6960

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ..... *Office No.* H-6960

LOCALITY

State MAINE

General locality Kennebec River ~~BOWDOINHAM~~

Locality MERRYMEETING BAY & CATHANCE RIVER

194 4

CHIEF OF PARTY

W. R. Porter

LIBRARY & ARCHIVES

DATE JUN 14 1945

B-1870-1 (1)

6960

Form 537
(Ed. Nov. 1941)

REG. NO. H-6960

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-6960

Field No. .....

State Maine

General locality ~~Bowdoinham~~ Kennebec River

Locality Merrymeeting Bay & Cathance River

Scale 1:5,000 Date of survey July, 1944

Instructions dated March 11, 1942 and March 11, 1944

Vessel Launch FARIS

Chief of party W. R. Porter

Surveyed by W. R. Porter

Soundings taken by ~~fathometer~~, graphic recorder, ~~hand lead~~, sounding pole

Protracted by Mary Miller

Soundings penciled by Mary Miller & J. D. Curd

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~

REMARKS: This sheet was processed in the Hydrographic Section, SE District, Norfolk, Va.

U. S. GOVERNMENT PRINTING OFFICE 428975

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET H-6960

NOTE:

The following descriptive report was written from a combined report for sheets H-6800, 6801 (1944), 6959, 6960 and 6961 submitted by the field party and supplemented by information obtained at this office.

PROJECT:

This survey is part of Project CS-265 and was executed under Instructions dated March 7, 1942, Supplemental Instructions dated March 11, 1942, and March 11, 1944, and letter - Triangulation data - Kennebec River and Merrymeeting Bay (reference 22/MEK and 1995 FA 4) dated May 3, 1944.

SURVEY LIMITS AND DATES:

This survey extends from a junction with Sheet H-6959 through Merrymeeting Bay to the entrance of the Androscoggin River and includes the Cathance River from Merrymeeting Bay to Bowdoinham. This work was accomplished during the month of July, 1944.

VESSELS & EQUIPMENT:

This survey was accomplished from the Launch FARIS basing at Bath, Me. Launch 102 and a catamaran was used in this survey. The survey party operated by truck from the Launch FARIS at Bath to the catamaran moored in the vicinity of Pleasant Point on Merrymeeting Bay.

The catamaran was assembled from the 14 foot dinghy assigned to the Launch FARIS and the 16 foot skiff assigned to the Launch WAINWRIGHT. The catamaran was powered by one 9½ h.p. and one 3½ h.p. motor.

TIDE & CURRENT STATIONS:

A portable automatic gage was installed at Bowdoinham for the survey of the Cathance River.

For that portion of the survey in Merrymeeting Bay a portable automatic gage was maintained at the entrance to the Androscoggin River in Latitude 43° 57.08' and Longitude 69° 53.25'.

No current stations were established.

CONTROL STATIONS, SHORELINE & TOPOGRAPHY:

The control for the northeastern portion of Merrymeeting Bay is mostly from the triangulation executed by the U. S. Engineers in 1940 supplemented by hydrographic signals picked from air

photographic surveys and signals located by sextant fixes and cuts.

In the Cathance River, the control was taken from the airphoto compilations and supplemented by signals obtained by sextant cuts and fixes.

The shoreline and topographic signals were obtained from air photo compilations Nos. T-5975 (1941) and T-5966. (1941)

The shoreline for the area is thickly wooded and very similar in appearance throughout. The majority of the islands are wooded and covered with brush and grass with rather indefinite points and edges. Consequently, considerable difficulty was encountered in identifying many signals picked on the air photo map drawings, especially those described simply as point of marsh, bush, tree, point of island, end of dock and group of cedars. Winter storms and ice change the marsh and brush lines considerably. A particular brush or tree is often very difficult to spot in an area covered with brush and trees. The majority of docks are temporarily erected for the summer or hunting seasons and were not in place at the time of this survey. Many buildings back from the waters edge are not visible from any point accessible by boat or sufficiently visible for hydrographic purposes. Many objects suitable for signals either did not show well in the photograph or were not picked for use.

