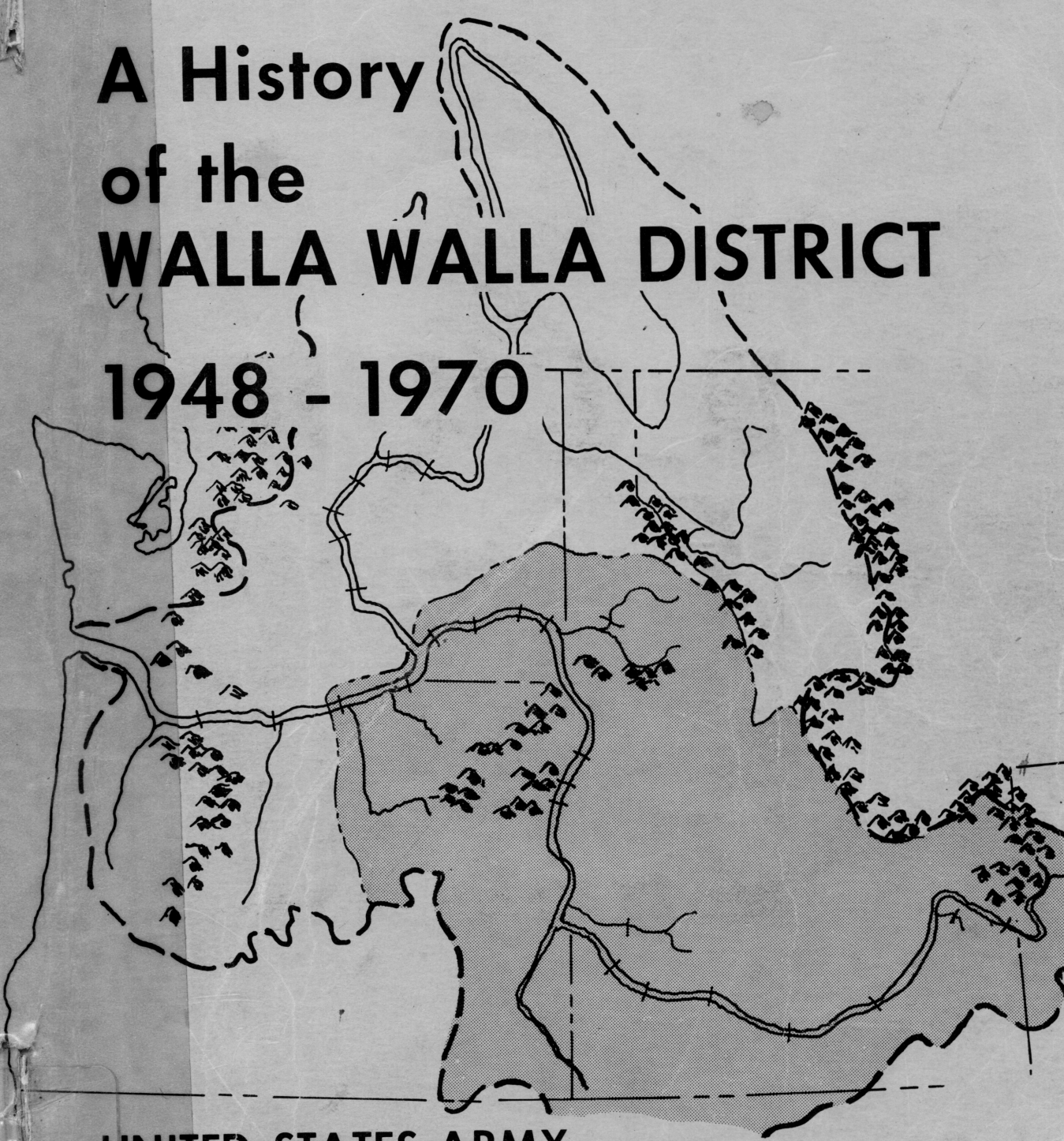
A History of the WALLA WALLA DISTRICT 1948 - 1970



UNITED STATES ARMY
CORPS OF ENGINEERS

TABLE OF CONTENTS

PREFACE

Part I of this history is the story of the first 22 years of the life of the Walla Walla District. It is designed to present a narrative type epistle, generally in chronological sequence, citing some of the major or interesting events occurring along the way. It grew from many personal interviews, searching of public documents found in the District library and files, the annual reports of the Chief of Engineers, Congressional Record, reading of old official files of local newspapers, and intimate studies of personal papers. To do justice to all of the people who have given so much toward making this District an outstanding institution would be almost impossible; hence, we have not stressed this facet. Furthermore, this document makes reference to many studies, actions, and events that took place before the District was formed. To evaluate fully the history of the Corps in the Inland Empire and upper Snake River Basin, it is imperative that one also study portions of the Portland District History, for much of the pioneering work that preceded this District is only mentioned as background material herein. Parts II and III discuss in more detail the major water resource projects realized for the region, together with some basic data on the District, including its District Engineers.

Gibbon has said, "History is little more than the register of the crimes, follies, and misfortunes of mankind." This history recounts a number of major accomplishments in water resource development, and helping of mankind in his troubles. Le Bon, on the other hand, observed that histories "are fanciful accounts of ill-observed facts accompanied by explanations, the result of reflections," and that the writing "of such books is a most absolute waste of time."

There were still enough factual records available that this account should have some authenticity, supported by the "reflections" of several persons, both present and retired, who have had a key role in making it function. We trust that the true history of time will prove that the accomplishments cited here, and many not recounted, will be long-lived to the benefit of mankind rather than "misfortunes," and that the District will add to them in the next decades. We also trust that browsing through these pages will, in spite of Le Bon, be fruitful.

THE AUTHOR

FOREWORD

"History" is usually viewed from the position of decades of "aging" and experience. The U.S. Army Corps of Engineers is approaching its two hundredth anniversary, and its work in the Pacific Northwest covers the past 120 years. The economic expansion of this inland portion of the United States in the 1940's dictated attention to the water resource needs and potentials, with the Corps directed to oversee much of its development and control of its streams' wild gyrations. Thus was born the youngest District in the Corps.

The Walla Walla District portion of the Inland Empire and upper Snake Basin is rich in its own history, which in many ways forecasts the advent of the District and its task. Established in 1948, these have been eventful years for the District, and a period of marked expansion and development for the region it serves.

The author of this history has been an integral part of the entire 22 years of the District's life. His knowledge of the region and the many events, as well as his active part in the realization of many of the projects, has given a little different flavor to this recounting of history. Howard A. Preston, a Michigander with two engineering degrees from Michigan State University, started to work with the Corps on the Great Lakes in 1930. His Federal service in several responsible positions reaches over the ensuing 40 years to his retirement in 1970. His work here was first in the Planning Branch on project development studies. He then spent four years as Assistant Chief, Engineering Division, and finally as Chief of Planning Branch from 1964 to 1970. He has been a real student of the region he has served and a public servant in his community.

Although here during but a very small segment of the time of this history, I feel fortunate in being the link with the future and having a part in continuing much of the work initiated in that first 22 years. Thus, much that is recounted here is contemporary rather than aged. Nevertheless, the accomplishments of those years will have a long-range influence upon western United States, as reading of this story of people and their work will attest. I commend this recounting of resource development and the practical problems of its realization to your reading.

Richard M. Connell

RICHARD M. CONNELL
Colonel, CE
District Engineer

CLEARWATER BASIN FOREST - Lewis & Clark Traversed this Region

SOUTHERN IDAHO - TYPICAL DESERT REACH OF "OLD OREGON TRAIL"

PART I

"THE STORY"

CHAPTER 1

THE OPENING OF THE

INLAND EMPIRE OF THE COLUMBIA RIVER BASIN

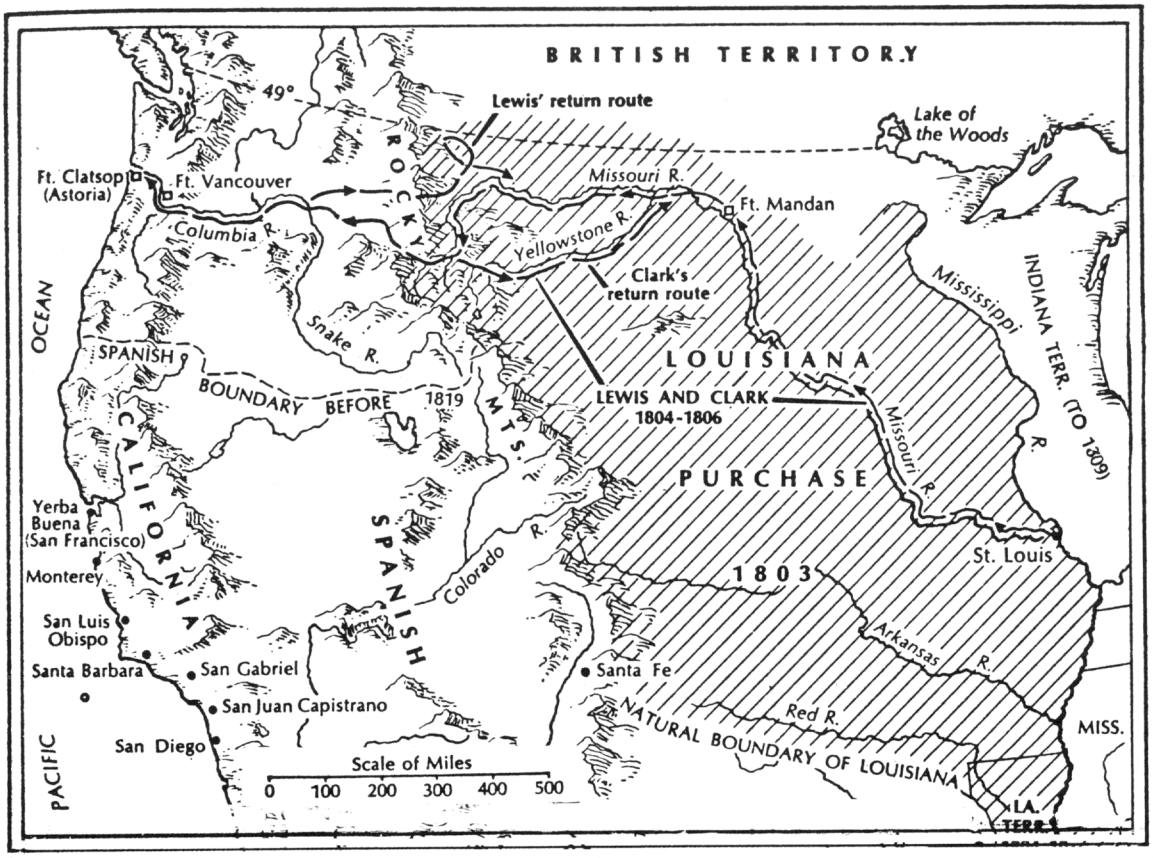
DISCOVERY

The Walla Walla District, conceived as an instrument for management of some of the extensive water resources of this segment of the "Inland Empire," operates in an area steeped in the proud records of individual achievements as well as the trials and tribulations of its economic development. Robert Gray, an American sea captain, was interested in commerce between China, Europe, and the United States, including fur trading. Gray, the first to enter the Columbia estuary, sailed 15 miles up the river near the close of the eighteenth century and gave it the name of his ship, claiming the region for the United States. He dreamed of a rich fur trade for the future when he bartered with the Indians that day, 11 May 1792, rather than of explorations and land claims.

As a quirk of fate, Captain George Vancouver of the Royal Navy was along the Pacific Coast and met Gray before the Columbia River discovery. Vancouver was skeptical of Gray's report of the likelihood of a large river and sailed on to Vancouver Island according to his orders. After Gray left the Columbia River he sailed to Nootka Sound on Vancouver Island, where he met the Spanish Captain Quadra and told him of his discovery, giving him a sketch of the river entrance. Later Quadra told Vancouver of Gray's finding and gave him the sketch. Learning of the river, Vancouver sent Lieutenant William Broughton in H.M.S. CHATHAM to the Columbia. He entered it, using the rough chart Gray had made. Broughton sailed 119 miles up the Columbia, claiming the region for Great Britain in spite of Gray's prior finding.

The land between the Pacific and the Missouri River was a great unknown, with only smatterings of information about it from tales of trappers who had ventured into the edges of the vast area and the legends of the Indians. It was virtually a no-man's land claimed by Spain, Russia, Great Britain, and the United States.

President Jefferson, by his foresight in negotiating with France in 1803 to buy the Louisiana Territory east of the Rockies for $15 million, increased the land area of the United States about 140 percent. This whetted the spirit and imagination of the American people for development and exploration of the land to the west, including a trade route to China. The President, who had previously planned an expedition to the Northwest and obtained an appropriation from Congress for it, appointed two Army captains, Meriwether Lewis and William Clark, to lead an expedition to the mouth of the Columbia to find "the most direct and practicable water communication across the continent for the purposes of commerce." President Jefferson also desired to open to trade and frontier expansion the unexplored territory stretching from the upper reaches of the Missouri River across the Rockies to the Pacific Coast.



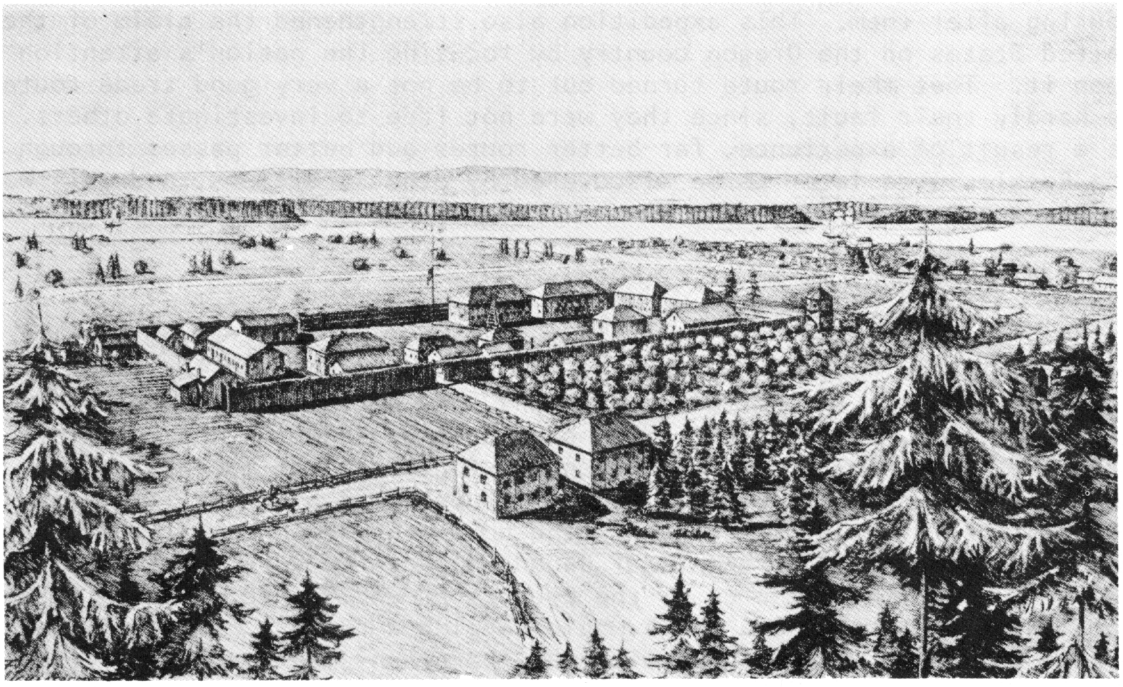
The Lewis and Clark Expedition of 1804-1806 was brilliantly successful. They mapped and described a territory that has since become ten states, and opened the way for the tide of settlement that came pouring after them. This expedition also strengthened the claim of the United States on the Oregon country by focusing the nation's attention upon it. That their route turned out to be not a very good trade route is hardly their fault, since they were not free to investigate others. As a result of experience, far better routes and better passes through the Rockies were later to be discovered by other travelers, and this was to be expected.

