

U.S. Department
of Transportation

United States
Coast Guard



**Merchant Marine Deck
Examination Reference Material**

**Reprints from the
TIDE TABLES and
TIDAL CURRENT TABLES**

REPRINTS FROM THE TIDE TABLES AND TIDAL CURRENT TABLES

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**This publication contains information to be used in
examinations for Merchant Marine Licenses**

NOT TO BE USED FOR NAVIGATION

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U.S. Department
of Transportation



United States
Coast Guard

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Subj: MERCHANT MARINE DECK EXAMINATION REFERENCE MATERIAL,
REPRINTS FROM THE TIDE TABLES AND TIDAL CURRENT TABLES

1. PURPOSE. This publication contains reference material for use during an examination for a merchant marine deck license. It contains excerpts from the Tide Tables and the Tidal Current Tables. This manual is current with the problems used in the examinations.
2. PROCEDURES. This publication is available to applicants taking a deck merchant marine examination. The covers available for sale from the Government Printing Office (GPO) are printed with red ink. The covers used in Regional Examination Centers are printed with green ink. Applicants who purchase copies of this publication from the GPO may not use their personal copies during examinations.
3. DISCUSSION. Applicants for merchant marine deck licenses are tested to ensure their professional qualification. Tide and current problems require the use of data contained in this publication.
4. ORDERING INFORMATION.
 - a. Regional Examination Centers will be provided with an initial supply of this publication. Replacement and additional copies are available through standard distribution sources.

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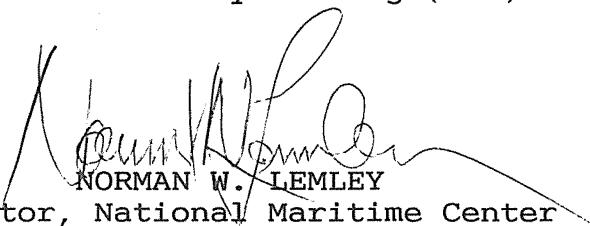
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NORMAN W. LEMLEY
Director, National Maritime Center

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INSTRUCTIONS

1. This reference contains extracts of the TIDE TABLES and TIDAL CURRENT TABLES. Some navigation problems require determining the tide or tidal current for a specific time of day. The data necessary for solving these problems is contained in this manual.
2. This manual is in two parts. Part one contains the information referring to tides. Part two contains the information referring to tidal currents.
3. Applicants who wish to comment on any material in this publication should complete a Comment/Protest form for the question involved and give it to the examiner.
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REPRINTS from TIDE and TIDAL CURRENT TABLES
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All comments are welcomed and will be acknowledged. Valid comments will be incorporated into this publication.

**Merchant Marine Deck
Examination Reference Material**

**Reprints from the
TIDE TABLES and
TIDAL CURRENT TABLES**

PART ONE. 1983 TIDE TABLES

PART TWO. 1983 TIDAL CURRENT TABLES



**MERCHANT MARINE DECK EXAMINATION
REFERENCE MATERIAL**

PART ONE

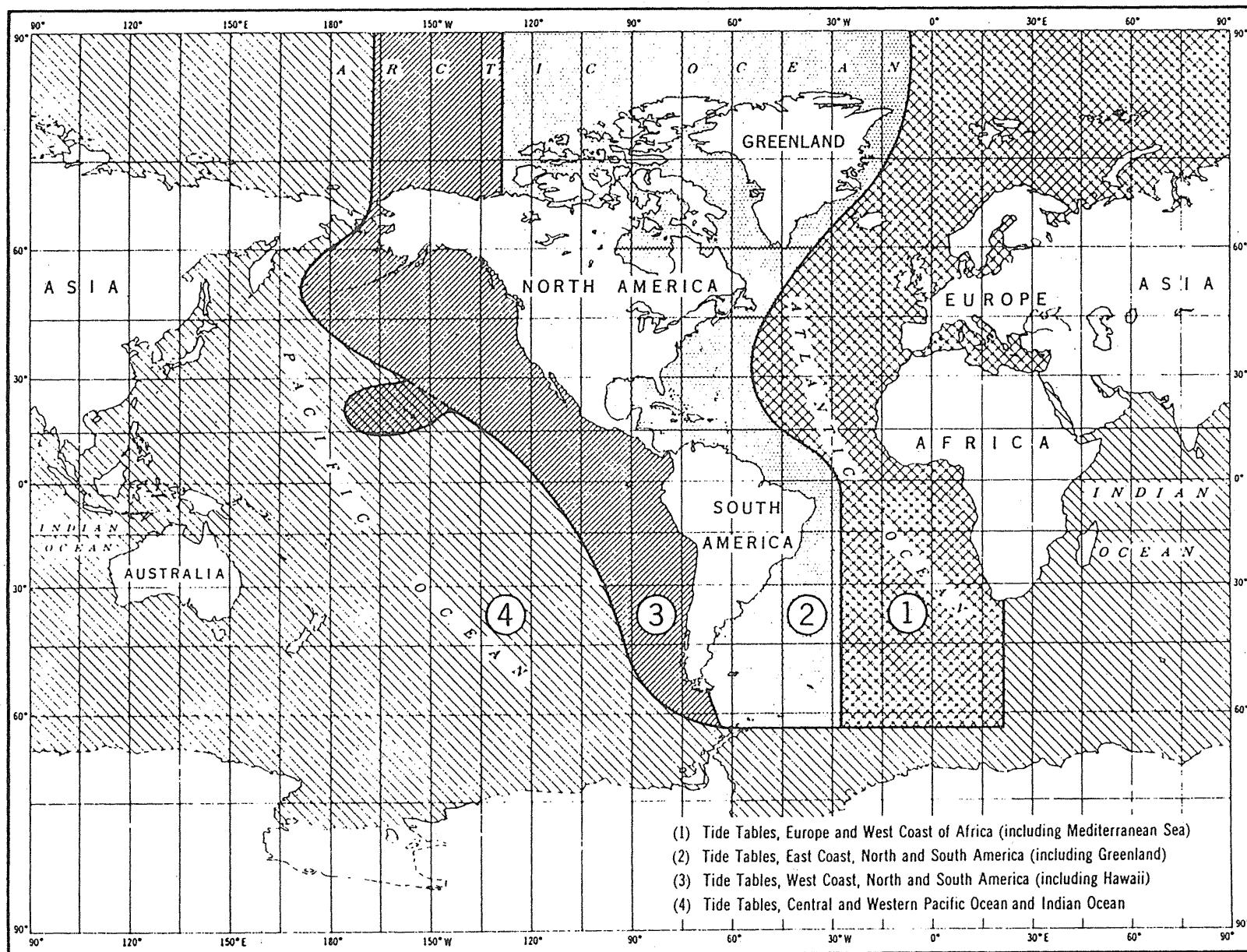
**1983
TIDE TABLES**

High and low water predictions

EAST COAST of NORTH and SOUTH AMERICA

including GREENLAND

INDEX OF TIDE TABLE COVERAGE



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IMPORTANT NOTICE

For the most part, tide predictions for U.S. reference stations are based upon analyses of tide observations for periods of at least one year. Since the extremes of meteorological conditions have been excluded from the analyses and predictions, the predicted tidal heights should be considered those expected under average weather conditions. The mariner must be cautioned that during times when weather conditions differ from what is considered average for the area, corresponding differences between predicted levels and those actually observed will be noted. Generally, prolonged onshore winds or a low barometric pressure can produce higher levels than predicted, while the opposite can result in lower levels than those predicted.

