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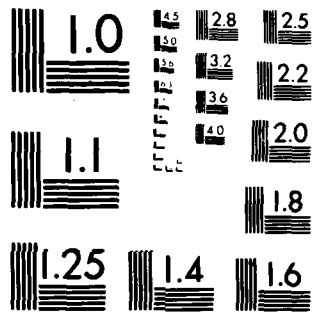
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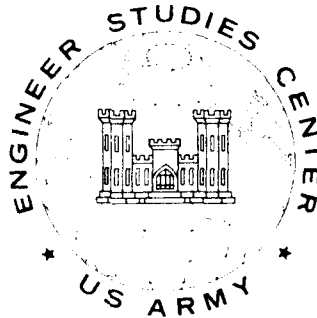
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WORK FORCE
TRAINING AND DEVELOPMENT
FOR THE 1980's



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Prepared by
US Army Engineer Studies Center
Corps of Engineers

JULY 1980

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A detailed analysis of the current training and development program in the Corps of Engineers, US Army. Future needs are assessed and current shortcomings are identified. Recommendations are made to enhance Corps training of its employees to meet the challenges of the 1980's within the parameters established under the Civil Service Reform Act (CSRA).		
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WORK FORCE TRAINING AND DEVELOPMENT FOR THE 1980's

**Prepared by
US Army Engineer Studies Center
Corps of Engineers**

July 1980

Principal Author: Mr. John O. Moser

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WORK FORCE TRAINING AND DEVELOPMENT FOR THE 1980'S

I. INTRODUCTION

1. Purpose. This monograph identifies the Corps of Engineers training and development needs for the decade of the 1980's.

2. Scope.

a. The monograph describes and evaluates the training and development programs in the Corps and suggests ways to prepare the work force to meet expected future challenges. It identifies resources required to overcome existing and perceived shortfalls and highlights management implications for meeting the training and development needs of the work force.

b. This is the last publication developed under the umbrella of the project titled Developing and Managing the Corps Work Force for Future Missions (July 1980). As the fifth monograph associated with this project, it focuses in depth on the various training and development needs revealed in the earlier monographs and Main Report.

II. BACKGROUND

3. Corps Policy. Over the past few years, there has been increasing interest in training for Corps personnel. This was most succinctly stated in the Foreword to the July 1977 Corps of Engineers Managers and Supervisors Training Handbook.^{1/} LTG John W. Morris, Chief of Engineers (COE), wrote, "I consider training a top priority in our overall management plan. Through modern up-to-date programs, we can stay abreast of the changing times in Government and enjoy the opportunity to change our environment." These words still retain their relevance.

4. Previous Engineer Studies Center (ESC) Involvement. ESC has been an integral force in identifying training needs for the Corps. Since 1976, ESC has conducted a comprehensive training study,^{2/} helped establish a Corps Training Committee composed of line managers and charged with aligning operational and training requirements, and participated in the establishment of the Huntsville Division (HND) as the training division for the Corps. In 1976, ESC evaluated the entire Corps training program for component balance and level and assessed managerial development in the Corps. ESC determined that it was out of balance and that the (1976) manpower investment was too low to meet the Corps' needs. At that time, training and development responsibilities were divided among Military Construction (MC), Civil Works (CW), and the Civilian Personnel Office of the Office of the Chief of Engineers (OCE).

^{1/} Department of the Army, Office of the Chief of Engineers, EP 350-1-5, Managers and Supervisors Training Handbook. Washington, D.C., 15 February 1977 and July 1977. (Hereafter referred to as the Purple Book.)

^{2/} Department of the Army, Office of the Chief of Engineers, United States Army Engineer Studies Center, An Evaluation of CE Civilian Training. Washington, D.C., January 1977.

a. ESC recommended establishment of a Corps Training Committee to provide corporate leadership to the Corps' employee development program and development of a training catalog and handbook to help supervisors carry out their employee development programs. Both recommendations were approved for implementation. An interim report of late May 1976 developed an argument for increased training resources, shifted training emphasis, and provided a more enterprising training philosophy. After publishing the interim report, ESC shifted its efforts from the analytic to a more facilitating mode. ESC interacted with the Corps Training Committee and its subcommittees in the areas of management development and resources. The Management Development Subcommittee subsequently adopted a policy of enhancing the Corps' managerial capability by fostering managerial career paths, early identification of employees with management potential, and distribution of a District Engineer's Primer.^{3/} The Resources Subcommittee reviewed training costs in terms of cost per student hour of training accomplished and decided to change the Corps' methods for determining training needs and negotiating for courses. ESC further recommended consolidating all employee development responsibilities into a single organizational element at OCE (which was subsequently detailed in ESC's Field Review of Corps Organization and Resources report, dated July 1977).

b. After working with the Corps Training Committee and its subcommittees, ESC published a final report in January 1977. ESC's involvement in training and employee development shifted from the Evaluation of CE Civilian Training study (January 1977) to the OCE Organizational Realignment study (May 1977). One of the seven major recommendations resulting from the organization

^{3/} Department of the Army, Office of the Chief of Engineers, EP 350-1-6, Employee Development in the Corps of Engineers--A District Engineer's Primer. Washington, D.C., 28 April 1977.

analysis was to establish a Resource Management Directorate (headed by an O-7) with broad responsibilities for integrating all OCE corporate-level resource management functions. Within the Resource Management Directorate, ESC recommended the inclusion of an employee development function to be monitored by a GS-14 with 10 employees charged to plan and execute training programs to improve identified areas of weak performance, prepare for forthcoming missions, offset projected skill shortages, and sharpen basic technical and managerial skills. The office performing the functions would also provide staff supervision of all Corps employee development programs and support for the Corps Training Committee.

c. By 1979, the Corps' training program had changed. OCE had been reorganized and the Resource Management Office (RMO) established. The COE had designated HND as a "center of competence" for the Corps' training program in the area of short courses.^{4/} The HND Program Manager was given responsibility for providing instructors, accommodations, transportation, visual aids, contracting expertise, budgeting knowledge, and billing. (HND oversees course content for currency, redundancy, and relevance.) The Corps Training Committee (and subcommittees), Civilian Personnel Office, RMO, and program directors/functional chiefs were given defined training roles. In addition to HND, which accounts for only about one-third of the Corps' training commitment, training is also provided by other governmental organizations, outside educational facilities, and contract sources. A prime goal of ESC recommendations, consolidation of management of Corps training into one organizational element, was not achieved since only one position was authorized for employee

^{4/} It is assumed that HND will continue in this capacity during the 1980's.

development programs--a training officer working for the RMO Deputy for Management Activities.

d. At the October 1977 Division Engineers (DE) Conference, Task Group IV was tasked to study the "Quality of the Work Force." This task group topic was later assigned to ESC as a study under the sponsorship of the RMO. The study charter called for ESC to address the issue of training and development. Although this issue was discussed briefly in the Main Paper of the Developing and Managing the Corps Work Force for Future Missions project, LTC Morris specifically requested that ESC develop a separate in-depth analysis of the future training and development needs. This monograph addresses that requirement. The basic data in this paper were provided by HND, RMO, and the Civilian Personnel Office, OCE. In interactions with these elements/organizations, ESC surfaced issues and thus indirectly caused the onset of reappraisal and change. It is to the credit of the Corps' training and development system that it has proven so responsive to new trends and requirements.

III. OVERVIEW OF CORPS TRAINING AND DEVELOPMENT REQUIREMENTS

5. Introduction. The array of Corps missions is presently in a dynamic state with significant new requirements already appearing on the horizon. At the same time, the Corps' work force is undergoing major changes both in demographics and personnel. For example, more than 25 percent of the current work force is expected to turn over in the next 5 years, and over 65 percent is expected to be new in their jobs. The Corps' training and development programs must adapt to these changes if the work force is to continue the high level of performance the Nation and the Army have come to expect.

6. Skill Requirements. Missions naturally determine skill requirements. New demands for Corps services will significantly affect the direction that our training and development programs must take. The nature and extent of Corps involvement with such programs as environmental regulatory controls, mobilization, water resources, real property management, and foreign programs will, to a large extent, dictate the nature of new training and development needs. Not only must the Corps continue to attract highly skilled, promising employees, it must also provide them the necessary training and development opportunities and encourage them to stay in the engineer family. The Corps must also continue to help its work force keep pace with advances in their areas of competence.

