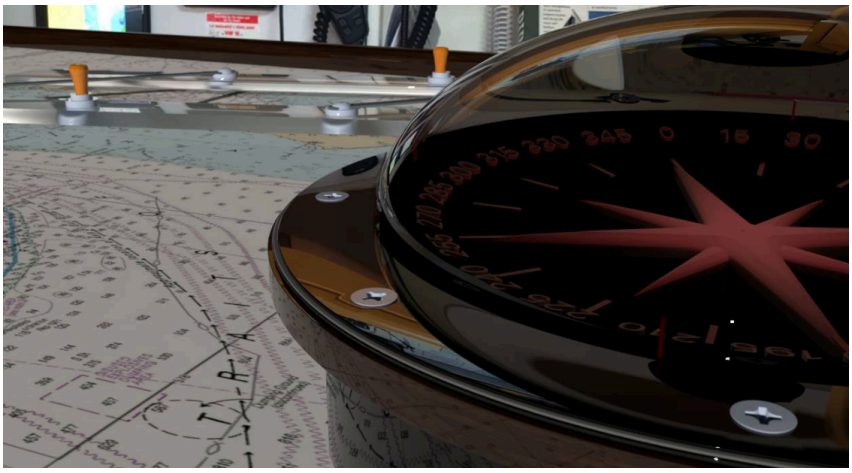
DETERMINING

DEPTH of WATER, CURRENT SPEED and DIRECTION OF TIDES at a give location and time



Georgia Hilton

www.captaingeorgia.com

READING TIDE TABLES
Determining Tide at a given location and time:

STEP 1

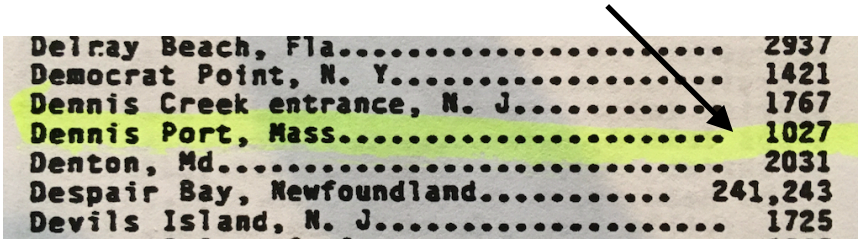
Document Know information including CHARTED DEPTH (CD), DATE, TIME, PLANNED LOCATION (SUBSTATION)

EXAMPLE:
FInd the water depth at DENNIS PORT on OCT 28, 1983 at 0914 EST
Date: OCT 28, 1983
Time: 0914 EST
SubStation: Dennis Port (Planned location)
CHARTED DEPTH (CD) 14 Ft

STEP 2

Locate Tide differences by finding closest location (substation) number in INDEX for TABLE 2

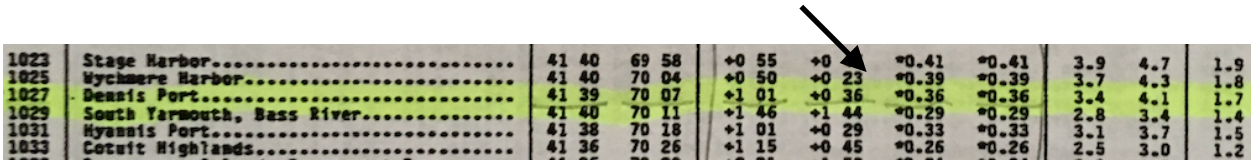
EXAMPLE:
SubStation: Dennis Port index number : 1027



STEP 3

Document Differences noted in TABLE 2 for time/date of planned location
HIGH TIDE DIFFERENTIAL TIME and HIGH TIDE DIFFERENTIAL IN FT (including + - or *)
LOW TIDE DIFFERENTIAL TIME and LOW TIDE DIFFERENTIAL IN FT (including + - or *)

EXAMPLE:
High Water time differential: +1 01 (1 hour and 1 min)
*High Water height differential: *.36 (* means to multiple) .36 ft*
Low Water time differential: +0 36 (36 minutes)
*Low Water height differential: *.36 (* means to multiple) .36 ft*

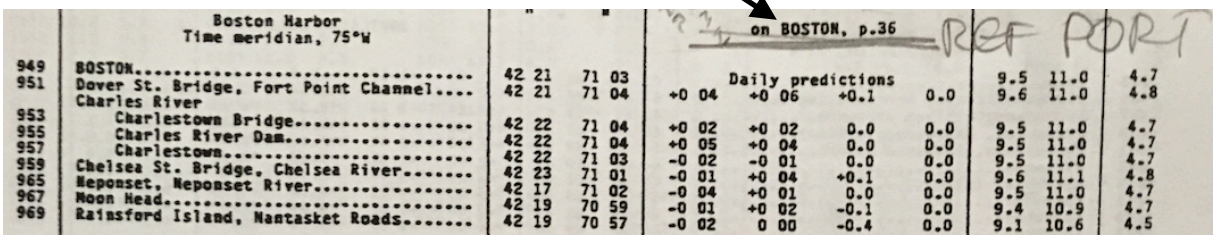


1023	Stage Harbor	41 40	69 58	+0 55	+0	*0.41	*0.41	3.9	4.7	1.9
1025	Wychmere Harbor	41 40	70 04	+0 50	+0 23	*0.39	*0.39	3.7	4.3	1.8
1027	Dennis Port	41 39	70 07	+1 01	+0 36	*0.36	*0.36	3.4	4.1	1.7
1029	South Yarmouth, Bass River	41 40	70 11	+1 46	+1 44	*0.29	*0.29	2.8	3.4	1.4
1031	Hyannis Port	41 38	70 18	+1 01	+0 29	*0.33	*0.33	3.1	3.7	1.5
1033	Cotuit Highlands	41 36	70 26	+1 15	+0 45	*0.26	*0.26	2.5	3.0	1.2

