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Treasury Department,
U. S. COAST AND GEODETIC SURVEY.

O. H. Pittmann

Superintendent.

State: *Wash*

DESCRIPTIVE REPORT.

of ~~Sheet No. 4~~ *2606-9* *39*
~~Sheet No. 4~~ *2608-9* *10* *map*

LOCALITY:

Lake Wash

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CHIEF OF PARTY:

O. B. French

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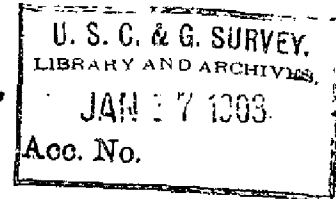
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U. S. Coast and Geodetic Survey,
Washington, D. C.?

December 31st., 1902.

Mr. O. H. Tittmann,
Superintendent, Coast and Geodetic Survey,
Washington, D. C.



Sir:-

The following descriptive report to accompany topographic sheets Nos. 2606, 2607, 2608, 2609, and hydrographic sheets Nos. 2608, 2609, 2610, covering Lake Washington, with its shore line and contiguous topography, is respectfully submitted.

Lake Washington is the large body of fresh water just east of the city of Seattle in the northwest corner of the state of Washington. It is about twenty miles long and from one to four miles in width.

The relief of the country shown on the sheets is much broken and irregular, but more or less rounded, and covered with a dense growth of vegetation excepting where cleared for farming, summer homes, or the like. The hills are often three hundred feet or more in height, and usually slope up directly from the shore line, the degree of slope often being as great as thirty degrees or more. In some places the shore is bordered by bluffs ten to a hundred feet in height, but ordinarily the natural slopes of the hills begin at the shore line.

The soil is usually a rich vegetable mold on the surface, with a subsoil of sand or gravel and clay. This subsoil is fairly solid and does not seem to cut up very badly on the roads where light teaming is done. No strata of rock were seen near the surface, although numerous boulders of various sizes may be seen in a few places, notably on the west side of Juanita Bay and near the middle of the west side of Mercer Island.

The shore line is very bold and sharply defined, excepting near the extreme ends of the lake or near the sloughs. There are a few places so bold that a ship drawing twenty feet of water can lay close enough to shore to allow the gang plank to reach dry land. At or near the sloughs the shores are swampy and impassable, the swamps being almost entirely submerged at times of high water, particularly during the spring.

A large part of the shore line of the lake is composed of a soft silex sand or gravel and shingle, especially where the waves strike with much force. Numerous patches of a dense growth of sedge grass may be seen along the shores wherever the water is less than six or seven feet in depth. Along the shores much protected by the sedge, or where the waves strike with little force, the shore is usually of a muddy or alluvial character. The latter places are often protected too by brush, logs, stumps, and the like, which border a large part of the beach, often reaching a hundred feet or more from the shore.

There are numerous small springs and streams along the shores of the lake. The former are particularly frequent wherever the hillsides have been cut for railroad construction or the like. Leakage along the cuts of the Seattle and International Railroad near the stations Pontiac and Lake are very prominent, being so great in many places as to necessitate the construction of retaining walls to keep the banks from sloughing off onto the tracks.

The vegetation around the lake is very luxuriant, and in many places almost impenetrable. The woods consist mostly of fir and cedar with a few deciduous trees. A dense undergrowth of brush grows almost every where unless the ground is worked every year. Amongst the brush may be found a large fern or braken which fills nearly every available interstice. This braken grows to a height of eight or ten feet in many places and is

often so dense as to make it very difficult to force a passage through it.

Most of the large timber adjoining the lake has been cut although there are a few good timber sections now being worked. The fir trees where the timber has not been cut, are many of them 150 feet or more in height. Even in those sections where the best timber has been cut there are many trees 100 feet or more in height.

The orchards in this region are composed mostly of apple, peach, and prune trees, although nearly all kinds of fruit trees may be found around the summer homes. Only a small portion of the area bordering the lake is tilled at present, the greater part being composed of hillsides too steep to be worked profitably.

There are no towns of any size on the lake, Seattle of course not being considered. Kirkland is a small village on the east side of the lake about northeast from Seattle, and probably owes its origin to the timber industry. It is now little more than a summer resort however. A fairly good sized woolen mill is in operation there, with the prospect of a blast furnace or iron working mill, in the near future. The latter will probably necessitate railroad connection. The grade for a railroad from Renton to Kirkland was almost completed several years ago, following the east shore of the lake to Mercer Slough and then cutting through the country to Kirkland. The rails were laid for several miles, and most of the trestles built even as far north as Mercer Slough.

Near the south end of the lake is the town of Renton, a coal mining town. It is about one and a half miles from the lake however with a wide strip of low swampy land intervening.

In the neighborhood of Rainier Beach, Brighton Beach, and from Juanita Bay to Anderson Bay, are many summer homes. During the summer months the shores of the lake from Sand Point to Renton are more or less
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taken up by campers, particularly wherever easy rail or boat communication may be obtained with the city of Seattle.

At the extreme north end of the lake is a small saw mill; another and larger one, is located about a mile south of Leschi Park. A small one is near Medina and a new one is being built about a mile south of Rainier Beach. At Pontiac there is a large brick yard.