7. Current Training Mechanisms. It is the Corps' policy to develop training for the work force when it is deemed that such training is unavailable from other sources, available but unsuited to Corps needs, or evaluated as less than equivalent to Corps training needs.^{5/} Other sources of training

^{5/} Department of the Army, Office of the Chief of Engineers, ER 350-1-414, Training--Corps of Engineers Training Program. Washington, D.C., 31 January 1980.

are: other governmental organizations, outside educational facilities, and training aids and programs available on the open market. Training responsibilities are assigned to OCE (Civilian Personnel Office, RMO, program directors/functional chiefs), and to HND.

a. A vital training responsibility lies also with the divisions, districts, and the immediate supervisors who more directly impact on the development of the employees. Passage of the Civil Service Reform Act (CSRA) has broadened the supervisor's role by mandating that training and employee development become an integral part of performance standards and performance appraisals.

b. The Training Review Advisory Committee (TRACE) serves as a forum for bringing together course proponents and developing a set of Corps-wide training priorities and policies for HND-sponsored short courses, along with making some course-specific decisions. RMO allocates monetary resources and HND handles space management for OCE in-house short-term training. The OCE Civilian Personnel Office is responsible for all other training programs.

c. Although all principals are assiduously and conscientiously working toward a common goal, communication deficiencies exist. Even the basic task of rewriting training regulations becomes a massive undertaking--internal rivalries and distorted perceptions of responsibilities often prevail. These varying interpretations were revealed during coordinations and will cause undue expenditures of time and efforts for resolution. The reason for these difficulties is that responsibilities are clouded and the decision mechanism is unclear. Problems generated cause a lack of cohesive management of the overall training program.

8. Assessment.

a. ESC's Developing and Managing the Corps Work Force for Future Missions study identifies and highlights the opportunities afforded the Corps in future assigned missions and specifically cites the skill levels required by the Corps' work force to attain its mission goals. Intensive corporate management of human resources, together with channelled training and development of Corps employees, will be required to meet the challenges of the future.

b. Despite some lingering problems, the current state of training and development in the Corps is far from bleak. In fact, there has been much change and improvement over the last 4 years. The ESC task at this time is not only to assess the current program's adequacy, but to project that program into the decade of the 1980's, anticipating changed Corps mission requirements and the expected turnover of Corps personnel. This monograph includes major recommendations, reinforced with rationale and background data.

IV. TRAINING AND DEVELOPMENT NEEDS

9. Training Parameters.

a. Training and development in the Corps is both for organizational and individual career needs. Both types of needs often merge for mutual benefit. Although training should normally enhance an individual's career, management must make the final determination as to whether training is needed to benefit individual performance.

b. This section does not address the individual career needs of the employee, nor does it address in detail the specific courses in the Corps' training program. Rather, it identifies broad areas for training and development in view of the anticipated Corps personnel turnover and expected new mission challenges of the 1980's.

10. Mobilization.

RECOMMENDATION: DEVELOP A COMPREHENSIVE MOBILIZATION
TRAINING PROGRAM

a. Current status. The Corps' peacetime missions to some degree prepare it for wartime exigencies (notably through its capability for responding to natural disasters). However, there is currently a "low level of general awareness and appreciation of the magnitude of [wartime] mobilization requirements."^{6/} The recent Corps mobilization support posture studies and Corps participation in Exercise Prize Gauntlet^{7/} have served to elevate the

^{6/} Department of the Army, Office of the Chief of Engineers, United States Army Engineer Studies Center, Corps Mobilization Posture. Washington, D.C., February 1980.

^{7/} Department of the Army, Office of the Chief of Engineers, United States Army Engineer Studies Center, Engineer After Action Report, Exercise Prize Gauntlet (U). Washington, D.C., April 1980. (SECRET).

Corps' awareness of its wartime requirements, but much work remains to be done.

b. Mobilization course availability. The Corps has no designated mobilization training programs at this time. However, some courses already in the Corps' inventory might lend themselves to restructuring for adaptation to mobilization needs. Furthermore, HND and CW are presently developing mobilization training courses. Some military construction courses may be of value to personnel cross-training for mobilization functions, and existing management and training courses for Corps personnel also might be easily expanded to cover the mobilization mission.

c. Personnel impact. Peacetime Corps missions are primarily in the CW area. In fact, nearly 75 percent of all Corps employees are engaged in CW projects. Yet, all but critical CW functions will be terminated in a wartime environment and main Corps efforts redirected to military programs. It is estimated that more than 20,000 CW employees will become available as primary manpower resources for mobilization support work. To fully and productively use these Corps employees, they must be trained/cross-trained prior to a mobilization emergency.

d. ESC perceptions. The ESC Corps mobilization support study series, specifically the Corps Mobilization Posture (February 1980), addressed the entire topic of Corps mobilization support and strongly emphasized the need for additional Corps planning and training to meet its expected mobilization support role. The study makes the broad recommendation that efforts should be made to inform all Corps personnel of their mobilization responsibilities through a comprehensive training program conducted by HND and consisting of:

(1) Initial and follow-on courses to assure complete mobilization understanding by all personnel.

(2) A key manager's course for executing managerial mobilization roles.

(3) A training course for mobilization planners.

(4) A general orientation course on mobilization construction management and procurement activities.

e. Rationale. This recommended course of action will ensure that the Corps will be better prepared to meet its wartime mobilization commitments and will thereby generally improve the Nation's response during mobilization periods. Failure to plan and train for mobilization would be a disservice to the Nation and would be contrary to the Corps' commitment to support the total Army.

11. Management.

RECOMMENDATION: INCREASE MANAGEMENT TRAINING PROGRAMS
IN THE CORPS

a. Current status.

(1) Like other elements of the Federal Government, the Corps needs trained managers in the areas of general management (primarily at division and district levels), project management (for planning studies and design/construction), and in contract management (for the intensifying contracting activities). Some management training is already available in-house—not specifically for training of managers, but rather as fillers in the technical training of personnel. Training of managers is of high priority for the Corps to meet the needs of the future.

(2) Managers^{8/} are in extremely short supply in the Corps today.^{9/} There is no conscious career plan nor training program for management positions. In many instances, personnel are promoted into management positions based primarily on their technical competence, leaving management expertise to be achieved principally through on-the-job training. At this time, the availability of experienced management personnel is being reduced by the exodus of many senior managers (grades GS-14 and above) due to retirement. Projections of Corps personnel turnover for the next 5-year period indicate that a further depletion in the management ranks can be expected. Personnel turnover is discussed in detail in the ESC monograph, The Corps Work Force in Transition, published in July 1980. Management shortages are now primarily in study/project managers and general managers. Also, it is anticipated that there will be increasing shortages in the areas of contract management. To partially overcome the managerial shortfall, there have been attempts to identify personnel with management potential and to structure their career growth. The Executive Development Group (EDG) program is the primary vehicle for such attempts. Inclusion in EDG is dependent on personal desire as well as

^{8/} One who is responsible for integrating the decision-making structural and behavioral components of an organization to accomplish organizational objectives.

