for Hispanic officers are registered in the next three of four year groups (1973, 1974, 1976). Hispanic loss rates are higher in YGs 1975, 1977 and 1978, and end up noticeably lower in YG 1979. In milestone period 4, Hispanics have positive loss rates in four of the 11 year groups (1966, 1969, 1970, 1973) and all of those rates are higher than those of White officers. However, the population sizes are very small in each of the individual year groups, resulting in tenuous analysis. The same is true for milestone periods 5 and 6; therefore, analysis was not continued.

b. Hispanic Promotion Rates

Comparing Hispanic average promotion rates to those of White officers across the milestone periods shows that

Hispanics have lower average promotion rates in four of the five periods in which they have a population size. The exception is milestone period 3 where they have a slightly higher rate as compared to White officers. Milestone periods 5 and 6 could not be analyzed because of small or zero population sizes.

In milestone period 1, Hispanics have lower or even promotion rates compared to White officers in most of the year groups except for YGs 1979, 1983, 1986. In milestone period 2, Hispanic promotion rates fluctuate slightly among the various year groups. The biggest difference in rates is seen in YG 1979. The last two year groups studied (1983 and 1984) have lower promotion rates for Hispanic officers as compared to White officers. In milestone period 3, Hispanics appear to have higher loss rates in the last six of seven year groups studied (the exception is YG 1978). Prior to YG 1973, Hispanics have lower promotion rates in every year group studied. The population sizes become too small in the individual year groups to continue with the analysis in milestone periods 4 - 6.

3. Female Officers

a. Female Loss Rates

With the exception of YOS 3, compared to males, females experience lower average loss rates in the first seven years of service. They then have higher loss rates from YOS

8 to YOS 11. Loss rates are almost even at YOS 12, substantially higher at YOS 13 and YOS 15 and zero for YOSs 14, 16-18. The population size was very small in the latter three years of service and zero beyond YOS 20.

Comparing female average milestone loss rates against those of White officers in each of the milestone periods, female officers have lower average loss rates in milestone periods 1 and 2 and then have substantially higher loss rates in milestone periods 3 and 4. However, the population sizes in milestone periods 4 - 6 are quite small or even zero and so do not warrant further analysis. The lower loss rates in milestone period 1 and 2 may be influenced by the "transfer effect" since inventory levels actually increased in some of the late 1970's and early 1980's year groups because of an influx of females transferring into the community.

Zero loss rates for female officers were registered in YGs 1975, '977 - 1980 and 1985 probably because of the "transfer effect" in milestone period 1. Loss rates were lower for females as compared to males in YGs 1981 - 1983 and become higher in YG 1984. In the last four year groups studied, the loss rates fluctuated, starting lower in YG 1986 and ending higher in YG 1989. In milestone period 2, there was a zero population size in YG 1974. Of the remaining 11 year groups studied, only four had higher loss rates for female officers as compared to male officers (1976, 1977,

1982, 1984, the last year group used in the computations). In milestone period 3, the population size was too small or zero in year groups prior to YG 1975, with the exception of YG 1973, to warrant analysis. Of the remaining six year groups, YG 1976 has a slightly higher loss rate for females as compared to males, and YGs 1977 and 1979 (the last year group studied) have substantially higher loss rates.

b. Female Promotion Rates

Of the four milestone periods in which females have a population size large enough for analysis, women show higher average promotion rates than men in three of the periods (1, 2 and 4). The exception is milestone period 3, in which females have lower average promotion rates than their male counterparts. Milestone periods 5 and 6 have zero population sizes.

In milestone period 1, female officers generally have higher promotion rates as compared to male officers in every year group except YG 1986 and YG 1989 (albeit the difference is slight except for the first four year groups). In milestone period 2, average female promotion rates are higher in every year group except for YGs 1976, 1983, and 1984 (the last two year groups used in the computations). YG 1974 has a zero population. The promotion rates for females fluctuate in the last five year groups studied in milestone period 3 and end with a lower rate in YG 1979. The population

size is too small in the earlier year groups to conduct the analysis. The same is true for all year groups in milestone periods 4 - 6.

4. Summary

In the Aviation community, Black officers experience higher loss rates and corresponding lower promotion rates compared to White officers in milestone periods 1, 2, 3 and 4. Hispanic officers, compared to White officers, have higher loss rates and lower promotion rates in milestone periods 1, 2 and 4, as well as, higher loss rates in milestone period 3. Female officers have higher loss rates and lower promotion rates in period 3, as well as, higher loss rates in period 4 compared to male officers.

E. ANALYSIS OF SUBMARINE WARFARE COMMUNITY

1. Background

Only five year groups in the submarine community have available inventory levels of Black officers of at least ten (YGs 1976, 1978, 1980, 1990 and 1991). Hispanic officers are represented even less with only three year groups that have an available inventory of at least ten (YGs 1983, 1989, and 1991). Because of the small population sizes for Blacks prior to YG 1976 and for Hispanics prior to YG 1983, analysis of loss and promotion rates was limited to the more recent year groups, which include only the first couple of milestone

periods and the first 14 or ten years of service for Blacks and Hispanics, respectively.

2. Black Officers

a. Black Loss Rates

Black officers have higher average loss rates than those of White officers in the first three years of service. In the next four years of service (YOSs 4 - 7), Blacks have lower loss rates except for YOS 6. Except for YOS 10, Blacks have higher loss rates compared to White officers from YOS 8 through YOS 14.

Comparing average milestone period loss rates with those of White officers shows that Blacks experience higher loss rates in milestone periods 1, 3 and 4. Blacks have a lower loss rate than White officers in milestone period 2. The loss rates in milestone periods 4 - 7 are tenuous because of small or zero population sizes.

In milestone period 1, Black officers have higher loss rates compared to White officers in 11 of 15 year groups included in the computations. Th. exceptions are YGs 1975, 1979, 1988 and 1989. In milestone period 2, Blacks have higher loss rates in YGs 1975 and 1976, then lower loss rates in the next three year groups (1977 - 1979). YGs 1980 and 1981 indicate higher loss rates for Blacks compared to Whites, while the last three year groups used in the computations reflect lower loss rates for Black officers. Analysis of loss

rates prior to YG 1975 could not be conducted because of small population sizes in both milestone period 2 and 3. In milestone period 3, Blacks have higher loss rates compared to White officers in the last four year groups studied (1976 -1979).

b. Black Promotion Rates

Comparing average Black promotion rates against those of Whites in the various milestone periods shows that Blacks have slightly higher rates in milestone periods 1 and 2. Black officers have a substantially lower average promotion rate in milestone period 3 but then have a higher rate compared to White officers in milestone period 4. However, the population sizes in milestone periods 4 - 7 are too small or zero to continue further analysis.

Higher/lower promotion rates for Black officers as compared to White officers fluctuate among the various year groups in milestone period 1. Slightly higher loss rates are evident in the last two year groups included in the computations (1988, 1989). In milestone period 2, Black officers have higher promotion rates in eight of the 12 year groups studied. (YG 1974 had a zero population size.) The last three year groups in the study indicate higher promotion rates for Black officers as compared to White officers, and these rates show an increasing trend. Beyond milestone period

2, the population sizes of the year groups included in the computations are too small to continue analysis.

3. Hispanic Officers

a. Hispanic Loss Rates

Of the ten years of service that have a population size conducive for analysis, Hispanic officers have higher average loss rates in eight of the years of service categories as compared to White officers. Hispanics have lower loss rates in YOSs 7 and 10 only.

Hispanics have higher average loss rates in every milestone period in which they are represented (periods 1 -5), however, the loss rates in milestone periods 3 - 7 are tenuous because of small or zero population sizes.

Within milestone period 1, only YGs 1981 and later could be used in the analysis, and these year groups showed that Hispanics have higher loss rates compared to White officers in each of these year groups except YGs 1983 and 1986. In fact, the loss rates show an increasing trend over the last three year groups used in the computations (1987 -1989). In milestone period 2, of the last four year groups that supported analysis, three of the year groups (1981, 1983, 1984) show higher loss rates for Hispanic officers compared to White officers. The exception is YG 1982.

b. Hispanic Promotion Rates

Comparing average promotion rates between Hispanic and White officers in the various milestone periods shows that Hispanic officers have a slightly lower rate in milestone period 1 and a fairly comparable rate in milestone periods 2 and 3. Milestone period 4 indicates a higher average promotion rate for Hispanic officers as compared to White officers; however the population sizes for milestone period 4 - 7 are too small to draw conclusions.

In milestone period 1, Hispanics have comparable or lower promotion rates in every year group commencing with YG 1981 and subsequent year groups, except for YG 1986. The last three year groups used in the computations (1987 - 1989) have consistently lower promotion rates for Hispanics when compared to White officers. In milestone period 2, promotion rates for Hispanic officers alternate lower/higher commencing with YG 1981 through YG 1984. Year groups prior to 1981 do not have population sizes large enough to support further analysis. This is also true of all the year groups used in the computations in milestone periods 3 - 7.

4. Summary

In the Submarine community, Black officers have higher loss rates in milestone periods 1, 3 and 4 and lower promotion rates in milestone period 3 compared to White officers. Hispanic officers have higher loss rates and lower promotion

rates in milestone period 1, as well as higher loss rates in milestone period 2 compared to White officers. Unfortunately, ethnic representation in the Submarine community is small and analysis is limited to the more recent year groups and years of service categories.

CHAPTER VI. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The goal of this thesis was to conduct a cohort analysis to compare the career opportunities, in terms of loss and promotion rates, of ethnic (Black and Hispanic) and female officers with those of White ethnic and male officers, respectively. Data was compiled from the OPIS dataset to compute ethnic/gender loss and promotion rates for year groups 1960 - 1991 in the Surface, GenURL, Aviation and Submarine communities.

The study was hindered by a lack of data because of limited representation of Black, Hispanic and/or female officers in the communities and to nonavailability of data prior to FY 1975. Analysis of the older year groups and higher years of service categories often could not be conducted because of small or zero populations of the study groups. However, all rates, even those rates computed from small populations, are included in the appendices for reference.

An objective of this study was to determine whether uptrends or downtrends in loss or promotion rates could be observed from one year group to the next. Overall, it would

appear that rates fluctuated over some periods of time and observable trends occurred only infrequently.

Rates computed for each year of service averaged across year groups addressed the issue of loss and promotion rates from one year to the next. However, there was much variability in these rates and it was difficult to assess whether the group of officers studied were, in fact, experiencing higher or lower rates over time in relation to their comparison group of officers. Milestone periods defined in Chapter IV, section E, on the other hand, aggregated years of service to emphasize significant junctures in a community's career path. These junctures included significant events such as leadership tours, promotions, important sea/shore tours, etc., whose achievement highlighted the successful progression of officers. Thus, averaging rate data over such periods of time provided a more comprehensive analysis than point-topoint analysis of loss and promotion rates by year of service for all groups of officers included in the study.

Regarding milestone period loss and promotion rates in each of the communities, there is generally a direct correspondence between higher loss rates and lower promotion rates in the case of Black officers as compared to White officers. Primarily Black officers experienced higher loss rates in milestone periods 1, 3 and 4 in each of the four communities studied, with the exception of the GenURL community where Black officers experienced lower loss rates in

milestone period 1. This is generally accompanied by lower promotion rates in the same milestone periods, although Black officers in the Submarine community have higher promotion rates in milestone periods 1 and 4.

The correspondence between higher milestone loss rates and lower milestone promotion rates as compared to White officers applies to Hispanic officers, as well, in the Surface and Aviation communities. Generally, Hispanic officers experience higher loss rates and corresponding lower promotion rates compared to White officers in milestone periods 1, 3 and 5 in the Surface community and milestone periods 1, 2 and 4 in the Aviation community (although the differences in loss rates are slight in periods 2 and 4). In addition, Hispanics have lower promotion rates in milestone period 4 in the Surface community. In the Submarine community Hispanics have higher loss rates and corresponding lower promotion rates in milestone period 1 although they also have higner loss rates in subsequent milestone periods.

This correspondence between higher loss rates and lower promotion rates is not seen in the GenURL community; instead, Hispanic officers have slightly higher loss rates in milestone periods 1 and 3 and lower promotion rates in milestone periods 2 and 4 as compared to White officers.

It appears that female officers in the surface and aviation communities have higher loss rates and lower promotion rates in just one or two of the milestone periods as

compared to their male counterparts. However, the following points should be addressed when interpreting the results. First, women have not been around long enough to be present in the senior paygrades in sufficient numbers to warrant analysis beyond milestone period 3. Also, the first two milestone periods are comprised of year of service categories where lateral transfers into the community have an impact. Inventory levels actually increased from one year of service to the next in the first five years of service for several year groups after the communities were first opened to women. The effect of transfers into the communities must have influenced loss rates downward and promotion rates upward.

In the GenURL community, <u>male</u> officers have higher loss rates and lower promotion rates in almost every aspect studied--milestone periods, average years of service and year groups--as compared to their female counterparts. Prior to FY 1992, male GenURLs were primarily lateral transfers and attrites from other communities. Until December 1989, the policy was to automatically redesignate many attrites from other URL communities (for whatever reason) to 1100s. Since then, attrites have had to undergo a selection process to be accepted into the 1100 community. (General URL Community Bulletin, December 1992) Therefore, the automatic redesignation of male attrites, without benefit of selection to identify possible non-promotable candidates, may be a factor in causing these differences in rates. Other factors,

such as bias in promotion or an individual's decision to leave (self-selection), may also have an impact on the differences in rates.

B. RECOMMENDATIONS

The CNO Study Group on Equal Opportunity in the Navy investigated the status of equal opportunity for minorities in the Navy and published a thorough review of officer/enlisted accessions, attrition, and other personnel management policies and practices. This thesis focused on two aspects included in the CNO study: losses and promotional data for Black and Hispanic officers, as well as for female officers. This thesis examined loss and promotion rates in more detail and over a larger period of time than the CNO study and analyzed rates by year groups versus aggregates over fiscal years.

The results of both studies are comparable. In addition to the multitude of CNO study recommendations, the following recommendations are provided for further research.

- Investigate reasons why Black, Hispanic, and female officers leave the communities with emphasis on the problematic years of service and milestone periods that have higher loss rates compared to White and male officers identified in this study. Reasons for leaving may differ between milestone periods, and as such retention and mentor programs could be revised accordingly to increase the retention of these groups of officers.
- Investigate the reasons for differences in promotion rates identified in this study, again with emphasis on the problematic years of service and milestone periods.
- Study the reasons for the discrepancies between female and male loss/promotion rates in the GenURL community.

• Because data limitations restricted much of the analysis effort in this thesis, another study could be conducted in five or ten years, in which time more data would become available.

APPENDIX A - OPIS FILE VARIABLES AND CODES

File Variable	OPIS Code	Definition
TARIND	0	Active duty officers less TAR
RECTYPE	0 8	Inventory data Promotion data
GENDER	1 2	Male Female
ETHNIC	1 2 4	White Black Hispanic
PAYGRADE	5 6 7/8 9/10 11/12 13 14	ENS LTJG LT LCDR CDR CAPT flag
YOS	0 - 31	Years of Service
DESIG	1 2,3,8 4,5,9 13,38,55,56,57	110X 111X, 116X 112X, 117X 130X, 131X, 132X 137X, 139X

Table VII. OPIS FILE VARIABLES AND CODES

APPENDIX B - INVENTORIES

Table VIII. INVENTORY OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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Table IX. INVENTORY OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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Table X. INVENTORY OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEARS 1960 - 1991 i

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Table XI. INVENTORY OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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Table XII. INVENTORY OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEARS 1960 - 1991

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**Table XIII.** INVENTORY OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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1976       1979       1960       1981       1963         305       343       458       309       339         317       357       471       305       325         303       357       471       305       325         303       357       440       292       326         303       359       440       202       326         304       319       396       252       286         141       180       271       318       217         154       131       180       276       188       188         154       180       216       186       178         151       180       215       160       174         151       180       207       160       147         121       181       195       147       147         92       195       195       147       147         93       96       195       147       147	
1974     1975     1975     1975     1975       191     275     1976     1977       291     275     161     314       291     275     161     314       236     266     165     280       175     285     106     280       115     140     64     139       98     125     56     166       91     115     47     131       98     125     56     166       91     115     47     133       91     125     53     166       91     125     53     109       91     125     53     109       91     125     53     109       91     125     53     109       71     74     31     98       72     72     72     29       72     72     73     29	
9       1970       1971       1972       1973         19       1971       1972       1973       1973         11       215       215       117       1996         115       112       117       1996       1101         15       112       113       113       1146         15       112       112       1147       1146         15       603       63       61       61       114         15       63       61       64       51       111         15       55       38       45       101       101         15       55       38       45       86       92       101         15       55       33       44       92       101       101       101       101       101       101       101       101       101       101       101       101       102       101       101       101       101       101       102       101       101       101       101       101       102       102       102       102       102       101       101       102       102       102       102       103       103 <t< td=""><td>49 25 41 25 15 24 32 21 15 15</td></t<>	49 25 41 25 15 24 32 21 15 15
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**Table XIV.** INVENTORY OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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**Table XV. INVENTORY OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS** 1960 - 1991

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1 5 6 7 8 9 9 9 6 7 7 9 19 4 4	
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**Table XVI. INVENTORY OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991** 

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1 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
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**Table XVII.** INVENTORY OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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1991 I **GROUPS 1960** FOR YEAR SERVICE С Ц О BY YEAR Table XVIII. INVENTORY OF WHITE AVIATION WARFARE OFFICERS

Table XIX. INVENTORY OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991 

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4 9 7 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
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Table XX. INVENTORY OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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Table XXII. INVENTORY OF FEMALE AVEATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991 

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Table XXIII. INVENTORY OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
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ま 9.144445571111 9.1894999994 9.997104999459 1.997104999459
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1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
1 444 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
4 4 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
1 9 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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Table XXIV. INVENTORY OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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ł Table XXV. INVENTORY OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991



## APPENDIX C - LOSS DATA

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SERVICE FOR YEAR GROUPS 1960 - 1991 0F Table XXVI. LOSS DATA OF WHITE SURFACE WARFARE OFFICERS BY YEAR

Table XXVII. LOSS DATA OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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Table XXVIII. LOSS DATA OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1661 0661 6861 0 0 

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Table XXIX.

