

LOOKING TOWARDS THE FUTURE



a rewarding  
**CAREER**

with the  
**Corps of Engineers**  
**DREDGING FLEET**

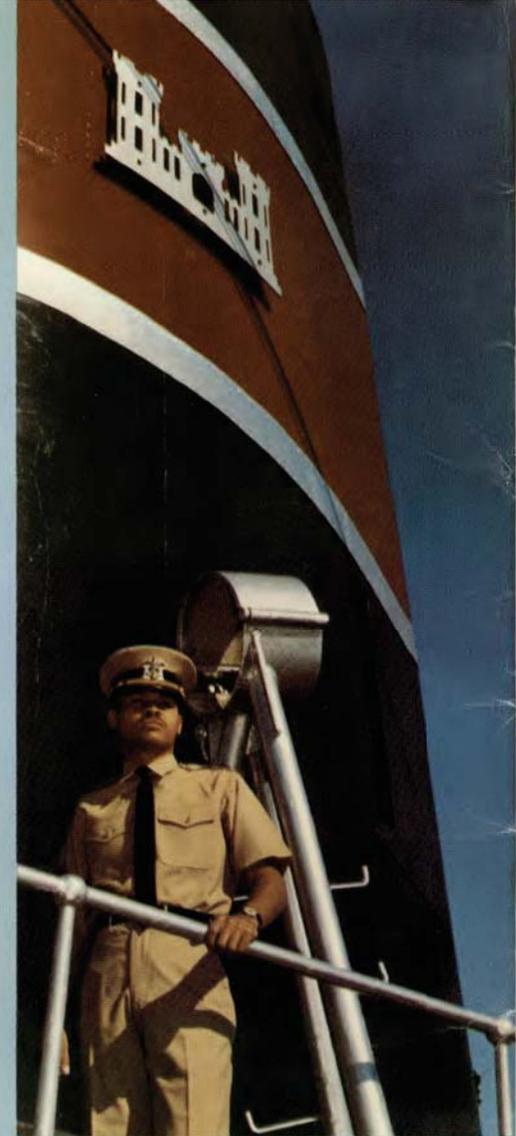
DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS

An equal opportunity employer



# Looking towards the Future

One of the most important decisions you face prior to graduation is the selection of a challenging and meaningful career. It is, therefore, desirable to thoroughly evaluate job opportunities offered to you. You should consider the organization with which you will be associated, the promotional opportunities leading to advancement and the personal challenges and satisfaction to be gained from the position you select. The Corps of Engineers has career openings for licensed Third Mates and Third Engineers (Steam and/or Diesel) aboard Hopper and Sidecasting Dredges that are engaged in improving and maintaining waterways in the Continental United States and in Overseas areas. We believe these employment opportunities warrant your careful consideration.



# WHO WE ARE

The Corps of Engineers, Department of the Army is the largest engineering and construction organization in the world. It has earned a reputation for transforming impossible tasks into realities. The variety of the engineering projects, both civil and military, performed by the Corps is unparalleled by any industrial or governmental organization.

# WHAT WE DO

In addition to the work of improving and maintaining the navigable waterways and harbors of the United States, our responsibilities encompass the following major areas:

Design and construction of beach restoration and nourishment projects which include the installation of jetties, groins and placement of material to restore offshore slopes to a stable condition.

The design and installation of structures and revetments for channel stabilization and to protect the slopes and levees of major waterways such as the Missouri and Mississippi Rivers.

The construction, maintenance and operation of flood control structures, hydro-electric dams including irrigation and recreation features, and the locks, spillways and dams required in canalized projects.

The design and construction of major structures and facilities for the Army and other military services including guided-missile sites, air bases, hospitals, training facilities, munitions plants and similar facilities that are vital to defense and to the advancement of the Country.

The design and construction of major structures and facilities for NASA and other Civil Agencies including vertical assembly buildings, gantry cranes, control stations and launching pads for space exploration.

Surveying and mapping of the Earth's surface and preparation of Lunar and Mars mapping programs. Development and distribution of maps required by the U.S. Army.