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It was found necessary to locate a considerable number of signals by sextant for hydrographic control. Wherever possible these signals were located by strong sextant fixes at the signals or by cuts from previously located signals using triangulation stations when possible or signals from the air photo map drawings that could be picked with assurance.

SOUNDINGS:

Depths were measured with the 808 Fathometer No. 71 S throughout this survey. A few lines of pole soundings were run. A pole sounding was obtained on each fix in very shoal area and in areas of kelp and grass as a verification of the fathometer sounding.

The fish was set at eighteen inches on the catamaran and at 2½ ft. on Launch 102.

CONTROL OF HYDROGRAPHY:

Sounding lines were controlled throughout by sextant fixes taken from a point close by the fish or by reference to signals when very near them.

ADEQUACY OF SURVEY:

This survey is considered complete and adequate to supersede prior surveys for charting purposes. Junctions with ~~previous~~ contemporary surveys are good. No holidays are left other than those noted on the boat sheets as covered with heavy grass that could not be sounded by boat.

CROSSLINES:

Approximately ten percent of the lines are cross lines. The crossings appear to be in good agreement.

COMPARISON WITH PRIOR SURVEYS:

Greater depths than shown on previous surveys can be carried through Merrymeeting Bay and up the Cathance River. Local residents claim that heavy storms and winter ice change the shoals and depths in Merrymeeting Bay, and, to some extent, in the Cathance River. There have been no modern surveys of this area.

The present survey is in considerably greater detail than that made about 1860 and should be used exclusively, it is believed, for charting purposes.

The areas noted as "Grass and Kelp" on the boat sheet can only be crossed with difficulty at all stages of the tide.

DANGERS AND SHOALS:

All charted dangers, shoals and rocks were found as charted, except in some instances they were found to be shoaler on the present survey.

COAST PILOT INFORMATION:

Merrymeeting Bay is well buoyed and is easily navigated at slack water. It is believed that buoying would be necessary to follow the channel across Merrymeeting Bay to the Cathance River.

The Launch FARIS anchored in Merrymeeting Bay in Latitude 43° 59.2' and Longitude 69° 50.3' in 21 feet of water. The bottom is sand and gravel and a good anchorage in moderate weather.

BAR CHECKS:

All velocity corrections were obtained from daily bar checks.

STATISTICS:

Vol. No.	Day letter	Date	No. Pos.	Stat. Miles
1	a	July 13	35	3.2
1 & 2	b	July 14	107	11.2
2	c	July 15	103	8.6
2 & 3	d	July 17	163	12.0
4	e	July 18	122	12.2
3	f	July 19	24	2.0
3	g	July 20	22	2.0
5	h	July 21	100	11.2
5	j	July 27	31	3.0
6	k	July 28	73	7.6
6	l	July 29	41	3.9

