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Form 504  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: Florida

11-5615

DESCRIPTIVE REPORT.

Sheet No. 4577

LOCALITY:

Gulf Coast

Clearwater Harbor-N Part

1926

CHIEF OF PARTY:

R. P. Eyman

January 3, 1927.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in  
5 volumes of sounding records for

HYDROGRAPHIC BUREAU NO. 4577

Locality: FLORIDA WEST COAST

Chief of Party:

Plane of reference is MLW  
2.9 ft. on tide staff at Egmont Key.  
2.0 ft. ----- do ----- Dunedin

For reduction of soundings, condition of records satisfactory  
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A. M. or P. M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

*Hammer*  
Chief, Division of Tides and Currents.

C. & G. SURVEY  
L. & A.  
DEC 17 1926  
Ans. No.

DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET "h"

CLEARWATER HARBOR

Instructions of June 3, 1924

STEAMER HYDROGRAPHER  
RAYMOND P. BYMAN  
Chief of Party

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET "h"

1. Authority.

This sheet was done in accordance with orders of The Director dated June 3rd, 1924 to Commanding Officer of Steamer Hydrographer.

2. Limits of Sheet.

The sheet joins on to the work of the Steamer Bache at the south and to ship sheet "C $\frac{1}{2}$ " on the west and to launch sheet "f" on the north. It extends roughly from 1/4 mile S. of Little Pass to 1/4 mile N. of Big Pass and westward to a little beyond the 2 fm. curve where it joins on to Ship Sheet "C".

3. General Description of Shore Line.

The outside shore line of Sand Key, Clearwater, Beach Island, and Hog Island is smooth hard sand and very even. The bottom drops off fairly rapidly so that the 1 fm. curve is about 50 m. from the shore line except at Big Pass and Little Pass ; at these passes large sand bars make off. At Big Pass the 1/2 fm. curve is about 3/4 mile off shore and the bottom is all hard sand. A channel leading through this bar in an easterly direction and is marked <sup>by</sup> a buoy and three pile beacons. The buoy is small and can not be seen for any great distance.

The bar at Little Pass makes off shore for about 1/2 mile and has a channel passing through it at the extreme N. end of the pass. The entrance to the channel is marked by a pile beacon.

The inside shore line of Clearwater Beach is all under development and being changed. The small islands east of Clearwater Beach are all covered with mangroves.

The eastern water fronts of Clearwater Harbor are all well developed with docks and bulkheads at the towns of Clearwater and Dunedin. Clearwater Harbor is a little more than one mile in width but is filled with

shoals through which there are natural channels. With the exception of the channels the bottom is soft sticky mud and covered with grass.

#### 4. Description of Channels.

Beginning at Beacon 2 (Sta. 'Fun') the channel through Little Pass runs S.E. and passes about 100 meters off the south end of Clearwater Beach I. to Beacon 4 (Tri. sta. 'Nel'). From here it turns south for about 1/2 mile to the north end of Sand Key I. where it turns east. There is no beacon to mark this turn; however the local yachtmen have put in a small marker which may be used to advantage. From here the channel runs east to Beacon 57 and then E.N.E. to a pile beacon with double pointers and no number. From this point the channel runs north to Beacon 59 and from there to the dock at Clearwater. It would not be safe to attempt to take more than 6 ft. through this channel at low tide. The channel is well marked with the one exception mentioned and is fairly wide.

Another channel continues from Clearwater through the bridge of the causeway and then north to the bridge of the old causeway, from which it turns N.W. to Beacon 61 which should be passed about 75 meters on the port beam, and continuing on to Beacon 63 which should be passed about 50 meters on port beam. From this beacon the channel turns N. by W. to Beacon 86 which should be passed about 75 meters on starboard beam then continues on to Beacon 88 which can be passed well on starboard beam. From this point on the channel is not well marked but the best water will be found by heading for Station "Tall" until abeam of the south end of the island on which Sta. "Tall" is located; then heading N.W. so as to pass between the two pile beacons shown on the sheet. From this point the best water is found by passing close to the north side of the shoal on which beacon 3 (Sta. "Bu") is located. From this point the channel is fairly wide and well marked leading just off the point at Station "Pat" northward to Beacon 6 and then westward to Beacon 1 (Sta. "Com") and

Beacon 4 (Sta. 'Bin') both of which should be passed well on starboard side. This outside channel shifts considerably with each storm and the beacons do not always show the best channel.

There is at present a steam dredge at work in the vicinity from Beacon 3 (Sta. 'Bu') to the two pile beacons to the **K** S.E. and no doubt there will be a more defined channel in this section when the work is completed.

Beacon 3 (Sta. 'Bu') is at present located on the end of a shoal that is bare at all except high tide. It would be safe to carry 6 ft. through this channel and even more when that part through the pass has been dredged out.