STEP 4

Go to top of TABLE 2 PAGE Selected for planned location (substation) and Find REFERENCE STATION at top.
Go to REFERENCE STATION in table 1

EXAMPLE:
Reference Station: BOSTON (top of page)

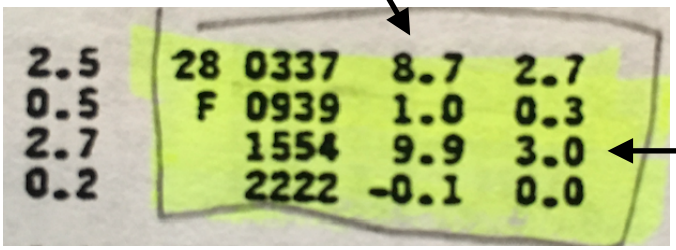


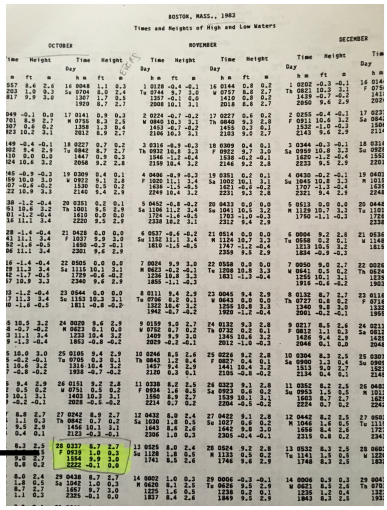
	Boston Harbor Time meridian, 75°W			on BOSTON, p.36 REF PORT						
				Daily predictions						
949	BOSTON	42 21	71 03					9.5	11.0	4.7
951	Dover St. Bridge, Fort Point Channel	42 21	71 04	+0 04	+0 06	+0.1	0.0	9.6	11.0	4.8
	Charles River									
953	Charlestown Bridge	42 22	71 04	+0 02	+0 02	0.0	0.0	9.5	11.0	4.7
955	Charles River Dam	42 22	71 04	+0 05	+0 04	0.0	0.0	9.5	11.0	4.7
957	Charlestown	42 22	71 03	-0 02	-0 01	0.0	0.0	9.5	11.0	4.7
959	Chelsea St. Bridge, Chelsea River	42 23	71 01	-0 01	+0 04	+0.1	0.0	9.6	11.1	4.8
965	Neponset, Neponset River	42 17	71 02	-0 04	+0 01	0.0	0.0	9.5	11.0	4.7
967	Moon Head	42 19	70 59	-0 01	+0 02	-0.1	0.0	9.4	10.9	4.7
969	Rainsford Island, Nantasket Roads	42 19	70 57	-0 02	0 00	-0.4	0.0	9.1	10.6	4.5

STEP 5
FIND REFERENCE STATION, DATE, TIME
Note and Document CLOSEST HIGHT and LOW TIDES to planned original time
(original time should be between the two tides)
DOCUMENT the two tide informamation
HIGH TIDE TIME and HEIGHT
LOW TIDE TIME and HEIGHT

EXAMPLE:
Reference Station: BOSTON
DATE: OCT 28, 1983
ETA: 0914
*Find the tides **before** and **after:***
Bracket 0914 between two tides:

HIGH TIDE time: 0337
HIGH TIDE height: + 8.7 ft
LOW TIDE time: 0939
LOW TIDE height + 1 ft





STEP 6
DETERMINE ADJUSTED TIDE TIMES for planned Location (nearest substation)

ADD Time differential to HIGH and LOW TIDES

DETERMINE CORRECTED TIDE HEIGHTS for planned location & time
(using + - or (* multiply)) add, subtract or multiply the HIGH and LOW TIDES for the REFERENCE STATION with the Planned location DIFFERENTIALS

ADD THESE TO CD (Charted Depth) to find corrected HIGH and LOW TIDE HEIGHT

EXAMPLE:
HIGH TIDE time: 0337 + 1 hr 1min = 0438
HIGH TIDE height: 8.7 ft x .36 = 3.13 Ft
LOW TIDE time: 0939 + 36 min = 1015
LOW TIDE height 1 ft x .36 = .36 Ft

(charted depth) CD = 14 Ft (from navigation chart)

CD 14 + ADJ High Tide 3.13 Ft = 17.13 ft HIGH TIDE
CD 14 + ADJ Low Tide 0.36 Ft = 14.23 Ft LOW TIDE