6 & 7	m	July 31	124	4.1
7	n	Aug. 1	48	5.7
7	p	Aug. 14	23	0.0
		Total	1016	86.7

Total Square Statute Miles = 3.0

Respectfully submitted,

Isadore M. Zeskind

Isadore M. Zeskind,
Cartographic Engineer

Norfolk, Va.
June 9, 1945

Approved & Forwarded

Paul C. Whitney

Paul C. Whitney
Supervisor, SE District

Hydrographic Signals Sheet H-6960

Signals	Origin
And	Andros U.S.E.
Ale	T-5966
Ant	T-5975
Ape	T-5966
Art	T-5966
Bay	T-5975
Bit	T-5975
Bob	T-5966
Ban	T-5966
Bush	T-5966
But	T-5966
Cad	T-5966
Cat	T-5966
Cent	Center, U.S.E.
Cop	T-5966
Cut	T-5966
Den	T-5966
Day	T-5966
Dip	T-5966
Dol	T-5966
Ear	T-5966
Eke	T-5966
Eve	Vol. No. 1, page 22
Fag	T-5966
Fun	T-5975
Get	T-5966
Hat	T-5966
Hob	T-5966
Ida	T-5966
Idax	T-5975
Ike	T-5966
Int	T-5966
Jet	~~T-5966~~ Sheet H-6959
Jim	T-5966
~~Jog~~ Joe	T-5966
Jot	T-5975
Kix	T-5975
Kip	Sheet H-6959
Lone	T-5966
Lot	T-5966
Man	T-5966
Mop	Vol. No. 1, page 3 & 4
Nan	T-5975
Nat	T-5966
Nab	Vol. No. 1, page 22
Nor	Vol. No. 1 page 4
Nun	Vol. No.1, page 22
Oat	T-5975
~~Old~~ Ola	Vol. No. 1, page 22
Pan	Vol. No. 1, page 22
Pile	T-5966

H-6960

Hydrographic Signals Sheet H- 6960

Signals	Origin
Pine	T-5966
Pop	T-5966
Qui	T-5966
Quo	T-5975
Rat	T-5966
Rex	Vol. No. 1, page 3
Rail	See Boat Sheet
Rock	T-5966
Sox	Vol. No. 1, page 3
Say	T-5966
Sig	T-5975
Six	T-5966
Tall	T-5966
Tap	Vol. No. 1, page 22
Tide	T-5966
Tip	T-5966
Una	T-5975
Vte	T-5966
Val	T-5966
Vic	T-5975
Vim	Vol. No. 1, page 22
Wax	Vol. No. 1, page 22
Wee	T-5966
Wet	T-5975
Yap	T-5966
Zot Ze	T-5966
Zip	Vol. No. 1, page 4

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H6960

Records accompanying survey:

Boat sheets 1...; sounding vols. ..7..; wire drag vols. ....;

bomb vols. .....; graphic recorder rolls ...13.;

special reports, etc. .....

.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		1916.
Number of positions checked		.117.
Number of positions revised		...2.
Number of soundings recorded		13,000 (approx. 75% plotted)
Number of soundings revised (refers to depth only)		..17.
Number of soundings erroneously spaced		..16.
Number of signals erroneously plotted or transferred		None.
Topographic details	Time	..32.hrs.
Junctions	Time	...8.hrs.
Verification of soundings from graphic record	Time	..24.hrs.

Verification by G.B. Woolley ...Total time .251hrs Date Dec.1.1945

Review by R.H. Carstens ..... Time .32 hrs Date Dec.11.1945

GEOGRAPHIC NAMES

Survey No.

H 8911

Name on Survey

Name on Survey	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
Maine				(for title)				U.S. & B		1
Kennebec River				"	"			"		2
Merrymeeting Bay				"	"			"		3
Bowdoinham (tidestaff)				440	698					4
Cathance River				439	698					5
Muddy River					"					6
Pleasant Point (tidestaff)					"					7
Beach Point					"					8
Centers Point					"					9
Brick Island					"					10
Androscoggin River					"					11
										12
										13
										14
										15
										16
										17
					L.H Eck 12/7/45					18
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										27

M 234

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

19 June 1945

~~Division of Hydrography and Topography:~~

Division of Charts: Attention: H. W. MURRAY

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 6960

Locality Merrymeeting Bay and Cathance River, Bowdoinham, Maine

Chief of Party: W. R. Porter in 1944
Plane of reference is mean low water reading
1.3 ft. on tide staff at Pleasant Point
8.3 ft. below B. M. 1
4.2 ft. on tide staff at Bowdoinham
10.7 ft. below B. M. 1

Height of mean high water above plane of reference is 4.7 feet at Pleasant Point, 5.7 feet at Bowdoinham.

