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ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

The Institute for Creative Studies Washington, D.C.


SCIENCE AND SERVICE: A STUDY OF
CAREER MOTIVATION IN THE
ESSE COMMISSIONED OFFICER CORPS

Prepared by Fellows of The
/ Institute For Creative Studies, ,Washington, D. C. for the Environmental Science Services Administration of the U.S. Department of Commerce


U. S. Dept. of Commerce


## FOREWORD

In the spring of 1969 , we began an examination of the spectrum of problems related to the staffing and management of the commissioned officer personnel system. One of our main concerns was in the area of career motivation. To reinforce our own examination, we asked the Institute for Creative Studies to undertake an independent study. This organization is devoted to education, research and public service, and carries out its work with teams of students who work during the summer months. The report that follows is their work, and the findings, conclusions and recommendations are theirs.

I do not necessarily agree with all of their statements or conclusions; however, the bulk of them is proving to be accurate and useful. In many cases, their findings document situations that were already known or suspected, but inadequately established. The knowledge gained from this study has led to some improvements in the administration of the corps and will make others possible.

Another analysis was made on the list of officers who had resigned or retired within the past half-dozen years. The results of this were compiled and tested by the student team. However, their work had to be stopped before a complete report was possible. Our staff is continuing this project.

We are examining various other reports germane to our project, including those made by other services, academia, and the Coast and Geodetic Survey in earlier years. In particular, we are enlisting the advice of professional psychologists.

I know that we can improve our administrative process, but more important is the matching of the needs of the system with the desires of the individual once he is a member of the corps. This is the basic purpose of the series of studies we are making.

Harley D. Nygren
Rear Admiral, USESSA
Associate Administrator
$\cdot$
$\cdot$

## PREFACE

This report represents efforts by five Fellows of the Institute for Creative Studies during the summer of 1969. The richness of our experience cannot be summarized in a few pages, nor can the warm appreciation we feel toward Dr. Milton Johnson and Admiral Harley Nygren. We would like to thank them for their daily cooperation, their patience, and most remarkably, for their faith in a group of young outsiders.

James Fishkin, Yale University
Marsha Hoffman, Yale University
Richard Parker, Harvard Law School

Cynthia Rusick, Cornell University

David Robinson, University of Pennsylvania
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## SUMMARY OF MAJOR CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations in this report are derived both from direct data on ESSA personnel including the results of a questionnaire given to members of the ESSA Commissioned Officer Corps and from interviews of officers on every ESSA ship and at every major shore billet.

The questionnaire pinpointed some of the major sources of dissatisfaction with ESSA service among officers; these are probably major sources of turnover. All ranks indicated that their work involved more red tape and wasted effort than they desired. Both higher and lower ranks indicated significant dissatisfaction with the amount of "self-fulfillment" and "worthwhile accomplishment" resulting from their work. Lieutenant jg's form the most dissatisfied rank in the Corps; their dissatisfaction may both hamper the effectiveness of the Corps and help produce high turnover. Both this questionnaire and a similar Navy study of the Civil Engineer Corps indicate that in the terms of career decision, the rank of lieutenant is the crucial one. Officers above this rank tend to prefer officer careers to civilian alternatives, thus are more committed to the Officer Corps; officers below it tend to be dissatisfied with the Officer Corps and do not have career motivation.

An examination of the complaints about recruiting procedure indicates that the greatest shortcoming is that new candidates do not receive a complete and realistic presentation of work in the Corps. Some new officers
feel they were induced to join by false reports of the nature of work in the Corps. A central recruiting officer is needed to assist the field recruiting officers. Longer interviews for candidates and a psychological test to help in recruiting are also desirable.

During interviews officers raised some complaints over individual assignments. If an officer's first posting will be land-based, he should always be assigned with fellow officers to avoid feelings of isolation and to help establish a sense of esprit de corps. Since young officers tend to be most dissatisfied with postings on major survey ships, every effort should be made to allow such officers to carry through individual projects in which they are interested. At least one position on the assignment board should be full time to increase the fairness and efficiency of the assignment process. ESSA should provide advance information on transfers and job vacancies to all officers. This will allow them to plan their careers and help eliminate uncertainty about assignments.

Interviews also suggested certain changes in administrative practices which might improve morale among officers. ESSA should not give advanced standing for advanced degrees or work experience, except for military service. The Captain of a ship should have more autonomy on leave policies, and should take an active part in all project planning.

The questionnaire indicated that pay remains an important dissatisfaction at the crucial intermediate ranks. Officers of higher and lower rank found
their pay satisfactory, but lieutenant jg's, who are about to decide whether to make the Corps a career, of ten viewed their pay as inadequate for their self esteem.

In addition to these specific issues, the study also indicated that the problem of turnover is related to confusion about the nature of ESSA and the kind of men recruited for the Corps. Many officers indicated dissatisfaction with the consolidation of ESSA. They felt that the organization had lost its sense of adventure, had become more bureaucratic, and was unable to utilize the educational background of the specialized scientists now being recruited. Many officers felt that their education and training were being wasted in subprofessional or administrative positions at sea. The men who are happiest at ESSA are mathematicians or engineers, whose jobs make use of their specialized education and training. ESSA should make a study of the kind of men who are happy in the Corps and perhaps change the goals of its policy on recruitment. Perhaps ESSA should recruit fewer highly educated scientists and seek more men with promise but without advanced degrees, men from maritime academies, and men trained in business or public administration, sociology or psychology.

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## I. INTRODUCTION

This report outlines the results of a summer spent studying questions of turnover and retention in the ESSA Commissioned Officer Corps. Direct data from ESSA personnel provided information about (1) the structure of the Corps, (2) the background of its officers, and (3) the nature of the recruitment and assignment processes. In addition, we have gathered atti.tudinal data about the officers through interviews on every ESSA ship and at major shore locations. This picture of officer attitudes has been more systematically developed with the aid of a voluntary questionnaire (included herein, pages 55-72) which was filled out and returned by 67 percent of the Officer Corps. ${ }^{1}$ The preliminary draft of the questionnaire was developed by ESSA Lieutenant Commander Renworth Floyd on the basis of a 1968 study of Navy Civil Engineering Officers. ${ }^{2}$ It was pretested and developed into final form by the study team. We are indebted to Dr. Edward Lawler of Yale University for questions 66-87. Question series 70-87 were taken directly from previous questionnaires designed by him for industrial studies. Questions 66-69 were added by us to explore special aspects of the ESSA Corps.

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## II. CAREER MOTIVATION AND SATISFACTION IN THE COMMISSIONED CORPS

The theoretical framework for our study of the degree of satisfaction or dissatisfaction felt by ESSA officers is based on a theory of motivation developed by Abraham H. Maslow in his work, Motivation and Personality (1954), and further elaborated by Dr. Frank M. Sterner, and Professor Lyman W. Porter. ${ }^{3}$ This theory distinguishes between the concept of "career motivation," and that of "career satisfaction." This version of motivation theory assumes that an individual possesses an hierarchy of needs. An individual is motivated to action by the desire to fulfill and satisfy these needs; he begins by satisfying his most basic security needs, and once these are satisfied, he proceeds to fulfill his higher order needs.

An individual, we assume, is motivated towards a certain job or career by the desire to fulfill certain of his needs and by the expectation that the job will enable him to do so. Job satisfaction results to the extent that this expectation is met; job dissatisfaction is a result of failing to achieve that satisfaction of needs which originally motivated the individual to take the job. It is thus important to know two aspects of an individual's attitude towards his job: first, what things he looks for from the job,

[^1]that is, what needs are most important for him to satisfy; and second, the extent to which these needs are actually being satisfied.

The questionnaire used in this study is similar to that developed by Professor Porter. It employs indirect means to measure these two aspects of job satisfaction.

Porter's analysis proceeded along the following lines:
(1) The respondent indicated, in part (a) of the question, how much a particular quality "is now connected with your position." In part (b) he indicated "how much of that characteristic should be connected with your position." Subtracting the value given in (a) from (b) gave the Need Fulfillment Deficiency. Averaging this value for all individuals of a given position gave the Mean Need Fulfillment Deficiency (MNF) associated with that item.
(2) An a priori assumption was made that the larger the difference between (a) and (b) the greater the degree of dissatisfaction.
(3) The importance of the item to the individual was obtained through further questioning in part (c). The Average Importance Rating (AIR) for an item was calculated by averaging the answers of different individuals at a given rank to part (c)

The data in Porter's study led him to several generalizations:
(1) Need fulfillment deficiencies for most items increased at each lower level of the management hierarchy.
(2) The largest deficiencies were in the categories of autonomy and self-actualization, which are respectively satisfied by being in positions of independence and authority and by feelings that the job gives an opportunity for personal growth, self-fulfillment and worthwhile accomplishment.

Because expectations are important in satisfaction, low levels of satisfaction may result from high levels of expectation by the individual.

In the questionnaire, series $70-87$ was structured by Dr. Lawler along lines suggested by Porter and serves here as an indirect measure of motivation and satisfaction.

Mean Need Fulfillment Deficiencies (MNF) and Average Importance Ratings (AIR) for Each Officer Category