Another channel leading from Big Pass to Clearwater passes from the black pile beacons mentioned before to Beacon 8 and then south between Clearwater Beach I. and ~~the small keys~~ the small keys to the eastward. Near station "Cat" it passes under the old causeway and no boats with masts or stacks over 10 ft. high could get under it; from this point the channel continued south and passes through the new causeway at Station 'Co's'. From this point there is a channel parallel to the causeway and about 125 meters away which leads clear over to Clearwater. This part of the channel is where the sand was dredged up in constructing the new causeway. This channel has the deepest water of any leading to Clearwater and when the dredge has finished should carry 8 ft. safely at low tide. From Beacon 88 a channel makes off to the eastward to Beacon 65 and then N.E. to Beacon 67. Beacon 67 should be passed about 100 meters on the port beam then head E.N.E. to Beacon 69. Up to this point the channel is narrow and crooked but well ~~the~~ marked ~~fixed~~ and with a good 6 ft. of water at low tide; however from this point on the channel is not well defined, and it would not be safe to attempt to take more than 4 ft. any farther. From Beacon 69 the best water is found by heading for Beacon 71 and then heading for the end of the fish dock at Dunedin

(Sta. Spire).

Another channel begins at the extreme south end of Hog Island and winds around between the Keys at Station "Leam" and Station "Bee" from which it ~~it~~ makes a big loop to the southward and then winds along to the northward and eastward. It is narrow and very crooked and not marked other~~x~~ than the markers of the local fishermen by whom it is used to a considerable extent. It has no great value at present for it does not connect up with the main channel in Big Pass but could be opened up at a small cost and would carry deeper drafted vessels than the marked channel to the south.

There is a channel leading to Dunedin from the north which will be shown on sheet "F".

#### 5. Survey Methods.

No new methods were used in the making of this survey. The control was furnished by triangulation and topography. The ship launch was used in all the launch work. The party usually consisted of one officer, recorder, Q.M. for taking left angles, cox'n, engineer, and leadsmen.

Much of the work inside the harbor was done at a time when it was low tide near the middle of the day. This caused some delay and inconvenience by limiting the amount of work to be done by the launch to the deeper parts of the harbor.

Most of the work where the water was to<sup>o</sup> shallow for the launch, was done by Mr. Smith and party in the ships skiff using an out-board motor for power.

Respectfully submitted,

*Jack C. Sammons*  
 Jack C. Sammons,  
 Jr. H. & G. Engr.

**TIDAL SHEET**

in accuracy

SHEET "h" BOAT Launch, Skiff, + Dinghy

Gauge Used Portable Automatic #158

Location of Gauge Yacht Club Dock, Dunedin, Florida

Bench Marks.

Elevation of B. M's. above Q of tide staff.

	<u>Date.</u>	
	<u>Aug. 1926</u>	<u>Sept. 1926</u>
# 1. _____	6.311	6.312
# 2. _____	12.369	12.372
# 3. _____	8.351	8.354
# 4. _____		
# 5. _____		

Tide Plages.

Readings on Staff.

	<u>feet.</u>	<u>Date.</u>
	Highest tide observed. _____	6.30
Mean high water. (* obs.) _____	3.81	
Mean half tide level. _____	2.89	
Mean low water. (* obs.) _____	1.97	
Lowest tide observed. _____	-0.50	(Sept. 1926)
Mean range of tides. _____	1.84	

\* Simultaneous comparison for 7 day period with gauges at Egmont Key and St. Petersburg.



STATISTICS SHEET NO. h

Date (1926)	Letter	Volume	Positions	Soundings	Miles Statute	Vessels
September 1st.	a	1	46	195	5	Launch
September 2nd.	b	1	98	513	11	Launch & Skiff
September 3rd.	c	1	111	559	16.5	Launch
September 6th.	a	4	125	617	18.3	Skiff
September 8th.	d	2	111	559	19.0	Launch
September 9th.	b	4-5	187	784	20.3	Skiff
September 9th.	e	2	191	892	29.5	Launch
September 10th.	f	3	94	375	11.5	Launch
September 10th.	c	5	24	78	2.5	Dinghy
September 29th.	g	3	157	739	21.0	Launch
Totals	10	5	1144	5311	154.6	

## Verification Report on H 4577.

The sounding records conform to the requirements of the General Instructions.

With the exception of a few places where additional soundings would have been advisable the survey seems complete and conforms to the requirements of the General Instructions.

The junction with the sheet to the south is satisfactory.

The work on the smooth sheet was extremely careless and a close verification was necessary.

In several instances the dots marking the center of the signals were so large that they were practically useless as such. The numbers of the positions were placed so close to the position that the majority of them were obscured when the soundings were inked.

The protracting was accurately done.

In many instances the sounding taken on a position was plotted at one side of the position and the spacing of soundings was based on the location of the sounding instead of the position. Each time this was done from 6 to 12 soundings were incorrectly plotted. Changes in time interval were generally ignored, soundings being evenly spaced regardless of length of interval. Soundings with the fraction  $\frac{8}{10}$  were indiscriminately plotted as the unit below or above. In several instances the soundings between two positions were replotted between the next two, omitting entirely the soundings that should have been plotted. It was not uncommon to find the order of the soundings between two positions reversed.

(2)

- The depth Curves were drawn sometimes inside, sometimes outside the sounding determining the Curve.
- The sounding line crossings are generally O.K., but at position 829 there is a 1 ft. sounding over a 16 ft. sounding. Between positions 924 and 934 there is a 1 ft. sounding between 11 ft. and 7 ft.