EXPLORATION

After Lewis and Clark came the fur traders of three rival companies. The Pacific Fur Company of John Jacob Astor established Astoria in 1811. The North West Company sent David Thompson down the Columbia River, also in 1811, "to open out a passage for the interior trade with the Pacific Ocean." When he stopped at the mouth of the Snake he set up a pole bearing a piece of paper on which he laid claim to the land for Great Britain. On the notice he added a statement that the N. W. Company of Merchants of Canada planned to "erect a Factory at this Place for the Commerce of the Country around." Did he envision the complex of the atomic era which would develop a century and a half later around the mouth of the Snake with waterborne shipments routinely from California and Alaska?

When Thompson came to the mouth of the Walla Walla, he was shown the American Flag and Jefferson Medal given to Chief Yellepit by Lewis and Clark. By the time he reached The Dalles he realized his claims were shaded by the earlier expedition. Thompson proceeded on to Astoria to make contact with Astor's Company. In 1813, because of the War of 1812, Astoria was sold for about one-third its value to the North West Company and renamed Fort George, just weeks before a British ship sailed into the Columbia to attack her in the name of the king.

In 1811 John Jacob Astor sent a United States expedition overland to the Columbia River, headed by Wilson Price Hunt, a partner in the Pacific Fur Company. One destination enroute was to Fort Henry, which had been established by Andrew Henry the previous year on the Snake River near the mouth of Henry's Fork. The Hunt expedition of 56 men and Madam Dorion, wife of Pierre Dorion, guide and interpreter, pioneered in a route across the country as possibly the world's greatest trail blazers. They arrived at Astoria in January and February of 1812. The route was more definitely established as the famous "Oregon Trail," particularly through the country east of the Snake River Valley, by the returning Robert Stuart expedition of 1812 which arrived in St. Louis in May 1813, via South Pass, the Sweetwater, and the Platte. Thus, was the Oregon territory and the upper Snake River country opened up.



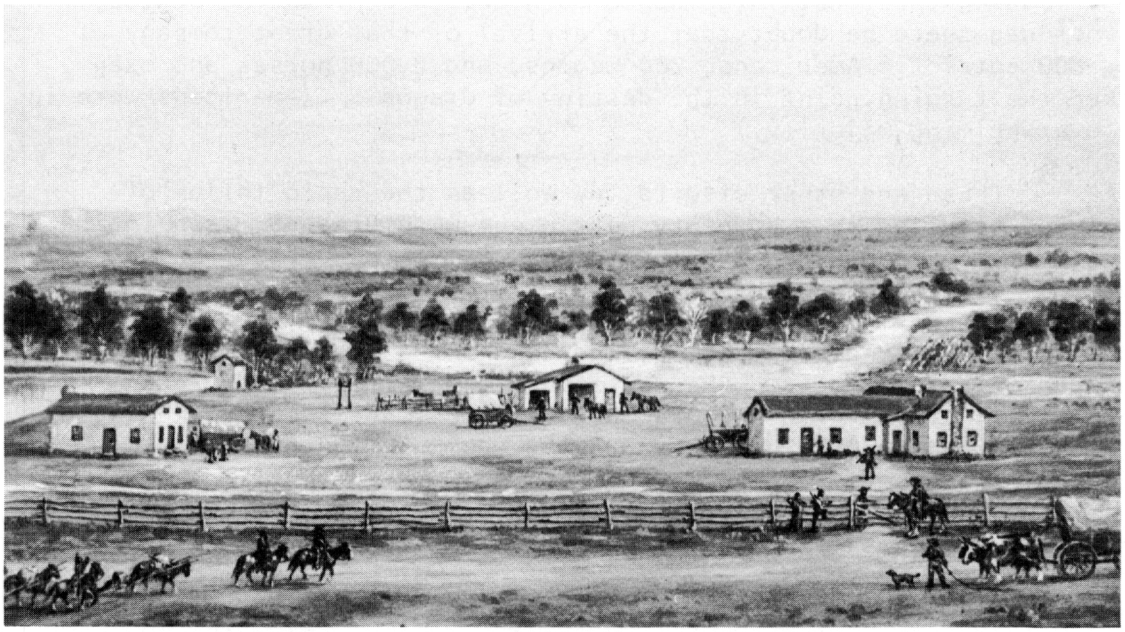
HUDSON'S BAY COMPANY POST - FORT VANCOUVER, OREGON TERRITORY (1845)
(National Park Service)

The third fur trader to enter the area right after Thompson was Hudson's Bay Company, an organization chartered by King Charles in 1670. Open warfare broke out between the two companies during the teens for the rich fur trade of the region. Finally, in 1821 the two companies merged with Hudson's Bay the successor. Then began the two decades of the "McLoughlin Era" (1825-1846) when the Factor of Hudson's Bay Company was Dr. John McLoughlin. His headquarters was Fort Vancouver with strong allegiance to Great Britain.

SETTLEMENT

During this period, Hudson's Bay strengthened the Company position in the interior by establishing posts at Colville and the mouth of the Walla Walla River, with others in the Pend Oreille and Flathead country. Later they moved into the upper Snake at Boise and Fort Hall. The Americans ran the Hudson's Bay Company competition with the Rocky Mountain Fur Company which worked around the fringes of the Hudson's Bay territory. With the decline of the beaver fur, and the desire to become more self-sufficient, Hudson's Bay and the Oregon Territory turned to sawed lumber, salted salmon, hay, grain, and other agricultural products for trade with other parts of the world, including Russia's Alaska.

With the fevers of exploration and civilization coming to the Northwest came the need for religious guidance that was to express itself in the missionary crusades of the thirties and after. First came Jason Lee and his nephew, Daniel, in 1834. They came across the plains into the Snake River country, over the Blue Mountains to the Columbia, and into the Willamette Valley. The following year came the Rev. Samuel Parker for only a brief stay. The young Dr. Marcus Whitman, a physician, came with him that year as far as Green River, Wyoming. Dr. Whitman was impressed with the need and returned east to obtain help for an organized mission project. In 1836, after marrying Narcissa Prentiss, he collected a party, including Henry Spalding, and came west to Fort Walla Walla, then at the mouth of the Walla Walla River, The Whitmans were to settle at Waiilatpu, "The place of rye grass," that fall, 25 miles east of the Fort. The Spaldings went on, late that fall, to establish a mission at Lapwai on the Clearwater.



WHITMAN MISSION - NEAR WALLA WALLA, WASH. (1845)
(National Park Service)

In 1838 Rev. F. N. Blanchet and Rev. Modest Demers were sent to the Northwest by the Catholic Bishop at Red River, Canada. They arrived at Fort Walla Walla on Sunday, 18 November and held the first Mass celebrated in this section of the country. The Indians had heard of the "Blackgowns" and came to see them, attending the Mass. The two priests then continued on to the Willamette Valley for their permanent assignment. It wasn't until 1847 that Catholic clerics were assigned

to the Inland Empire area, one arriving in the Walla Walla Valley a very few months before the Whitman Massacre. The Rev. Cushing Eells and Rev. Elkanah Walker came west through Fort Walla Walla in 1838 enroute to the Spokane country to establish a mission there, and others were to follow. The Anglican Church was represented at Fort Vancouver by Mr. Beaver, who stayed only two years and served mostly Catholics in that area.

During this period the Hudson's Bay Company, with ties to England, essentially controlled the Oregon Territory from the 42nd parallel to the 54th parallel. They welcomed settlers but made sure their work was not contrary to the best interests of Hudson's Bay. The settlers were not in accord with this. Jason Lee went east in 1838 with a petition to Congress for Oregon's admission to the Union. Dr. Marcus Whitman made a very difficult winter ride east, across the continent, in 1842, not only to enlist home seekers and on missionary matters, but to seek governmental aid in the settlement of the Oregon country and to assert its ownership of the territory. He returned in the summer of 1843, leading the first large wagon caravan. One historian states, "...nor can there be doubt that the arrival of that great company of over 800 patriotic Americans, 200 wagons, and 2,000 horses and oxen marked the turning point in the destiny of Oregon." (Americans were in the overwhelming majority.)

These and other efforts, as well as the rapid influx of settlers, resulted in a boundary settlement with Great Britain in 1846 and an act by Congress on 14 August 1848, admitting Oregon to the United States as a territory with officers appointed by President Polk. The Whitman Massacre in 1847--the single most important immediate cause--other threats, boundary disputes, and need for a governmental body other than Hudson's Bay dictated the decision. The territory of Oregon embraced all of the original Oregon country between the 42nd and 49th parallels from the Rockies to the Pacific. Thus, the United States extended on west from the Louisiana Territory to the Pacific. The "Inland Empire," with soon-to-be discovered natural resources and development potentials, was an integral part of it.

Also an integral part of the Oregon Territory and its economic potentials for the white man was the native Indian. Distributed throughout the Columbia Basin and along the coastal area mostly in small tribes, they lived off the land, fished the streams, and stalked the wildlife. Early Spanish explorers from the south brought to the great plains the horse, which the Indians adapted to their use and took over the Rockies to the Columbia Basin before the time of Lewis and Clark. Early history contains the names of over 60 tribes dealing with the white immigrants and there were, no doubt, many more. However, the total population was not great because of the hardships and basic problems of living. The white man with his increasing numbers was, of course, an anathema to the Indian, but the Indian and his presence in the region shaped much of the white man's development pattern. The white man's influence over the Indian's culture was very much stronger.

GOLD! AND TRANSPORTATION

To illustrate the transportation problems, the immigrants such as Marcus Whitman and others when coming west at first abandoned their wagons at Fort Hall or Fort Boise in Idaho, packing the rest of the way because of the heavy sagebrush. In 1841 one pioneer group (The Newell Party) coming west were the first ever to take wagons west of Fort Boise. Because of the heavy sagebrush they were forced to abandon the wagon beds and came on with the running gear only. One historical account states: "In the fall of 1842 Dr. Elijah White arrived at the Whitman Mission with 114 persons, but they left their 19 wagons at Fort Hall...Thus we see that the Newell party of 1841 brought the first vehicles, and that the Whitman-led train of 1843 was the first to bring through its complete wagons, nearly 200 in all."

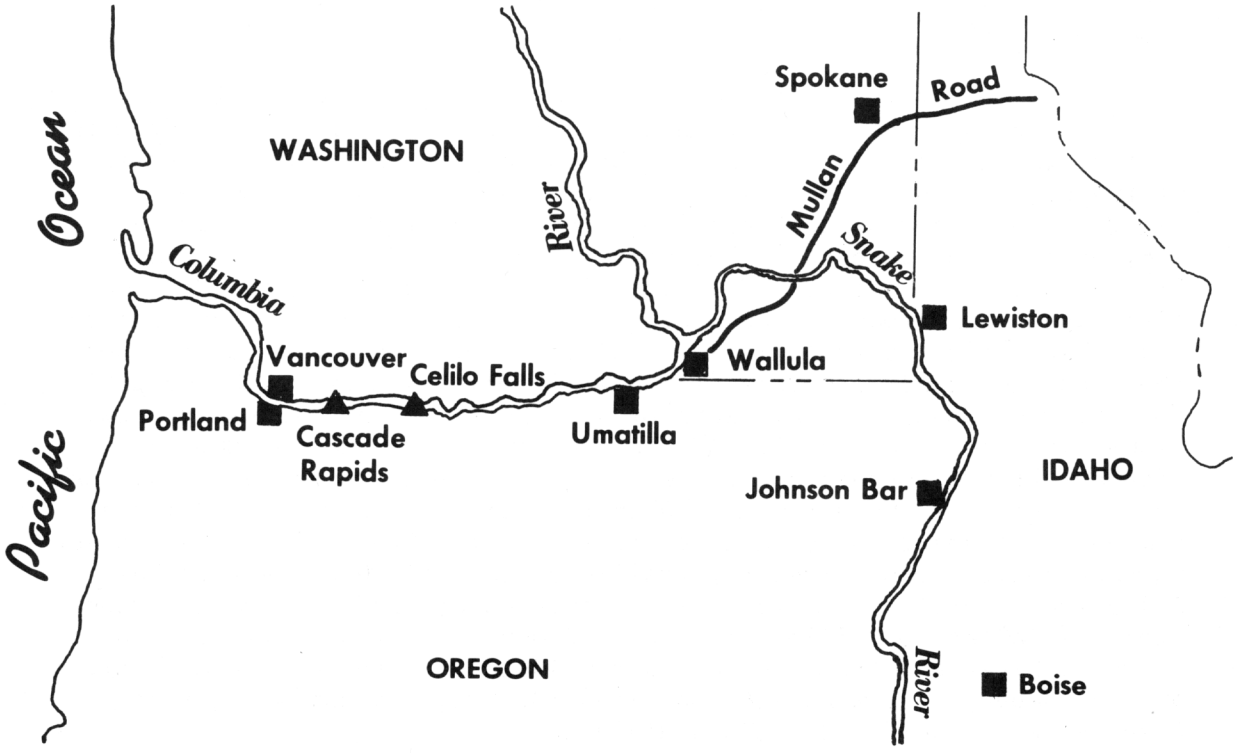
Gold was discovered in California in 1848 and the mad rush to the gold fields, wherever it was found in the entire west, caused many migrations and emphasis on land settlement during the next five decades. The miners required food, lumber, and other supplies and the Pacific Northwest was a good source of supply. The area prospered and developed fast. In Oregon alone, the population grew from 13,294 in 1850 to 413,526 in 1900.

The territory of Oregon was carved out of the larger territory in 1853 and the remainder became the territory of Washington. From the latter, the eastern portion was detached in 1863 to form the territory of Idaho. Oregon became a state in 1859, Washington in 1889, and Idaho in 1890. Development continued for the area east of the Cascades. In 1857 gold was discovered in the Colville area of the upper Columbia River; in 1860 in Idaho; and in 1861 in eastern Oregon. In 1863 the first wheat was grown in the vicinity of Umatilla. By 1875 Dr. Dorsey Baker had built the Walla Walla & Columbia River Railroad to transport the wheat and other products of the Walla Walla Valley to the Columbia for movement downstream by means of steamboats on the "majestic broad highway to the mighty Pacific." In the early '60s the Columbia River became a travel bonanza and there was gold in the travel business, too. Says a report of those times: "When the gold rush began in 1861 the demand for transportation was so great that the Oregon Steam Navigation Company, which monopolized the traffic on the Columbia River to The Dalles and Umatilla, had to build new steamboats and improve the road from The Dalles to Celilo. In 1864, 22,000 were transported on the Columbia River and from 1861-64 nearly 100,000 passengers were recorded by the company. Between 1861 and 1866 the Oregon Steam Navigation Company paid itself $332,750 in dividends."

The economic expansion of the area was marked, but there was still a strong urge for a transportation route from the Midwest to the

Pacific for trade with China. The railroad era was, of course, inevitable, and after Dr. Baker's short line came the rail lines from the east in the early '80s. The Oregon Steam Navigation Company became the Oregon Railway and Navigation Co. (OR&N), which later became a part of the Union Pacific. About the same time the Northern Pacific (NP) started to build from Lake Superior to Puget Sound. Their first connection with Puget Sound was via Villard's OR&N line down the south bank of the Columbia River. The combination of the two roads was completed in 1883. The Cascade route of the NP was completed in 1887. The construction of the NP started from both ends and Yakima, Pasco, Spokane, and other communities became important supply centers for the gold mining in the adjacent Idaho country of the Coeur d'Alenes.