Table XXX. LOSS DATA OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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**Table XXXI.** LOSS DATA OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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**Table XXXII.** LOSS DATA OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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Table XXXIII. LOSS DATA OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1991 -



Table XXXIV. LOSS DATA OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

**Table XXXV.** LOSS DATA OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

Table XXXVI. LOSS DATA OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991 1661 0661 101 **89** 119 119 44 37 28 105 22 25 25 167 100 22 96 104 71 26 156 156 80 80 146 146 166 166 162 YON960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 2011-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 2014-1 20  Table XXXVII. LOSS DATA OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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Table XXXVIII. LOSS DATA OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -

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TA	1965
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Table XLII. LOSS DATA OF BLACK SUBMARINE			LOS	S DA	TA	0F ]	BLAC	K SI	UBMG	RIN		ARFA	RE O	FFI(	CERS	ВҮ	WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991	C OF	SEI	VICE	FOI	X XE	AR G	ROUI	S 1;	60		166
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## APPENDIX D - PROMOTION-ELIGIBLE DATA

TADIE XLIV. PROMOTION-ELIGIBLE DATA OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 

**Table XLV.** PROMOTION-ELIGIBLE DATA OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

**Table XLVI. PROMOTION-ELIGIBLE DATA OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR** GROUPS 1960 - 1991

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PROMOTION-ELIGIBLE DATA OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS **Table XLVII.** 1960 - 1991

Table XLVIII. PROMOTION-ELIGIBLE DATA OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR Groups 1960 - 1991

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PROMOTION-ELIGIBLE DATA OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR - 1991 Table XLIX. GROUPS YEAR

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**Table L. PROMOTION-ELIGIBLE DATA OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR** GROUPS 1960 - 1991

5       1966       1969       1969       1991         12       21       6       10       20       29         13       14       12       20       29       1991         15       23       14       12       20       29         16       13       14       12       20       29         15       23       15       13       15       20         16       1       15       23       15       20         16       1       15       20       20       20         16       1       15       20       20       20         17       15       15       20       20       20         16       1       15       20       20       20         17       15       20       20       20       20         18       15       20       20       20       20         19       15       20       20       20       20         10       20       20       20       20       20         10       20       20       20       20       20         <
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**Table LI. PROMOTION-ELIGIBLE DATA OF HISPANIC GENERAL UNRESTRICTED LINE OFFICER BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991** 



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Table LII. PROMOTION-ELIGIBLE DATA OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR - 1991 GROUPS 1960

**Table LIII.** PROMOTION-ELIGIBLE DATA OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991 

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PROMOTION-ELIGIBLE DATA OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS **Table LIV.** I 

Table LV. PROMOTION-ELIGIBLE DATA OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

**Table LVI.** PROMOTION-ELIGIBLE DATA OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

7 1988 1989 1990 1991 2 50 76 59 3 48 72 2 45					
065 5 65					
1989 76 72					
1988 50 45 45					
1967 53 52 52					
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<b>4</b> 1985 1986 1967 : 7 4 1985 1986 1967 : 3 35 53 53 53 0 33 28 53 7 33 48 52 7 7 7 7 7 1 1					
1984 37 27 27 27 27					
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Table LVII. PROMOTION-ELIGIBLE DATA OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS - 1991
Table LVIII. PROMOTION-ELIGIBLE DATA OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

1990 1991		
1990		
1969		
1988 38 39 37		
1987 40 38 38		
1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		
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1984 27 22 23 21 1		
1983 17 166 166 188 283	15	
1982 29 25 24	16	
1981 18 17 17 17	121	
1960 1160 1196 1196	<b>.</b>	
1979 17 12 17 19	1 6 9	
978 136 133	221	80
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Table LIX. PROMOTION-ELIGIBLE DATA OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1991 -

**Table LX.** PROMOTION-ELIGIBLE DATA OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

1991				
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1988 533				
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9 9 19 19 9 0 0 1				
10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
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**Table LXI. PROMOTION-ELIGIBLE DATA OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR** Groups 1960 - 1991

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1973   1974   1975   1977   1979   1981   1982   1983   1984   1985   1986   1989   1990   1990   1990   1990   1990   1990   1990   1990   1990   1990   1990   1990   1990   1990   1990   1991   1990   1991   1990   1991   1991   1991   1991   1991   1991   1990   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991   1991	
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## APPENDIX E - PROMOTION DATA

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	1979 735 735 227 30	
	1026 714 2350 2350 2350 2350 2350 2350 2350 2350	
	10119 10119 10119 10119 1019 1019 1019	
	1976 10114 7014 100 100 11 100 11 100 11 100 11 100 11 100 11 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 1000000	
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	1973 638 1455 1455	
	1973 1972 1796 1796 1179 111	
	19 33 19 19 19 19 19 19 19 19 19 19 19 19 19	
	1970 1655 1662 1623 3133	
	1969 1963 1963 1963 1963 1963 1963 1969 1969	
	1968 11 123 133 133 14 18 18 18 18 18	
	1967 205 1566 1756 1756 17	
i	1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
	1965 120 150 150 150 150 150 150 150 150 150 15	
	1 90 1172 4 1172 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 4 177 177	
	1963 1731 16 37 37 37 37	
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	Yommonda 1963 1963 1963 1970 1971   2 2 1964 1965 1966 1969 1970 1971   2 2 2 131 193 157 214   2 1 2 131 193 157 214   1 2 131 121 104 58   1 2 131 121 104 58   1 2 131 121 104 58   1 2 131 121 104 56   1 2 131 120 143 156   1 2 131 120 143 156   1 2 33 4 2 1   1 1 1 1 1 1   1 1 1 1 1 1   1 1 1 1 1 1   1 1 1 1 1 1   1 1 1 1 1 1   1 1 2 1 1 1   1 1 2 1 1	
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SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 am t una 1 1 1 .

I Table LXIII. PROMOTION DATA OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991

**Table LXIV.** PROMOTION DATA OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

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199.	16				
1	00 18				İ
960	56T 6				
3 19	8 198 6 111 3				
3UP	7 198 1 131,				
GRO	1987 1471 873				
ZAR	1986 615 823	•			
R YI	1985 1617 883	5 T			
F0]	1984 1106 743	<b>9</b> 7			
ICE	1983 1152 714	31			
ERV	1962 1345 852	10 S. S. S.			
С Ц	1981 1215 754	9 16 16 16 16			
а 0 Я	1980 1326 688	74 267 267			
YEA	1979 1230 168	53 242 242 32			
ВҮ	1977 1976 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 131 1182 1105 1230 1324 1215 1345 1152 1106 1617 615 1471 1316 1114 61 163 759 768 688 754 852 714 743 883 823 872	63 37 230 33	a		
ZRS	977 1 1131 182 1 61	42 108 108	<b>W</b> (N		
7ICI	1976 1 121 121 78 78	100 100 101	158 158		
OFI	975 ] 134 ] 193 ] 769 7	11 177 122	151 151		
ARE	974 1 096 1 56 631	221 9 421 9	10 10 10 10 10 10 10 10 10 10 10 10 10 1		
WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991	1973 1974 1975 1974 1975 1096 1193 56 531 769	0015 20 17 17	15 149 1		
			187 1		
FAC	971 1	337 221 59	1551	a	
SUR	1 016	162 108 1	167 1	m 49 (1	
ILE	969 11	197	1493	44	
F W	968 19	133 131	136	19 19 19	
<b>A</b> 01	67 15	207 80	1236	13 9 1 1 4 9 1 1 1 4 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
DAT	166 15		67 147 1	168	
NO	65 19		37 119 27	15662	
ITO	64 19		21 27 1 27 1	10 -7 QI	•
ROM	61 63		1 177 1 16	36 86	in ei
Table LXV. FROMOTION DATA OF MALE SURFACE	YO <b>2</b> 960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 2 2 3		1 96 9 2 9	100 m	m 6 m
ITXO	19		165 11 68 4	6 7 5 6 7 5	
]e	0 194			4 10 1 0	10 64 64
Tab	YOE96	#5000000	12 13 16 15 15 16 18	9.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 7 8 4 1 0 M M M N N

**Table LXVI.** PROMOTION DATA OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

1991																						
1990																						
586	39																					
1986	29																					
1967	1.9	15																				
9961	60	16 7																				
1985	17	13																				
1984	16	11																				
1983	17	14																				
1962	17	1																				
1981	20	17	•		•																	
1980	19	13			ŝ																	
1979	23	50			æ																	
1978	14	81 19			v																	
1977		8 <b>4</b>		9	Ŷ																	
1976	,	<b>^</b> +1	,	<b>-</b>																		
1975		-		-1			~															
1974				4			6															
E761				г																		
1972		H		4																		
1971																						
1970																						
1969																						
1968																						
1967																						
9961																						
1965																						
964																						
YO <b>8</b> 960 1961 1962 1964 1965 1966 1967 1968 1969 1971 1973 1974 1975 1976 1977 1978 1980 1981 1982 1984 1985 1986 1987 1988 1980 1991 1991																						
962 1																						
961 1																						
160 1																						
YOBS		י הוידאי מ	0 - 1	10 ON	21	12	12	16	17	18	19	20	5	52	33	24	25	26	27	28	39	30

**Table LXVII.** PROMOTION DATA OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

166				
5T 066				
168 11				
162				
987 1 163 117				
906 1 97 130 14				
985 1 222 146 20				
984 162 284 25 28				
1983 1 287 215 215				
1962 1 322 254 254	~ ~			
1981 248 248	18			
1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 285 352 437 286 322 287 228 222 97 163 162 168 1 289 322 248 254 215 162 144 138 117 26 51 57 248 254 215 152 144 138 117 26 51 57 3 8 5 20 14	121			
1979 352 249 51	14 13			
1978 285 198 26	21 78			
1977 38 262 262 169 169	4 1 1	19		
1976 151 556 19	98 50	3 16		
1975 114 251 103 103 103	13	-10 -14 -10 -14		
1974 246 145 1	10 M	36 17		
1973 1973 173	9 FT F7 9	50		
1972 92	146 146 18	31		
1971 16	8 M 8	4 61		
1970	9 9 FI 9	90	192	
1969	99 H 9	12 15	-1 <b></b>	
1968	7 F	60	m	
1967	ŝ	42		
1966			(1	
1965		954	m	
1964		10 47 64	C1 C1	
1963		<b>\$</b>	0.0	н
. 1962		CH 40	M ref	
1961		n a	(T )	-1
YOBD60 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1 2 3 4 4 5 5 6		8 1928 1928	10000000000000000000000000000000000000	0 0 0 0 7 0 7 0 0

**Table LXVIII.** PROMOTION DATA OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

199							
1990							
1989 20							
1986 13							
1987 14	11						
1986 13	17						
1985 42	30						
1984 34	25 1						
1983 32	7 0 7						
1982 30	27						
34	33	13					
.980 l	<b>1</b> 5	<b>r</b> 4					
. 979 22	11						
. 976 J	1 1 2						
977 29 29		a <b>4</b>					
1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 4 10 11 11 29 21 22 21 34 30 32 34 42 13 14 13 20	ŝ	01 F1	9				
11	٢	ŵ	ň				
1 974 1 10	60	0 0	-				
673	11	<b>F</b> 1	•				
1 272.	11	ñ	-				
		2	-				
1 0/61		-	-		-1		
1969							
1968							
967 3		-	г	H			
966 1			H				
965 1			-				
964 1							
963 1							
962 1							
YOB960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1 2							
960 1							
80 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		~~~~~		0 0 C		9 22 <b>8</b>	8 8 8 J

146

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Table LXX. PROMOTION DATA OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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SERVICE FOR YEAR Table LXXI. PROMOTION DATA OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF - 1991 GROUPS 1960 163 4 2 - -16 135 135 16 75 18 8**4** 84 1221 - -6 7 9 ۳.t 90 7 **4** 7 5.5 18 19 19 5 с п п п 5 1 116 а ^щ и ~ ~ ~ မှ ဖ 31 8 - 4 411 15 **in** a 2 3 20 ŝ 50 -1 -1 ~ -(1 4 ~ ŝ CR -4 ø **~** − °. 333

I Table LXXII. PROMOTION DATA OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 

Table LXXIII. PROMOTION DATA OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

1990				
1984 1985 1986 1987 1988 1989 1990 34 20 21 33 44 39 26 18 24 28 2				
1988 44				
1967 33 28				
1966 24 24				
1985 20 18				
1984 34 25 25				
1983 24 18				
1982 27 26				
1981 36 30				
1980 23 20 20	10			
1978 1979 1980 1981 1982 1983 20 16 23 36 27 24 19 17 20 30 26 18 1 2 1 2 4	<b>⇔ 60</b>			
1978 20 19	45			
1977 23 20 20 20	50 69	H		
1976 11 21 20	13	•		
1970 1971 1972 1973 1974 1975 1976 1977 3 1 3 18 14 21 23 1 1 2 1 1 21 1 1 4 21 23 1 2 20 20 1 1 1 1 1 3	90 (1	4		
1974 18 12	9			
1973	12 2	<b>AR 17</b>		
1972 10 1		m		
1971	69 69			
1970	ч			
1969	-	T	H.	
1968	-	Ŧ		
1967	<b>m</b> 01	M →	г	
1966		-	F	
1965		-		
1964		7	64	
1963				
1962				
1961		H	~	
YOB960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1 2 3 4 4 5 5	- 8 8 1 I 1 I 8 8 7		5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0 0 0 0 7 0 0 0 0 0 7 0

Table LXXIV. PROMOTION DATA OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991



I Table LXXV. PROMOTION DATA OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 

Table LXXVI. PROMOTION DATA OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

1991											
1990											
1989	46										
1988	37										
1987	38	55									
986	14	4 M									
1 386	5 1	<b>4</b> 0									
1 486	23	20									
1 689	18	15									
982 1	25	34									
1 186.	17	17	T TT								
1 086	19	13	a								
979 1	17	19	ŵ								
978 1	10	14 B	-1 0								
1 779	10	<b>6</b> 4									
1976	'n	N N	2								
1975	5	ŝ	7	ч	Ч						
1974											
1973		4- Q	5		'n						
1972											
1971											
970			-1								
969											
968 1											
1 7 3 9											
966 1											
965 1											
964 1											
YO <b>B</b> 960 1961 1962 1964 1965 1966 1967 1968 1969 1971 1972 1973 1974 1975 1976 1977 1978 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1991 1991											
962 1											
961 1											
960 1											
XOBS	• •• •		8 0 H	222	15	18	6 8 8 6 8 6	18	 5 F	28	30 29

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## APPENDIX F - LOSS RATES

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Table LXXX LOSS RATES OF WHITE SURFACT, WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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00000000000000000000000000000000000000
00000000000000000000000000000000000000
2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 200 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2
1975 000 000 000 000 000 000 000 000 000 0
1975 1975 1975 1975 1976 1976 1976 1976 1976 1976 1976 1976
1974 0.2007 0.2291 0.2291 0.2291 0.0682 0.0682 0.001 0.001 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.001 0.001 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.007 0.00000000
1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 197 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1
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00000000000000000000000000000000000000
00000000000000000000000000000000000000
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4 000000000000000000000000000000000000
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00000000000000000000000000000000000000
4 000 100 100 100 000 000 000 000 000 00

Table LXXXI LOSS RATES OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

1 0 0 1 6 0 1	
1046	
	000000000000000000000000000000000000000
	0000000 0000000 0000000 0000000 000000
	00000 00000 00000 00000 00000 00000 0000
	00000000000000000000000000000000000000
	се с с с с с с с с с с с с с с с с с с
	00000000000000000000000000000000000000
	00000000000000000000000000000000000000
	00000000000000000000000000000000000000
1974	000000000000000000000000000000000000000
5791	
1973	000000000000000000
1971	
1970	000000000000000000000000000000000000000
9791	
1968	000000000000000000000000000000000000000
1967	
1966	
1965	0000000000000000
1964	0000000000
1961	
2 3 6 1	
1961	
0 7 6 1 5 0 4	
, CA	10 m 4 N 9 C 9 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C

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**Table LXXXII** LOSS RATES OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

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166106	0.000																													
	0.000 0.0	00																												
	0.000 0.0	-																												
	0.000 0.0																													
	0.000 0.0					1																								
							0																							
	00 0.079	_	_	_			-	63																						
	000.000								67																					
	000.000	_	_	_			-	_	_																					
	000.000																													
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	0 0.000	-	-	-				-	_	_		-	0.00																	
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	0.000	_	_	_				_	-		_	-	_	-	_															
	0.250	0	0	0	-			0	•	-		•	0.001	0.00	0.00	0.00														
	0.000	-		<u> </u>			-	-	-	<u> </u>		-	_		_	_	_	_												
1974											0.000																			
1973			0.250								0.000																			
1972				0.333								0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000										
1971					000 0				0.000																					
1970	l						0.000	0.500	0.000	0.000.0	1.000																			
1969								0.000	0.000	0.00.0	0.000	0.00.0	0.000	0.000	0.00.0	0.000	0.000	0.00.0	0.000	0.000	1,000									
1968									0.00.0	0.00.0	0.000	0.000	0.000	0.000	0.00.0	0.000	0.000	0.000	0.333	0.000	0.500	0.00.0	0.000	0.000						
1967										0.333	0.000	0,000	0.000	0.000	0.000	0.500	0.000	0.000	1,000											
1966												0.000								0.000	0000	0.000	0.000	0.000	0.000	0.00.0				
1965																														
1964													0.00.0	0.000.0	0.000	0.00.0	0.000	0.000	0.000	0.500	1.000									
1963													-									000.0	0.000	000.4	000.0	000.0	0.00.0	. 630		
1962															0	Ű	2	Ũ	Ű		Ű		9	0		0	Ő	0		
1961																														
YOS1960																	.000	.000	.000	190.500	.000	.000								
YOS	~	~	~	•	ď	••	0	٢	æ	•	10	11	2	1	14	5	160	170	150	190	200	211	23	23	24	25	38	27	59	5.5

Table LXXXIII LOSS RATES OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

19901991 0.000	
1989 1	0 0
1986 1	0
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Table LXXXIV LOSS RATES OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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SERVICE FOR YEAR GROUPS YEAR OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY 0F LOSS RATES Table LXXXV ł 