## THE DREDGING FLEET OF THE CORPS OF ENGINEERS

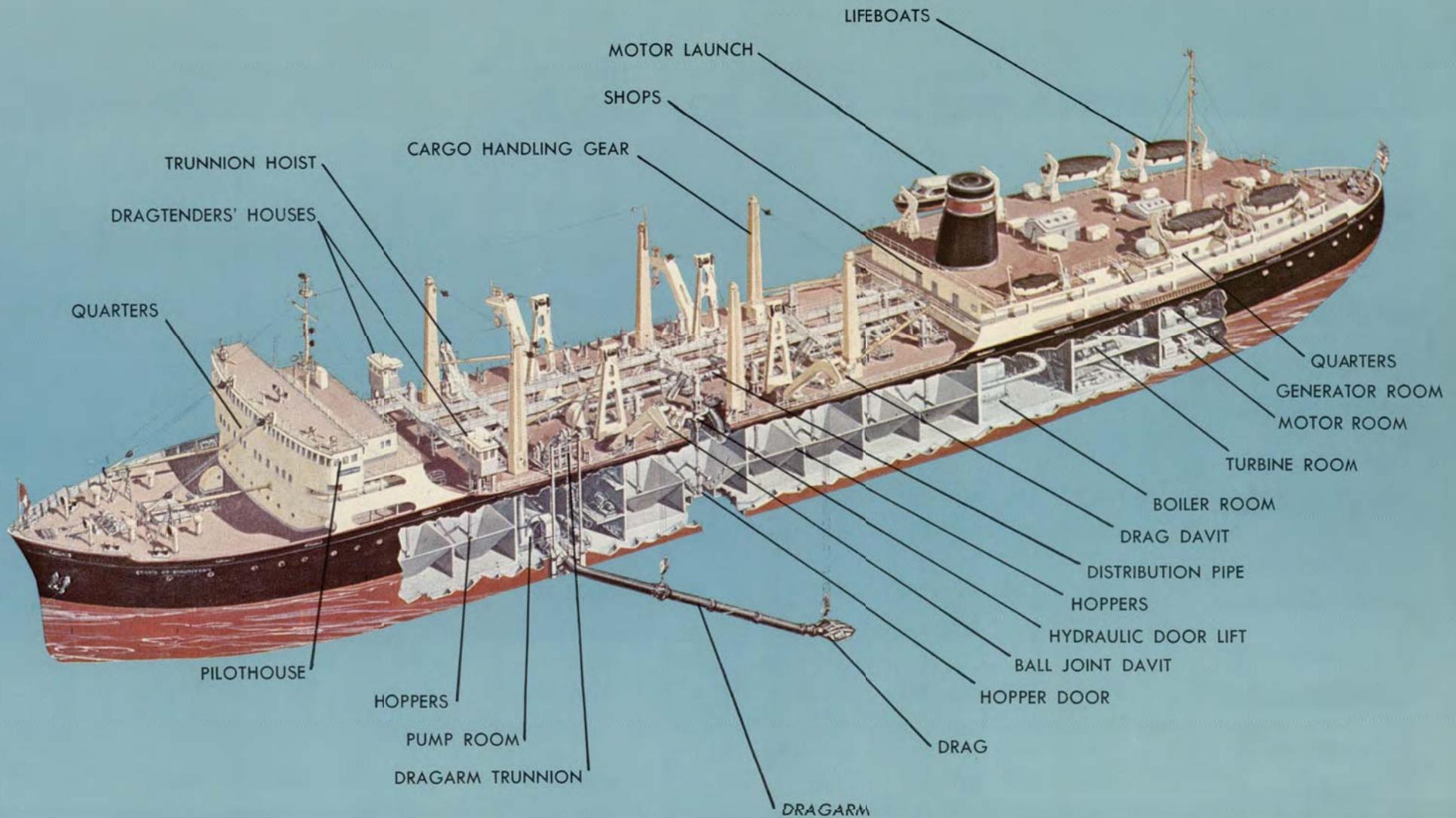
The descriptions and illustrations provided in this brochure furnish general information concerning the operation and missions of the Corps of Engineers Dredging Fleet. The missions of individual units in their assigned Districts are briefly covered on pages six to 13 inclusive. A table of vital statistics is given on pages four and five and characteristic hopper dredge components are flagged on page three opposite.

**THE HOPPER DREDGE** works on a principle similar to a vacuum cleaner. The dredge has pipes called dragarms extending from each side of the hull. Drags at the end of each dragarm are lowered to the bottom and slowly pulled over the area to be dredged. Pumps create suction in the dragarm and the silt or sand is drawn up through the arms and deposited in bins in the mid-section of the dredge. When the bins are full, the dredge proceeds to a place of disposal where the load is either directly pumped ashore or material is dumped through bottom doors in deep water. When disposing loads by pump-

ing out, the dredge pumps draw the material out of the hopper bins and force it through a pipeline into a disposal area on shore.

Dredging is also performed by sidecasting the material, which is discharged through a sidecasting boom outside the channel limits on certain projects where littoral currents carry the dredged material from the channel area.

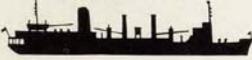
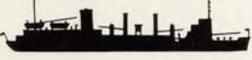
Survey vessels fitted with electronic equipment make underwater surveys to determine when the desired project depth of the channel has been obtained by the dredge.