| Question | Capt. |  | Cmd. |  | LtCmd. |  | Lt. |  | Lt.jg |  | Ensign |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MNF | AIR | MNF | AIR | MNF | AIR | MNF | AIR | MNF | AIR | MNF | AIR |
| 66 | -0.526 | 3.37 | $-0.300$ | 2.78 | -0.375 | 3.48 | -0.306 | 4.12 | -0.948 | 2.96 | -0.500 | 4.25 |
| 67 | 0.158 | 5.62 | 0.450 | 5.50 | 0.437 | 6.05 | 1.09 | 5.55 | 1.79 | 5.71 | 1. 50 | 5.00 |
| 68 | -2. 42 | 4.42 | -1.90 | 5.35 | $-1.44$ | 5.34 | -1.98 | 5.43 | -2. 13 | 5. 67 | -2.04 | 5.13 |
| 69 | -2.63 | 4.53 | -2.60 | 5.76 | $-2.19$ | 5.25 | -2.22 | 5.32 | $-2.37$ | 4.75 | $-2.00$ | 5.05 |
| 70 | 0.684 | 5.95 | 0.650 | 5.30 | 1.00 | 5.67 | 1.59 | 5.54 | 1.92 | 5.25 | 2.08 | 5.03 |
| 71 | 0.737 | 5.31 | 0.500 | 5.24 | 0.500 | 5.48 | 1.63 | 5.28 | 1.26 | 4.52 | 1.04 | 4.50 |
| 72 | 0. 578 | 5.90 | 0.025 | 5.82 | 0.250 | 6.24 | 1. 72 | 5.98 | 2.71 | 6.16 | 2.16 | 6.03 |
| 73 | 0.790 | 5.00 | 0.650 | 5.00 | 0.375 | 5.20 | 1. 26 | 4.43 | 1.53 | 4.24 | 1.17 | 4.30 |
| 74 | 0.948 | 6.31 | 0.450 | 5.82 | 0.250 | 5.62 | 1.33 | 6.00 | 2.13 | 5.42 | 2.16 | 5.72 |
| 75 | 0.105 | 4.9 | 0.400 | 5.00 | 0.125 | 5.38 | -0.370 | 4.05 | -0. 527 | 3.20 | -1.04 | 4. |
| 76 | 0.737 | 5.95 | 0.350 | 6.00 | 1.06 | 5.76 | 2.45 | 3.07 | 3.61 | 6.08 | 2.96 | 6. 20 |
| 77 | 0.210 | 5.4 | 0.600 | 4.7 | 0.500 | 5.14 | 0.69 | 4.44 | 0.869 | 4.24 | 0.625 | 4.28 |
| 78 | 0.895 | 5.68 | 1.45 | 5.11 | 0.875 | 5. 57 | 1.09 | 5.16 | 2.18 | 4.68 | 1. 67 | 4.88 |
| 79 | 1.16 | 6.00 | 0.950 | 6.00 | 1. 44 | 5.71 | 2.04 | 6.27 | 3.00 | 5.96 | 2.75 | 6.15 |
| 80 | 0.578 | 5.52 | 0.400 | 5.23 | 0.688 | 5.52 | 0.76 | 4.72 | 1. 26 | 4.71 | 2.16 | 4.93 |
| 81 | 0.790 | 5.68 | 0.650 | 5.18 | 0.437 | 5.52 | 1. 76 | 5.05 | 2.18 | 5.08 | 2.45 | 4.80 |
| 82 | 0.790 | 5.58 | 0.500 | 5.53 | 0.625 | 5.95 | 1. 72 | 5.28 | 1.87 | 5.34 | 1.75 | 5.10 |
| 83 | 1.68 | 6.05 | 1.30 | 6.18 | 1.12 | 6.09 | 2.34 | 6.05 | 2.58 | 6.00 | 1.96 | 5.82 |
| 84 | 0.473 | 5.00 | 0.300 | 4.33 | 0.062 | 5.42 | 0.520 | 4.74 | 0.632 | 4.25 | 0.250 | 5.05 |
| 85 | 1. 16 | 4.11 | 0.350 | 5.18 | 0.562 | 4.78 | 0.910 | 5.28 | 0.948 | 5.13 | 1.25 | 5.88 |
| 86 | 0.737 | 5.22 | 0.400 | 5.40 | 0.187 | 5. 50 | 1.16 | 5.79 | 1.00 | 5.34 | 1.25 | 5.54 |
| 87 | 0.210 | 6. 16 | 0.300 | 6.00 | 0.312 | 5.58 | 1. 06 | 5.85 | 1. 45 | 5.50 | 0.834 | 5.54 |

A brief summary of those items yields the following conclusions:
(1) Questions 68 and 69 deal with negative aspects of the job: "The amount of wasted effort involved in my work," and "the amount of 'red tape'
involved in minor decisions." For these questions, the lower the MNF the higher the dissatisfaction. A negative MNF indicates that more of these qualities is associated with the work than the individual believes ought to be. All ESSA officers had MNF scores below -1.40. This MNF has a high absolute value for all ranks. These items also receive middle range AIR scores from all ranks; all ranks are dissatisfied with this aspect of their work, and feel it to be moderately important. In the middle ranks there is more dissatisfaction with red tape than with wasted effort.
(2) Captains indicated their greatest need deficiency on question 83, 'The feeling of being informed. . ." (MNF +1.68). This was the third most important need for the captains (AIR +6.05). The possibility of a significant difference on this item between captains commanding ships and those on shore should be investigated.
(3) Pay (see question 78) received the highest MNF from the commanders (+1.45), but they gave this same item a relatively low AIR (+5.11). They feel the pay is inadequate but attach relatively little importance to it for themselves. The next highest MNF (+1.30) was on the commanders' feeling of being informed. This factor received the highest AIR (+6.18), which indicates that commanders view this as a major source of dissatisfaction.
(4) Lieutenant commanders indicated their highest need deficiency on question 79, "The feeling of worthwhile accomplishment," (MNF +1.44). They also gave this item a high AIR (+5.71). Thus lieutenant commanders expressed
a high degree of dissatisfaction on what to them is a very important aspect of ESSA work.
(5) Lieutenants displayed their highest MNF on item 76, "Feeling of self-fulfillment. . ." (+2.45). The AIR for this item was implausibly low (+3.07). Investigation on this item is desirable. Their second and third ranking MNF's occurred on queries about 'Feeling of being informed on my job," (+2.34), and "Feeling of worthwhile accomplishment," (+2.04). These items were second and first on the AIR scale. They are the most significant sources of dissatisfaction among lieutenants.
(6) Lieutenant jg's displayed high need deficiencies on four items: "Feeling of self-fulfillment," (+3.61); "Feeling of worthwhile accomplishment," (+3.00); "Opportunity for personal growth," (+2.71); and "Feeling of being informed on my job," (+2.58). The MNF for the first item is the highest MNF indicated for any rank on any item; this is a very serious problem for this rank of officer. All four items are very important to the lieutenant jg's, with AIR's over 6.00.

This rank seems to be highly dissatisfied; these complaints indicate that low morale at this grade may hamper the operation of the Corps and lead to high turnover.
(7) Ensigns indicated dissatisfaction on "Self-fulfillment," (+2.96) and "Worthwhile accomplishment," (+2.75). Both of these received high AIR's.

Ensigns generally display the same pattern of dissatisfaction as their immediate superiors.

The problem of job satisfaction outlined above is, then, a product of reinforcing variables--the nature of the task, the expectations which an individual has about that task, and the need structure of the individual; in other words, what factors in a job are most important to him. These findings for ESSA officers resemble markedly those in the previously noted Navy study conducted in 1968 for officers of the Civil Engineer Corps.

In the Navy study, when asked whether the work was "interesting and challenging," only 15 percent of the ensigns and 21 percent of the lieutenant jg's indicated that it was interesting by comparison with civilian life. However, 52 percent of the lieutenants, 71 percent of lieutenant commanders, 65 percent of commanders, and 66 percent of captains thought Navy work was "interesting and challenging."

All ESSA ranks displayed relatively high MNF's with regard to their "feeling of being informed. . . ." Even the generally satisfied captains showed a high MNF (+1.68) for this item. However, among Navy officers over 70 percent of all ranks indicated that they were satisfied with their information; apparently the Navy does a better job of satisfying its officer needs in this respect, although the data are not strictly comparable.

Junior naval officers also felt that they had inadequate authority. Among ensigns and lieutenant jg's 39 percent and 36 percent, respectively, indicated
they were dissatisfied and felt that civilian life was better when asked, "Do you have the freedom to do the job the way you think best?" Among officers above the rank of lieutenant, however, over 50 percent on these items felt that the Navy was better than or equal to civilian life. Thus, the rank of lieutenant seems to be the crucial one; officers senior to lieutenants feel that Navy life is preferable or the equal of civilian life with regard to the authority they have in their work; officers junior to them are dissatisfied with Navy life. This pivotal position of lieutenants appears on a number of other questions as well.

This "pivotal" position of the lieutenant is also found in the ESSA data. Question 74 on the ESSA questionnaire, "The opportunity for independent thought and action," is comparable to the Navy question. The MNF for the ranks came out as follows:

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+2.16 for ensigns
+2.13 for lieutenant jg
+1.33 for lieutenants
+0.250 for lieutenant commanders
+0.450 for commanders
+0.948 for captains
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The progression from ensign to captain is not lineal. Lieutenant comnanders have the lowest MNF on this question. Yet lieutenants do fall between the ensigns and lieutenant jg's on one hand, and the senior officers on the other. The MNF derived for lieutenants is close to the midpoint between the highest and lowest recorded need deficiencies. These
results supported the contention that the rank of lieutenant is an important one for career choice and a pivotal one in the socialization process of the young officer. Once promoted to the rank of lieutenant commander, the chances that the individual will make the Corps a career increased markedly.

The naval officers were asked to rate the prestige of a Navy career. The differences among ranks on this issue are less obvious than on previous questions. In each case, over 70 percent of the officers in a specific rank answered either "favorably" or "neither favorably nor disfavorably." When asked about the "prestige of their job outside the organization", ESSA officers indicated greater satisfaction than on other questions. The MNF of lieutenants was only +0.69 ; the MNF for commanders and ensigns were almost the same $-(+0.600$ and +0.625 , respectively).

Both studies indicated a substantial amount of satisfaction about the "chances to be a leader or supervisor." The number rating the Navy as better than civilian life ranged from 54 percent for ensigns to a high of 83 percent for lieutenant commanders. ESSA officers cited some need deficiency when asked about "the amount of responsibility my work involved" (question 87). Nevertheless, the coefficients, although positive, were relatively low. They reached a high point at the level of lieutenant junior grade and a low point at the rank of captain.

Comparative Retention Rates for Navy Officers and ESSA Officers

| Year | \% Naval Officers Remaining <br> After Minimum Service <br> Plus One Year | \% ESSA Officers Remaining <br> After Minimum Service <br> Plus One Year |
| :--- | :---: | :---: |
| 1965 | $46.3 \%$ | $38 \%$ |
| 1966 | $36.9 \%$ | $31 \%$ |
| 1967 | $35.1 \%$ | $35 \%$ |
| 1968 | $37.9 \%$ | $37 \%$ |

The preceding pages were an attempt to add some perspective to the ESSA data. The nature of the Navy data, at this stage, did not permit more than impressionistic analysis.

In most instances, rank was an important variable for the results. In some cases, answers could be predicted once rank was known. In other cases, only a trend could be established. Ensigns and lieutenant jg's were clearly differentiated from the more senior officers. Lieutenants remained, for the most part, in the pivotal position. More work must be done in this area. The link between the responses and career plans is not as firmly based on data as it might be. It appears, however, that the middle level of the career hierarchy is the crucial one for career choice.

Some of ESSA's turnover problems result from certain recruiting procedures. The same complete and unbiased information about the Corps needs to be presented to all candidates. Officers recruited in recent years have received very diverse impressions of the Corps from their initial interviews. This fact indicates that there is a need for greater coordination among officers assigned to recruitment.

We suggest the establishment of a central office responsible for recruitment. This office could keep its personnel accurately informed about changing aspects of Officer Corps duty (role in ESSA, sea duty duration, future of ESSA, etc.) and could provide professional assistance to officers newly assigned to recruitment. The office would hold a briefing at the beginning of the season for all officers engaged in recruiting and would keep in contact with them during the season. The briefing would be a required part of the assignment to recruiting and would serve to acquaint the recruiters with all aspects of the presentations they were to give during interviews. It would be more extensive for officers with no past experience in recruiting.

This office would also be responsible for notifying the universities to be visited and for supplying them with preparatory literature. A single brochure giving a complete picture of the Commissioned Corps, its place
in ESSA, the various divisions of ESSA into which an officer may be placed, etc., should be drawn up to serve as the backbone of the preparatory literature. It should be designed to anticipate and answer as many questions as possible so that the interviewing officer would not have to tell the candidate about basic aspects of the Corps. It should also include model career plans.

