

THE UMPQUA RIVER AND OCEAN PORT

The Umpqua river is the largest river emptying into the Pacific ocean between the Columbia river on the north and the Sacramento river in the south. It is formed by the junction of the North and South forks, which take their rise in the Cascade and Calapooia mountains about 120 miles east of the Oregon coast line at elevations of about 5000 feet and flows in a general northwesterly direction, finally emptying into the Pacific ocean about 165 miles south of the Columbia river and about 412 miles north of the San Francisco bay.

With its tributaries, it drains over 4800 square miles subject to moderately heavy rainfall. From the junction of the forks to below Roseburg to Scottsburg it is a succession of rocky rapids with pools of quiet water between with varying length and depth and an average low water width of about 500 feet. This stretch of river is not navigable for any kind of boats at low water, nor is navigation practical at the intermediate or highest stages, the river between Scottsburg and its mouth is navigable. Boats drawing about 17 to 18 1/2 feet loaded can navigate to a point approximately nine miles above the city of Roseburg or 19 miles from its mouth, and smaller gasoline craft can navigate between the mouth and Scottsburg, some 30 miles.

The Umpqua river for the last four miles before entering the ocean flows in a southerly direction and before any improvements had been made on the bar, it was separated from the ocean by a broad sand spit about one mile wide.

To the east and south the river is bounded by a rocky shore covered with timber. A marked indentation in the shore forms Winchester bay just inside the entrance where the town of Winchester is situated; which town has great promise as a summer resort and during the summer months numerous families spend their vacations on the beach.

A group of submerged rocks, visible at low tide and known as Ork Reef, lies in the middle of the river opposite Winchester bay. The main channel passes to the north of the reef which is no serious obstruction to navigation.

In 1918 tests were made on the Umpqua bar by boring. These tests were made by the Port of Umpqua and the result showed that upon making borings the engineer struck nothing but fine gray sand. These tests were taken fifty feet apart and to all the depth the equipment would allow.

The harbor prior to the construction of the present jetty was about 200 feet in width at low water and widened to about one-half mile at high tide.

On the south side of the entrance gorge is a wooded head land known as Winchester Head, about three hundred feet above sea level, terminating in a bluff of soft rock at the shore. A rock reef crops out on the south side of the entrance at Pyramid Rock and extends in a submerged reef out in the channel some 400 feet from low water shore line, but is easily passed by vessels to the north and prior to the jetty construction. On the northwest side of the entrance was an extensive low, flat bar of sand with generally one or two shoal passages through it, which made the usual fine gray sand which at that time was some 500 feet long and which would be considered comparatively short, but made the one channel over the bar rather varied in direction from southwest to west. The least bar depth at that time was 12 feet at low water. The harbor had and has at this time ample anchorage areas in the roadstead inside the bar.

The tidal wave of the Umpqua river is about 3 1/2 square miles, with a mean range of tide of 5 feet at the ocean, which extends practically undiminished from its mouth to Brandy Bay, 9 miles above Roseburg, a distance of about 19 miles from the mouth. The average rise of the tide above mean low water is about 6 feet. The average tidal discharge of the river is about 61,000 cubic feet per second. This of course is greatly increased during spring tides and nearly doubled during spring freshets, which gives the Umpqua river first place on the Pacific coast for scow capacity and when the Umpqua bar is improved there will be no necessity for bar dredging. This feature places the Umpqua river in a class by itself inasmuch as the original expense of petty construction, will after this construction is completed, make Umpqua bar an improved project. But until the jetty work is completed, these freshets have a tendency to produce changes in the position and depth of the bar channel and without proper jetties are sometimes detrimental by scouring away the sands of the north spit and depositing them on the bar. For 20 miles south to Coos bay to 23 miles north to the Siuslaw river, the coast line runs nearly due north and south in a straight line with low sandy shores backed by sand dunes, some of which rise to a height of from 200 to 300 feet at the forest line. There are no rocks or hidden dangers off the mouth of the Umpqua and the depth one mile from shore is about 10 fathoms. About

four miles below Reedsport there exists a shoal with a controlling depth of about 10 feet at a mean low water.

