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Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: Mass

DESCRIPTIVE REPORT.

Hyd Sheet No. 3356-7

LOCALITY:

Plum Is. Sound
" " River

1911-12

CHIEF OF PARTY:

E. B. Latham

B

3356-7

Hyd. 3356 & 3357.

Department of
Commerce and Labor.

Coast and Geodetic Survey.
O.H Tittmann. Superintendent

Hydrographic Sheet
Plum Island Sound and Tributaries
Ipswick River to
Merrimac River

Scale 1-10,000

E. B. Latham. Assist C.&G.S.
Chief of Party.
Apr. 1912

2 Mylar Sheets

Assistant in Charge. L. & A. Hyd. 3356
" 3357.

Descriptive Report,

Superintendent.

Hydrographic Sheets, Plum Island Sound and Tributaries

This survey was made during September and October 1911 and March 25-27-1912. Soundings were made largely to utilize the time of my party, while engaged in the Surveys of Ipswich and Plum Island Bars and when conditions prevented work on these bars. As the ice carried down the banks and deposited much mud in the River Channels, these Channels were sounded in March 1912, and the soundings plotted on Separate Sheets, on tracing paper. It is presumed that these soundings are to be used when if differing from them in pencil on the main Sheet.

Plum Island Sound is much used by gasoline pleasure boats. The Plum Island River affords a passage from the Merrimac into the Sound. A Chart, published by the Harbor and Land Commissioners, State of Massachusetts is transmitted with the Sheet, as a part of the record.

The only danger on the Sheet, is Sneys and Scott Sneys rock, just North of Jerico Creek. Plum Island Sound is buoyed by the Bureau of Lighthouses. On a Sketch sent to the Commissioner of Lighthouses, a buoy

was suggested to mark the Southern End of Rowley Spit.

Rowley River is reported as navigable for a short distance above the Boston and Maine Railroad bridge, but it is not advisable for a stranger to go above the lower landing, about 300 miles below this bridge and near Rowley Station. The town of Rowley is about one mile from the station.

Ipswich River can be navigated up to the bridge at County Street, but it is advisable to go no further that the wharf at East Street, where during the summer a float is maintained for the convenience of motor boats. Gasoline, oils and other supplies can be obtained here. During the summer a small steamer is operated between this wharf and points in Ipswich River and Plum Island Sound to Parker River, landing at Newbury Old Town. There are two trips daily, except Sundays, each ways.

Parker River is navigable for a distance of 5½ miles above Newbury to Byfield. There are no draws in the bridges. There is a head way of 12 feet at Parker River and 10 feet at the Boston and Maine railroad.

Supplies of all kind may be obtained at Newburyport. For a more extensive description of conditions

at Newburyport, see descriptive report of the revision of Topographic Sheet No 355.

C. F. Jackson
Asst C&GS in charge Chief of Party

Statistics Hydrographic Sheet

Plum Island Sound and Tributaries.

Date	Day	Vol.	No. Angles.	No. Soundgs.	No. Miles.
Sept 20-11	A	1	112	482	9.50
Sept. 27-11	B	1	1118	723	16.25
Sept 28-11	C	1-2	156	724	10.75
Oct 3-1911	D	2	104	537	8.75
Oct 6-11	E	2	126	600	10.0
Oct 11-11	F	3	50	1052	20.0
Oct 12-11	G	3	54	663	6.5
Mar 25-12	H	4	2	388	4.0
Mar 27-12	I	4	20	236	3.0
			772	5405	8875

Soundings in feet.

Plane of ref. S.6 Plum Id. Tide Gauge.

E. F. Gallian, Chief of Party

Note O day Mar 26th Angles 20. Soundings 438 Miles 10.0 pertains to Sheet 3312 - a duplicate set of notes, Sent to the office on loose Sheets.

Drawing Sec.

Department of Commerce and Labor

Aug 1, 1912

Library: — This letter should be filed with the descriptive Report of Hyd sheet No. 3356

GPT.

To be acknowledged by Library

DMW.

Recd 2 angle boards
" Hydc Sheet
" 3312 & board "
" 3356
" 1 Tracing blue print 13785
1 Sheet of Station Values
1 Tracing on paper

No. 204
Ed. 1-13-12—200,000

Drawing Sea. ASSISTANT IN CHARGE

FORM 65.—Field Letter.

Post-Office Address: Portsmouth N.H. 2 Hawthorn Street

Telegraph Address:

Express Office:

COAST & GEODETIC SURVEY RECEIVED AUG 1 1912

11-8

Superintendent.

Assistant in Charge.

Department of Commerce and Labor
LIBRARY AND ARCHIVES
COAST AND GEODETIC SURVEY
AUG 1 1912
Acc. No

RECEIVED
BY ASSISTANT IN CHARGE
AND REFERRED TO
AUG 1 1912

Portsmouth, N.H.

July 30, 1912

Superintendent,
Coast and Geodetic Survey
Washington D.C.

ANSWERED
AUG 5 - 1912
LIBRARY AND ARCHIVES.

Sir.

I return, under seperate cover, the records mentioned in your letter of July 25-1912, with tracing and sketch showing adjustment of position of stations, at the juncture of sheets 3312 and 3356. With certain angles, observed during the topographic revision, added to the record in the angle book.