The need for a complete and realistic presentation, both in the literature and by the interviewer is critical. The majority of the officers with grade $0-3$ or lower presently in the Corps feel that they were given an incomplete or distorted picture of Corps life during recruitment. The tendency to play down the undesirable aspects of Corps duty (sea duty, routine work, separation from family) and to emphasize such facets as travel, research, and adventure, while understandable, is damaging. For example, the ESSA pamphlet on recruitment emphasizes the fact that, "Officers may specialize in a broad sense, as in geophysics, oceanography or meteorology, or they may generalize with an eye toward eventual administrative assignments in ESSA." The pamphlet further speaks of the need for officers with "unusual scientific and technical competence in their areas of specialization." The young officer doing hydrography or standing watch may feel that he has been misled by such literature into becoming a generalist. A certain number of men will be disillusioned when they find the work is not as described. The percentages involved may be small, but they have an effect on the retention problem. The type of man who will make the Corps a career will be attracted by a straight-forward assessment of what the

A longer interview, or perhaps a followup interview for promising candidates, could be of great value. The present half-hour is inadequate for a sound appraisal. Longer interviews or a return visit would perhaps, though not necessarily, require the assignment of additional recruiting officers. This move would not necessitate a major policy change within ESSA, but would increase the need for closer liaison between the interviewer and university placement offices to provide a more selective preliminary screening of applicants prior to the interview session. If the two interview systems were adopted the second interview would ideally be by a second officer--a junior if the first had been a senior officer, and vice versa.

The Corps should investigate the possibility of developing a psychological test to supplement an interviewer's impressions. The Foreign Service uses such a test and finds that it yields significant results. The test could give clues to such career motivation as a desire for promotion, innovative drive, acceptance of routine duties, job satisfaction, and so forth. It should be brief enough to administer during the interview, but comprehensive enough to yield meaningful results. These results would be scaled and given numerical values which would be computed into the mastermark total. How much weight the test score would carry in comparison to the thirty-point maximum of an interviewer's impressions would be up to the personnel office.

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## IV. ASSIGNMENT PROCEDURES

- Our study shows that many officers have specific complaints about some of ESSA's administrative procedures. Although the most serious complaints concern assignments, there is no general widespread lack of faith in the justice of the assignment process. When asked "How much importance do you feel is attached to officer preferences in the assignment procedure?" the distribution of responses by rank was as follows:

|  | A. "A great deal" | Capt. | Cmd. | Lt. Cmd. | Lt. | Lt.j g |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 | 1 | 5 | 12 | 5 | 4 |
| B. "Some" | 11 | 10 | 10 | 21 | 6 | 21 |
| C. "Not much" | 1 | 5 | 4 | 10 | 8 | 4 |
| D. "None at all" | 0 | 0 | 2 | 0 | 0 | 1 |

However, there were considerable complaints about individual assignments. A number of complaints concerned initial assignments. For example, as ESSA has understood for some time, recruits who remain behind a desk during their first assignments tend to leave ESSA more quickly than men assigned to ships. The desk men work side-by-side with better paid civil servants and have little chance to establish an identification as members of an elite corps working on a specific task. They leave mainly because they are unable to establish and maintain a clear picture of the rationale behind the Commissioned Corps. This was one of the reasons for the high turnover among officers joining in 1966 。

It is now standing policy in ESSA that first assignments should always be sea assignments. At times, however, this policy has to be ignored when emergency situations arise. Our studies show that in such cases it is very important that the new officers be assigned in shore billets with their fellow officers. Isolated officer billets tend to atomize the Corps and to disintegrate the sense of common identity among officers.

Another guideline for the assignment of initial billets is indicated by the high turnover rate of officers joining in 1966. A large proportion of those recruits were given highly specialized shore assignments. When they were later assigned to less specialized sea billets they were very dissatisfied. To avoid this source of dissatisfaction, an officer's first assignment should never be more specialized than later ones.

A number of officers expressed unhappiness about being assigned to major survey vessels. ESSA has a number of these large, class I ships, such as the Oceanographer, the Discoverer, and the Surveyor. Some of these ships have been designed for investigating the global oceanic environment. They can be provisioned for 150 days at sea and are equipped to carry as many as 116 persons. Yet despite their modernity and sophisticated design, these ships have the most dissatisfied officers. Although all the officers expressed the same kind of complaints, the junior officers were the most dissatisfied. They seem to feel that they have less professional work to do and less responsibility and authority in ship management than junior officers on smaller ships. One new officer remarked that he often trades duties with
a crew member for diversity and increased challenge.

There is no easy solution to this complaint, since obviously some officers have to be assigned to these ships. One way to improve the situation would be to give these younger officers opportunities to follow through on projects they find especially interesting. They should be encouraged to analyze their data and also to publish if they so desire. This would help relieve the feeling that they were doing subprofessional work in a routine way.

The fact remains that officers assigned to smaller ships have greater team spirit and sense of responsibility. It is easier for them to see the effects of their work since the environment is more intimate than on larger ships. Also, small ships spend more time in port, and this may relate to their officers' greater satisfaction.

The Assignment Board is presently composed of senior officers who do assignment work only part-time. We feel that the kinds of problems discussed above could be avoided and the credibility and efficiency of the assignment process could be improved by the following changes in the Board.
(1) We recommend that at least one position on the Assignment Board, and preferably two, be made full time. One officer devoting all his time to scanning selection materials could improve assignment distribution.
(2) We recommend that the Board be restructured or expanded to include an officer representing the lower ranks. That fact that all the Board positions are filled by captains hardly helps to bridge the generation gap within the Corps. Furthermore, officers of lower rank have fewer responsibilities than captains, and could devote more time to their duties on the Assignment Board.
(3) We recommend that the work of the Assignment Board be supplemented by a civil servant with a management background and by more extensive use of data processing techniques. The task of making assignment decisions far enough in advance to facilitate career planning and relieve anxiety among the younger officers will require more manpower and resources. It will also depend on the growth of the manpower available to the Corps. As long as ESSA is understaffed, long-range planning will continue to be upset by emergency assignments.

Our study indicates that officers feel a need for advanced information on job vacancies and transfers so that they can more easily request assignments related to their education and interests. The officers themselves suggested that some sort of special flyer or announcement be distributed (perhaps quarterly) to the officers, listing whatever assignments will be made available within the next six months. This is a legitimate request, since in most cases resignations and retirements are submitted six months before they are to take effect. In addition, each man should know approximately when he is due for a transfer to a different assignment, so he can
look into the jobs that will be available. One officer wrote:
"Perhaps there should also be a form that encourages you to request information about certain ESSA agencies before formally applying for them. If you're currently on a remote assignment it's not easy to talk to the people 'in the know' who can give you good career counseling. You should know exactly what you're getting into beforehand, and perhaps the agency should also know a few things about you, too."

The officers at sea especially need this sort of information because their direct contact with ESSA in Rockville, Seattle, and Norfolk is very slight. At the moment most knowledge about available assignments comes through a grapevine or good friend in one of the headquarters. Officers at sea resent officers on land who they feel (perhaps wrongly) may have more success in arranging their next assignment.

Our key recommendations about the assignment process concern the institution of career plans, more extensive career counseling, and, perhaps most important, advance notice of transfers and position openings. The 1955 report of the Corps noted:
"A secondary source of uncertainty and discontent (in the Corps) has been lack of a definite indication of the length of various assignments. Adoption and publication of a master assignment plan, with definite tenure indicated for all assignments, will eliminate the uncertainty, and the overall effect of such a plan will relieve the discontent. . . 14

Although career plans have been suggested (most notably by Admiral Karo), they have not been followed. ${ }^{5}$ In the course of our interviews, we

[^2]found it was quite rare for an officer to have any confidence in his estimate of how long he would be in present billet or what kind of assignment he would get next. Adequate career planning and counseling would eliminate rumor and misinformation and relieve uncertainty, particularly among the younger officers.

## V. ADMINISTRATIVE PRACTICES

## A. Advanced Standing

Ensigns with substantial ship experience are routinely passed over for Lt. jg's with up to two years advanced standing and no sea experience. To find themselves training inexperienced officers of higher rank destroys the morale of ensigns who have worked hard to be able to stand watch or take charge of a launch. This problem would be partly alleviated by giving everyone ship assignments first; but even then, an ensign who had served up to 18 months would be outranked by an inexperienced Lt. jg with advanced standing. Such artificial promotions for experience which only tangentially relate to a junior officer's work in the Corps can be destructive to morale. We recommend the elimination of advanced standing for advanced degrees or related work experience apart from military service.

There is no need in recruiting to offer the incentive of advanced standing to people with advanced degrees; because of the draft, the Corps already has more applications from such people than it can possibly accept or retain. Further, people attracted only by advanced standing are unlikely to have career motivation. Credit for military service, however, should be retained because officers with such experience are more likely to be career oriented (if only because the draft was not a factor in their decision to join) and because such background is clearly a preparation for life in the Commissioned Corps.

## B. Leave

The turnover problem, particularly among married officers, could be alleviated by more reasonable and systematic provisions for leave with the permission of the commanding officer.

The principles behind the present policy were clearly stated by
Admiral Karo in 1963:
"A member of a uniformed service, by nature of his appointment, must accept the obligation to serve whenever and wherever needed. Thus, there is no entitlement to 'lieu time' or 'compensatory time.' Rather, he must accept the fact that he is expected to be available for duty at any time unless excused by proper authority." 6

Rather than quarrel with the above principles, we would like to suggest that the problem is really one of administration. Our concern is for the problem of family separation and time away from shore which both destroys morale and costs the Corps dearly in turnover. The Captain must be allowed some discretion to compensate his officers informally for their extra efforts on nonwork days and after normal working hours. In the past, bureaucratic procedures may have robbed the Captain of the authority to provide for the morale of his officers while still considering the needs of his ship. Apparently many junior officers have not been aware of C\&GS leave approval policies (as described in letter of 30 June 1969 from Rear Admiral Jones, Director of C\&GS, to the Directors of the Atlantic and Pacific Marine Centers) in which authority was delegated (a) to the Marine Center Directors to

[^3]approve leave up to 60 days and (b) to commanding officers of individual vessels to approve leave up to 15 days for officers on their ships. Additionally, however, it should be kept in mind that a Captain is restricted by the requirement that two-day liberty cannot be used to extend leave (see Coast and Geodetic Survey Regulations 06605A). Clearly, a two-day liberty apart from other leave is useless when the distance from home is many thousands of miles.

Any erosion of the Captain's ability to improve the morale of his officers and crew and to provide further work incentives discourages younger officers who might aspire to be commanding officers.

## C. The Captain and Project Planning

The Captain must be involved in planning any projects involving outside parties of scientists. If the Captain were given a chance to improve and approve the written project instructions far enough in advance, later conflicts and entanglements in the chain of command could be avoided. The Captain might also point out logistical problems unanticipated by planners at the Marine Centers. Furthermore, when the Captain is not consulted in project planning this becomes another example of the erosion of authority at the top that can be destructive to career aspirations at the junior levels.

According to Sterner, pay and fringe benefits prevent dissatisfaction but do not necessarily contribute to satisfaction. 7 In both interviews and written responses, officers in ESSA have described such benefits as "insufficient." The AIR score for these factors falls in the middle of the scale.