Gold was first discovered east of Lewiston in 1860 and during the next 20 years navigation up the Columbia was the primary transportation route from Portland to Wallula. The Snake was used during high water periods to Lewiston, which at this time was the capital of the territory of Idaho.



LOWER COLUMBIA AND SNAKE RIVERS REGION

River traffic on the Snake was intermittent, but colorful, as the following report description from H. Doc. 190, 73d Congress, 2d Session, dated 3 January 1934, attests.

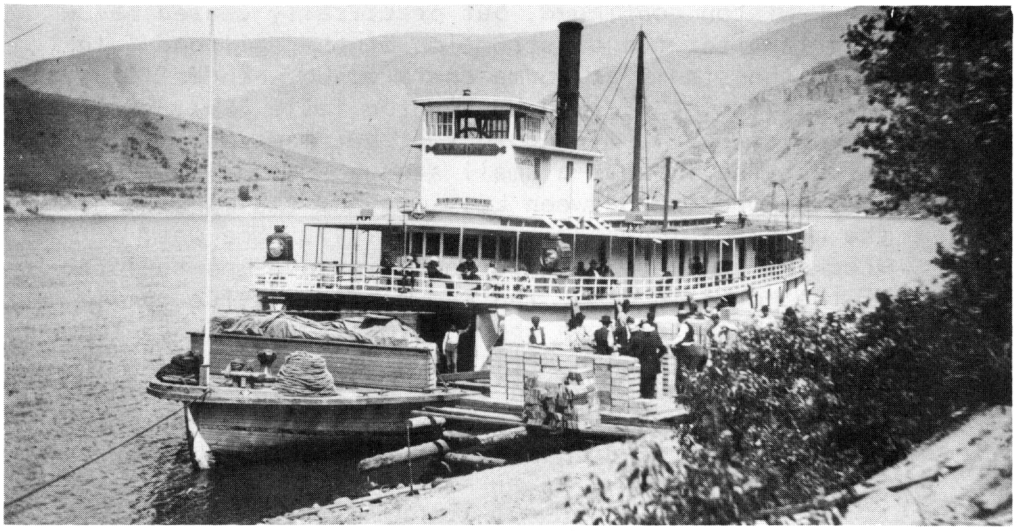
> "Early navigation on Snake River, during the fur-trading days, was by bateaux and sailboats which were drifted downstream and sailed or lined up. In 1858 the steamboat Colonel Wright was built at Celilo, on Columbia River, for navigation of the upper Columbia. In 1861, with the gold rush to the Idaho mines increasing, an experimental trip was made up Snake and Clearwater Rivers by the Colonel Wright. The boat ascended some distance up the Clearwater and discharged her passengers bound for the mines, but it was decided in the future to discharge them at the junction of the Clearwater with the Snake. Lewiston (Mile 141) was founded the same year at this point.
>
> "In 1862, when the gold rush was at its height, 4 additional boats were built to operate between Celilo and Lewiston. By 1864, there were 10 or 12 steamboats which in that year carried 36,000 passengers. As the mining rush died down the boats were transferred to the lower Columbia, so that by 1870 most of them were gone from the Snake...
>
> "In 1888, the Oregon Railroad & Navigation Co. completed a rail line along Snake River upstream to Riparia, crossing the river at that point to continue on to Spokane. Navigation between Riparia (Mile 68) and Lewiston continued, but practically ceased below Riparia after the construction of the railroad. In 1891, the steamboat Norma operated between Ballards Landing (mile 265) and Huntington (mile 329), serving the Seven Devils mining region, but made only a few trips. The Imnaha, a small steamboat, was built in 1903 to operate between Lewiston and the mines near the mouth of Imnaha River (mile 194). She was wrecked, however, after a few trips and was replaced by the Mountain Gem. The Gem was in service until the mines closed down about a year later. When the Oregon State Portage Railroad between The Dalles and Celilo was completed, in 1905, navigation between Celilo and Lewiston revived. In 1912, navigation of this stretch was discontinued, due to lack of patronage.

"The opening of The Dalles-Celilo Canal, in 1915, saw the beginning of steamboat service between Portland and Lewiston. Lack of proper terminal facilities and consequent lack of tonnage sufficient to pay expenses forced the service to discontinue, in 1920. Since that time, the only steamboat service has been the operation of one railroad-owned boat, which picks up wheat at river warehouses on both banks, between Lewiston and Couse Creek (mile 159), and on the left bank, between Lewiston and Riparia, and delivers the wheat to the railroad at and below Lewiston... (Discontinued in 1940.)

"In 1915, regular launch service from Lewiston upstream was begun. This service still continues, the launches running as far upstream as Johnsons Bar, about 91 miles above Lewiston during favorable stages. The launches carry mail, passengers, and supplies for ranches along the river.

* * * * * *

"Clearwater River is the only tributary which has been navigated to any extent. From 1861 until the railroad from Lewiston to Spokane was completed, steamboats used the river occasionally, but there was never any scheduled service. There are annual barge trips down Salmon River by parties bent on adventure, but otherwise the river has never been navigated. These are the only tributaries of Snake River on which boats have ever been used."



STEAMBOAT "ALMOTA" LOADING FRUIT ON SNAKE RIVER

Other steamers made records, both as opportunists and long service. In 1863 the NEZ PERCE CHIEF carried the richest cargo ever taken downstream from Lewiston--$382,000 in gold dust. The ALMOTA, built in 1876, paid for herself in one trip to Lewiston by carrying troops upriver for General Howard's fight with Chief Joseph and the Nez Perce Indians. The ANNIE PAXTON, the pride of the river, built in 1877, was first operated between Celilo and Lewiston. After ten years she was rebuilt to run from Lewiston to the Union Pacific Railroad terminal at Riparia. The LEWISTON, built in 1894 and equipped to carry 250 tons of freight and with 14 staterooms, was assigned to the Snake River with headquarters at Lewiston. After several accidents and rebuildings, she had the dubious honor of making the final steamboat trip down the Snake River on 29 February 1940, proceeding on to Portland; the end of steamboating on the Snake River which started 80 eventful years before. An interesting and more complete story of the early navigation saga of the Snake River, and cargoes handled, is recounted in Chapters 7 and 8 of the history of steamboating in "Stern-Wheelers up Columbia," A Century of Steamboating in the Oregon Country, by Randall V. Mills.

ROADS

With the trek to the west, roads became a vital necessity, together with the waterways and later the railroads. The Army Engineers and an offshoot of the Engineers, the "Corps of Topographical Engineers," which had independent status from 1838 to 1863, were given the task of opening the vast territory west of the Mississippi with "Military" roads which could, of course, be used for commerce and travel. There was the road to California built by CPT Philip St. George Cooke; the route of CPT Amiel W. Whipple west along the 35th parallel; the Simpson route across western Utah; and the road of CPT John Mullan who was commissioned to develop a route from the head of navigation on the Missouri River at Fort Benton to the head of navigation on the Columbia. This route followed the Clark Fork into the Spokane area, then south to the Snake in the Tucannon-Lyons Ferry area. After crossing the Snake the road continued south to Prescott and Walla Walla, where an established road led to Wallula and the steamboats. The road was 624 miles in length and a difficult feat of engineering for those times. It was accomplished through a great deal of hard work involving 120 miles of difficult timber cutting 25 feet wide and 30 measured miles of excavation 15 to 20 feet wide.

The Mullan Road, completed in 1862, turned out to be a fortuitous undertaking. It was not actually used by the military to any extent but did provide a good route for the heavy migration that came with the discovery of gold at that same time. By the 1870s a network covered most of the west through the territories of Minnesota, Oregon, Washington, Utah, and the southern area. It has been said that by the end of the nineteenth century the engineers and explorers of the Army Corps of Engineers had probably done more than any other single group

toward opening up the west. The transcontinental railroads might dispute that broad statement since they, too, "opened up the west," as population figures for the region suggest.

CHAPTER 2

INLAND EMPIRE STREAMS AND MAN

EARLY EVOLVEMENT

The development experienced during the century from the time of the Hudson's Bay reign to end of the expansion era of the 1920s indicates that one of the strong motives was reaching the Pacific Ocean west of the Cascades. Railroads and highways all led to Portland and Seattle, the seaports for the Pacific trade routes. However, in the process of accomplishing it, the inland areas became an essential and integral part of that development. In addition, many of those with visions of the broad Pacific in their mind at the start found a strong affinity for the interesting country of the Snake River Basin and upper Columbia and the opportunities that abounded there. One Idaho historical writer, however, makes this statement about settling in that portion of the Oregon Territory:

> "In twenty years, between 1842 and 1862, it is estimated that at least 300,000 people dragged their weary way across the sun-blistered sagebrush plains of the Snake River country on their way to the rain-soaked hills and valleys of the Pacific Slope. Of all those eager, determined, emigrants, not one stopped to take up land, nor tried to make a home under Idaho's blue skies. At old Fort Boise, they enjoyed Francois Payette's crisp vegetables and luscious melons, his hospitality and butter, but only one, David Bivens, diverted from the regular route in 1861 by tales of the gold strike at Auburn, Oregon..."

Minerals, of course, furnished much of the incentive for early development in the Inland Empire and upper Snake River area. Deposits of gold were found in many of the stream basins--Coeur d'Alene; the Clearwater; the Snake canyon; the Salmon River country; the John Day, Grande Ronde, Powder, Burnt, Malheur, and Owyhee basins; the upper Boise; the Wood River Basin; and other valleys to the east. Other minerals followed and still provide a strong base of the local economy. (Idaho now produces one-half of the nation's silver.)

Early establishments in the region were strictly for the migrant and fur trader. Fort Hall, Fort Boise, Fort Walla Walla, Pendleton, and The Dalles all served the Oregon Trail traveler. When the idea for agriculture, cattle, and exploiting the local resources became feasible, as the result of better protection from the Indian, communities sprang up around and between the Posts and the "sod busters" took over. Even though the markets for food were erratic, irrigation of bottom lands in the Snake Basin developed with the in-migration. The soil is rich and water has been plentiful. Irrigation for commercial crops began in the Boise and Grande Ronde Basins in the 1860s. It spread upstream into the Twin Falls, Pocatello, and Idaho Falls area during the period of 1880 to 1905. Now it is general throughout the Inland Empire and upper Snake River area with about 3,500,000 acres under irrigation in the Snake Basin alone, mostly in Idaho, which boasts that in a single year they had six of the "top 10" of the 25 leading crops for the nation. Three-quarters of all employment in the Columbia Basin is traced directly or indirectly to agriculture.

WATER

As has been the history for settlements throughout the United States, when people settled in the Inland Empire they gathered along the streams, at the mouths of canyons, and on or below the debris cones or outwashes from mountain streams. Water quality was good, the supply plentiful, and the ground slope gentle and very suitable for gravity irrigation. The transportation routes, roads and railroads, of necessity followed the streams in order to hold down grades and bypass the rolling hills and mountains. In addition, the valley bottoms were where the gold was, both the highly prized mineral and the black kind in the form of very productive soil.

In his single-minded objective of development, and support of his family, man encroached on the streambeds, dammed the streams for irrigation diversions, diverted them for placer mining, and tore them all apart with dredges seeking gold. In many instances streams were also his household water supply, either directly or through shallow wells. With much of the Inland Empire area a near desert climate, water is its lifeblood, and also one of its major liabilities. All of its streams are subject to wild fluctuations and the control of them is difficult. They inflict heavy damages on man and his frail facilities, later to be the foundation of his very existence.

FLOODS AND DROUGHTS

Major flooding is infrequent on the Columbia River proper and many of its tributaries since, in general, there are high banks and an adequate channel. Some tributaries, however, such as the upper Snake River streams, the Clearwater, Yakima, and other tributaries throughout the southern part of the Inland Empire experience frequent but irregular floods. The largest known flood of general occurrence was that of June 1894. It was severe in most of the basin east of the Cascades with a

peak Columbia River flow at The Dalles of 1,240,000 second feet. The second largest was that of June 1876 with a comparable discharge of 1,020,000 second feet. The third largest was that of May 1948 with a discharge of 1,010,000 second feet. (The low flow of record is 30,500 second feet and the mean annual discharge is 188,500 second feet.)

VANPORT AREA - PORTLAND, OREGON - COLUMBIA RIVER - MAY 1948

These floods caused widespread damage throughout the basin, as can be readily realized when summer and fall flows are only about one-tenth this amount. From this it can be seen that floods are not the making of mankind exploiting the area, but he can contribute to it. Major floods are of spring snowmelt origin, aggravated by excess precipitation or warm weather, and are usually broad crested. Tributary streams, particularly in the Snake River Basin, experience frequent, if not annual, floods from the same cause as well as from unseasonable winter snowmelts with rain. The development of the valley bottom and adjacent plains, as well as settlements near the mouths of mountainous sections of streams, have aggravated flood actions with serious results and many calls for help.

Droughts in the Inland Empire and upper Snake area are also a serious matter to the settler and developer of the basin lands. Dryland farming for small grains has been hazardous, as has been overdevelopment of local irrigation projects, only to experience the summer and fall loss of an adequate water supply. During a 60-year period from 1886, the basin has experienced 18 years in which deficiency of spring and summer rain caused critical crop conditions. As a result of these wide variations in precipitation and streamflow, there has been, from the earliest time, emphasis on storage and stream regulation.

In an effort to control the streams throughout the basin, man has resorted to major storage projects as well as many types of channel control structures. From the standpoint of optimum use, storage of snowmelt and spring flood flows has been a big objective. The water is later used for supplementing low summer flows for irrigation, power, recreation, navigation, and more uniform aesthetic stream conditions.

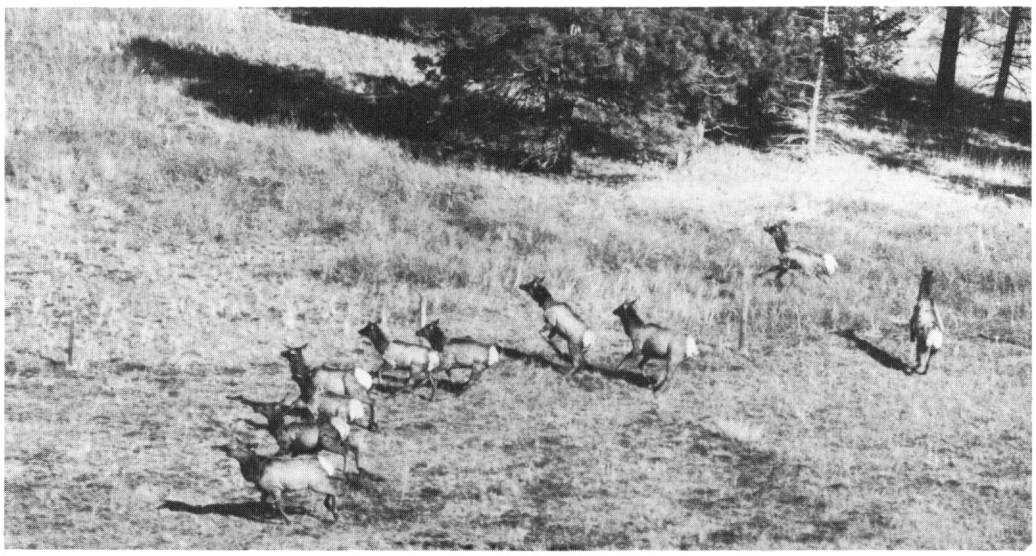
The first storage project of any size was Milner Dam on Snake River in central Idaho, built about 1905 with 80,000 acre-feet of storage. The Columbia River and its tributaries is now controlled by an aggregate of close to 21 million acre-feet of storage, including Canadian projects, with an additional 13.5 million acre-feet to be added by 1973. Maximum utilization of the streams for all purposes, including hydroelectric power and irrigation of another 4-6 million acres of dry land, would dictate more than doubling that storage figure. Some of it is under development at the present time.