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**Table LXXXVI** LOSS RATES OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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1988 1																							
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1986 1.000.0																							
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1983 1.000.0																							
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1979 .	00	00		00	. 0	~	÷	200															
1978	00	00				Ξ.			.000														
1977	90			-		-	-	-		.077													
1976	00			0.0		č	ĩ		Ű	0	.000												
1975 0.000 0	•••			-		-	-	_	-	-	-	000.											
-	.231 0									-			000,										
1973	00	0.083 0	~~	00		~	-	-	0	0	-	-	-	.000									
1972		.867 0				-	-	-	-	-	-	-	-	-	000-0								
1971		000	0.200	000-0	000.000	0.000	0.000	9.333 (	0.000 (	000.0	0.000	000.0	0.000.0	0.000.0	0000.0	0.500							
1970			0.500	0.00.0	0.000	0.000	0.000	0.000	0.000 - 0	0.000	0.000	0.000	0.000	0.000	0.00.0	0.000	0.00.0						
1969			-					-	-														
1968										0.000	0.000	1.000											
1967					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000.0	0.000	0.000	0.000	0.000	1.000						
1965																		0.000	0.000.0	0.000	1.000		
1965									0.000														
1964														0.000	0.000	0.00.0	0.000	.010	0.010	0.000	1.000		
1963																							
1962																							
1961																							
YO31960																							

**Table LXXXVII** LOSS RATES OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991 GROUPS 1960

1989 19901991 0.000 0.000 0.100 1988 1 1985 1986 1987 9 2000 2000 0000 0 0.057 0.000 0.000 0 0.077 0.273 0.000 0 0.077 0.273 0 0.077 0.273 0 0.000 0.000 0 0.000 
 1983
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 1 1972 0.500 0.500 0.500 0.000 1963 1964 1965 1966 1967 1968 1969 1970 1971 1962 1961 0.000.0 YOS1960

**Table LXXXVIII** LOSS RATES OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

19901991 0.000	
1989 0.161 0.000	
1988	0.078
1987	- 080 0587
1986	5 7 3 4 5 5 7 4 5 5 7 4 5 5 7 4 5 5 7 4 5 5 7 4 5 5 7 4 5 5 7 4 5 5 7 4 5 5 7 7 4 5 5 7 7 4 5 5 7 7 7 7
1985	1500
÷ •	00000000000000000000000000000000000000
	000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1980 1.000 0.030 0.030	
1979	500 100 100 100 100 100 100 100
1978 0.000 (	
1977	
1976	00400000000000000000000000000000000000
1975 0.366   0.011	000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1974	00000000000000000000000000000000000000
1973	
1972	00000000000000000000000000000000000000
1971	00000000000000000000000000000000000000
1970	10000100000000000000000000000000000000
696T	00000000000000000000000000000000000000
1968	00000000000000000000000000000000000000
1967	00000000000000000000000000000000000000
1966	00000000000000000000000000000000000000
1965	000000000000000000000000000000000000000
1964	00000000000000000000000000000000000000
1963	
1962	4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1961	00000000000000000000000000000000000000
1 1 1 1	22 25 25 25 25 25 25 25 25 25 25 25 25 2

SERVICE FOR YEAR GROUPS 0F YEAR BY UNRESTRICTED LINE OFFICERS GENERAL FEMALE <del>В</del>О RATES LOSS XIXXXIX 1991 I Table 1960

1968 1989 19991991 0.000 0.000 0.000 0.022 0.013 0.030 1987 0.000 0.056 0.056 0.059 0.189 1986 0.000 0.022 0.023 0.162 0.207 1984 0.028 0.028 0.028 0.038 0.038 0.038 0.103 1983 0.041 0.041 0.042 0.042 0.152 0.119 0.119 0.074 1982 0.000 0.005 0.134 0.116 0.116 0.1105 0.1105 0.1105 0.055 0.055 1981 0.019 0.065 0.126 0.126 0.126 0.126 0.010 0.010 0.052 0.052 0.052 1980 0.000 0.040 0.041 0.118 0.118 0.118 0.118 0.118 0.122 0.058 0.251 0.251 1979 0.051 0.051 0.051 0.1055 0.1055 0.0525 0.101 0.1230 0.1230 0.1230 0.1230 0.022 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.020 0.020 0.020 0.020 0.020 0.020 0.000 0.025 0.055 0.055 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0. 1975 1974 0.265 0.169 0.197 0.097 0.097 0.097 0.092 0.092 0.022 0.022 0.020 0.022 1973 1972 1971 1970 1961 1968 0.200 0.000 0.000 0.000 0.227 0.227 0.227 0.225 0.225 0.225 0.222 0.222 0.200 0.000 0.2222 0.2222 1967 0,000 0,1250 0,1287 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,1111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 0,11111 1965 1965 1964 1963 1962 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 1961 

Table XC LOSS RATES OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991 

_																											
19901991 0.072																											
1969 1																											
1988 1.035 0.																											
1987		·																									
1966 1.0.066 0.	00																										
1985 1 0.058 0.		- 0	~	103																							
1984 1 0.068 0.																											
1983 1.073 0.						234																					
1982 1							131																				
1981 1.096 0.		~~	-	-	~	-	÷	042																			
1980 1,087 0.1		0	0	Ç	Ŷ	~	0	Ŭ	111																		
1979 19				0	0	·	0	~	0	158																	
1978 19 0.046 0.0				0	~	-	0		<u> </u>	·	046																
1977 19	0.0			ç	~	~	~	v	~	Ψ.	-	127															
1976 19	~ ~			~	-	-	~	0	-		~	-	52														
1975 19			. 0	0	0	-	0	0	ç	0	0	۰	۰	60													
-	0.034 0.0	•••	-	-	~	~	~		~	~		~		-	126												
1973 19			1.0 261.0													68											
1972 15	0		0.174 0.1	-	-	_	-	-	-	_	-	~	-	-			.05										
_		1.0	<u> </u>	ĩ	~	Ā	_	ŭ	~	Ĩ	~	~	~	š	э.	-	ă,	101									
1970 197			0.1	64 0.21													25 0.15		54								
1969 19				1.0													0.114 0.125		83 0.154	50							
1968 19					0.1		-	-	_	-	-	-					-	_	_	22 0.150	73						
1407 19						1 0	417 0.059										49 0.104			00 0.122		0.6					
1966 19							• • 0										30 0.149		•	21 0.100			76				
1965 19								0.0									30 0.130					70 0.101		30			
1964 19									0.0								23 0.130							50 0.4	53		
1363 19										0.032							11 0 123						33 6.126	12 0.2	75 0.42	6.9	
1962 13											9.6						9.3 D.111									14 0.468	00
												0.0					86 0.093					16 0.175					30 0.500
1961 09																	4 3.036									967 . 64	
YOS1960					_			11	11	~	13	14	15	160.03	170.32	180.05	140.154	200.28	210 11	221.11	230.09	242.15	240.03	200.34	119.19	12 067	10.33

Table XCI LOSS RATES OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

166106	0.200																												
89 19	0.000 0.2	88																											
	0.042 0.0																												
		-		30																									
	772.0 95																												
	17 0.239																												
	0 0.147					-																							
	0 0.170																												
	0.000	~	~	~	-	~		-	_																				
	0.114																												
	0.125																												
	0.133						-	-																					
1979	0.216	0.273	0.000	0.000	0.158	0.000	0.059	0.125	0.143	0.083	0.182	0.222																	
1978	0.207	0.130	0.150	0.000	0.100	0.111	0.125	0.214	0.000	0.182	0.222	0.000	0.000																
1977	0.229	0.000	0.074	0.040.0	0.042	0.000	0.304	0.188	0.154	996.0	0.000	0.00.0	0.000	0.000															
1976	0.436	0.000	0.000	0.000	0.045	3.095	0.105	0.059	0.063	0.200	0.167	0.000.0	0.000	0.000	0.000														
1975	0.500 1	. 200	000.0	000.0	0.125	E 143	000.0	000.0	0.003	160.0	000.0	000.0	000.0	000.0	0.100	111.0													
1974							0.250										000.												
E791		~	-	-	-	_	0.231.0	-	-	-	-	~	-	-	-	-	-	.111											
1972			°	-		-	0 666.0		-			-		_															
1971							0.000.0													000									
1970					Ô	_	0.250 0	_	_	-	-	-	_	_	-	-		0.000.0	-										
1969						0				0.000 0.											000	000							
1968 3							0.			0.000 0.										0	°.	0							
1967 1								_	-	0.000 0.	-	-	_	_	_	_	-		000	600	000	000	000.0	1.509					
1966 1																				0.000 0.				<u> </u>					
1965 1																				0.3333 0.				ð	0				
1966 1																							00	001	00	000	00		
1963 15												0.0								EEE.0 00	0.0	0.0	0.0	0.0	0.0	0	1.0		
1962 19													0.0	0.0	0.0	0.0	0.0	0.000	0.0	1.0									
															00	00	00	00	00	C 0	00	00	00	00	00	00	00	00	
50 1961															0.000	0.0	0.0	0.0	0.0	0,000	0.0	0.0	0.0	0.0	ő . o	0.0	0.0	0.0	
YOS1960		~	~		÷	~				10	11	13	:		15	16	17	1.0	19	50	77	22	3)	34	25	54	5	*	

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**Table XCII** LOSS RATES OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

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1988 0.052 0.219
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Table XCIII LOSS RATES OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

19901991 0.078																						
1989	0.087																					
1988 950.0																						
	0.021																					
1986	0.0059	0.060																				
1985 0.064	150.0	0.037																				
	0.018																					
1983 0.068	0.005	0.023	0.196																			
1982	180.0	0.031	0.218	0.127																		
1981	0.035	0.023	0.220	0.092	0.045																	
1980	0.026	0.026	0.197	101.0	0.026	077.0																
1979	100.0	610.0	0.222	0.090	0.065	0.063																
1978	0.014	0.026	0.254	160.0	0.059	0.086	0.043															
1977	0.008	0.030	0.146	0.117	0.112	0.052	0.067	0.026														
0,	0.000	900	00	, 0	0,0	50	.0	o	ç													
1975	0.013	0.124	124	0.038	0.171	0.060	0.021	0.017	0.060	0.039												
1974	0.037	0.121	0.158	0.034	0.080	0.069	0.054	0.030	0.012	0.044	0.026											
1973	760.0	0.137	761.0	0.051	0.044	820.0	0.029	0.036	0.008	0.046	0.000	0.069										
1972	¥0. 0	0.173	0.293	0.072	0.00.0	0.035	610.0	160.0	0.062	0.038	0.024	0.058	0.104									
1971		0.168	0.260	0.065	0.084	0.058	0.037	0.025	E00'0	0.018	0.048	0.031	0.159	216.0								
1970		0.166	0.207	0.085	0.105	10.055	0.024	110.0	0.019	0.017	0.049	0.056	0.127	156.0								
1963			0.165	0.096	0.163	0.007	0.003	0.016	000.0	0.008	0.045	0.053	0.113	116.0	0.152							
1968			Cat 0		0.159																	
1967				0.146	0.232	0.041	960.0	0.018	0.022	0.000	0.021	0.021	0.145	0.207	0.09.8	0.027	0.190					
1965					0.055	0.027	0.015	0.031	0.00.0	0.026	0.051	0.038	0.130	0 162	0.117	0.058	0.11.0	0.179				
1965						560.0	0.046	0.003	0.028	0.047	0.041	0.054	0.133	101.0	0.081	0.051	0.069	0.149	0.476			
1964						0.032	160.0	0.032	0.023	0.045	0.010	0.038	0.120	0 1945	0.160	0.114	0.129	0.123	0.252	0.436		
E961							0.022	0.048	0.047	0.031	0.025	0.115	0.105	101.06	0.166	0.067	0.081	0.137	0.216	0.072		
1961								960.0	600.0	0.028	0.045	950.0	0.093	171 0	0.112	6.00.0	0.175	0.142	0.299	0.176	0 500	
1961									9.000	0.012	0.059	0.058	0.084	F 41 0	0.099	0.101	0.103	0.173	9.174	0.183	161.0	0.368
YOS1960 1		• vî ve	~	) <b>•</b>	10	11	11	14	15	160.000	170.026	180.057	190.156	191.001	220.110	230.099	240.167	250.091	260.320	270.176	290.326	300.548

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Table XCIV LOSS RATES OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

19901991	- 143																								
1989																									
	0.051 0.																								
	.0 000.0	-																							
	.050 0.	~	~	181																					
		φ	0	e																					
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	0.014 0.0	~	0	~	~	-	~																		
	0.000 0.0	~		~	~	~	-	~																	
	0.00 0.00	-	-	-	-	_	-	-	-																
	0.000 0.0	0	0	0	0	•	0	0	0	0															
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1976 19	50 0.000	-	<u> </u>	Ŭ	~	Ŷ	-	-	-	~	~	-	~												
	0		0	¢	0		~	0	~	~			9	0											
`	0.000	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5	0.0										
1973 1974		00	00	0.0	25		67	00	00	00	00	00	00	00	00	00	00								
1972 19		0.0	0.0	0.0	0.1		1.0	0.0	0.000	0.0	0.0		0.0	0.0	0.0	0.0	0.0								
1971 19				0.000	00	00																			
1970 19							00	00	00	00															
1969 19					0.0	0.0	0.0	0.0	0.000	1.0															
1968 19																									
1967 19																									
1966																									
54 1965																									
63 1964																									
62 1963																									
61 1952																									
0 1961																									
VOS1960	- ~	-	-	Ş	\$	7	•		10	11	12	13	•1	15	16	17	10	19	30	21	22	2	5	9	0

Table XCV LOSS RATES OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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19910201	960.																												
	0.081 0.	039																											
	0.040 0.	~	020																										
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	.016 0.4	•	0	0		1																							
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	-	-	-	-	-	-	-		0.000																				
	-	-	-	_	_	-			0.038	-																			
1979	0.069	0.000	0.035	0.081	0.256	0.089	0.171	0.101	0.049	0.051	0.103	0.090																	
1978	960.0	0.038	0.028	0.143	0.264	1.00.0	0.137	0.130	0.099	0.110	0.172	0.083	0.064																
1977	0.011	0.047	0.033	0.111	0.250	0.076	0.133	0.109	0.102	0.102	0.145	0.096	0.122	0.056															
1976	0.211	0.044	0.025	0.170	0.299	0.085	0.142	0.086	0.000	0.067	0.092	0.072	0.031	0.024	0.017														
1975	0.0.0	0.016	0.059	0.136	0.320	0.130	0.144	960.0	0.000	0.192	0.098	0.091	0.090	0.022	0.045	0.047													
1974		0.000	0.010	0.056	0.268	0.190	0.205	160.0	0.017	0.042	0.000.0	0.097	0.069	0.042	0.022	110.0	110.0												
1973			003	0.071	0.247	0.206	0.243	0.084	0.107	0.077	0.074	0.080	.054	080.0	0.025	1:051	000.0	0.053											
1972									0.025		_	_		-		_	_	_	.123										
1971				Ų					0.050											.106									
1970					•	-			0.042 0	-	-	-	-	~	~	-	-	-	-	-	.038								
1963						•			0.027 0													. 022							
1968							Ŷ		0.043 0														. 022						
1967								0	-	-	0.113 0	-	-	<b>C</b>	~	0	-	~	~	0		0	0	048					
1966									Ó		0.144 0.														206				
1965 1										÷																0.367			
1964 1																										0.175 0.			
1963 1												0															0.200 0.	164	
1962 19													0.1													0.167 0.0			u .
1961 19																												52 0.094	ç
																												33 0.152	
YO31960	-	~			<b>ب</b>	\$	~	•		10	11	12	13	14	15	160.02	170.01	10.001	193.04	200.21	210.01	220.06	230.06	240.14	250.07	260.25	270.21	260.133	41 081

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Table XCVI LOSS RATES OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

19901991 0.300																									
1989 1989 1900 1989 1989 1989 1989 1989																									
7 1988 6 0.000 0 0.000		,																							
6 1987 0 0.286 0 0.000	00																								
1986 0.500 0.000		-																							
1965		-																							
1984 0.333 0.000	0.000	0.500	0.000	0.000																					
1983 0.167 0.200	0.250	0.000	0.000	0.000	0.333																				
1982 0.143 0.000	0.000	0.200	0.250	0.000	6.933	000.0																			
1981	0000.0	000.0	000.0	.500	1.000																				
1980	00		-	-	-		.000	000.0																	
1979	0000		0000	000	0 EEE.	.500 0	0000	.000																	
1978 0.077 0 0.083 0	00				0	0	Ģ		.000	. 333															
1977				-	~	-	~	~	~	0															
1976 0.000 0.000	96	• •	ç	0	¢	D	0	-																	
1975 1 0.000 0.			_	_	_	-	_			000	000	000	000												
1974 1 0.					.0	0	•		ė																
I E791	0.000	000	000	000	000	000	000	000	000	000	00														
1972 1	00		0.0				5.0		5	°.	1.0														
		00	00																						
1701 07		0.0	00 1.000		00																				
0 1970			0.000				•	0	0	•			0	0	0	0	0	0	•						
8 1969				00'0		0 0.000			0.50	1.00			00.00	00.00	0.00	0.00	00.0	0.000	0.0						
1968					0.00	0.000	0.00	1.00																	
1967																									
1966							0.000	0.000	0.000	0.000	0.000	00000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
1965																									
1964																									
1963																									
1962																									
1961																									
¥051960 1 2																									
¥05. 1	~ •	• ••	¢	•	۰	•	10	11	12	51	14	15	16	17	18	19	30	31	22	23	34	35	56		

