9052

Dias Ckt No. 1212-2

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 745-10-5-69 Office No. H-9052

LOCALITY

State Connecticut

General locality Connecticut

Locality Connecticut River

1969

CHIEF OF PARTY

LT Arthur P Sibold III

LIBRARY & ARCHIVES

DATE May 29, 1980

USCOMM-DC 37022-P66

9052

FORM C&GS-537 (5-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

REGISTER NO.

H-9052

HYDROGRAPHIC TITLE SHEET

INSTRUCTIONS - 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.

745-10-5-69

State Connecticut

General locality Connecticut

Locality Connecticut River

Scale 1:10,000 Date of survey 9 July to 22August 1969

Instructions dated 6 June 1969 Project No. OPR 414

Vessel Hydrographic Field Party 745

Chief of party LT Arthur P Sibold III

Surveyed by LTjg Brent H Traughber

Soundings taken by echo sounder, hand lead, pole DE723 Serial No. 1998

Graphic record scaled by Hydrographic Field Party 745 personnel

Graphic record checked by Hydrographic Field Party 745 personnel

Protracted by _____ Automated plot by _____

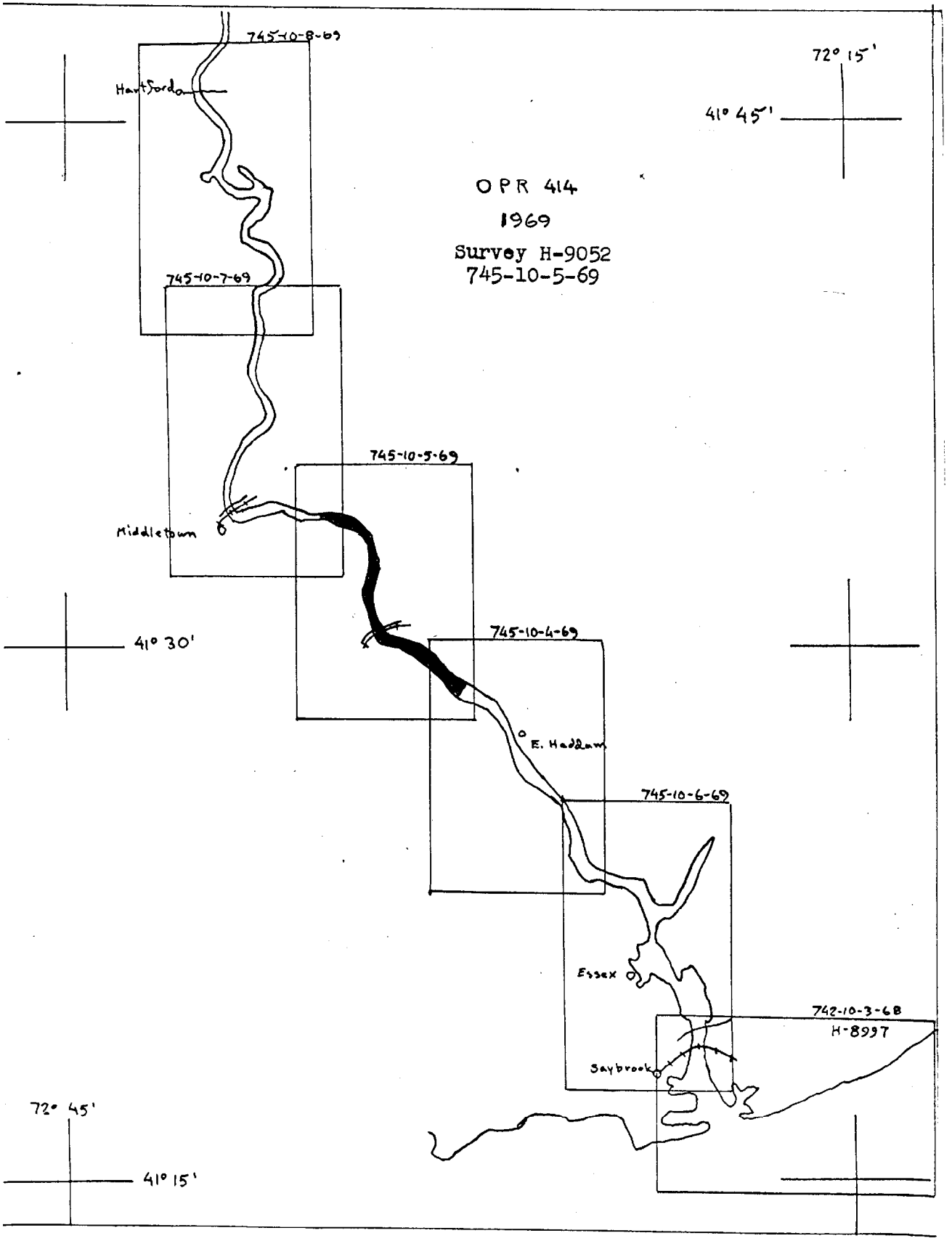
Soundings penciled by _____

Soundings in XXXXX feet at MLW XXXX

REMARKS: Basic Hydrographic Survey

Applied to stds 6/25/80

USCOMM-DC 37009-P66


745-10-8-69
Hartford
72° 15'
41° 45'
OPR 414
1969
Survey H-9052
745-10-5-69
745-10-7-69
745-10-5-69
Middletown
41° 30'
745-10-4-69
E. Haddam
745-10-6-69
Essex
742-10-3-68
H-8997
Saybrook
72° 45'
41° 15'

DESCRIPTIVE REPORT

to accompany

Hydrographic Survey No. H-9052
(Field No. 745-10-5-69)

OPR 414 — Scale 1:10,000

Connecticut River — Hydrographic Party 745

LT Arthur P. Sibold — Officer-in-Charge

Surveyed by: — LTJG Brent H. Traughber

A. PROJECT

This survey accomplished in accordance with Project instructions OPR 414 dated 6 June 1969.

