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THE U. S. ARMY CORPS OF ENGINEERS: RIVERS AND HARBORS WORK

Since 1824, the U. S. Army Corps of Engineers has been continuously involved in developing the nation's rivers and harbors. At first, the Corps was charged with insuring the navigability of the principal rivers and harbors of the country. Later, it became involved in various flood control activities. For over a hundred years it has also engaged in disaster relief operations, rescuing people from flooded and isolated dwellings, building protective floodwalls and levees, and constructing many other flood control devices to protect American cities and farms. Today, the Corps remains the nation's major water resources developer. Its locks on the Ohio River provide safe navigation along the river's entire length. Its multi-purpose dams on the Missouri supply water for hydropower, irrigation, and navigation. During high water, the same dams hold back water, preventing downstream flooding. Corps dams in the Columbia River basin allow residents of the Northwest to enjoy some of the cheapest power in the United States. Throughout the country, the Corps' work can be seen in thousands of local protection and small harbor projects.

In the summer of 1979, the Historical Division of the U. S. Army Corps of Engineers, in cooperation with the Army Art Activity, a branch of the U. S. Army Center of Military History, obtained the services of Specialist 4 William Blomquist and Specialist 5 Janet Fitzgerald, two Army artists, to do a number of paintings of Army civil works activities. This project marked a significant departure in the Army art program. It was the first time that Army artists had done paintings of anything other than traditional military subjects. It reflects the importance the Army places on its civil works mission. The paintings suggest the broad range of civil works activities involving the Army Corps of Engineers, including a sizeable number of projects that provide varied recreation opportunities.

This set of prints was assembled with the cooperation of Marian McNaughton and Mary Lou Gjernes of the Army Art Activity. Their help is gratefully acknowledged.

The attached texts briefly describe the subjects of the individual prints. These texts can be detached from this brochure and affixed to the backs of the framed prints.

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PULLING POST

by

Janet Fitzgerald

Since 1944, Army Engineers have been developing recreation facilities at appropriate Corps projects. By 1981, they had developed over 3,800 recreation areas. Of these, nearly 1,500 are managed by other federal, state, or local agencies.

On Corps recreation sites, Corps rangers, managers, park technicians, and maintenance personnel perform a variety of functions to enable visitors to enjoy their stay as much as possible. Over 2,000 permanent Corps employees work to insure that recreation facilities are properly maintained and that natural resources, including fish and wildlife, are intelligently managed. The responsibilities range from search for lost children or extinguishing forest fires to the more mundane task of pulling fence posts.

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LAKE SIDNEY LANIER

by

Bill Blomquist

Lake Sidney Lanier is formed by the Buford Dam on the Chattahoochee River northeast of Atlanta. The Corps of Engineers began building the dam in 1950 and completed most of it seven years later. Authorized by the 1945 Rivers and Harbors Act, Lake Lanier is used for flood control, power, and streamflow regulation. The powerplant produces about 236,000 kilowatt-hours of energy annually.

Lake Lanier covers approximately 38,000 acres and has 540 miles of shoreline. It is the most popular recreation area the Corps operates, attracting over 16 million people annually. The Corps and various local governmental agencies are steadily expanding recreation facilities. The Lake Lanier Islands Development Authority, an instrumentality of the state of Georgia, is developing four islands in the southern portion of the lake into a year-round recreation-resort complex, including a golf course, bathing beach, motor hotels, restaurants, shopping village, family cabins, extensive camping and picnic areas, and special activities centers. The Corps cooperates with Georgia Game and Fish Division to help increase the number of trout during the fishing season.