TYPICAL HOPPER DREDGE COMPONENTS (DREDGE ESSAYONS)



# SALIENT FEATURES of the HOPPER

Dredge	Year Built	Length Beam & Depth (feet)			Maximum Hopper Capacity (cu. yds.)	Maximum Draft Loaded	Propulsion H.P. & Type* (all twin screw)	Dredge Pumps			
								No.	Size	Horsepower Hopper	Each Pump-out
 <b>ESSAYONS</b>	1950	525	72	40	8270	31' 0"	8000 TE	2	32"	1850	—
 <b>GOETHALS</b>	1938	476	69	36	6422	29' 0"	6000 TE	2	30"	1300	3000
 <b>BIDDLE</b>	1947	352	60	30	3060	24' 4"	6000 TE	2	28"	1150	—
 <b>COMBER</b>	1947	352	60	30	3524	24' 4"	6000 TE	2	28"	1150	3000
 <b>GERIG</b>	1947	352	60	30	3060	24' 4"	6000 TE	2	28"	1150	—
 <b>LANGFITT</b>	1947	352	60	30	3060	24' 4"	6000 TE	2	28"	1150	—
 <b>HARDING</b>	1939	308	56	29	2682	20' 3"	4240 D	2	20"	1000	—
 <b>MARKHAM</b>	1960	339	62	28	2681	20' 0"	5300 DE	2	23"	650	1000

\*TE—Turbo-Electric; DE—Diesel-Electric; D—Diesel Direct Drive

# DREDGES of the CORPS OF ENGINEERS

Dredge	Year Built	Length Beam & Depth (feet)			Maximum Hopper Capacity (cu. yds.)	Maximum Draft Loaded	Propulsion H.P. & Type (all twin screw)	Dredge Pumps			
								No.	Size	Horsepower Hopper	Each Pump-out
<b>MACKENZIE</b> 	1924	268	46	23	1656	21' 0"	2400 DE	1	26"	900	—
<b>HAINS</b> 	1942	216	40	16	885	13' 0"	1400 DE	1	20"	410	410
<b>HOFFMAN</b> 	1942	216	40	16	920	13' 0"	1400 DE	1	20"	410	—
<b>HYDE</b> 	1945	216	40	16	720	13' 0"	1400 DE	1	20"	410	—
<b>LYMAN</b> 	1945	216	40	16	920	13' 0"	1400 DE	1	20"	410	—
<b>DAVISON</b> 	1945	216	40	16	720	13' 0"	1400 DE	1	20"	410	—
<b>PACIFIC</b> 	1937	180	38	14	500	11' 3"	1200 D	1	18"	340	—
<b>MCFARLAND</b> 	1967	300	74	33	3140	23' 0"	6000 DE	2	26"	2800	2800

# BUFFALO DISTRICT

The BUFFALO District is responsible for maintenance and improvements of the rivers and harbors bordering Lakes Erie and Ontario from Sandusky, Ohio to the International boundary at Massena, New York. In addition, assistance is provided for required dredging in harbors and connecting channels elsewhere on the Great Lakes.

To accomplish this mission, the BUFFALO District operates a fleet of three hopper dredges, the HOFFMAN and LYMAN, each of 920 cubic yard capacity and the 2,700 cubic yard capacity MARKHAM. These vessels operate 24 hours a day, six days a week from mid-March until mid-December, when lake ice prevents navigation. The dredges tie up at Cleveland, Ohio during the winter months at which time crew members perform any necessary repairs to machinery and equipment, and clean and paint the interior compartments. Work schedules for the crew are arranged on a rotating shift basis to allow a three-day week-end leave every third week.

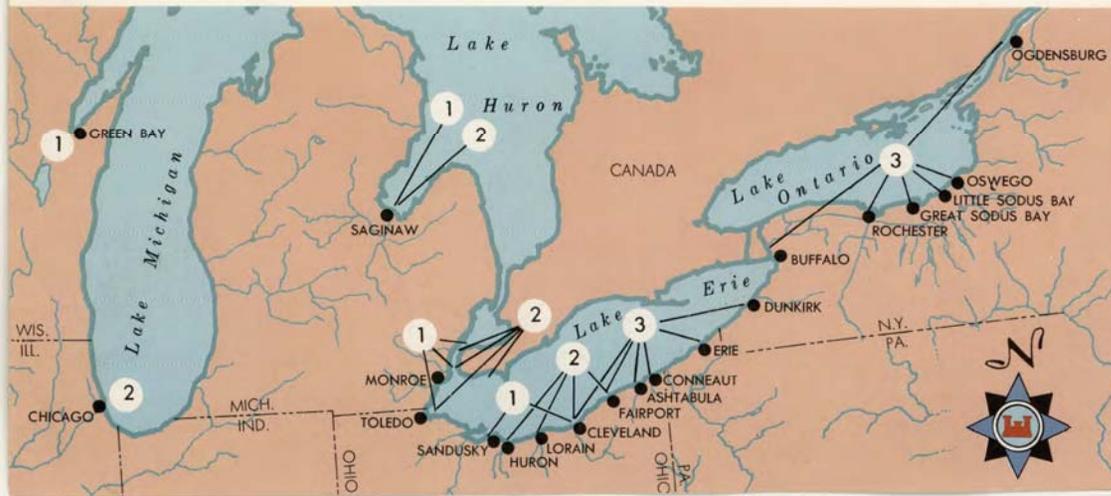
(1) DREDGE MARKHAM



(3) DREDGE LYMAN



DREDGE HOFFMAN (2)



