

The Corps of Engineers and the Pacific Northwest

Why is the U.S. Army involved in building harbors, waterways, dams, and flood control projects? The answer is rooted in our country's history. The beginning of the Army Corps of Engineers goes back to June 16, 1775, when General George Washington appointed a Chief Engineer in the service of the Continental Army. After establishing a reputation for distinguished performance in the Revolutionary War, military engineers were asked to serve their country by exploring and mapping new territory, designing and constructing canals, harbors, and other civil works, as well as providing engineering services to the Army. This was largely because there were few civilian engineers then, and the United States Military Academy, established in 1802 at West Point, NY, was for 25 years after its founding the nation's only engineering school. In 1803, the Louisiana Purchase doubled the territorial holdings of the United States. The next year President Jefferson dispatched Capt. Meriwether Lewis and Lt. William Clark on their famous expedition to the Pacific Northwest. This was the first Army involvement in the region. In 1824, Congress passed the General Survey Act, marking the beginning of the Corps' civil works program. Military engineers conducted explorations and surveys and laid out early stagecoach routes, military roads, and railroads. These included John C. Fremont, George B. McClellan, and Washington Territory's first governor, Isaac Ingalls Stevens - all Army engineers. Ulysses S. Grant and Philip Sheridan also drew assignments to the region. During the Civil War, Army engineers continued their work in the Northwest. One of their efforts was removing hazards to navigation, such as rocks, snags, and sandbars, from the Snake River between what is now Pasco, WA, and Lewiston, ID. This allowed sternwheelers to navigate the river, carrying gold from Idaho mines to federal coffers to help finance the war. Later, Congress directed the Corps of Engineers to design, construct, and operate huge multi-purpose water resource development projects, including a series of hydroelectric power and flood control dams and navigation locks in the Northwest. Designing, constructing, and operating civil works projects provides valuable practical experience and expertise in the Corps of Engineers. This helps keep the Corps prepared for its missions of mobilizing civilian industry and ports of the nation should this country be threatened by war, and providing full engineering services to the Army and Air Force in peace and war. Water has always been important in development of the Pacific Northwest, and is one of the keys to the region's future. The region's tidal waters and many rivers and lakes are sources for power; transportation; water supplies for communities, commerce, and industry; irrigation; recreation; and fish and wildlife. Washington and Oregon have more than 3,000 miles of tidal shoreline, including estuaries, beaches, tidelands, and rockbound shores on the Pacific Coast, the Strait of Juan de Fuca, and Puget Sound. Columbia River system flows stem from highlands in Canada, Washington, Oregon, Idaho, Montana, Wyoming, and

NEVADA. SURFACE WATER TOTALS 270 MILLION ACRE-FEET ANNUALLY, WITH CANADA providing 54 million acre-feet from streams flowing into the Columbia. The Rocky Mountain, Cascade, Olympic, and Coast Ranges are the region's major mountain ranges. Climate of the Northwest is as varied as its topography. Weather systems and storms are borne inland from the Pacific Ocean by prevailing winds. While an abundance of rain and snow falls in the western part of the region, storm clouds are usually depleted when they reach the interior. On the east slopes of the mountains, dry winds take moisture from semi-arid lands on the high plateaus and deserts. This varied climate has created a broad mix of vegetation ranging from rain forests in the coastal region to sagebrush and juniper-covered plateaus and plains in the mid and eastern parts of the region. The nearly 174 million acres of land in the region are classified by use. Crop lands total 20,800,000 acres, while 85,800,000 acres are forests and 58,700,000 acres are range lands. Barren lands and mountain rock outcropping account for 5 million acres; and 3.3 million acres are taken up with population concentration. Economic leaders in the region are agriculture, timber, and tourism. The largest employers are service industries, manufacturing, and retailing. Major population centers are Seattle-Tacoma, Spokane, Portland-Vancouver, Salem, Eugene, and Boise. More than 8 million people live in the Northwest, according to the 1990 census. National projections estimate that the population will double in 50 years, with heaviest concentrations of people in a megalopolis stretching from Everett, Wash., to Eugene, Oreg. This predicted growth is expected to bring heavy demand on municipal and industrial water supplies, electrical energy, irrigation flows, and recreational and other essential resources.

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