Exclusive of weather conditions, the astronomical tide is subject to range variations which should be noted. Decreased ranges may be expected near the times when the Moon is in apogee (apogeal tides) or in quadrature (neap tides) and increased ranges when the Moon is in perigee (perigeal tides) or in a new or full position (spring tides). A larger diurnal range may also result when the Moon is in its maximum declination (tropic tides). The actual range will depend upon the extent to which combinations of these positions reinforce or detract one from the other. The effect of these astronomical lineups is included in the predictions and may be apparent upon inspection.

The mariner may be kept aware of the times of these astronomical events by referring to the astronomical data listed in this book. He should realize, however, that there is generally a time lag from a few hours to several days from the time of the astronomical event to the time of the resultant tide. During times of storm surges or when extreme weather conditions are imminent, it would be prudent for the mariner to keep closely advised by local weather forecasts as they relate to the effects upon the tide levels.

TIDE TABLES

INTRODUCTION

Tide tables for the use of mariners have been published by the National Ocean Survey (formerly the Coast and Geodetic Survey) since 1853. For a number of years these tables appeared as appendixes to the annual reports of the Superintendent of the Survey, and consisted of more or less elaborated means for enabling the mariner to make his own prediction of tides as occasion arose.

The first tables to give predictions for each day were those for the year 1867. They gave the times and heights of high waters only and were published in two separate parts, one for the Atlantic coast and the other for the Pacific coast of the United States. Together they contained daily predictions for 19 stations and tidal differences for 124 stations. A few years later predictions for the low waters were also included, and for the year 1896 the tables were extended to include the entire maritime world, with full predictions for 70 ports and tidal differences for about 3,000 stations.

The tide tables are now issued in four volumes, as follows: *Europe and West Coast of Africa (including the Mediterranean Sea); East Coast of North and South America (including Greenland); West Coast of North and South America (including the Hawaiian Islands); Central and Western Pacific Ocean and Indian Ocean*. Together, they contain daily predictions for 198 reference ports and differences and other constants for about 6,000 stations.

This edition of the *Tide Tables, East Coast of North and South America* contains full daily predictions for 48 reference ports and differences and other constants for about 2,000 stations in North America, South America, and Greenland. It also contains a table for obtaining the approximate height of the tide at any time, a table of local mean time of sunrise and sunset for every 5th day of the year for different latitudes, a table for the reduction of local mean time to standard time, a table of moonrise and moonset for 8 places, a table of the Greenwich mean time of the Moon's phases, apogee, perigee, greatest north and south and zero declination, and the time of the solar equinoxes and solstices, and a glossary of terms.

Up to and including the tide tables for the year 1884, all the tide predictions were computed by means of auxiliary tables and curves constructed from the results of tide observations at the different ports. From 1885 to 1911, inclusive, the predictions were generally made by means of the Ferrel tide-predicting machine. From 1912 to 1965, inclusive, they were made by means of the Coast and Geodetic Survey tide predicting machine No. 2. Since 1966, predictions have been made by electronic computer.

In the preparation of these tables all available observations were used. In some cases, however, the observations were insufficient for obtaining final results, and as further information becomes available it will be included in subsequent editions. All persons using these tables are invited to send information or suggestions for increasing their usefulness to the Director, National Ocean Survey, Rockville, MD 20852, U.S.A.

In accordance with cooperative arrangements for the exchange of tide predictions, the authorities given below have furnished the predictions for the following stations in the present issue:

Canadian Hydrographic Service.—Harrington Harbour, Quebec, Halifax, St. John, Picton, and Argentia.

Directoria de Hidrografia e Navegacao, Brazil.—Recife, Rio de Janeiro, and Santos.

Servicio Hidrografico, Argentina.—Buenos Aires, Puerto Belgrano, Comodoro Rivadavia, and Punta Loyola.

LIST OF REFERENCE STATIONS

Name of Station	Datum below mean sea level	Page	Name of Station	Datum below mean sea level	Page
	Feet			Feet	
Albany, N.Y.....	*2.5	60	Pensacola, Fla.....	0.6	128
Amuay, Venezuela.....	0.6	156	Philadelphia, Pa.....	*3.2	76
Argentia, Newfoundland.....	4.3	4	Pictou, Nova Scotia.....	3.9	8
Baltimore, Md.....	0.6	80	Portland, Maine.....	4.5	32
Boston, Mass.....	4.9	36	Puerto Belgrano, Argentina.....	8.0	184
Breakwater Harbor, Del.....	2.1	68	Punta Gorda, Venezuela.....	3.3	160
Bridgeport, Conn.....	3.4	48	Punta Loyola, Argentina.....	20.3	192
Buenos Aires, Argentina.....	2.6	180	Quebec, Quebec.....	*8.5	16
Charleston, S.C.....	2.7	96	Recife, Brazil.....	3.7	168
Comodoro Rivadavia, Argentina.....	10.3	188	Reedy Point, Del.....	2.8	72
Cristobal, Panama.....	0.4	144	Rio de Janeiro, Brazil.....	2.2	172
Eastport, Maine.....	9.2	28	St. John, New Brunswick.....	14.5	24
Galveston, Tex.....	0.8	136	St. Marks River Entrance, Fla.....	1.8	124
Halifax, Nova Scotia.....	4.3	20	St. Petersburg, Fla.....	1.2	120
Hampton Roads, Va.....	1.2	88	Sandy Hook, N.J.....	2.3	64
Harrington Harbour, Quebec.....	3.5	12	San Juan, Puerto Rico.....	0.6	148
Isla Zapara, Venezuela.....	2.7	152	Santos, Brazil.....	2.5	176
Key West, Fla.....	0.9	116	Savannah, Ga.....	*4.0	104
Mayport, Fla.....	2.3	108	Savannah River Entrance, Ga.....	3.6	100
Miami Harbor Entrance, Fla.....	1.3	112	Suriname Rivier, Surinam.....	4.3	164
Mobile, Ala.....	0.8	132	Tampico Harbor, Mexico.....	0.8	140
New London, Conn.....	1.3	44	Washington, D.C.....	*1.4	84
Newport, R.I.....	1.6	40	Willlets Point, N.Y.....	3.6	52
New York, N.Y.....	2.3	56	Wilmington, N.C.....	*2.2	92

* Datum below mean river level.

Each datum figure above represents the difference in elevation between the local mean sea (or river) level and the reference level from which the predicted heights in table 1 were calculated.

Local mean sea level datum should not be confused with the National Geodetic Vertical Datum which is the datum of the geodetic level net of the United States. Relationships between geodetic and local tidal datums are published in connection with the tidal bench mark data of the National Ocean Survey.

TABLE 1.—DAILY TIDE PREDICTIONS

EXPLANATION OF TABLE

This table contains the predicted times and heights of the high and low waters for each day of the year at a number of places which are designated as *reference stations*. By using tidal differences from table 2, one can calculate the approximate times and heights of the tide at many other places which are called subordinate stations. Instructions on the use of the tidal differences are found in the explanation of table 2.

High water is the maximum height reached by each rising tide, and low water is the minimum height reached by each falling tide. High and low waters can be selected from the predictions by the comparison of consecutive heights. Because of diurnal inequality at certain places, however, there may be a difference of only a few tenths of a foot between one high water and low water of a day, but a marked difference in height between the other high water and low water. It is essential, therefore, in using the tide tables to note carefully the heights as well as the times of the tides.