FISH AND WILDLIFE

The Inland Empire of the Columbia Basin, owing to its great variation in and exceptionally favorable environmental conditions, has been, and still is, one of the nation's most prolific producers of fish and wildlife. One of the staple foods of the Indians was the Pacific salmon which abounds in the Columbia and its tributaries. It was also a boon to the white man. Several species use the basin streams for spawning so the migrating fish are available during much of the spring to fall season. Records indicate that the salmon was exported as a food

as early as 1830. The first salmon cannery was established in 1866 and by 1883 the record commercial catch of salmon was estimated at 43 million pounds, which was much more than a sustained fishery could support. Regulatory legislation was enacted in Washington State in 1890.

INDIANS FISHING FOR SALMON AT CELILO FALLS



Other species of wildlife were present also, including, of course, the fur bearers which were extensively hunted by the early trappers. Big game, deer, antelope, elk, bear, and the predators roamed the area even though the journals of Lewis and Clark indicate they found none

in the Clearwater and Snake River area. As a result, the Expedition had very meager fare on this leg of their trip. (On October 14, 1805, while on Snake River, Captain Clark noted, "Here we dined, and for the first time for three weeks past I had a good dinner - of blue winged teal.") The arid Snake River plains along the Oregon Trail were also quite barren of big game.

Many wildlife species were gradually restricted and forced to modify their natural habitat by the appropriation of the bottom lands and breeding grounds for agricultural and community uses. Reclamation of marshlands resulted in the loss of resting and breeding grounds for waterfowl, with some substitutions of small reservoir areas. Irrigation of semi-arid lands reduced the habitat of some native game birds but benefited other upland game species and waterfowl. Big game animals were forced higher into the foothills and mountainous areas from much of their native rangelands and have acclimated to it. Throughout the development period of the territories and early statehood, the fisheries of the Inland Empire and its wildlife provided major items in the diet of both the migrant and the settler. Of course, the fish and game were the principal source of food for the Indian, as supplemented by natural growth of roots and berries.

This early period of settlement was essentially a period of exploitation of the natural food resources of the region with little or no attempt at sustaining it or replenishing it. Not until the start of the 20th century was conservation and planned replenishment of our fish and wildlife resources undertaken--and then very limited until the second quarter. One exception was Robert Hume, an Oregon pioneer fish packer, who established a fish hatchery on the Rogue River in 1877. He operated it into the 20th century.

Up to the time of the second world war probably 300 dams were built in the Columbia Basin, varying in size from small diversion structures up to major storage projects, but all, nevertheless, barriers to fish movement. Yet in only a few instances was much collective thought given to the effect these developments would have on fish and wildlife resources. They were plentiful and there for the taking, along with all other depletible, exhaustible, destructible, and non-replenishable natural resources. The national attitude, earlier for survival, then later toward seeking the "good life," was transitional. It had not yet come to the realization that "Spaceship Earth" just might not be limitless in its ability to cope with the ingenious and often destructive endeavors of man.

FOREST PRODUCTS

The first part of the century saw a major expansion of lumbering in the Inland Empire with large mills at such locations as Burns, Baker, La Grande, Lewiston, Payette, and Boise. This expansion came to a halt with the depression years of the 1930s. After that, as the market recovered, considerable of it was satisfied by lumber processed

through small, independent, inexpensive mills located strategically close to the supply with the products handled by truck. As with agriculture, the war demands of the 1940s put unprecedented requirements on the industry, again dictating larger mills with more complete processing capabilities, with continued promising outlook. Paper products, containers, plywood, and prefabricated structures are factors in continued expansion of the industry and emphasis on the region's economic importance.

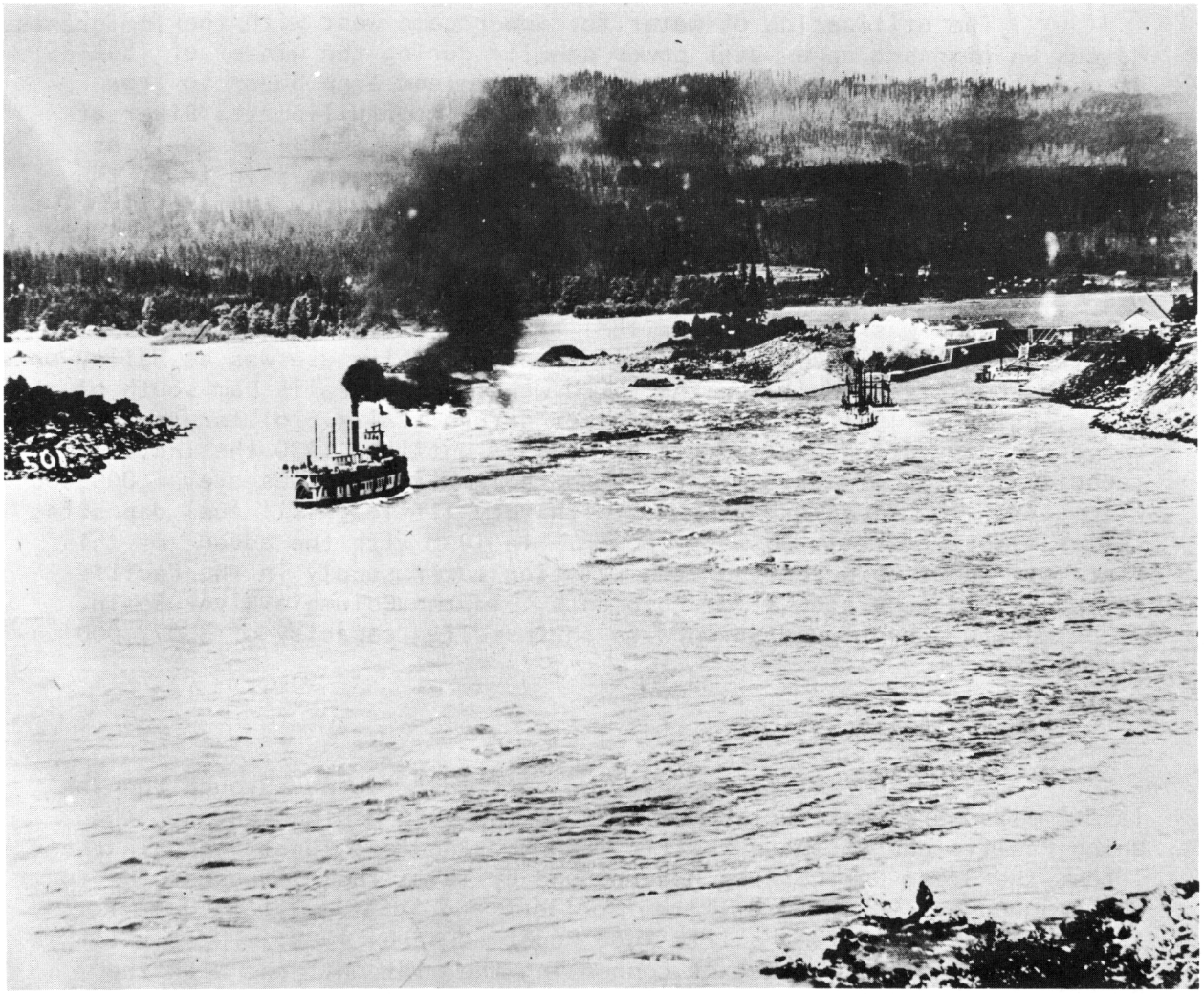
POWER

The utilization of water for power came west with the immigrants. Marcus Whitman set up a water power sawmill during the winter of 1844-45 as one of his projects, and as soon as the inland area began to grow wheat, flour mills became prevalent. The falls of Willamette River at Oregon City were used for power development for a sawmill as early as 1842 by Dr. John McLoughlin of the Hudson's Bay Company. In 1889, the Willamette Falls Electric Company built one of the early commercial hydroelectric powerplants in the United States at the same site. It had a capacity of 1,000 kilowatts divided between 19 machines and the power was transmitted to Portland at 4,000 volts. The first hydroelectric plant in Idaho was at Ketchum in 1881 to furnish light and operate smelter machinery. The first installation for public use was at Hailey on the Big Wood River in 1885. The third was the Swan Falls Dam south of Boise, built in 1901. Installations at natural falls proliferated to serve the population and industrial centers until by 1930 the installed capacity of hydroelectric plants in the Columbia Basin was over 1,000,000 kilowatts. The Pacific Northwest, with very little fossil fuel deposits, relies almost entirely on water power. In 1948 with the advent of this District, about 86 percent of the existing power supply in the Pacific Northwest was generated at hydro plants. In the Columbia River Basin, 91 percent was hydrogeneration with an installed capacity of 5,077,000 kilowatts.

TRANSPORTATION

The main rail transportation east-west routes through the Inland Empire were constructed well before the turn of the century; the Union Pacific and Northern Pacific into Portland and Puget Sound in the 1880s; the Great Northern to Puget Sound by 1893; the Milwaukee Line to Puget Sound by 1909; the Spokane, Portland and Seattle (SP&S) into Portland in 1908; and Union Pacific into Puget Sound by 1909. These railroads all had one aim, that of connecting the mid-continent with the Pacific Coast for the export business. As the inland area developed, branch lines were extended up some valleys to serve local communities and move out the local agricultural and timber products. The Union Pacific completed its north-south line from Wallula to Spokane in 1888 and from Pocatello to Butte, Montana, in the teens. It was not until 1911 that central Oregon rated a rail line, and Burns, the center of Oregon's cattle country, had to wait until 1924 for the rails. The Camas Prairie Railroad was run from Riparia to Lewiston and thence eastward into the Clearwater country in 1909.

Highways have always been the major means of transportation starting with the Mullan Road through the northern part, and Oregon Trail through southern Idaho into Oregon. North-south routes are difficult due to mountainous country and canyons, which also limit rail lines. A major network of highways developed throughout the Inland Empire during the expansion period of the 1920s to 1940s. Interstate highways and truck routes now lace the region, serving the many communities for major interstate traffic. Through routes to the coast are few because of the Cascade Mountain range.



COLUMBIA RIVER AT CASCADE RAPIDS

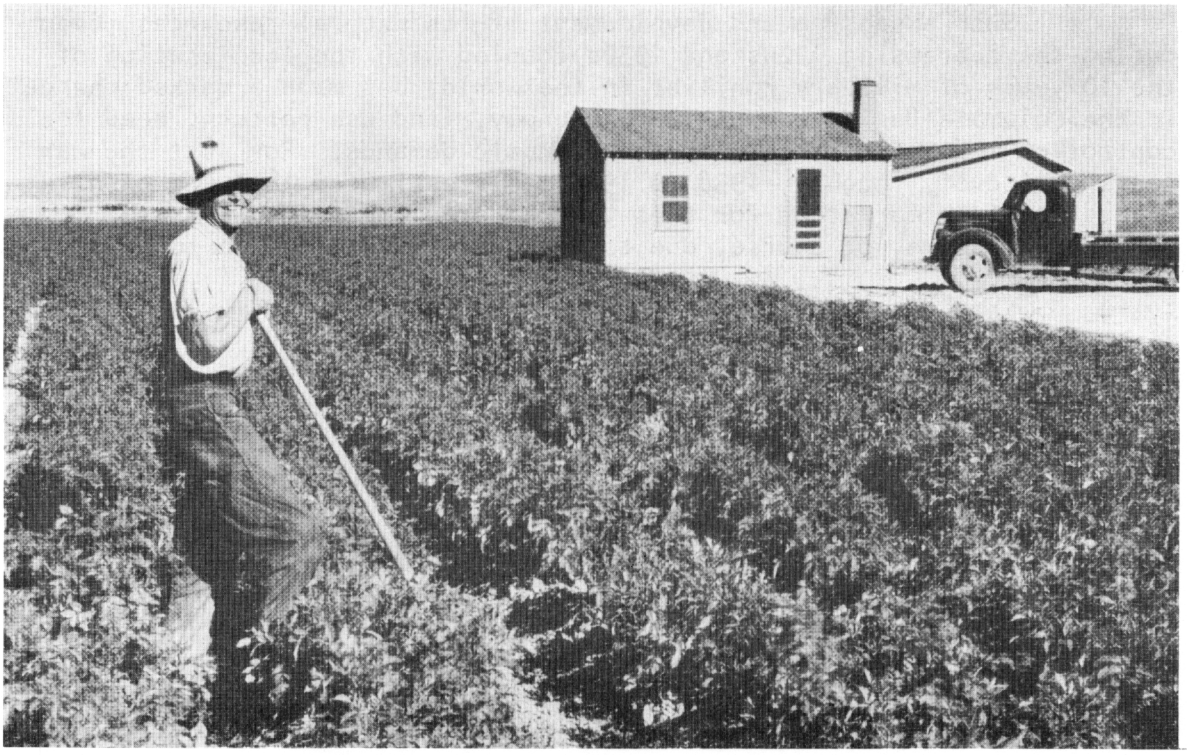
Water has been a prime means for transporting freight between cities and nations since earliest days. While the development of the railroad, the motor vehicle, the airplane, and, finally, pipeline transportation have all helped to decrease dependence on navigable waters

during the past century, regions around major cities still grow and prosper if access to waterways is available as a means of moving freight.

The fact that 96 of the 107 cities in the United States with a population of more than 100,000 are located either on one of the nation's coastlines or on a navigable waterway exemplifies this principle. Stated another way, only 11 cities in this country with a population of over 100,000 do not have direct access to some form of water transportation. The Inland Empire and its communities are influenced in the same way by the Columbia and lower Snake navigation potentials, with Portland and the adjacent tidewater ports as a Pacific terminus rating third largest on the West Coast.

DEVELOPMENT TRENDS

This portion of the Columbia River Basin is natural-resources oriented and, no doubt, will remain that way for its overall economy. Agriculture, minerals, and forest products, including their processing, predominate. Exploiting of the minerals, sustained production and wise use of the forests, and optimum utilization of the soils and water resources dictate careful evaluation, planning, and development for their best use. They form an important segment of the national well being and growth. As is said for Idaho, the real treasure of the Columbia Basin is not its gold--or minerals--but its soil.



The years of the first world war brought unprecedented prosperity and expansion of agriculture because of food shortage. In many areas of the nation over-expansion resulted and the collapse after the war brought on the national "farm problem" of over-production which has persisted. The Inland Empire and upper Snake region, which had experienced surplus crop supplies even during the 19th century, shared in this "problem" which was acute through the 1930s with its depression. The availability of good lands and water and development of some big irrigation and reclamation projects, however, helped it to move forward and carried it proportionately ahead of many less favorably endowed sections of the nation. This region, spared severe dust bowl experiences, attracted some of the people who had abandoned land in the Great Plains of the Midwest. In Idaho alone, as people returned to the farm and small towns, the state showed a 10-year increase of 17.9 percent for the 1930s, and this general trend was experienced also in the remainder of this inland region.

