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DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 2489

State Washington

LOCALITY

1900

CHIEF OF PARTY
Westdahl

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Descriptive Report

to accompany hydrographic sheet entitled

Treasury Department
U. S. Coast and Geodetic Survey
O. H. Tittmann Supt.
Seattle Harbor
Washington

Ferdinand Westdahl, Asst. Chief of Party
Steamer "McArthur"
November 12 to December 6, 1900
Scale $\frac{1}{10,000}$

This is a survey of the immediate vicinity of the wharves in Seattle Harbor, made in accordance with the Superintendent's instructions of November 1, 1900, for the purpose of "publishing a new chart of it without unnecessary delay". Although small in extent the season of the year and the chaotic state of the waterfront combined to prolong its execution to an unreasonable extent. In the absence of detailed instructions regarding the limits of the area to be surveyed it was begun by running a series of lines normal to the shore out far enough to define the 20 fathom curve; but in a telegram of Nov. 19, 1900, the Superintendent directed that it would be sufficient to run out to 10 fathoms. Owing to the fact that some of the wharves in Seattle reach out to

almost that depth it became necessary to construe that order liberally, and most of the lines are ended in water much deeper than 10 fathoms. The work was done in a whale-boat and an ordinary hand lead and line used. On account of the great depth the boat had to be stopped for every sounding beyond 30 feet. It was intended to develop the anchorage more particularly with the ship, using wire apparatus, but just at the time an extraordinary number of vessels choked up the limited area which could be utilized for such purpose. There were no less than five Revenue Cutters, several steamers, and a number of sailing vessels in the bay, most of them awaiting berths alongside some wharf for discharging or loading. Running the ship had to be abandoned and the anchorage also was done with the whale-boat.

Sounding along the wharves was almost impracticable and entirely useless for chart purposes after this year, except along the new piers. About one half of the existing wharves were being torn out and the surface of the water in their vicinity choked with the debris. All the traffic had to be done on the remaining wharves in the meantime so that none of them were ever vacant. Seattle is the center of a large local traffic with Sound ports and rivers emptying into the Sound, carried on by numerous small steamers making regular trips. Even these regular steamers were obliged to wait at times for an opportunity to land.

On account of the great depth immediately in front of the wharves and consequent difficulty in anchoring, except for vessels well found in steam hoisting gear, the City maintains mooring-buoys. There are at present only three such laid. The Harbor-master informed me that a small appropriation had been made, sufficient for about two or three more. Ultimately this number will have to be largely increased and laid systematically so that vessels may lie out of the way of the ferry and steamer traffic to the wharves. On foggy days and dark nights the danger to small boats and launches is now very great and several accidents have occurred.

The new wharves constructed since the topographical survey are determined by sextant angles and shown in blue on the sheet. It will be seen that the new system does not run straight out from the streets but is bent at an angle to the westward for the two-fold purpose of affording longer wharves for accommodating longer ships, and to facilitate the laying of spur-tracks from the railways to the ends of the piers. Large vessels lie at these piers in perfect safety even during southeast gales in winter, but small vessels have to haul out occasionally on account of rough sea, particularly towards North Seattle. The "McArthur" was moored on the southeast side of the new wharf projected from the foot of Virginia Street while the boiler was

blown off and repairs to engine made. She could not lie on the Northwest side of the wharf on account of the sunken wreck of a burned steamship lying there. During the night of Nov. 21 and 22 a strong southeast gale sprang up and she pounded against the wharf, injuring her guard slightly, until morning when I procured some bales of straw wrapped in old canvas and rope to drop between the ship and the wharf. These fenders lasted during one or two subsequent blows and proved entirely effective. During a northerly gale and snowstorm I have also noticed a swell, uncomfortable for small craft at the wharves, rolling in from the Sound. The "McArthur" rested on the bottom at half-tide to the northward of the inner angle of the same wharf when one of these blows came on and had to be hauled out as soon as afloat. The greatest annoyance to a beached vessel near the Seattle water-front, however, is the swell raised by the almost continual passing of small but very swift steamers.

Wherever in this survey the low water line and other curves of equal depth have not been defined the cause of omission has been the impracticability of getting the boat in there on account of obstructions, such as piling, log-booms, rafts, etc. The town out wharves are marked in pencil.

Respectfully submitted

Ferdinand Westdahl

Asst. C. & G. Survey, Comdg