**Table XCVII** LOSS RATES OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

_																												
1991991 0.111																												
1989 19 0.250 0.3																												
1986 19																												
1987 11	- •																											
1986 1.000 0.0																												
1985 19		~	~																									
1984 15 0.444 0.0		-	-	-																								
21 E861 0.0 160.0		_	_	_	-																							
1982 19 0.167 0.0						-																						
						-	0.5																					
1980 1981 0.625 0.620		-	-																									
1979 19 0 0		0.0	0.0	0.5	1.0																							
1978 19																												
1977	000	000																										
1976				.000	.000	000	000	000	.000	000	000																	
1975 U. 000 0	, o	0	°	•	•	0	0	0	0	0	0																	
1974																												
1973	.000	000	.000	. 500	.000	.000	.000	0.000	.000	. 000																		
1972			0.000.0			0	0	0	•			. 000	0.000															
1971		¢				.500	.000	0.000	.000	.000	.000			.500	.000	.000	.000	.000										
1970			0	0	U	0	0	0	0	0	0	0	9	Ĵ	Ŭ	0		0										
1969					0.000	000.0	0.000	0.000	000.0	000.0	000.0	0.000	000.0	000.1	0.000	000.0	1.000											
1968						1.000 4		0	Ŭ	Ū	Ŭ	Ŭ	Ŭ	Ŭ	Ţ		-											
1967						-	1.000																					
1966							-		000.1	000.0	. 000	.000	.000	.000	.000	000.	. 000	000.	000	000.0	.000	0.000.0	.000					
1965									3	3	3	9	3	3	0	9	3	3	0	0	3	3	3					
1964																												
1963																												
1962																												
1961																								0.000	000.0	1.000	000	
YOS1960 1 2																											-	
ő,	•	-	en	÷	2	•	•	10	11	12	1	-	15	16	5	10	19	20	31	22	33	24	25	56	5	82	52	

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### APPENDIX G - PROMOTION RATES

Table XCVIII PROMOTION RATES OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991

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1988 1989 19901991 

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 0.4 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1961 YC91960

Table XCIX PROMOTION RATES OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991

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1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 19901991 .000 1.000 0.954 0.957 1.033 0.920 0.920 0.982 0.526 0.957 0.957 0.974 .727 0.551 0.630 0.593 0.661 0.759 0.844 0.600 0.553 0.641 .500 0.333 0.286 1.000 0.400 0.400					
1989					
1988 1957 (					
1987 1.957 ( 1.641					
1986 1.526 1.529 1.533					
1985 0.982 0.600 0.667					
1984 0.920 0.844					
1983 0.920 0.159 0.400					
1982 1.033 0.661 1.000					
1977 1978 1979 1980 1981 1982 1984 1985 1986 1986 1989 1988 0.00 0.00 0.908 1.000 1.000 0.954 0.957 1.033 0.920 0.920 0.982 0.526 0.957 0.957 0.974 0.038 0.727 0.561 0.630 0.593 0.661 0.759 0.844 0.600 0.593 0.641 0.333 0.500 0.333 0.246 1.000 0.400	0.050				
1980 1956 0.956 0.286	0.529 0.167				
1979 1.000 0.561 0.333	0.100 0.852 1.000				
1978 1.000 1.727 0.500	0.036 0.760	0.048 0.053			
1977 0.000 0.908 0.988 0.098 0.038 0.778 0.1338	0.063 0.633 0.500 0.600 0.525 0.500 0.333 0.206 0.036 0.100 1.000 0.250 1.000 0.636 0.500 0.542 0.760 0.662 0.529 1 1.000 0.167	0.048			
976 846 846 857	0.333	0.154			
1971 1972 1973 1974 1975 1 0 0060 0 1.036 0978 0 0.069 0.042 0 1.120 0.621 0.650 0.759 0	0.500	0.250 0.667 0.700 0.250 0.222 0.615 0.273 0.571 0.339			
1974 1.036 0.059 0.659	0.625	0.222 0.571 0.333			
1973 1973	0.250	0.250			
1.120	0.063	0.700			
0 197					
9 1970	1.000 0.286 0.571 0.667 1.000	0.500 0.800	0.200 0.500 0.333		
961 B;	0 0.28	0.50	0.50		
196	1.00				
66 196		00	0		
65 19		0.500 1.000	0.400		
64 19		50 1.0	50 00		
63 19		00 0.5	60 0'3 0 5 3		
62 19		1.000 1.000 0.750 1.000	666,0 000,1 666.0 005.0 000,1 000,1	11	00
1961 1962 1963 1964 1965 1966 1967 1968 1969		1.0	1.0	666.0	0.500
960 19			00		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			19 20 21.000 22 23	10.01	88 88 90

t YOSI960 1961 1962 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1976 1977 1978 1979 1980 1981 1982 1984 1985 1985 1985 1989 19901991 1.000 0.600 0.600 1.000 1.250 1.000 1.050 0.958 1.000 0.965 0.981 0.966 0.500 1.000 1.040 1.015 0.259 0.667 0.667 0.667 0.667 0.667 0.667 0.667 0.692 0.750 0.864 0.755 0.648 0.463 0.619 1.000 0.333 1.000 0.333 **Table C** PROMOTION RATES OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991 0.500 0.286 0.600 0.750 1.000 1.000 1.000 1.000 0.429 0.500 0.250 1.090 1.000 0.500 0.667 0.333 1.000 1.000 1.000 1.000 0.500 0.500 1.500 1,000 1.000 0.500 1,000 180 

Table CI PROMOTION RATES OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

19901991	
1. 1989 1.	
1985 1986 1987 1988 1989 0.994 0.427 0.966 1.008 0.592 0.110 0.333 0.500 0.592 0.589 0.429 0.643 0.533 0.429 0.625 0.643	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
000 900 900 900 900 900 900 900 900 900	
1965 1986 0.994 0.427 0 0.910 0 0.589 0.429 0.333 0.429 0.333 0.429	
40 6 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
0000 1000 0000 0000 0000 0000 0000 000	
1976 1979 1990 1991 1982 1983 1505 0.952 1.013 0.962 0.996 0.933 1500 0.100 0.100 0.125 0.400 0.333 1500 0.559 0.651 0.714 0.706 2.708 0.559 0.651 0.643 0.625 0.423 1.000 0.400 0.612 0.004 0.004 0.000 0.106 0.100 0.008 0.410 0.106 0.004 0.008 0.410 0.106 0.004 0.008 0.410 0.106	
1 00000 0010000 001000000 000000000 000000	
1 10 1	
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4791 950 950 950 950 950 950 950 950 950 950	
E 191	
1972 1.070 1.070 1.070 0.085 0.085 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.012 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.0	
1970 1971 0.481 0.668 0.697 0.594 0.722 0.711 0.711 0.019 0.021 0.019 0.019 0.019 0.019	
66 1969 1970 1971 1971 1971 1971 1971 1971 197	
1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969 1969	
1967 1966 0.464 0.389 0 0.510 0.652 0 0.429 0.365 0 0.429 0.365 0 0.0365 0 0.180 0 0.180 0 0.036 0 0.030 0 0.030 0 0.262 0.286 0 0.265 0.286 0	
6 1967 0 510 0 510 0 510 0 2628 0 0 0 2628 5 0 2029 5 0 2029	
1963 1966 1965 1966 1967 1968 1963 1966 1965 1966 1967 1968 0.510 0.552 0.324 0.0324 0.032 0.070 0.154 0.382 0.100 0.0439 0.018 0.324 0.429 0.138 0.036 0.054 0.014 0.015 0.329 0.138 0.036 0.054 0.014 0.015 0.013 0.035 0.029 0.054 0.014 0.015 0.005 0.029 0.056 0.056 0.514 0.433 0.231 0.035 0.262 0.240 0 0.514 0.443 0.231 0.035 0.262 0.240 0 0.514 0.453 0.231 0.035 0.262 0.240 0 0.514 0.051 0.028	
<ul> <li>1965</li> <li>0.154</li> <li>0.154</li> <li>0.154</li> <li>0.154</li> <li>0.154</li> <li>0.211</li> <li>0.211</li> <li>0.228</li> <li>0.028</li> <li>0.028</li> </ul>	
3 1964 3 0.070 6 0.545 6 0.015 6 0.015 10 0.053 10 0.051	
2 196 5 0.00 12 0.00 12 0.01 12 0.01 10 0.01 1	
1961 1962 1964 1961 1964 1964 1964 1964 1964 1964	50
YOSI960 1961 1962 1963 1966 1966 1966 1967 1968 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0.0

# **Table CII PROMOTION RATES OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -**1991

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1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1984 1.85 1986 1987 1988 1989 1991991 2.800 1.150 1.118 1.250 0.895 1.000 1.000 0.944 0.381 1.059 0.957 0.929 3.000 1.000 1.125 0.947 1.000 0.722 0.850 0.875 0.824 0.647 0.765 0.695 0.833 0.600 2.000 1.000		
1987 1590.		
1977 1978 1979 1979 1980 1981 1982 1983 1984 1-5 1986 1985 2.800 1.150 1.118 1.250 0.895 1.000 1.000 0.944 0.381 1.059 1.125 0.947 1.000 0.722 0.850 0.675 0.824 0.647 0.765 0.696 0.833 0.667 1.000		
1,85 .944 0 .765 0		
1984 		
1983 1.000 1.824 0		
1982 0.895 0.875		
1961 1.250 0.850	0.100 0.125 1.000	
1980 1.118 0.722	0.375 0.375 0.1000 1.003 1.000 0.857 1.500 1.000 1.003 1.000	
1979 1.150 1.000 1.000	1.000	
1978 2.600 0.947 2.000	1.500	
1977 1.125 0.800	0.375 0.857	
1975 1976 3.000 1.000 1.000	0.750	
1975 1.000	0.200	1.000 1.000
1974	1.000 0.800 0.200	<b>1</b> ,00
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1966 1967		
1965 196		
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**Table CIII** PROMOTION RATES OF WHITE GENERAL RESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1999 1991991 . 2899 0.986 0.930 0.991 0.991 0.957 1.013 0.974 0.497 0.681 0.942 1.624 . 250 0.684 0.732 0.679 0.715 0.724 0.658 0.605 0.530 0.692 1.667 0.739 0.792 0.089 0.276 0.119 0.400 0.389 1.000 1.300				
1989 1.624				
1988				
1987 5.006 5.881 (				
1986 1986 1986 1989 1989				
2881 0.974 0.605 0.605				
1984 1.013 0.698 0.119 1.000				
1983 0.957 0.724 0.276				
1982 0.991 0.715 0.088	0.007			
1981 0.938 0.679	0.006			
1980 0.002 0.930 0.732 0.732	0.009 0.620 0.132			
1979 0.986 0.684 0.739	0.078 0.503 0.321			
1978 0.899 0.250 0.662 0.667	0.149			
1977 1949 1949 1949 1949 1923 1923 1923 1923 1923 1923 1923 192	0.255	0.023		
1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1989 1989 1989 1989 1989	0.006 0.639 0.531 0.299 0.149 0.078 0.009 0.006 0.007 0.308 0.381 0.554 0.709 0.503 0.622 0.547 0.059 0.321 0.132	0.011 0.094 0.023 0.616 0.571 0.141 0.571		
1975 0.042 0.962 0.038 0.038 0.098	0.629 0.308	0.013 0.616 0.148		
1972 1973 1974 0.629 0.108 0.108 0.160 0.012 0.160 0.014	0.789 0.593 0 0.143 0.555 0 0.250 0.250	0.023 0.486 0.610 0.522 0.029 0.500		
1973 0.601 0.160	0.789 0.143 0.250	0.610		
1972 0.308	0.302	0.023 0.486		
1971 1971		0.057 0.613 0.250		
1970	0.023 0.500 0.667 0.645 0.689 0.500 0.533 0.400 0.500 0.500 0.111 0.111	0.577	0,031 0,065 0,333	
1969	0.667 0.533 0.111	0.375	0.040 0.308 0.250	
1968	0.023 0.500 0.500	0.259	0.300	
1967	9E1.0	0.190 0.667	0,053 0,125 0,125 0,125	
1966		0.100 0.273 0.625 0.667	0.400	
1965		0.450 0.636 0.167	912.0	
1964		0.455 0.571 0.333	#51.0 #51.0	
1963		0.667	0.285 0.400	6.933
1962		0.250	0.200	
1961		615.0 448.0	0.333	0.167
ros1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1 2 3 4 4 6 6 1 1 6 1 0.134	0 - 1	11 13 14 0.455 0.455 0.455 0.459 0.375 0.375 15 0.313 0.250 0.667 0.571 0.636 0.525 0.667 0.500 0.714 0.577 0.613 160.462 0.444 0.714 0.333 0.167 0.667 0.667 0.512 0.2250	18 19 20 20 20 20 210.500 0.333 0.300 0.286 0.154 0.214 0.400 0.143 0.300 0.308 0 210.250 0.667 0.200 0.400 0.333 0.214 0.400 0.125 220.250 0.667 0.200 0.400 0.333	*11.00 - 40 a 0 M M M M M M
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# **Table CIV** PROMOTION RATES OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 19901991 0.0 0.759 0.917 1.171 1.000 0.955 1.375 1.050 1.030 0.938 1.000 1.063 1.024 0.565 1.000 1.063 1.000 0.113 0.917 0.800 0.538 0.455 0.455 0.611 0.714 0.971 0.964 0.606 0.831 0.667 0.733 0.731								
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1 000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
1 2986 1 202								
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1975 .917 1 .538 0	0	1.000 1.000 1.000 0.778 0.400 1.000 0.250 0.450 0.063 0.286 6 0.591 0.591 0.200 0.467 0.591	0.500 0.667					
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Table CV PROMOTION RATES OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

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1972 1974 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1985 19901991 1.000 1.000 0.800 0.500 0.750 0.800 0.857 0.889 1.000 1.000 0.913 0.800 1.000 0.900 0.500 1.000 1.000 0.500 0.567 1.000 0.750 0.600 0.750 0.714 0.500 0.923 0.727 0.750			
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86 194 00 1.00 27 0.7			
195 19 133 0.8 123 0.7			
984 19 984 19 900 0.5 500 0.5			
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1982 1 .889 1. .750 0			
1981 . 857 0	1.500		
1980 1981 1982 1983 1984 1985 1986 1987 0.800 0.857 0.889 1.000 1.000 0.913 0.800 1.000 0.750 0.600 0.775 0.714 0.500 0.923 0.727 0.750 1.000	0.500 0.500		
1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1.000 1.000 0.800 0.500 0.750 0.800 0.857 0.889 1.000 1.000 0.933 0.800 1.000 0.500 0.500 0.667 1.000 0.750 0.600 0.750 0.714 0.500 0.923 0.727 0.750			
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Table CVI PROMOTION RATES OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS - 1991 1960 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1984 1985 1986 1987 1988 1989 19901991 0.063 0.110 0.379 0.711 0.951 1.113 0.986 0.951 1.146 0.0401 1.000 1.178 1.010 1.169 1.111 0.404 0.893 1.115 0.711 0.951 1.113 0.986 0.959 1.146 0.0401 1.000 1.178 1.010 1.169 1.111 0.404 0.893 1.115 0.717 0.071 0.072 0.044 0.075 0.333 0.330 2.000 0.667 1.000 1.169 1.111 0.404 0.893 0.893 1.115 0.037 0.072 0.284 0.095 0.730 0.341 0.972 0.684 0.974 0.041 0.118 0.130 0.034 0.031 0.042 0.091 0.555 0.346 0.313 0.031 0.074 0.041 0.118 0.130 1.450 0.594 1.450 0.110 0.110 0.130 0.031 0.011 0.001 0.566 0.346 0.311 1.400 1.000 1.000 1.001 0.011 0.011 0.110 0.056 0.056 £££.0 000.1 00\$.0 0.333 0.222 0.182 0.167 0.111 0.034 0.429 0.176 EEE.0 022.0 EEE.0 YOS1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1.000 c.... 0.500 0.500 0.200 0.200 0.500 0.500 0.200 0.501 0.200 0.500 0.500 0.500 0.200 0.200 0.200 0.200 0.200 0.500 0.200 0.500 0.200 0.167 0.333 0.083 0.083 0.500 0.250 0.500 0.250 0.500 0.200 **むちおくりちゃととてくくなしからやくだて**なるという。 そだえてどとだだだだででででですでです。

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### SERVICE FOR YEAR Table CVII PROMOTION RATES OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF GROUPS 1960 - 1991

0.042 0.042 0.043 0.309 0.004 0.309 0.005 0.736 0.667 0.309 0.167 0.096 0.010 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 9 0.447 0.400 0.462 0.732 0.697 0.405 0.556 0.830 0.742 0.742 0.742 0.744 0.505 0.714 0.744 0.731 0.457 0.744 0.714 0.744 0.714 0.744 0.714 0.744 0.714 0.414 0.467 0.734 0.714 0.405 0.756 0.756 0.714 0.010 0.010 1.417 0.400 0.667 0.333 0.167 0.730 0.425 0.550 0.615 0.013 0.001 0.010 1.417 0.400 0.667 0.333 0.167 0.716 0.255 0.065 0.013 0.001 0.010 1.417 0.400 0.667 0.530 0.667 0.425 0.550 0.655 0.026 0.013 0.001 1.410 0.667 0.500 0.667 0.433 0.1667 0.716 0.255 0.066 0.013 0.001 0.010 1.417 0.400 0.667 0.657 0.632 0.667 0.720 0.725 0.0065 0.023 0.667 0.000 0.010 1.417 0.400 0.667 0.033 0.1667 0.700 0.445 0.655 0.065 0.024 0.025 0.011 0.000 0.010 1.410 0.667 0.250 0.667 0.425 0.020 0.652 0.000 0.619 0.051 0.000 0.010 1.410 0.667 0.700 0.667 0.700 0.667 0.700 0.667 0.700 0.667 0.700 0.667 0.700 0.667 0.700 0.667 0.700 0.667 0.700 0.000 0.000 0.000 0.000 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.000 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.000 0.010 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0 

I Table CVIII PROMOTION RATES OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991 100'0 16670667 0.085 0.007 0.004 0.004 0.001 0.001 0.001 0.002 0.002 0.002 0.002 0.002 0.003 0.259 0.594 0.251 0.654 0.011 0.025 0.703 0.127 0.518 0.651 0.651 0.651 0.660 0.735 0.479 0.115 0.250 0.203 0.200 0.233 0.040 0.015 0.250 0.203 61010 1001 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0 1968 1969 1970 1971 1972 1973 

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<b>អ</b> ្ន	1984 0.872 0.765 0.400				
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CLX PROMOTION RATES	YOSI360 1961 1962 1964 1965 1966 1967 1968 1968 1970 1971 2 2 3 4 4 1.000		1.000	000.1	
rabie 1991			-	7	
	1960				