The second war in Europe and its demands made additional major changes and extensive development in the inland region, not in war industries or shipyards, but in the support factors--airbases, training camps, ordnance plants, demand for minerals, and even Japanese relocation and prisoner of war camps. The demand for food and fibre was, of course, a major factor in its expansion and food processing became an important adjunct. The demand on Idaho's minerals was such that during the period 1938 to 1960, the state's output equaled in value that produced from its inception in 1860 up to 1938.

Such expansion and development of its natural resources, even during the depressing 1920s and 1930s coupled with the acceleration of the 10 years of military conflict in the world, has made a marked change in the Columbia Basin's population, economy, land use pattern, need for control of its water resources, and economic demands. For just the war years period of, roughly, 1938 to 1948 it is estimated that the cash receipts for farm marketing for this general area increased well over 300 percent; some, of course, due to inflation, but much due to development.

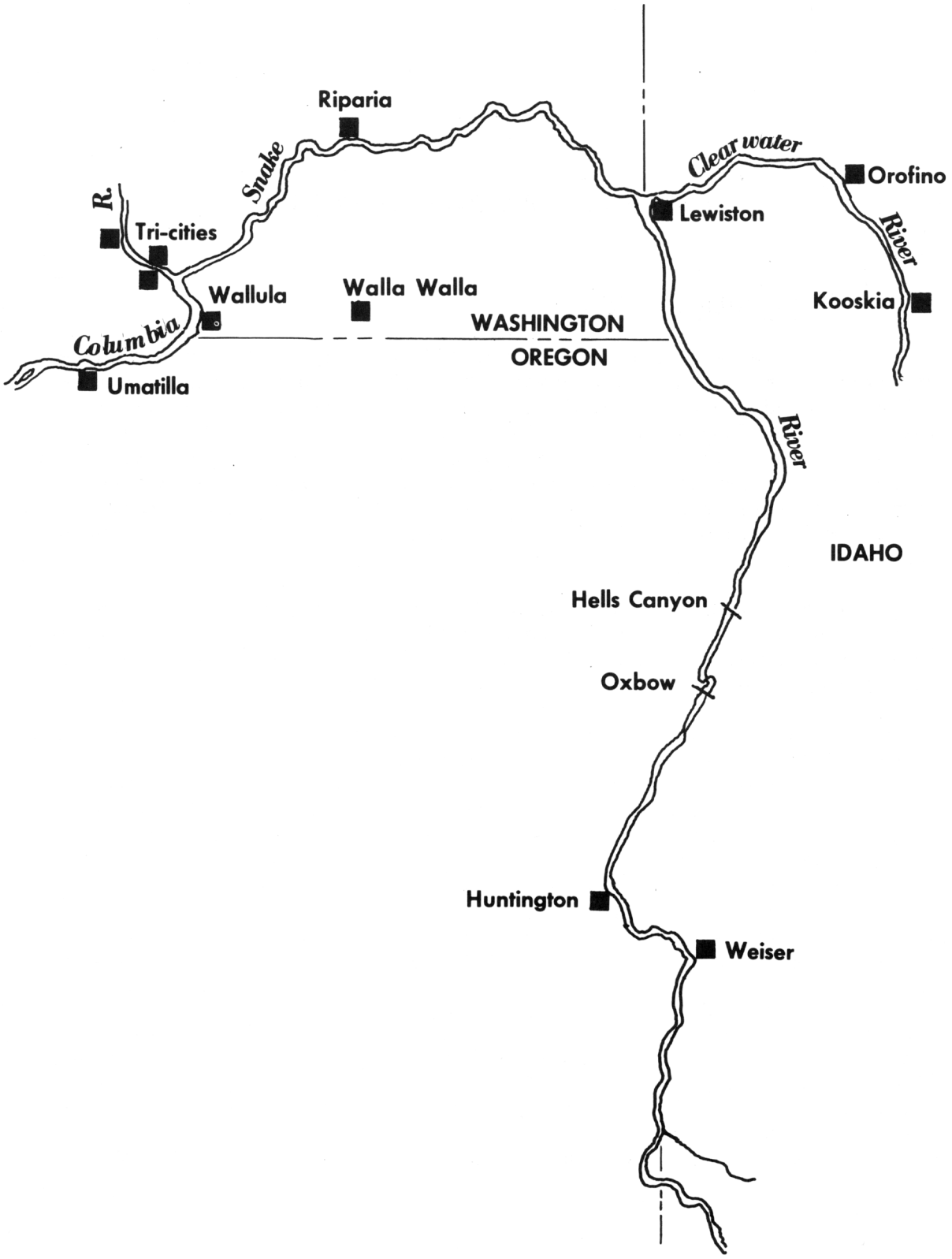
EARLY RIVER IMPROVEMENTS UNDERTAKEN

UPPER AND MIDDLE SNAKE

The waterways of the middle and upper Snake region were never utilized to any extent for movement of people or goods because of their hazardous conditions. In 1866, prior to the railroad in southwestern Idaho, the 136-foot steamboat SHOSHONE was built on Snake River at the mouth of Boise River. It made trips between Olds Ferry at Farewell Bend to Swan Falls upstream, a distance of about 120 miles. The venture proved unprofitable and in 1869-70 the vessel was taken downstream through Hells Canyon to the lower Columbia--a trip that must have been a real thrill.

A Preliminary Examination Report on Snake River, Idaho and Washington, with a view to its canalization to Shoshone Falls near Twin Falls, Idaho, was submitted 12 January 1926. The report was unfavorable and is unpublished.

Early mining in the Seven Devils or Hells Canyon reach of the Snake River below Oxbow and around Homestead, Oregon, and Cuprum, Idaho, influenced attempts to navigate the river up to Huntington, Oregon, a distance of about 65 miles, to connect with the railroad. A Federal project to improve this stretch of the Snake River by removal of rocks and the placing of ring bolts and iron posts was adopted in 1892. The project was abandoned in 1896 after spending $40,500. House Document 127, 56th Congress, 2d Session, dated 6 December 1900 states in part, "...The Government spent a considerable sum of money from 1891 to 1896 in improving Snake River in the vicinity of Huntington. This was of no avail, however, as the only boat ever built for this section of the river, the NORMA, gave up trying to run after the difficulties of navigation." Idaho history recounts that the steamboat NORMA was also taken to the lower Columbia by way of Hells Canyon in 1895, a most perilous and uncertain adventure. There are other records of boats on the Snake River in this general reach so it must be assumed there was actually considerable traffic in the 1890s, or period of the project, to serve the mines which, through the second world war, produced copper.


Riparia
Snake
R.
Tri-cities
Wallula
Walla Walla
Columbia
Umatilla
WASHINGTON
OREGON
Clear water
Orofino
Lewiston
River
Kooskia
River
IDAHO
Hells Canyon
Oxbow
Huntington
Weiser

CLEARWATER RIVER

Records indicate steamboat navigation on the lower Snake River made runs occasionally up the Clearwater River to the vicinity of Orofino, Idaho, to serve the gold mining rush. As a result, a study was made and work authorized for the Clearwater River navigation. The original project for the Clearwater was adopted in 1879. It provided for a channel 4½ feet deep to the North Fork near Orofino and three feet from the North Fork to the South Fork at Kooskia, Idaho. In 1896 this project was dropped and a project for high water navigation substituted. By the River and Harbor Act of 1902 the river was declared unworthy of further improvement by the Federal Government at that time. The expenditures under the two projects were $37,705.54. As requested in the River and Harbor Act of 1916, a preliminary examination report was prepared for the Clearwater River from its mouth to Orofino with a view to construction of locks and dams for navigation. The report was submitted on 29 November 1922. The Board of Engineers for Rivers and Harbors recommended no improvement. The report is unpublished. (The Potlatch Dam on the lower Clearwater was licensed by the Federal Power Commission in 1926 soon after that report was completed. The license provides for the installation of a lock for boats up to 10 tons if a need ever develops.)

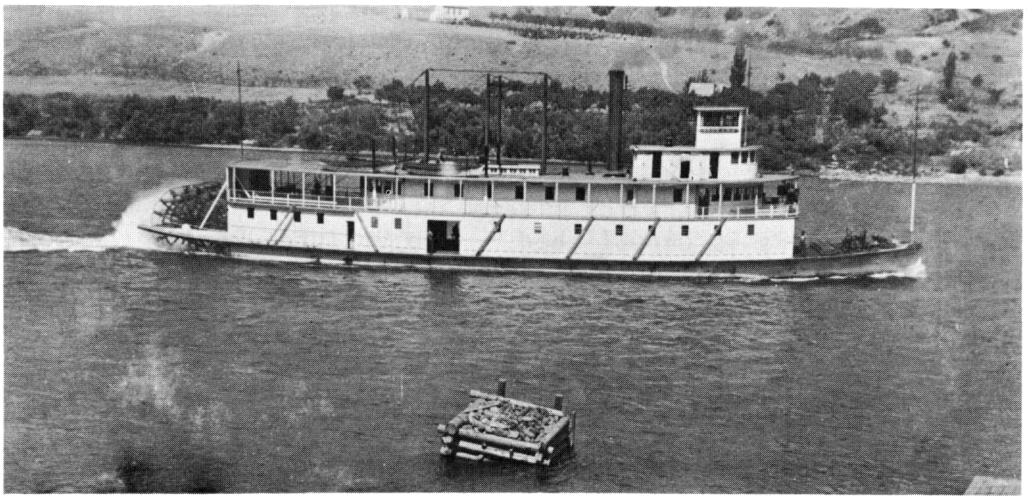
SNAKE RIVER BELOW HELLS CANYON

The Snake River from Johnson's Bar in the Hells Canyon section downstream past the Imnaha, Salmon, Grande Ronde and Clearwater Rivers at Lewiston, past Riparia at the Union Pacific Railroad crossing to the mouth at Pasco, Washington, has had a colorful and checkered history. Use of this reach of river for navigation really blossomed when gold was discovered in Idaho, with the use of the river increasing and decreasing as the temperature of the gold fever fluctuated.

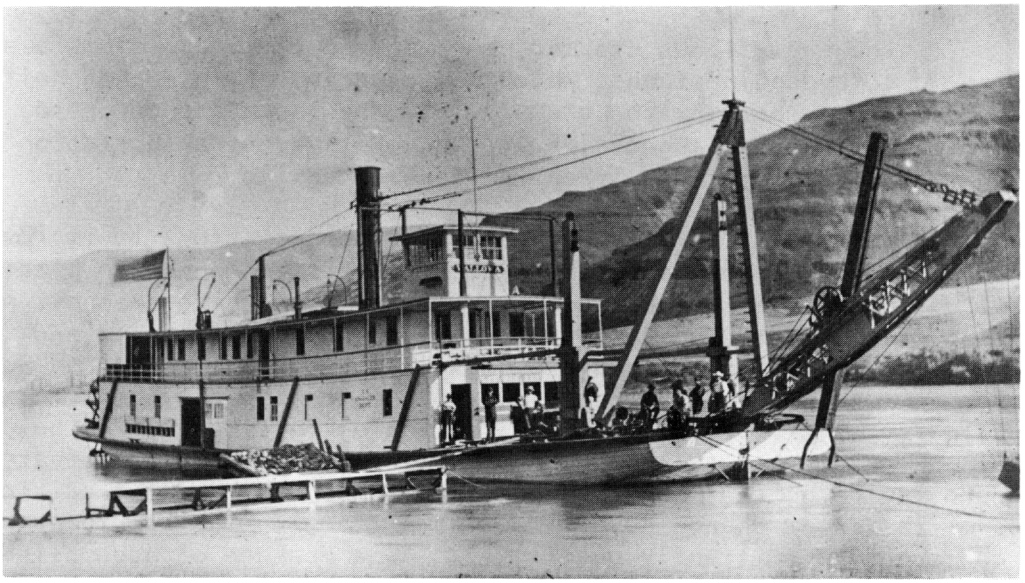
In the early 1860s steamers on the "upper river" Columbia above Celilo at most favorable stages, which was usually for more than half of each year, could ascend up the Columbia into the Snake and on up to Lewiston. Locks at the Cascades, built in 1896, made transportation from Portland more feasible with only one portage at Celilo.

As early as 1876 the Congress made appropriations to improve the Snake River. The method of improvement consisted mainly in blasting out obstructing boulders, constructing dikes to close side channels and concentrate flows, removing dangerous ledges, and scraping sand and gravel bars, thus trying to secure a navigable depth of 4½ feet at low water for a width of about 60 feet. Up to the turn of the century records indicate $117,850.57 spent on the Snake River, primarily below Riparia, and mainly before 1888 when the railroad was completed that far. One record indicates that Congress provided funds for dredging critical reaches of the river channel every two years starting in 1882 through 1891, and then intermittently until 1942. As a measure of accomplishment, "The improved channel allowed the steamer ANNIE PAXTON to haul more than double her grain load capacity of 600 sacks of grain."

Many studies have been made for improvement of Snake River from below Hells Canyon to the mouth over the past century. The initial one was made in 1866 for dredging at selected locations. No formal projects for the Snake River were adopted by Congress before 1902; however, as indicated above, considerable funds were expended for intermittent open channel work. Records indicate Congressional direction to make 14 different investigations over a 70-year period on this reach, for improvements to the open river. (See H. Doc. 25, 72d Congress, 1st Session, dated 22 April 1932.)



THE "SPOKANE" - SNAKE RIVER AT KELLEYS BAR
(WSU Library)



U.S. ENGINEER DEPT. DREDGE "WALLOWA" IN SNAKE RIVER AT KELLEYS BAR
(WSU Library)

Through a series of authorizations between 1902 and 1935 a continuous channel was authorized from the mouth to Johnson's Bar, a distance of 232 miles. These provided for a channel depth of five feet at low water to Lewiston with varying widths from 60 to 150 feet. Above Lewiston the authorizations were for removal of boulders and rock points. Specific authorizations by Congress for open river work are shown in the following tabulation:

River and Harbor Act	Reach of River	Description
1902	Riparia to Lewiston River mile 68 to 141	Removal of shoals and rocks with some contraction works 5-foot depth - 60-foot width
1902	Lewiston to Pittsburg Landing River mile 141 to 218	Removal of rocks and reefs. (No deepening but attempt to secure a navigable channel at a 3-foot stage at Lewiston.)
1910	Mouth to Riparia River mile 0 to 68	Removal of shoals and rocks with some contraction works. 5-foot depth - 150-foot width
1935	Pittsburg Landing to Johnson's Bar River mile 218 to 232	Removal of boulders and rock at 11 shoals.

Open river navigation of the Snake River from its mouth to Lewiston virtually ceased when the Union Pacific Railroad removed its steamer "LEWISTON" from the Riparia-Lewiston run in 1940. The steamer was taken to Portland for service in the lower Columbia and later was sent to Alaska for use there. As of 1945, the Federal Government had spent $400,000 for new work and $187,000 for maintenance. In addition, the State of Washington had contributed $85,000 for the work.

Records of waterborne traffic on Snake River indicate the wide variation in traffic, depending upon activities in Idaho. People were an important commodity being transported in the early days but records are scarce concerning them. One note states that 36,000 people traveled to and from the Idaho gold fields by steamer during 1864. During 1920 to 1935 passenger traffic ranged between 350 and 2,000 people per year.

The total tonnage carried on Snake River by representative years is shown in the following tabulation.

Year	Tons
1875	18,230
1879	65,975
1884	30,260

Year	Tons
1891	31,400
1894	9,902
1899	45,654
1903	
1906	
1910	
1915	
1920	29,868
1925	11,954
1930	19,823
1935	8,895
1940	1,361
1943	629
1945	370
1948	210
1950	53

Note: Traffic - Lewiston to Johnson's Bar generally 500 tons or less of the above.