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THE NAUSET AND THE WAMPANOOG ON THE CAPE COD CANAL

by

Janet Fitzgerald

The *Nauset* is an 86-foot tugboat, and the *Wampanoog* is a 41-foot patrol boat. The New England Division of the Corps of Engineers uses both boats on the Cape Cod Canal. This canal is a deep-draft, sea-level canal located about 50 miles south of Boston at the narrow neck of land joining Cape Cod to the mainland. It has a 25-foot deep channel that was constructed by a private corporation. Opened as a toll canal in 1914, the Cape Cod Canal was sold to the federal government in 1928 at a cost of \$11.5 million. Subsequently, Congress authorized the construction of two highway bridges, one at Bourne and the other at Sagamore, and a vertical lift railroad bridge (visible in background of this painting) at Buzzards Bay.

Presently, the Corps maintains an open canal 32 feet deep and 540 feet wide along the 7.7-mile land cut, 500 feet wide in a straight channel extending about 5 miles southwest from the head of Buzzards Bay to Wings Neck, Pocasset, and 700 feet wide for about five miles southward of Wings Neck. The Corps has also built mooring basins, a small-boat harbor, and anchorage areas, and has improved the lighting systems. The canal is one of New England's outstanding recreational facilities. Over a million visitors a year enjoy fishing, salt-water swimming, picnicking, overnight camping, bird hunting, and just relaxing along the canal or at the two recreation areas, Scusset Beach State Park and Bourne Scenic Park, that were developed by the Massachusetts Department of Environmental Management and the Bourne Recreation Authority, respectively.

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PASSAMAQUODDY TIDAL POWER PROJECT, 1935

by

Janet Fitzgerald

The Passamaquoddy Tidal Power Project was the most innovative power venture of the 1930s—and the most short-lived. Quoddy, as the venture became known, was designed to generate hydroelectric power by closing Passamaquoddy and Cobscook bays, located at the mouth of the St. Croix River, which forms the boundary between Canada and the United States. Passamaquoddy Bay is in Canada and Cobscook Bay is in Maine. Both bays experience tremendous tidal variations.

Interest in the Passamaquoddy Power Project developed as early as 1919, but it was only because of concern for work relief and economic recovery that the federal government appropriated money for the project in 1935. On 17 May 1935, the Corps of Engineers established a new District in Eastport, Maine, to handle the undertaking. From the summer of 1935 to February 1936, Army Engineers examined the project site and developed designs. The project posed numerous challenges, and the Engineers made several studies of the effect of severe climatic conditions and corrosive seawater on the building material. The Corps established a new town to house personnel. It included individual homes, apartments, dormitories, warehouses, shops, and labor camps. Most of the workers were recruited from the relief rolls.

In 1936, a number of U. S. Senators questioned the Quoddy project, charging that the government was wasting money on an inefficient form of power development. The Senate denied additional funding, without which the project could not continue. By October 1936, all Quoddy Village facilities were transferred to the National Youth Administration, and Eastport district officially closed. The Corps had spent \$5.8 million at Quoddy during Eastport District's seventeen-month existence. Army Engineers completed two rock-fill dams and partially constructed the Treat-Dudley Islands dams. In addition, they had excavated ground for the navigation locks and control gates. Although Congress abandoned the Quoddy experiment in 1936, its fate was far from sealed. Studies on the project lasted into the 1970s.

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CAPTAIN ANTHONY MELDAHL LOCKS AND DAM

by
Janet Fitzgerald

The Captain Anthony Meldahl Locks and Dam project is located on the Ohio River near Foster, Kentucky, and Chilo, Ohio. The locks consist of two chambers, side by side. The main lock is 110 feet by 1,200 feet, and the auxiliary lock is 110 feet by 600 feet. The dam provides a pool with a minimum navigable depth of nine feet extending 95 miles to Greenup Locks and Dam.

On the Ohio side of the river, the Corps built an overlook and picnic facilities. The Corps also constructed nine upstream boat launching areas. There are plans to develop the recreation facilities at the site into a multi-purpose recreation complex.

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SMITHLAND LOCKS AND DAM

NOV 21 1983

by

Janet Fitzgerald

Smithland Locks and Dam is located on the Ohio River between Illinois and Kentucky about two miles above the mouth of the Cumberland River. The two locks (not shown in this painting) are each 110 feet wide and 1,200 feet long and are the world's largest twin navigational locks system. The overall length of the river lock wall, including the guard walls, is approximately three-quarters of a mile. The locks contain four horizontally framed, welded lock miter gates. Each miter gate leaf, or door, weighs 250 tons.