ŧ Table CX PROMOTION RATES OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991 YOS1960 1961 1962 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1960 1981 1982 1984 1965 1986 1987 1988 1989 19901991 1 0.100 0.130 0.100 2 1.167 1.000 0.530 1.200 0.901 0.669 0.714 0.894 0.907 0.517 0.528 0.917 0.792 0.143 0.231 1.000 0.511 1.000 0.561 1.000 0.561 0.014 0.594 0.917 0.528 0.917 0.792 1.000 0.714 0.893 1.000 1.000 0.675 1.000 0.607 1.000 0.900 0.501 0.714 0.894 0.918 0.714 0.895 1.000 0.714 0.893 1.000 1.000 0.675 1.000 0.601 1.000 0.900 0.501 0.714 0.926 0.758 0.913 0.865 1.000 0.714 0.893 1.000 1.000 0.675 1.000 0.601 1.000 0.900 0.901 0.914 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 0.714 1.040 0.571 0.125 0.500 0.333 0.500 0.667 1.000 1.000 1.000 0.500 0.750 1.000 0.333 1.333 1.000 0.500 000.1 1.000 1.000 1.600 1.000 0.667 1.000 0.500 0.500 1.000 0.500 1.000 1.000 1.000 

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ł SERVICE FOR YEAR GROUPS 1960 MALE AVIATION WARFARE OFFICERS BY YEAR OF Table CXI PROMOTION RATES OF 1991  

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 0.0 1968 1969 1970 1971 1972 0.861 0.564 0.158 1961 1962 1963 1964 1965 1966 1967 YOS1960

# **Table CXII** PROMOTION RATES OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

1978 1979 1980 1961 1982 1983 1984 1985 1986 1987 1988 1969 1991 1.667 1.417 1.188 1.000 0.928 1.125 1.045 1.125 0.350 1.152 0.949 0.852				
969 852				
1988 1 949 0.				
152 0	169.			
. 350 L	0 5 6 0 °			
125 0.	956 0			
045 1.	952 0			
1 521	833 0 .000			
1982 .926 1	1			
0 000 .	1 000.	. 077		
1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 0.250 1.250 0.750 1.000 1.667 1.417 1.188 1.000 0.926 1.125 1.045 1.125 0.350 1.152 0.949 0.852	1 000.	0 006.		
1 718.	600 1	. 750 0		
1978 1.667	1.000	. 673 . 818 0		
1977 0.250 1.000	1.000	0.250		
1976	1.000	1,000		
1973 1974 1975 1976 1977 0.250 1.250 0.750 1.000 1	1,000 0.500 1.000 1.077 1.000 1.000 1.000 1.000 0.833 0.952 0.956 0.895 0.971 1.000 1.000 1.000 1.000	0.667 1.000 0.250 0.071 0.500 0.818 0.750 0.900 0.917	0.500	1.000
₽261				
	0.857	600.1		
2721				1.000
1761				
1970		1.000		
1963				
1968				
1967				
1966				
1965				
1964				
1963				
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YOS1960 1 2	n wiki ka pa	0 0 1 1	12:	4 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

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ł Table CXIII PROMOTION RATES OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 1991

1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1994 1985 1996 1985 1996 1989 1998 1999 29901991 0.012 0.013 0.044 0.073 0.046 0.073 0.046 0.073 0.046 0.073 0.046 0.073 0.046 0.073 0.046 0.073 0.046 0.073 0.046 0.073 0.046 0.073 0.046 0.046 0.074 0.046 0.090 0.046 0.004 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 0.046 1,000 0.478 0.572 0.599 0.000 0.850 0.739 0.631 0.856 0.725 0.450 0.294 0.095 0.063 0.063 0.010 0.478 0.500 0.774 0.745 0.698 0.643 0.923 0.886 0.846 0.019 0.749 0.739 0.747 0.702 0.756 0.739 0.143 0.512 0.450 1.000 1.000 12 13 14 15 16.741 0.419 7.276 0.100 0.267 0.998 0.231 0.169 0.171 0.226 0.013 0.024 0.012 0.041 0.021 0.073 0.073 15 15 15 15 17 17 17 16.741 0.419 7.276 0.100 0.267 0.660 0.933 0.633 0.933 0.918 0.735 0.714 0.763 0.769 0.820 0.759 17 17 Z00.014 210.217 9.546 0.453 0.525 0.607 0.718 0.588 0.633 0.642 0.460 0.018 0.016 220.700 9.989 0.517 0.692 0.400 0.300 23 1963 1966 1965 1966 1967 1968 1969 1970 25 25.055556 27.055556 280.071 0.051 0.065 0.024 290.045 0.038 0.077 1961 1962 VOS1960 2

### Table CXIV PROMOTION RATES OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 -1991

Y031960 1961 1962 1963 1964 1955 1966 1967 1968 1969 1970 1971 1972 1973 1974 1977 1978 1979 1984 1983 1963 1964 1985 1986 1967 1986 1969 19901991 1.000 1.000 0.917 1.667 0.901 0.750 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 0.222 1.000 1.000 1.250 0.900 0.800 0.727 0.667 0.833 1.000 1.000 0.800 0.800 0.800 0.800 1.000 1.000 0.800 0.750 1.000 0.143 611.0 1.000 0.250 1.000 1.000 1.000 1.000 1.000 1.000 1.000 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000 / 0.000

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# **Table CXV** PROMOTION RATES OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

15610#				
1972 1973 1974 1975 1976 1977 1978 1990 1981 1/02 1983 1984 1985 1986 1987 1988 1989 19801991 0.500 1.900 1.900 1.900 1.000 1.000 1.000 1.000 1.000 0.857 0.750 0.800 0.875 0.889				
66 19 875 0.8				
81 19 900 0.0	000			
986 11 750 0.1	375 0.5 500			
985 1. 857 0.	400 0.			
.984 1 000 D.	1,000 0.750 1.000 0.571 1.000 0.400 0.375 0.500 1.000 1.000			
T 000 T	571 1.			
1 000.	0 000			
1881 1 666.	. 750 1			
1980	0 0 0 0 .			
6791 L	-			
1978				
1977 1.000				
1976 0.540 1.000	1.000	1.000	1.000	
1975				
1974				
1973	1.000 1.000	1.000		
1972	1.000			
1971	1.000	1.000	1.000	
1970				
1963		1.000	1.000	
1968				
5 1967				
5 1961			1.000	1.000
<b>*</b> 196				
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1031960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 2 2				
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### APPENDIX H - LOSS RATES BY YEAR OF SERVICE AVERAGED ACROSS

YEAR GROUPS

### Table CXVI LOSS RATES OF SURFACE WARFARE OFFICERS BY YEAR OF SERVICE

	LOSS RATES							
YOS		BTHNIC	GEI	NDER				
	WHITE	BLACK	HISPANIC	NALE	FENALB			
1	.000	.033	.016	.001	.031			
2	.009	. 026	. 017	. 010	. 029			
3	. 108	. 127	. 130	. 111	.036			
4	. 245	. 236	.238	. 247	. 141			
5	. 236	. 175	.241	. 234	. 155			
6	. 200	. 162	.211	. 200	. 170			
7	. 159	.101	. 117	. 156	. 220			
8	.110	.144	. 094	. 112	. 128			
9	. 069	.071	. 085	. 068	. 186			
10	. 093	. 118	. 083	.094	.040			
11	. 098	.135	.214	.100	. 095			
12	.046	. 043	. 095	. 047	. 059			
13	.047	. 050	.053	. 046	.080			
14	.031	. 020	. 000	.031	.000			
15	.013	. 025	. 067	.014	. 167			
16	.016	. 029	.000	.015	. 000			
17	. 023	.034	.000	. 023	. 000			
18	.042	.063	. 154	. 043	.000			
19	. 076	. 095	. 200	. 076	.000			
20	. 288	. 133	. 429	. 288				
21	. 156	. 167	. 250	. 156				
22	. 110	. 059	.000	. 108				
23	. 080	. 200	.000	.082				
24	. 124	.167	.000	. 124				
25	.121	.000	. 000	. 121				
26	. 276	.000	.000	. 272				
27	.168	.286	.000	. 169				
28	. 173	.000	1.00	. 173				
29	. 298	.000		. 294				
30	. 663	.000		. 644	1			

### Table CXVII LOSS RATES OF GENERAL WARFARE OFFICERS BY YEAR OF SERVICE

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	LOSS RATES							
YOS		ETENIC	GEN	DER				
	WHITE	BLACK	HISPANIC	MALE	PEXALE			
1	. 0364	.0145	. 0000	.0962	. 0268			
2	. 0536	.0138	.0870	. 1176	.0403			
3	.0911	.0876	. 1250	. 1971	.0817			
4	. 2137	. 1602	. 1757	. 2994	. 1608			
5	. 2715	.1250	. 1053	. 5935	. 1191			
6	.1630	. 0797	. 1957	.3451	. 1154			
7	. 1047	. 0739	. 1600	.2181	.0815			
8	.0674	.1018	. 2105	. 1672	. 0589			
9	. 0679	. 0593	. 0000	. 1299	.0587			
10	. 0983	.0973	. 2000	.3661	. 0577			
11	. 1415	.2222	. 2857	. 4848	. 1140			
12	.0629	.0545	.0250	. 2319	. 0527			
13	. 0497	.0408	. 0000	.0794	. 0553			
14	. 0329	. 0909	. 0000	. 1169	.0325			
15	.0327	.0000	. 0000	.1299	.0196			
16	.0280	. 1538	.0000	. 2262	.0185			
17	.0262	. 0000	. 0000	.0429	. 0288			
18	. 0487	.0000	.0000	.0878	. 0327			
19	.1058	.0000	.0500	. 1653	. 0996			
20	. 3534	.1667	.0000	. 2679	. 3797			
21	.2444	.2500	1.000	.2814	. 2500			
22	.1071	.0000	. 0000	.2424	.0364			
23	.1324	.0000	. 0000	. 2000	.0833			
24	. 2037	.0000	1.000	.4211	. 1282			
25	. 0909	1.000		.1250	. 1481			
26	. 3793			. 1429	. 4545			
27	. 1333			.0000	. 1818			
28	. 2727			. 5000	. 1429			
29	. 6000			1.000	. 5000			
30	1.000				1.000			

### Table CXVIII LOSS RATES OF AVIATION WARFARE OFFICERS BY YEAR OF SERVICE

	LOSS RATES						
YOS	·	BTENIC		GBNDER			
	WEITE	BLACK	HISPANIC	MALB	PRMALE		
1	.0951	.1900	.1179	.1000	. 0566		
2	.0458	. 1265	. 1108	.0504	. 0442		
3	.0146	.0474	.0152	.0154	. 0225		
4	.0305	. 0379	.0385	.0310	.0110		
5	. 0694	.0750	.0641	.0697	.0369		
6	.1423	.1314	.1050	. 1416	. 1171		
7	. 1966	. 1758	. 1884	.1960	. 1773		
8	. 1625	. 1526	.1414	.1619	. 1923		
9	. 0853	. 0962	.1061	.0856	. 1111		
10	. 0993	. 1278	. 1053	.0990	. 1228		
11	.0986	. 1161	.0976	. 0995	.1842		
12	.0477	. 0444	. 0909	.0479	.0455		
13	.0342	. 0500	.0000	.0334	. 2353		
14	. 0277	.0435	.0667	.0281	.0000		
15	. 0220	. 0333	.0000	.0213	. 1667		
16	. 0265	.0816	.0800	.0268	. 0000		
17	.0314	.0000	.0000	.0315	.0000		
18	. 0525	.0606	.0526	.0528	.0000		
19	. 1232	.0870	.1250	.1226			
20	. 2957	.5000	. 3077	. 2979			
21	. 1682	.1111	.1250	.1667			
22	.1233	. 1250	. 1429	.1227			
23	.0848	.0000	. 0000	.0845			
24	.1330	.1667	. 3333	.1336			
25	.1413	.0000	. 3333	.1432			
26	. 2930	. 3333	. 5000	. 2943			
27	.2143	. 5000	1.000	.2163			
28	. 2696	. 0000		. 2692			
29	. 3407	. 0000		.3358			
30	. 5393	.0000		. 4493			

### Table CXIX LOSS RATES OF SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE

	LOSS RATES ETHNIC					
Yos		r				
	WHITE	BLACK	BISPANIC			
11	. 0543	. 1489	. 2235			
2	. 0379	. 0526	.0615			
3	.0306	. 0563	. 1071			
4	.1366	. 1194	. 2222			
5	. 2690	. 2143	. 3235			
6	. 1229	. 1364	. 2000			
7	. 1784	. 1053	. 1429			
8	. 1267	. 1765	.4167			
9	.0503	. 1538	. 2857			
10	. 0928	. 0909	.0000			
11	.1175	. 4000	. 0000			
12	.0845	. 1250	. 1667			
13	.0783	. 2857	. 0000			
14	.0615	. 2500	. 0000			
15	.0351	.0000	. 0000			
16	.0170	.0000	.0250			
17	.0272	.0000	. 0000			
18	.0313	.0000	.0000			
19	.0575	. 0000	. 3333			
20	. 1714	. 0000	. 0000			
21	. 0962	.0000	. 0000			
22	.0616	. 0000	. 0000			
23	. 0397	. 0000	. 0000			
24	.0842	.0000	.0000			
25	.1077	.0000	.0000			
26	. 1849		. 0000			
27	. 1657		. 0000			
28	. 1811	······································	. 0000			
29	. 2771		. 0000			
30	. 5854		. 0000			

### APPENDIX I - PROMOTION RATES BY YEAR OF SERVICE AVERAGED

ACROSS YEAR GROUPS

### Table CXX PROMOTION RATES OF SURFACE WARFARE OFFICERS BY YEAR OF SERVICE

	PROMOTION RATES							
YOS		BTHNIC	GENDER					
	WHITE	BLACK	EISPANIC	MALB	PENALE			
1	.021	.013	. 006	. 020	. 000			
2	. 954	. 928	. 936	. 950	. 996			
3	.014	.010	. 075	.014	.015			
4	. 696	. 694	. 663	. 692	. 847			
5	. 543	.417	. 379	. 531	.818			
6	.333	.000		. 375				
7	.000	.000	. 000	.000	. 000			
8	.007	.003	. 000	. 007	. 058			
9	.366	.247	. 313	.361	. 200			
10	.656	. 678	. 524	. 653	. 970			
11	.157	.150	.000	. 177	. 000			
12	.000	.000	.000	.000	. 000			
13	.003	.017	.000	. 003	.000			
14	.071	.071	. 056	.071	. 000			
15	. 633	. 534	. 571	.631	.667			
16	.315	.207	. 000	. 307	.000			
17	.016	.059	.000	. 017	.000			
18	.000	.000	.000	. 000	.000			
19	.001	.000	. 000	.002				
20	.008	.040	.000	.009	.000			
21	.343	.450	. 667	. 344	.000			
22	.423	. 375	1.00	. 421				
23	.006	.000		.006				
24	.000	.000		.000				
25	.000	.000		.000				
26	. 000			. 000				
27	.046	.000	. 000	. 047				
28	. 055	.000		.054				
29	.041	.333		. 046				
30	.013	.000		.012	-			

Table CXXI PROMOTION RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE

	PROMOTION RATES							
YOS		BTENIC		GENDER				
	WHITE	BLACK	HISPANIC	MALE	PENALE			
1	.016	.012	.000	. 042	.008			
2	.907	. 997	. 859	. 869	.927			
3	.006	.000	. 026	.013	.001			
4	. 649	.720	.703	. 475	.743			
5	.381	. 465	.125	.074	. 799			
6	. 333	. 000		. 333	. 286			
7	.000	.000	.000	.000	. 000			
8	.011	.000	.000	.000	.011			
9	. 284	. 267	. 357	. 063	. 319			
10	. 548	. 447	. 400	.078	. 638			
11	.158	.045	.000	. 022	. 198			
12	.000	.000	. 000	.000	.000			
13	.003	. 000	.000	. 017	.001			
14	.081	. 068	. 000	.080	. 077			
15	.571	.480	. 500	. 357	. 599			
16	. 209	. 083	.000	.154	.231			
17	.000	. 000	. 000	000	.000			
18	.000	.000	.000	. 000	.000			
19	. 009	. 167	.000	.000	.011			
20	.027	.000	.000	. 000	.034			
21	.277	. 333		. 098	. 337			
22	. 226	. 000	. 000	. 040	. 387			
23	. 000	.000	.000	.000	. 000			
24	.000	. 000	. 000	.000	. 000			
25	. 000			. 000	.000			
26	.045			. 000	.056			
27	.000			. 000	.000			
28	.111			. 000	. 167			
29	.000				.000			
30	.000				. 000			