B. AREA SURVEYED

The area covered by this survey is the Connecticut River in the vicinity of Higganum, Connecticut. The area covers from Lat. 41° 28.93' N. Lon. 72° 30.25' W. to Lat. 41° 33.50' N. Lon. 72° 35.40' W. Field work on this survey commenced on 9 July 1969 and ended on 22 August 1969.

C. SOUNDING VESSEL

The only vessel used for this survey was Launch C.S. 1258. The identifying color is blue.

D. SOUNDING EQUIPMENT

Raytheon Graphic Recorder, Model DE723, Serial No. 1998. Sounding pole and leadline soundings were also obtained. Corrections to be applied to echo soundings were determined from daily bar checks. "Abstract of Velocity Corrections" appended to this report.

E. SMOOTH SHEET

This survey will be hand plotted at the Atlantic Marine Center. All processing will be completed by party personnal.

F. CONTROL

Horizontal control was by visual three-point sextant fix method. Appendix contains a complete list of control used and its quality and source. Photo-hydro signals from Incomplete Manuscripts:

T-13308	1:10,000	1969
T-13307	"	"
T-13306	"	"

No substandard horizontal control.

G. SHORELINE

Shoreline for this survey was taken from above listed Incomplete Manuscripts. Shoreline provided was accurate in nearly all flat areas. The exception was the small island at Lat. 41° 33.25' Lon. 72° 34.00' which actually is a shoal covered at high water. In areas with overhanging trees the shoreline appeared to extend to the river five to ten meters. Field edit is being done concurrently with hydrography by the photo unit. Shoreline changes will all be noted on field edit sheets and reports.

H. CROSSLINES

Crosslines were run in approximately 10% of the regular system of sounding lines and were in good agreement.

I. JUNCTIONS

Junctions were made on the south with H-9051 (745-10-4-69), and with H-9077 (745-10-7-69) on the north. Excellent agreement.

J. COMPARISON WITH THE PRIOR SURVEYS

The latest C&GS basic survey (1890-91) was not furnished for comparison with boat sheet soundings. Very few soundings from the 1890-91 survey remain on the chart since

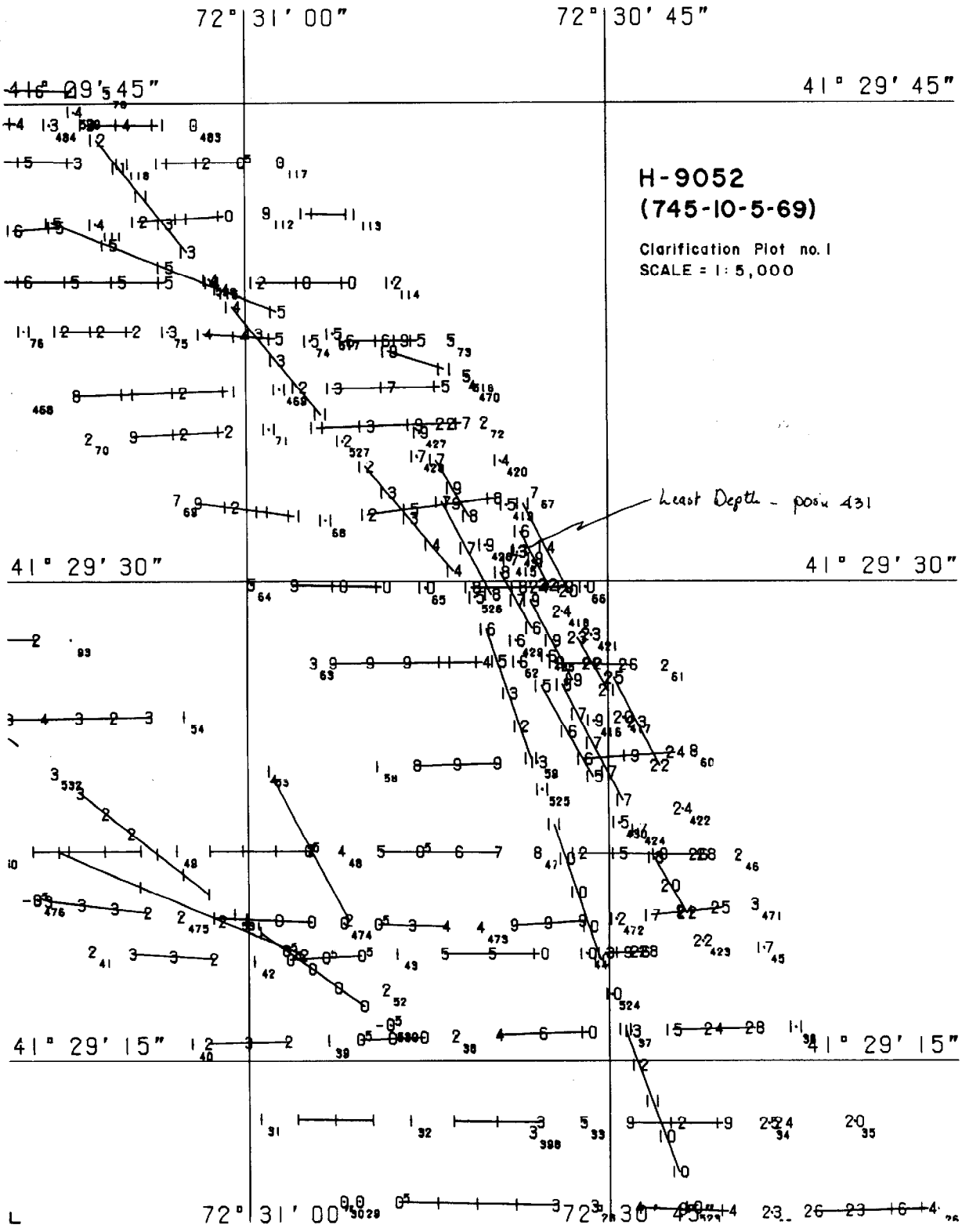
the chart has been updated many times from US Corps of Engineers surveys. The comparison will be with the chart and mentioned under the next section. All dredged channels were compared with surveys provided by the US Corps of Engineers.