On the shore in front of the city of Seattle are several small parks at street railroad termini, viz., Leschi, Madrona, and Madison. Just north of Union Bay is Ravenna Park. Bordering Union Bay on the west are the grounds and buildings of the Washington state University.

Communication around the lake may be either by land or water. On the west side it is principally by land, but for points across the lake it is necessarily mostly by water at present. The Seattle and International R.R. follows the north shore of Lake Union, and around the northwest side of Union Bay; then after cutting across country for a short distance comes out to the shore of the lake at Pontiac and follows the west shore to the extreme north east point of the lake. The Columbia and Puget Sound R.R. passes through Renton and runs very near the south end of the lake in getting to the mines at Coal Creek. This road has a switch track to a coal bunker or trestle at the southeast point of the lake where coal cars can be unloaded by dumping into scows underneath.

Electric cars are operated between Renton and Seattle, the road being located as close to the shore of the lake as possible from the south end of the lake to Rainier Beach. A cable line is run between Seattle and Leschi Park and also between Seattle and Madison Park. Electric cars are operated from Seattle to Madrona Park and also to Ravenna Park. All have frequent service.

There are several small boats on the lake that make regular runs. A ferry boat, large enough to carry a number of wagons and teams, makes several trips a day between Madison Park and Kirkland. A smaller steamer also makes this run, stopping also at many landings between Kirkland and Anderson Bay. A small steamer runs more or less regularly between Madison Park and Bothell, at the north end of the lake, making landings as desired. From Leschi Park a steamer makes frequent trips across to Medina, Meydenbauer Bay, East Seattle, and such other landings as may be necessary. Most of these steamers can be hired for short trips to points where they do not go regularly, particularly after the dry season ends. At Leschi, Madrona, and Madison Parks are boat houses where launches and small boats may be hired at reasonable rates.

A small canal has been dug between Union Bay and Lake Union large enough for the purpose of getting logs across. There are no other canals around the lake and only two streams that might be called rivers. Squawk Slough, at the north end of the lake, is the only stream of any size flowing into the lake, and the only one at all navigable. The outlet of the lake is Black River at the extreme south end of the lake. It is navigable for only small boats and is a narrow shoal stream. Cedar River is a small shoal stream flowing into Black River from the east, at about a half a mile from the lake. Cedar River is the stream from which Seattle gets its water supply at present. Until recently the water for the city was taken from Lake Washington at a point about a mile and a half south of Leschi Park.

The roads in the region covered by these sheets are rather rough and hilly and undeveloped. The remains of many old skid roads are not shown on the sheets as they are more or less filled up with logs and brush, or washed out and impassable.

With the exception of the logging and lumber industries, Lake Washington is at present of but little importance excepting as a summer resort. Some coal, and such supplies as are needed by the people living around the lake, constitute the greater part of the freight transported by water. When the proposed canal between Lake Washington and Puget Sound is opened the lake will make an excellent harbor. Although the greater part of the lake is rather deep for anchorage (being about 200 ft.) still, with good mooring bouys little trouble will probably be felt on this account.

The shores are usually so bold that very short wharves will be needed excepting in the bays or near the ends of the lake, and as the water is fresh they will last until they decay or are torn away.

This proposed canal is to enter Lake Washington either at the west side of Union Bay, or at a point near the large saw mill about a mile south of Leschi Park; probably the ~~latter~~ former as it is certainly the more economical of construction. The latter is proposed by parties who expect to use the material excavated to fill in the tide flats located just southwest of Seattle.

Fog is one of the greatest difficulties the mariner has to contend with in this region. ~~They are~~ ^{It is} liable to occur at any time but ~~are~~ ^{is} more prevalent during the autumn. Often the fog is so dense as to prevent objects being seen at distances less than a hundred meters. The south end of the lake seems to be a little more subject to fog than the north end as the usual clearing is from the north and the clearing wind usually very light, thus taking some time to reach the south end of the lake. Other winds besides north winds also clear the fog away hence it is difficult to predict where it will clear from.

The weather during July, August, September, and part of October, is generally pleasant and fairly clear. Fog is liable to be more or less dense from daylight to 9 or 10 A.M., particularly on the cooler mornings. The afternoons however are nearly always very pleasant on days when the mornings are foggy.

Smoke is likely to be a disagreeable factor during August and September, although it does not become thick enough to render objects as faint as the fog does. Two or three days during September of this season, smoke was dense enough to make the shore invisible at a distance of a quarter of a mile, but such cases are very rare. This instance was the worst case experienced for many years according to the old inhabitants.

The rainy season is said to begin in October, but in 1902 very little rain fell during this month. The winds are usually very light during the summer months, and mostly from the north. After the rains begin however the prevailing winds are from the south. Strong winds occur occasionally on the lake, usually from the south, during the winter months, but gales likely to be disastrous to shipping are not at all common, if they occur at all.

The topographic work of the survey was done on a scale of 1 : 10 000. The detail on the sheets is represented as accurately as is needed for the ordinary cartographic reproductions.

A square mile of the topography is probably equivalent to about five miles of the shore line, hence the cost per square mile of the topography may be considered as about \$20.00. The cost of the topography was diminished very materially by the determination of numerous triangulation stations, thus lessening the number of planetable stations required, and also increasing the accuracy of those determined.

Respectfully,

Owen B. French

Assistant, C. & G. S.