### Table CXXII PROMOTION RATES OF AVIATION WARFARE OFFICERS BY YEAR OF SERVICE

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PROMOTION RATES							
	BTENIC		I	IDBR			
WHITE	BLACK	HISPANIC	MALE	FEMALE			
.024	.011	.008	. 023	. 003			
. 909	. 841	. 845	. 905	.962			
. 027	.021	.010	. 027	.000			
. 908	. 891	.841	. 907	.952			
.722	. 655	.735	.720	. 938			
. 538	. 000	1.00	. 563				
. 000							
. 005	. 011	. 000	.005	.000			
. 415	. 390	. 375	. 415	. 181			
. 626	. 623	. 643	. 623	.818			
. 213	. 000	.000	. 206	.000			
. 208	.000		. 203				
. 003	. 025	.000	. 003	. 059			
. 083	. 118	. 161	. 084	.000			
. 633	. 538	. 545	.631	.800			
. 191	. 000	. 222	. 190				
.009	. 000	. 000	. 009				
. 007	. 000	.000	.005				
.002	. 000	. 000	.002				
.011	.000	.000	.011				
. 381	.714	. 500	. 383				
.321	.333	. 250	.319				
.005	.000	.000	. 005				
. 004	.000	.000	. 004				
. 000		. 000	. 000				
.002	. 000	. 000	. 002				
. 023	. 000		. 023				
. 075	. 000		. 073	[			
. 058	. 000		. 065				
. 073	. 000		. 121				
	.024 .909 .027 .908 .722 .538 .000 .005 .415 .626 .213 .208 .003 .083 .633 .191 .009 .007 .002 .011 .381 .321 .005 .004 .000 .002 .002 .002 .002 .003	NEITE         BLACK           .024         .011           .909         .841           .027         .021           .908         .891           .722         .655           .538         .000           .005         .011           .415         .390           .626         .623           .213         .000           .003         .025           .083         .118           .633         .538           .191         .000           .002         .000           .003         .025           .083         .118           .633         .538           .191         .000           .002         .000           .003         .025           .004         .000           .005         .000           .006         .000           .001         .000           .002         .000           .003         .000           .004         .000           .005         .000           .002         .000           .003         .000           .000<	BILACK         HISPANIC           .024         .011         .008           .909         .841         .645           .027         .021         .010           .908         .891         .641           .722         .655         .735           .538         .000         1.00           .005         .011         .000           .005         .011         .000           .415         .390         .375           .626         .623         .643           .213         .000         .000           .003         .025         .000           .003         .025         .000           .003         .025         .000           .003         .025         .000           .003         .025         .000           .004         .000         .022           .009         .000         .000           .001         .022         .000           .001         .000         .000           .001         .000         .000           .001         .000         .000           .002         .000         .000 <td< td=""><td>HEITE         BLACK         HISPANIC         MALE           .024         .011         .008         .023           .909         .841         .845         .905           .027         .021         .010         .027           .908         .891         .841         .907           .722         .655         .735         .720           .538         .000         1.00         .563           .000         .005         .011         .000         .005           .415         .390         .375         .415           .626         .623         .643         .623           .415         .390         .375         .415           .626         .623         .643         .623           .003         .025         .000         .003           .003         .025         .000         .003           .003         .025         .000         .003           .003         .025         .000         .003           .003         .025         .000         .003           .009         .000         .000         .002           .009         .000         .000         .00</td></td<>	HEITE         BLACK         HISPANIC         MALE           .024         .011         .008         .023           .909         .841         .845         .905           .027         .021         .010         .027           .908         .891         .841         .907           .722         .655         .735         .720           .538         .000         1.00         .563           .000         .005         .011         .000         .005           .415         .390         .375         .415           .626         .623         .643         .623           .415         .390         .375         .415           .626         .623         .643         .623           .003         .025         .000         .003           .003         .025         .000         .003           .003         .025         .000         .003           .003         .025         .000         .003           .003         .025         .000         .003           .009         .000         .000         .002           .009         .000         .000         .00			

### Table CXXIII PROMOTION RATES OF SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE

		PROMOTION RATES				
YOS	BTENIC					
	WHITE	BLACK	HISPANIC			
1	.011	.032	.012			
2	.891	. 972	. 922			
3	.011	.028	.019			
4	.801	.862	. 574			
5	. 552	.667	.714			
6	. 500					
7	. 500					
8	. 004	.000	.000			
9	. 462	. 192	. 500			
10	.811	.438	1.00			
11	.311	. 143				
12	.000					
13	.003	. 167	.000			
14	.066	.333	.000			
15	.783	1.00	1.00			
16	. 387					
17	.000	.000	.000			
18	. 000	.000	.000			
19	.000	.000	.000			
20	.012	.000	.000			
21	. 508	1.00	1.00			
22	. 528					
23	.000					
24	.000					
25	.000	.000	. 000			
26	.000		.000			
27	.017		.000			
28	. 073		.000			
29	. 054		. 000			
30	. 000		.000			

### APPENDIX J - LOSS RATES BY MILESTONE PERIOD AVERAGED ACROSS

### YEAR GROUPS

Table CXXIV MILESTONE PERIOD LOSS RATES OF SURFACE WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE	YEARS OF		LOSS RATES	BS		
PERIOD	SERVICE		ETHNIC		GEN	IDER
		WHITE	BLACK	HISPANIC	MALE	PEMALE
1	1-2	.005	.031	.017	.006	.033
2	3-6	.189	.173	.180	.190	.123
3	7-11	.110	.118	.138	.110	.150
4	12-17	.030	.038	.026	.030	.250
5	18-20	.129	.081	.259	.129	.000
6	21-26	.145	.091	.143	.188	
7	27-30	.256	.000		.252	
Table CXXV	MILESTONE	PERIOD I	JOSS R.	ATES	$\bigcirc F$	GENERAL
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UNRESTRICTED	LINE OFFICERS	AVERAGED	ACROSS	YEAR	GROUE	2S

MILESTONE	YEARS OF			LOSS RATES		
PERIOD	SERVICE		ETHNIC		GEN	DER
		WHITE	BLACK	HISPANIC	MALE	PEMALE
1	1-2	.0304	.0105	. 0432	.0535	. 0338
2	3-6	.1650	.1052	.1495	.3088	.1147
3	7-11	.0940	.1168	.1190	.2455	.0724
4	12-16	.0358	.0677	.0000	.1258	.0336
5	17-20	.1300	.0435	.2000	.1429	.1319
6	21-25	.1715	.2000	.5000	.2857	.1273
7	26-30	.3684		.0000	.3333	.0375

Table CXXVI MILESTONE PERIOD LOSS RATES OF AVIATION WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE	YEARS OF		I	OSS RATES		
PERIOD	SERVICE		ETHNIC		GEN	der
		WHITE	BLACK	HISPANIC	MALE	PEMALE
1	1-2	.0728	.1580	.1164	.0780	.0460
2	3-7	.0768	.0865	.0786	.0770	.0680
3	8-12	.0960	.1027	.1241	.0960	.1430
4	13-18	.0299	.0500	.0360	.0300	.0950
5	19-25	.1574	.1429	.1778	.1580	
б	26-30	.2496	.0000	1.000	.2460	

### Table CXXVII MILESTONE PERIOD LOSS RATES OF SUBMARINE WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE	YEARS OF		LOSS RATES	5
PERIOD	SERVICE		ETHNIC	
		WHITE	BLACK	HISPANIC
1	1-2	.0455	.0938	.1560
2	3-7	.1397	.1203	.2115
3	8-12	.0906	.2195	.1250
4	13-16	.0528	.1667	.0625
5	17-20	.0683	.0000	.0909
6	21-24	.0749	.0000	.0000
7	25-30	.1957		.0000

#### APPENDIX K - PROMOTION RATES BY MILESTONE PERIOD AVERAGED

### ACROSS YEAR GROUPS

Table CXXVIIIMILESTONEPERIODPROMOTIONRATESOFSURFACEWARFAREOFFICERSAVERAGEDACROSSYEARGROUPS

MILESTONE	YEARS OF		PROI	NOTION RATES		
PERIOD	SERVICE		BTHNIC		GRI	NDER
		WHITE	BLACK	HISPANIC	MALE	PEMALE
1	1-2	.496	.467	.482	. 492	. 523
2	3-6	.339	.333	.341	.338	.469
3	7-11	.199	.175	.137	.197	.193
4	12-17	.168	.151	.111	.166	.105
5	18-20	.003	.013	.000	.004	.000
6	21-26	.268		.500	.269	
7	27-30	. 034		.000	.036	

Table CXXIXMILESTONEPERIODPROMOTIONRATESOFGENERALUNRESTRICTEDLINEOFFICERSAVERAGEDACROSSYEARGROUPS

MILESTONE	YEARS OF		PRO	MOTION RATES	5	
PERIOD	SERVICE		ETHNIC		GEN	IDER
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.468	.530	.488	.516	.462
2	3-6	.334	.364	.313	.241	.380
3	7-11	.179	.150	.194	.028	.206
4	12-16	.159	.123	.111	.129	.160
5	17-20	.009	.056	.000	.000	.011
6	21-25	.193	.000	.000	.053	.271
7	26-30	.063			.000	.077

Table CXXXMILESTONEPERIODPROMOTIONRATESOFAVIATIONWARFAREOFFICERSAVERAGEDACROSSYEARGROUPS

MILESTONE	YEARS OF		PRO	MOTION RATE:	3	
PERIOD	SERVICE		ETHNIC		GEN	IDER
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.437	.383	.399	.433	.482
2	3-7	.473	.458	. 447	.473	.498
3	8-12	.305	.291	.320	.304	.264
4	13-18	.195	.137	.152	.194	.273
5	19-25	.133	.250	.100	.133	
6	26-30	.038	.000	.000	.04	

## Table CXXXIMILESTONEPERIODPROMOTIONRATESOFSUBMARINEWARFAREOFFICERSAVERAGEDACROSSYEARGROUPS

MILESTONE	YEARS OF	PR	OMOTION RA	TES
PERIOD	SERVICE		BTHNIC	
		WHITE	BLACK	HISPANIC
1	1-2	.456	.471	.429
2	3-7	.409	.439	.393
3	8-12	.348	.148	.364
4	13-16	.256	.286	.333
5	17-20	.003	.000	.000
б	21-24	.451	1.00	1.00
7	25-30	.020		.000

APPENDIX L - MILESTONE PERIOD LOSS RATES BY YEAR GROUPS

# Table CXXXII MILESTONE PERIOD LOSS RATES OF SURFACE WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year	Milest	one Per	iod 1	Milest	one Per	nod 2	Milest	one Pe	nod 3	Milest	one Per	iod 4	Miles	tone Pe	nod 5	Miles	ione Per	od 6	Milest	one Pe	100 1
Group	W	8	Н	W	8	н	W	8	н	W	B	н	W	В	н	W	8	н	W	8	н
1960													135	125	200	153	125	1 00	250		
1961	(												143	1 00		124			260		
1962													118	083		153	000				
1963					1								166	000	000	141	100	000			
1964										019	042	000	119	067	400	141	125				
1965										022	125		111	000		155	333				
1966										037	030	000	098	000	000						
1967										041		100	143		1 00						
1968										046	200	000	134		286						
1969				1	}		108	.152	000	028	.000	000	124	091	333						
1970							.119	.103	400	031	030		128	111							
1971				1			.106	100	333	.024	045		135	125							1
1972							.089	.068	167	033	.032	000									
1973				251	227	.273	.078	.146	.000	.026	077	125									1
1974				221	241	.067	880	.043	.091	022	019	000									
1975	027	000	.286	.205	156	100	.118	115	222												
1976	.004	.101	.143	.185	.121	.125	099	.113	.167												1
1977	.000	051	.000	.156	.152	.104	.126	143	.081												
1978	.000	000	.000	155	.140	.200	133	.115	.286												
1979	014	.000	.000	173	.193	.182	125	083	100												
1980	.000	.023	.048	201	.186	.217	.115	.179	.172												
1981	011	.022	.024	.188	.247	.195	1						Į								
1982	.000	070	.000	.178	.178	.145															1
1983	.000	.070	.023	.175	.143	.232															ł
1984	.000	.042	.010	.185	132	.170															
1985	.001	.022	.058	.198	.208	.176							1								Į
1986	.000	005	000																		
1987	.015	.023	.000																		
1988	000	037	000		1																
1989	.002	.000	.000					ĺ													1
1990	<b>I</b>																				
1991																					
N = WHITE		В	= BLAC	ĸ		H=H		0													

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# Table CXXXIII MILESTONE PERIOD LOSS RATES OF SURFACE WARFARE OFFICERS BY GENDER AND YEAR GROUP

Year	Miles Pan	stone od 1	Mile: Pen	stone od 2	1	stone Iod 3	Miles Peri			stone iod 5		stone Iod 6	Miles Peri	
Group	м	F	M	F	м	F	м	F	м	F	M	۶	м	F
1960									135		154	_	245	
1961									144		124		257	
1962									.118		151			
1963									165		138			
1964							018		120		142			
1965							023		.111		156			
1966							036		.097	000				
1967							.041		.144				1	
1968							046		135					
1969					.108		.028	1.00	123					
1970					.119	.000	.030	.667	128					
1971					.106		026		135					
1972					089	.000	.033	.000						
1973			.252		.079	.000	.026	1.00						
1974			.221	.000	.087	.143	.022	.000						
1975	.027	1.00	.203	.000	.1i8	.150								
1976	.007	1.00	.184	.100	.099	.222								
1977	.000		.162	.031	.127	.123	1							
1978	.000	.000	.157	.074	.132	.270								
1979	.014	.000	.176	.085	.121	.158								
1980	000	.029	.202	.197	.119	.069	Í		í (				1	
1981	015	.000	.191	.082										
1982	.000	.053	.178	.119							1		]]	
1983	.000	.029	.176	.167										
1984	.003	.000	.180	.264									l	
1985	.003	.054	.199	.155									11	
1986	.000	.000												
1987	.015	.000							]					
1988	.000	.017												
1989	.000	.036												
1990														
1991														

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Table CXXXIV MILESTONE PERIOD LOSS RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year	Miles	tone Pe	riod 1	Miles	tone Pe	riod 2	Miles	stone Pe	enod 3	Miles	tone Pe	riod 4	Miles	stone Pe	mod 5	Miles	stone Pe	riođ 6	Miles	one Pe	riod 1
Group	w	8	н	W	8	н	W	8	н	W	в	н	W	в	н	W	8	н	W	B	н
1960													143		000	304		1 00			Ť
1961													.168			051		333	368		
1962													024			194					
1963													114			069					
1964										068	000		129	000		275	200				
1965										.060			135		1 00	170					
1966										048	000		208	000		158	200				
1967										041	.000		101	000							
1968								J .		065			093								
1969							.088	1.00		063			160								1
1970							.078	.000		034	000		123	000							1
1971							118	143		.052	.125		136	125		i i					
1972							.062	000	500	.023	000										
1973				.404	.391	.500	.055	.048	.000	.021	.000	.000									
1974	1 1			.193	.081	.200	.044	.071	.000	.019	000	.000									
1975	.109	.000	.000	.175	.089	.214	.075	.114	200	031	.000										
1976	.103	.000	.000	.216	.135	.429	.096	156													
1977	.016	.000	.143	133	.085	.182	.108	.091	000												
1978	.023	.000	.250	136	.085	.000	.099	.169	250			i l									1
1973	.000	.000	.167	121	.139	.600	.121	.163													
1980	.018	.000	.111	.117	.025	.067	.116	123	.182												
1981	.028	015	.071	100	.053	.176															
1982 1983	.021 .074	.016	000 .000	.140 .142	.071	.097				ĺ											
1984	.074	000 .045	.000	.142	.117 .092	.115 .200															
1985	.007	.045	.000	.150	.113	.039				1											
1985	.000	023	000	.135	.113	.039															
1987	.008	.000	.000																		]
1988	.008	.000	.000																		
1989	.009	.000	.050																		
1990																					
1991																					

## Table CXXXV MILESTONE PERIOD LOSS RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY GENDER AND YEAR GROUP

Year	Mile: Peri	stone od 1	2	stone od 2	3	stone Iod 3	Miles Pen	stone od 4		stone Iod 5	1	stone Iod 6	Miles Perii	
Group	М	F	м	F	М	F	м	F	M	F	м	F	м	F
1960					$\square$				000	167	333	333		
1961									1 00	152	222	.030	333	37
1962									125	.077	211	167		
1963					1				188	133	.143	045		
1964							.214	.034	135	109	667	167		
1965							.000	155	.159	097	.269	074		
1966							.063	094	.167	209	250	214		
1967							000	.064	100	094				
1968							237	044	000	113				
1969					.333	.043	.389	031	286	152				
1970					.333	.052	121	.020	105	130				
1971					.206	113	.269	032	250	.131				
1972					.139	063	.172	.010						
1973			.668	.195	.195	045	.053	025						
1974			.326	152	.271	.024	.071	.026						
1975	.228	.027	.321	.121	.207	.062	.000	031						
1976	.058	.137	.295	.138	.229	.061								
1977	.000	.044	.171	120	.285	070								
197 <b>8</b>	.000	.059	.180	.130	.267	.068					1			
1979	.000	.040	203	.088	.265	098								
1980	016	.020	172	.097	.192	104							[	
1981	.000	.033	.142	.101										
1982	053	.021	.317	.104			1							
1983	.143	.042	.279	109	1									
1984	000	.026	.307	090										
1985	000	.033	.323	.106										
1986	000	.011												
1987	.000	.030							1					
1988	.050	.011												
1989	.088	.007												
1990														1
1991			'		l ·									

#### Table CXXXVI MILESTONE PERIOD LOSS RATES OF AVIATION WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year	Miles	stone Pe	nod 1	Miles	tone Pe	riod 2	Mile	stone Pe	eriod 3	Miles	tone Pe	riod 4	Mile	stone Pe	riod 5	Miles	one Pe	nod 6
Group	W	В	н	W	B	н	W	8	н	W	8	н	W	В	н	W	B	н
1960							[			[			161			250		
1961							1						132	000	000	235	000	1 00
1962										1			140					
1963										049	000	000	137	500	267			[
1964										031	000	000	177	063	000			
1965										037	.040	.000	166	400	.250			
1966										026	.143	071	173	000	250			
1967										020	000	.000						
1968							.101	143	286	029	167	000						
1969	1						105	000	.200	.020	.000	.500						
1970							.107	182	.222	.028	000	250						
1971							.105	045	.143	.027	050	000						
1972							.062	150	273	.043	.000	000						
1973				.131	.138	.133	.036	.085	000	.030	.095	063						
1974	[ ]			.095	.110	.114	.058	.043	000									1
1975	.113	.400	.429	.088	.054	.118	.093	.036	.100									
1976	.186	.279	.600	.057	.047	.000	.106	100	000									
1977	.089	.129	.308	.054	.090	.050	.136	.167	.190									
1978	.046	.173	.400	.071	.099	.000	.122	135	.167									Į
1979	.045	240	.091	.078	.047	.087	.115	.145	.053									
1980	.067	.125	.087	.073	.037	.040								ļ				}
1981	.075	.111	.073	.086	.110	.072												
1982	.090	106	.273	.069	.096	.057												
1983	.080	.102	.057	.059	.078	.066	l											1
1984	.051	.151	.100	.057	.572	.113												
1985	.051	.222	.042							1	ĺ							
1986	.072	.173	.129								ļ							
1987	.039	.173	.087							l								1
1988	.033	.032	.051		ĺ													
1989	.051	.094	.133								2							
1990					1						Ì							
1991																		
W = WHITE		[	3 = BLA(	CK		H =	HISPAN	IIC										

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#### Table CXXXVII MILESTONE PERIOD LOSS RATES OF AVIATION WARFARE OFFICERS BY GENDER AND YEAR GROUP