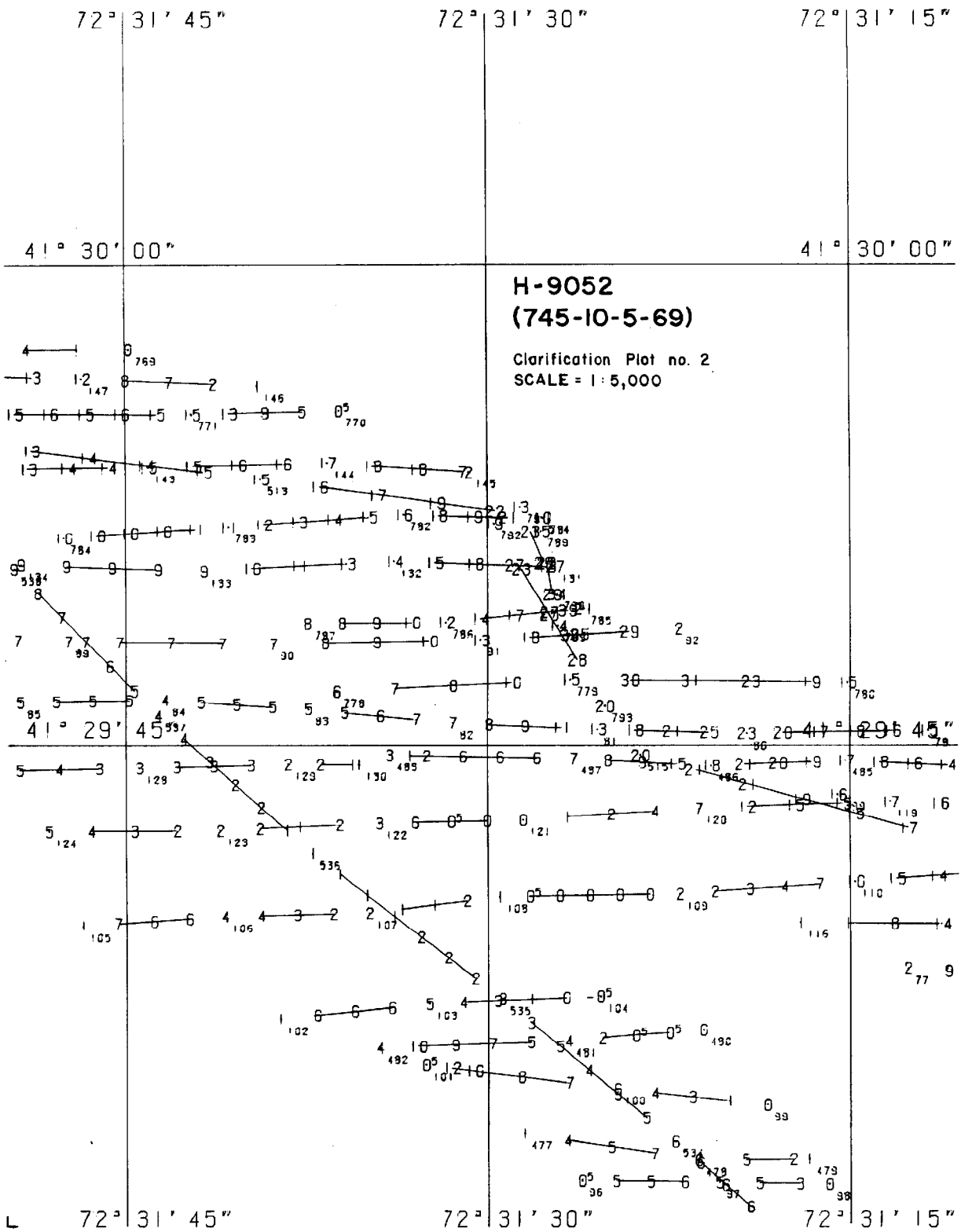
K. COMPARISON WITH THE CHART

This survey was compared with chart C&GS 266 (4th Ed. dated January/68) Scale 1:20,000. All pre-survey review items listed under this section. All chart comparisons listed from north to south.

Feature	Position	Remarks
Rock Awash	41° 33.57' 72° 35.20'	PSI item #1. This rock was charted from aerial photographs. The rock was searched for but not found. The depth is only 2 1/2 ft. and any rock awash would have been located. The shoreline here is a catchall for driftwood and the object charted from photographs was probably a log which has since washed away.
Paper Rock Shoal Channel (dredged)	41° 33.50' 72° 35.22' to 41° 33.47' 72° 34.27'	Soundings were compared with US Corps of Engineers survey dated Sept. 1964 (Scale 1:1200; Drwng no. CT 806 Sheet 6 of 8). Soundings are in good agreement.
Cobalt Shoal Channel (dredged)	41° 33.47' 72° 34.27' to 41° 33.14' 72° 33.34'	Soundings were compared with US Corps of Engineers survey dated Sept. 1964 (Scale 1:1200; Drwng. no. CT 806 Sheet 2 of 8). Soundings are in excellent agreement.
Southeast of Dart Island	41° 32.75' 72° 33.20'	Soundings in this area are now deeper on the west side of the river and shoaler on the east side of the river as compared to those charted.