^{9/} Department of the Army, Office of the Chief of Engineers, United States Army Engineer Studies Center, Developing and Managing the Corps Work Force for Future Missions. Washington, D.C., July 1980. "The strongest point of consensus on current skill shortages was the need for managers...study/project managers and general managers....Study/project managers were almost unanimously identified as the skill shortage of greatest concern....The other management category shortage identified during field visits was that of general managers. (Shortage is not really the correct description since there are presently no civilian positions of general managership in the Corps' organization structure.)...Since implementation of this Act [CSRA] will require redefining and analyzing a wide range of Corps positions, the opportunity is provided for the Corps to assess establishment of general manager positions."

supervisor recommendation. Implementation of CSRA provisions should further expedite the early identification of personnel with management potential because of the Act's stringent requirements for consideration of candidates for the Senior Executive Service (SES). At this time, however, training to develop managerial skills is largely on-the-job which does not appear adequate to satisfy the future needs of the Corps. As stated in Developing and Managing the Corps Work Force for Future Missions and the monograph, Managing the Corps Work Force, survey instruments such as the Management Audit Survey (MAS)^{10/} can be very useful in matching an organization's training program with its operational needs. The MAS has been used successfully in five Corps organizations so far. It measures the organization's work climate and provides a means of focusing training and development efforts on areas needing improvement.

b. Course availability. As stated above, the Corps' managerial needs are primarily in the areas of study/project managers, general managers, and contract managers. In assessing the available long-term and short-term in-house training courses, it appeared initially that many lend themselves to management training. Yet, on closer evaluation, it became evident that management was not of primary consideration in structuring these courses. For example, the Planning Associates Program, conducted annually by the Board of Engineers for Rivers and Harbors (BERH), has an objective to "develop generalist planners who will manage complex planning studies...." Further, the prospectus states that ultimately it is possible to "become a study manager

^{10/} Institute for Behavioral Research in Creativity, Applications of the Management Audit Survey (MAS) to the U.S. Army Corps of Engineers--Final Report. By Robert L. Ellison, et. al. CERL Contract DACA 88-78-C-0010. Salt Lake City, Utah, July 1979.

responsible for directing large studies and formulating recommendations for solutions to major problems.^{11/} However, actual management training accounts for at most 2 weeks (out of an 11-month course) and is provided by outside contractors. Therefore, the Corps' in-house program for training managers needs to be substantially improved. Also, numerous management courses and programs are available to Corps personnel from external sources. Primary among these are the Brookings Institute, Federal Executive Institute, Harvard Business School, and the American Management Association.

c. Personnel impact. More than 65 percent of the Corps' professional work force^{12/} at each grade level is expected to become new in their jobs during the next 5 years. This high level of turbulence in the managerial segment implies a significant need for increased training and development and a significant opportunity to prepare the work force to meet the changing demands that will be placed on it. More than 3,400 employees will require additional training, both formal and on-the-job, during the next 5 years to assure a continuing high level of professionalism in the Corps' work force. In addition, some supervisory and managerial personnel not in the professional segment should also be provided the opportunity for training and development to avoid the need for "crash" management programs later on. The proper implementation of CSRA will assure some degree of initiative and continuity in molding future Corps managers; however, its impact on training and development cannot as yet be assessed.

^{11/} Department of the Army, Office of the Chief of Engineers, Careers. Washington, D.C., Undated.

^{12/} Professional work force is defined as the 12,500 personnel classified as scientists, engineers, and other selected occupations.

d. ESC perceptions.

(1) The Corps has an ever increasing need to acquire and maintain management skills as it undertakes new missions and must deal with an advancing technology. Study/project managers are critical in assuring that the Corps continues its high level of performance. There is currently a significant shortage of these managers in the Corps. Courses should be established which will train personnel to manage all phases of projects to include planning the schedule and budget, negotiating task commitments with functional support elements, monitoring progress to assure commitments are met, and handling customer relations.

(2) There is also a need for general manager positions in the current Corps organizational structure. General managers at the division and district levels will be required in the 1980's to assure the most effective results in all areas of production. Much of this training can be achieved in-house through effective cross-training/utilization, but must be reinforced by specialized training courses.

(3) Finally, there is a shortage of contract managers. It is expected that as Corps missions expand, more work will be contracted and more contract managers will be required. Since there is no specific career series for this category, there is a need for defining required job criteria, for recognizing the occupation as a major discipline, and for establishing a career pattern. Courses must be established to provide the necessary training and development.

12. CSRA.

RECOMMENDATION: FULLY TRAIN CORPS EMPLOYEES TO MEET
CSRA OBJECTIVES

a. Current status.

(1) CSRA implementation is already a Corps objective. Much has been accomplished since the DE Conference in October 1979 when a CSRA Task Force set goals and dates for Corps CSRA conformance. It is still of immediate concern since the Act mandates specific completion dates for implementation through October 1981. Training is therefore required as a high Corps priority to assure full compliance with the provisions of the Act.

(2) At present a CSRA Advisory Panel, composed of a cross-section of Corps line managers and personnel officers, is representing the COE in ensuring that the requirements of the Act are fully met. Training sessions have been held for managers and supervisors; all other employees received an orientation before the 1 May 1980 deadline. It is anticipated that the Corps will have all its employees covered by CSRA provisions and that it will fully implement the requirements of the Act by 1 October 1980--12 months before the mandated completion dates.

b. CSRA course availability. There are no specific courses available to fully train Corps employees in the implementation of CSRA. Since the intent of the Office of Personnel Management (OPM) is to fully decentralize all personnel functions, only the broadest guidance will and does emanate from that level--agencies are encouraged to implement the Act as applicable to local needs. The Corps has opted for ad hoc, in-house training courses for its personnel based on guidance received from the Civilian Personnel Office, OCE. Thus, there is no intent to institutionalize CSRA training courses.

c. Personnel impact. Ultimately, all Corps personnel shall have received training and orientation in CSRA. More than 7,000 managers and supervisors have received at least one 8-hour session accomplished in-house; other personnel have received a 2-hour in-house orientation on the Act. Additional training will be required in the future. For example, merit pay group employees will soon have to receive merit pay system training. Other training may have to be given to selected employees to assure full compliance with the Act and to prevent incidences of employee grievances.

d. ESC perceptions. The total impact of the CSRA implementation effort cannot be fully assessed. Certainly, the COE's interest in having the Corps' CSRA implementation preeminent in the Army community may necessitate additional and more intense efforts in future months. At present, the 8-hour course for supervisors and managers and the 2-hour orientation course for all other employees appear to be sufficient. More comprehensive and more costly training may be required to assure full compliance with CSRA in the future.

e. Rationale. CSRA is a law and must be adhered to. Aside from its mandatory nature, some aspects promise to bear fruit through better training for individuals and a generally more coherent training effort locally. All efforts must be made, regardless of cost, to assure the Corps fully understands and complies with all facets of CSRA. The ongoing training program and other Corps implementation efforts will ensure that the Corps complies with the full intent of the law.

13. Real Property Management Activity (RPMA).

RECOMMENDATION: TRAIN PERSONNEL TO MANAGE CORPS RPMA MISSIONS

a. Current status.

(1) The Corps recently was assigned the mission of real property management for the National Capital Region (NCR). Although experimental at this time, the assignment has the potential for later application on a larger scale. Moreover, the Corps has expanded its installation support role through its "one-stop service" and may gain additional responsibilities for RPMA for mobilization bases through its mobilization support responsibilities. Although courses are available that can accommodate the facilities engineering management need for NCR, they may not meet the requirements of expanded RPMA responsibilities. RPMA may ultimately be of high priority in the Corps.

(2) The Corps is presently moving towards assuming the RPMA responsibilities for all Army installations in the NCR by 1 October 1980 and developing plans for its mobilization support role. These responsibilities are complex and difficult and present a challenge to the engineer family. In the event that the Corps is assigned the mission for Army-wide RPMA, the requirement for management skills will magnify. The Corps elements assigned these responsibilities must be staffed with highly qualified managers, and such managers are not readily available within the Corps. A minimal number of courses are already available to increase the number of managers available; other courses are being developed and should become available in the near future. However, acceptance of Army-wide RPMA responsibilities necessitates taking on already in-place training programs and assuming Corps management of these programs. The transfer of Army courses to Corps responsibility could strain existing resources beyond acceptable limits. Training is not required

now. What is required now is an awareness of the magnitude of the potential mission and planning for its implementation. This will permit the Corps to react positively in the future and stay well ahead of the requirement.

b. Personnel impact and course availability. At this time, taking on RPMA functions for the NCR will not necessitate changes in the training program since courses and course quotas meet the present needs for available personnel. If and when these functions are accepted by the Corps for the entire Army, the Corps would presumably also receive the 27,000 facilities engineering personnel who do the work. Although total numbers of personnel required to meet the proposed expanded Corps mission cannot be determined at this time (depending on phasing of transition), they should number less than 500 managers for the entire Corps.

c. ESC perceptions. There appears to be a lack of interest on the part of engineers in becoming more involved in RPMA functions. Yet, future Army needs necessitate greater emphasis on this facet of engineering. There is a requirement to attract highly qualified people who have the capability to adapt to the needs of the user^{13/} and who are able to assimilate the management skills required to deal with the complexities of RPMA. This already has been accomplished by the Navy with its operations in the Facilities Engineering Command and is considered by participants to be a prestige assignment. It appears that a similar RPMA program in the Corps would not require massive expenditures for training, would require only a minimal expansion of course quotas for existing courses (and that only in the near future), and could ultimately result in more functional facilities with lower life-cycle cost

^{13/} Junior engineers assigned to operations and maintenance could be rotated through facilities functions at installations to understand customer requirements.

since their design and construction would be more inclined to consider building operations and maintenance.

d. Rationale. This recommendation is intended to increase personnel awareness to a Corps mission which could potentially assume increasing importance over the next few years. It should create a basis for greater appreciation of an important Corps program which has not been given the emphasis it requires.