Time.—The kind of time used for the predictions at each reference station is indicated by the time meridian at the bottom of each page. Daylight saving time is not used in this publication.

Datum.—The datum from which the predicted heights are reckoned is the same as that used for the charts of the locality. The datum for the Atlantic coast of the United States is mean low water. For foreign coasts a datum approximating to mean low water springs, Indian spring low water, or the lowest possible low water is generally used. The depression of the datum below mean sea level for each of the reference stations of this volume is given on the preceding page.

Depth of water.—The nautical charts published by the United States and other maritime nations show the depth of water as referred to a low water datum corresponding to that from which the predicted tidal heights are reckoned. To find the actual depth of water at any time the height of the tide should be added to the charted depth. If the height of the tide is negative—that is, if there is a minus sign (—) before the tabular height—it should be subtracted from the charted depth. For any time between high and low water, the height of the tide may be estimated from the heights of the preceding and following tides, or table 3 may be used. The reference stations in table 1 now contain the heights in meters as well as feet.

Variation in sea level.—Changes in winds and barometric conditions cause variations in sea level from day to day. In general, with onshore winds or a low barometer the heights of both the high and low waters will be higher than predicted while with offshore winds or a high barometer they will be lower. There are also seasonal variations in sea level, but these variations have been included in the predictions for each station. At ocean stations the seasonal variation in sea level is usually less than half a foot.

At stations on tidal rivers the average seasonal variation in river level due to freshets and droughts may be considerably more than a foot. The predictions for these stations include an allowance for this seasonal variation representing average freshet and drought conditions. Unusual freshets or droughts, however, will cause the tides to be higher or lower, respectively, than predicted.

Number of tides.—There are usually two high and two low waters in a day. Tides follow the Moon more closely than they do the Sun, and the lunar or tidal day is about 50 minutes longer than the solar day. This causes the tide to occur later each day, and a tide that has occurred near the end of one calendar day will be followed by a corresponding tide that may skip the next day and occur in the early morning of the third day. Thus on certain days of each month only a single high or a single low water occurs. At some stations, during portions of each month, the tide becomes diurnal—that is, only one high and one low water will occur during the period of a lunar day.

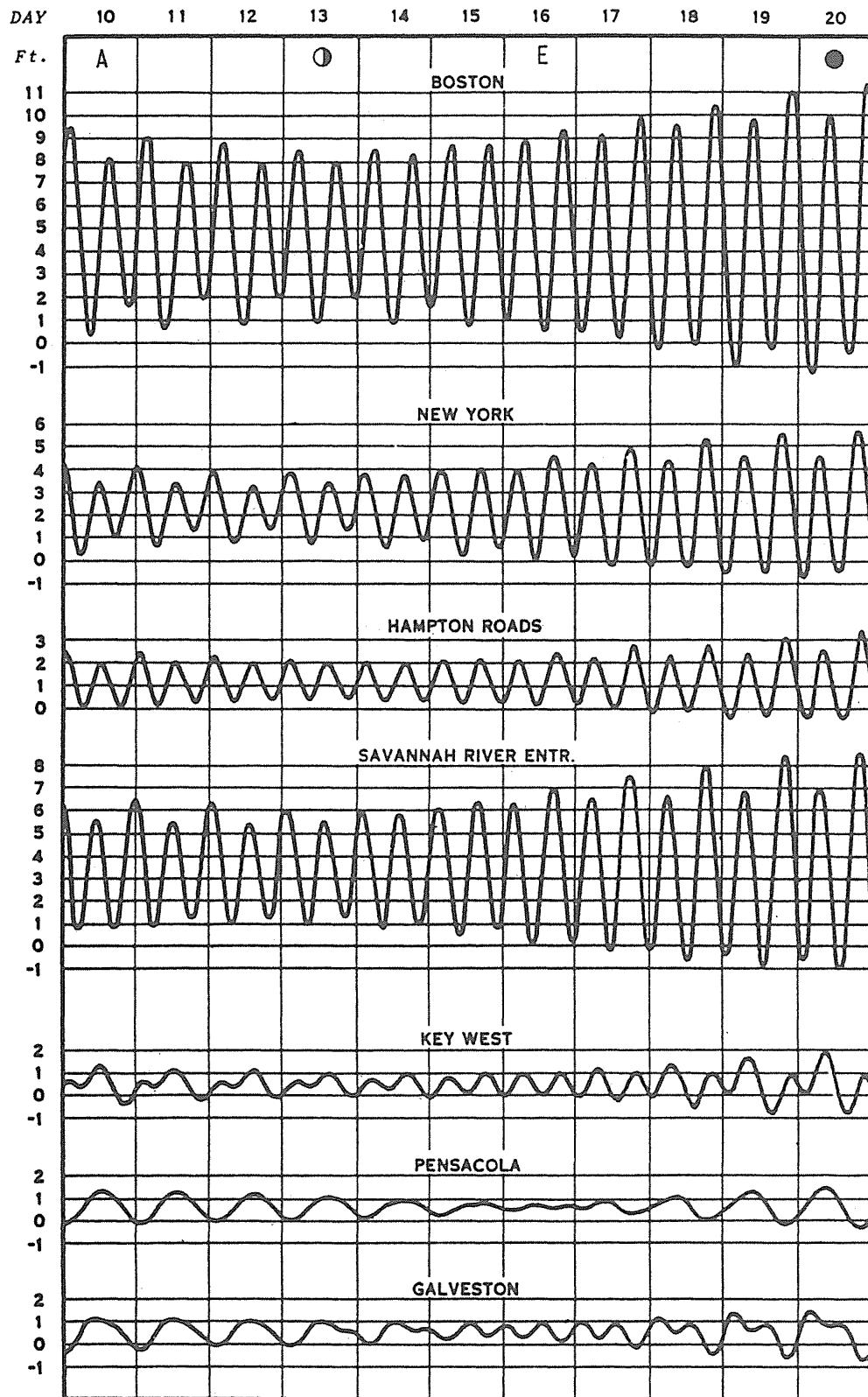
EXPLANATION OF TABLE

Relation of tide to current.—In using these tables of tide predictions it must be borne in mind that they give the times and heights of high and low waters and *not* the times of turning of the current or slack water. For stations on the outer coast there is usually but little difference between the time of high or low water and the beginning of ebb or flood current, but for places in narrow channels, landlocked harbors, or on tidal rivers, the time of slack water may differ by several hours from the time of high or low water stand. The relation of the times of high and low water to the turning of the current depends upon a number of factors, so that no simple or general rule can be given. For the predicted times of slack water reference should be made to the tidal current tables published by the National Ocean Survey in two separate volumes, one for the Atlantic coast of North America and the other for the Pacific coast of North America and Asia.

Typical tide curves.—The variations in the tide from day to day and from place to place are illustrated on the opposite page by the tide curves for representative ports along the Atlantic and Gulf coasts of the United States. It will be noted that the range of tide for stations along the Atlantic coast varies from place to place but that the type is uniformly semidiurnal with the principal variations following the changes in the Moon's distance and phase. In the Gulf of Mexico, however, the range of tide is uniformly small but the type of tide differs considerably. At certain ports such as Pensacola there is usually but one high and one low water a day while at other ports such as Galveston the inequality is such that the tide is semidiurnal around the times the Moon is on the Equator but becomes diurnal around the times of maximum north or south declination of the Moon. In the Gulf of Mexico, consequently, the principal variations in the tide are due to the changing declination of the Moon. Key West, at the entrance to the Gulf of Mexico, has a type of tide which is a mixture of semidaily and daily types. Here the tide is semidiurnal but there is considerable inequality in the heights of high and low waters. By reference to the curves it will be seen that where the inequality is large there are times when there is but a few tenths of a foot difference between high water and low water.