Icebreakers	41° 32.50' 72° 33.15'	Two large icebreakers are located as shown on Incomplete Manuscript T-13307. Height is twelve feet.
Sears Upper Bar Channel (dredged)	41° 32.37' 72° 33.07' to 41° 31.88' 72° 33.11'	Soundings were compared with US Corps of Engineers survey dated Aug. & Sept. 1968 (Scale 1"=100'; Drwng no. CT 826 Sheet 3 of 8). Southern end of channel is now two feet shallower than shown in Corps of Engineers survey.
Sears Shoal Channel	41° 33.77' 72° 33.18' to 41° 31.33' 72° 33.48'	Soundings were compared with US Corps of Engineers survey dated Oct. 1968 (Scale 1"=100'; Drwng no. CT 826 Sheet 2 of 8). This channel is now two ft. shallower than shown in US Corps of Engineers survey.
Rock Awash	41° 31.60' 72° 33.45'	PSI #19. Rock searched for at low water. Located as shown detached position 407. Covered three ft. MLW. Rock is not awash as charted.
Soundings East of Sears Shoal Dike	41° 31.25' 72° 33.25'	Area behind breakwater now shoaler than charted.
Rock Awash	41° 30.95' 72° 33.38'	PSI #18. Large rock bares one ft. MLW.
Scovill Rock Bar Channel	41° 31.10' 72° 33.53' to 41° 30.25' 72° 33.44'	Soundings were compared with US Corps of Engineers survey dated Oct. 1964 (Scale 1:2400; Drwng no. CT 808 Sheet 2 of 5). Excellent agreement.
Isolated Pinnacle	41° 30.38' 72° 33.11'	The pinnacle is located as charted. The least depth was five ft. MLW.


72° 31' 00"
72° 30' 45"
41° 29' 45"
41° 29' 30"
41° 29' 15"
H-9052
(745-10-5-69)
Clarification Plot no. 1
SCALE = 1:5,000
least Depth - posn 431


72° 31' 45"
72° 31' 30"
72° 31' 15"
41° 30' 00"
41° 29' 45"
H-9052
(745-10-5-69)
Clarification Plot no. 2
SCALE = 1:5,000

Higganum Creek Shoal Channel (dredged)	41° 30.35' 72° 33.35' to 41° 30.09' 72° 33.02'	Soundings were compared with US Corps of Engineers survey dated Sept. 1967 (Scale 1"=100'; Drwng no. CT 821 Sheet 4 of 8). Soundings are now about one foot shallower.
Soundings East of Higganum Creek	41° 30.20' 72° 33.00'	The eleven foot shoal is gone. PSI #17.
Rock Landing Bar Channel (dredged) CLARIFICATION Plot #2	41° 29.95' 72° 32.30' to 41° 29.87' 72° 31.56'	Soundings were compared with US Corps of Engineers survey dated Sept. & Oct. 1964 (Scale 1:1200; Drwng no. CT 806 Sheet 2 of 5). Soundings are now two to three ft. shallower. The range was run as a cross-line and gave excellent agreement with the regular lines.
Haddam Island Bar Channel (dredged) CLARIFICATION Plot #1	41° 29.75' 72° 31.35' to 41° 29.60' 72° 30.90'	Soundings were compared with US Corps of Engineers survey dated Aug. 1968 (Scale 1"=100'; Drwng no. CT 826 Sheet 1 of 8). Soundings are now one and two ft. shallower. A shoal is extending into the channel (right outside quarter from seaward) with depths of 12 ft. at MLW.
Pinnacle Rock	41° 29.32' 72° 30.83'	A submerged obstruction just south of Haddam Island Bar was reported to the US Corps of Engineers by Mr. Ken Sears, a Connecticut River pilot. Mr. Alan Ikeleinen, from the Boston Corps of Engineers, and Mr. Sears accompanied HFP Launch crew to investigate the obstruction. Close space lines were run and plotted on an overlay. The obstruction was located and found to be a very narrow pinnacle rock

		covered 13 ft. MLW in 18 ft. of water. This obstruction was reported and may be removed by the Corps of Engineers.
Soundings South of Haddam Island	41° 29.20' 72° 30.75'	The lower end of the shoal south of Haddam Island is now two to three feet deeper than charted.

L. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys for charting. No substandard work exists.

Fathometer depths have been checked by leadline/pole soundings taken at bottom sample locations. Fathometer soundings appear to be accurate. In those dredged channels where our 1969 survey by echo sounder shows one to three feet shoaling since the latest Corps of Engineers condition surveys. We have carefully compared our corrected echo soundings with the Corps of Engineers tagline survey results. Our survey accurately reflects conditions of the time of the survey.

All dredged channels seem to have shoaled up about one half foot at least, with some channels (particularly Rock Landing Bar, Haddam Island Bar, Sears Shoal, and Sears Upper Bar Channels) giving depths one to three feet less than the Corps of Engineers' latest condition surveys.

M. AIDS TO NAVIGATION

All aids to the survey area were charted correctly at the time of the survey. However the U.S. Coast Guard is in the process of studying the Connecticut River aids to navigation and may make some changes in the survey area.

N. STATISTICS

Total Positions	848
Nautical Miles of Sounding Lines	60.6
Square Nautical Miles	1.7
Bottom Samples	15

One tide gage was located at the entrance to Higganum Creek and a second gage was located at Portland near Moose Island Bar. (However, the Higganum Creek gage was used for all boat sheet tide reducers.)

O. MISCELLANEOUS

Magnetic compasses are greatly and unpredictably affected by power cables, power plants, bridges, and rock formations along the river.

P. RECOMMENDATIONS

None

Q. REFERENCE TO REPORTS

None

Submitted:

Brent H. Traughber
LTJG
Hydrographer, Survey H-9052

Approved & Forwarded:

Arthur P Sibold
LT Arthur P. Sibold
Officer-in-Charge Hydrographic Field Party 745

APPROVAL SHEET

H-9052

(Boatsheet 745-10-5-69)

The field and office work for this survey were completed under my overall supervision. The actual hydrography was accomplished by LTJG Brent Traughber. I did not directly participate in the survey, as Mr Traughber is particularly conscientious in his approach to this survey. Mr Traughber wrote the Descriptive Report.

The field records are complete. This survey is adequate to supersede prior surveys for charting, and contains no substandard work.

When smooth plotting this survey, particular attention should be paid to the tide reducers on each side of the tide zone. This survey was conducted during a flood stage of the Connecticut River, and the considerable downstream flow of water distorted the normal rise and fall of the tide. The boatsheet tide zone may have to be changed to accurately reflect tide rise and fall.