14. Hydrologic Engineering.

RECOMMENDATION: PROVIDE NECESSARY TRAINING TO MEET
FUTURE HYDROLOGIC ENGINEERING SKILL
NEEDS

a. Current status.

(1) Available hydrologists appear sufficient to meet the Corps' current water management responsibilities. Although there are some scattered hydrologist shortages throughout the Corps, they are primarily regional and not Corps-wide. As discussed below, this picture changes when expected new future requirements are factored into the assessment.

(2) Most Corps hydrologists are trained at the Corps Hydrologic Engineering Center (HEC), Davis, California. Because Corps employees seem to perceive that promotion opportunities for hydrology journeyman are severely limited, many hydrologists change their occupational series as they advance in seniority. This situation is reflected in the CORPSTRAT^{14/} which identifies more than 1,150 personnel as working in the hydrology field, while only 57 personnel are identified as members of the hydrology engineering occupational series.

^{14/} Department of the Army, Office of the Chief of Engineers, Engineering Automation Support Activity, Corps Stratification. Washington, D.C., Reports dated 1975 through 1979.

b. Future status. Future Corps missions, both foreign and domestic, will require additional hydrological skills, creating potential occupational shortages. Unfortunately, the skills are not readily available in the private sector (hence, cannot be recruited). In fact, increased contracting by the Corps could incur private sector raids on available Corps personnel with hydrologic engineering skills. This could ultimately result in a shortage of mature, trained hydrologists. The Corps then might not be able to meet the needs of its assigned missions. HEC does, however, have the potential to substantially increase its training capacity with only a modest investment in resources. Not considering these future expansion implications might severely limit the expected Corps response capability.

c. Courses available. HEC currently conducts a number of courses relating to hydrology. Future needs for trained personnel in this field can be met by expanding the Center's training capacity.

d. ESC perceptions. A continual drain on the Corps' available pool of hydrologists could result in a severe skill shortage which would be difficult and time-consuming to remedy. A small investment in HEC training would ensure that Corps requirements for the future can be met. These specialized skills are so pivotal to Corps effectiveness that we cannot risk being caught short.

e. Rationale. The Corps must maintain a substantial depth in its manpower pool of hydrologic engineers. Analysis reveals that employees with hydrologic skills are in a delicate balance between regional shortages and training capacity limitations. New missions worldwide promise to draw heavily on hydrologic engineering skills, and the Corps might be embarrassed if, for

lack of trained hydrologists, it refuses new programs in this traditional Corps area of expertise or performs at less than the expected level.

15. Required Courses and Personnel Implications.

a. This paragraph identifies and discusses courses required to meet the future requirements of the Corps. The courses and other programming information are described in Figure 1.

b. Although new and specialized courses are suggested for the various areas of interest, it is certainly possible that some available courses might lend themselves to changes and modifications. Therefore, it remains for some agency (e.g., OCE Civilian Personnel Office or HND) to examine all existing courses and decide whether to add to them or develop new courses. Course requirements related to mobilization support and management are discussed below. Other training requirements such as CSRA and RPMA are not discussed further as they can be accommodated by the present system.

(1) Mobilization training. It is assumed that about 20,000 employees can be made available for cross-training to perform effectively in a mobilization/wartime environment. Yet, key personnel, namely mobilization managers and planners (300 positions), must be identified early and be started on their training programs. Key managers must fully understand all mobilization requirements to provide their divisions/districts with the leadership to ensure a smooth and rapid transition into a wartime situation. Mobilization planners must be assigned this responsibility with a strong commitment by management. At present, mobilization planning in divisions and districts is normally given to junior professionals as an additional duty, sometimes for indoctrination, but hardly ever as a task vital to the future of the Corps.

PROPOSED NEW IN-HOUSE TRAINING COURSES--5-YEAR PERIOD

Course Title	No. of Personnel Eligible	Course Frequency ^{a/}	Course Length	Course Location	Course Presentation	Comments
Mobilization/Orientation	40,000	One time	1 hr	Div/Dist/FOA ^{b/}	Videotape	Dual purpose: informative; indicate Corps priorities.
Mobilization Management	200	6 per yr	80 hrs	HND	Classroom	Four managers per div and dist.
Mobilization Planner	100	4 per yr	80 hrs	HND	Classroom	Two planners per div and dist.
Cross-training for Mobilization Roles	20,000	115 per yr	40-80 hrs	HND ^{c/}	Classroom	None.
General Management	650	4 per yr	160 hrs	HND	Classroom	Based on anticipated personnel turnover in grades GS-14 and 15 over next 5 years ^{d/}
Project Management (Includes Program Management)	2,200	12 per yr	80 hrs	HND ^{c/}	Classroom	Based on anticipated personnel turnover in grades GS-12 and 13 over next 5 years ^{d/}
Contract Management	Unknown at this time	27 per yr	40-80 hrs	HND	Classroom	Based on FY 80 contract management training (9 courses, 27 sessions).
Supervisory Orientation	7,000	One time	8 hrs	Div/Dist/FOA	Classroom	Already accomplished.
General Orientation	33,000	One time	2 hrs	Div/Dist/FOA	Classroom	Already accomplished.
Merit Pay Training	3,600	One time	4 hrs	Div/Dist/FOA	Classroom	To be accomplished by mid-CY 81.
Performance Appraisal	3,600	One time	4 hrs	Div/Dist/FOA	Classroom	None.
RPMA Management	500	3 per yr	40 hrs	HND	Classroom	Based on Corps' perceived need.
RPMA Orientation ^{e/}	5,000	One time	8 hrs	Div/Dist/FOA	Classroom	Specific requirement to be developed as need arises.

a/ Division/District/Field Operating Agency (FOA).

b/ Based on average class size of 35 people.

c/ May ultimately lend itself to presentation at divisions and districts.

d/ Department of the Army, Office of the Chief of Engineers, United States Army Engineer Studies Center, The Corps Work Force in Transition. Washington, D.C., July 1980.

e/ Dependent on Corps acceptance of expanded RPMA mission.

Figure 1

Rotation through this duty assignment is rapid and there is little or no continuity. This trend must be reversed.

(2) Management training. The shortage of trained management personnel in the Corps must be overcome with identifiable training to permit the smooth transition for individuals from a technical specialty to that of management. At present, the Corps already has a severe shortage of personnel with an acceptable range of management skills. The shortage is liable to increase as more of the senior managerial personnel reach retirement age. Therefore, it is absolutely necessary to assure greater participation in currently available management courses and to establish new courses where required. Corps performance in allocating funds for management and executive training has been trending in the opposite direction, with training funds for managers decreasing from 7.3 percent of the training budget in FY 75 to only 5.5 percent in FY 80. This trend also must be reversed.

V. ORGANIZATIONAL NEEDS

16. Introduction. A fundamental objective of the Corps' training policy is to provide training to increase employee efficiency and to encourage employee self-improvement. This section examines present organizational staffing, resources, and structure and identifies areas for possible change and areas needing further implementation.

17. Organizational Staffing.

RECOMMENDATION: ENHANCE TRAINING FOR TRAINING OFFICERS AND
MAKE TRAINING OFFICERS ACTIVE MEMBERS OF STAFF

a. Current status.

(1) Training officers are an integral part of the Corps' educational process. As such, their management and implementation of the training program should ultimately result in increased effectiveness and productivity of the work force. At present, training officers generally provide guidance to individual personnel only on request and rely on employee perceptions of their training needs. Thus, their role is essentially passive rather than active. Overall, training effectiveness is a reflection of the local training officer's capability and, thus, varies throughout the Corps.