STEP 7
DETERMINE DIFFERENTIALS for TIDE RANGE and TIDE DURATION (TIME)
HIGH TIDE HEIGHT - LOW TIDE HEIGHT = TIDE RANGE
HIGH TIDE TIME - LOW TIDE TIME = TIDE DURATION

EXAMPLE:
DURATION OF TIDE: Tide Time Differential 1015 - 0438 = 5 hours 37 min
TIde Height Differential 17.13 Ft - 14.23 Ft = 2.9 Ft

STEP 8
FIND Differential between our ETA and the nearest TIDE

EXAMPLE:
Original ETA: 0914
Closest Tide: 1015 (LOW Tide)
DIFFERENTIAL BETWEEN OUR ETA ARRIVAL and CLOSEST TIDE: 1 hour

STEP 9

USING TABLE 3
Find TNT - TIme to Nearest Tide (**TIME DIFFERENCE**) follow that COLUMN down until you find RANGE OF TIDES that cloest match our TIDE RANGE.
Using **TIDE DURATION** in table 3, follow row until you find the closest matched duration.

Note that cross referenced CORRECTION IN HEIGHT
IF nearest tide is HIGH TIDE **subtract** the **CORRECTION IN HEIGHT to HIGH TIDE**
IF nearest tide is LOW TIDE **add** the **CORRECTION IN HEIGHT to LOW TIDE**

USING THE CLOSEST TIDE TO OUR PLANNED TIME you now have the Tide Height at the planned location and planned time.

Some extrapoliation is required here:
EXAMPLE:

DIFFERENTIAL BETWEEN OUR ARRIVAL and CLOSEST TIDE: ***1 hour***
DURATION OF TIDE: ***5.5 Hours*** ***(5 hrs 37 min)***

RANGE OF TIDE: ***2.9 Ft***

CORRECTION FACTOR from table: ***.2***

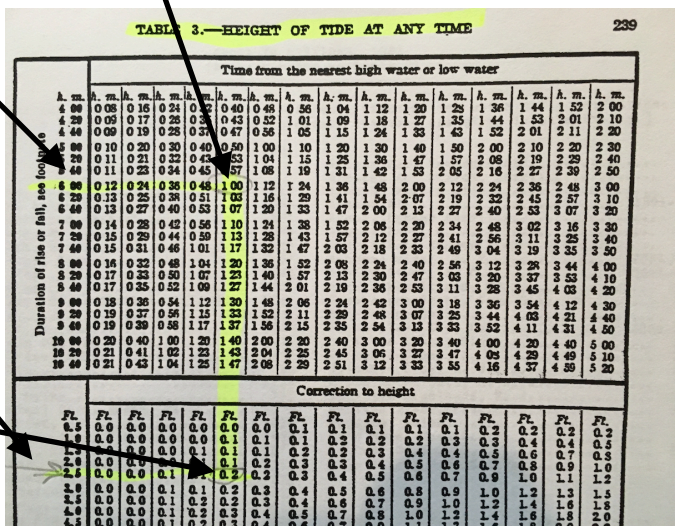
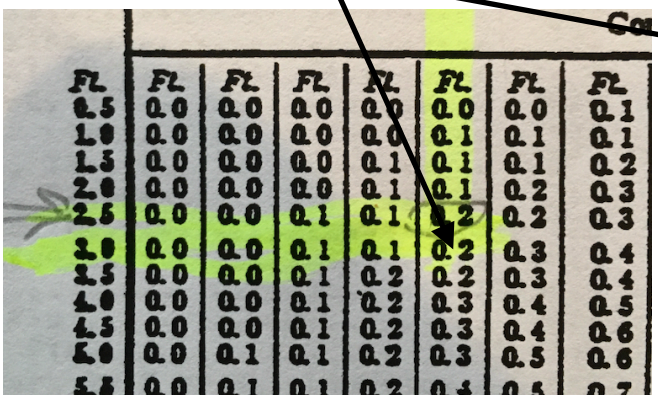


TABLE 3.—HEIGHT OF TIDE AT ANY TIME 239

Time from the nearest high water or low water

Duration of rise or fall, see footnote

Correction to height

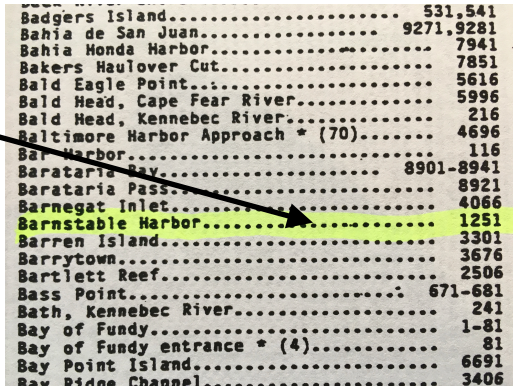


LOW TIDE 14.23 + .2 = 14.42 Ft
Answer: 14.42 Ft at 0914 on COT 28, 1983 at DENNIS PORT