Approved & Forwarded:

Arthur P Sibold III

Arthur P Sibold III
LT USESSA
Officer-in-Charge,
Hydrographic Field Party 745

LIST OF SIGNALS

Survey H-9052

Name	Source
SAM	HADDAM CONGREGATIONAL CHURCH, 1862
GIN	NO. 178 (U. S. E.), 1934
HAD	HADDAM ISLAND REAR RANGE LIGHT, 1892
ROC	ROCK LANDING, FRONT RANGE LIGHT, 1915
WAD	T-13308 (Photo)
ACT	
YAC	
BED	
PET	
OLD	T-13308 (Photo)
CAR	T-13308 (Hydro)
DIF	
CAT	T-13308 (Hydro)
GAL	T-13308 (Photo)
HER	
BIL	
SUE	
KID	
LOG	
BUD	
SON	
NEW	
IDA	
PEG	
EGG	
FIX	
SIN	
GAS	
OUT	
HIG	
JET	
SOW	
PIT	T-13308 (Photo)
SEA	SEARS, 1934
PAR	PARK, 1934
DAR	DARLEY'S CHIMNEY, 1934
IDE	VOL. I, Page 47 (Hydro)
WAR	T-13307 (Photo)
EAR	
HOP	
LEG	
SKY	
SHE	T-13307 (Photo)

List of Signals (continued)

Name	Source
PLY	NO. 162 (U. S. E.), 1934
CUP	VOL. II, Page 6 (Hydro)
NIG	T-13307 (Photo)
ART	
COW	
HAT	
JAW	
WAG	
FAT	
BON	
FLY	T-13307 (Photo)
BUT	NO. 154 (U.S.E.), 1934
USE	T-13307 (Photo)
KEY	
ACE	
JUG	
HIS	
NOR	
CAB	
BOX	
RUM	
FOR	T-13307 (Photo)
PIE	PAPER ROCK LIGHT, 1891
DOL	T-13307 (Photo)
YES	
EAT	
EVA	
CUT	
SIG	
NOW	T-13307 (Photo)
TUB	T-13306 (Photo)

VELOCITY TABLES

VELOCITY CORRECTIONS TO ECHO SOUNDINGS

H-9052

"To" Depth in Feet	Corrections in Feet
4.0	-0.2
5.8	0.0
13.4	∕0.2
21.6	∕0.4
30.0	∕0.6
38.0	∕0.8

Note: The ∕0.2 ft. correction for settlement and squat has been included in the above velocity correction. Those tabulated ocrrections apply to all echo soundings from Launch CS-1258 by fathometer DE-723, Serial No. 1998.

TIDE NOTES

Survey H-9052

Tide Station:	Higganum Creek Entrance 41° 30.22' 72° 33.23' Automatic Data Recorder & Staff
Time Meridian	75° West
Plane of Reference:	Mean Low Water equals 1.3 ft. on 1969 staff.
Correction:	No time or height corrections applied when calculating tide reducers.
Tide Zone:	Zone for Higganum tide reducers is marked on boat sheet and marked as used in the sounding volumes. The tide zone divide line passes through Lat. 41° 33.02' Lon. 72° 33.50' to Lat. 41° 33.07' Lon. 72° 33.20'.
Tide Station:	Portland, Connecticut 41° 33.72' 72° 37.73' Automatic Data Recorder & Staff
Time Meridian:	75° West
Plane of Reference:	Mean Low Water equals 5.7 ft. on 1969 staff.
Corrections:	No time or height corrections applied when calculating tide reducers.
Tide Zone:	Zone for Portland tide reducers marked on boat sheet and marked as used in the sounding volumes.

Appendix D

GEOGRAPHIC NAMES LIST

Survey H-9052

Photo Party 62 had no specific investigations on geographic names during the 1969 season. There were no changes to compiled names by Hydrographic Field Party 745.

Director, Coast & Geodetic Survey
Rockville, Maryland 20852

25 Feb 1970

Attn: C331

Officer-in-Charge, Hydrographic Field Party # 745

Tide Zoning on Connecticut River --- OPR 414

It is requested that comparison be made between tide records at Higganum and Portland, Connecticut, during the time of extra high water in August 1969. Boatsheet H-9052 and sounding volumes are being sent to you for inspection before smooth plotting.

While entering smooth tide reducers, it was found that on August 9 there is a difference of 1.2 feet between reducers at Higganum and Portland, Connecticut. Boatsheet soundings were applied earlier using Higganum reducers only. Reducers differ by less than 0.8 feet during normal river stage.

Please forward any changes in tide zoning with the boatsheet, sounding volumes and descriptive reports to processing, Atlantic Marine Center.

Brent H. Traughber

LTJG Brent H. Traughber
Officer-in-Charge, HFP 745

cc: CFN 31

U.S. DEPARTMENT OF COMMERCE
Environmental Science Services Administration
COAST AND GEODETIC SURVEY
Rockville, Md. 20852

Date: March 27, 1970

Reply to Attn of: C331W-79-MCFOB

Subject: Tide Zoning, Connecticut River

REF: Memorandum Dated February 25, 1970, HFP 745

To: Chief, Hydrographic Processing Branch, AMC

Sounding valumes, tide records, and Boat Sheets for H.S. 9052 have been reviewed.

There is a difference of over 1 foot in the tide reducers for August 6, 1969, when changing from the Higganum to the Portland tide gages. After a careful examination, it was found that shifting the tide zones would not materially effect the tide reducers.

The tide records for Portland on August 6, 1969, indicate an unusual high water stand. Thus, the tide reducers entered on this day are substantiated by the tide records from these gages and cannot be altered.

It is, however, suggested that some small adjustment could be made by the Processing Office on lines as they extend from one zone to another.