# DETROIT DISTRICT

The responsibilities of the DETROIT District, within the geographic limits of the Eastern one-half of the Upper Peninsula, the Lower Peninsula of Michigan, Northeastern Indiana, and Northwestern Ohio, include the following: designing, constructing, operating and maintaining projects authorized by Congress relating to rivers, harbors, and waterways for navigation and other authorized purposes.

To accomplish operations and maintenance the DETROIT District operates one hopper dredge, the HAINS, with a hopper capacity of 885 cubic yards. The HAINS receives assistance from other Corps dredges in discharging her basic mission and in turn performs necessary dredging operations to assist in the maintenance of harbors and connecting channels elsewhere on the Great Lakes.

The DETROIT District's hopper dredge HAINS winters at Grand Haven, Michigan and from the beginning of each work season until 1 August, works in the harbors on the east shore of Lake Michigan where dredging consists primarily of removing shoals at harbor entrances. During the latter half of the work season, the HAINS usually works on projects on Lake Huron and the Connecting Channels leading to Lake Erie.

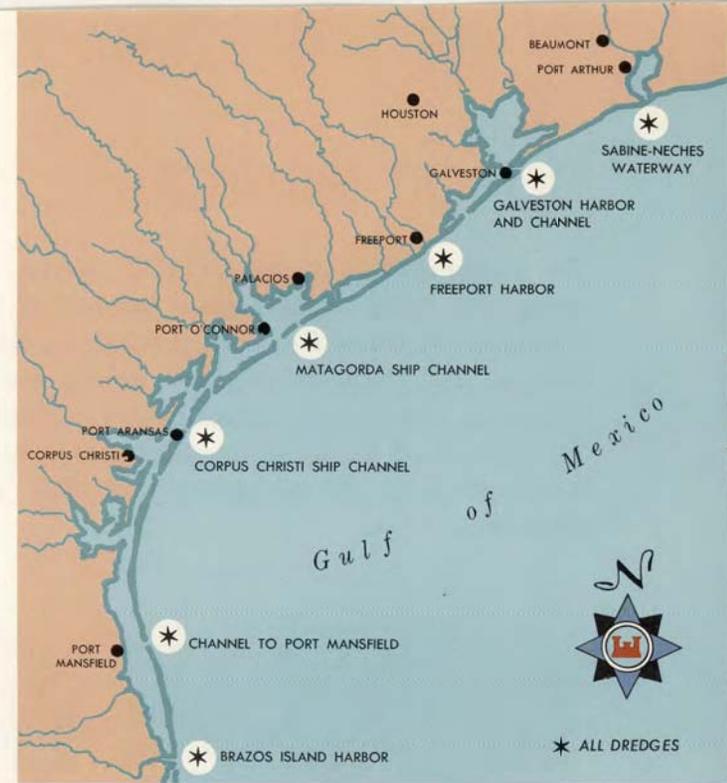
DREDGE HAINS



## GALVESTON DISTRICT

The GALVESTON District is responsible for the maintenance and improvement of the navigable waterways, rivers, and harbors along the entire Texas coast. In addition, assistance is rendered occasionally to other districts in performing required dredging of entrance channels from the Gulf of Mexico along the coast from Louisiana to Florida.

To accomplish this mission, the GALVESTON District operates two hopper dredges, the 3060 cubic yard capacity McFARLAND and the 1656 cubic yard capacity A. MACKENZIE. These vessels operate 24 hours a day, six or seven days a week, 12 months a year, except when under repair. Work schedules for the crew are arranged on a rotating shift basis to allow two to four consecutive days off duty each two weeks, including at least one four-day off period each four weeks.



DREDGE MACKENZIE

DREDGE MCFARLAND





(3) DREDGE GOETHALS

## PHILADELPHIA DISTRICT

The PHILADELPHIA District is responsible for maintaining and constructing projects involving rivers and harbors, flood control, and beach erosion control within an area including a portion of Southeastern New

York, Eastern Pennsylvania, Southern New Jersey, Northern and Southeastern Delaware, and a small portion of Northeastern Maryland.

To accomplish the mission of improving and maintaining rivers and harbors, the PHILADELPHIA District operates a fleet of three hopper dredges, the 3524 cubic yard capacity COMBER; the 6422 cubic yard capacity GOETHALS; and 8270 cubic yard capacity ESSAYONS.