Group         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F <th>Year</th> <th>Miles Pen</th> <th></th> <th></th> <th>stone od 2</th> <th></th> <th>stone od 3</th> <th></th> <th>stone od 4</th> <th></th> <th>stone Iod 5</th> <th>Miles Peri</th> <th>stone od 6</th>	Year	Miles Pen			stone od 2		stone od 3		stone od 4		stone Iod 5	Miles Peri	stone od 6
1961       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	Group	м	F	м	F	м	F	M	F	м	F	M	F
1962       1       1       1       140         1963       1       1       1       139         1964       1       1       1       139         1965       1       1       1       139         1966       1       1       1       168         1966       1       1       1       168         1967       1       1       102       027       173         1968       1       1       101       021       173         1969       1       1       108       250       029       173         1970       1       132       056       038       031       095         1971       1       132       056       038       031       095         1972       132       056       038       031       095       1         1974       095       000       088       087       092       077       1         1975       1.26       000       057       111       106       111       1       1         1977       0.95       000       0.72       0.53       1.22       1       1 <td>1960</td> <td></td> <td></td> <td></td> <td></td> <td>$\square$</td> <td></td> <td></td> <td></td> <td>.162</td> <td></td> <td>286</td> <td></td>	1960					$\square$				.162		286	
1963 <td< td=""><td>1961</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>.128</td><td></td><td>207</td><td></td></td<>	1961									.128		207	
1964           030       177         1965          036       168         1966          020       173         1967         020       173         1968         102       .029       173         1969         1.04       .021           1969           .029           1970                  1971                 1971                  1971                 1972                  1971	1962			ļ						140			
1025 <td< td=""><td>1963</td><td></td><td></td><td>   </td><td></td><td></td><td></td><td>.047</td><td></td><td>139</td><td></td><td>    </td><td></td></td<>	1963							.047		139			
1966       1       1       1       027       .173         1967       1       102       029       1         1968       1       102       029       1         1969       1       108       250       029       1         1970       1       108       250       029       1         1971       1       138       250       029       1         1972       1       138       250       029       1         1973       1.132       056       038       031       .995         1974       .095       057       1       1       1         1975       .126       000       0.88       87       092       077         1976       191       .250       0.57       111       106       111       1         1977       095       000       0.54       119       136       250       1       1         1977       052       000       0.72       0.53       1.12       117       1       1         1978       .051       000       .072       0.54       1       1       1       1 <tr< td=""><td>1964</td><td></td><td></td><td></td><td></td><td></td><td></td><td>030</td><td></td><td>177</td><td></td><td></td><td></td></tr<>	1964							030		177			
1967 <td< td=""><td>1965</td><td></td><td></td><td></td><td></td><td></td><td></td><td>036</td><td></td><td>168</td><td></td><td></td><td></td></td<>	1965							036		168			
1968       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I	1966							.027		.173			
1969       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I	1967							020					
1970       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I	1968					.102		.029					
1971       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I	1969					.104		.021					
1972 <td< td=""><td>1970</td><td></td><td></td><td></td><td></td><td>.108</td><td>.250</td><td>.029</td><td></td><td></td><td></td><td></td><td></td></td<>	1970					.108	.250	.029					
1973	1971					105		.027					
1974	1972					.062		.043					
1975       126       000       .088       087       .092       .077         1976       191       .250       .057       .111       .106       .111         1977       095       .000       .054       .119       .136       .250         1978       .051       .000       .072       .053       .122       .117         1979       .052       .000       .076       .068       .114       .225         1980       .071       .000       .072       .054       .114       .225         1980       .071       .000       .072       .054           1981       .077       .029       .085       .035           1982       .093       .071       .070       .076           1983       .081       .030       .060            1984       .054       .025            1986       .078       .025            1988       .034       .026            1989	1973			.132	.056	.038	.038	.031	.095				
1976       191       .250       .057       .111       .106       .111         1977       095       .000       .054       .119       .136       .250         1978       .051       .000       .072       .053       .122       .117         1979       .052       .000       .076       .068       .114       .225         1980       .071       .000       .072       .054       .       .         1981       .077       .029       .085       .035       .       .         1982       .093       .071       .070       .076       .       .         1983       .081       .030       .060       .034       .       .         1984       .054       102       .059       .109       .       .         1985       .058       .000       .       .       .       .         1986       .078       .025       .       .       .       .         1988       .034       .026       .       .       .       .         1988       .034       .026       .       .       .       .         1980       .	1974			.095		057							
1977       095       000       .054       119       .136       .250         1978       0.51       000       .072       .053       .122       .117         1979       .052       .000       .076       .068       .114       .225         1980       .071       .000       .072       .054       -       -         1981       .077       .029       .085       .035       -       -         1982       .093       .571       .070       .076       -       -         1983       .081       .030       .060       .034       -       -         1984       .054       102       .059       .109       -       -         1985       .058       .000       .       .       -       -         1986       .078       .025       .       .       .       -         1986       .078       .026       .       .       .       .       .         1987       .045       .096       .       .       .       .       .       .         1988       .034       .026       .       .       .       .       .	1975	.126	.000	.088	.087	.092	.077						
1978       .051       .000       .072       .053       .122       .117         1979       .052       .000       .076       .068       .114       .225         1980       .071       .000       .072       .054       .       .         1981       .077       .029       .085       .035       .       .         1982       .093       .071       .070       .076       .       .       .         1983       .081       .030       .060       .034       .       .       .         1984       .054       102       .059       .109       .       .       .         1985       .058       .000       .       .       .       .       .       .         1985       .058       .000       .       .       .       .       .       .         1986       .078       .025       .       .       .       .       .       .         1988       .034       .026       .       .       .       .       .       .         1989       .       .       .       .       .       .       .       .	1976	.191	.250	.057	.111	.106	.111						
1979       .052       .000       .076       068       .114       .225         1980       .071       .000       .072       .054         1981       .077       .029       .085       .035         1982       .093       .571       .070       .076         1983       .081       .030       .060       .034         1984       .054       102       .059       .109         1985       058       .000       -       -         1986       .078       .025       -       -         1987       .045       .096       -       -         1988       .034       .026       -       -         1988       .034       .026       -       -         1988       .034       .026       -       -         1989       .057       .075       -       -       -         1980       .057       .075       -       -       -         1990       -       -       -       -       -	1977	.095	.000	.054	.119	.136	.250						
1980       .071       .000       .072       .054         1981       .077       .029       .085       .035         1982       .093       .571       .070       .076         1983       .081       .030       .060       .034         1984       .054       102       .059       .109         1985       .058       .000           1986       .078       .025           1987       .045       .096           1988       .034       .026           1988       .034       .026           1989       .057       .075	1978	.051	.000	.072	.053	.122	.117						
1981       .077       .029       .085       .035         1982       .093       .071       .070       .076         1983       .081       .030       .060       .034         1984       .054       102       .059       .109         1985       .058       .000	1979	.052	.000	.076	.068	.114	.225						
1982       093       .371       .070       .076         1983       .081       .030       .060       .034         1984       .054       102       .059       .109         1985       058       .000	1980	.071	.000	.072	.054	1				1			
1983       .081       .030       .060       .034         1984       .054       102       .059       .109         1985       .058       .000	1981	.077	.029	.085	.035								
1984       .054       102       .059       .109         1985       058       .000       .	1982	.093	.071	.070	.076								
1985         058         .000           1986         .078         .025           1987         .045         .096           1988         .034         .026           1989         .057         .075           1990         .         .	1983	.081	.030	.060	.034	1		j					
1986       .078       .025         1987       .045       .096         1988       .034       .026         1989       .057       .075         1990	1984	.054	102	.059	.109								
1987     .045     .096       1988     .034     .026       1989     .057     .075       1990	1985	.058	.000										
1988 .034 .026 1989 .057 .075 1990	1986	.078	.025										
1989 .057 .075 1990	1987	.045	.096										
1990	1988	.034	.026										
1990	1989	.057	.075									ii i	
1991	1990	11											
	1991												

#### Table CXXXVIII MILESTONE PERIOD LOSS RATES OF SUBMARINE WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year	Milest	one Per	iod 1	Milest	one Per	iod 2	Milest	ione Pe	nod 3	Milest	one Per	10 <b>0</b> 4	Miles	tone Pe	nod 5	Milest	one Per	iod 6	Milest	one ^p e	fiori 7
Group	w	8	н	W	в	Н	W	В	н	W	В	н	W	В	н	w	В	н	W	8	н
1960													082			.068		Î	221		Ť
1961								ł					.088			072			168		000
1962													095			074					
1963										046			056			084					
1964										.034			065			092					
1965									1 1	.025			042			040			]		
1966										045	.000	.000	055	000	.000	103	000	000			
1967				Í						101			.053			061					
1968							118	.250	1.00	043			066								
1969						[	.091	.125	.000	071	500	000	086	000	. 333						
1970							.100	1.00		044			.061								
1971				1			103		.125	070		125	.041		000						ĺ
1972							.079			.056											
1973				.139	.000	.111	.085	.000	200	.053	.500										1
1974				.138			.050			.037											
1975	.009	.000	1.00	155	.200		.083	.000		.052	000										[
1976	.137	.053	.000	.143	.152	.143	.063	.267	.000												
1977	.029	.111	.000	.119	.105	.500	.110	.375													
1978	.038	080		.130	.065		.120	.172													
1979	.036	000	1.00	.122	.095		.079	.429													
1980	.034	.050	.000	.149	.167	.222															1
1981	.043	.143	.455	149	.167	.308															
1982	.055	.077	.091	.147	.125	.043															
1983	.037	.182	.048	.133	.063	.320															
1984	.041	.200	.286	.155	.125	.250		}													
1985	.063	.200	.077																		
1986	.041	.333	.000																		
1987	.020	.167	100					ļ													
1988	.030	.000	.118											1							
1989	.061	.000	.190					l													
1990								ĺ						ĺ							
1991																					

### APPENDIX M - MILESTONE PERIOD PROMOTION RATES BY YEAR GROUPS

.

Year	Milest	one Per	iod 1	Milest	one Per	iod 2	Milest	one Pe	riod 3	Milest	one Per	iod 4	Miles	tone Pe	iod 5	Milest	one Per	iod 6	Miles	one Pe	nod
Group	W	В	н	W	В	н	W	8	н	W	8	н	W	8	н	W	В	н	W	· 8	н
1960											r		000	000	000	240	1 00	000	044	000	OC
1961													000	000	000	326	000	900	02 <b>8</b>	000	00
1962													001	000	000	237	500	000			
1963													000	000	000	283	1 00	500			
1964										162	235	100	000	000	000	269	333	000			
1965										178	143	000	004	000	000	266	000	000			
1966										220	250	.250	005	000	000						
1967										164	000	125	009	000	000						
1968										184	.000	.154	000	000	000						
1969							.211	.148	250	185	100	000	005	000	000						
1970							.196	207	000	169	167	000	012	067	000						
1971							230	238	000	155	200	000	004	000	000						
1972							247	250	250	144	146	000									
1973				305	.281	.286	253	194	.333	154	042	.167									
1974				.352	.300	.500	.243	281	286	142	152	100									
1975	547	.600	.429	.345	367	333	.203	.218	125												
1976	.526	.417	.800	.365	.419	.500	212	.163	.250		ļ										
1977	.545	.497	.591	.395	.381	.345	.176	.135	133		1										
1978	.526	.511	.714	373	.362	.333	.161	157	.000												
1979	.500	.508	.500	.338	.268	.286	.156	213	.125												
1980	.511	.470	500	.294	.290	.324	.162	.103	097												
1981	.503	.493	.561	.331	.267	.422															
1982	.505	.481	.513	.339	.325	.390															
1983	.520	439	483	334	.348	.267										1					
1984	532	.486	.505	353	.403	.356					ĺ										
1985	512	.485	.463	.304	.295	.322															
1986	.212	263	257								[										1
1987	506	.509	.520																		
1988	.513	466	.536																		
1989	512	490	520														1				
1990											1										
1991																					

Table CXXXIX MILESTONE PERIOD PROMOTION RATES OF SURFACE WAPFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Table CXL MILESTONE PERIOD PROMOTION RATES OF SURFACE WARFAPE OFFICERS BY GENDER AND YEAR GROUP

Year	Miles Pen	stone od 1		stone od 2	5	stone lod 3	Miles Peri	stone od 4	3	stone Iod 5		stone Iod 6	Miles Perio	
Group	M	F	M	F	M	F	M	F	M	£	M	F	м	F
1960			<u> </u>				ř		000		240		048	
1961									003		326		028	
1962									004		240			
1963									000		292			
1964					1		162		000		267			
1965							169		004		263			
1966							222		002	000	ļ			
1967							164		009					
1968							187	000	000					
1969					211		183		007					
1970					197	000	167		014					
1971					.230		155	000	.004					
1972					247	500	144							
1973			.304		252	333	151							
1974			.351		244	333	140	250			ļ			
1975	548	000	345		.203	.059								
1976	.521	.000	.366	2.00	208	273								
1977	541		.388	846	.171	191								
1978	.520	2.80	.368	.588	.158	194								
1979	.496	920	333	477	.158	163								
1980	507	543	293	351	.157	208								
1981	498	645	329	425										
1982	504	.447	338	.424										
1993	513	486	331	400										
1984	.525	.563	.357	314										
1985	.508	.460	303	382										
1986	.217	.200												
1987	.507	.563												
1988	.512	.492												
1989	513	470							}					
1990														
1991					ļ									

...

M = MALE F = FEMALE

# Table CXLI MILESTONE PERIOD PROMOTION RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

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BH	• V	B	н	W	В	H												
		Τ	<u> </u>			1 " 1	W	9	н	W	8	н	W	8	н	W	8	н
		1	1							000			286					
										000			333		000	063		
	11									000			200					
										000			267					
1	1	1			ĺ		216			000	000		154	000				1
							230	333		000		000	083					
	11						268	333		000	000		182	000				
							172	333		039	353							
							173	000		000								
				.217	000		220			009	1							1
				.203	333		131	250		.023	000							
				230	200		161	100		000	000							
				246	.375	.000	114	059										
	1	2 24	4 167	256	.296	333	138	160	.000									
1	2	5 38	1 .333	236	182	.333	167	050	.250									
78 571	71 3	2 .25	9 222	.212	.261	333	.15)	.111										
17 .500	00    .2	0 24	0 250	.187	111													
511 .571	71 3	6 .33	8 286	.166	.169	333												
538 .250	50 .3	3 44	2 .500	.168	.070	.000												
59 .500	00    .34	6 .35	6 .000	∴30	.108		Ì											
68 .444	44 .3!	2 .40	4 .444	.141	.108	111												
607 429	29 .4	1 .47	8 .273															
92 .471	71 .36	1 .45	8 .333															
16 .538	38 .3	3 31	9 .313												1			
625	25    .3:	5 37	1 .214												i			
606 519	19 .3	0   .33	3 .444														-	
95 400	20																	
36 .667	67			1														
591																		
600 .450	50			1														
				1														
																		1
-																		

# Table CXLIIMILESTONEPERIODPROMOTIONRATESOFGENERALUNRESTRICTEDLINEOFFICERSBYGENDERANDYEARGROUP

Year	Miles Pen	stone od 1	•	stone od 2		stone od 3	Miles Peri	1		stone iod 5		stone Iodi 6	Miles	
Group	м	F	M	F	M	F	м	F	M	F	м	F	M	F
1960									.000	000	000	667		
1961									000	000	000	462	000	073
1962									000	000	100	429		
1963									000	000	100	250		
1964							400	171	000	000	143	125		
1965							214	245	000	000	000	231		
1966			1				400	235	000	000	125	100		
1967							240	167	000	061				
1968							125	136	.000	000				
1969					024	273	.200	213	000	010				
1970					.065	225	032	.150	000	024				
1971					.107	245	040	179		000				
1972					.115	272	000	127						
1973	1		065	346	.041	.276	111	140	i i				{	
1974			.189	370	.047	.257	077	.162						
1975	386	484	.254	.387	.081	.244	.080	152					Í	
1976	.549	.431	.148	.301	.030	.245								
1977	705	.481	.359	.335	.007	.207								
1978	.597	.433	.418	.341	.000	.203								
1979	.729	.463	.324	.384	.007	152								
1980	.452	.478	.407	391	.026	156								ł
1981	.514	.467	.475	.421										
1982	.558	477	.238	.407					1					
1983	429	.469	.288	.384			Į							
1984	.611	479	.166	.418										
1985	.583	.469	.184	392			1							[
1986	.228	.278												
1987	466	.485	1											
1988	.500	491												
1989	.509	503												
1990														
1991														

M = MALE F = FEMALE

### Table CXLIII MILESTONE PERIOD PROMOTION RATES OF AVIATION WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year	Miles	tone Per	nod 1	Milest	one Per	nod 2	Miles	tone Pe	riod 3	Milest	one Per	iod 4	Miles	tone Pe	nod 5	Miles	tone Pe	10 <b>0</b> 6
Group	W	8	н	W	8	н	W	8	н	W	8	н	W	8	н	w	8	н
1960	$\square$												131			036		Ī
1961													176	333	333	039	000	000
1962													129					
1963								ł		181	000	111	147		111			
1964						{ }				158	111	333	126	333	333	[		[
1965										.154	045	100	109	000	000			
1966										218	.250	333	129	333	000			
1967					1					232	.267	500						
1968							.277	.250		226	.333	143						
1969							.294	.500	222	242	.333	.000		í .				[
1970		ļ			1		.307	.125	.167	190	.000	000						
1971							.331	.333	.250	.206	000	333						
1972				1			.378	.182	.286	167	333	.000						
1973		ł		436	.457	.400	.397	.359	.500	.164	167	.077	ļ					
1974				.477	.600	.500	404	.450	.500	[						1		
1975	.477	.298	.308	495	.516	.571	.329	.370	.500									
1976	415	.367	.100	.495	.477	.500	.332	.389	.400									
1977	.485	.441	.391	.509	.444	.471	.252	200	.333									
1978	.464	.385	.200	.479	.500	.500	.235	.216	.000									
1979	.470	.320	.545	.481	.500	.364	.218	.205	.333	í								
1980	.454	.411	.435	.465	.478	.500												
1981	.448	.400	.436	.452	.413	.469												
1982	.436	.409	.303	.472	.481	.478										ļ		
1983	.439	.407	.477	464	.415	.415												
1984	.464	.395	.429	469	.378	.441	1											
1985	.462	.317	.465															
1986	.214	.259	.241															
1987	.472	.407	.452													1		
1988	.475	468	.449		l								1					
1989	.453	.406	.385	1	ĺ													
1990										1								
1991																		

## Table CXLIV MILESTONE PERIOD PROMOTION RATES OF AVIATION WARFARE OFFICERS BY GENDER AND YEAR GROUP

.