(2) There is little centralization of training policy and practice in the Corps, and training style is uneven. The use of the training officer varies from division to division and district to district and depends primarily on the incumbents, their relationships to the division/district engineers, and the extent of division/district engineer interest in personnel training. Training officers act primarily as keepers of the available courses and as recordkeepers of courses attended (essentially a bookkeeping operation). Information is not readily available to them or anyone else concerning

the Corps' long-range goals and objectives and their impact on Corps professional personnel needs.

b. Personnel impact. The staffing level for training officers need not increase, but there should be an increase in the fraction of the training officer's time dedicated to that function. Since many training officers have multiple functions within their personnel offices, it is desirable to relieve them of as many of their other duties as possible.

c. Proposed future status. Training officer use must be maximized. One approach would be to hire only trainers with a university education who can effectively use training tools and align organizational requirements and individual needs. In addition, a training course for the Corps' training officers should be established at OCE level. Development for this course is ongoing. This recurring course should communicate Corps annual training needs as perceived by corporate management and chart personnel requirements for the next year. It also should provide training officers the tools to perform effectively in their own environments (e.g., externally available training resources such as OPM research and course development assistance). Training officers should learn how to become involved in staff planning deliberations. They should learn to actively participate through their input in the decision-making process. This largely untapped resource should be more fully used in employee counseling and in the budgetary process, identifying organizational needs, developing in-house training when appropriate, ensuring a strong management commitment to training, and interacting with all personnel involved with respect to training and development.

d. Rationale. Training staff awareness of Corps personnel needs, adapted to local requirements, will increase uniformity throughout the Corps

and result in a better balanced, better trained, and more productive work force. The professional training officer can become a more valuable resource for the commander and staff in planning for the future. In concert with line management, individual supervisors, and other Corps employees, they can help optimize Corps expertise and productivity.

18. Organizational Resource.

RECOMMENDATION: RESTRUCTURE THE MANAGERS AND SUPERVISORS
TRAINING HANDBOOK (Purple Book)

a. Current status.

(1) In 1977, the Corps produced a training handbook which, for the first time, identified all available training courses, both internal and external to the Corps. This loose-leaf publication was intended to help employees and managers satisfy both individual and organizational training and development needs. It also provides data describing Corps training policies and procedures and is intended to facilitate communication regarding training and promote sharing of courses among districts. It still is the principal reference for training today.

(2) The Purple Book is still very much in evidence throughout the various divisions and districts of the Corps. It is easily updated by users as current data are provided from OCE and does, in fact, present a compendium of training courses currently available in the Federal Government. It is organized according to the source of training, which simplifies administration of the program. However, uninitiated individuals desiring to use this publication either must have knowledge on the availability of courses at a specific location or scan through the whole book until they find a course that meets their requirements. This is often difficult and time-consuming.

b. Personnel impact. None.

c. Proposed future status.

(1) The Purple Book should be restructured to identify areas of training, with location of training becoming a secondary criterion. Furthermore, courses should be identified based on their criticality to career development in the major professional disciplines utilized by the Corps. Career enhancing courses should be listed separately, as differentiated from those courses which are for bridging disciplines or functions rather than job essential. If these course distinctions are not already evident for engineer and scientist careerists, a consultant in career development and career pathing should be hired to clarify the situation. An in-house effort would be too time-consuming or too labor-intensive over the short term. Career programs could be established based on local needs. (There must be communication, however, between divisions and districts and guidance from the Corps Training Committee to ensure ultimate compliance with Corps needs and objectives.) Since this publication is intended primarily for training and development of the Corps professionals, it should be adapted to their specific needs. Use of the Purple Book, together with implementation of the training provisions of CSRA, should lend credence to both organizational and individual career planning and formulation. Its overall value, both to the line manager and the employee, would be greatly increased.

(2) The restructuring of this publication is a simple (albeit costly) task which can be accomplished with a minimal time investment. However, the initial cost will be far in excess of the annual maintenance budget for printing and materials. The one-time cost to restructure the Purple Book to the format of the annual training needs survey^{15/} may be spread over a

^{15/} Annual survey conducted by HND to determine training needs for Corps-sponsored Short Course Training Program.

3-year period, thus minimizing the dollar impact. Yet, it is absolutely mandatory that this be accomplished during CY 80 to permit full Corps compliance with the training provisions of CSRA.

d. Rationale. Implementation of this proposal will enhance the training program by making the career enhancement aspects of training more obvious to everyone concerned (supervisors, subordinates, and training personnel).

19. Organizational Procedures.

RECOMMENDATION: ENFORCE PRIORITY SYSTEM FOR COURSES

a. Current status.

(1) Proposed short courses are validated by an annual training needs survey for the next fiscal year and projected for the next 2 fiscal years based on the anticipated training requirements. The survey also determines Corps interest in courses provided by other agencies, with HND having quota management responsibility.

(2) Training requirements to meet current and anticipated needs are assessed during the planning and implementation phase of the training cycle. Priorities are set based on how each division and FOA will influence anticipated mission accomplishment. These training requests are then consolidated at HND and, based on perceived need and cited priorities, implemented by establishment of training courses. Attendance at these courses is based on priorities indicated; yet Corps organizational priorities are not always considered relevant nor adhered to by divisions and FOAs. Quotas are often established based on available funding and then manipulated without regard for long-term needs.

b. Personnel impact. None.

c. Proposed future status. Priorities that are established must be meaningful and adhered to by both HND and the requesting organization. HND efforts must be productively employed and not dissipated in establishing courses and quotas that are not of the highest priority. This will ensure that HND capability can be fully responsive to Corps needs and objectives, and that its capacity can be fully utilized.

d. Rationale. There is a cause-effect relationship between course establishment and assigned priorities. Enforcement of the priority system is cost-effective and inexpensive. Training resources can be more efficiently used while honest priorities will help ensure that the right training goes to those who should get it. The line managers and supervisors must perform their roles as envisaged under the training provisions of CSRA, and ultimately both the organization and the individual will benefit.

20. Organizational Structure. Training and development responsibility for the Corps is still fragmented despite previous recommendations to consolidate all activities within one organization at OCE.^{16/} The last reorganization of OCE gave RMO the responsibility for exercising staff supervision of all Corps-sponsored short courses at HND with the balance of training responsibilities remaining with the Civilian Personnel Office. Subsequent to this, CSRA became law and training now is assuming a larger role in setting performance standards and developing performance appraisals, with the intent of improving performance and enhancing productivity. The Corps must speak with one voice on training and development and must minimize internal confusion, uncertainty, and unnecessary duplication of effort.

^{16/} Department of the Army, Office of the Chief of Engineers, United States Army Engineer Studies Center, An Evaluation of CE Civilian Training. Washington, D.C., January 1977.

**RECOMMENDATION: CONSOLIDATE ALL TRAINING ACTIVITIES IN
CIVILIAN PERSONNEL OFFICE, OCE**

a. Current status. At present, the Civilian Personnel Office, OCE is responsible for developing corporate policy and procedures for all employee training and development except OCE-sponsored short courses. As such, that office manages, administers, and implements the executive development program, upward mobility programs, and cooperative (CO-OP) programs (among others). RMO (one training officer working directly for the Deputy, Management Activities) is charged with developing and directing improved training programs to accomplish Corps missions and with exercising staff supervision over HND on all accomplished OCE-sponsored short courses. In this task, RMO is assisted by the Corps Training Committee and the TRACE in providing general direction and in identifying manpower and other resources needed to fully train Corps personnel. TRACE also is charged with giving HND guidance on courses that are required and on course proponency. HND is solely responsible for managing its training mission.

b. Personnel impact. One position is affected only in that it moves from one element of the OCE Staff to another.

c. Proposed future status. Figure 2 is a proposed reorganization chart. RMO, together with input from the OCE Civilian Personnel Office, would formulate money and manpower ceilings, and accommodate Corps mission changes as they occur similar to their other staff areas of interest. The Civilian Personnel Office would, as now, continue to develop Corps policy and procedures for employee development and training. That office would also exercise staff supervision over both the Training Center in HND and over FOA personnel offices in the performance of their training and development functions. HND would continue to receive command guidance from the COE and would be