The dam extends from the river lock wall to the opposite (Kentucky) shore. It consists of eleven tainter gates (shown in painting) and a 1,572-foot fixed weir section. Each of the tainter gates is electrically operated.

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FISHING BELOW BLACKWATER DAM

by
Janet Fitzgerald

Blackwater Dam is located in the town of Webster, New Hampshire, on the Blackwater River 8.6 miles above its confluence with the Contoocook River. The Corps placed the dam in operation in 1951. The dam consists of a rolled earthfill section with a dumped rock face and a concrete gravity spillway section (in background in the painting) across the river section. The dam's total length is 1,150 feet, of which 240 feet are along the spillway. Its maximum height is 75 feet above the streambed. Since the reservoir behind the dam is used for flood control purposes, it is normally kept empty. When full, a 3,140-acre reservoir would extend upstream about seven miles and would have a maximum width of one mile.

The New Hampshire Department of Resources and Economic Development uses the reservoir area for long-term forestry improvement, fish and wildlife conservation, and for public recreation. The 14-mile section of the Blackwater River that winds through the reservoir area is a popular canoe stream and is heavily stocked with trout each spring.

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**FORT KENT, MAINE, LOCAL PROTECTION
PROJECT**

by
Janet Fitzgerald

NOV 21 1983

In the late 1970s, the New England Division of the Corps of Engineers constructed several structures to protect the town of Fort Kent from flooding. The Corps built an earth dike extending 3,250 feet from upstream of the International Bridge to near the Fort Kent Blockhouse, raised 550 feet of roadway embankment an average of five feet along the Fish River, and constructed a pumping station and pressure conduit to discharge interior drainage during floods. This is typical of many Corps local flood protection projects.

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DRINKING COFFEE ON A CORPS DREDGE IN NEW YORK HARBOR

by
Janet Fitzgerald

NOV 21 1963

The public does not generally associate dredges with the Army Corps of Engineers. Yet, the crews of these boats perform one of the most important tasks assigned to the Corps of Engineers—keeping the nation's harbors and rivers free from obstructions, sediment accumulation, and other impediments to navigation. The Corps has been performing this function since the 1820s. Presently, private industry is doing an increasing amount of work formerly done by vessels owned and operated by the Corps of Engineers. Still, the Corps will retain a minimum fleet of dredges in order to be ready for any emergencies, including wartime duty.

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WEST POINT DAM

by

Bill Blomquist

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West Point Dam is on the Chattahoochee River, 3.2 miles north of West Point, Georgia. It is the fifth unit in a seven-reservoir system and will be operated to serve the Apalachicola-Chattahoochee River System. The project provides considerable, although not complete, flood protection for West Point and low-lying lands below that city as well as for agricultural lands extending to the upper position of the Walter F. George Lock and Dam project. In 1977, the average annual energy production was 250 million kilowatt-hours.

The nearly 30,000-acre lake behind the dam has a shoreline of 525 miles and is 34 miles long. Plans call for the construction of 43 public use areas around the lake, including 11 parks, 26 access areas, a public overlook, 4 marinas, and an access area downstream with a 2.5-acre fishing pond for pre-teen children and a special fishing pier for the handicapped. An amphitheater, beach pavilions, playground facilities, baseball diamonds, two upstream fishing piers, wildlife ponds, and a small-bore rifle and pistol range will be included in the recreation facilities. Non-federal agencies are planning additional recreation facilities. The Georgia Department of Natural Resources operates a wildlife management area of 6,387 acres long the upper reaches of the reservoir. This area offers public hunting for deer, turkey, and small game, including game birds. During the non-hunting season, the area is opened to visitors for sightseeing, nature photography, and hiking.

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