TYPICAL TIDE CURVES FOR UNITED STATES PORTS

3



A discussion of these curves is given on the preceding page.

- Lunar data:
- A - Moon in apogee
 - O - last quarter
 - E - Moon on Equator
 - - new Moon

ARGENTIA, NEWFOUNDLAND, 1983

Times and Heights of High and Low Waters

JANUARY						FEBRUARY						MARCH					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m
1 0240	1.2 0.4	16 0255	2.2 0.7	1 0405	1.1 0.3	16 0355	1.6 0.5	1 0305	0.8 0.2	16 0300	1.4 0.4						
Sa 0930	8.7 2.7	Su 0935	7.8 2.4	Tu 1100	8.1 2.5	W 1015	7.4 2.3	Tu 0945	8.1 2.5	W 0925	7.4 2.3						
1525	1.5 0.5	1530	2.2 0.7	1625	1.5 0.5	1610	1.7 0.5	1525	1.1 0.3	1500	1.3 0.4						
2210	7.0 2.1	2135	6.7 2.0	2325	7.0 2.1	2225	7.1 2.2	2215	7.4 2.3	2125	7.4 2.3						
2 0330	1.3 0.4	17 0335	2.2 0.7	2 0455	1.3 0.4	17 0420	1.7 0.5	2 0355	0.8 0.2	17 0325	1.3 0.4						
Su 1030	8.5 2.6	M 1000	7.7 2.3	W 1150	7.5 2.3	Th 1050	7.1 2.2	W 1030	7.7 2.3	Th 0955	7.2 2.2						
1610	1.7 0.5	1610	2.2 0.7	1710	1.8 0.5	1640	1.6 0.5	1605	1.3 0.4	1545	1.3 0.4						
2300	6.9 2.1	2215	6.6 2.0			2300	7.1 2.2	2305	7.2 2.2	2215	7.4 2.3						
3 0415	1.5 0.5	18 0410	2.2 0.7	3 0025	6.8 2.1	18 0455	1.8 0.5	3 0420	1.1 0.3	18 0355	1.3 0.4						
M 1115	8.2 2.5	Tu 1050	7.4 2.3	Th 0525	1.8 0.5	F 1130	6.8 2.1	Th 1120	7.1 2.2	F 1030	6.9 2.1						
1650	1.9 0.6	1635	2.3 0.7	1235	6.9 2.1	1715	1.7 0.5	1640	1.6 0.5	1610	1.1 0.3						
2355	6.7 2.0	2255	6.6 2.0	1750	2.2 0.7	2355	7.0 2.1	2355	7.0 2.1	2255	7.4 2.3						
4 0510	1.8 0.5	19 0435	2.3 0.7	4 0120	6.7 2.0	19 0540	2.0 0.6	4 0515	1.6 0.5	19 0430	1.4 0.4						
Tu 1220	7.7 2.3	W 1125	7.2 2.2	F 0625	2.3 0.7	Sa 1215	6.4 2.0	F 1215	6.5 2.0	Sa 1105	6.6 2.0						
1730	2.3 0.7	1705	2.3 0.7	1330	6.4 2.0	1745	1.8 0.5	1700	2.0 0.6	1645	1.3 0.4						
		2345	6.6 2.0	1825	2.7 0.8					2335	7.2 2.2						
5 0050	6.6 2.0	20 0510	2.4 0.7	5 0215	6.5 2.0	20 0055	6.9 2.1	5 0040	6.7 2.0	20 0515	1.6 0.5						
W 0555	2.2 0.7	Th 1200	6.8 2.1	Sa 0720	2.8 0.9	Su 0620	2.3 0.7	Sa 0555	2.1 0.6	Su 1155	6.2 1.9						
1315	7.2 2.2	1730	2.4 0.7	1435	5.9 1.8	1310	6.1 1.9	1310	6.0 1.8	1725	1.4 0.4						
1825	2.7 0.8			1915	3.0 0.9	1840	2.0 0.6	1745	2.4 0.7								
6 0150	6.5 2.0	21 0015	6.7 2.0	6 0310	6.4 2.0	21 0145	6.9 2.1	6 0140	6.4 2.0	21 0020	7.0 2.1						
Th 0700	2.6 0.8	F 0555	2.6 0.8	Su 0905	3.2 1.0	M 0720	2.7 0.8	Su 0630	2.8 0.9	M 0550	2.0 0.6						
1425	6.7 2.0	1240	6.5 2.0	1530	5.6 1.7	1430	5.9 1.8	1355	5.6 1.7	1255	5.9 1.8						
1920	3.0 0.9	1815	2.4 0.7	2055	3.2 1.0	1950	2.3 0.7	1835	3.0 0.9	1800	1.8 0.5						
7 0255	6.5 2.0	22 0115	6.7 2.0	7 0405	6.4 2.0	22 0305	6.9 2.1	7 0235	6.2 1.9	22 0125	6.8 2.1						
F 0900	2.9 0.9	Sa 0650	2.8 0.9	M 1025	3.3 1.0	Tu 0855	2.9 0.9	M 0830	3.3 1.0	Tu 0645	2.5 0.8						
1515	6.3 1.9	1340	6.2 1.9	1630	5.6 1.7	1545	5.9 1.8	1500	5.3 1.6	1405	5.7 1.7						
2145	3.1 0.9	1915	2.5 0.8	2200	3.2 1.0	2105	2.4 0.7	1930	3.3 1.0	1900	2.3 0.7						