PROPOSED RESPONSIBILITIES—TRAINING AND DEVELOPMENT

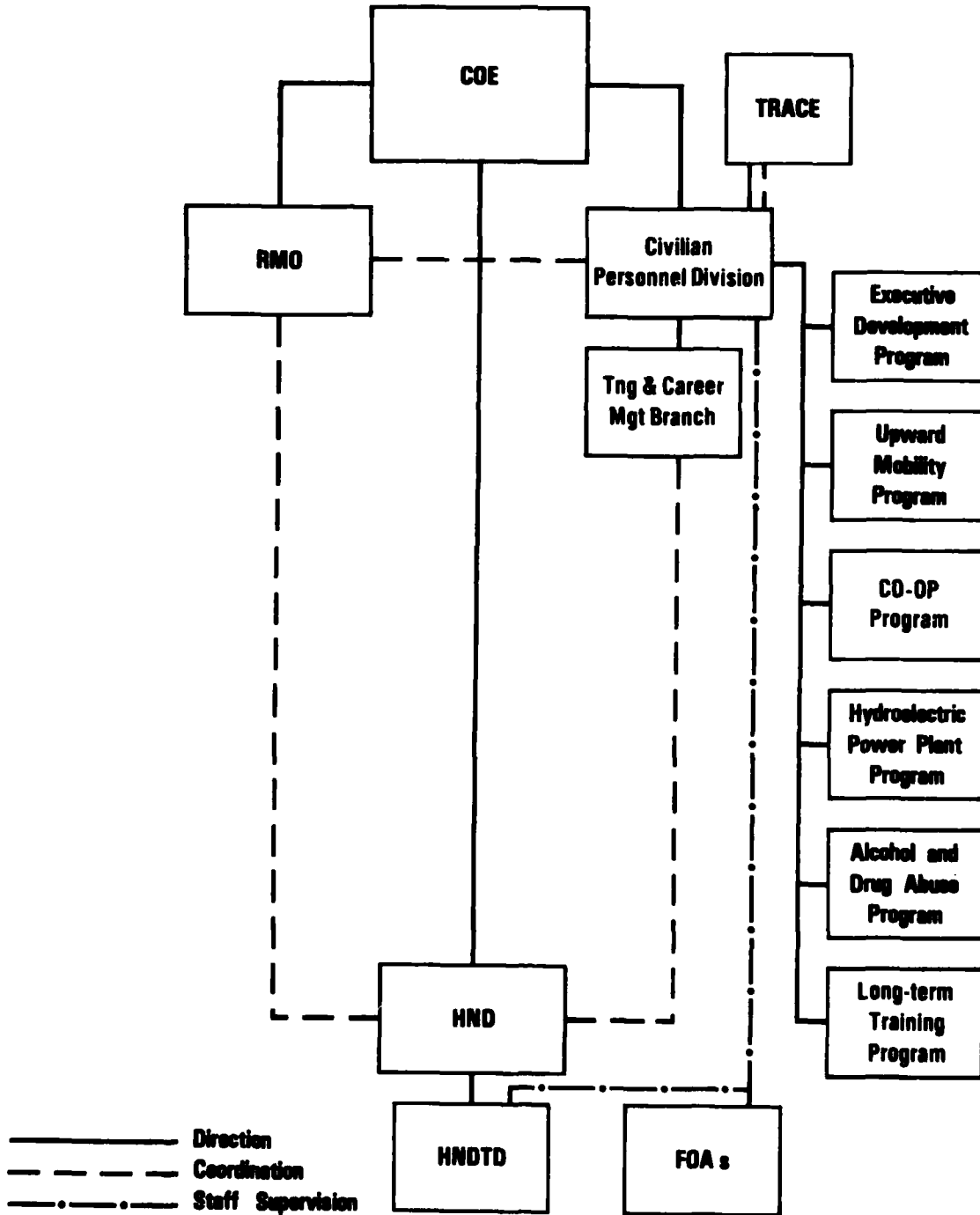


Figure 2

responsible for managing execution of the in-house, centralized training program. Efficiency, effectiveness, and relevance of the Corps training program and training cycle are directly dependent on the interaction, coordination, and communication among concerned entities (i.e., TRACE, HND, RMO, and Civilian Personnel Office). Overall direction for the training program at HND, however, must continue to be provided by the COE to the DE, HND.

d. ESC perception. In 1977, ESC recommended consolidation of all training activities in the newly created RMO. ESC still considers that implementation of that recommendation would enhance training and development management. However, since training and development now is managed primarily by the Civilian Personnel Office, it is more cost-effective to move the remaining vestige of training in RMO to the Civilian Personnel Office and actually give that office full responsibility for direction of the entire Corps program. Furthermore, the Corps will be in conformance with the Deputy Chief of Staff for Personnel policy of training being a personnel function.

e. Rationale. The overall intent of this proposal is to put all of Corps training and development responsibilities in one office, thus establishing a centralized management system and improving program cost effectiveness. Confusion and uncertainty in the field and perceived lack of direct guidance will be eliminated as training direction will be closely aligned to the current Corps missions and long-range goals and objectives.

21. ESC Insights--Organization, Training, and Development.

a. The evolutionary process of ongoing personnel turnover and of current and future mission changes of the Corps necessitates that our operational and functional training and development system be appraised and evaluated now to assess the changes that will be required to meet the needs of the

1980's. A fresh approach is needed to look at Corps training philosophy, training style, and training techniques.

b. CSRA is a newly available, effective mechanism which lends itself to enhancing the training program since, for the first time, it makes the line managers and immediate supervisors essential players in the training cycle. The full implications of innovative CSRA implementation are provided in the September 1979 ESC monograph, Management Implications of the Civil Service Reform Act (CSRA). Training has been elevated to an identifiable factor both in performance standards and in performance appraisal. It is a management tool which facilitates proper planning for the future by causing line and corporate management to consider both organizational requirements and individual needs. The proper use of CSRA can make training more effective and meaningful, both to the individual and the Corps, and could well lead to the greater productivity that all organizations seek.

c. Our training program must become more results-oriented. A redirection of training and development efforts, use of new training techniques, and an insistence on enhancing interpersonal communication skills can provide more meaningful training and development for all. Ultimately, this should result in increased Corps productivity, improved employee performance, and continued quality products for both the Army and the Nation.

VI. RESOURCE REQUIREMENTS

22. Introduction.

a. All training and development in the Corps is affected by manpower and funding allocations. At this time, Corps leadership is committed to increased training and development as a way of becoming more responsive to the needs of the 1980's. Yet, ironically, training and development funds are normally among the first affected in a budgetary reduction and in a mission reprioritization.

b. This section identifies the current Corps commitment to training (both in actual expenditures and manpower), makes comparisons with training commitments of other comparable organizations both within and outside the Federal Government, and recommends future required resource commitments.

RECOMMENDATION: OVER NEXT 5 YEARS, INCREASE TRAINING TO
1 PERCENT OF ANNUAL OPERATING BUDGET
AND
FENCE FUNDS ALLOCATED TO TRAINING

23. General. Corps training expenditures for FY 80 amounted to \$27.4 million. Figure 3 shows training and development costs by type, training incidences, and salary expenditures. Included are approximately 50 man-years of effort by local training officers in support of the current training level, as well as 20 man-years by HND. More than 50 percent of training costs are for student salaries (which are paid regardless of whether or not a person is in a training mode). Of the total allocation, 22 percent goes for travel and TDY.

CORPS TRAINING AND DEVELOPMENT COSTS, FY 80^{a/}
(In Thousands of Dollars)

Type	Number Trained	Direct Costs ^{b/} (\$)	Indirect Costs ^{c/} (\$)	Total Costs (\$)	Salaries ^{d/} (\$)	Grand Total (\$)
Management	404	1,417	423	827	585	1,412
Supervisory	411	3,534	388	799	1,356	2,155
Spec, Tech, Administrative	2,502	14,942	3,055	5,557	5,770	11,327
Med, Legal, Engr	1,709	6,069	1,757	3,466	3,429	6,895
Clerical, Adult Basic Ed	373	4,014	262	635	1,583	2,218
Trades and Crafts	165	677	129	294	834	1,128
Other	73	<u>1,212</u>	<u>53</u>	<u>126</u>	<u>270</u>	<u>396</u>
Total	5,637	31,865	6,067	11,704	13,827	25,531
45 Employees ^{e/}						1,900
Grand Total						27,431

a/ Actual and projected.

b/ Instructor salaries.

c/ Includes travel and TDY costs.

d/ Student salaries.

e/ Long-term training students (salaries, tuition, per diem, etc.).