Group         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F         M         F <th>Year</th> <th>Mile: Peri</th> <th>stone od 1</th> <th></th> <th>stone od 2</th> <th></th> <th>stone Iod 3</th> <th></th> <th>stone od 4</th> <th>1</th> <th>stone od 5</th> <th></th> <th>stone od 6</th>	Year	Mile: Peri	stone od 1		stone od 2		stone Iod 3		stone od 4	1	stone od 5		stone od 6
1961       1       1       1       1       1       1       1       1       129         1963       1       1       1       1       1       1       145       145         1964       1       1       1       1       1       1       145       145         1965       1       1       1       1       1       129       145       128         1966       1       1       1       1       1       128       127       128         1966       1       1       1       1       1       1       128       127         1967       1       1       1       1       1       233       233       127         1969       1       1       1       1       306       500       189       241       127         1970       1       1       1       331       203       203       103       167         1971       1       1       4       467       394       455       163       273       167         1977       4       1       1       1       1       1       167       1	Group	м	F	M	F	М	F	M	F	м	¢.	м	F
1962       1       1       1       1       129         1963       1       1       1       1       145         1964       1       1       1       157       128         1965       1       1       1       108       127         1966       1       1       1       1       108       127         1966       1       1       1       1       128       127         1966       1       1       1       1       233       108         1969       1       1       1       275       226       241         1970       1       1       306       500       189       203         1971       1       1       331       203       167         1972       1       436       467       394       455       163       273         1974       470       714       496       500       331       286       11       11         1975       470       714       496       500       331       286       11       11         1977       465       586       481       528       21	1560									130		040	
1963	1961									179		035	
1964       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	1962									129			
1965         1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       <	1963					[ ]		. 180		145			
1966	1964							157		128			
1967	1965							153		108			
1968         275	1966							218		127			
1969       I.       <	1967							233					
1970       I.       I.       I.       306       5.00       1.89         1971       I.       I.       I.       331       I.       203         1972       I.       I.       336       467       394       455       163       273         1973       I.       I.       436       467       394       455       163       273         1974       I.       I.       478       406       I.       I.       1167         1975       4.70       7.14       496       500       331       286       I.       I.         1976       4.12       7.50       495       444       333       500       I.       I.         1977       482       750       507       526       251       1.67       I.         1978       460       833       478       654       234       250       I.       I.         1979       465       586       481       528       218       200       I.       I.         1980       451       613       466       451       500       I.       I.       I.       I.         1981       446	1968					275		.226				)	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1969					.294		.241					
1972 <t< td=""><td>1970</td><td></td><td></td><td></td><td></td><td>.306</td><td>.500</td><td>.189</td><td></td><td></td><td></td><td></td><td></td></t<>	1970					.306	.500	.189					
1973 $436$ $467$ $.394$ $.455$ $.163$ $.273$ $1974$ $478$ $406$ $406$ $1975$ $.470$ $.714$ $496$ $500$ $.331$ $.286$ $1976$ $412$ $.750$ $.495$ $.444$ $.333$ $500$ $1977$ $482$ $750$ $.507$ $.526$ $251$ $.167$ $1978$ $.460$ $.833$ $478$ $.654$ $.234$ $.250$ $1979$ $.465$ $586$ $.481$ $528$ $.218$ $.200$ $1980$ $.451$ $.613$ $.465$ $500$ $$ $$ $1981$ $.446$ $.486$ $.451$ $.500$ $$ $$ $1982$ $.433$ $.446$ $.471$ $490$ $$ $$ $1983$ $.436$ $.545$ $.462$ $.447$ $$ $$ $1984$ $.460$ $.469$ $$ $$ $$ $$ $1986$ $.215$ $$ $$ $$ $$ $$ $1986$ $.468$ $.521$ $$ $$ $$ $$ $1988$ $$ $$ $$ $$ $$ $$ $1988$ $$ $$ $$ $$ $$ $$	1971					.331		.203					
1974       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -	1972					.374		167					
1975       .470       .714       496       500       .331       .286         1976       .412       .750       .495       .444       .333       500         1977       482       750       .507       .526       .251       .167         1978       .460       .833       .478       .554       .234       .250         1979       .465       .586       .481       .528       .218       .200         1980       .451       .613       .465       .500       .       .         1981       .446       .486       .451       .500       .       .         1982       .433       .446       .471       .490       .       .         1983       .436       .545       .444       .       .       .         1984       .460       .466       .444       .       .       .         1985       .457       .608       .       .       .       .         1986       .215       .177       .       .       .       .         1988       .474       .481       .       .       .       .         1988       .474<	1973			436	.467	.394	.455	.163	.273				
1976       .412       .750       .495       .444       .333       500         1977       482       750       .507       .526       .251       .167         1978       .460       .833       478       .654       .234       .250         1979       .465       .586       .481       .528       .218       .200         1980       .451       .613       .465       .500       .       .         1981       .446       .486       .451       .500       .       .         1981       .446       .486       .451       .500       .       .         1982       .433       .446       .471       .490       .       .         1983       .436       .545       .462       .447       .       .         1984       .460       .469       .466       .444       .       .         1985       .457       .608       .       .       .       .         1986       .215       .177       .       .       .       .         1988       .474       .481       .       .       .       . <td>1974</td> <td></td> <td></td> <td>.478</td> <td></td> <td>.406</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1974			.478		.406							
1977       482       750       507       526       251       167         1978       460       833       478       654       234       250         1979       465       586       481       528       218       200         1980       451       613       465       500       1       1         1981       446       486       451       500       1       1         1982       433       446       471       490       1       1         1983       436       545       462       447       1       1         1984       460       469       466       444       1       1         1985       457       508       1       1       1       1         1986       215       177       1       1       1       1         1986       215       177       1       1       1       1         1987       468       521       1       1       1       1         1988       474       481       1       1       1       1       1	1975	.470	.714	496	.500	.331	.286						
1978       .460       .833       .478       .654       .234       .250         1979       .465       .586       .481       .528       .218       .200         1980       .451       .613       .465       .500       .       .         1980       .451       .613       .465       .500       .       .         1981       .446       .486       .451       .500       .       .         1982       .433       .446       .471       .490       .       .         1983       .436       .545       .462       .447       .       .         1984       .460       .469       .466       .444       .       .         1985       .457       .608       .       .       .       .         1986       .215       .177       .       .       .       .         1987       .468       .521       .       .       .       .         1988       .474       .481       .       .       .       .       .	1976	.412	.750	.495	.444	.333	500						
1979       .465       586       .481       528       .218       .200         1980       .451       .613       .465       500       .       .         1981       446       .486       .451       .500       .       .         1982       .433       .446       .471       .490       .       .         1983       .436       .545       .462       .447       .       .         1984       .460       .469       .466       .444       .       .         1985       .457       .608       .       .       .       .         1986       .215       .177       .       .       .       .         1987       .468       .521       .       .       .       .         1988       .474       .481       .       .       .       .       .	1977	482	750	.507	.526	.251	.167						
1980       .451       .613       .465       500         1981       446       .486       .451       .500         1982       .433       .446       .471       .490         1983       .436       .545       .462       .447         1984       .460       .469       .466       .444         1985       .457       .608	1978	.460	.833	478	.654	.234	.250						
1981       446       486       .451       .500         1982       .433       .446       .471       490         1983       .436       .545       462       .447         1984       .460       .469       .466       .444         1985       .457       .608	1979	.465	.586	.481	528	.218	.200						
1982       .433       .446       .471       490         1983       .436       .545       .462       .447         1984       .460       .469       .466       .444         1985       .457       .608       .       .         1986       .215       .177       .       .         1987       .468       .521       .       .         1988       .474       .881       .       .	1980	451	.613	.465	.500								
1983       .436       545       462       .447         1984       .460       .469       .466       .444         1985       .457       .608       .         1986       .215       .177       .         1987       .468       .521       .         1988       .474       .481       .	1981	446	.486	.451	.500								
1984       .460       .469       .466       .444         1985       .457       .608       -       -         1986       .215       .177       -       -         1987       .468       .521       -       -         1988       .474       .481       -       -	1982	.433	.446	.471	490								
1985     .457     .608       1986     215     .177       1987     .468     .521       1988     .474     .481	1983	.436	.545	.462	.447							(	
1986         215         177           1987         468         521           1988         474         481	1984	.460	.469	.466	.444								
1987 .468 .521 1988 .474 .481	1985	.457	.608										
1988 .474 .481	1986	215	.177										
	1987	.468	.521										
1989 448 434	1988	.474	.481										
	1989	.448	.434										
1990	1990												
1991	1991												

# Table CXLV MILESTONE PERIOD PROMOTION RATES OF SUBMARINE WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

.500 C	H .000 .667 .500	462 487 429 415 425 392	8 500 429 533 625 429	H .500 667 .000	W 333 349 339 408 419 358 430 387 425 444	8 500 500 .000 500 500 077	н .000 333 .333 500 .500	W 258 256 276 298 258 308 283 247 249 211 233 229 257	B 500 333	н 3333 3333 3333	W 003 000 000 000 000 012 004 004 004 004	8 000 000	н 000 000	W 357 602 404 528 488 517 357 446	1 00	H 100	W 025 015	Ë	000
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	256 276 298 258 308 283 247 249 211 233 229	.000	333	000 000 000 012 004 008 000 004 .004		000	502 404 528 488 517 357	1 90	7 00	n 1		996
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	256 276 298 258 308 283 247 249 211 233 229	.000	333	000 000 012 004 008 000 004 .004		000	404 528 488 517 357	1 50	1 00	015		900
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	256 276 298 258 308 283 247 249 211 233 229	.000	333	000 000 012 004 008 000 004 .004		000	528 488 517 357	1 90	1 00			
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	256 276 298 258 308 283 247 249 211 233 229	.000	333	000 012 004 008 000 004 .004		000	488 517 357	1 50	1 00			
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	276 298 258 308 283 247 249 211 233 229	.000	333	012 004 008 000 004 .004		000	517 357	1 50	1 00 .			
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	298 258 308 283 247 249 .211 233 229	.000	333	004 008 000 004 004		000	357	1 90	1 00			
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	258 .308 283 .247 .249 .211 .233 .229	.000	333	008 000 004 .004		000		1 50	1 00			
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	.308 283 .247 .249 .211 .233 .229			000 004 .004	000		446					
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.349 .339 .408 .419 .358 .430 .387 .425	500 .000 .500	333 .333 500	283 247 249 .211 .233 .229			004 .004	000							
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.339 .408 .419 .358 .430 .387 .425	.000 .500 .500	.333 500	.247 .249 .211 .233 .229			.004	000							
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.408 .419 .358 .430 .387 .425	.500 .500	500	.249 .211 .233 .229		.333	1 1		900						
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.419 .358 .430 .387 .425	.500	500	.211 .233 .229		.333	.004		.000						
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.358 .430 .387 .425	.500		233 229											
.563 .6	.667	.487 .429 .415 .425	.429 .533 .625	.667	.430 .387 .425	.500		229											
.563 .6	.667	.429 .415 .425	.533 .625		.387 .425	ł	.500		333										
.563 .6	.667	.415 .425	.533 .625		.425	ł	.500	257											
	- 11	.425	.625			077	.500							[[	í	[			
.444 .5	.500			.000	444														
	1	.392	400		11	.000		1							]				
.440			.429		.228	.136													
.833 .0	.000	.410	.364		.250	000													
.500 1.	1.00	.371	.381	.500	1										į				
.429 .3	.364	.388	.333	.375															
.462 .4	.455	.401	.417	.500															
.364 .4	.476	.391	429	.235															
	.357	.393	.500	.444							1								
1	11																		
	- II																		
		Í																	
	.412																		
.500 .3	.381	[																	
				]											1				
	1	[																	
3	133 117 500	133 500 117 400 500 412	133 .500 117 .400 600 .412	133 .500 117 .400 500 .412	133 500 117 400 500 412	133 .500 117 .400 500 .412	133 500 117 400 500 412	133 .500 117 .400 500 .412	133 .500 117 .400 500 .412	133 .500 117 .400 500 .412	133 .500 117 .400 500 .412	133 500 117 400 500 412	133 500 117 400 500 412	133 500 117 400 500 412	133 500 117 400 500 412	133 500 117 400 100 412 100 381	133 500 117 400 500 412	133 500 117 400 500 412	133 500 117 400 500 412



APPENDIX N - SUPPORTING GRAPHS FOR THE SURFACE WARFARE COMMUNITY

Figure 3 Loss Rates of Surface Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 4 Loss Rates of Surface Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups



Figure 5 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 1



Figure 6 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 2



Figure 7 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 3



Figure 8 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 4



Figure 9 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 5



Figure 10 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 6







Figure 12 Promotion Rates of Surface Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 13 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 1



Figure 14 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 2



Figure 15 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 3



Figure 16 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 4


Figure 17 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 5



Figure 18 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 6



Figure 19 Loss Rates of Surface Warfare Officers by Gender by Year of Service Averaged Across Year Groups



Figure 20 Loss Rates of Surface Warfare Officers by Gender by Milestone Period Averaged Across Year Groups



Figure 21 Loss Rates of Surface Warfare Officers by Gender for Milestone Period 1



Figure 22 Loss Rates of Surface Warfare Officers by Gender for Milestone Period 2



Figure 23 Loss Rates of Surface Warfare Officers by Gender for Milestone Period 3



Figure 24 Promotion Rates of Surface Warfare Officers by Gender by Year of Service Averaged Across Year Groups







Figure 26 Promotion Rates of Surface Warfare Officers by Gender for Milestone Period 1



Figure 27 Promotion Rates of Surface Warfare Officers by Gender for Milestone Period 2



Figure 28 Promotion Rates of Surface Warfare Officers by Gender for Milestone Period 3



APPENDIX O - SUPPORTING GRAPHS FOR THE GENERAL UNRESTRICTED LINE COMMUNITY

Figure 29 Loss Rates of GenURL Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 30 Loss Rates of GenURL Officers by Ethnic Group by Milestone Period Averaged Across Year Groups



Figure 31 Loss Rates of GenURL Officers by Ethnic Group for Milestone Period 1



Figure 32 Loss Rates of GenURL Officers by Ethnic Group for Milestone Period 2



Figure 33 Loss Rates of GenURL Officers by Ethnic Group for Milestone Period 3



Figure 34 Promotion Rates of GenURL Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 35 Promotion Rates of GenURL Officers by Ethnic Group by Milestone Period Averaged Across Year Groups



Figure 36 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 1



Figure 37 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 2



Figure 38 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 3



Figure 39 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 4



Figure 40 Loss Rates of GenURL Officers by Gender by Year of Service Averaged Across Year Groups



Figure 41 Loss Rates for GenURL Officers by Gender by Milestone Period Averaged Across Year Groups



Figure 42 Loss Rates of GenURL Officers by Gender for Milestone Period 1



Figure 43 Loss Rates of GenURL Officers by Gender for Milestone Period 2



Figure 44 Loss Rates of GenURL Officers by Gender for Milestone Period 3



Figure 45 Loss Rates of GenURL Officers by Gender for Milestone Period 4



Figure 46 Loss Rates of GenURL Officers by Gender for Milestone Period 5



Figure 47 Loss Rates of GenURL Officers by Gender for Milestone Period 6



Figure 48 Loss Rates of GenURL Officers by Gender for Milestone Period 7



Figure 49 Promotion Rates of GenURL Officers by Gender by Year of Service Averaged Across Year Groups



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Figure 50 Promotion Rates of GenURL Officers by Gender by Milestone Period Averaged Across Year Groups



Milestone Period 1



Figure 52 Promotion Rates of GenURL Officers by Gender for Milestone Period 2


Figure 53 Promotion Rates of GenURL Officers by Gender Milestone Period 3



Figure 54 Promotion Rates of GenURL Officers by Gender for Milestone Period 4



Milestone Period 5



Promotion Rates of GenURL Milestone Period 6



APPENDIX P - SUPPORTING GRAPHS FOR THE AVIATION WARFARE COMMUNITY

Figure 57 Loss Rates of Aviation Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 58 Loss Rates of Aviation Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups



Figure 59 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 1



Figure 60 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 2



Figure 61 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 3



Figure 62 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 4



Figure 63 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 5



Figure 64 Promotion Rates of Aviation Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 65 Promotion Rates of Aviation Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups



Figure 66 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 1



Figure 67 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 2



Figure 68 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 3



Figure 69 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 4



Figure 70 Loss Rates of Aviation Warfare Officers by Gender by Year of Service Averaged Across Year Groups



Figure 71 Loss Rates of Aviation Warfare Officers by Gender by Milestone Period Averaged Across Year Groups



Figure 72 Loss Rates of Aviation Warfare Officers by Gender for Milestone Period 1



Figure 73 Loss Rates of Aviation Warfare Officers by Gender for Milestone Period 2



Figure 74 Loss Rates of Aviation Warfare Officers by Gender for Milestone Period 3



Figure 75 Promotion Rates of Aviation Warfare Officers by Gender by Year of Service Averaged Across Year Groups



Figure 76 Promotion Rates of Aviation Warfare Officers by Gender by Milestone Period Averaged Across Year Groups



Figure 77 Promotion Rates of Aviation Warfare Officers by Gender for Milestone Period 1



Figure 78 Promotion Rates of Aviation Warfare Officers by Gender for Milestone Period 2



Figure 79 Promotion Rates of Aviation Warfare Officers by Gender for Milestone Period 3



APPENDIX  ${\tt Q}$  - supporting graphs for the submarine warfare community

Figure 80 Loss Rates of Submarine Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 81 Loss Rates of Submarine Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups



Figure 82 Loss Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 1



Figure 83 Loss Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 2



Figure 84 Loss Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 3



Figure 85 Promotion Rates of Submarine Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups



Figure 86 Promotion Rates of Submarine Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups



Figure 87 Promotion Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 1



Figure 88 Promotion Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 2



Figure 89 Promotion Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 3

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