Of the six docks shown on the sheet, only 2 have soundings anywhere near them.

The Channels as shown on the sheet do not agree with the descriptive report as there are insufficient soundings in some areas to draw in the curves as they probably exist.

More soundings should have been taken at the south side of Little Pass. There is an indication that there might possibly be a 5 ft. or 6 ft. Channel there. Additional work should have been done just inside the point at the north side of Little Pass. The indications are that there may be a Channel leading from this point in a northeasterly direction to the deep Channel south of the Causeway.

According to the soundings it would be impossible to pass between the two beacons west of O Tall in a northeasterly direction as recommended in the descriptive report. At Sn. #3 the sheet shows the best water to the south of the shoal instead of to the north as stated in the report. From the descriptive report (page 2, par. 2) it would seem that there is a dock south of the new Causeway. This is not shown on either the hydrographic or topographic sheets.

The topographic report refers to a photographic mosaic of Clearwater City and harbor that shows all the shoals distinctly. This mosaic might aid in locating the Channel where there are insufficient soundings.

March 9, 1927.

C. L. Christopher

PLEASE ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 11-VEC

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

May 17, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4577

Clearwater Harbor, Florida

Surveyed in 1926

Instructions dated June 3, 1924 (HYDROGRAPHER)

Chief of Party, R. P. Eymann.

Surveyed by J. C. Sammons, P. A. Smith.

Protracted and soundings plotted by J. C. Sammons.

Verified and inked by C. E. Christopherson.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development in general satisfy the specific instructions. The channels are not all sufficiently closely developed.
4. The crossings of sounding lines are, in general, adequate. At position 82g two soundings, 1 foot and 16 feet, fall at the same spot. Between positions 92f and 93f a 1 foot sounding occurs between 7 feet and 11 feet on another sounding line.
5. The usual depth curves can be completely drawn except in a few places, namely: between the south point of Clearwater Beach Island and the new causeway; low-water line along shore of mainland; limits of shoal making out to northeastward from small island approximately one mile west of south radio tower at Dunedin; low-water line at edge of channel approximately one mile west by south of south radio tower, Dunedin; 6 - and 12 - foot curves along outer ends of docks at Clearwater, between the old and new causeways.

6. The field plotting was completed to the extent prescribed in General Instructions.
7. In the office it was occasionally necessary to respace and replot soundings incorrectly plotted in the field.
8. The junctions with adjacent sheets are satisfactory.
9. Further surveying is required to fully develop important areas within the limits of the sheet.
10. Additional soundings are recommended along the outer ends of the docks at Dunedin and Clearwater, also closer development of the channels in the open water between Clearwater Beach Island and the mainland.  
There is a possibility of a channel leading from Little Pass Beacon 4 ( . Nel) to the east and north along the inner side of Clearwater Beach Island; this should be investigated and developed.  
The sounding of 1 foot between positions 92f and 93f should be verified. The position of this sounding is as follows:  
28° 00' 280 m.  
82° 49' 530 m.
11. Rating of the work:
  - a. Character and scope of surveying - good.
  - b. Field drafting (quality) - - - - - fair.
12. Reviewed by E. C. Rowse, May, 1927.

Approved:

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Chief, Section of Field Records (Charts)

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Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY  
L. & A.  
DEC 17 1926  
Acc. No.

REG. NO. 4577

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.

Field No. "h"

REGISTER NO. 4577

State Florida

General locality Gulf Coast of Florida

Locality Clearwater Harbor - North Part

Scale <sup>1</sup>/<sub>10000</sub> Date of survey September 1926

Vessel Steamer Hydrographer

Chief of Party Raymond P. Eyma

Surveyed by J. C. Sammons & P. A. Smith

Protracted by J. C. Sammons

Soundings penciled by J. C. Sammons

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated June 3rd 1924

Remarks:

*Plot*

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Page No. 6

Tampa, Florida

October 13, 1941

1938

TO BE CHARTED }  
~~TO BE DELETED~~ } STRIKE OUT ONE

I recommend that the following objects which have ~~(been)~~ been inspected from seaward to determine their value as landmarks, be charted on ~~(charts)~~ the charts indicated.  
The positions given have been checked after listing.

Lieut. Kenneth G. Crosby,

Chief of Party

GENERAL LOCALITY	NAME AND DESCRIPTION	POSITION			DATUM	METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
		LATITUDE	LONGITUDE	D. P. METERS							
	BIG PASS, LIGHT NO. 1	28 00	82 49	1628	M. A. 1927	Sextant	10/11/41	X			1257
	BIG PASS, LIGHT NO. 2	28 01	82 49	1493	"	"	"	X			"
	BIG PASS, BEACON NO. 3	28 01	82 49	1446	"	"	"	X			"
	BIG PASS, BEACON NO. 5	28 00	82 49	1208	"	"	"	X			"
	BIG PASS, FLOATING AID TO NAVIGATION										
	BIG PASS, BELL BUOY	28 00	82 50	1090	"	"	"	X			"

*Duplicate Copy  
original in next chart*

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.