Condition of records satisfactory except as noted below:

C. K. Green
Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6960

FIELD NO. -------

Maine, Kennebec R., Merrymeeting Bay and Cathance R.
Surveyed in July 1944 Scale 1:5,000
Project No. CS-265

Soundings:

808 Fathometer
Sounding Pole

Control:

Sextant fixes on shore signals

Chief of Party - W. R. Porter
Surveyed by - W. R. Porter
Protracted by - M. Miller
Soundings plotted by - M. Miller and J. D. Curd
Verified and inked by - G. B. Woolley
Reviewed by - R. H. Carstens, Dec. 11, 1945
Inspected by - H. W. Murray

1. Shoreline and Signals

The shoreline and topographic signals originate with T-5966 (1941) and T-5975 (1941). Fixes for hydrographic signals are recorded in the sounding records of the present survey. Two hydrographic signals were transferred from H-6959 (1944).

Two signals in the vicinity of Bowdoinham on the north were spotted on the boat sheet. On T-5966, a pile shown in lat. 44° 00.44', long. 69° 53.74' was not verified on the present survey and is assumed to have been removed. The hydrographer was in the immediate vicinity and made no mention of this particular pile although he did mention the pile used as a signal on the east bank.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves and Bottom Configuration

The usual depth curves were satisfactorily drawn.

The bay in general is very shoal with large areas baring at low water. However, in a number of places there are deep trench-like holes in the bottom.

4. Junctions with Contemporary Surveys

A satisfactory junction was made with H-6959 (1944) on the northeast. The junction with H-6961 (1944) on the south will be considered in the review of that survey. No surveys have been made by this Bureau beyond the bridges crossing the Cathance and Muddy Rivers.

5. Comparison with Prior Surveys

H-790 (1861) 1:10,000; H-790a (1871) 1:10,000

H-790a is a survey of the Cathance River and the channel leading into the Muddy River. H-790 covers the whole of Merrymeeting Bay.

Agreement with H-790a is generally good. The 6-1/2 foot sounding falling in present depths of about 26 ft. in lat. 44° 00.43', long. 69° 52.94' is probably caused by improper spacing of soundings on the prior survey and should be disregarded. Considerable change in the bottom has occurred in lat. 43° 58.90', long. 69° 52.4' where the channel with a prior depth of 6 ft. has deepened to depths of about 11 ft.

In the main part of the bay considerable change in the bottom configuration has occurred since H-790 was accomplished.

There are holes as deep as 3-fms. in prior shoal or bare areas, and prior deeps have filled in completely. A channel cuts through the shoal shown in lat. 43° 59.0', long. 69° 52.5' on the prior survey, and the point of the shoal in lat. 43° 59.08', long. 69° 52.77' has eroded considerably.

The present survey supersedes these prior surveys within the common area.

6. Comparison with Chart 314 (Latest print date 7/14/44)
Chart 1204 (Latest print date 6/23/45)

A. Hydrography

The charted hydrography originates with the previously discussed surveys which need no further consideration. Only the soundings east of long. 69° 52.85' are charted at the present time.

B. Aids to Navigation

There are no aids to navigation charted within the area of the present survey.

7. Condition of Survey

Satisfactory except that pencilled soundings were improperly spaced at the beginnings and endings of crosslines, crossing channel areas. These discrepancies were due to the fact that no allowance was made

for change in speed of the boat with the result that shoal soundings were incorrectly plotted in the deeper channel areas and thereby caused unnatural protrusions in the depth curves. Soundings so plotted were revised.

8. Compliance with Project Instructions

Satisfactory.

9. Additional Field Work Recommended

No additional work is required on this basic survey.

Examined and approved:

Chief, Nautical Chart Branch

Chief, Chart Division

Chief, Section of Hydrography

Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. 6960

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3-26-46	314	J M a.	~~Before~~ After Verification and Review Preliminary corr'n. Only a few minor changes, pencilled in prints.
2/5/46	314 (Reconst.)	GJE	~~Before~~ After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.