In addition to performing work in the PHILADELPHIA District, these dredges perform necessary dredging of harbors in Norfolk, Baltimore, and New York Districts and in the New England Division. Occasionally work is performed by PHILADELPHIA District dredges along the South Atlantic Seaboard of the United States and in overseas areas. Crew members work on a rotating shift, with ten days on and four days off. These dredges operate on a 24-hour day, seven-day week schedule.



DREDGE ESSAYONS (2)



(1) DREDGE COMBER





DREDGE HARDING



DREDGE DAVISON

## PORTLAND DISTRICT

The PORTLAND District's fleet of four sea-going hopper dredges is responsible for maintenance and improvement of the harbors and navigable river inlets on the West Coast. In addition to operating at the Mouth of the Columbia River and at various navigable river inlets and bays along the Southern Oregon Coast, assistance is rendered to the Seattle, San Francisco, and Los Angeles Districts as well as intermittent tours to the Hawaiian Islands and the Panama Canal Zone. Also, since February 1966 one dredge has been operating in Southeast Asia.

The Dredge BIDDLE, steam-electric driven, is presently operating on a seven day schedule and the crew rotates on a ten days on and four days off basis. This dredge operates in all areas but spends the majority of her season at the Mouth of the Columbia River.

The Dredge HARDING, diesel driven, is presently operating on a six day schedule (two day tie-up) and the crew rotates on a ten days on and four days off basis. This dredge also operates in all areas, but the majority of her operating season is in the San Francisco Bay Area.

# JACKSONVILLE DISTRICT

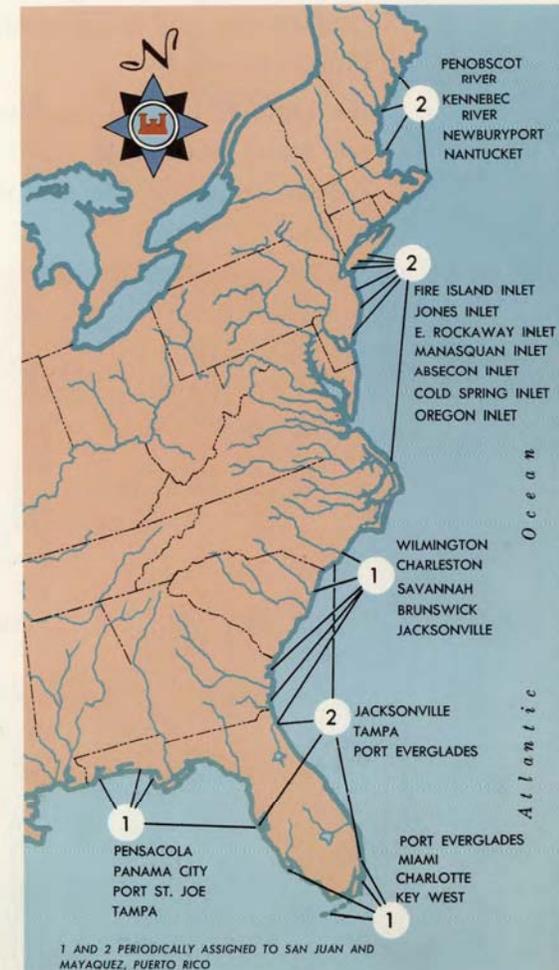
The JACKSONVILLE District is responsible for maintenance and improvements of the rivers and harbors of the State of Florida bordering the Atlantic Ocean and Gulf of Mexico from Fernandina Harbor to St. Marks, Florida, and the U. S. Possessions of Puerto Rico and the Virgin Islands. In addition, assistance is rendered to other districts in the South Atlantic, North Atlantic, and New England Divisions in performing required dredging in harbors and rivers along the coasts of the Atlantic Ocean and Gulf of Mexico.

To accomplish this mission, the JACKSONVILLE District operates two hopper dredges, the 3,060 cubic yard capacity GERIG and the 720 cubic yard capacity HYDE. The GERIG operates year-round 24 hours a day, seven days the first week and six days the second week each bi-weekly period, with a 24 hour lay day each alternate Thursday. The HYDE operates year-round 24 hours a day, seven days the first week and five days the second week each bi-weekly period, with two 24 hour lay days each alternate Sunday and Monday.



DREDGE HYDE (1)

DREDGE GERIG (2)



## NEW ORLEANS DISTRICT

The mission of the NEW ORLEANS District is to develop and maintain navigable waterways, rivers and harbors, flood control facilities and other public works facilities within its geographical limits. The Hopper Dredge LANGFITT is responsible for maintaining to authorized dimensions, deep draft navigation channels in the NEW ORLEANS District such as the Calcasieu River, Passes of the Mississippi River, Mississippi River Gulf Outlet, and deep draft channels in other Districts as required.