Figure 3

24. Current Status.

a. The Corps is one of the foremost users of training and development among Federal agencies. Based on the most recent data available, the Corps has less than 2 percent of the whole Federal work force, yet its expenditures for short-term training (not exceeding 120 days) accounted for nearly 5 percent of total Federal training expenditures and nearly 4 percent of total

training incidences. It is significant that the other Federal agencies over the past few years have reduced their commitments to training and development and that this trend is likely to accelerate in the current anti-inflationary, tight-money environment. Fortunately, the Corps is remaining relatively stable on this issue and plans to remain so over the near term.

b. The heavy Corps emphasis on training and development is necessitated by the Corps' rather unique position in the government and its role vis-a-vis private industry. We support the Nation in conservation and management of national/natural resources while also supporting the Army (and the other services) in pursuit of its assigned defense missions. The Corps must remain current in the many highly specialized skills needed to perform these functions and maintain a rapid-response military capability. Furthermore, the Corps is often judged against standards of the private sector as it performs its functions in a highly visible and controversial environment. We must be competitive. Our training program to date has been effective in meeting set goals--it has adjusted to meet the changing missions since 1977 and has resulted in a well-trained, responsive work force. Corps training efforts can continue at no less than the current level of commitment. Additionally, new missions are looming in the immediate future, and current funds cannot accommodate the new requirements in addition to existing training needs. The proposed ESC restructuring of the Corps work force to adapt to the needs of the 1980's demands increased funding for training.

c. At present, Corps training expenditures amount to approximately 0.5 percent of the Corps' annual operating budget based on CW and military programs appropriations. Although the Corps expends a far greater percentage of training funds than any other agency in the Federal Government, this is

often less than in private industry.^{17/} Unfortunately, most private firms are extremely reluctant to publicize their training expenditures as an identifiable part of their annual operating budget. However, based on the most recent information available, Bell Telephone annually spends \$1,300 per employee on training, Chase Manhattan \$900 per employee, and the electronic data processing (EDP) industry \$1,181 per employee. The Corps per capita average for FY 80 is \$647.00.^{18/} Private industry training budgets depend on various factors, but particularly on employee turnover rates and difficulties in training employees for specific specialties. Both of these factors are relevant to the Corps where turnover will be significant during the next 5 years and 20 percent of the work force consists of scientific and engineering careerists.

d. In funding for training in the Corps, with the sole exception of executive development, costs of training are charged to projects. The current dynamic is that training funds are shrinking because of decreases in supervision and assurance (SA) funds (overhead costs). This could and does impact adversely on training; e.g., a recent cut in travel funds almost immediately resulted in a reduction of student attendance at HND.

e. In the January 1977 ESC study, An Evaluation of CE Civilian Training, the state of training in the Corps was assessed as good. However, it was suggested that minor "fixes" be made in the management of the total program and that small shifts of emphasis would result in a program closer to optimal. This has occurred to a large extent, although overall procedures and policies still require some minor modifications. More funding is required to

^{17/} Planning Research Corporation, Memorandum to Engineer Studies Center, Training Budget for the Army Corps of Engineers. Washington, D.C., March 1980.

^{18/} Based on Corps civilian work force of 42,500.

accommodate the Corps' mobilization support activities and to enhance availability and development of managers for the coming decade.

25. Proposed Future Status. The Corps' resource commitment to training and development must be increased. More planning consideration must be given to training to meet the Corps mobilization support mission and to elevating the Corps' management capabilities for the 1980's. Although HND has assigned two of its engineer division employees to develop mobilization training courses, this effort is considered to be too small. (Management training is being partially addressed in a Civilian Personnel Office pilot program for management skills, open to all EDG members Corps-wide. However, only two courses will be given this fiscal year.) The recommended increase in training funds will ensure that the Corps continues to maintain its expertise, both in current and forthcoming missions. Since past records do not permit a thorough comparison of training needs and training commitments, it is assumed that current training expenditures are realistic. Thus, about 0.5 percent should be considered the absolute minimum proportion of the total operating budget committed to training. Since the Corps is revitalizing its capability for mobilization support, this commitment must be increased incrementally to meet those additional requirements. Moving toward allocating 1 percent of the budget to training over the next 5 years will permit the Corps to keep pace with its increased responsibilities and will also enhance its management capabilities. Also, "fencing" the funds for training would prevent commanders from reprogramming funds for other uses. Although setting a proportional relationship of training funds to the operating budget would limit command flexibility to some extent, it would assure that perceived local needs will not have precedence over established Corps initiatives.

26. Training Costs. Costs for additional training required cannot be precisely established. However, a "ballpark" comparison can be made between the number of FY 80 training incidences and the perceived new training need for management and mobilization. In FY 80, there are 31,865 projected training incidences to enhance employee effectiveness in meeting current mission requirements. The total proposed additional training incidences required to meet only the Corps mobilization support mission and management needs over the next 5 years exceed 4,600 annually. This equates to an annual increase of nearly 15 percent based on current annual training incidents. It is assumed that monetary commitment must increase accordingly. Actually, however, costs tend to increase more sharply than incidences.^{19/} Based on FY 80 dollar commitment, this necessitates a minimal increase to more than \$31.5 million for training, well within the recommended incremental increases to the training budget for next year. Note: It is highly likely that first-year costs of the newly proposed training will be somewhat in excess of this figure due to start-up costs. This should even out over the 5-year period being addressed.

27. ESC Perceptions. An increase in funding for training is required solely to meet the COE goal of revitalizing mobilization support to the Army. It is also clear that new managers must be provided training to enable them to cope with the complexities of managing the Corps work force, Corps projects, and the Corps' increasing reliance on contracting. A minimal increase, however, will scarcely be sufficient to keep pace with known training expenditures in private industry, nor can it meet the requirements for training of that new 28 percent of the work force who shall join the Corps over the next

^{19/} Office of Personnel Management, Office of Work Force and Development, Employee Training in the Federal Service, FY 1978. Washington, D.C., 1980.

5 years. They will require more than the normal training to bring them to the required level of competency. Thus, future training and development funds must increase significantly to meet the combined impact of new missions, changing work force, increasing inflation, and gearing up to become more competitive with the training in the private sector.

28. Rationale. The Corps must maintain its capability and reputation for ready, rapid response to national and military requirements. Much applicable training is available through other agency and external sources, and the Corps must be careful not to duplicate any courses which can be purchased outright at lesser cost. Where Corps-unique missions and applications demand, however, the Corps must incrementally increase the funding levels for training (and administering such training). Cost implications of "buying" out-of-house talent rather than training for it must be considered. Can (or should) the Corps compete with private industry in hiring management-level employees with experience and applicable training? How much training, on-the-job and otherwise, will be required to train recruits from other agencies and the private sector in Corps procedures? ESC suggests that a "grow and train your own" approach to managerial development is the more cost-effective, least disruptive route in this already rapidly changing environment.

VII. SUMMARY

29. General.

a. Training is too important to be left only to the desires and intuition of the individual employee. The mechanism for implementing an active, ongoing training program already exists, but additional appropriations are needed. There is a requirement for constant application of management interest to ensure that both organizational requirements and perceived individual needs can be merged for the benefit of all. Fencing of training funds will effectively assure that training becomes mainstream to operations.

b. Corps needs now and in the future are such that they cannot be left to chance. The Corps should decide now to try to grow its own managers and experts rather than try to buy them full grown from the outside. This top-priority determination is not only realistic in cost and timing, but will permit us to maintain flexibility to meet upcoming Corps missions, objectives, and goals.

c. Line managers and supervisors must become an integral part of the Corps' training and development cycle. They must not only become aware of available courses and of their content, but also be intimately aware of the training needs and requirements of the work force. The recent enactment of CSRA has provided them with an effective mechanism to shape and motivate the work force to meet our needs.

d. Training is not costly. At present less than one-half of 1 percent is devoted to this activity. Additional funding will be necessary to gear up for new requirements and to meet our internal managerial needs. Thus, a minimal increase in training appropriations to about 1 percent of current CW and military program budget totals, together with elimination of existing

inefficiencies, is a small price to pay for the benefits that a good training program will endow. The Corps has a better chance of training the managers it needs and will continue to need than it has of being "price competitive" with private industry. Furthermore, the current and projected hiring freezes do not bode well for bringing in outside trained and experienced managers.

e. The balance of this section will not reiterate recommendations made earlier in this monograph; rather it will provide some further insights gained during the analytical process.