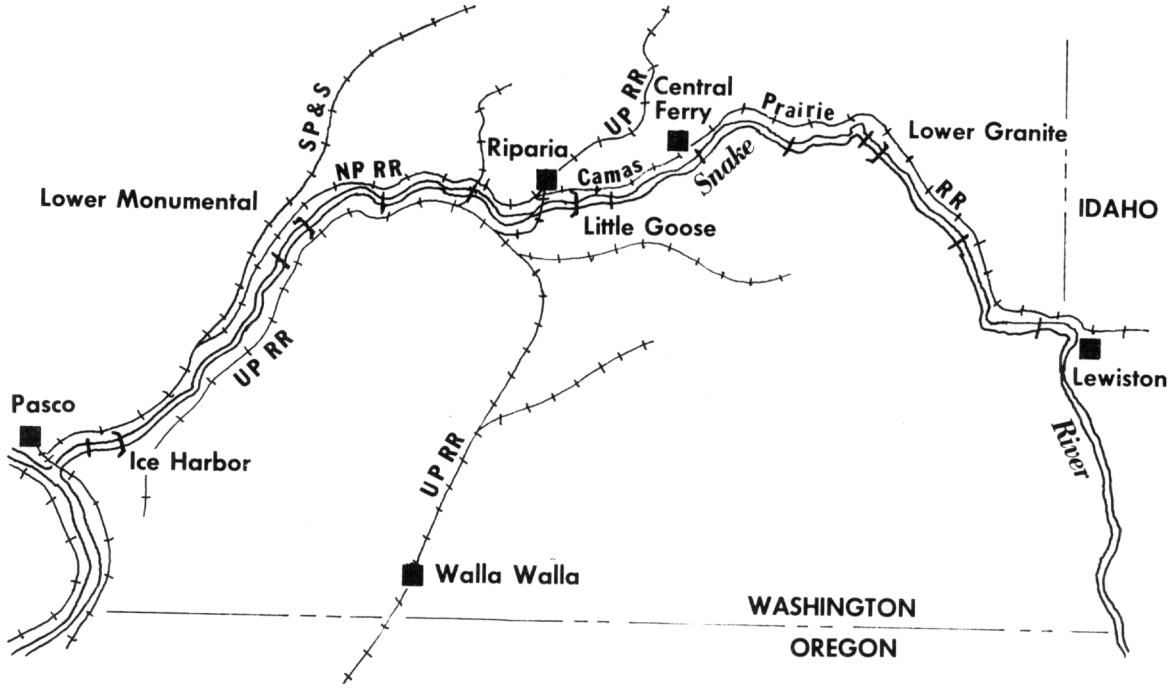
LOWER SNAKE RIVER DAMS

The first apparent concerted effort to examine the lower Snake River for a series of locks and dams for navigation, as well as incidental hydroelectric power was directed by the River and Harbor Act of 27 July 1916. This request for a preliminary examination report also included the Columbia River, Celilo Falls to the mouth of Snake River, and Clearwater River from the mouth to Orofino. The Snake River study extended to Pittsburg Landing, Idaho. The directive was for a study with a view to the construction of locks and dams for navigation, including any proposition by local interests for participation in the expense of the project in connection with the development of hydroelectric power. The initial report was submitted 6 April 1917 with a subsequent survey report submitted 29 November 1922. The reports are unpublished and their recommendations unknown, but the Board of Engineers subsequent recommendation was that no change be made in the existing projects.

The next study to be made for the region was the general, basinwide analysis of the Columbia River, the initial "308" Report. This review is contained in H. Doc. 103, 73d Congress, 1st Session, dated 10 June 1933, covering the Columbia Basin, including the Snake Basin.

In 1936 the Senate requested a review of H. Doc. 127, 56th Congress, 2d Session, dated 6 December 1900, for lower Snake River which provided for the open river improvements authorized in 1902. As a result of this review, H. Doc. 704, 75th Congress, 3d Session, dated 13 June 1938 reported on a proposal for 10 dams on the lower Snake, primarily

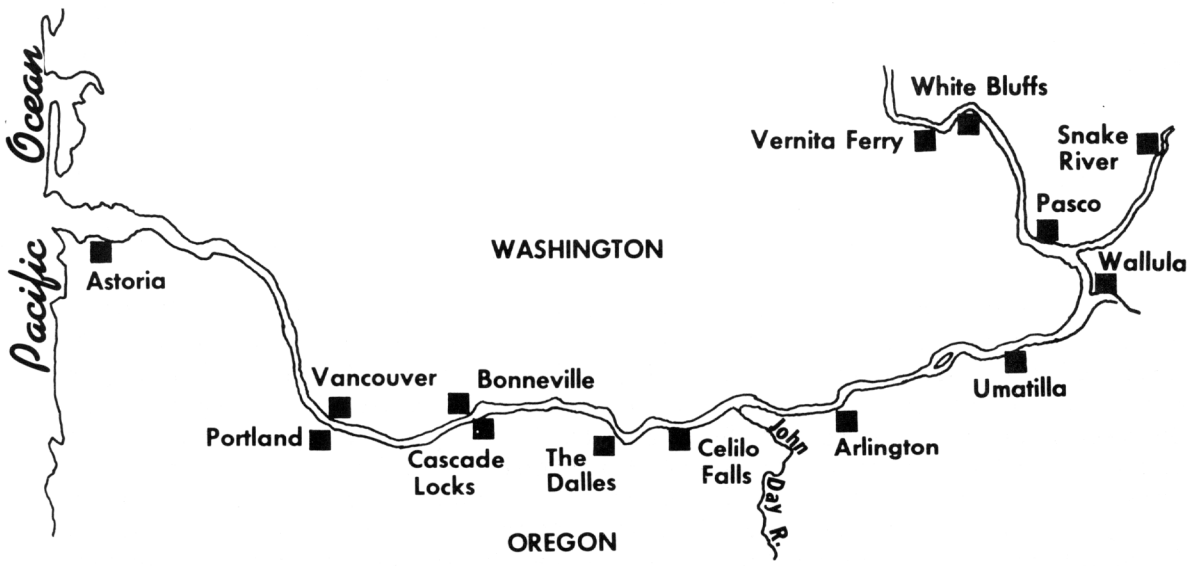
for navigation. These dams would provide for a nine-foot draft channel to Lewiston. The dam heights were carefully chosen to minimize damage to the parallel railroad lines.



That report, actually completed early in 1937, was just too early to foresee the surge of development to come to the region, and the impact of the then under construction Bonneville and Grand Coulee projects. In the report the Division Engineer found that the irrigation and navigation benefits were insufficient to justify the projects but that possibly sufficient power from the dams could be sold in the next 50 years to make the improvements economically sound. The report continues, "It is not safe to assume now, however, that this can be done, on account of uncertainty as to how long it will take the market to absorb the very large blocks of power which the Grand Coulee and Bonneville projects are capable of producing." (With the advent of war and upturn in the economy, the region was to experience "brown-outs" within three years.) The Chief of Engineers essentially concurred in these findings, recommending, however, that the report findings be accepted by the Congress "as a

general guide for future development - and that the Congress authorize from time to time such portions of the plan as it wishes...." The River and Harbor Act of 2 March 1945 authorized the construction of such dams as are necessary, and open-channel improvements for the purpose of providing slackwater navigation between the mouth of Snake River and Lewiston, Idaho, as generally described in H. Doc. 704.

Subsequent to the preparation of the report for H. Doc. 103 and during the preparation of H. Doc. 704, development of the Columbia Basin streams took a decided upturn with construction of Rock Island, Bonneville, and Grand Coulee Dams and the economic pressure on the region due to the second world war. In 1942 the Portland District was directed to review previous plans for the lower Snake River as generally outlined in H. Doc. 704. A report which was later used as the basis for more specific project identification and funding was submitted in November 1942, titled "Snake River, Lewiston to Pasco." The report found that in comparison with the benefits of a series of low dams, primarily for navigation but with some power facilities as previously contemplated in H. Doc. 704, a fewer number of high dams with power revenues paying a larger percentage of the annual cost was much better. That study, which was not printed as a Congressional document, recommended a comprehensive plan involving four major structures of 57- to 100-foot hydraulic heights with a fifth dam near the present Ice Harbor site with a height of 35 feet, assuming a pool elevation for the McNary project of 340 feet. Detailed site selection studies subsequently modified the dam locations, number, and pool heights to the four now under construction, each with a hydraulic height of about 100 feet.



LOWER COLUMBIA RIVER TO SNAKE RIVER

The Columbia River has, of course, always been a primary route of travel. Between 1850 and 1880 the river steamboats and stagecoaches had full sway. Portages at Cascades and Celilo Falls were improved and upriver steamers then had a busy time--until the railroads came in the 1880s and 1890s. During the gold rush steamers plied from The Dalles to Lewiston on Snake River and to White Bluffs on the Columbia, about 45 miles above the mouth of Snake River. Construction records indicate that over a period of 100 years--1850 to 1950--more than 100 steamboats of various sizes and capacities were built for the upper river runs, or made trips to that region from the lower river. Records also indicate that other steamers plied the Columbia River from the vicinity of Kettle Falls into Canada all the way to Revelstoke,B.C.

Business to Wallula and the mouth of the Snake River was thriving for the gold rush period. However, like the Snake, traffic on the Columbia withered after the turn of the century. Records at The Dalles-Celilo Canal for the decade of the 1920s show little or no traffic passing that point. Above Celilo Falls to Snake River records show no commerce for the years 1921 to 1929. There was good access to the railroads on both banks of the river and good farm-to-market feeder roads from the interior.

The advent of Bonneville Dam with its large lock and good river conditions to the foot of The Dalles-Celilo Canal in 1938 changed conditions and barge traffic returned to the river. By 1940 the reach of river from Celilo Falls to Pasco and Kennewick had generated 322,691 tons of waterborne freight, primarily small grains and petroleum products. This traffic grew gradually and in a relatively uniform manner until in 1947 it amounted to 820,072 tons. The flood of 1948 reduced traffic that year and the construction of McNary Dam in the ensuing five years had some effect on movement on this reach of river.

Utilization of Columbia River water resources for navigation, power, irrigation, and other uses by the introduction of structures was initiated by the building of the locks around Cascade Rapids in 1896. This was followed by construction of The Dalles-Celilo Canal and Locks in 1915. Bonneville Dam, which was reported upon in H. Doc. 103, 73d Congress, 1st Session, dated 10 June 1933, was completed in 1938 as a public works project during the depression years. The Grand Coulee project was also reported upon in that document, along with four others in the reach above the Snake, all of which have now been built by various interests. The same document proposed a dam at The Dalles about 300 feet high which would have a reservoir reaching to the mouth of the Snake River and be a major structure with 40 feet of reservoir capacity for storage and stream control. That report recommended that a comprehensive plan of eight dams on the Columbia River in the United States be adopted as a guide in controlling and supervising the development of the stream.

House Document 704, 75th Congress, 3d Session, dated 13 June 1938, reanalyzed the reach of Columbia River below the Snake River for feasibility of development, due, no doubt, in some degree to objections to a 300-foot-high structure at The Dalles and the advent of construction at Bonneville. (An alternate proposal for a dam at The Dalles, and reported upon in this document, discusses a dam 680 feet high with a pool elevation of 540 feet creating a lake up to the Rock Island Dam on the Columbia, and Riparia on the Snake; a veritable inland sea.) After reviewing the alternate proposals for the Columbia River below the Snake River, the report recommended a series of five dams between tidewater above Vancouver, Washington, and the Snake, including the Bonneville project which was under construction at that time. The other four dams would be located at The Dalles, the mouth of the John Day River, above Arlington, and at Umatilla Rapids.

The upper project was titled "Umatilla Dam." In H. Doc. 704 it was stated that construction of the several projects should be in that order which would best meet the most pressing needs of waterborne commerce. Accordingly, the Umatilla Dam was indicated as of high priority. The report stipulated a dam 2.5 miles above Umatilla, Oregon, with a normal pool elevation of 310.5 feet. In an unpublished report of the Portland District of February 1942 titled, "Proposed Power Projects" the pool level was raised to elevation 330. Studies made between 1942 and 1944 revised this pool elevation to 340. The project was subsequently authorized by the River and Harbor Act of 1945 generally in accordance with H. Doc. 704 but with a pool elevation of 340 feet. The Act also specified that the name of the dam should be "McNary Dam" in honor of the late Senator from Oregon, Charles L. McNary.

1948 COMPREHENSIVE BASIN REVIEW

The increasing tempo of water resource development in the Inland Empire and the demand for hydroelectric power spawned by the second world war dictated the need for a re-examination of the proposals which were described in the original "308" Report of 1933 - H. Doc. 103. The Senate requested the review by a resolution in 1943, and the study was five years in the making with the Division Engineer's report dated 1 October 1948. The resulting published report, H. Doc. 531, 81st Congress, 2d Session, dated 20 March 1950, was comprehensive, covering the entire Columbia Basin with major implications for storage in Canada, as well as an all-U.S. plan involving major storage projects for rather complete control of the streamflows, both for flood control and power.

For the reach of Columbia River below the Snake, this report modified the plan adopted in H. Doc.704 by reducing the number of dams to four. (The Bonneville project had been built and the Umatilla Dam had been authorized with subsequent studies determining the optimum pool elevation at 340 feet.) The remaining question was the best plan of development for the reach from The Dalles to Umatilla. The review found that two dams, rather than the three previously recommended, would be best; the two to be The Dalles Dam as originally proposed with a pool

height at elevation 160 and a major structure at the mouth of the John Day River, with a pool elevation of 255 extending to the Umatilla Dam site. This dam would replace the previously recommended John Day and Arlington dams. In addition, the report recommended superimposing about 2 million acre-feet of "last chance" flood control storage at this site for protection of the lower river's extensive developments against rare but devastating major floods. The two projects were authorized essentially as described in H. Doc. 531 by the Flood Control Act of 1950, approved 17 May 1950.

LOCAL FLOOD CONTROL

With the settlement of the inland region and development by man of the bottom lands in our many stream valleys, floods were found to be particularly contentious for the land's use. Furthermore, with the streams of the Columbia Basin all originating in mountainous areas, annual heavy spring freshets are to be expected. The discharge of the Columbia at The Dalles has ranged from 30,500 cfs to 1,240,000 cfs, while the Snake River at Riparia has ranged from 10,600 cfs to 409,000 cfs. The maximum flood of record for both streams was in 1894. Other major floods have occurred in 1859, 1862, 1866, 1871, 1876, 1880, 1882, 1887, 1948, and 1956, with their discharges at The Dalles decreasing from the maximum cited above to 800,000 cfs. The 1948 flood, the maximum flood of this century, was 1,010,000 cfs. In the Snake River asin there have been 11 floods during this century of major proportions ranging from 250,000 cfs to 369,000 cfs. In addition, tributaries can have very damaging floods to lands along those streams. Very few years pass but that one or more of the tributary streams create local and main-stem flood problems that demand Federal attention.

On 22 June 1936, the Congress passed the first "Flood Control" Act (Public Law No. 738, 74th Congress), another major milestone marking the growth of the Corps. This flood control act declared flood control to be a proper activity of the Federal Government to be carried out in cooperation with the states; that improvement of river and other waterways and the watersheds thereof, for flood control, was in the interest of the general welfare; that such improvements should be carried out if the benefits, to whomsoever they accrued, were in excess of the costs, and if the lives and security of the people were otherwise adversely affected.