The exact amount of satisfaction or dissatisfaction an officer feels would depend on his prior expectations, his marital status, and the way he defines pay. For example, it is likely that the MNF quotient for pay would depend on whether pay was equated with security or with prestige and personal esteem. Today, when men are often judged by the pay they receive, pay and benefits may be interpreted as contributing to morale problems. Interviews have suggested that when an officer sees pay as a measure of esteem, he tends to be dissatisfied with the rate of pay. Officers in interviews pointed to the fact that the compensation received by the civilian crew sometimes exceeded their own.

This complaint about pay is more true of the younger officers than of the senior officers in the Corps. As a group, however, younger officers seem more concerned with recognition and responsibility (intrinsic factors)
${ }^{7}$ Frank M. Sterner, "Managing and Motivating Engineers," Professional Engineer, July 1969, p. 38.
than with extrinsic factors such as pay. Further statistical analysis would have to be done on this point.

Pay assumes increased importance at a particular stage in an officer's career. An ensign does not expect high monetary compensation. Pay in any of the armed services at that level is low, and the bases for unfavorable comparison are slight. One ensign noted, "If I were in the Army now, my pay would be the same as it is now. Pay is not a source of dissatisfaction for me at this point."

In the higher ranks, officers seem satisfied with the pay. Retirement benefits were mentioned quite frequently by these officers. Apparently, after years in the service, retirement benefits and pay may become positive incentives to remain in the Corps.

It is at the intermediate ranks, when the officer decides about a career in the Corps, that low pay becomes a problem. This view is supported by the fact that pay as a factor in need deficiency (see question 78 in table on page 6 ) was highest among the lieutenant jg's (+2.18). A younger officer may be less future oriented than an older officer. The pay of a captain or the retirement benefits that accompany 20 or 30 years of service may be outside his frame of reference and experience. At the point in his life when a career decision should be made, he sees his pay as inadequate and his selfesteem as low. As one of the junior officers put it, "I'd rather have the later benefits translated into more pay now." Yet we pass on their suggestion
fully aware that fringe benefits and pay are difficult to change because of the administrative structure of the Corps.

## VII. THE STRUCTURE OF ESSA AND TURNOVER

The previous sections outline some of the sources of job dissatisfaction and high turnover in some of ESSA's specific policies and procedures. It is our feeling, however, that a substantial part of such dissatisfaction derives from confusion at all levels of the Corps about the exact nature of ESSA, the kind of job it is supposed to do, and the justification for the military structure of the Officer Corps.

Such uncertainty was expressed by several interviewed officers. One officer, commenting upon the formation of ESSA remarked that "Before the formation of ESSA, people in Seattle knew what a Coast and Geodetic Survey officer was. We now have a difficult time explaining what an ESSA officer is." Another complained, "The career of an ESSA officer can no longer be characterized or identified."

In addition, many officers have become insecure about the future role of the Officer Corps in the larger organization. Morale has been affected by this uncertainty, fed by unconfirmed rumors which spread from ship to ship. Establishment of the National Oceanographic and Atmospheric Agency is discussed, but information is lacking on the details of such proposals.

This uncertainty and anxiety is reflected in generally negative officer comments on the formation of ESSA itself. In response to the question,
'How has the establishment of ESSA in 1965 influenced your feelings about the role of the Officer Corps?"

Two-thirds of the captains and commanders expressed some degree of dissatisfaction with the formation of ESSA.

Nearly half of the lieutenant commanders and lieutenants stated that they were opposed to the formation. Only one-quarter favored it.

Less than one-quarter of the lieutenant jg's and ensigns viewed the formation of ESSA with favor. Most of them, however, responded that the question was not applicable, because they had no way of comparing the old Coast and Geodetic Survey with ESSA.

Question 126: The Formation of ESSA

|  | Capt. | Cmd. | LtCmd. | Lt. | Lt.j g | Ensign |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| Very unfavorably | $22.2 \%$ | $22.2 \%$ | $9.5 \%$ | $18.2 \%$ | $12.5 \%$ | $12.0 \%$ |
| Unfavorably | 44.5 | 44.5 | 38.0 | 31.2 | 4.2 | 2.4 |
| Total | $66.7 \%$ | $66.7 \%$ | $47.5 \%$ | $49.4 \%$ | $16.7 \%$ | $16.4 \%$ |
| Favorably | 11.2 | 5.5 | 19.0 | 15.9 | 8.4 | 16.8 |
| Very favorably | 5.5 | 5.5 | 9.5 | 4.6 | 8.4 | 9.2 |
| Total | $16.7 \%$ | $11.0 \%$ | $28.5 \%$ | $20.5 \%$ | $16.8 \%$ | $26.0 \%$ |
| No change | $16.7 \%$ | $22.2 \%$ | $19.0 \%$ | $13.6 \%$ | $16.8 \%$ | $14.4 \%$ |
| Does not apply | 0 | 0 | $4.8 \%$ | $15.9 \%$ | $50.4 \%$ | $46.0 \%$ |

The crucial statistic is the large percentage of officers in the higher ranks who were unhappy over the formation. One lieutenant commander commented, "When I came into the Corps in 1960, the Coast and Geodetic Survey was a fairly small, elite, prestige organization. Now it is a sprawling bureaucratic mess."

On the other hand, individuals whose specialized skills are effectively utilized in the larger organization are pleased with the consolidation of ESSA. Mathematicians at Suitland were enthusiastic because they felt the larger organization enabled them to make good use of their education and training.

Officers expressed uncertainty about which direction ESSA would take: towards or away from more specialization. Who, in Rockville's eyes, is the ideal officer: a chief scientist, naval officer, data collector, or a mythical figure who can be all of these at once?

We feel that at least some of this confusion is reflected at the policymaking levels as well. There seems to be a conflict between the logic of an elite, generalist corps of officers, serving at sea in command of vessels and that of a diverse and varied scientific establishment with major shore-based research facilities. The idea of the Commissioned Corps has long proved itself at sea; but is there equal necessity to organize shore-based specialists along these lines?

This leads to the question of the wisdom of ESSA's recruiting goals; is ESSA going after the right kind of people to staff the Commissioned Corps?

It must be noted that at the moment ESSA faces an unusual recruiting situation. Because draft exemption status is available for service in the Commissioned Corps, large numbers of highly educated individuals enter the Corps without planning to make it a career. The draft situation has resulted in ESSA being able to fill its relatively small number of openings from a very large pool of applicants. ESSA recruiters have reacted to this opportunity by selecting the most highly qualified persons; those with the most advanced degrees and best academic records. ESSA is recruiting highly trained, highly specialized individuals who face a seller's market in the civilian economy after they fulfill their draft commitment. After the first three-year term, ESSA is competing with private employers who offer far higher salaries, better working conditions and greater opportunities for professional advancement and recognition for scientists and engineers.

ESSA Officer Recruitment

| Year | Applications | Number <br> Appointed |
| :---: | :---: | :---: |
| 1963 | 90 | 40 |
| 1964 | 68 | 43 |
| 1965 | 162 | 40 |
| 1966 | 231 | 98 |
| 1968 | 160 | 35 |
| 1969 | 289 | 44 |

ESSA also places heavy emphasis upon the scientific credentials of new recruits; it virtually insists that officers hold degrees in engineering or related scientific fields. The Corps thus not only recruits a large number of specialists who expect and demand exceptionally challenging and rewarding jobs; it exclusively recruits specialists in science or engineering.

By contrast, the typical job carried out by a member of the Commissioned Corps seems to differ from that of the typical research scientist in civilian life. One young officer wrote, "Initially, I thought that the expanded ESSA organization would allow a greater chance to participate in scientific endeavors; i.e., ESSA research labs, etc. However, it appears that the Corps' role is once again only that of hydrography, and furthermore, that officers are destined to serve at least two and maybe three years aboard a ship, never seeing any research facilities or ground parties, let alone working in such a capacity."

The inability of ESSA to provide specialist jobs for the great majority of those who desire them is probably the single biggest contribution to dissatisfaction and turnover. As noted in the section on recruitment, these recruits came into ESSA under the impression that they would be able to pursue their scientific research interests. Once they join the service, they find themselves on board ship carrying out duties which do not demand training or skills which they possess. In the interviews, over half of the officers in grades 1-4 felt that their work did not utilize their educational background. Nearly 90 percent of the ensigns rated the amount of special
skill. required for their jobs as less than 4 on a scale from 1 to 7. Furthermore, at all officer grades there was a feeling that the skills demanded by the job were not primarily scientific. Fifty-four percent of the officers responding classified themselves in their current jobs as manager/ administrators or ships officers. Only 7.4 per cent thought they were working as scientists, and only 9.3 per cent felt that their primary responsibilities were as engineers. Many officers indicated that without their scientific training they could have been easily trained by ESSA to carry out their current responsibilities, and that the diversity gained by recruiting men from different backgrounds would benefit the Corps.

These complaints are largely those of the junior officers. Senior officers generally expressed a high degree of satisfaction with their jobs. Having over the years developed a preference for certain kinds of duty, they are now enjoying the fruits of their seniority.

Question 65: Role as an Essa Officer, Ranking of Titles

| Response | Ranking |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1st | 2 nd | 3 rd | 4 th | 5 th | 6 th |
| A - Ships Officer | 64 | 43 | 22 | 18 | 10 | 2 |
| B - Manager/Administrator | 16 | 17 | 29 | 43 | 33 | 3 |
| C - Surveyor | 38 | 29 | 40 | 24 | 8 | 1 |
| D - Engineer | 13 | 10 | 17 | 28 | 56 | 16 |
| E - Scientist | 14 | 41 | 40 | 25 | 25 | 2 |
| F - Other | 19 | 8 | 7 | 5 | 4 | 4 |
| Overall | A | C | E | B | D |  |

But even these officers remarked upon the tediousness of their early experience in the Coast and Geodetic Survey. They expressed concern that this problem is becoming greater as a result of the ESSA consolidation. (As indicated earlier, most of these officers are opposed to the consolidation.) They expressed regret that the Coast Survey, with the advance of technology and bureaucratic control, is becoming a less adventurous service than it once was. Officers no longer feel that they are in a position to struggle with the elements, to investigate nature's secrets, and to carry on projects which increase man's understanding of and control over his environment. The need for and rewards of physical effort, intelligence and group spirit have diminished with the growth of the organization. Senior officers often implied and occasionally said outright that the younger officers do not get a sense of individual accomplishment, and feel that their assignments do not demand innovative or creative thinking, much less a high level of scientific training.

Interviews with junior officers substantiate these observations. They feel that they are involved in an excessive amount of subprofessional work in the routinized performance of set duties. During interviews these men referred to their work as "routine," "dull," "unchallenging," and "irrelevant". Furthermore, they felt that, with the exception of applied mathematics, their scientific training was not used.

In contrast with the dissatisfied specialists quoted above, another group of young officers who plan to make the Corps a career can be identified.

Many of them have civil or mechanical engineering degrees, and have been assigned to positions which make use of this training. Mathematicians and physicists assigned to this same type of post do not feel they are using their training.

Most of those who plan a career in the Corps have entered it without an advanced degree. They are more willing to function as general administrators and ships officers than those with advanced scientific training, and can more easily fit their future training to the opportunities actually offered by ESSA.

Those few individuals who graduate from maritime academies and enter ESSA appear to have above average longevity in the Corps.