The harbors of Oregon are the only harbors requested by the federal government to place dollar for dollar in the treasury of the construction funds and although after many adverse reports by the government engineers the Port of Umpqua was formed in the year 1913, with the determination to have the harbor improved in face of the reports which had been made as follows: An examination of the Umpqua river between Roseburg and Scottsburg was made in 1870 by Major H. S. Williamson, corps of engineers. This part of the river was considered worthy of some improvement at that time. An examination was made in 1871 by H. F. West, survey of the river from Scottsburg to its mouth ordered by the act of March 3, 1873, was assigned to Major Wilson, made in 1879 under the direction of Major Gillespie. The river was considered worthy of some improvement.

A preliminary examination of the Umpqua bar was ordered by Act of August 5, 1886, made under the direction of Capt. Powell. The river was considered worthy of some improvement in the vicinity of Scottsburg.

Act of August 11, 1888, called for a preliminary examination of the Umpqua river between Scottsburg and Hart's rapid in the vicinity of Elkton, which was made in 1889 under the direction of Capt. Willard Young, corps of engineers. This report was unfavorable.

A survey of the Umpqua river between Scottsburg and its mouth was made under Act of August 11, 1888 and 1890 under the direction of Capt. T. W. Symons, corps of engineers. As a result of this survey Capt. Symons recommended that \$9,000.00 be appropriated for removing rocks from the river below Scottsburg, but did not recommend further appropriation at that time.

A survey was made of the river in 1894 by Lieut. Graham D. Fitch, corps of engineers under Capt. Symons and it was found that \$9,000 would be required to complete the existing project and it was recommended that this amount be appropriated.

A preliminary examination of the bar and entrance was made in 1897 by Capt. Blake, corps of engineers and he at that time reported unfavorable and a similar examination was made in 1902 by Major W. C. Longfitt, who also reported unfavorable, but in his report stated that where improvement of this entrance was as worthy as several of the Oregon coast harbors, where such work has been undertaken by the general government, the expenditure of \$602,000 could hardly be recommended at that time, but if the cost of this improvement could be reduced to from two-thirds to one-half this sum, favorable recommendations would be justified. An unfavorable report was also made in 1910 and by Major J. F. McIlwain, but by the foregoing it is easy to see that the unfavorable reports were rendered not so much from worthiness of the project as from an economical standpoint, inasmuch as the time of the survey made by Major W. C. Longfitt in 1902, the estimate for a complete project was only \$662,000.

It has been by the organized efforts of this recently formulated body that the general government first considered the improvement of the Umpqua bar favorably.

The original detailed estimate of the improvement of the Umpqua entrance by jetty construction was based on a survey begun in October 1915, and completed March, 1916, which was as follows:

North Jetty.	
Receiving wharf	\$ 4,000.00
1,000 linear feet of jetty tramway approach	5,000.00
7,500 linear feet of jetty tramway approach	51,000.00
421,245 tons of stone	442,307.00
Engineering and contingencies 10 per cent	50,693.00
Total for north jetty	\$553,600.00
South Jetty.	
Receiving wharf	\$ 4,000.00
4500 linear feet jetty tramway approach	22,500.00
4500 linear feet jetty tramway approach	29,250.00
314,130 tons stone	323,044.00
Engineering and contingencies	39,206.00
Total for south jetty	\$428,000.00
Total for north jetty	\$553,600.00
Total for north and south jetties	\$981,600.00

From a survey of the river from the bar to Reedsport, made in December, 1916, the following estimate was made:

Dredging 829,000 cubic yards of sand and mud, to obtain a 16-foot mean lower-water channel 210 feet wide through the shoals between the bar and Reedsport, including engineering and contingencies, \$57,200.00.

This, with the improvement of the bar would make a total of \$1,038,800.00.