8 0350	6.6 2.0	23 0215	6.8 2.1	8 0505	6.5 2.0	23 0420	7.0 2.1	8 0335	6.0 1.8	23 0235	6.6 2.0						
Sa 1020	2.9 0.9	Su 0800	3.0 0.9	Tu 1125	3.2 1.0	W 1100	2.6 0.8	Tu 1030	3.4 1.0	W 0815	2.8 0.9						
1615	6.1 1.9	1450	6.1 1.9	1735	5.7 1.7	1710	6.1 1.9	1610	5.3 1.6	1535	5.7 1.7						
2230	3.0 0.9	2020	2.5 0.8	2310	3.1 0.9	2230	2.3 0.7	2205	3.4 1.0	2030	2.6 0.8						
9 0445	6.7 2.0	24 0335	7.0 2.1	9 0610	6.7 2.0	24 0540	7.4 2.3	9 0445	6.1 1.9	24 0410	6.7 2.0						
Su 1100	2.9 0.9	M 0925	3.0 0.9	W 1220	3.0 0.9	Th 1210	2.2 0.7	W 1125	3.2 1.0	Th 1115	2.4 0.7						
1710	6.0 1.8	1625	6.2 1.9	1820	6.0 1.8	1810	6.6 2.0	1710	5.5 1.7	1655	6.0 1.8						
2255	2.9 0.9	2145	2.4 0.7	2355	2.9 0.9	2355	2.0 0.6	2305	3.3 1.0	2300	2.4 0.7						
10 0540	6.9 2.1	25 0455	7.3 2.2	10 0655	7.0 2.1	25 0635	7.8 2.4	10 0545	6.4 2.0	25 0525	7.0 2.1						
M 1150	2.8 0.9	Tu 1115	2.6 0.8	Th 1255	2.7 0.8	F 1310	1.7 0.5	Th 1200	2.9 0.9	F 1200	1.9 0.6						
1800	6.1 1.9	1720	6.5 2.0	1855	6.3 1.9	1905	7.0 2.1	1755	5.8 1.8	1805	6.5 2.0						
2340	2.8 0.9	2300	2.1 0.6														
11 0620	7.1 2.2	26 0545	7.7 2.3	11 0050	2.6 0.8	26 0055	1.6 0.5	11 0000	2.9 0.9	26 0015	1.9 0.6						
Tu 1230	2.7 0.8	W 1225	2.2 0.7	F 0725	7.3 2.2	Sa 0740	8.2 2.5	F 0630	6.7 2.0	Sa 0630	7.4 2.3						
1835	6.3 1.9	1815	6.8 2.1	1335	2.4 0.7	1345	1.3 0.4	1245	2.6 0.8	1245	1.5 0.5						
				1930	6.6 2.0	1955	7.3 2.2	1830	6.2 1.9	1855	7.0 2.1						
12 0010	2.6 0.8	27 0000	1.8 0.5	12 0130	2.3 0.7	27 0150	1.2 0.4	12 0045	2.6 0.8	27 0055	1.4 0.4						
W 0710	7.4 2.3	Th 0655	8.1 2.5	Sa 0805	7.6 2.3	Su 0815	8.4 2.6	Sa 0715	7.1 2.2	Su 0725	7.7 2.3						
1310	2.6 0.8	1320	1.9 0.6	1415	2.2 0.7	1430	1.1 0.3	1315	2.3 0.7	1325	1.2 0.4						
1910	6.4 2.0	1920	7.1 2.2	2005	6.8 2.1	2045	7.5 2.3	1905	6.6 2.0	1940	7.4 2.3						
13 0050	2.5 0.8	28 0055	1.6 0.5	13 0215	2.1 0.6	28 0230	0.9 0.3	13 0125	2.2 0.7	28 0140	1.0 0.3						
Th 0745	7.6 2.3	F 0745	8.5 2.6	Su 0845	7.8 2.4	M 0900	8.4 2.6	Su 0745	7.3 2.2	M 0800	7.9 2.4						
1345	2.4 0.7	1410	1.5 0.5	1435	2.0 0.6	1455	1.0 0.3	1355	2.0 0.6	1400	1.0 0.3						
1955	6.6 2.0	2005	7.2 2.2	2035	7.0 2.1	2125	7.5 2.3	1950	6.9 2.1	2020	7.6 2.3						
14 0130	2.4 0.7	29 0200	1.4 0.4	14 0245	1.9 0.6			14 0155	1.8 0.5	29 0225	0.7 0.2						
F 0825	7.7 2.3	Sa 0830	8.7 2.7	M 0900	7.8 2.4			M 0815	7.5 2.3	Tu 0855	7.8 2.7						
1430	2.3 0.7	1450	1.4 0.4	1500	1.8 0.5			1415	1.7 0.5	1430	0.9 0.						
2020	6.7 2.0	2100	7.3 2.2	2110	7.1 2.2			2020	7.2 2.2	2100	7.7 2.						
15 0220	2.3 0.7	30 0240	1.2 0.4	15 0315	1.7 0.5			15 0230	1.6 0.5	30 0255	0.7						
Sa 0855	7.8 2.4	Su 0925	8.6 2.6	Tu 0945	7.7 2.3			Tu 0855	7.6 2.3	W 0935	7.5						
1510	2.2 0.7	1515	1.3 0.4	1530	1.7 0.5			1445	1.5 0.5	1505	1.7						
2100	6.7 2.0	2155	7.3 2.2	2145	7.1 2.2			2050	7.4 2.3	2155	7.						
		31 0320	1.2 0.4							31 0335							
		M 1015	8.4 2.6							Th 1015							
		1600	1.4 0.4							1540							
		2235	7.2 2.2							2235							