30. Training Officers.

a. A major factor in the implementation of a well-balanced, effective Corps training program are the training officers. They must work not only with the individual employees, but also with the line managers and immediate supervisors in determining the training and development needs. The training officers must be more than administrators and expeditors; they must have a genuine understanding of the missions of the Corps and the needs of the individual employees. As such, they are symbolic of the Corps' total management commitment to training.

b. Training officers must be fully aware of all available courses which can be of value to Corps personnel. Thus, they should make good use of the Federal training resource information system which the OPM maintains to strengthen training capabilities through information sharing. OPM also assists agencies in executive and management development, course design, management of the training function, and instructional technology. Furthermore, OPM also encourages interagency technology transfer throughout the government. Training officers must broaden their perspective and look at the "big picture" of how the Corps fits into the long-range objectives of the Army

and DOD. Thus, they should push course designers to include such vital topics as the Army Planning, Programming, and Budgeting System (PPBS) and its impact on Corps operations.

c. Training officers must be able to communicate to management the folly of cancelling attendance at courses to meet an immediate crisis without consideration of how training might avoid similar crises in the future. A small investment of resources now may save large amounts at a later time. Management must be convinced that it is in their interest to send only qualified personnel (i.e., able to meet course entrance requirements) to a course. It has been estimated by course proponents that from 10 to 15 percent of attendees at courses should not have been there. This is probably due to problems with obligations; i.e., divisions/districts being forced to pay for spaces whether or not they are used. This is wasteful and interferes with the courses of instruction.

31. Executive Development Training. In the past, many of the middle management positions were filled by candidates from the EDG. Participation in the program was primarily through recommendation of immediate supervisors. This has now been expanded to include all GS-13's and above who have been identified as being part of the Merit Pay Program under the provisions of the CSRA. It is assumed that since more than 80 percent of all Corps employees in grades GS-13 and above (approximately 3,000) ultimately will be in this category, they will be a major factor in assuming management positions in the future. Therefore, this facet of the management training program must be expanded to accommodate the increasing number of potential trainees. However, the EDG program funding was reduced by 50 percent during the current fiscal year. Policy and actions cannot continue at cross purposes and ensure a viable training program to fill one of the critical shortages in the Corps.

32. Resource Allocations. The total impact of increased training requirements to support the Corps' mobilization mission and for the Corps' accelerated need for managers cannot be fully assessed at this time. Corps managers and decision makers must now look at the financial requirements and availability of funds to set aside sufficient training resources (fencing) to accomplish new high-priority missions for the Army and to concurrently train its managers to meet the needs for these and other missions already in place. Since training for mobilization will involve primarily cross-training of CW employees for military functions, funding must either come from MC appropriations or from a general fund established for that purpose. Fencing of the funds would assure that training and development will not be adversely affected by being tied to a project and being reduced or curtailed as a project nears completion.

33. Course Availability. Course titles are not always what they seem. In the current vogue of becoming management oriented, various courses have been retitled to include the word "management," while course content has remained unchanged. Only the most discerning and knowledgeable training officers and/or Corps employees would know that they are not getting what is being implied by a course title. An agonizing reappraisal of all courses, by title and the relationship to course content, is required. Although somewhat time-consuming, this sanitizing of courses included in the Purple Book will be most beneficial in the future.

34. Data Availability. The Main Report, Developing and Managing the Corps Work Force for Future Missions (July 1980), identifies the lack of an adequate responsive data base on Corps composition. Lack of an adequate corporate-level management information system severely impedes planning

efforts in the Corps. The Corps Training Committee, course proponents, and Civilian Personnel Office all need such data as a regular input to their advice, decisions, and plans. As stated in ESC's monograph, The Corps Work Force in Transition, July 1980, there is a tendency to regard the Corps of Engineers Management Information System--Personnel Administration (COEMIS-PA) as a complete accounting of personnel. Unfortunately, it is not. Yet, the OCE Civilian Personnel Office has developed and is in the final stages of implementing a "training tracking system" which interfaces with COEMIS-PA. The system has a historical data capability and can also track the current and next 2-year's training plan. Although this system is considered a valuable management tool in forecasting budgets, preparing execution reports and other statistical data, it unfortunately is not Corps-wide since it does not include the Europe Division (EUD) and only partially includes the Pacific Ocean Division (POD). Care should be exercised to ensure that the entire Corps work force is included in any data base to permit accurate training forecasting and ready availability for long-range planning. A data array such as shown in Figure 4 rather pointedly portrays the Corps' requirement to train managers and employees at all levels. The extent of expected mobility, occupational changes, growth to supervisory experience (as indicated by Figure 4) suggests the need for a focused training and development program. The fluidity of the situation demands increased planning and training to offset predictable areas of shortage and change. The data portrayed in Figure 4 were gathered and compiled by ESC to address problem areas other than training, but they are helpful also in driving home many of the major points made in this monograph. Data such as these are useful to training committees and civilian personnel employees in planning short- and long-term training programs.

CORPS EMPLOYEE CAREER PROFILES^{a/}

Attributes (Sample Size: 638)	GS-11 (119)	GS-12 (133)	GS-13 (141)	GS-14 (112)	GS-15 (89)	GS-16 (38)	GS-17 (6)	ST ^{b/} (2)
Entry Age Into Corps	29.10	29.00	28.66	27.70	29.14	27.60	27.50	23.50
Entry Grade Into Corps	6.39	6.99	7.11	7.46	7.85	7.52	8.50	4.00
Years of Corps Service	12.30	15.00	18.50	20.60	22.50	25.33	24.25	41.50
Ages At Promotion To:								
GS-11	35.33	34.33	32.73	29.01	29.80	28.89	28.00	31.00
GS-12	--	37.94	34.55	32.51	32.81	31.99	30.67	32.50
GS-13	--	--	42.80	37.24	34.28	34.88	31.67	36.00
GS-14	--	--	--	42.49	40.98	38.21	38.00	41.50
GS-15	--	--	--	--	46.46	43.61	41.25	50.50
GS-16	--	--	--	--	--	48.57	45.00	--
GS-17	--	--	--	--	--	--	49.25	--
ST	--	--	--	--	--	--	--	58.00
Current Age	42.18	43.89	47.20	48.54	52.43	53.33	52.75	65.00
No. Lateral Moves	1.29	1.73	2.19	2.13	2.16	2.08	3.00	1.50
Occ Series Changes (%) (Avg No.)	51% (2.57)	57% (2.36)	65% (3.59)	73% (3.09)	76% (3.03)	84% (2.72)	100% (3.75)	100% (1.5)
Breaks in Service (%)	18%	20%	28%	30%	13%	24%	75%	100%
Mobility (%) ^{c/} (Avg No. Moves) ^{d/}	45% (2.24)	51% (2.69)	61% (2.77)	68% (2.75)	73% (2.6)	87% (2.73)	100% (3.25)	50% (5.0)
Supv Experience (%)	19%	39%	70%	79%	91%	100%	100%	100%
Eligible to Retire By 1984 (%)	23%	25%	34%	45%	59%	68%	60%	100% (Now)

a/ These data were derived from a search of 638 Corps employee 201 files (random sample of GS-11 through GS-15 and senior executive records).

b/ ST employees are supergrade employees whose salaries are set by Congress in accordance with Public Law 313.

c/ Percent with at least one move over 50 miles during career.

d/ For persons with at least one career move over 50 miles.

VIII. FINAL ASSESSMENT

35. Implementation of Recommendations.

a. This monograph has identified a variety of actions that should be implemented by the Corps to optimize and enhance our training and development program. However, no resolution has been provided on how to approach this vital, yet disconnected, project.

b. The COE recently (26 March 1980) established a committee of senior Corps leadership (Corps of Engineers Major Issues Committee--CEMIC) which is charged with assisting the COE in defining and articulating the major thrusts (or direction) of the Corps for the long term. One of their tasks is to generate strategy statements with target dates for each thrust area identified by them.

c. This training and development monograph lends itself to developing one long-range directional plan for the Corps. Various options can be identified and recommendations can be made on required decisions and their timing. It should be presented to the CEMIC for action.

LAST PAGE OF MONOGRAPH

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