The commissioners of the Port of Umpqua have ordered built a suction dredger which will be able to take care of all shoal and sand dredging. This dredger will be built of modern type and completely equipped with pipe and pontoons. The port are enabled to do this and make these expenditures by reason that the commissioners have the power to bond the port district this year for an additional amount of \$274,000.00 without putting the matter before the voters.

Since the time this estimate was made the Port of Umpqua have

expended \$200,000.00 on the construction of a north jetty. By this expenditure there has been constructed 4500 feet of completed north jetty and it is considered that 2500 more will be required to complete the entire north jetty project. This construction has practically demonstrated that a south jetty will not be required, which will reduce the cost of the entire improvement to approximately \$800,000.00 and this will give us at the narrowest place a bar channel of 1500 feet wide.

Towns.

The territory to receive the largest benefits by any improvements to the river's mouth is that along the river west of Elkton and the Smith river county as well as a few of the outlying districts, but the whole watershed would be benefitted to a great extent. The principal towns are Reedsport, with a population of over 1400, which town was reported and correctly so, in a report to the chief of engineers, U. S. Army on July 31, 1915, as having a population of 100. Reedsport has second place in the county for population, being exceeded only by Roseburg, but has got the largest payroll in Douglas county. With the advantages Reedsport has in water frontage and backed by the natural resources of one of the richest communities in the United States, has promise of becoming a city of considerable size in the very near future.

Garrison, a prosperous little town of about 300 population also has great promise in the development of the lumber industry and has considerable business from the surrounding farms.

Resources.

There is approximately 53,000,000,000 feet of standing merchantable timber in the watershed of the Umpqua river; this being one of the heaviest timbered sections of country in the United States. Of this three-fourths is private ownership and one-fourth in the national forest. The timber is of the finest quality and includes Douglas fir, spruce, sugar pine, yellow pine, cedar, hemlock and oak. Little of the timber has been cut. The following is an analysis of the timber on the Umpqua watershed:

Port District.	
Privately owned timber	5,842,641,600 board feet.
U. & C. timber	1,738,030,080 board feet.
Forest reserve	705,808,000 board feet.
	11,275,461,680 board feet.
Watershed Outside Port Umpqua District.	
Privately owned U. & C. timber	30,030,335,230 board feet.
Forest reserve	11,181,500,000 board feet.
	Salmon fishing and packing is one of the sources of wealth and is followed extensively. Several large plants for canning and sold storage are operated on the lower river.
	Lumbering and stock raising is a large industry. Several launches traverse the river picking up cream and bringing the same to the creameries. The following is an analysis of the farm lands on the Umpqua river:
Douglas County.	
Winter wheat	9987.50
Spring wheat	6784.25
Oats	15,370.75
Barley	1790.35
Rye	339.00
Corn	5568.25
Clover	1140.00
Alfalfa	1036.25
Wild or marsh hay	604.00
Other hay crops	19072.00
Potatoes	794.35
Other root crops	55.00
Field peas	47.00
Field beans	66.00
Hops, out acreage	80.00
Hops, new acreage	69.00
Other crops	33700.75
Apple trees, bearing	3366.50
Apple trees, non-bearing	237.75
Cherry trees, bearing	138.75
Cherry trees, non-bearing	30.75
Peach trees, bearing	419.75
Peach trees, non-bearing	8.50
Pear trees, bearing	785.75
Pear trees, non-bearing	342.50
Prune trees, bearing	3045.75
Prune trees, non-bearing	2918.25
Walnut trees, bearing	56.00
Walnut trees, non-bearing	28.75
Loganberries	118.50
Blackberries and raspberries	8.50
Strawberries	36.50
Other fruits and nuts, bearing	187.75
Other fruits and nuts, non-bearing	15.50
Total acres in agricultural and horticultural products	106434.50
Farms reported	1905
Total acres in farms	453000.25

The Jewett Mill, owned and operated by W. J. Jewett, is located on the site formerly occupied by the Harding Mill, which burned down December, 1916. After the burning of this mill Jewett practically no shipping by water until the development of the mill was started, some two and a half years ago. There is at present in Reedsport one sawmill with a daily capacity of 10,000 feet of lumber with 30,000 and one with 45,000 feet of lumber per day.