Among the reasons given for remaining in the Corps were job security, love of the outdoors, a feeling of worthwhile accomplishment through public service, friendship and the prestige of being an officer.

Clearly there is a contrast between the kind of individual who finds challenge and reward in being an ESSA officer, and the kind of individual preferred by ESSA recruiting officers. Unless the nature of ESSA and the jobs typically performed change radically in the next few years, a solution to the turnover problem demands a change in recruiting policy. It appears that ESSA ought to recruit more individuals with high personal promise but without advanced degrees, more men from the maritime academies, and perhaps
some with training in business or public administration, sociology or psychology. ESSA might investigate the kind of individual who finds satisfaction within the Corps and develop psychological tests to identify those individuals. In recruiting, ESSA must make clear that there are relatively small numbers of specialized jobs available, and that a young officer has little chance of getting one in his first or second assignment.

Some of the senior ESSA officers went further than this. They suggested, in effect, that ESSA distinguish between the Officer Corps, which would consist of generalists, ships officers, administrators, etc., and a group of civilian specialists who would carry on the limited amount of highly specialized research needed but would not be a member of the Officer Corps. One career officer commented, "I have gotten the impression that increasingly officers are assigned to positions which might be better filled by a civilian 'specialist.' These positions have opened up since 1965, and it is my opinion that the combination of these jobs and the C\&GS 'mobile' jobs has led to confusion and ambiguity."

Of course, even the most "generalist" officer in ESSA cannot handle the entire range of duties encompassed within ESSA. In this sense the generalist/ specialist dichotomy is false, as applied to ESSA. Everyone is to some extent or another a specialist. But what these senior officers seem to question is the desirability of mixing research scientists whose tasks do not seem to demand military structure with a Corps traditionally composed of men with a certain range of specialities, a range which includes both
scientific and general administrative responsibilities. They suggest that the purely research functions should be separated out to be handled by civilians, and that the Commissioned Corps should be given responsibility for those functions which it has traditionally performed so superbly.

A great deal of work needs to be done in this field. Although ESSA turnover is not nearly as high as, say, in the Public Health Service, the small size of the organization means that a relatively small turnover percentage still has great impact on the assignment pattern and general character of the Corps. An individual who leaves must be replaced and may take with him skills and experience which cannot be easily replaced by a new recruit or by transfers within the small Officer Corps. There is no "featherbedding" problem. In addition, there is currently no lateral recruitment; an individual who has not been a junior officer cannot be brought in to replace a senior officer.

ESSA should necessarily clarify the exact nature of its personnel needs, design policies which will enable it to hold personnel, and then recruit them. Much is to be done where this study has left off. The conclusions demand further and more systematic investigation; a more sophisticated use of the data will have to be followed by more refined instruments to gather new data. This report is hopefully the foundation upon which a more complex structure can be built.

## VIII. REFERENCES

Argyris, Chris, Personality and Organization, Harper and Row, New York, 1957.

Bohr, Ronald H. and Arnold B. Swertioff , 'Work Shift, Occupational Status, and the Perception of Job Prestige," Journal of Applied Psychology, Vol. 53, No. 3.

Lawler, Edward E., 'Managers' Attitudes Toward Their Pay is and Should be Determined," Journal of Applied Psychology, Vol. 50, No. 4, 1966, pp. 273-279.

Maslow, Abraham H., Motivation and Personality, Harper and Row, New York, 1954.

Porter, Lyman W., Job Attitudes in Management: Perceived Satisfaction and Importance of Needs, Institute of Industrial Relations, Reprint No. 229, University of California, Berkeley, 1964.

Price, Don K., Government and Science: Their Dynamic Relation in American Democracy, New York University Press, New York, 1954.

Somer, Emanuel P. and Susan B. Ware, Civil Engineer Corps Career Motivation Study 1968, U. S. Department of the Navy, Personnel Research Laboratory, Washington, D. C.

Sterner, Frank M., 'Managing and Motivating Engineers," Professional Engineer, July 1969.
U. S. Department of Commerce Coast and Geodetic Survey Committee on Career Opportunities in Commissioned Service, Report, August 12, 1955.
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## APPENDIX A

STATISTICAL INFORMATION

## APPENDTX A

STATISTICAL INFORMATION

Officer Procurement Figures for 1963 - 1969

| Year | No. Applications <br> Recejved | No. Appointed | Remarks |
| :---: | :---: | :---: | :--- |
| 1963 | 90 | 40 | No applications were |
| 1964 | 68 | 43 | accepted May through |
| 1965 | 162 | 40 | October, 1968. |
| 1966 | 231 | 98 | Budgetary limitations |
| 1967 | 160 | 35 | permitted two training |
| 1968 | 289 | 44 | classes for incoming |
| 1969 | 293 | 74 | officers in l968. |

Corps Strength (end of year figure) for 1961-1969

| 1961 | 184 |
| :---: | :---: |
| 1962 | 191 |
| 1963 | 200 |
| 1964 | 209 |
| 1965 | 225 |
| 1966 | 291 |
| 1967 | 297 |
| 1968 | 256 |
| 1969 | 278 |

Retention ESSA Commissioned Officers

| Year | No. <br> Appointed | On duty $12 / 31 / 68$ |  | Resignations Pending | On duty after Pending Resig. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number | \% |  | Number | \% |
| 1950 | 18 | 8 | 44 |  | 8 | 44 |
| 1951 | 13 | 2 | 15 |  | 2 | 15 |
| 1952 | 10 | 3 | 30 |  | 3 | 30 |
| 1953 | 17 | 2 | 13 |  | 2 | 13 |
| 1954 | 1 | 1 | 100 |  | 2 | 100 |
| 1955 | 10 | 2 | 20 |  | 2 | 20 |
| 1956 | 36 | 0 | 0 |  | 0 | 0 |
| 1957 | 17 | 3 | 18 |  | 3 | 18 |
| 1958 | 37 | 9 | 28 |  | 9 | 28 |
| 1959 | 40 | 10 | 25 |  | 10 | 25 |
| 1960 | 20 | 7 | 35 |  | 7 | 35 |
| 1961 | 37 | 10 | 27 | 4 | 6 | 16 |
| 1962 | 29 | 6 | 21 | 1 | 5 | 17 |
| 1963 | 40 | 12 | 30 | 2 | 10 | 25 |
| 1964 | 43 | 17 | 40 |  | 17 | 40 |
| 1965 | 40 | 19 | 4.7 | 3 | 16 | 40 |
| 1966 | 98 | 39 | 40 | 18 | 21 | 22 |
| Total | 506 | 150 | $30 \%$ | 28 | 122 | 28\% |
| Officers Holding Advanced Degrees When Appointed |  |  |  |  |  |  |
| 1960 | 1 | 0 |  |  |  |  |
| 1961 | 2 | 0 |  |  |  |  |
| 1963 | 1 | 1 |  |  | 1 |  |
| 1964 | 5 | 1 |  |  | 1 |  |
| 1965 | 6 | 3 |  |  | 3 |  |
| 1966 | 12 | 5 |  | 5 | 0 |  |
| Total | 27 | 10 |  | 5 | 5 | 18\% |

Comparative Navy Data

|  | Total $\%$ | Ens. | $\begin{gathered} \text { Lt. } \\ \mathrm{j} \text { g } \end{gathered}$ | Lt. | Lt. Cmd. | Cmd. | Capt. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| "Amount of information you get about things important <br> Not important <br> Important-satisfied; feel Navy better <br> Important-satisfied; feel civilian better <br> Important-satisfied; feel both about equal <br> Not satisfied; feel Navy better <br> Not satisfied; feel civilian better <br> Not satisfied; feel both about equal | to you | job 2 13 9 48 0 26 3 | $\begin{array}{r} 2 \\ 13 \\ 10 \\ 51 \\ 1 \\ 20 \\ 4 \end{array}$ | $\begin{array}{r} 1 \\ 28 \\ 6 \\ 46 \\ 3 \\ 11 \\ 6 \end{array}$ | $\begin{array}{r} - \\ 32 \\ 3 \\ 51 \\ 1 \\ 8 \\ 5 \end{array}$ | $\begin{array}{r} 42 \\ 3 \\ 50 \\ 2 \\ 3 \\ - \end{array}$ |  |
| "Interesting and challenging work" <br> Not important <br> Important-satisfied; feel Navy better <br> Important-satisfied; feel civilian better <br> Important-satisfied; feel both about equal <br> Not satisfied; feel Navy better <br> Not satisfied; feel civilian better <br> Not satisfied; feel both about equal | $\begin{array}{r} 46 \\ 9 \\ 28 \\ 1 \\ 16 \\ 2 \end{array}$ | $\begin{array}{r} 15 \\ 19 \\ 30 \\ 1 \\ 32 \\ 3 \end{array}$ | $\begin{array}{r} 21 \\ 15 \\ 32 \\ - \\ 30 \\ 2 \end{array}$ | $\begin{array}{r} 52 \\ 8 \\ 29 \\ 1 \\ 9 \\ 1 \end{array}$ | $\begin{array}{r} 71 \\ 2 \\ 21 \\ - \\ 5 \\ 1 \end{array}$ | $\begin{array}{r} 65 \\ 1 \\ 29 \\ - \\ 4 \end{array}$ | $\begin{array}{r} 66 \\ 3 \\ 24 \\ 1 \\ 3 \\ 3 \end{array}$ |
| "Freedom to do the job the way you think best" <br> Not important <br> Important-satisfied; feel Navy better <br> Important-satisfied; feel civilian better <br> Important-satisfied; feel both about equal <br> Nôt satisfied; feel Navy better <br> Not satisfied; feel civilian better <br> Not satisfied; feel both about equal | $\begin{array}{r} 1 \\ 22 \\ 12 \\ 34 \\ 1 \\ 24 \\ 7 \end{array}$ | $\begin{array}{r} 2 \\ 10 \\ 20 \\ 24 . \\ 1 \\ 39 \\ 5 \end{array}$ | $\begin{array}{r} 1 \\ 9 \\ 17 \\ 29 \\ - \\ 36 \\ 7 \end{array}$ | $\begin{array}{r} - \\ 24 \\ 11 \\ 37 \\ 2 \\ 20 \\ 6 \end{array}$ | $\begin{array}{r} 1 \\ 32 \\ 5 \\ 40 \\ 2 \\ 13 \\ 6 \end{array}$ | $\begin{array}{r} 2 \\ 30 \\ 6 \\ 42 \\ 1 \\ 13 \\ 7 \end{array}$ | $\begin{array}{r} - \\ 33 \\ 11 \\ 40 \\ 1 \\ 9 \\ 7 \end{array}$ |