DETERMINING CURRENT AT A GIVEN LOCATION AND TIME

STEP 1
Document Know information including DATE, TIME, PLANNED LOCATION (SUBSTATION) , PLANNED ARRIVAL TIME (ETA)
THEN FIND THE INDEX NUMBER for the SubStation (planned lcoation)

EXAMPLE:
FInd the current at BARNSTABLE HARBOR -
SubStation: (Planned location) :1251
Date: APRIL 3, 1983 at 13:43 EST
Time: 0914 EST



Badgers Island	531,541
Bahia de San Juan	9271,9281
Bahia Honda Harbor	7941
Bakers Haulover Cut	7851
Bald Eagle Point	5616
Bald Head, Cape Fear River	5996
Bald Head, Kennebec River	216
Baltimore Harbor Approach * (70)	4696
Bar Harbor	116
Barataria Bay	8901-8941
Barataria Pass	8921
Barnegat Inlet	4066
Barnstable Harbor	1251
Barren Island	3301
Barrytown	3676
Bartlett Reef	2506
Bass Point	671-681
Bath, Kennebec River	241
Bay of Fundy	1-81
Bay of Fundy entrance * (4)	81
Bay Point Island	6691
Bay Ridge Channel	3406

STEP 2
Goto TABLE 2 - find the INDEX number (planned location) and document the following:

TIME DIFERENCES (hours and minutes)
MINIMUM (SLACK WATER) BEFORE FLOOD
FLOOD (max FLOOD)
MINIMUM BEFORE EBB
EBB (Max EBB)

SPEED RATIO (multiply)
FLOOD
EBB

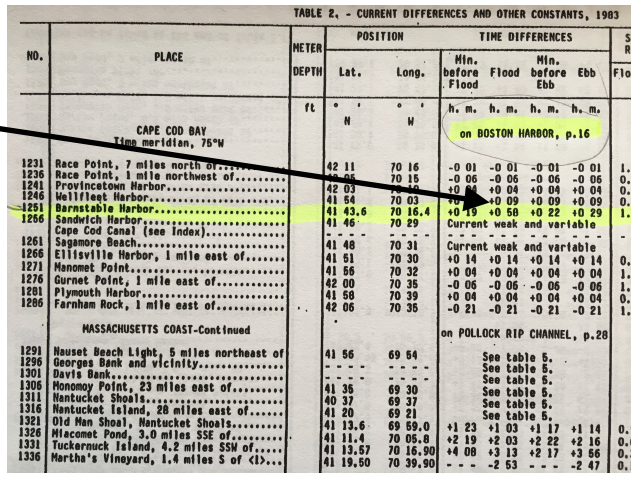


TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION Lat.	POSITION Long.	TIME DIFFERENCES Min. before Flood	Flood	Min. before Ebb	Ebb	Flo
		ft	° ' N	° ' W	h. m.	h. m.	h. m.	h. m.	
	CAPE COD BAY Time meridian, 75°W				on BOSTON HARBOR, p.16				
1231	Race Point, 7 miles north of		42 11	70 16	-0 01	-0 01	-0 01	-0 01	1.
1236	Race Point, 1 mile northwest of		[illegible]	70 15	-0 06	-0 06	-0 06	-0 06	0.
1241	Provincetown Harbor		42 03	[illegible]	+0 04	+0 04	+0 04	+0 04	0.
1246	Wellfleet Harbor		41 54	70 03	[illegible]	+0 09	+0 09	+0 09	0.
1251	Barnstable Harbor		41 43.6	70 16.4	+0 19	+0 58	+0 22	+0 29	1.
1256	Sandwich Harbor		41 46	70 29	Current weak and variable				
	Cape Cod Canal (see index)		- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	-
1261	Sagamore Beach		41 48	70 31	Current weak and variable				
1266	Ellisville Harbor, 1 mile east of		41 51	70 30	+0 14	+0 14	+0 14	+0 14	0.
1271	Manomet Point		41 56	70 32	+0 04	+0 04	+0 04	+0 04	1.
1276	Gurnet Point, 1 mile east of		42 00	70 35	-0 06	-0 06	-0 06	-0 06	1.
1281	Plymouth Harbor		41 58	70 39	+0 04	+0 04	+0 04	+0 04	0.
1286	Farnham Rock, 1 mile east of		42 06	70 35	-0 21	-0 21	-0 21	-0 21	1.
	MASSACHUSETTS COAST-Continued				on POLLOCK RIP CHANNEL, p.28				
1291	Nauset Beach Light, 5 miles northeast of		41 56	69 54	See table 5.				
1296	Georges Bank and vicinity		- - - -	- - - -	See table 5.				
1301	Davis Bank		- - - -	- - - -	See table 5.				
1306	Monomoy Point, 23 miles east of		41 35	69 30	See table 5.				
1311	Nantucket Shoals		40 37	69 37	See table 5.				
1316	Nantucket Island, 28 miles east of		41 20	69 21	See table 5.				
1321	Old Man Shoal, Nantucket Shoals		41 13.6	69 59.0	+1 23	+1 03	+1 17	+1 14	0.
1326	Miacomet Pond, 3.0 miles SSE of		41 11.4	70 05.8	+2 19	+2 03	+2 22	+2 16	0.
1331	Tuckernuck Island, 4.2 miles SSW of		41 13.57	70 16.90	+4 08	+3 13	+2 17	+3 56	0.
1336	Martha's Vineyard, 1.4 miles S of <1>		41 19.50	70 39.90	- - -	-2 53	- - -	-2 47	0.

