

3763 - 3763 *Addl.*

W.K.

Diag. Cht. No. 6450-1



Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

11-5613

State: *Washington*

DESCRIPTIVE REPORT.

Hyd. Sheet No. **3763**

LOCALITY:

Puget Sound
Liberty Bay

1917

CHIEF OF PARTY:

J. A. Daniels

3763

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following-title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 3763

State Washington

General locality Puget Sound

Locality Liberty (Dogfish) Bay

Chief of party John A. Daniels

Surveyed by W. S. P. Keyes

Date of survey January 3 - 8, 1917

Scale 1 : 10000

Soundings in Feet

Plane of reference 2 feet below M. L. L. W.

Protracted by M.J.T. Soundings in pencil by M.J.T.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, Boat sheets,

Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks:

HYDROGRAPHIC SHEET NO. 1

Liberty (Dogfish) Bay,
Puget Sound, Washington.

Scale 1/10000

Projection made by L. P. Raynor, Aid.

Verified by F. H. Hardy, Asst.

Hydrographer R. W. Healy, Mate.

Chief of Party F. H. Hardy, Assistant.

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DESCRIPTIVE REPORT

Hydrographic Sheet Number 3763, Additional
Work

Surveyed Under Instructions from The Superintendent

Dated November 12, 1917.

John A. Daniels, Assistant, Chief of Party

REFER TO NO.

5-EMK

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

February 4, 1918.

Chief, Division of Hydrography and Topography. HCG

In accordance with your verbal request of the 2nd instant, the following report is submitted in regard to the relation between the datum to which Hydrographic Sheet 1694 was reduced, and the plane of mean lower low water, now used in Puget Sound.

On February 7, 1917, a correction of +1.4 feet was furnished from this Section, for the reduction of soundings from the Burkes Bay gauge. After a careful examination of the tidal observations of 1885 at Burkes Bay, I find that they are not sufficient to determine a plane of reference closer than with an uncertainty of ± 0.3 foot. The draftsman properly used the correction of +1.4 feet as +1 foot, and it would remain +1 foot if the negative sign of the above uncertainty were used; but it would become +2 feet when the positive sign is used.

Over a wide area in the vicinity of Burkes Bay, the mean sea level is usually depressed one or more tenths of a foot below its average value for the year, during the months of October and November, when most of the work on Sheet 1694 was done. Correcting for this would increase the +1.4 feet to more than +1.5 feet, thus indicating that the upper sign of the above uncertainty should be used, which will increase the soundings of 1885 on the tracing by another foot.

L. P. Shidy

Acting Chief, Section Tides
and Currents.

Liberty (Codfish) Bay.

STATISTICS SHEET NO. 1

Date 1915.	Letter.	Vol.	Posi tions.	Sound ings.	Miles. Statute.	Vessel.
Mar. 12	a	1	249	622	4.8	Whaleboat #209
" 13	b	1	86	281	1.5	" "
" 16	c	1	3	3		" "
TOTAL.....			338	906	6.3	

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DESCRIPTIVE REPORT
(Additional Work, Sheet 3763)

The area sounded and represented upon this sheet includes Liberty (Dogfish) Bay from its head to a point just south of latitude 47 42'. The scale of the sheet is 1 : 10000.

The development consists of 100 meter lines in one direction perpendicular to the axis of the channel. Where soundings fell upon or very near those previously taken, they were not plotted upon the smooth sheet. Curves showing the location of the low water line, the one and three fathom curves are shown on the sheet in pencil. The depths found closely check those upon the chart and join well with those previously taken and shown upon the sheet.

Tidal reductions for the soundings were obtained from the automatic gauge maintained at Morford, near the head of the bay. The plane of reference is that used upon the chart, viz 2 feet below M. L. L. W.

The northern limit of wire drag work done upon sheet No. 1 is indicated upon the sheet by a dotted red line. The signals used were partly recovered from those determined by Captain Hardy in 1915. The remainder were located by the party with theodolite cuts graphically plotted.