Comparative Navy Data (cont'd)

|  | $\begin{gathered} \text { Total } \\ \% \end{gathered}$ | Ens. | Lt. $j \mathrm{~g}$ | Lt. | $\begin{gathered} \text { Lt. } \\ \mathrm{Cmd} \end{gathered}$ | Cmd | Capt. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| "Chances to be a leader or supervisor" |  |  |  |  |  |  |  |
| Not important | 1 | 3 | 2 | 1 | - | - | - |
| Important-satisfied; feel Navy better | 70 | 54 | 59 | 75 | 83 | 80 | 68 |
| Important-satisfied; feel civilian better | 2 | 3 | 4 | 2 | - | - | - |
| Important-satisfied; feel both about equal | 22 | 31 | 26 | 18 | 13 | 18 | 30 |
| Not satisfied; feel Navy better | 1 | 5 | 1 | 0 | 1 | - | - |
| Not satisfied; feel civilian better | 3 | 3 | 5 | 3 | 2 | 19 | - |
| Not satisfied; feel both about equal | 1 | - | 3 | 1 | 1 | - | - |
| "Amount of prestige of a Navy career" |  |  |  |  |  |  |  |
| Very unfavorable | 2 | 2 | 1 | 2 | 2 | 2 | 2 |
| Unfavorable | 8 | 9 | 8 | 7 | 9 | 7 | 8 |
| Neither favorable nor unfavorable | 32 | 36 | 41 | 30 | 26 | 25 | 29 |
| Favorable | 44 | 45 | 38 | 43 | 50 | 49 | 45 |
| Very favorable | 12 | 6 | 7 | 16 | 13 | 16 | 15 |
| No opinion | 3 | 2 | 5 | 2 | 1 | 1 | - |

Average Grade Mark Scores for Entering Officers

| Year in | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Resigned officers | 14.2 | 13.1 | 13.3 | 13.2 | 13.7 |  |  |  |
| Active officers | 13.7 | 12.3 | 13.1 | 13.5 | 13.3 | 14.2 | 16.0 | 14.9 |
| All officers | 14.1 | 12.9 | 13.2 | 13.4 | 13.6 | 14.2 | 16.0 | 14.9 |
| Fraction of class meas. measured | $16 / 29$ | $34 / 40$ | $38 / 43$ | $24 / 40$ | $90 / 98$ | $31 / 35$ | $43 / 44$ | $48 / 53$ |

Average Master Mark Scores for Entering Officers

|  | 62 | 63 | 64 | 65 | 66 | $67 *$ | $68 *$ | $69 *$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Resigned officers | 36.1 | 32.8 | 32.0 | 32.7 | 32.8 |  |  |  |
| Active officers | 35.6 | 32.2 | 31.8 | 33.0 | 31.7 | 35.2 | 39.2 | 36.4 |
| All officers | 36.0 | 32.7 | 31.9 | 32.8 | 32.6 | 35.2 | 39.2 | 36.4 |
| Fraction of class |  |  |  |  |  |  |  |  |
| measured | $16 / 29$ | $34 / 40$ | $37 / 43$ | $24 / 40$ | $90 / 98$ | $30 / 35$ | $43 / 44$ | $48 / 53$ |

* Scores converted to 50-point scale.

Note: Master mark introduced in 1962. Files were either unavailable or master marks were not recorded for the unmeasured fraction of each class.

| Average Response to Career Likelihood (first joining, \#88) vs. Grade Mark |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Grade Mark Score |  |  |  |  |  | No. Responded |  |  |  |  |
|  | 18, 19 | 16, 17 | 14, 15 | 12,13 | 10, 11 | Avg. | 18, 19 | 16, 17 | 14, 15 | 12.13 | 310,11 |
| Ensign | 3.00 | 2.63 | 4.67 | 5.00 | -- | 3.97 | 5 | 8 | 12 | 7 | - |
| Lt. j g | 2.00 | 3.75 | 3.50 | 3.20 | -- | 3.32 | 2 | 4 | 8 | 5 | - |
| Lt. , LtCmd. | 4.00 | 4.12 | 3.27 | 4.25 | 3.67 | 3.86 | 1 | 8 | 11 | 12 | 3 |
| All officers | 2.88 | 3.45 | 3.87 | 4.25 | 3.67 | 3.78 | 8 | 20 | 31 | 24 | 3 |
| * Only two responding Lt. Cmd. 's had a master mark score. No higher ranking respondin officers had master mark scores. |  |  |  |  |  |  |  |  |  |  |  |
| Average Response to Career Likelihood (at present, \#89) vs. Grade Mark |  |  |  |  |  |  |  |  |  |  |  |
| Ensign | 2. 00 | 1.29 | 3.83 | 2.43 | -- | 2.65 | 5 | 7 | 12 | 7 | - |
| Lt. j g | 2.50 | 1.75 | 2.62 | 2.40 | -- | 2.37 | 2 | 4 | 8 | 5 | - |
| Lt. , Lt. Cmd. | 1.00 | 2.50 | 3.27 | 4. 92 | 4.67 | 3.71 | 1 | 8 | 11 | 12 | 3 |
| All officers | 2.00 | 1. 89 | 3.32 | 3.69 | 4.67 | 3.06 | 8 | 19 | 31 | 24 | 3 |
| Response to Question \#90 vs. Grade Mark (all officers) |  |  |  |  |  |  |  |  |  |  |  |
| Response AResponse BResponse CResponse DResponse E |  | Grade Mark Score |  |  |  |  | Response A or B Response C <br> Response D or E |  | Grade Mark Score |  |  |
|  |  | 18,19 | 16, 17 | 14, 15 | 12, 13 | 3 10, 11 |  |  | 19, 16 | 15, 14 | 13, 10 |
|  |  | 0 | 2 | 1 | 2 | 1 |  |  | $31 \%$ | 43\% | $59 \%$ |
|  |  | 2 | 4 | 12 | 12 | 1 |  |  | 23\% | 47\% | 26\% |
|  |  | 3 | 3 | 14 | 6 | 1 |  |  | 46\% | 10\% | 15\% |
|  |  | 1 | 6 | 2 | 2 | 0 |  |  |  |  |  |
|  |  | 2 | 3 | 1 | 2 | 0 |  |  |  |  |  |


|  | Master Mark Score* |  |  |  |  |  | No. Responded |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 | Avg. | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 |
| Ensign | 4.60 | 3.33 | 4.30 | 4.00 | -- | 3.97 | 5 | 12 | 13 | 2 | - |
| Lt.j g | 2.67 | 3.00 | 3.83 | 3.50 | -- | 3.32 | 3 | 6 | 6 | 4 | - |
| Lt., LtCmd*** | 2.50 | 3.39 | 3.57 | 4.00 | 5.34 | 3.86 | 2 | 5 | 7 | 18 | 3 |
| All officers | 3.60 | 3.26 | 4.00 | 3.92 | 5.34 | 3.78 | 10 | 23 | 26 | 24 | 3 |

* All scores converted to 100 point scale.
**Only two Lt. Cmd. respondants had a ma
**Only two Lt. Cmd. respondants had a master-mark score。

| Average Response to Career Likelihood (at present, \#89) vs. Master Mark |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Master Mark Score |  |  |  |  |  | No. Responded |  |  |  |  |
|  | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 | Avg. | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 |
| Ensign | 3.25 | 2.00 | 2.92 | 3.50 | -- | 2.65 | 4 | 12 | 13 | 2 | - |
| Lt.j g | 2.33 | 2.00 | 2.67 | 2.50 | -- | 3.37 | 3 | 6 | 6 | 4 | - |
| Lt., Lt. Cmd. | 3.00 | 3.20 | 3.72 | 3.90 | 4.00 | 3.71 | 2 | 5 | 7 | 18 | 3 |
| All officers | 2.89 | 2.26 | 3.08 | 3.62 | 4.00 | 3.06 | 9 | 23 | 26 | 24 | 3 |

Response to Question \＃13 vs．Grade Mark vs．Master Mark

|  | Grade Mark Score |  |  |  |  | Master Mark Score |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 18，19 | 16， 17 | 14， 15 | 12， 13 | 10,11 | 80－90 | 75－79 | 70－74 | 60－69 | 50－69 |
| Response A | 0 | 4 | 5 | 3 | 1 | 1 | 4 | 3 | 5 | 2 |
| Response B | 7 | 10 | 22 | 14 | 1 | 8 | 14 | 20 | 11 | 1 |
| Response C | 0 | 4 | 2 | 3 | 1 | 0 | 4 | 0 | 6 | 0 |
| Response D | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 0 |

Response to Question \＃14 vs．Grade Mark vs．Master Mark

|  | Grade Mark Score |  |  |  |  | Master Mark Score |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 18， 19 | 16， 17 | 14， 15 | 12， 13 | 10， 11 | 80－90 | 75－79 | 70－74 | 60－69 | 50－59 |
| Response $A$ | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Response B | 1 | 2 | 14 | 12 | 1 | 3 | 6 | 8 | 12 | 1 |
| Response C | 5 | 12 | 15 | 12 | 1 | 5 | 14 | 14 | 12 | 0 |
| Response D | 1 | 4 | 2 | 0 | 0 | 1 | 3 | 3 | 0 | 0 |


| $\begin{aligned} & 0 \\ & H \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{gathered} 0 \\ 10 \\ 1 \\ 1 \\ 10 \end{gathered}$ | $\rightarrow N O O$ |
| :---: | :---: | :---: |
|  | $\begin{aligned} & \infty \\ & 0 \\ & 1 \\ & 1 \\ & 0 \end{aligned}$ | ๑ $\underset{\sim}{\text { N }}$ O |
|  | $\begin{gathered} 5 \\ 0 \\ 0 \\ 4 \end{gathered}$ | い |
|  | $\begin{aligned} & 0 \\ & 1 \\ & 1 \\ & 1 \\ & 1 \end{aligned}$ | $\cdots$ 10 $-\infty$ |
|  | $\begin{aligned} & 0 \\ & 0 \\ & 1 \\ & 1 \\ & \infty \end{aligned}$ | ○サMN |
| əxOoS צִxeIN әрехŋ | $\begin{aligned} & \underset{\sim}{H} \\ & 0 \\ & 0 \end{aligned}$ | HNOO |
|  | $\begin{aligned} & \infty \\ & \stackrel{\sim}{\sim} \\ & \stackrel{\sim}{\sim} \end{aligned}$ | サ $\quad$ 我 |
|  | $$ | NOM |
|  | $\begin{aligned} & \underset{\sim}{r} \\ & \underset{\sim}{6} \end{aligned}$ | 「上が |
|  | $\infty$ $\square$ $\infty$ $\cdots$ | ○○m |
|  |  |  |

Response to Question \#16 vs. Grade Mark vs. Master Mark

|  | Grade Mark Score |  |  |  |  | Master Mark Score |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 18,19 | 16,17 | 14,15 | 12,13 | 10,13 | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 |
| Response A | 4 | 6 | 3 | 7 | 0 | 2 | 7 | . 10 | 3. | 0 |
| Response B | $3$ | $1 \times 2$ | 13 | 4 | 0 | 3 | 6 | - 7 | 6 | 0 |
| Response C | $\bigcirc 0$ | - 0 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| Response D | 1 | 1 | 2 | 1 | 0 | 0 | 2 | - 0 | 1 | $0$ |