EXAMPLE:

MINIMUM (SLACK WATER) BEFORE FLOOD	*+19 minutes*
FLOOD (max FLOOD)	*+ 58 minutes*
MINIMUM BEFORE EBB	*+ 22 minutes*
EBB (Max EBB)	*+ 29 minutes*
SPEED RATIO - (multiple) FLOOD max	*X 1.1*
SPEED RATIO - (multiple) EBB max	*X1.0*

STEP 3
Document the following from TABLE 2

SPEED RATIO (multiplier) and DIRECTIONS (directions are in DEGREES)
MINIMUM BEFORE FLOOD
FLOOD (max FLOOD)
MINIMUM BEFORE EBB
EBB (Max EBB)

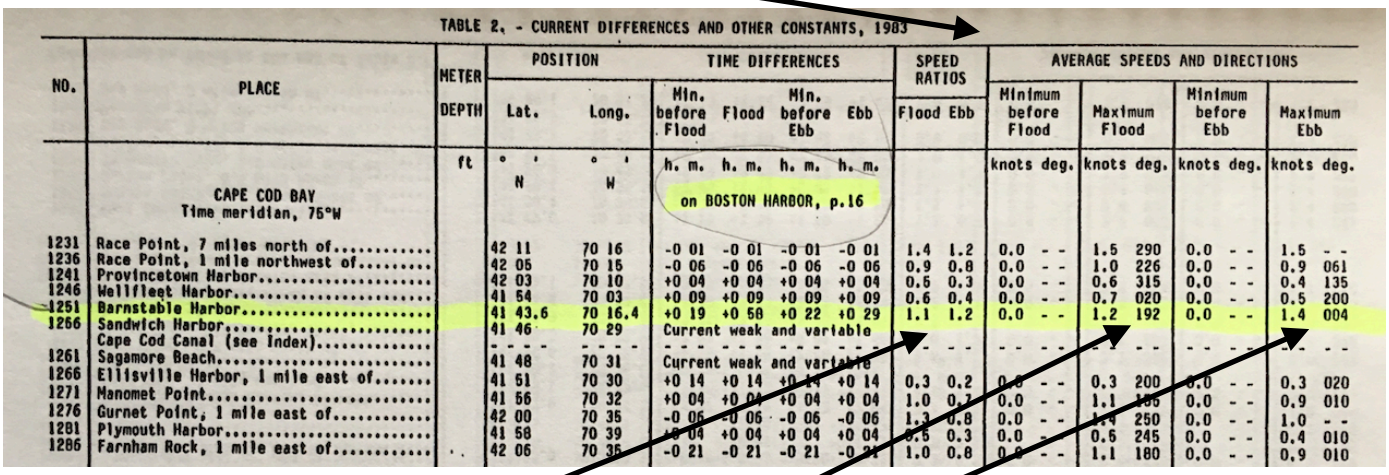


TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION Lat.	POSITION Long.	TIME DIFFERENCES Min. before Flood	TIME DIFFERENCES Flood	TIME DIFFERENCES Min. before Ebb	TIME DIFFERENCES Ebb	SPEED RATIOS Flood	SPEED RATIOS Ebb	AVERAGE SPEEDS AND DIRECTIONS Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb
		ft	° ' N	° ' W	h. m.	h. m.	h. m.	h. m.			knots deg.	knots deg.	knots deg.	knots deg.
	CAPE COD BAY Time meridian, 75°W				on BOSTON HARBOR, p.16									
1231	Race Point, 7 miles north of		42 11	70 16	-0 01	-0 01	-0 01	-0 01	1.4	1.2	0.0 - -	1.5 290	0.0 - -	1.5 - -
1236	Race Point, 1 mile northwest of		42 05	70 15	-0 06	-0 06	-0 06	-0 06	0.9	0.8	0.0 - -	1.0 226	0.0 - -	0.9 061
1241	Provincetown Harbor		42 03	70 10	+0 04	+0 04	+0 04	+0 04	0.5	0.3	0.0 - -	0.6 315	0.0 - -	0.4 135
1246	Wellfleet Harbor		41 54	70 03	+0 09	+0 09	+0 09	+0 09	0.6	0.4	0.0 - -	0.7 020	0.0 - -	0.5 200
1251	Barnstable Harbor		41 43.6	70 16.4	+0 19	+0 58	+0 22	+0 29	1.1	1.2	0.0 - -	1.2 192	0.0 - -	1.4 004
1256	Sandwich Harbor		41 46	70 29	Current weak and variable									
	Cape Cod Canal (see Index)		- - - -	- - - -	- - -	- - -	- - -	- - -	- -	- -	- - -	- - -	- - -	- - -
1261	Sagamore Beach		41 48	70 31	Current weak and variable									
1266	Ellisville Harbor, 1 mile east of		41 51	70 30	+0 14	+0 14	+0 14	+0 14	0.3	0.2	0.0 - -	0.3 200	0.0 - -	0.3 020
1271	Manomet Point		41 56	70 32	+0 04	+0 04	+0 04	+0 04	1.0	0.7	0.0 - -	1.1 155	0.0 - -	0.9 010
1276	Gurnet Point, 1 mile east of		42 00	70 35	-0 06	-0 06	-0 06	-0 06	1.3	0.8	0.0 - -	1.4 250	0.0 - -	1.0 - -
1281	Plymouth Harbor		41 58	70 39	+0 04	+0 04	+0 04	+0 04	0.5	0.3	0.0 - -	0.6 245	0.0 - -	0.4 010
1286	Farnham Rock, 1 mile east of	. .	42 06	70 35	-0 21	-0 21	-0 21	-0 21	1.0	0.8	0.0 - -	1.1 180	0.0 - -	0.9 010

