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Department of Commerce and Light
COAST AND GEODETIC SURVEY

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State *Miss*

DESCRIPTIVE REPORT

Hyd Sheet No. *3312*
3312

LOCALITY

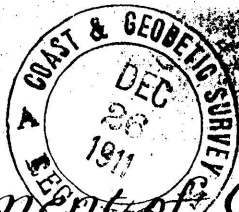
Spanish Bay, Puerto Rico
Amaguanac and vicinity

1901

CHIEF OF PARTY:

C. B. Lockman

3312 3312a^b



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Department of Commerce & Labor
Assistant in Charge
Coast & Geo. Survey

O. H. Tittmann, Supt.

Hydrographic Sheet. 3312.

Annisquam and Essex Rivers
and Plum Island Sound Entrances
Massachusetts

Scale 1-20,000

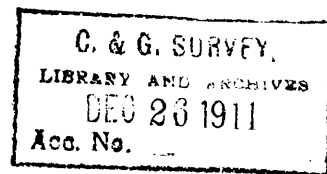
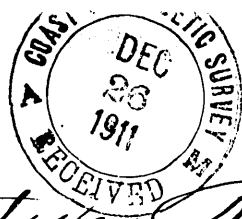
With Sketches, of Essex and Castle Neck Rivers
and the Canal into Ipswich River.

Scale-1-10,000.

E. B. Latham, Chief of Party.

Dec-23rd 1911

Verified & checked by
H. L. Simmons



*Descriptive Report,
Hydrographic Sheet, No.*

*Surveys in Annisquam and Essex River
Bars and River, and Entrance to
Plum Island Sound.*

*This sheet, with two tracings, shows the re-
sults of surveys over the bars at Essex
Annisquam and Plum Island Bars, and
in Essex River to the bridge at the town of
Essex and in Castle Neck River and in the
Canal into Ipswich River. Also the lower
end of Plum Island Sound.*

*The coast consists of sand hills and low
(100 to 225 feet) grass covered hills.*

*The entrance to Plum Island Sound, may be
identified by the high bluff on its south
side, and the large prominent House of
Mr. R. J. Crane, on the high hill near
the bluff. The entrance is marked by the
Ipswich range lights, and the Channel
is buoyed.*

*Essex River entrance, is marked by the
termination of the sand hills on Castle*

Neck, and by two prominent stone markers on its southern bank.

This Channel and Essex River, as far as Conomo Point, is bridged.

Annisquam River entrance can be identified by the Light House, and by the village of Annisquam, (a part of the City of Gloucester, Mass.). The entrance is marked by buoys and beacons of stone.

Pilots, may be secured on notice by mail or wire, for Plum Island Sound, to Ipswich, Mass.

For Essex River, to Essex Mass. and for Annisquam (Squam) River to Gloucester Mass. It is problematical if a pilot could be obtained by signal.

Anchorage areas in Annisquam and Essex Rivers are limited, The bottom is sand and good holding ground.

Anchorage in Plum Island Sound is extensive, with good sandy bottom holding ground.

With the wind to the Eastward, all the bars are rough, and break in heavy weather, in several lines of breakers. Even in moderate weather

the bars, prevent entrance. The currents are strong 2 to 3 miles per hour in Plum Island Sound and Essex River, with less current in Annisquam River.

Depth over bars best obtained from sheets, as the field reductions for low water is doubtful, being adapted from determination by the Engineer Corps, United States Army.

Best aids, are the Sights beacons and buoys which are changed frequently to indicate the changed positions of Channels.

There is a Life saving station, about two miles north of the southern end of Plum Island. The station at Rockport also responds to distress signals, as there is telephonic communication with Annisquam Bayview and Sacoisville.

There is but little Commerce in these waters. A few vessels obtain sand in Essex and Ipswich Rivers. At the join of Essex are numerous ship yards. Small Schooners are the usual product. All hulls, are engine and rigged elsewhere.

Numerous gasoline and other pleasure boats use the waters, especially those of Ipswich River and Plum Island Sound. The sound with Plum Island River, offers communication into the Merrimack River at high water.

The soundings were carried off shore, to an agreement with the Outer Survey. The development of the bars were considered to be ample owing to their frequent change in depth and position. The buoys should be accepted as indicating the best water. A tracing showing location of objects on shore, is prepared, with the expectation that it will be transmitted to the Bureau of Light Houses, and thus enable the Survey to accurately plot the position of the new buoys, from either Sextant Angles or Compass bearings, observed on these objects. A statistical report and title of the sheet are herewith attached.

Respectfully
E. D. Atham

Newburyport, Mass. Dec 23-1911 Chief of Party, CES



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Statistics Hydrographic Sheet.
Annisquam Essex and
Plum Island Entrances

<i>Day</i>	<i>No Angles</i>	<i>No Soundings</i>	<i>Miles Sound.</i>
A	142	581	11.0
B	58	214	4.25
C	170	691	11.25
D	268	1071	19.75
E	44	189	2.25
F	56	223	3.50
G	94	377	7.50
H	220	1033	17.75
I	276	1215	20.75
K	166	596	14.75
L	118	598	13.25
M	106	462	9.75
N	32	906	15.50
<i>Totals</i>	<u>1754</u>	<u>8356</u>	<u>151.25</u>

Tide Staff. Plum Island Wharf.

Observers. E. B. Latham Assist
S. A. Graham Aid

E. B. Latham
Chief of Party

Nov. 1911

VED
Feb. 1, 1912.

HYDROGRAPHIC SHEET 5512

Ipswich Bay, Massachusetts, by Assistant
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

Coast and Geodetic Survey

FEB 1 1912

TIDAL DIVISION

VEC
May 28, 1912.

HYDROGRAPHIC SHEET 3312a.

Plum Island Sound, Massachusetts, by Asst. E.B.
Latham in 1912.

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

Coast and Geodetic Survey
MAY 28 1912
TIDAL DIVISION

Hyd. Sheet No. 3312.

Feb. 8, 1912.

At the entrance to Essex Bay northwest of Two Penny Loaf the soundings do not show a good development of the channel. The other portions of the area surveyed is well covered.

The work should have been plotted on a larger scale.

H. L. Simons

Attention is called to above as the survey does not show what water can be carried into Essex River. E. S. P.

Hyd. Sheet No. 3312^c - (work of 1912)

May 6 1912

Additional work was done to complete the development of the channel at the ent. to Essex Bay.

The line of soundings from L13 to L16.0 does not agree with the work of 1911. It shows a depth of 6 feet over a spot where the previous work shows a small island. It may be that the island has been washed away but ~~there~~ is not mentioned in any way in the records. The descriptive report was received with this sheet.

H. L. Simons