Prior to 1949 flood control levee and channel works had been authorized for the Heise-Roberts area above Idaho Falls and the Lucky Peak flood control storage reservoir had been approved, with design or work started on both of them. In the Palouse Basin, tributary to the lower Snake, levee and channel work was approved in 1944, with no work accomplished. A similar situation prevailed at Lewiston and Clarkston on the Snake, where levee works were authorized in 1945. In the Walla Walla River Basin, channel work through Milton-Freewater had been authorized, as well as both a storage dam and channel works on Mill Creek at Walla Walla. The later works were both completed during the 1940s.

A levee and channel project at Dayton on the Touchet River was authorized in 1941 but no work accomplished.

In the 1948 "308" Report - H. Doc. 531 and subsequent authorization by P. L. 516, 81st Congress, dated 17 May 1950, a total of 23 other local flood protection projects (18 of them in the Snake Basin) were authorized, some on a conditional basis subject to further economic justification.

The marked growth, both urban and rural, in this portion of the Inland Empire during the second quarter of this century has placed major emphasis on control of all tributary streams to the Snake and Columbia for flood control, making such control multipurpose wherever possible. Federal involvement is almost mandatory because of the volume of water requiring control and the scope of the projects necessary.

A REVIEW OF PLANS IN RETROSPECT

The extent to which needs and plans for the development of the water resources of the inland basin changed during the 20-year period between the preparation of H. Doc. 103, starting in about 1930, and completion of H. Doc. 531 in 1948 is of interest and illustrates the rapid growth of the region. H. Doc. 103, which is the granddaddy of Columbia Basin development for multipurpose uses, indicates that the District Engineers of those times, and Division Engineers, too, were of a very conservative nature on future development potentials. That document cites that local interests felt with improvement in conditions of the Columbia River, waterborne traffic would expand to as much as 300,000 to 400,000 tons annually. The Division Engineer questioned this, estimating 100,000 to 200,000 tons with the qualification that if, in the long range, slack water to the Pasco-Kennewick area were realized, the traffic might even go to 600,000 tons annually. As with navigation, power was a big unknown at that time. The report states, "Estimates of the future always involve many uncertainties. In the electric industry five years ahead is as far as plans can usually be prepared with any definite uses. A 10-year estimate is hazarded only with reservations." A report on the Snake River prepared in 1933 (H. Doc. 190) cites an inventory of 29 existing and potential hydroelectric plants from Jackson Lake to the mouth with a total installed capacity of 113,900 kw (less than one generating unit of the lower Snake projects now being built.) The report states that the distances from power sites--including the lower Snake River--to large markets are so great and the local market so limited that it cannot yet be foreseen when an extensive development of hydroelectric power in the Snake River Basin will be justified. "Development of water power is so far in the future that it is not a factor in the solution of other problems." The report, in commenting on flood control, states, "Flood control in Snake Basin is a matter of no special Federal concern. Two areas are threatened, but local interests and the State of Idaho are awake to the situation and Federal participation is believed not warranted." As for additional development of irrigated lands, the

Secretary of Agriculture in connection with H. Doc. 103, stated in very positive terms his opinion that "the Federal Government should not now undertake to further enlarge the areas devoted to agriculture in this country."

Contrariwise, by 1950 H. Doc. 531 found the need for a series of large, multiple-purpose dams and reservoirs to be operated as a coordinated system which, in conjunction with lower Columbia River levees, will control main river floods, improve inland navigation and furnish the major part of the power requirements of the region, together with 13 irrigation projects in various sections of the basin. Dams and reservoirs in the proposed plan would provide for an additional 24 million acre-feet of usable storage (5 million at Grand Coulee by modification of the outlet works) and an additional 7-1/3 million kilowatts of installed capacity. Many major local flood control projects were also recommended. In addition, the Bureau of Reclamation cited the need for 10 new irrigation projects involving about 370,000 acres of land. The Director of the Bureau of the Budget, in commenting on the report, stated, "The works projected by the Bureau of Reclamation and the Corps of Engineers represent a construction program which will extend over a period of about 20 years. When completed they will make the Columbia River system the greatest source of hydroelectric power in the world and will yield additional benefits in terms of flood control, navigation, reclamation, and other beneficial uses of water...We are only at the beginning of a tremendous development program in the Pacific Northwest." It was in this later atmosphere that the Walla Walla District was conceived, to accomplish a major segment of the development envisioned, as well as to make adequate plans for then undesignated future projects to meet the many needs of the people of the Inland Empire, the upper Snake River Basin, and Pacific Northwest.

History should not be critical of the apparent conservative efforts of early planners. Rather, it should realize that even the long-range thinking of that time could not envision a second world war, a population explosion for the Northwest, atomic energy, nor Sputnik. Rather, it should heed the words of COL Wm. Whipple, our first District Engineer,--"make no small plans"--particularly ones which will preclude optimum development of our water resources for future mankind.

THE INLAND EMPIRE

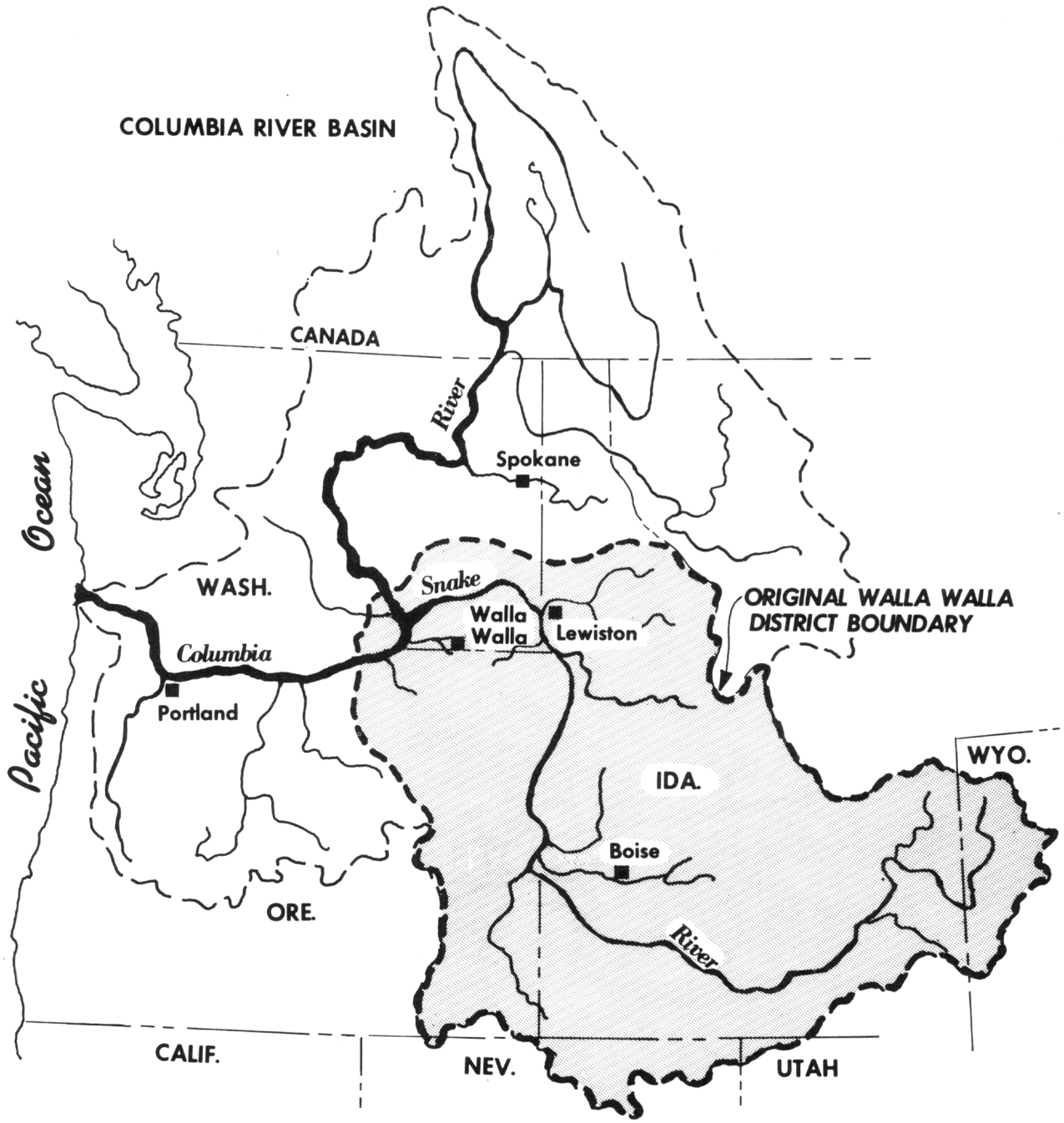
In these recountings of historical events and development trends in the foregoing material, we have alluded many times to early navigation activities. These efforts were trying to improve stream conditions, and the money was spent to open up and maintain a channel for the early steamers. In addition, authorizations made for structures and control works resulted from much pioneering effort by communities, individuals, and investigating teams. Some of these efforts, and results, are recounted in a most interesting narrative style in the History of the Portland District. The early work by the Portland District in the

Inland Empire, for almost 80 years prior to 1949, as described in many places throughout that volume, forms necessary supplemental reading to this record to better understand all of the early efforts toward development of the region.

Some may feel that the Portland District history dwells too much on the tidal reach of the Columbia, the coastal areas, and the Willamette basin, because that is where their hearts and interests lie. A study of the development of the Oregon Territory and the coastal states, the objectives, and economic impact, of course, indicates that the region west of the Cascades "is where the action is." However, the growing feeling by the Inland Empire people and institutions that they were being slighted; that they were an important cog in the growth of the west side; and that the "web feet" on the other side of the mountain were using them without proper compensation and share in the growth factors led to independence of thought and action. To some indeterminate extent that demand for recognition is one reason for establishing a Corps of Engineers District in the Inland Empire. The area east of the mountains feels quite strongly that in no way should it be exploited for the benefit of the west siders.

The Inland Empire and southern Idaho people are somewhat more independent, conservative, and more oriented to individual endeavor than the later migrants to the coastal area. They gambled much for the early settling and developing of the region. They pioneered in its individual enterprises and "sod busting" efforts. Their traits are most evident in the local requests for help in controlling streams and evaluation of levee and channel or storage plans prepared by the District to provide stream control.

All of the foregoing is a prologue to the actual history of the Walla Walla District. The development that has taken place, the land resources coupled with the tremendous water resources of the upper Snake Basin and southern part of the "Inland Empire", and their relationship to the needs and support of the growth of the entire nation form a potent reason for the District.


COLUMBIA RIVER BASIN
CANADA
Pacific Ocean
River
Spokane
WASH.
Snake
Columbia
Walla Walla
Lewiston
ORIGINAL WALLA WALLA DISTRICT BOUNDARY
Portland
WYO.
IDA.
Boise
ORE.
River
CALIF.
NEV.
UTAH

CHAPTER 4

THE NEW DISTRICT'S FORMATIVE YEARS

PRELUDE

The preceding review of the sequence of studies and subsequent authorization of projects for the Columbia River below the Snake and in the Snake River Basin outlines the projects that were on the books at the time of conception of the Walla Walla District; i.e., Umatilla (McNary) Dam, the four lower Snake dams, navigation from Lewiston to Johnson's Bar, Lucky Peak Dam at Boise, and a handful of local protection projects in the Snake Basin. Activities were underway in 1947 on a dam at Umatilla Rapids, renamed McNary after the illustrious Oregon Senator, Charles McNary. The Senator had much to do with efforts in its behalf as early as in the 1920s. Construction plans for the lower Snake River projects had jelled and design of the first unit at Ice Harbor had been funded, starting in 1946. In addition, preliminary design funds for the Lucky Peak Dam at Boise had been appropriated in FY 1948. Local flood protection works were also underway at Walla Walla and at the Heise-Roberts location on Snake River above Idaho Falls. All of these activities, plus the future work that was envisioned, prompted the Division Engineer in 1947 to initiate a survey of several towns, including Pendleton, Tri-Cities (Pasco, Kennewick, Richland), Spokane, Boise, and Walla Walla for the best location of a possible District office. COL Whipple, Division Executive Officer, was given the task of working out the details and organizing the new District. He was then named as the first District Engineer.

THE OFFICE

The City of Walla Walla won the nod for the location of the District office, probably for several reasons. It was the largest community in the general area of the anticipated action at McNary and the lower Snake; away from the boom development of the Tri-Cities; Spokane was away from the action scene; and Boise, already the home of other Federal offices, was not warm to more "federalists" who were sort of relegated to "second class people" in spite of the possible economic advantages. In addition, Walla Walla had one of the major airports in the Inland Empire and a prior Air Force training center which had considerable available space since the airbase had been closed in 1946.

Probably one of the compelling arguments for settling in Walla Walla, other factors being equal, was the presence there of the Inland Empire Waterways Association with an Executive Vice President who was a real activist for the development of the water resources of the Inland Empire. Herbert G. West, a far-sighted individual with a vision of major developments for the Columbia Basin water resources,was an able promoter and had the knack of being able to sell his ideas to others--local, state and nationwide. The early emphasis of IEWA was on inland waterway navigation serving as a feeder to ocean shipping at tidewater; hence, the strong emphasis in the 1940s on the Umatilla (McNary) and lower Snake projects. The 1948 flood, and review of the Columbia basin "308" Report, in 1948-50, broadened the objectives of IEWA. They realized that storage and stream regulation not only for navigation, but for the generation of hydroelectric power, flood control, and major source of irrigation water were essential.

Routine correspondence and memos relating to early evaluations and decisions concerning the location for an Inland Empire District are scarce. Evidence indicates that while there certainly were discussions with people of the three or four communities, the decision was essentially made within the Corps and the local authorities in Walla Walla were then made aware of the decision, with qualifications. An inquiry to Portland late in 1946 by IEWA concerning a rumor that the Corps of Engineers would need "considerable office space" brought a categorical answer--no space required. In a similar vein, an inquiry in January 1948 by IEWA to LTC Wm. J. Ellison, Jr., then Portland District Executive Assistant for McNary Dam, brought an answer that "COL Walsh is contemplating the organization of a McNary Division some time this spring...." (The McNary project office had been established the fall before.)

From the memory of local citizens who were charting the course of Walla Walla at the time--Roland Miller, Clarence Braden, Herb West, Al McVay, Parker Barrett, Don Sherwood, and others, including Jim Schick, reporter for the Union-Bulletin--the Division Engineer indicated early in 1948 that Walla Walla and Pendleton were in competition, but that to win about 50 homes would have to be provided as a starter. Walla Wallans were the activists. They promptly formed the Blue Mountain Housing Corporation, and started building homes. Others followed. It appears that this action had some influence, and on 7 September 1948 a formal announcement was made in the Walla Walla Union-Bulletin that an interior district office was being established. After that announcement IEWA sent letters to every organization in the community urging full cooperation and an all-out effort to make housing available.

The decisions concerning office space evidently received considerable discussion with proposals made to several downtown building owners.

The amount of space needed and the size of the District staff was continually escalated. The first plans appear to be formulated

around space in town with firm commitments for the second floor of the Union-Bulletin building and overflow in the vicinity in a relatively modest amount. Records of the Airport Board show that the first informal proposal for use of airport buildings was on 3 September 1948 with the Corps requesting information on possible space available. On 10 September NPD returned with specific requests but still not ready for final agreement. Negotiations and agreements were numerous after that with several changes of mind. Two of the administrative buildings, a warehouse, a garage, as well as a messhall, were agreed upon and a lease entered into on 24 September 1948.