Time meridian 52° 30' W. 0000 is midnight. 1200 is noon.
 Heights are referred to the Canadian chart datum of soundings. Subtract 1.7 feet (0.5 meter) to refer to the datum of N.O.S. charts.

31 0335

Th 1015

1540

2235

Times and Heights of High and Low Waters

APRIL				MAY				JUNE			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0415	1.0	0.3	16 0350	1.0	0.3	1 0425	1.4	0.4	16 0405	1.1	0.3
F 1045	6.6	2.0	Sa 1010	6.7	2.0	Su 1110	5.9	1.8	M 1045	6.2	1.9
1600	1.3	0.4	1545	0.8	0.2	1620	1.7	0.5	1615	0.9	0.3
2315	7.0	2.1	2240	7.5	2.3	2325	6.7	2.0	2315	7.4	2.3
2 0450	1.4	0.4	17 0420	1.2	0.4	2 0500	2.0	0.6	17 0445	1.4	0.4
Sa 1130	6.1	1.9	Su 1055	6.3	1.9	M 1145	5.5	1.7	Tu 1140	5.9	1.8
1655,	1.7	0.5	1620	1.0	0.3	1655	2.2	0.7	1650	1.2	0.4
			2325	7.3	2.2				1730	2.3	0.7
3 0010	6.7	2.0	18 0455	1.4	0.4	3 0025	6.4	2.0	18 0015	7.1	2.2
Su 0525	1.9	0.6	M 1150	5.9	1.8	Tu 0545	2.5	0.8	W 0520	1.8	0.5
1220	5.6	1.7	1710	1.3	0.4	1250	5.2	1.6	1255	5.7	1.7
1725	2.2	0.7				1730	2.7	0.8	1750	1.7	0.5
4 0100	6.3	1.9	19 0015	7.0	2.1	4 0130	6.1	1.9	19 0130	6.8	2.1
M 0615	2.6	0.8	Tu 0540	1.9	0.6	W 0630	3.0	0.9	Th 0620	2.2	0.7
1335	5.3	1.6	1250	5.6	1.7	1355	5.1	1.6	1400	5.7	1.7
1805	2.8	0.9	1755	1.8	0.5	1820	3.1	0.9	1905	2.2	0.7
5 0200	6.0	1.8	20 0115	6.7	2.0	5 0230	5.9	1.8	20 0220	6.5	2.0
Tu 0715	3.2	1.0	W 0630	2.4	0.7	Th 0905	3.1	0.9	F 0945	2.4	0.7
1445	5.2	1.6	1420	5.5	1.7	1450	5.2	1.6	1510	5.8	1.8
1910	3.3	1.0	1900	2.4	0.7	2105	3.3	1.0	2140	2.2	0.7
6 0305	5.9	1.8	21 0230	6.5	2.0	6 0315	5.8	1.8	21 0335	6.3	1.9
W 0945	3.2	1.0	Th 1000	2.5	0.8	F 1000	2.9	0.9	Sa 1035	2.0	0.6
1545	5.2	1.6	1540	5.7	1.7	1600	5.4	1.6	1620	6.1	1.9
2150	3.4	1.0	2130	2.5	0.8	2210	3.1	0.9	2245	1.9	0.6
7 0410	5.9	1.8	22 0345	6.5	2.0	7 0420	5.8	1.8	22 0445	6.2	1.9
Th 1055	3.1	0.9	F 1100	2.2	0.7	Sa 1050	2.7	0.8	Su 1115	1.9	0.6
1635	5.4	1.6	1640	6.1	1.9	1645	5.7	1.7	1730	6.5	2.0
2250	3.2	1.0	2300	2.1	0.6	2310	2.7	0.8	2340	1.6	0.5
8 0500	6.0	1.8	23 0500	6.6	2.0	8 0520	5.9	1.8	23 0545	6.4	2.0
F 1125	2.9	0.9	Sa 1145	1.8	0.5	Su 1140	2.4	0.7	M 1150	1.6	0.5
1730	5.7	1.7	1745	6.5	2.0	1735	6.1	1.9	1815	6.9	2.1
2335	2.8	0.9	2345	1.7	0.5	2345	2.3	0.7			
9 0600	6.3	1.9	24 0615	6.8	2.1	9 0600	6.2	1.9	24 0030	1.3	0.4
Sa 1200	2.5	0.8	Su 1220	1.5	0.5	M 1205	2.0	0.6	Tu 0650	6.4	2.0
1800	6.2	1.9	1840	7.0	2.1	1820	6.6	2.0	1225	1.2	0.4
						1805	7.2	2.2	1910	7.4	2.3
10 0015	2.4	0.7	25 0040	1.3	0.4	10 0030	1.8	0.5	25 0105	1.1	0.3
Su 0645	6.6	2.0	M 0705	7.1	2.2	Tu 0645	6.5	2.0	W 0725	6.5	2.0
1245	2.2	0.7	1255	1.3	0.4	1245	1.7	0.5	1300	1.4	0.4
1855	6.6	2.0	1925	7.4	2.3	1855	7.0	2.1	1940	7.4	2.3
11 0055	2.0	0.6	26 0120	0.9	0.3	11 0115	1.4	0.4	26 0145	1.0	0.3
M 0715	7.0	2.1	Tu 0750	7.2	2.2	W 0730	6.7	2.0	Th 0810	6.5	2.0
1315	1.8	0.5	1330	1.1	0.3	1315	1.3	0.4	1340	1.3	0.4
1920	7.0	2.1	2000	7.6	2.3	1930	7.4	2.3	2025	7.4	2.3
12 0130	1.5	0.5	27 0205	0.7	0.2	12 0155	1.1	0.3	27 0225	1.0	0.3
Tu 0755	7.1	2.2	W 0835	7.1	2.2	Th 0810	6.9	2.1	F 0835	6.4	2.0
1355	1.4	0.4	1405	1.0	0.3	1350	1.0	0.3	1400	1.2	0.4
2000	7.3	2.2	2050	7.6	2.3	2015	7.7	2.3	2055	7.4	2.3
13 0205	1.2	0.4	28 0230	0.7	0.2	13 0230	1.0	0.3	28 0250	1.1	0.3
W 0830	7.2	2.2	Th 0905	6.9	2.1	F 0840	6.9	2.1	Sa 0910	6.2	1.9
1415	1.2	0.4	1440	1.0	0.3	1420	0.8	0.2	1450	1.3	0.4
2030	7.5	2.3	2120	7.5	2.3	2055	7.8	2.4	2140	7.2	2.2
14 0240	1.0	0.3	29 0305	0.8	0.2	14 0250	0.9	0.3	29 0325	1.3	0.4
Th 0905	7.1	2.2	F 0945	6.6	2.0	Sa 0920	6.8	2.1	Su 0955	6.1	1.9
1450	1.0	0.3	1515	1.1	0.3	1450	0.7	0.2	1525	1.5	0.5
2110	7.6	2.3	2210	7.3	2.2	2135	7.8	2.4	2220	7.0	2.1
15 0305	1.0	0.3	30 0350	1.1	0.3	15 0325	0.9	0.3	30 0410	1.6	0.5
F 0935	6.9	2.1	Sa 1025	6.2	1.9	Su 1000	6.5	2.0	M 1025	5.8	1.8
1515	0.8	0.2	1545	1.4	0.4	1530	0.7	0.2	1600	1.8	0.5
2150	7.6	2.3	2240	7.0	2.1	2215	7.6	2.3	2305	6.8	2.1
						31 0445	1.9	0.6			
						Tu 1120	5.6	1.7			
						1635	2.1	0.6			
						2345	6.5	2.0			

Time meridian 52° 30' W. 0000 is midnight. 1200 is noon.
 Heights are referred to the Canadian chart datum of soundings. Subtract 1.7 feet (0.5 meter) to refer these levels to the datum of N.O.S. charts.