The LANGFITT has a complement of 94 officers and men. The dredge works 24 hours per day, 7 days per week. The mild climate of the areas



DREDGE LANGFITT



in which the dredge operates permits continuous operation. In a 14 day period, each man works ten consecutive days and is off four days. Normally, once a man is assigned to a tour, he remains on that tour. The dredge does not tie up during the winter months; it operates year around except for annual shipyard repair which usually requires four to six weeks and occurs in the second quarter of the fiscal year. Living quarters aboard the dredge are air-conditioned.

Personnel are assigned to rotating tours of duty so as to provide continuous manning for operation of the dredge.



The Dredge PACIFIC, diesel driven, is presently operating on a five day schedule (four day tie-up) and the majority of the crew works the same schedule as the dredge with the tie-up security watch staffed on an overtime basis with watchstanders rotating. This dredge also operates in all areas, but the majority of her season is along the Southern Oregon Coast.

The Dredge DAVISON, diesel - electric driven, is presently operating seven days a week in Southeast Asia. The crew works five days regular time and two days overtime per week.



DREDGE BIDDLE



DREDGE PACIFIC

## QUALIFICATION REQUIREMENTS

### BASIC

Applicants must submit a current license of the appropriate grade issued by the Marine Inspection Office, U.S. Coast Guard.

## APPOINTMENT

Employees of the Corps of Engineers are under the Federal Career Civil Service System.

## CAREER DEVELOPMENT

The Government pays tuition, salary and per diem costs for qualified personnel to upgrade licenses.

# PAY & EMPLOYEE BENEFITS

## BASIC PAY

The salary you receive will vary depending on the specific job, length of service, class of dredge, and geographic region of the owning District. Subsistence and quarters are free. Salaries are generally competitive with those of private industry. Salary charts are not published in this brochure because they are subject to change. Current rates will be furnished by recruiters.

## NIGHT DIFFERENTIAL

Additional amounts are added to the base pay of dredge personnel for work performed on evening and night shifts.

## OVERTIME

Overtime is paid at a rate of 1½ times basic pay for all hours worked in excess of eight hours per day or forty hours per week.

## PREMIUM PAY FOR SUNDAY WORK

An employee is entitled to extra pay if his regular tour of duty includes Sunday. The extra or premium pay amounts to 25% of his rate of basic compensation.

## GROUP LIFE INSURANCE

Group life insurance at the attractive rate of 27½¢ per thousand per bi-weekly payday through payroll deduction is available for individual employees on an optional basis. This charge represents 2/3 of the cost

of the insurance. The other 1/3 is paid by the Government. The amount of group life insurance depends on the annual rate of pay, which includes basic pay of the grade plus night differential.

## SUPPLEMENTAL INSURANCE

If you elect regular insurance you may also elect additional "optional insurance" in the amount of \$10,000 —no more nor less. This \$10,000 is in addition to whatever amount of regular insurance you have. You pay the full cost of the optional insurance at variable premium rates dependent on age.

## EMPLOYEES' COMPENSATION

The Employees' Compensation Act provides compensation for employees of the U.S. Government who receive disabling injuries while in the performance of their duties, provided such were not the result of willful misconduct on the part of the employee. Beneficiaries of employees may also receive compensation if the event or injury results in death.

## MEDICAL COVERAGE

Hopper Dredge personnel are entitled to free medical and dental care under the Merchant Seaman's Act. A comprehensive government-sponsored hospital and surgical insurance plan is also available to employees and their dependents on an optional basis. Part of the cost of this insurance plan is shared by the Government.

## RETIREMENT

The Federal Civil Service Retirement System is essentially an employee-employer retirement plan in which the Government, as the employer, guarantees the employee a regular income at the end of his career, or, in the event of his death, benefits to his survivors. It also provides disability benefits after 18 months of service in case of loss of earning power through injury or sickness. The retirement system is financed by a deduction of 7% from employee's basic salary and a government contribution which makes up a major portion of the retirement costs. The present retirement system provides for retirement at age 55 with 30 years service or 60 with 20 years service.

## SHORE LEAVE

An employee earns additional leave, called shore leave, at the rate of one day for every 15 days the dredge works beyond its normal area of operations.

## SICK LEAVE

The sick leave employees earn in the amount of 13 working days per year is granted as needed in time of illness or for medical treatment. It accumulates from year to year when it is not used and protects you from loss of salary due to illness. Accumulated sick leave is credited to length of service upon retirement.