The position of the signals north of Hill, Up, etc do not depend on them or on Ice, Dal, etc, but were determined on seperate data; that is, on Old Town triangulation and other triangulation stations on the Shores of Plum Island Sound.

When 3356 was plotted, the positions on 3312 were not available, Stations Ice, Bar, Tow, 1910 were plotted on 3356, and three positions checked with the work of 1911 - and it was assumed that the work on the two sheets agreed. Station Up when check

with the determinations of 1910 and 1911 show a discrepancy. The determination of 1910 of this station is weak, depending on Hie Down and Bar. The discrepancy is such, that it is believed that it will not be necessary to replot the sounding in a scale of 1, 20,000 (sheet 3312) The sounding records are not available to test this. It is suggested that the sounding lines South of Hie and West of Thin, be plotted to test this, preferably on the 3356 - Scale 1-10,000.

The order of plotting sheet 3356 is as follows - 1- Plotting of triangulation stations - 2. Plotting of theodolite angles observed at Old Down and other triangulation stations, and at Topo. Signal, Red. Tree stations to be controlled by these lines. Station Val- Plotted on the line from Old Town Triangulation station with the angle Yel - Hie - (Yel is on two theodolite angle lines.) and tested with other stations. Also during the topographic revision, angles were observed between Old Town triangulation, Ipswich and Kirby Churches and Hie, their position checks, well with the previous determination It would probably give a better determination, to use the angle Old Down Ipswich Church, but the discrepancy is within an allowable discrepancy. Several angles at Bar, check its 1910 position, with stations Tope Bar Sta Cupola, Old Down and Yel. and indicate that Hie

should be 10 metres north of its 1910 position. Station Up 1910, depending on Hei Bar and Dow, with Stations Win and No. depending on its position were not accepted, but were replotted. See tracing showing lines and adjusted position for this station, and for new positions for Win and No. The shore line depending on the position of Up and Win, was replotted. (See sheet and tracing) this brings all the topography affected.

The discrepancies noted in your letter of July 18, were caused by the poor position of Up. and the enlarging from 1-20,000 to 1, 10,000 and expanding or locating stations from the Signals of 1910, when a later determination controlled the Signals on Sheet No 3356 as plotted in the field.

The tracing submitted and the angles when plotted on Sheet 3356-, will show that all stations are well located and that the topography in Plum Island Sound and River is not affected, further than noted and corrected.

Respectfully
E B Latham
Assist C&GSurvey
Chief of Party

VEC
May 10,1912.

HYDROGRAPHIC SHEET 3356.

Plum Island Sound, Massachusetts, by Asst. E. B. Latham in 1911.

TIDES.

	Bluff Wharf ft.
Mean low water, or plane of reference on staff	4.6
Lowest tide observed " "	4.5
Highest " " " "	14.9
Mean range of tide	8.7

VEC
May 10,1912.

HYDROGRAPHIC SHEET 3357.

Plum Island Sound, Massachusetts, by Asst. E. B. Latham in 1911.

TIDES.

	Bluff Wharf ft.
Mean low water, or plane of reference on staff	4.6
Lowest tide observed " "	4.5
Highest " " " "	14.9
Mean range of tide	8.7

Hyd. Sheet No. 3356

An examination of this work, showed plainly that some essential feature was in error.

After the soundings were plotted, that portion of Hyd. Sheet No. 3312, which overlaps this work, was enlarged to this scale. The hydrography disagreed so badly, that a further enlargement and comparison was made, bringing out the fact that the tri. point, "Ipswich A. H.," is shown in an old and abandoned position, on this sheet, although correct on Hyd 3312, and that the hyd. signals, common to both sheets, were shown in different positions on each. A list of these signals was made and forwarded to Asst. Latham, who sent in a tracing showing their correct position, as re-determined. The hydrography on hyd. sheet No. 3312, was badly affected; therefore, that portion controlled by these signals, was reprotracted and plotted on this sheet. Also the lines on this sheet, most affected by the changed positions of signals, were reprotracted and plotted.

The soundings on the three tracings, of the Parker, Rowley and Ipswich Rivers, were transferred to this sheet and the work on them given preference over that on the main sheet, where ever it conflicted. (Desc. Report.)
These tracings may now be treated as boat sheets.

This is not reliable work and is not of much

value, except to give a general idea of the ground. The only thing which can be said favorable of it, is that the ground is very well covered.

The work in the Parker, Rowley and Ipswich Rivers, is especially questionable, as it has practically no control. No angles were read on positions and such positions as were described, could hardly be plotted from the character of descriptions given. These lines had to be accepted in the position shown on the sheet by the field party and adjusted to cross as well as possible.

The main body of the work is also unreliable, the crossings poor, records not well kept and the protracting and plotting that was done is inaccurate. The letters on some of the lines did not correspond with those in the records.

The manner in which some of the hyd. signals, on the lower part of the sheet, are shown, is some what misleading. Two separate positions are shown, one marked 1911 and the other 1912. There is only one correct position for each signal, generally the one in black (1912), which was used for all work.

R. L. Johnston

Nov. 1912.

Oct 8, 1912

Hyd. Sheet No. 3357

Os positions on sounding lines were not determined so they can be checked and many positions could not be identified all that could be done was to ink in the soundings which they were placed in pencil by the field party. No verification of the plotting is possible. Channel lines were not run and the survey did not develope the water that can be carried through the waters covered by the survey

J.S.H.