The Office, Chief of Engineers cut General Order No. 9 on 10 September 1948 officially establishing the District as of 1 November 1948. It was a "going concern" when set up, with a heavy workload, strong funding, and good potentials for the future. The 1948 flood, third largest of record, emphasized the need for stream control throughout the basin. The 1948 "308" Review Report, with its comprehensive evaluation of needs and water resource potentials, set the stage for development which is exceeding even the scope envisioned by the Director of the Bureau of the Budget in his forecast in 1950 "...We are only at the beginning of a tremendous development program in the Pacific Northwest." The future for the District was not to be without its ups and downs for workload, but it was well conceived, with a very competent staff recruited quite meticulously by COL Whipple from all over the nation. Furthermore, the staff and office being new, without historic preconceived ideas and entrenched positions, was a viable group easily molded into an organization full of enthusiasm with "new worlds to conquer." Thus began, in a quite modest way, the Walla Walla District.

THE STAFF

As indicated previously, COL Whipple was the first District Engineer with LTC Vincent "Tex" Frisby as Executive Officer. In staffing the new District, notices were broadcast nationwide inviting adventurous souls to apply but carefully avoiding any indication of pressure, even on the three Districts in North Pacific Division. COL Whipple, who had previously drawn Corps assignments to civil works, had had contact with highly competent engineers and administrators in the organization and used this knowledge well. He recruited Jim Reeves, then in Greece on rehabilitation work by the Corps trying to keep that nation allied with western Europe, to head up the engineering staff. Reeves had an outstanding record with the Corps and from Walla Walla was destined to go on to the Atomic Energy Commission for a yet more important role. Reeves had full confidence in another outstanding engineer with whom he had worked in earlier days, which directly or indirectly influenced his selection from the Tulsa District as Chief of Engineering Design, Edwin C. "Fritz" Franzen. Because Reeves was in Greece during the District's critical organizational days of the last quarter of 1948, he delegated this responsibility for all of engineering to Franzen. Franzen introduced some innovative organizational structures throughout engineering,

such as the Project Coordinator for each major structure, working directly with composite Design Sections within Engineering (as against the task force concept) and other units throughout the District.

COL Whipple went to the Western Ocean Division in Sausalito, California, to tap a very knowledgeable man, Leo Buhr, to head up the Construction Division. In addition, he had a going field organization at McNary headed by LTC Wm. J. Ellison, Jr., and W. B. "Bill" Watson. The Construction Division was a critical unit to staff because McNary was very active, Lucky Peak was on the drawing board, and Ice Harbor was imminent.

To illustrate the cosmopolitan aspect of the District organization, other units of the District staff, administrative and technical, were comprised of top men gathered from many Corps sources: Russell D. Whelan from the Seattle District, as Chief Administrative Assistant; Merle E. Lietzke, a real estate expert from the Tulsa District; William E. Sanderson from North Pacific Division to head up Personnel; Francis E. Casey for Fiscal Officer from the Buffalo District; Bart Long, an eccentric but very knowledgeable concrete specialist of national reputation from the Division Laboratory; Ed Wainwright and Chester Hansen came from Western Ocean Division for Management and Office Services. The Portland District furnished such men as Claude Waggoner, an expert in all phases of surveying and mapping; Clyde Walker, attorney and legal counsel; and Louis Rydell to head up all phases of engineering planning, who had an intimate and highly professional knowledge of the Columbia Basin. The organization of the all-important Supply Division fell to VanNatta Baldwin, who had been in many phases of the Corps program from Ft. Peck and Bonneville to the military effort, and at this time was working at the McNary project. The original organization chart anticipated approximately 400 to 500 employees for the District Office and, needless to say, these men selected from a wide geographic area influenced others to come, such as Joe Monahan, Harry Drake, Melvin Ord, Sam Guess, Orville Murray, and August Niemi, all destined for responsible future supervisory positions.

REAR ECHELON

Another very important segment of the District staff at the time of its advent was the "Rear Echelon" in the Portland District Engineering Division. This unit was comprised of about 80 people, not only those in the Portland District who were working on design of the funded projects assigned to the new District, but also some who were to later come to Walla Walla with the physical transfer of the design effort. This was a very trying experience of divided responsibilities, divided allegiance, divided professional judgment on project features, and personal desire to work but not wanting to leave the "west side" to come to the very different "east side."

Since the McNary project was under construction and it was vital to keep the work on schedule, design for the second-step cofferdam and powerhouse was critical. This was underway in the Portland office and needed to continue. The new District principals, with some different approaches to design features and problems, were responsible for the execution of the project and assuring the progress of contract documents, without having full control of some of the attendant responsibilities. The Engineering staff did much coordination between the two offices and Otto R. Lunn was the McNary Design Chief for the District. He was a veteran of Bonneville days, as well as Mud Mountain Dam and City of Tacoma projects, a doughty engineer and an activist. Lunn did yeoman service in keeping production lines open, yet injecting into the design some of the professional knowledge and thinking of the District staff fresh from several other projects in the country. The job was accomplished, and in the summer of 1949 the rear echelon was disbanded and all functions moved to Walla Walla along with some of the people.

ORIGINAL OFFICE BUILDINGS AND MESSHALL--Top of Picture
CONVERTED HOSPITAL AREA--Center of Picture
BOQ BUILDINGS--Lower Left

THE ESTABLISHMENT

In addition to staffing, the District experienced physical growing pains for quarters. There was an initial strong feeling that at least the executive and construction people should be in town in order to relate to the community. Since space was not available for all echelons, engineering and most segments of administration were located at the airport, including, as well, a motor pool and warehouse storage. Office space was secured in two prior headquarters buildings in the center of the base, engineering to use one and administration the other. Each building had an actual capacity of 50 to 75 people. As soon as the "clan began to gather" it was realized that additional space was necessary and negotiations were started in November 1948 for the "hospital area", the best maintained and only coordinated group of buildings available.

The Airport Board, which had just been given the surplus former Walla Walla Army Airbase from the Government, deeded the "hospital area" back to the Corps without cost. After several shifts and intermediate moves the District rehabilitated and occupied the hospital complex during the summer of 1949, except for the forty or so people still in town. The separation of the executive offices, key administrative, and construction people by five miles from the remaining functions proved highly unsatisfactory and, accordingly, all phases of the District were assembled at the Airbase complex by the summer of 1951. At that time the District staff, including many who spent most of their time in the field, was well over 500 people.

Another transient phase of the District's early growth was the establishment of a formal messhall operation, coupled with several BOQ barracks operated to house employees while hunting for homes for their families or on temporary assignment. These housing arrangements lasted for about a year until conditions stabilized in town. Because of the continuing need for readily available low-cost housing for family use, the District obtained permission in January 1949 to remodel six of the two-story BOQ buildings adjacent to the office complex to provide 48 apartment units for District personnel on a rental basis. After operating them until August 1957, ownership and operation was transferred to the City-County Airport Board which now makes them available to all comers, regardless of occupation in the community. In the mid-1960s, the ownership and operation of the office complex was transferred to the General Services Administration.

Districts are not established very frequently, but when they are the paperwork is the first and fastest growing part of it. A part of the problem of implementing the flow is to find the paper and machines to produce it. This District was not immune, and when a routine request for a large number of typewriters was given to the General Services Administration, they disclaimed any responsibility since the District was a unit of the U.S. Army and advised going to the Quartermaster for equipment. The Quartermaster quickly abnegated any responsibility and advised

going to GSA since the District was a civil function. Luckily, the Atomic Energy Commission at Hanford had a warehouse full of surplus typewriters and other items, so the District broke the stalemate by producing its first flood of paperwork on AEC generously donated equipment. (The records are incomplete as to how the standoff was actually resolved.)

THE DISTRICT'S INHERITANCE

McNary Dam

A prime reason for the creation of a District in this inland region was the inventory of work underway, as well as that in advance planning for which construction funds were imminent. The running start for the District is well illustrated by statements made in December 1948 regarding additional office space (two months after formation). "The ceiling requirement for the District Office at Walla Walla for 15 January 1949 will be 456 employees and the anticipated future peak requirement to be reached when construction starts on Ice Harbor, as well as McNary, is 694 employees in Walla Walla. If supplemental allotments of funds are made for Ice Harbor and McNary, it will be necessary to provide greatly expanded office facilities within this next few months." The Ice Harbor funds were not forthcoming as soon as anticipated; regardless, the work-load mushroomed so the District Office had 584 employees in FY 1950.

NORTH SHORE--FIRST STEP COFFERDAM--FALL 1948

The McNary project was, of course, under "full steam" at the inception of the District. The first construction contract awarded for McNary Dam was made by the Portland District in April 1947 with the Guy F. Atkinson Company, San Francisco, for rough excavation along the Washington shore for the navigation lock, all without need of a formal cofferdam. A subsequent contract provided for the first-step cofferdam in the northern half of the river channel and included the navigation lock area. Design had been completed for structures within this cofferdam and the first contract awarded by the new District was for the northern portion of the dam consisting of the navigation lock, fishway, and 13-1/2 bays of spillway. The remainder of the project structures were under design by the "rear echelon" in Portland for later contracts.

Lower Snake Dams

The lower Snake River four-dam complex had been planned and the approximate location of the structures determined by Portland District studies made between 1942 and 1946. Advance engineering and design studies for Ice Harbor were initiated in FY 1947 by the Portland District. Foundation explorations had been made and structural features were being established at the time the new District was formed, in anticipation of construction funds in FY 1950. Basic design studies for the lower Snake River projects were assumed by the new District staff when they assembled in November 1948. In the meantime, with the economic lull and budgetary problems after the Pacific military conflict termination, an executive decision was made in 1949 that FY 1950 would contain no new starts. As a result, the construction schedule for Ice Harbor was put in escrow, not to be resumed until 1955. In the interim, however, the new District analyses were destined to result in extensive restudies and project modifications.

Lucky Peak

The Lucky Peak project on Boise River, Idaho, had also been planned by the Portland District and Congressionally authorized in 1946. Advance engineering studies were funded in FY 1948 for the Portland District, including a start on design details. Continued design of this project was one of the initial efforts undertaken by the Engineering Division of the new District.

Levee and Channel Work

In addition to these three major structures on the drawing boards of the new Engineering staff, with McNary construction assumed by the then Operations Division of the District, levee and channel works at three locations (Walla Walla, Milton-Freewater, Oregon, and Heise-Roberts, Idaho) were in varying stages of construction and were taken over for supervision. The Portland District had also submitted investigation or survey reports on other needed flood control works, some authorized and others to be included in the 1948 "308" Report with subsequent conditional authorizations.

Such was the "running start" of the Walla Walla District: a good workload; a good staff recruited; and an outstanding bevy of District Engineers and Executive Officers (now Deputy DEs) over the ensuing years. A portentous beginning for a continuing illustrious career.

THE EARLY YEARS

In spite of the new-start moratorium of 1949 extending into the early 1950s, the District continued its active construction program. In addition, engineering design continued on the Ice Harbor project resulting in a summary report issued 31 October 1952 with a supplement thereto dated 5 August 1955. The 1948 major flood and resultant findings in the "308" Report (H. Doc. 531) prompted a series of flood control studies throughout the Snake River Basin, as well as for the Walla Walla and Umatilla Rivers. Coupled with those analytical studies of a more comprehensive nature, emergency repair work at critical locations on existing levee and channel works was undertaken in 1949 and 1950 at many points along the Clearwater, Salmon, Grande Ronde, Weiser, Payette, Boise, Portneuf, upper Snake River above Idaho Falls, and in Jackson Hole, as well as in the Walla Walla River Basin. These emergency repair efforts, coupled with flood-fight operations as tributary floods occurred, were destined to be an important segment of the District's efforts toward stream control and have proven to be well-received assistance to the local people. While not spectacular from the standpoint of total funds expended in comparison to the major project construction effort, the local assistance through these emergency measures continues to highlight one of the District responsibilities and personnel effort and performs a critically needed and much appreciated service.

First District Engineer

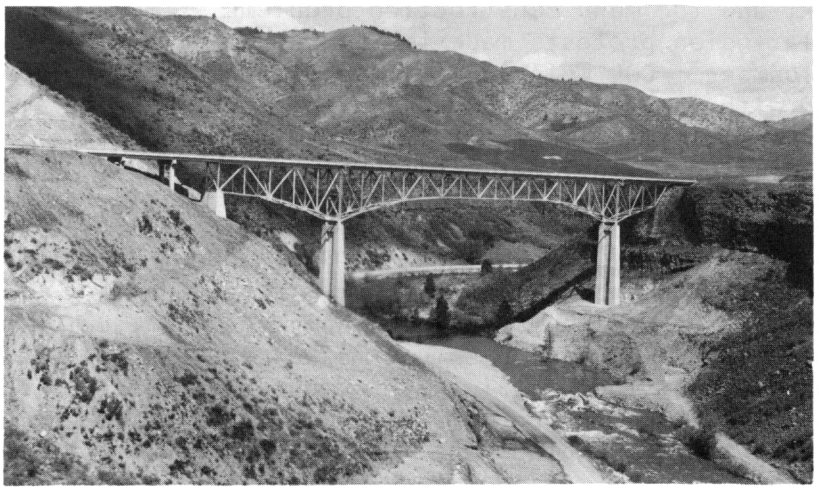
As the running start for the District would indicate, together with the "work on the books", COL Whipple had an active tour of duty with the District. The aggravating local flood problems throughout the Snake Basin; coordination efforts with the Bureau of Reclamation in whose "territory" the District was becoming active; the not complete acceptance of the Lucky Peak project in Boise; the ever-present basic objections of the anadromous fishery interests to any development; delays in the lower Snake work; and the many construction problems at McNary coupled with the Umatilla Indian protests made for no lack of challenge during his two-year assignment. COL Whipple left the District as a going concern in August 1950 with a record of increasing appropriations for the work undertaken. The partial fiscal year of 1949 resulted in an expenditure of practically $19 million. (The next fiscal year expenditures doubled to $39 million), and in FY 1951 they increased further to nearly $45 million for civil works. LTC Vincent "Tex" Frisby did yeoman service as Executive Officer for one year with COL Whipple (1948 to December 1949) trying to meet and assuage the birth pangs of the District. He was succeeded by LTC W. P. Leber who also stayed only one year, being transferred in September 1950, almost the same time as COL Whipple. He spent his time smoothing out the District's procedures and path of operations. He found sufficient time during the hectic pace and "birddogging" for COL Whipple to gain the acquaintance and interest of one of the more prominent young

ladies and successful merchants of Walla Walla (Bernice Humphrey) who decided to go with him on his next assignment.

Construction

The next two or three years for the Civil Works Program of the District (1950-53) were ones of essentially carrying on under the impetus gained from the initial two years. McNary construction proceeded rapidly within the south shore second-step cofferdam, as well as for relocation and levee work upstream. This breather time for Ice Harbor permitted a review of the scope of the project and some desirable modifications. Lucky Peak construction moved ahead with several facets of the job requiring special attention, including More's Creek Bridge, the "million dollar bridge to nowhere," according to the Boise Statesman; modifications to Arrowrock Dam; county road relocations; operational procedures to obtain optimum use of Lucky Peak storage in combination with two U.S. Bureau of Reclamation storage units upstream; and plowing new ground with the Federal and state fish and game agencies on mitigation needs as a result of the project.

LUCKY PEAK DAM CONSTRUCTION
OCT 1951
LOOKING DOWNSTREAM--BOISE
IN UPPER RIGHT



MORES CREEK BRIDGE
1954
LOOKING UPSTREAM
BEFORE POOL RAISING