L. C. Wharton

L. C. Wharton
Tides & Currents Branch
Oceanography Division

Enclosures

Oceo Log Sheet M (Substitute)

All samples from Connecticut River (Chart C&GS 266).
Sample Numbers correspond to Position Numbers used on Boatsheet Field No. 745-10-5-69
Samples #398 thru 414 obtained by C&GS Hydrographic Party 745 on 18 July 1969, using small grab sampler.
Sample material from surface of river bed (maximum sampler penetration 4").

Sample Number	Latitude	Longitude	Field Description
398	41° 29.22'	72° 30.80'	crs br S
399	29.73'	31.27'	crs br S
400	29.89'	31.91'	crs br S
401	30.03'	32.72'	crs br S
402	30.29'	33.16'	fne br S
403	30.78'	33.38'	crs br S
406	31.32'	33.38'	crs br S
408	31.80'	33.26'	crs br S & P
409	32.20'	33.12'	crs br S
410	32.78'	33.13'	crs br S
411	33.22'	33.58'	crs br S & M
412	33.39'	34.18'	crs br S
413	33.46'	34.80'	crs br S & P
414	33.50'	35.50'	crs br S & P

FORM C&GS-712
(10-67)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 26, 1970

~~xxxxxxxxxxxxxxxxx~~ Atlantic Marine Center

Plane of reference approved in ~~xxxxxxxxxxxxxxxxxxxxx~~ Form 8502

HYDROGRAPHIC SHEET 9052

Locality: Connecticut River, Conn.

~~Chief of Party~~ ~~xxxxxxxxx~~ Year: 1969

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Portland, Connecticut River
Higganum " "

Height of Mean High Water above Plane of Reference is as follows:

Portland	2.2
Higganum	2.6

Remarks Tide reducers for July 25 (day 206) on Portland gage have been revised in red and verified.

J. M. Symons
Chief, Tides and Currents Branch

FORM C&GS-712
(10-67)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

March 27, 1970

~~xxxxxxxxxxxxxxxx~~ Atlantic Marine Center

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 9052 (Add. wk.)

Locality: Connecticut River, Conn.

Year
~~xxxxxxxxxx~~ 1969

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Portlant, Connecticut River
Higganum, " "

Height of Mean High Water above Plane of Reference is as follows:

Portland 2.2 feet
Higganum 2.6 "

Remarks

J. M. Symons
Chief, Tides and Currents Branch

FORM C&GS-8502 (5-67) USCQMM-DC 60729-P67

ABSTRACT OF TIDE CORRECTIONS

(See instructions on reverse side)

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

1. HYDRO. SURVEY NO:	2. FIELD NO.	3. SURVEY LOCATION	4. TIME MERIDIAN
H-9052	745-10-5-69	Connecticut River	75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME FROM	c. TIME TO	d. TIDE REDUCERS FT.	d. TIDE REDUCERS FMS.	e. MACHINE ENTRY FT.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
July 18 (199)		1000	1110	-0.2				Portland Gage (only)	
			1145	-0.4					
			1200	-0.6					
July 25 (206)		1100	~~1105~~	-2.8		-1.8			
			~~1110~~	-2.6		-1.8			
			~~1115~~	-2.4		-1.8			
			1123	-2.2		-1.8			
			~~1132~~	-2.0		-1.6			
			~~1143~~	-1.8		-1.6			
			1159	-1.6		-1.6			
			1219	-1.4		-1.4			
			1300	-1.2		-1.2			
Aug. 6 (218)		1100	1500	~~-4.4~~ -2.4					
Aug. 7 (219)		0800	1150	~~-5.2~~					
			1200	~~-5.0~~					
Aug. 8 (220)		0700	0900	~~-4.2~~ -2.2					
Aug. 21 (233)		1450	1451	-1.0					

5. CHECKED OCS

APPROVED Tides and Currents Branch 1/23/70 cif

INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval
   Approved: Indicate Washington Office approval.

Instructions by columns (letters):

a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.

b. Enter the position number of the sounding line where the reducer is to first apply.

c. Enter the time in hours and minutes that the reducer listed in "d" is used.

d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

+60.0	
- 3.1	(from column d.)
+56.9	(into column e.)

This summed value shall be punched into the paper tape.

f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.

g. Enter the additional information used to determine the corrections: Ratio of Range, ± time necessary to correct for the gage position, and zone designation.

FORM C&GS-8502
(5-67)
USCOMM-DC 60729-P67

ABSTRACT OF TIDE CORRECTIONS
(See instruct. on reverse side)

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

1. HYDRO. SURVEY NO:	2. FIELD NO.	3. SURVEY LOCATION	4. TIME MERIDIAN
H-9052	745-10-5-69	Connecticut River	75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME FROM	c. TIME TO	d. TIDE REDUCERS FT.	d. TIDE REDUCERS FMS.	e. MACHINE ENTRY FT.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
Aug. 22 (234)		0800	0810	-2.4				Portland Gage (only)	
			0910	-2.2					
			0951	-2.0					
			1000	-1.8					

5. CHECKED PCS

APPROVED Tides and Currents Branch 1/23/70 CJF

INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval
   Approved: Indicate Washington Office approval.

Instructions by columns (letters):

a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.

b. Enter the position number of the sounding line where the reducer is to first apply.

c. Enter the time in hours and minutes that the reducer listed in "d" is used.

d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

```
+60.0
- 3.1  (from column d.)
+56.9  (into column e.)
```

This summed value shall be punched into the paper tape.

f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.

g. Enter the additional information used to determine the corrections: Ratio of Range, ± time necessary to correct for the gage position, and zone designation.