EXAMPLE:
SPEED RATIO for Substation
FLOOD X 1.1
EBB X 1.2

DIRECTION OF CURRENT
FLOOD 192 degrees
EBB 004 degrees

STEP 4
FInd the REFERENCE STATION at the top of the page and go to TABLE 1

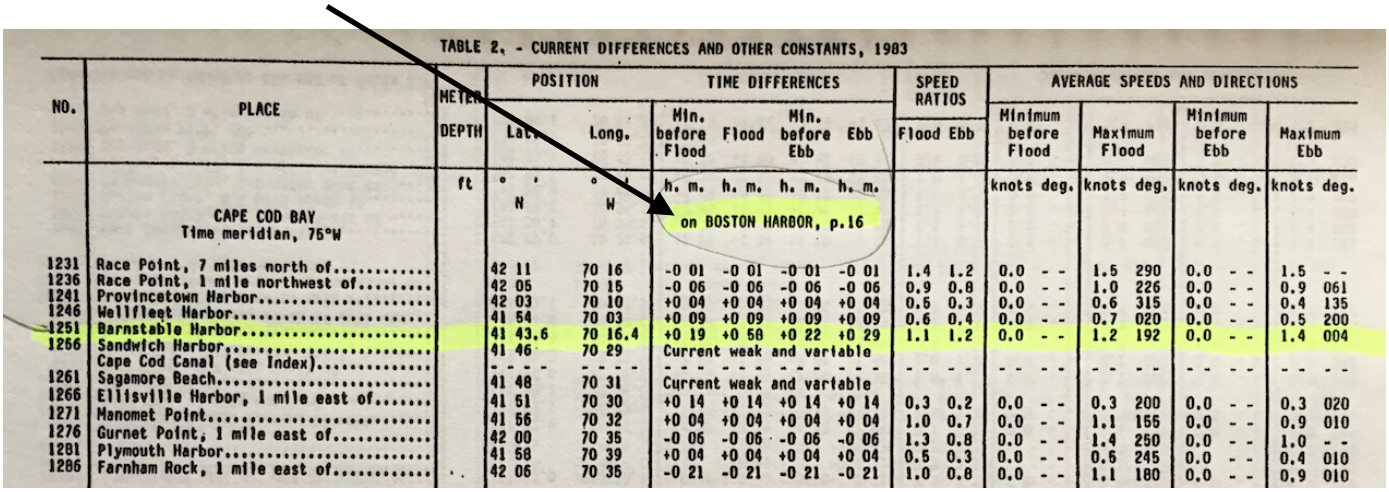


TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION Lat.	POSITION Long.	TIME DIFFERENCES Min. before Flood	TIME DIFFERENCES Flood	TIME DIFFERENCES Min. before Ebb	TIME DIFFERENCES Ebb	SPEED RATIOS Flood	SPEED RATIOS Ebb	AVERAGE SPEEDS AND DIRECTIONS Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb
		ft	° ' N	° ' W	h. m.	h. m.	h. m.	h. m.			knots deg.	knots deg.	knots deg.	knots deg.
	CAPE COD BAY Time meridian, 75°W				on BOSTON HARBOR, p.16									
1231	Race Point, 7 miles north of		42 11	70 16	-0 01	-0 01	-0 01	-0 01	1.4	1.2	0.0 - -	1.5 290	0.0 - -	1.5 - -
1236	Race Point, 1 mile northwest of		42 05	70 15	-0 06	-0 06	-0 06	-0 06	0.9	0.8	0.0 - -	1.0 226	0.0 - -	0.9 061
1241	Provincetown Harbor		42 03	70 10	+0 04	+0 04	+0 04	+0 04	0.5	0.3	0.0 - -	0.6 315	0.0 - -	0.4 135
1246	Wellfleet Harbor		41 54	70 03	+0 09	+0 09	+0 09	+0 09	0.6	0.4	0.0 - -	0.7 020	0.0 - -	0.5 200
1251	Barnstable Harbor		41 43.6	70 16.4	+0 19	+0 58	+0 22	+0 29	1.1	1.2	0.0 - -	1.2 192	0.0 - -	1.4 004
1256	Sandwich Harbor		41 46	70 29	Current weak and variable									
	Cape Cod Canal (see Index)		- - - -	- - - -	- - -	- - -	- - -	- - -	- -	- -	- - -	- - -	- - -	- - -
1261	Sagamore Beach		41 48	70 31	Current weak and variable									
1266	Ellisville Harbor, 1 mile east of		41 51	70 30	+0 14	+0 14	+0 14	+0 14	0.3	0.2	0.0 - -	0.3 200	0.0 - -	0.3 020
1271	Manomet Point		41 56	70 32	+0 04	+0 04	+0 04	+0 04	1.0	0.7	0.0 - -	1.1 155	0.0 - -	0.9 010
1276	Gurnet Point, 1 mile east of		42 00	70 35	-0 06	-0 06	-0 06	-0 06	1.3	0.8	0.0 - -	1.4 250	0.0 - -	1.0 - -
1281	Plymouth Harbor		41 58	70 39	+0 04	+0 04	+0 04	+0 04	0.5	0.3	0.0 - -	0.6 245	0.0 - -	0.4 010
1286	Farnham Rock, 1 mile east of	. .	42 06	70 35	-0 21	-0 21	-0 21	-0 21	1.0	0.8	0.0 - -	1.1 180	0.0 - -	0.9 010