There is also a shingle mill, box factory, planing mill, saw and door factory, canning and cold storage plant, creamery, three meat building establishments, two machine shops, and one foundry.

There is much young growth of spruce near the mouth of the river suitable for wood pulp and an organized company has this development in hand with a mill site at Reedsport. This gives promise of developing one of the largest industries of the lower valley.

There is a vast amount of undeveloped power on the Umpqua and its tributaries. Watershed area of Smith river Power site has 2000 acres with an available head of 90 feet by the construction of a dam and which develops 24,000 to 30,000 hydro electric horse power. This would require a transmission to Reedsport, a distance of only 35 miles.

Watershed at Loon lake power site 70 square miles. Area of the lake, 265 acres. Available head, 245 feet. Amount of power, 1,000 to 4,000 hydro electric horse power. Transmission to Reedsport 17 miles.

Reedsport and vicinity has an ample supply of fresh pure water, which is so essential in the manufacturing of pulp paper. The source of this water is Clear lake, a body of water some six miles from Reedsport which is a natural reservoir for a gravity water supply. Area of Clear lake, 380 acres. Annual rainfall about 46 inches, available head for gravity water supply, 225 feet.

The city of Reedsport has bonded themselves for sufficient money to put this water into town and have at this date expended \$12,000 which has brought the water in 12 inch redwood pipe almost to the city limit.

LOON LAKE, DISTRICT

The Loon Lake valley is situated in the Lake creek watershed between the Coos and Umpqua rivers. It is in the heart of that forest area drained by Lake creek, its waters joining Camp creek forms Mill creek, which in turn empties into the Umpqua river four miles west of Scottsburg.

This valley, about four miles in length and one mile wide, is one of the richest and most productive in Oregon. All kinds of fruit, vegetables and grain grow there in "over-production" quantities. It is traversed lengthwise by the Scottsburg-Alleghany highway, with Alleghany at the head of navigation on terminus and joins the Reedsport-Scottsburg-Drain highway at Scottsburg.

Loon lake is about three miles in length and one-half mile wide, and is surrounded with evergreen mountains. It is situated at the west end of the valley, receiving its main waters from Lake creek, which heads about twelve miles east in the big timber district and flows directly through the center of the valley to the lake.

The grandeur of the rough, high vine and moss covered ledges and terraces of the canyons and gorges below the lake grip you with their wonderful charms, their heights tower above, seemingly ready to fall. Here the great hills standing up on end with scars of the slides and washes that broke in ragged seams from the majestic hills, covered with greens, yellows and browns that harmonize with the deep-throated canyons, with the tumbling waters far below, thrill and hold you.

A new road in course of construction now will be completed within two years. It skirts the edge of Loon lake for about three miles, then meanders the Lake Creek gorge to Mill creek, thence following the latter to its junction with the Reedsport-Scottsburg-Drain highway on the Umpqua river, affording quick access to Reedsport and the Pacific highway.

The wild, rugged scenery along this route and its good timing with its many attractive campsites make it unusually interesting for seekers of outdoor recreation. Nearby are large huckleberry patches—feeding range for black and brown bears which are abundant. Then deer hunting may be had by the persevering, willing climber among the rough hills and crags.

Immediately east of the Loon lake settlement are several herds of elk—though protected by law—it is well worth one's time to take pack-sack and kayak where he may see them at his best in the blue-gray Natchez has given him. Formerly thousands of elk inhabited the forest herdsabout, but man—the great destroyer—all but wiped out this great deer family in most ruthless fashion. Now friendly settlers protect and a wise law guards them against poachers while they increase rapidly in their native haunts.

Four carloads of prime ripe cherries were shipped out of one city in Douglas county in 1924 to the eastern markets.

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