FORM C&GS-8502 (5-67) USCOMM-DC 60729-P67

ABSTRACT OF TIDE CORRECTIONS

(See instructions on reverse side)

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

1. HYDRO. SURVEY NO:	2. FIELD NO.	3. SURVEY LOCATION	4. TIME MERIDIAN
H- 9052	745-10-5-69	Connecticut River, Connecticut	75° West

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME FROM	c. TIME TO	d. TIDE REDUCERS FT.	d. TIDE REDUCERS FMS.	e. MACHINE ENTRY FT.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
7-9-69 (190)		08 41	09 10	-2.0				Higganum (Connecticut River)	
			09 52	-1.8					
			10 24	-1.6					
			10 58	-1.4					
			11 31	-1.2					
			12 03	-1.0					
			12 38	-0.8					
			13 12	-0.6					
			13 36	-0.4					
7-10-69 (191)		07 58	08 22	-1.8					
			09 00	-2.0					
			10 15	-2.2					
			10 48	-2.0					
			11 17	-1.8					
			11 45	-1.6					
			12 19	-1.4					
			12 52	-1.2					
			13 30	-1.0					
			14 13	-0.8					
7-11-69 (192)		08 34	08 58	-2.0					
			09 36	-2.2					
			11 08	-2.4					
			11 42	-2.2					
			12 20	-2.0					
			12 53	-1.8					
			13 26	-1.6					
			13 57	-1.4					
			14 25	-1.2					
7-18-69 (199)		08 53	09 01	-0.4					
			10 27	-0.2					
			10 52	-0.4					
7-22-69 (203)		10 25	10 48	-0.8					
			11 13	-0.6					

5. CHECKED OCS

APPROVED

Tides and Currents Branch 1/23/70 cit

INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval
   Approved: Indicate Washington Office approval.

Instructions by columns (letters):

a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.

b. Enter the position number of the sounding line where the reducer is to first apply.

c. Enter the time in hours and minutes that the reducer listed in "d" is used.

d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example: +60.0
- 3.1 (from column d.)
+56.9 (into column e.)

This summed value shall be punched into the paper tape.

f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.

g. Enter the additional information used to determine the corrections: Ratio of Range, ± time necessary to correct for the gage position, and zone designation.

FORM C&GS-8502 (5-67) USCOMM-DC 60729-P67

ABSTRACT OF TIDE CORRECTIONS

(See instructions on reverse side)

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

1. HYDRO. SURVEY NO:	2. FIELD NO.	3. SURVEY LOCATION	4. TIME MERIDIAN
H-9052	745-10-5-69	Connecticut River, Connecticut	75° West

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME FROM	c. TIME TO	d. TIDE REDUCERS FT.	d. TIDE REDUCERS FMS.	e. MACHINE ENTRY FT.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
8-1-69 (213)		08 30	08 43	-3.6				Higganum, (Connecticut River)	
			11 43	-3.4					
			12 10	-3.6					
			12 42	-3.8					
			13 09	-4.0					
			13 34	-4.2					
			14 08	-4.4					
8-6-69 (218)		08 55	09 00	-3.6					
			10 25	-3.4					
			11 24	-3.2					
		13 20	13 40	-3.0					
8-8-69 (220)		08 39	10 55	-3.6					
			11 50	-3.4					
			12 40	-3.2					
			13 35	-3.0					
			14 00	-2.8					
8-21-69 (233)		13 15	13 25	-0.6					
			13 50	-0.8					
			14 09	-1.0					
			14 25	-1.2					
			14 40	-1.4					
			14 45	-1.6					
8-22-69 (234)		08 26	08 29	-2.4					

5. CHECKED OCS

APPROVED

Tides and Currents Branch 1/23/70 cif

INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval
   Approved: Indicate Washington Office approval.

Instructions by columns (letters):

a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.

b. Enter the position number of the sounding line where the reducer is to first apply.

c. Enter the time in hours and minutes that the reducer listed in "d" is used.

d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example: +60.0
−3.1 (from column d.)
+56.9 (into column e.)

This summed value shall be punched into the paper tape.

f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.

g. Enter the additional information used to determine the corrections: Ratio of Range, ± time necessary to correct for the gage position, and zone designation.

NOAA FORM 76-155
(11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

SURVEY NUMBER

H-9052

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
										1
										2
										3
										4
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										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA | HYDROGRAPHIC SURVEY NUMBER H-9052

HYDROGRAPHIC SURVEY STATISTICS

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	1+0
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. 1, EXCESS 1	2

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	1					1
CAHIERS						
VOLUMES	4					
BOXES			1 (2 parts)			

T-SHEET PRINTS *(List)*

SPECIAL REPORTS *(List)*

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS: PRE-VERIFICATION	AMOUNTS: VERIFICATION	AMOUNTS: TOTALS
POSITIONS ON SHEET			848
POSITIONS CHECKED	59	61	
POSITIONS REVISED		19	
SOUNDINGS REVISED		123	
SOUNDINGS ERRONEOUSLY SPACED		10	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		-	
	TIME – HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)			
VERIFICATION OF CONTROL	14	5	
VERIFICATION OF POSITIONS		46	
VERIFICATION OF SOUNDINGS		93	
COMPILATION OF SMOOTH SHEET		15	
APPLICATION OF TOPOGRAPHY		5	
APPLICATION OF PHOTOBATHYMETRY		-	
JUNCTIONS		5	
COMPARISON WITH PRIOR SURVEYS & CHARTS			
VERIFIER'S REPORT		11	
OTHER		16	
TOTALS	14	196	210

Pre-Verification by M. Hickson	*Beginning Date* 06/09/75	*Ending Date* 06/10/75
Verification by J. Bradford	*Beginning Date* 08/15/75	*Ending Date* 02/20/80
Verification Check by Guy Trefethen	*Time (Hours)* 4	*Date* 3/12/80
Marine Center Inspection by	*Time (Hours)*	*Date*
Quality Control Inspection by	*Time (Hours)*	*Date*
Requirements Evaluation by	*Time (Hours)*	*Date*

ATLANTIC MARINE CENTER
Category II Survey
Verifier's Report

REGISTRY NO. H-9052 FIELD NO. 745-10-5-69

Connecticut, Connecticut River

SURVEYED: June 9 to August 22, 1969

SCALE: 1:10,000 PROJECT NO. OPR-414

SOUNDINGS: Raytheon DE-723 Fathometer
Sounding Pole Leadline CONTROL: Visual

Chief of Party . . . . . Arthur P. Sibold III
Surveyed by . . . . . Brent H. Traughber
. . . . . L. C. Gilden
. . . . . T. L. Dye
. . . . . B. R. Young
. . . . . M. L. Adams
. . . . . O. C. Swindell

Automated Plot. . . . . Xynetic 1201 Plotter (AMC)
Verified and Inked by . . . . . J. Scott Bradford
February 20, 1980

1. Introduction

a. This is a Category II survey and should be processed accordingly.

b. No unusual problems were encountered during verification of the survey.

c. Changes were made in the orginal Descriptive Report in pencil by the verifier.