EXAMPLE:
REFERENCE STATION for Barnstable Harbor is BOSTON

STEP 5
Using table 1 FIND THE TWO TIDES THAT OCCUR **BEFORE** and **AFTER** OUR **ETA**
DOCUMENT the following:

SLACK WATER (Minimum) TIME
MAXIMUM CURRENT TIME (Flood)
SLACK WATER (Minimum) TIME
MAXIMUM CURRENT TIME (Ebb)
VELOCITY (Kts) (note E = Ebb F=Flood)
(SLACK WATER = minimum current)

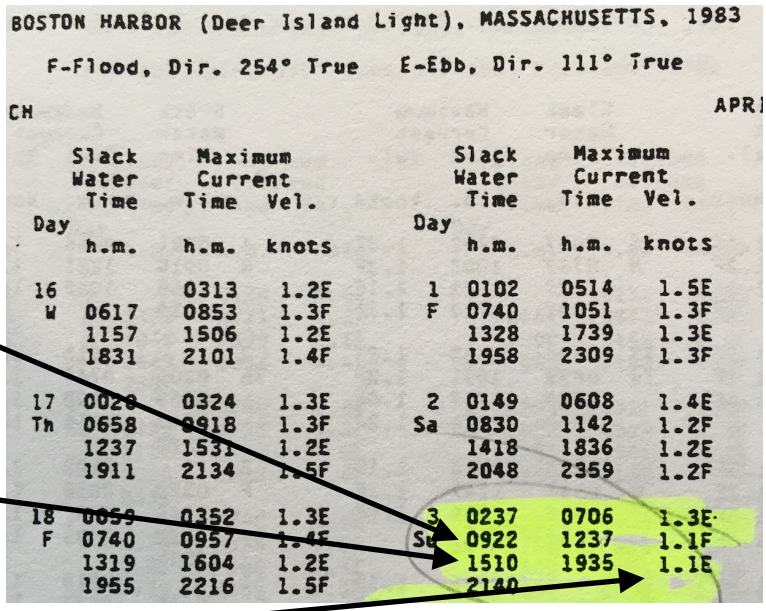
EXAMPLE:

SLACK WATER TIME *09:22*
MAX CURRENT TIME *12:37*

ETA *13:43*

SLACK WATER TIME *15:10*
MAX SURRENT TIME *19:35*

SPEED FLOOD max *1.1 F*
SPEED EBB max *1.1 E*



BOSTON HARBOR (Deer Island Light), MASSACHUSETTS, 1983

F-Flood, Dir. 254° True E-Ebb, Dir. 111° True

CH APR

Day	Slack Water Time h.m.	Maximum Current Time h.m.	Maximum Current Vel. knots	Day	Slack Water Time h.m.	Maximum Current Time h.m.	Maximum Current Vel. knots
16		0313	1.2E	1	0102	0514	1.5E
W	0617	0853	1.3F	F	0740	1051	1.3F
	1157	1506	1.2E		1328	1739	1.3E
	1831	2101	1.4F		1958	2309	1.3F
17	0028	0324	1.3E	2	0149	0608	1.4E
Th	0658	0918	1.3F	Sa	0830	1142	1.2F
	1237	1531	1.2E		1418	1836	1.2E
	1911	2134	1.5F		2048	2359	1.2F
18	0059	0352	1.3E	3	0237	0706	1.3E
F	0740	0957	1.4F	Su	0922	1237	1.1F
	1319	1604	1.2E		1510	1935	1.1E
	1955	2216	1.5F		2140		

STEP 6
ADD the TIME DIFFERENCE for the selected SUBSTATION (our planned location) to TIME AT REFERENCE STATION
MULTIPLY the SPEED RATION from the SUBSTATION to the SPEED AT REFERENCE STATION

NOTE: YOU MUST add or SUBTRACK Times as listed (- or +) and MULTIPLE RATIOS for SPEED

EXAMPLE:

STATION	*Min before Flood*	*Max Flood*	*Min before Ebb*	*Max Ebb*	*Speed Flood*	*Speed Ebb*
BOSTON (Reference)	*9:22*	*12:37*	*15:10*	*19:35*	*1.1*	*1.1*
Barnstable Harbor (dest)	*19*	*58*	*22*	*29*	*1.1*	*1.2*
	9:41	*13:35*	*15:32*	*20:04*	*1.2*	*1.3*
	time	*time*	*time*	*time*	*Kts*	*Kts*

STEP 7
Bracket OUR time between the two times that are closest
NOTE: For direction of CURRENT: IF START at Flood use **FLOOD** direction, if START at ebb use **EBB** direction

EXAMPLE:

MAX FLOOD 13:35 selected
Original ETA: 13:43
MIN BEFORE FLOOD 15:32 selected

DIRECTION OF CURRENT from Table 2
FLOOD 192 degrees
EBB 004 degrees

*Therefore: Direction will be **192 degrees upon arrival.***

STEP 8
Go to **TABLE 3** VELOCITY OF CURRENT AT ANY TIME

Determine DIfferential time between SLACK and MAX
Determine Differential time between SLACK and OUR ETA

Using closest available numbers ***(EXTRAPOLIATION IS REQUIRED HERE)***

CROSS REFERENCE to find **correction factor**
multply the CORRECTION FACTOR and the SELECTED MAX CURRENT SPEED

EXAMPLE:
DIFF between Slack and MAX: Slack 15:32 Maximun Flood 13:35 = 1 hr 57 min
DIFF between Slack and our ETA: Slack 15:32 Our ETA: 13:43 = 1. hr 49 min

CORRECTION FACTOR
1.0

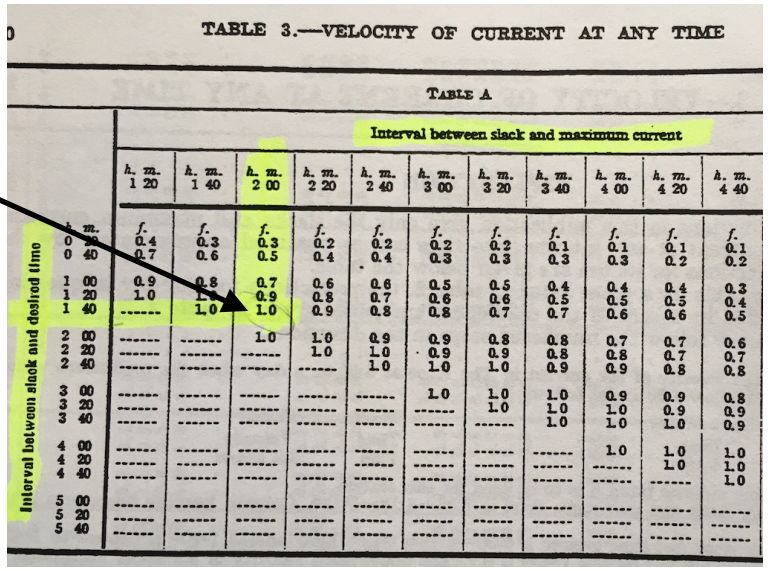


TABLE 3.—VELOCITY OF CURRENT AT ANY TIME

TABLE A

Interval between slack and maximum current

Interval between slack and desired time	h. m. 1 20	h. m. 1 40	h. m. 2 00	h. m. 2 20	h. m. 2 40	h. m. 3 00	h. m. 3 20	h. m. 3 40	h. m. 4 00	h. m. 4 20	h. m. 4 40
h. m.	f.	f.	f.	f.	f.	f.	f.	f.	f.	f.	f.
0 00	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
0 40	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2
1 00	0.9	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3
1 20	1.0	0.9	0.9	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.4
1 40	------	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5
2 00	------	------	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.6
2 20	------	------	------	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7
2 40	------	------	------	------	1.0	1.0	1.0	0.9	0.9	0.8	0.8
3 00	------	------	------	------	------	1.0	1.0	1.0	0.9	0.9	0.8
3 20	------	------	------	------	------	------	1.0	1.0	1.0	0.9	0.9
3 40	------	------	------	------	------	------	------	1.0	1.0	1.0	0.9
4 00	------	------	------	------	------	------	------	------	1.0	1.0	1.0
4 20	------	------	------	------	------	------	------	------	------	1.0	1.0
4 40	------	------	------	------	------	------	------	------	------	------	1.0
5 00	------	------	------	------	------	------	------	------	------	------	------
5 20	------	------	------	------	------	------	------	------	------	------	------
5 40	------	------	------	------	------	------	------	------	------	------	------

STEP 9

MULTIPLE
CORRECTION FACTOR (step 8) X **MAX FLOOD VELOCITY** (from step 6) to get **SPEED** of **CURRENT** at our **ETA**

EXAMPLE:

Our original ETA: 13:43

Correction factor ***1.0*** *X Maximum Flood Speed* ***1.2*** *Kts =* ***1.2 kts***

(*Use direction of current from step 7) Flood current direction 192 degrees*

Therefore:
At our arrival to Barnstable Harbor on April 3, 1983 at 13:43 EST the direction of the current will be 192 degrees at a speed of 1.2 Kts.