TABLE OF STATISTICS

Date	Day	Vol.	Soundings	Angles	Miles	
Jan.	3	A	1	341	198	11.0
"	5	B	1	450	245	15.1
"	6	C	1	127	82	3.5
"	8	D	2	283	227	9.8
Totals	-	4	2	1201	752	39.4

Respectfully Submitted,

John A. Daniels

Assistant, Coast & Geodetic Survey,
Chief of Party.

J.S.S.

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U. S. COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

REFER TO NO.

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

FIELD RECORDS (H) *[initials]*
CHARTS (H) *[initials]*

November 14, 1917.

LIBRARY

File with descriptive report
of hydrographic sheet No. 3763

[initials]

Drawing Section.

Division of Hydrography and Topography:

Division of Charts:

Tidal reductions are approved* in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 3763,

Liberty Bay, Puget Sound, Wash.,
J. A. Daniels in 1917.

Plane of reference is
Mean lower low water*, reading
7.5 feet on staff at Morford.

*Caution:-Soundings were reduced
in the field to the old plane of
2 feet below mean lower low water,
and should be increased by 2 feet
to reduce to the new plane of mean
lower low water.

L. P. Shidy

Acting Chief,
Section of Tides and Currents.

VEC
Jan. 3, 1915.

RFL

HYDROGRAPHIC SHEET 3763.

Liberty Bay, Puget Sound, Washington, by Asst. F.H.

Hardy in 1915.

TIDES.

	Morford ft.
2 feet below mean lower low water or plane of reference on staff	5.5
Lowest tide observed	" " 2.4
Highest " "	" " 21.6
Mean range of tide	8.1

Hyd. Sheet No 3763

Within the limits of the work, the ground is very well covered by a system of lines perpendicular to the channel. No cross lines were run.

The soundings agree very well with the work of 1915 (special examination of wharves & docks, plotted on this sheet) but seem to be consistently deeper than those of the old survey of 1885. (Hyd. 1694)

The following doubtful soundings were noted.

A minus six foot sounding, just off the Pacific Coast Codfish Co. dock where twenty feet is shown, which was rejected by Asst. Daniels as a "recorder's error".

A twelve foot sounding between pos. 86b and pos 87b (N.W. of Δ Point) and a twenty two foot sounding between pos. 22c and pos 23c (north of Δ Jackman). Although the old work shows no indication of either of these spots, it was not considered safe to omit them.

The rock noted on the work of 1915, (70 meters N.N.W. of \odot Moll) with eight feet shown over it, was investigated by a diver. It was found to be a hard lump or a small boulder projecting about two feet above the surrounding bottom.

Every position on the sheet was reprotracted and the spacing of all soundings tested.

A tracing was made combining the soundings of Hyd. 1694 with those on this sheet. On the tracing the soundings were brought up to the present plane of mean lower low water but after the tracing was made it was found that still another foot should be added to the old soundings (shown in red) to bring them up to this plane. (See special report from Tidal Div.)

Therefore the curves were drawn on the tracing using the black soundings as they are shown and the red soundings as though they were one foot deeper than they are shown.

R. L. Johnston

Hydrographic Sheet No. 3763.
Liberty Bay, Puget Sound.
Washington.

The positions for the work covered by this sheet were protracted by the field party and have been taken as correct, being verified only when found necessary to locate position and line for plating soundings.

As this work was done evidently to show only conditions at and adjacent to the numerous wharves and docks it would appear good and sufficient for this purpose.

At "Lemolo" dock the field party has indicated a sunken rock about 80 metres to the northwest of the northwest face of the wharf and on page 57 of the records positions 1-c + 2-c locates a rock in same vicinity but about 30 metres to the north west. While the rock indicated by the field party and the one for which the positions are given may be identical there is nothing to show such to be the fact, therefore, the rock indicated by the field party remains on the sheet as placed by. The field party and the rock on positions 1-c + 2-c is indicated by the marginal work rock and an 8 ft sounding.

According to records page 57 certain "drag" work was done in the vicinity of "Lemolo" dock but other than 1-2+3^c no mention is made of the fact and what developed.

Soundings platted in feet

John D. Loraney

6/3/16.

Hyd 3763