2. Control and Shoreline

a. The origin of the control is adequately described in the Descriptive Report.

b. The shoreline originates final reviewed photogrammetric manuscripts T-13307 and T-13308 1968-69.

3. Hydrography

a. Depths at crossing are in good agreement.

b. The standard depth curves were adequately delineated.

c. The development of the bottom configuration is considered adequate; however, because of the irregular bottom configuration, additional hydrographic lines would have aided in the application of depth curves.

4. Condition of Survey

The smooth sheet and accompanying boatsheet, hydrographic records, and reports are adequate to conform to the requirements of the Hydrographic Manual.

5. Junctions

Adequate junctions were effected with the following contemporary surveys:

H-9051	(1969)	to the south
H-9077	(1969)	to the north

6. Comparison with Prior Survey

Not applicable, will be accomplished during review.

7. Comparison with Charts

Not applicable, will be accomplished during review.

8. Compliance with Instruction

Not applicable, will be accomplished during review.

9. Additional Field Work

Not applicable, will be accomplished during review.

APPROVAL SHEET
FOR
SURVEY H-9052
Category II survey

A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has not~~ been made. A new final sounding printout has/~~has not~~ been made.

B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the Verifier's Report.

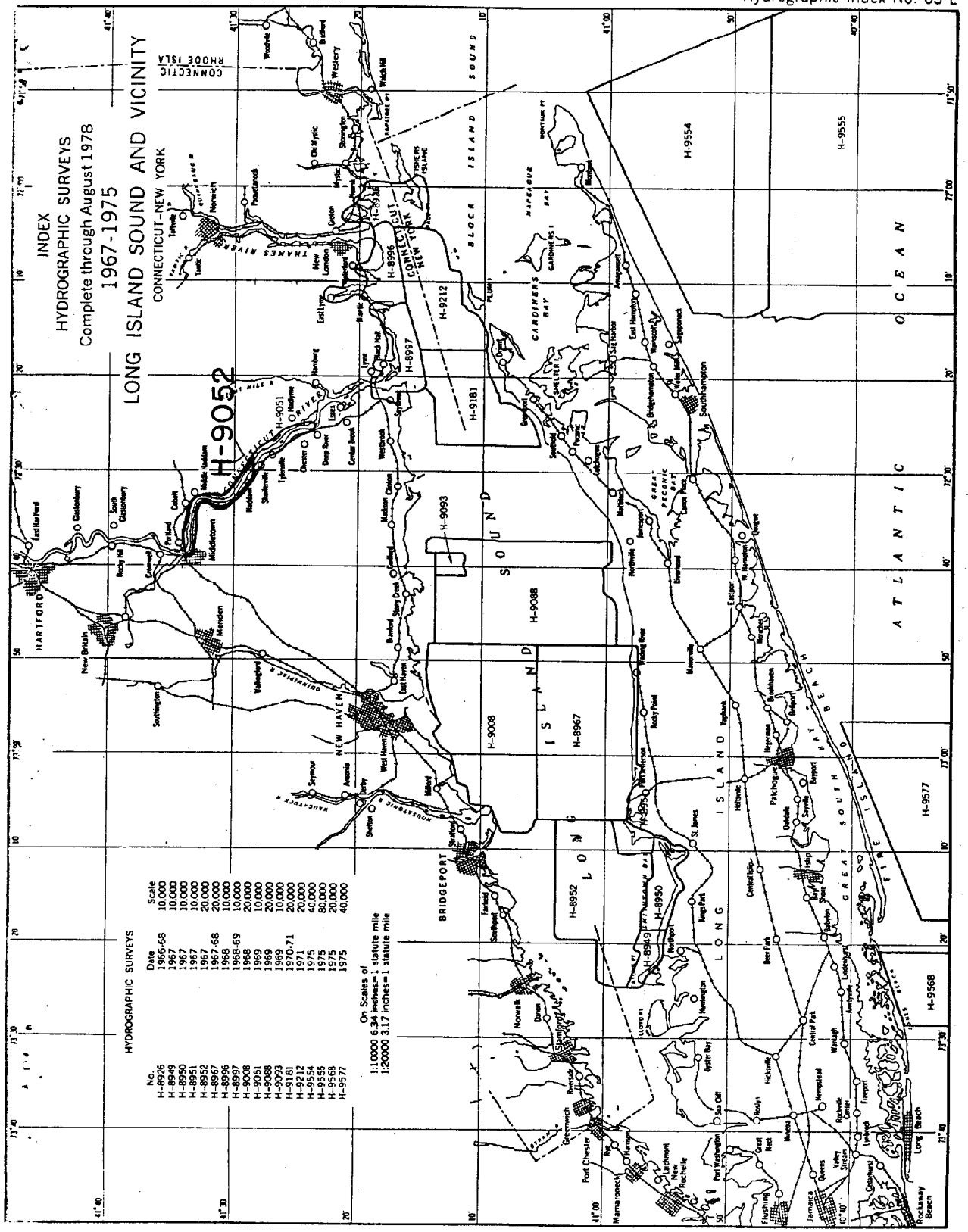
Date: 2/20/80

Signed: [signature]

Title: Chief, Verification Branch

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 63 L



A-4767

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9052

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
12377	47-2-80	D. Wylie	~~Full~~ Part Before ~~After~~ Verification Review Inspection Signed Via
			Drawing No. 25
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63