## VACATIONS

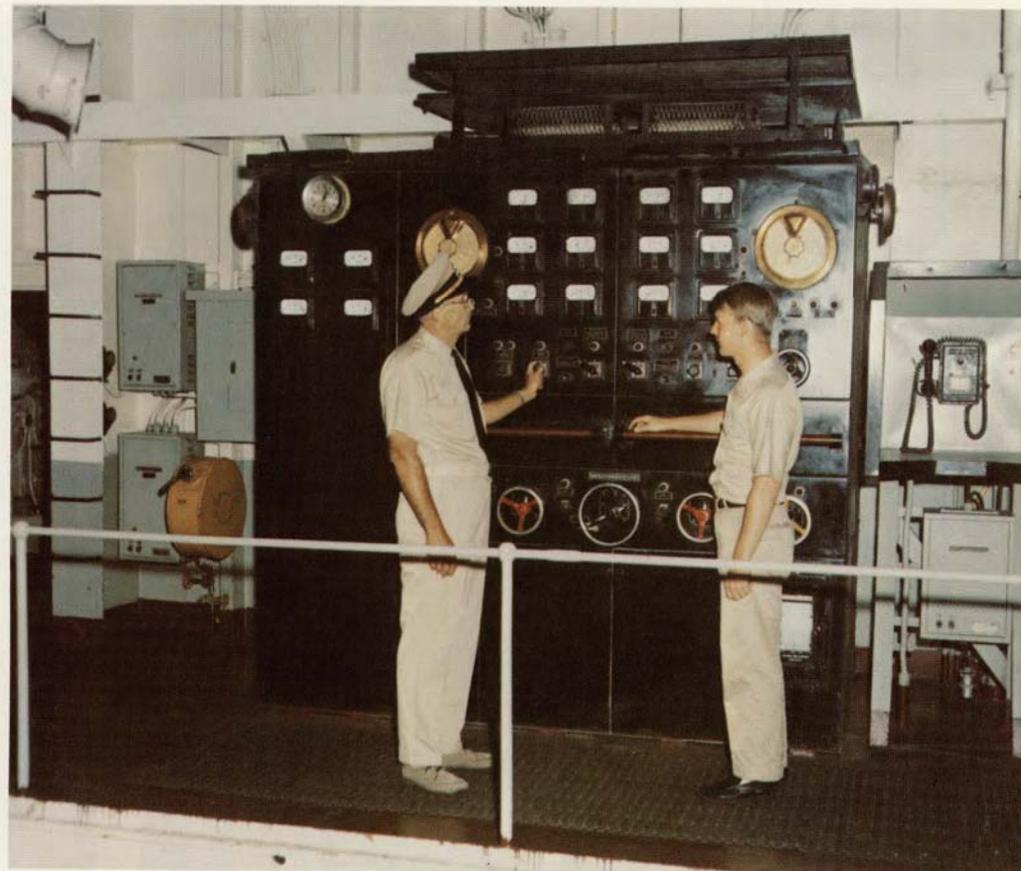
First three years of service: 13 working days per year.  
From 3 to 15 years of service: 20 working days per year.  
More than 15 years of service: 26 working days per year.

## OTHER FRINGE BENEFITS

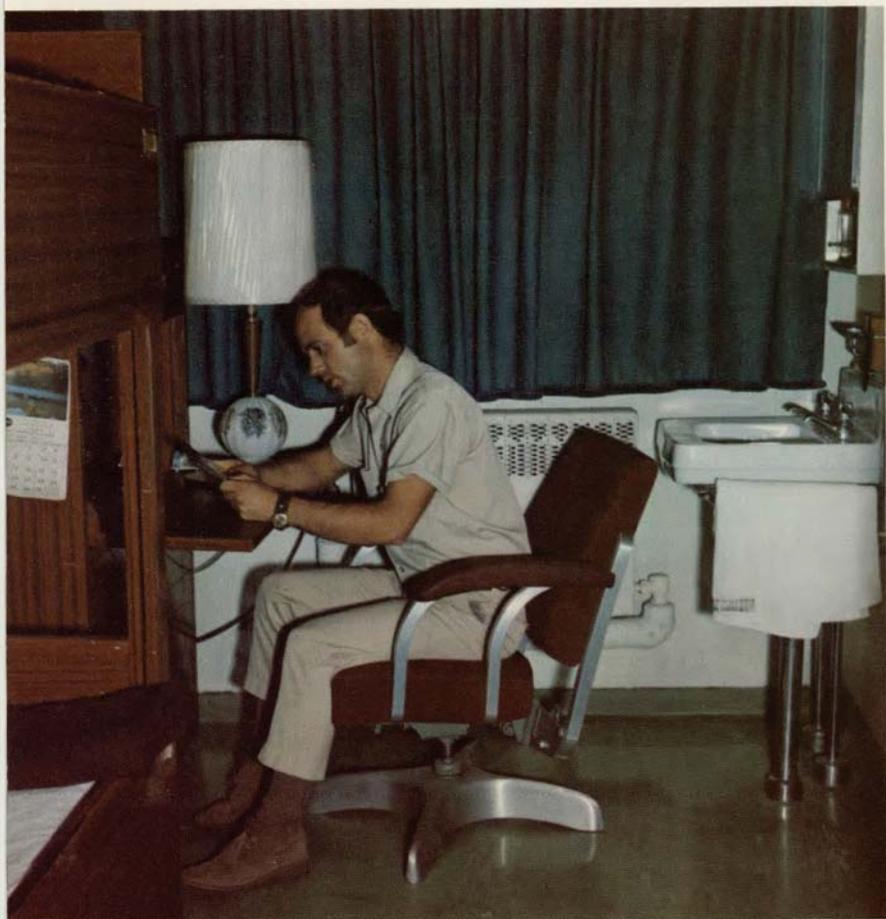
Eight paid Federal Holidays each year. Cash awards for adopted suggestions and superior work performance. Military leave with full pay for active duty training.