\footnotetext{
Response to Question \#17 vs. Grade Mark vs. Master Mark

|  | Grade Mark Score |  |  |  |  | Master Mark Score |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 18,19 | 16, 17 | 14,15 | 12,14 | 10, 11 | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 |
| Response A | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| Response B | 0 | 3 | 7 | 7 | 1 | 4 | 4 | 4 | 6 | 0 |
| Response C | 0 | 3 | 8 | 9 | 0 | 0 | 6 | 4 | 9 | 1 |
| Response D | 3 | 6 | 10 | 5 | 1 | 3 | 5 | 9 | 8 | 1 |
| Response E | 4 | 6 | 3 | 3 | 0 | 2 | 7 | 6 | 0 | 0 |

Response to Question \#16 vs. Grade Mark vs. Master Mark

|  | Grade Mark Score |  |  |  |  | Master Mark Score |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 18,19 | 16,17 | 14, 15 | 12, 13 | 10, 13 | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 |
| Response A | 4 | 6 | 3 | 7 | 0 | 2 | 7 | 10 | 3 | 0 |
| Response B | 3 | 2 | 13 | 4 | 0 | 3 | 6 | 7 | 6 | 0 |
| Response C | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| Response D | 1 | 1 | 2 | 1 | 0 | 0 | 2 | 0 | 1 | 0 |

\footnotetext{
Response to Question \#17 vs. Grade Mark vs. Master Mark

|  | Grade Mark Score |  |  |  |  | Master Mark Score |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - | 18, 19 | 16, 17 | 14, 15 | 12,14 | 10, 11 | 80-99 | 75-79 | 70-74 | 60-69 | 50-59 |
| Response A | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| Response B | 0 | 3 | 7 | 7 | 1 | 4 | 4 | 4 | 6 | 0 |
| Response C | 0 | 3 | 8 | 9 | 0 | 0 | 6 | 4 | 9 | 1 |
| Response D | 3 | 6 | 10 | 5 | 1 | 3 | 5 | 9 | 8 | - 1 |
| Response E | 4 | 6 | 3 | 3 | 0 | 2 | 7 | 6 | 0 | 0 |

## APPENDIX B

QUESTIONNAIRE

## U.S. DEPARTMENT OF COMMERCE

## ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

 ROCKVILLE, MD. 20952July 29, 1969

Dear Sir:
Enclosed is your copy of the Commissioned Officers' questionnaire which you have heard about through other announcements. This is a voluntary request but we urge you to respond for our aim is to obtain data which will assist in improvement of policies affecting you and other Commissioned Officers.

As you can see, most of the questions are multiple choice; nevertheless, you are urged to expand on any question or to add additional comments or statements on the back of the questionnaire, or on separate sheets of paper.

Please complete your questionnaire within three days or as near to that as possible and mail to the group which is carrying out the analysis:

The Institute for Creative Studies 2935 Upton Street, NW<br>Washington, D. C. 20008

We are not concerned with the identification of any individual who answers this questionnaire. Furthermore, your answers will be kept in strict confidence by the Institute which is responsible for the data. Although you will be asked to write in your service number on the last page of the questionnaire, this is optional since the service number will be used only for statistical control and analysis purposes.

The quantitative data will be computerized while other data will be codified and sumriarized insofar as possible. Upon completion of the analysis a copy of the report will be forthcoming.

Sincerely yours,
ノtabin D. Naqum
Harley D. Nygren
Rear Admiral, USESSA
Associate Administrator

1. What is your present pay grade?
A. 0-6 Captain
B. 0-5 Commander
C. 0-4 Lieutenant Commander
D. 0-3 Lieutenant
E. 0-2 Lieutenant junior grade
F. O-1 Ensign
2. What is your marital status?
A. Single-never married
B. Single-divorced, widowed, etc.
C. Married-no children
D. Married-with children
3. If married with children, list the ages of all your children.
(from oldest to youngest)
4. What was your major in college?
5. List any graduate degrees that you have.
6. Which (if any) of your graduate degrees were acquired while you have been in the Officer Corps?
$\qquad$
7. What do you consider to be your specialty within the ESSA disciplines?
$\qquad$
8. Are you in the geographical area which was your first choice for your present assignment?
A. Yes
B. No
C. Did not have a preference
9. Do you now have the type of duty which you requested as first choice on your last Service Report Form 19?
A. Yes
B. No
C. Did not indicate preference

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS!
$\square$ 10. What is your opinion of your present assignment?
A. Very satisfied
B. Satisfied
C. Indifferent
D. Dissatisfied
E. Very dissatisfied
lIst 11. What type of duty do you prefer? (select two in order of preference)
and
A. Large ship
B. Small ship
C. Mobile shore duty
D. Staff (Washington, D.C. area)
E. Staff (Marine Centers)
F. Staff (Field Office)
G. Research laboratory
H. Other (please specify)
12. What do you think should be the length of tour duty for your present pay grade in each of the following types of assignments?

12a. Sea Duty
12b. Mobile shore duty
12c. Fixed shore duty (Washington, D.C. area)
12d. Fixed shore duty (other than Washington, D.C. area)
A. Less than 18 months
B. 18 to 23 months
C. 24 to 29 months
D. 30 to 36 months
E. More than 36 months
13. Do you feel that while in the Commissioned Officer Corps you have been able to keep up with current trends and modern methods in your primary field of interest?
(Please specify your field of primary interest: $\qquad$
A. Yes
B. No, I would like to, but have not had the opportunity, time, etc.
C. No, other interests have higher priority right now.
D. No, I am not concerned with keeping up.14. Do you think that most officers with whom you have come in contact are keeping up with current trends and modern methods in their fields?
A. I feel that the other officers are keeping up.
B. I feel that some are keeping up.
C. I feel that most are not keeping up.
D. I don't know.
15. Generally, da you feel that the Corps has utilized your educational background?

```
A. Yes - a great deal
B. Yes - somewhat
C. No - not very much
D. No - not at all
```

16. If your answer to Question 15 is $C$ or $D$, has the lack of such utilization had any effect on your view of Officer Corps as a career?
A. It is a source of great dissatisfaction.
B. It is a source of some dissatisfaction.
C. It does not matter to me.
D. Other (please specify)
17. Are you satisfied with the degree to which your educational background is being used in your present assignment?
A. Very satisfied
B. Satisfied
C. Neutral
D. Dissatisfied
E. Very dissatisfied
18. Which is more important to you in the choice of assignment?
A. Duty type
B. Geographical location
C. Both duty type and location are equally important
19. How well do you feel you are able to express your job preference on Form 19?
A. Form 19 is adequate
B. Form, 19 is not adequate and should be replaced
C. No opinion
20. How much importance do you feel is attached to Officer's preferences in the assignment procedure?
A. A great deal
B. Some
C. Not much
D. None at all
E. No opinion :

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS!
21. How do you feel about your own assignments so far?
A. Very satisfied
B. Satisfied
C. Indifferent
D. Dissatisfied
E. Very dissatisfied
22. Before joining the Officer Corps, had you seriously considered a career of some kind at sea?
A. Yes
B. No
C. I never thought about it
D. I had given it only minor consideration
23. Which of the following most influenced your decision to seek a commission in the Officer Corps?
A. Parents
B. Other relatives
C. Friends in ESSA/C\&GS
D. Other friends
E. Recruiters
F. School counselors in placement offices
G. ESSA/C\&GS publicity
H. Draft
I. Other (please specify)

1st $\square$ 24. What are the three most important reasons in order of preference why you initially joined the Commissioned Officer Corps?
2nd $\square$

3 rd

A. Career opportunities looked better than in civilian life
B. For travel, adventure, new experience
C. To become more mature and self-reliant
D. To develop leadership/supervisory skills
E. Opportunity for advanced education, professional, or technical skill development
F. Wanted my choice of service rather than being drafted
G. Wanted to serve my country in a unique way
H. To continue a family tradition of seamanship or military service
I. Interest in the sea and/or shipboard life
J. For a position with responsibility, dignity, and social opportunities
K. For a secure position with promotions and favorable retirement benefits
L. Others (please specify)
25. What influence did the draft have on your decision to join ESSA?
A. Definitely would not have entered if no draft
B. Probably would not have entered if no draft
C. Probably would have entered even if no draft
D. Definitely would have entered even if no draft
E. Don't know what $I$ would have done if no draft
F. Not applicable--not subject to the draft when I entered

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS!
26. What were your service plans when you first entered the Commissioned Officer Corps?
A. Intended to make the Corps my career
B. Was undecided and wanted to wait to see how well I like the Corps
C. Hadn't thought about it
D. Intended to fulfill my military obligation only
27. If you had to make the choice again, would you join the Commissioned Officer Corps?
A. Would join to fulfill service obligation---but not as a career
B. Would join if there were no draft---but not as a career
C. Would not join if the draft did not exist
D. Would not join whether or not the draft existed
E. Would join as a career whether or not the draft existed
F. Other (please specify)
28. Do you now feel that when you first signed with the Corps you had been given an accurate picture of the nature of an Officer's work?
A. Yes, I feel I was given a very accurate picture
B. Yes, I had a generally accurate picture
C. No, there were some inaccuracies in the picture given me
D. No, there were many inaccuracies in the picture given me
29. Would you encourage a good friend who was qualified to make the Officer Corps a career?
A. Yes, I would encourage him strongly
B. Yes, I would encourage him
C. I would neither encourage him nor discourage him
D. I would discourage him from making it a career
E. I would strongly discourage him from making it a career
30. What are your career plans now?
A. I am eligible for retirement now, and will shortly retire
B. I am eligible for retirement now, but will continue with the Corps
C. I plan to stay with the Corps until eligible for retirement
D. I plan to stay past my current service obligation but not necessarily until retirement
E. I am undecided about my career plans
F. I plan to leave after completing my present service obligation
G. I have completed my service obligation and $p l a n$ to leave shortly
31. What is the highest level of education you hope to complete?
A. No further education desired
B. Further education but no additional degree desired
C. Master's degree
D. Ph.D. or professional degree
E. Other (please specify)

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
32. If ESSA guaranteed you the future opportunity to study for an advanced degree, how would this influence your decision to stay in the ESSA Officer Corps?
A. I would stay longer than the extra service obligation
B. I would stay only to fulfill the extra service obligation after graduate work
C. I am indifferent
D. I am not interested in graduate work
E. Question doesn't apply to me
F. I do not feel the advanced degree is worth the extra service obligation

Regardless of your present service plans, indicate the influence each of the following items has had on your feelings about a career in the Commissioned Officer Corps. Use the following list ( $A-E$ ) to answer questions ( 33 through 62).
A. A strong influence toward making Corps a career.
B. A moderate influence toward making Corps a career.
C. Of little or no influence.
D. A moderate influence against making Corps a career.
E. A strong influence against making Corps a career.
33. First job assignment
34. Promotion opportunities
35. Interesting and challenging work
36. Belonging to an organization $I$ can be proud of
37. Opportunity to try new ideas and test my ingenuity
38. Chances to be a leader or supervisor
39. Praise, commendations, decorations and other forms of
recognition for good performance
40. Number of working hours per week (including extra duties and watches)
41. Job security
42. Personnel and administrative practices
43. Retirement benefits
44. Opportunity to promote important national and humanitarian objectives
45. Physical conditions under which $I$ work
46. Family separation
47. Freedom of personal life

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
48. Enduring friendships with people sharing my values and interests
49. Utilization of educational background
50. Opportunity to have a stimulating job free from unproductive busy work

51. Successfully carrying out plans in an orderly organization

52. Leadership of my superior officers

53. Opportunity to trave1

54. Living conditions afloat

55. Social prestige of a job

56. Civilian employees (civil servants in ESSA)

57. Your peers (officers about the same rank as you are)
58. Vessel employees (crew and chiefs)
59. Opportunity for more education
60. Pay and allowances

61. Fringe benefits62. Personal interest of my superior officers

1st

63. Look back over the list above $(33-62)$ and in the two boxes provided

2nd $\square$ for this question, indicate the two reasons in order of preference which best describe why you have remained in the Corps to date.
1st $\square$ 64.