BRIDGE OF A CORPS OF ENGINEERS HOPPER DREDGE  
All Hopper Dredges are pilot-house controlled.



ENGINE ROOM SWITCHBOARD Typical for dredges which have steam driven turbo-electric generators to provide power for propulsion and for the dredge pumps. Other dredges are diesel-electric or direct diesel driven.



TYPICAL QUARTERS ABOARD A DREDGE



TYPICAL RECREATION ROOM ABOARD A DREDGE

# CORPS-WIDE SAILING PROGRAM FOR JUNIOR CADET OFFICERS

"PLOT YOUR COURSE—AND STAY ON IT"

## SUMMER EMPLOYMENT OPPORTUNITIES

Vacancies exist for summer employment of Cadets who have completed at least two years of appropriate study leading to a Bachelor of Science degree in Nautical Science for Deck Officers and Marine Engineering for Engineering Officers. Jobs are available for any periods during 1 May through 15 September each year. Also, jobs are available in some Districts during the Christmas holidays.

Employees perform selected assignments aboard a hopper dredge designed to provide experience in either deck or engine department operations, maintenance and repair. Training instructions are provided by licensed deck and/or engineer officers.

## SALARY

Recruiting representatives will furnish separate pay scales for each District.

## HOW TO APPLY

APPLICANTS SHOULD FORWARD SF-171, "APPLICATION FOR FEDERAL EMPLOYMENT" TO THE DISTRICT IN WHICH EMPLOYMENT IS DESIRED. (SEE LIST OF ADDRESSES ON PAGE 20.) PLEASE SPECIFY ON EMPLOYMENT APPLICATION THE DREDGE TO WHICH YOU WISH ASSIGNMENT AND THE DATES ON WHICH YOU WILL BE AVAILABLE FOR WORK.

Marine Academy Cadet receiving training in navigation of vessel.



Marine Academy Cadets discussing engine room equipment.





THIS IS HOW  
YOU  
CAN BECOME  
A PART OF THE  
CORPS OF ENGINEERS  
CIVILIAN DREDGING FLEET

To learn more about regular or summer employment opportunities in the areas in which our dredges operate (pages 6 through 13) applicants should complete SF-171, "Application for Federal Employment" and forward same to District in which employment is desired. It is suggested that applicants check with Placement Director to learn when the Corps of Engineers recruitment representatives will visit your school and then sign up for an interview.

Address application to  
**PERSONNEL OFFICER:**

U. S. Army Engineer District, Buffalo,  
1776 Niagara Street, Buffalo, New York 15207

U. S. Army Engineer District, Detroit,  
P. O. Box 1027, Detroit, Michigan 48231

U. S. Army Engineer District, Galveston,  
P. O. Box 1229, Galveston, Texas 77550

U. S. Army Engineer District, Jacksonville,  
P. O. Box 1027, Jacksonville, Florida 32201

U. S. Army Engineer District, New Orleans,  
P. O. Box 60267, New Orleans, Louisiana 70160

U. S. Army Engineer District, Philadelphia,  
Custom House, 2nd & Chestnut Sts.,  
Philadelphia, Pa. 19106

U. S. Army Engineer District, Portland,  
628 Pittock Block, Portland, Oregon 97205



FURTHER INFORMATION REGARDING EMPLOYMENT OPPORTUNITIES WITH THE  
CORPS OF ENGINEERS DREDGING FLEET MAY BE OBTAINED FROM THE

PERSONNEL OFFICE  
U.S. Army Engineer District, Philadelphia  
Corps of Engineers  
Custom House, 2d & Chestnut Streets  
Philadelphia, Pennsylvania 19106

The device which appears on the front cover and on page 20 is the cap ornament worn by officers of the Dredging Fleet.

The device on the back cover is the Seal of the Corps of Engineers. It combines elements of all the insignia used by the Corps prior to April 6, 1897, date of the Seal's official adoption.

FRONT COVER

OUTSIDE—DREDGE COMBER AND MOORING BARGE 1.

INSIDE—DREDGE COMBER, LIGHTER GORHAM AND PATROL BOAT CHOPTANK