2nd $\square$
Once again looking over the above list $(33-62)$, indicate the two reasons (in order of preference) which you would give if you were to resign from the Corps tomorrow.

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
65. Please rank the following titles as they apply to your overall role as an ESSA officer:
A. Ships officer
B. Engineer
C. Manager/Administrator
D. Scientist
E. Surveyor
F. If you wish, please specify and rank another choice

## Instructions:

Questions 66 to 87 1ist several characteristics or qualities connected with your own work (present assignment). For each such characteristic you will be asked to give three ratings:
a. How much of the characteristic is there connected now with your work?
b. How much of the characteristic do you think should be connected with your work?
c. How important is this characteristic to you?

Each rating will be on a seven-point scale, which will look like this:

```
(minimum) 1 1 2 % 3 <lllllll
```

You are to circle the number on the scale that best represents the amount of the characteristic being rated. For each scale circle only one number. Please do not omit any scale.
66. The long hours involved in my work:
a) How much is there now? $(\min ) \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad$ (max)

c) How important is this to me? $1 \begin{array}{lllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
67. The amount of special skill required to do my work:
a) How much is there now? (min) $1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) }\end{array}$
$\begin{array}{lllllllll}\text { b) How much should there be? } & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
68. The amount of wasted effort involved in my work:
$\begin{array}{llllllllll}\text { a) How much is there now? (min) } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) } \\ \text { b) How much should there be? } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \end{array}$
69. The amount of "red tape" involved in minor decisions:
a) How much is there now? (min) $1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7 & (\max )\end{array}$
b) How much should there be? $\quad 1 \quad 2 \quad 3 \quad 4 \quad 50637$
c) How important is this to me? $1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
70. The feeling of self-esteem a person gets from being in my job:
$\begin{array}{llllllllll}\text { a) How much is there now? } & (\mathrm{min}) & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) } \\ \text { b) How much should there be? } & & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
71. The authority connected with my job:
$\begin{array}{llllllllll}\text { a) How much is there now? } & (\mathrm{min}) & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) } \\ \text { b) How much should there be? } & & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
72. The opportunity for personal growth and development in my job:
a) How much is there now? (min) $1 \begin{array}{lllllllll} & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) }\end{array}$
b) How much should there be? $\quad 1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me? $\quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7$
73. The prestige of my job inside the organization (that is, the regard received from others in the organization) :
a) How much is there now? (min) $1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) }\end{array}$
b) How much should there be? $\quad 1 \begin{array}{lllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me? $1 \begin{array}{lllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
74. The opportunity for independent thought and action in my job:
a) How much is there now? (min) $1 \begin{array}{llllllll}\text { (max) }\end{array}$
b) How much should there be? $\quad 1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me? $\quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7$
75. The feeling of security in my job:
$\begin{array}{llllllllll}\text { a) How much is there now? (max) } \\ \text { b) How much should there be? } & \text { (min) } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) } \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \end{array}$
76. The feeling of self-fulfillment a person gets from being in my job (that is, the feeling of being able to use one's own unique capabilities, realizing one's potentialities):
a) How much is there now? (min) $1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7$ (max)
b) How much should there be? $\quad 1 \begin{array}{lllllll}7 \\ \text { c) } & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me?
$\begin{array}{lllllll}1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
77. The prestige of my job outside the organization (that is, the regard received from others not in the organization):
a) How much is there now? (min) $1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) }\end{array}$
b) How much should there be? $\quad 1 \begin{array}{lllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me? $\quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7$

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
78. The pay for my job:
a) How much is there now?
b) How much should there be?
c) How important is this to me?

| $(\min )$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

79. The feeling of worthwhile accomplishment in my job:
$\begin{array}{lllllllll}\text { a) How much is there now? } & \text { (min) } & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ \text { b) How much should there be? } & & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
(max)
80. The opportunity, in my job, to give help to other people:
a) How much is there now? (min)
b) How much should there be?
c) How important is this to me?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

81. The opportunity, in my job, for participation in the setting of goals:
$\begin{array}{lllllllll}\text { a) How much is there now? } & \text { (min) } & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ \text { b) How much should there be? } & & 1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me?
$\begin{array}{lllllll}1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
82. The opportunity, in my job, for participation in the determination of methods and procedures:
a) How much is there now? (min) $1 \begin{array}{lllllllll} & 2 & 3 & 4 & 5 & 6 & 7 & (\max )\end{array}$
$\begin{array}{lllllllll}\text { b) How much should there be? } & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
83. The feeling of being informed in my job:
a) How much is there now? (min) $1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) }\end{array}$
b) How much should there be? $1 \begin{array}{lllllll}1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me? $\quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7$
84. The opportunity to develop close friendships in my job:
a) How much is there now? (min)
b) How much should there be?
c) How important is this to me?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

85. The opportunity for promotion in my job:
$\begin{array}{llllllllll}\text { a) How much is there now? } & (\min ) & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) } \\ \text { b) How much should there be? } & & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \\ \text { c) How important is this to me? } & 1 & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
86. The opportunity to assume responsibility in my initial assignment:
a) How much is there now? (min) $1 \begin{array}{lllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
b) How much should there be? $1 \begin{array}{llllllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
c) How important is this to me? $\quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7$

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
87. The amount of responsibility my work involves:
a) How much is there now? (min) $1 \begin{array}{lllllllll} & 2 & 3 & 4 & 5 & 6 & 7 & \text { (max) }\end{array}$
b) How much should there be?
c) How important is this to me?

88. When you first joined the Corps what did you think was the likelihood that you would make it a career?

$$
\begin{array}{lllllllll}
\text { Unlikely } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \text { likely }
\end{array}
$$

89. How do you now rate the likelihood of your making the Corps a career?

$$
\begin{array}{lllllllll}
\text { Unlikely } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \text { likely }
\end{array}
$$

90. Do you think most of the work you are assigned to is
A. Extremely interesting
B. Interesting
C. Routine
D. Boring
E. Extremely boring

Is your life in the Officer Corps: A. Much better than
B. Better than
C. About the same as
D. Worse than
E. Much worse than
F. Do not know
civilian employment in the following categories?
91. Chances for promotion or grade advancement
92. Interesting or challenging work
93. Chances for more training and education
94. Recognition for work well done
95. Pride in belonging to an organization
96. Freedom to do a job the way you think best
97. Your chances to become a leader or supervisor
98. Retirement benefits
99. Pay, allowances, fringe benefits
100. Steady, secure job and income
101. Opportunity to serve the country
102. Family life
103. Treatment by supervisors

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
104. Physical conditions under which you work
105. Manner in which people are treated in the organization
106. Amount of information you get about things important to your job
107. Personnel assignment procedures and practices
108. Immediate benefit to society at large
$\square$ 109. Standard of living
110. Training period
$\square$ 111. Amount of social activity
112. Amount of leisure time-Freedom of personal life
113. What is your wife's attitude toward your making the Commissioned Corps a career?
A. Not applicable
B. Very much in favor of it
C. Somewhat in favor of it
D. Neutral
E. Somewhat opposed to it
F. Very much opposed to it
G. Do not know- she says nothing about my career decisions

Answer the following questions only if you are married or have been legally separated:
Indicate how your wife feels in general about the following aspects of ESSA life. Use the list below to answer the following nine questions.
A. Very satisfied
B. Satisfied
C. Dissatisfied
D. Very dissatisfied
E. My wife does not have an opinion about this
F. Do not know how my wife feels about this
114. Your absences from home
115. Your income
116. Frequency of moves-change of schools
117. Social status as an ESSA family

118. Commissary benefits
$\square$
119. Your job and its effects on her career.

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS!
120. Fringe benefits you receive as a member of a uniformed service
121. Prospects for the future of the Corps
122. Monetary allowances and/or arrangements made for relocation123. Compared to the pay and allowances you are now receiving from the Commissioned Corps, what starting salary would you expect to receive from a civilian firm if you left the service today?
A. Never investigated civilian jobs - cannot estimate
B. Less than I receive at present
C. About the same as I receive at present
D. $\$ 50-\$ 100 /$ month more than I receive at present
E. $\$ 100-\$ 200 /$ month more than I now receive
F. $\$ 200 / \$ 300 /$ month more than I now receive
G. At least $\$ 300 /$ month more than $I$ receive at present
124. From the list below choose 3 of the following changes which would do the most to make the ESSA Commissioned Officer Corps more attractive as a career field. Read all choices, then select three starting with the most important. Answer this question regardless of your present service plans.
A. Increased promotion rate
B. More influence in choice of geographical area of assignment
C. More influence in choice of duty type
D. Increase amount of time spent at homeport
E. Fewer changes of duty
F. Increase pay and allowances
G. Improve use of officers' abilities and education
H. Better opportunities for furthering education/training
I. More recognition of work well done
J. Increased prestige of the Corps
K. Higher sea pay
L. More open channels of communication
M. Shorten tours of sea duty
N. Improved leadership/supervision
O. Other $\qquad$
125. What is your opinion of the orientation you received in the Officer Training Class?
A. Adequate
B. Not adequate
C. Adequate for first assignment only
D. Did not attend training class

PLEASE USE THE REVERSE SIDE FOR ANY COMMENTS:
126. How has the establishment of ESSA in 1965 influenced your feelings about the role of the Officer Corps?
A. Very unfavorably
B. Unfavorably
C. Favorably
D. Very favorable
E. Did not change my opinion
F. Does not apply
127. What is your opinion of the ESSA officer promotion system?
A. Very fair
B. Fair
C. Unfair
D. Very unfair
E. No opinion
128. Service number: (Optional)


[^0]:    ${ }^{1}$ Additional responses came in after the cut-off date for this analysis; the final number of these returned questionnaires rose to approximately 80 percent. A supplemental analysis is in process.
    ${ }^{2}$ Emanuel P. Somer and Susan B. Ware, Civil Engineer Corps Career Motivation Study 1968, U.S. Department of the Navy, Personnel Research Laboratory, Washington, D. C.

[^1]:    ${ }^{3}$ Lyman W. Porter, Job Attitudes in Management: Perceived Satisfaction and Importance of Needs, Institute of Industrial Relations, Reprint No. 229 ,

[^2]:    4U.S. Department of Commerce, Coast and Geodetic Survey, Committee on Career Opportunities in Commissioned Service, Report, August 12, 1955, p. 31
    ${ }^{5}$ Ibid. p. 28

[^3]:    ${ }^{6}$ Memorandum from Admiral H. Arnold Karo, then Director of Coast and Geodetic Survey, to all Commissioned Officers and Chiefs of Parties, May 14, 1963.