Times and Heights of High and Low Waters

JULY				AUGUST				SEPTEMBER			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0520	2.1	0.6	16 0030	6.9	2.1	1 0020	6.0	1.8	16 0210	5.7	1.7
F 1205	5.7	1.7	Sa 0550	1.7	0.5	M 0610	1.9	0.6	Tu 0710	2.4	0.7
1730	2.2	0.7	1320	6.2	1.9	1255	6.2	1.9	1440	6.1	1.9
			1820	1.6	0.5	1830	2.2	0.7	2020	2.6	0.8
2 0025	6.2	1.9	17 0130	6.4	2.0	2 0115	5.7	1.7	17 0310	5.4	1.6
Sa 0600	2.3	0.7	Su 0645	2.1	0.6	Tu 0650	2.0	0.6	W 0810	2.7	0.8
1245	5.7	1.7	1420	6.1	1.9	1350	6.2	1.9	1550	6.0	1.8
1810	2.4	0.7	1930	2.1	0.6	1925	2.4	0.7	2230	2.9	0.9
3 0100	5.8	1.8	18 0240	5.9	1.8	3 0215	5.6	1.7	18 0410	5.2	1.6
Su 0645	2.5	0.8	M 0815	2.4	0.7	W 0755	2.1	0.6	Th 0930	2.8	0.9
1335	5.7	1.7	1515	6.1	1.9	1455	6.3	1.9	1645	6.1	1.9
1905	2.6	0.8	2145	2.2	0.7	2045	2.6	0.8	2340	2.9	0.9
4 0205	5.6	1.7	19 0350	5.5	1.7	4 0325	5.5	1.7	19 0510	5.3	1.6
M 0730	2.5	0.8	Tu 0945	2.5	0.8	Th 0900	2.0	0.6	F 1055	2.7	0.8
1445	5.9	1.8	1620	6.1	1.9	1600	6.6	2.0	1800	6.3	1.9
2015	2.6	0.8	2245	2.3	0.7	2215	2.4	0.7			
5 0310	5.4	1.6	20 0450	5.4	1.6	5 0445	5.7	1.7	20 0010	2.7	0.8
Tu 0905	2.4	0.7	W 1045	2.5	0.8	F 1015	1.8	0.5	Sa 0605	5.6	1.7
1550	6.1	1.9	1710	6.2	1.9	1715	6.9	2.1	1155	2.5	0.8
2200	2.5	0.8	2330	2.3	0.7	2340	2.1	0.6	1835	6.6	2.0
6 0425	5.5	1.7	21 0535	5.4	1.6	6 0550	6.1	1.9	21 0050	2.5	0.8
W 1005	2.1	0.6	Th 1115	2.4	0.7	Sa 1125	1.5	0.5	Su 0640	5.8	1.8
1655	6.5	2.0	1815	6.4	2.0	1820	7.4	2.3	1240	2.3	0.7
2305	2.2	0.7							1915	6.9	2.1
7 0520	5.8	1.8	22 0020	2.3	0.7	7 0045	1.6	0.5	22 0120	2.2	0.7
Th 1105	1.7	0.5	F 0620	5.6	1.7	Su 0645	6.5	2.0	M 0715	6.1	1.9
1750	6.9	2.1	1205	2.3	0.7	1235	1.2	0.4	1310	2.0	0.6
			1850	6.6	2.0	1925	7.9	2.4	1955	8.2	2.5
8 0010	1.9	0.6	23 0100	2.2	0.7	8 0135	1.2	0.4	23 0145	1.9	0.6
F 0620	6.1	1.9	Sa 0710	5.8	1.8	M 0740	6.8	2.1	Tu 0745	6.4	2.0
1145	1.3	0.4	1245	2.1	0.6	1325	0.9	0.3	1350	1.8	0.5
1840	7.4	2.3	1930	6.9	2.1	2005	8.2	2.5	2025	7.3	2.2
9 0055	1.6	0.5	24 0145	2.1	0.6	9 0215	0.9	0.3	24 0215	1.7	0.5
Sa 0700	6.4	2.0	Su 0740	6.0	1.8	Tu 0830	6.9	2.1	W 0815	6.6	2.0
1235	1.1	0.3	1330	2.0	0.6	1415	0.7	0.2	1430	1.6	0.5
1940	7.7	2.3	2010	7.0	2.1	2100	8.2	2.5	2055	7.3	2.2
10 0145	1.3	0.4	25 0225	1.9	0.6	10 0250	0.8	0.2	25 0250	1.6	0.5
Su 0755	6.6	2.0	M 0815	6.1	1.9	W 0920	7.0	2.1	Th 0855	6.7	2.0
1335	0.9	0.3	1410	1.8	0.5	1500	0.5	0.2	1505	1.5	0.5
2020	8.0	2.4	2055	7.2	2.2	2150	8.1	2.5	2130	7.2	2.2
11 0230	1.1	0.3	26 0250	1.8	0.5	11 0330	0.8	0.2	26 0315	1.5	0.5
M 0850	6.6	2.0	Tu 0845	6.2	1.9	Th 1005	6.9	2.1	F 0935	6.7	2.0
1415	0.7	0.2	1445	1.7	0.5	1545	0.5	0.2	1540	1.2	0.4
2115	8.1	2.5	2120	7.2	2.2	2240	7.8	2.4	2205	7.0	2.1
12 0315	1.0	0.3	27 0320	1.7	0.5	12 0415	0.9	0.3	27 0345	1.3	0.4
Tu 0930	6.6	2.0	W 0925	6.2	1.9	F 1105	6.8	2.1	Sa 1000	6.7	2.0
1510	0.7	0.2	1525	1.7	0.5	1620	0.7	0.2	1610	1.4	0.4
2210	8.1	2.5	2200	7.1	2.2	2325	7.4	2.3	2230	6.7	2.0
13 0350	1.0	0.3	28 0355	1.7	0.5	13 0450	1.2	0.4	28 0420	1.5	0.5
W 1025	6.5	2.0	Th 1005	6.2	1.9	Sa 1155	6.6	2.0	Su 1045	6.7	2.1
1600	0.7	0.2	1600	1.7	0.5	1700	1.0	0.3	1635	1.6	0.5
2250	7.8	2.4	2235	6.9	2.1				2310	6.4	2.0
14 0425	1.1	0.3	29 0415	1.7	0.5	14 0025	6.8	2.1	29 0450	1.5	0.5
Th 1115	6.4	2.0	F 1040	6.2	1.9	Su 0515	1.5	0.5	M 1140	6.7	2.0
1640	0.9	0.3	1625	1.8	0.5	1255	6.5	2.0	1710	1.8	0.5
2345	7.4	2.3	2315	6.7	2.0	1755	1.5	0.5	2350	6.1	1.9
15 0505	1.4	0.4	30 0445	1.9	0.6	15 0110	6.2	1.9	30 0525	1.7	0.5
F 1225	6.3	1.9	Sa 1120	6.1	1.9	M 0615	2.0	0.6	Tu 1230	6.6	2.0
1720	1.2	0.4	1700	1.9	0.6	1345	6.3	1.9	1755	2.1	0.6
			2335	6.3	1.9	1900	2.1	0.6			
31 0520	1.9	0.6				31 0040	5.8	1.8			
Su 1200	6.1	1.9				W 0605	1.8	0.5			
1730	2.0	0.6				1320	6.5	2.0			
						1855	2.4	0.7			

Time meridian 52° 30' W. 0000 is midnight. 1200 is noon.
 Heights are referred to the Canadian chart datum of soundings. Subtract 1.7 feet (0.5 meter) to refer these levels to the datum of N.O.S. charts.

Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0315	5.7	1.7	16 0420	5.6	1.7	1 0505	6.8	2.1	16 0515	6.5	2.0	1 0540	7.4	2.3	16 0515	6.9	2.1
Sa 0825	2.6	0.8	Su 1035	3.2	1.0	Tu 1125	2.0	0.6	W 1130	2.8	0.9	Th 1140	1.9	0.6	F 1140	2.7	0.8
1530	6.7	2.0	1650	6.4	2.0	1730	7.3	2.2	1755	6.7	2.0	1805	7.0	2.1	1750	6.4	2.0
2245	2.7	0.8	2320	3.0	0.9	2350	1.8	0.5	2350	2.5	0.8	2350	1.9	0.6	2330	2.4	0.7
2 0415	6.0	1.8	17 0505	5.9	1.8	2 0600	7.3	2.2	17 0600	6.9	2.1	2 0630	7.7	2.3	17 0600	7.4	2.3
Su 1020	2.4	0.7	M 1115	2.9	0.9	W 1210	1.6	0.5	Th 1215	2.4	0.7	F 1220	1.7	0.5	Sa 1210	2.4	0.7
1655	7.0	2.1	1745	6.6	2.0	1840	7.5	2.3	1835	6.9	2.1	1850	7.0	2.1	1825	6.7	2.0
2340	2.2	0.7	2350	2.7	0.8												
3 0525	6.5	2.0	18 0550	6.3	1.9	3 0035	1.5	0.5	18 0020	2.2	0.7	3 0015	1.8	0.5	18 0010	2.0	0.6
M 1115	2.0	0.6	Tu 1200	2.6	0.8	Th 0655	7.7	2.3	F 0635	7.4	2.3	Sa 0715	7.9	2.4	Su 0645	7.8	2.4
1750	7.4	2.3	1825	6.8	2.1	1255	1.3	0.4	1250	2.1	0.6	1315	1.6	0.5	1250	2.2	0.7
						1920	7.6	2.3	1900	7.1	2.2	1940	7.0	2.1	1900	7.0	2.1
4 0015	1.7	0.5	19 0020	2.4	0.7	4 0110	1.3	0.4	19 0050	1.9	0.6	4 0100	1.7	0.5	19 0045	1.7	0.5
Tu 0620	7.0	2.1	W 0635	6.7	2.0	F 0740	8.0	2.4	Sa 0720	7.7	2.3	Su 0750	8.0	2.4	M 0725	8.2	2.5
1225	1.5	0.5	1235	2.2	0.7	1330	1.0	0.3	1335	1.9	0.6	1350	1.6	0.5	1335	2.0	0.6
1850	7.7	2.3	1910	7.1	2.2	2010	7.6	2.3	1945	7.2	2.2	2010	6.9	2.1	1955	7.1	2.2
5 0050	1.3	0.4	20 0055	2.1	0.6	5 0135	1.2	0.4	20 0120	1.6	0.5	5 0135	1.7	0.5	20 0120	1.5	0.5
W 0720	7.4	2.3	Th 0715	7.1	2.2	Sa 0815	8.1	2.5	Su 0755	8.0	2.4	M 0840	8.0	2.4	Tu 0810	8.2	2.6
1300	1.0	0.3	1315	1.9	0.6	1415	1.0	0.3	1410	1.7	0.5	1420	1.7	0.5	1415	1.8	0.5
1945	8.0	2.4	1935	7.2	2.2	2045	7.4	2.3	2020	7.2	2.2	2055	6.7	2.0	2030	7.0	2.1
6 0135	1.0	0.3	21 0125	1.8	0.5	6 0210	1.3	0.4	21 0155	1.5	0.5	6 0220	1.8	0.5	21 0215	1.4	0.4
Th 0805	7.7	2.3	F 0740	7.4	2.3	Su 0910	8.1	2.5	M 0840	8.2	2.5	Tu 0920	7.8	2.4	W 0900	8.5	2.6
1345	0.7	0.2	1345	1.6	0.5	1450	1.1	0.3	1440	1.7	0.5	1515	1.9	0.6	1455	1.8	0.5
2030	8.0	2.4	2005	7.3	2.2	2115	7.1	2.2	2050	7.1	2.2	2125	6.5	2.0	2115	7.0	2.1
7 0200	0.9	0.3	22 0155	1.6	0.5	7 0300	1.4	0.4	22 0230	1.4	0.4	7 0300	1.9	0.6	22 0250	1.3	0.4
F 0850	7.8	2.4	Sa 0815	7.6	2.3	M 0945	7.8	2.4	Tu 0910	8.2	2.5	W 1005	7.7	2.3	Th 0955	8.4	2.6
1435	0.6	0.2	1415	1.5	0.5	1525	1.5	0.5	1500	1.7	0.5	1550	2.2	0.7	1530	1.8	0.5
2110	7.8	2.4	2045	7.2	2.2	2205	6.7	2.0	2130	6.9	2.1	2210	6.3	1.9	2215	6.8	2.1
8 0240	1.0	0.3	23 0225	1.4	0.4	8 0320	1.7	0.5	23 0310	1.3	0.4	8 0345	2.2	0.7	23 0335	1.4	0.4
Sa 0925	7.8	2.4	Su 0850	7.7	2.3	Tu 1025	7.5	2.3	W 1000	8.1	2.5	Th 1050	7.4	2.3	F 1030	8.3	2.5
1505	0.7	0.2	1450	1.5	0.5	1615	1.9	0.6	1545	1.9	0.6	1620	2.5	0.8	1620	1.9	0.6
2145	7.4	2.3	2115	7.0	2.1	2245	6.2	1.9	2210	6.6	2.0	2305	6.1	1.9	2305	6.7	2.0
9 0315	1.1	0.3	24 0255	1.3	0.4	9 0405	2.0	0.6	24 0350	1.5	0.5	9 0420	2.5	0.8	24 0420	1.6	0.5
Su 1010	7.6	2.3	M 0935	7.7	2.3	W 1115	7.2	2.2	Th 1050	7.9	2.4	F 1135	7.2	2.2	Sa 1130	8.0	2.4
1555	1.0	0.3	1520	1.5	0.5	1645	2.4	0.7	1620	2.1	0.6	1700	2.8	0.9	1705	2.0	0.6
2235	6.9	2.1	2145	6.8	2.1	2345	5.9	1.8	2305	6.4	2.0	2350	5.9	1.8			
10 0350	1.4	0.4	25 0325	1.3	0.4	10 0440	2.5	0.8	25 0425	1.8	0.5	10 0515	2.9	0.9	25 0010	6.6	2.0
M 1100	7.2	2.2	Tu 1005	7.7	2.3	Th 1235	6.9	2.1	F 1140	7.7	2.3	Sa 1220	6.9	2.1	Su 0510	1.9	0.6
1620	1.5	0.5	1600	1.7	0.5	1720	2.9	0.9	1705	2.3	0.7	1800	3.1	0.9	1215	7.7	2.3
2320	6.4	2.0	2225	6.5	2.0										1800	2.3	0.7
11 0425	1.8	0.5	26 0405	1.4	0.4	11 0100	5.7	1.7	26 0015	6.2	1.9	11 0050	5.8	1.8	26 0100	6.5	2.0
Tu 1150	6.9	2.1	W 1055	7.5	2.3	F 0525	3.0	0.9	Sa 0515	2.2	0.7	Su 0600	3.2	1.0	M 0600	2.2	0.7
1710	2.1	0.6	1640	2.0	0.6	1320	6.6	2.0	1250	7.4	2.3	1310	6.6	2.0	1315	7.3	2.2
			2310	6.2	1.9	1825	3.4	1.0	1800	2.7	0.8	1850	3.4	1.0	1840	2.6	0.8
12 0015	5.9	1.8	27 0450	1.7	0.5	12 0145	5.7	1.7	27 0130	6.2	1.9	12 0140	5.8	1.8	27 0210	6.6	2.0
W 0515	2.3	0.7	Th 1155	7:3	2.2	Sa 0615	3.4	1.0	Su 0620	2.6	0.8	M 0700	3.5	1.1	Tu 0720	2.5	0.8
1250	6.6	2.0	1710	2.3	0.7	1425	6.5	2.0	1345	7.2	2.2	1355	6.3	1.9	1425	6.8	2.1
1800	2.8	0.9				2105	3.5	1.1	1925	2.9	0.9	2020	3.5	1.1	2025	2.7	0.8
13 0130	5.5	1.7	28 0015	5.9	1.8	13 0255	5.7	1.7	28 0240	6.4	2.0	13 0235	5.9	1.8	28 0325	6.7	2.0
Th 0545	2.8	0.9	F 0525	2.1	0.6	Su 0850	3.6	1.1	M 0840	2.7	0.8	Tu 0840	3.6	1.1	W 0930	2.7	0.8
1355	6.4	2.0	1250	7.0	2.1	1500	6.4	2.0	1455	7.0	2.1	1455	6.1	1.9	1530	6.5	2.0
1920	3.4	1.0	1810	2.7	0.8	2155	3.3	1.0	2145	2.6	0.8	2140	3.3	1.0	2150	2.7	0.8
14 0235	5.4	1.6	29 0140	5.8	1.8	14 0340	5.8	1.8	29 0345	6.7	2.0	14 0330	6.2	1.9	29 0420	6.9	2.1
F 0710	3.3	1.0	Sa 0615	2.5	0.8	M 0955	3.4	1.0	Tu 1005	2.5	0.8	W 0945	3.4	1.0	Th 1035	2.5	0.8
1455	6.3	1.9	1405	6.9	2.1	1610	6.4	2.0	1610	6.9	2.1	1600	6.1	1.9	1645	6.4	2.0
2145	3.4	1.0	1900	3.1	0.9	2240	3.1	0.9	2250	2.3	0.7	2215	3.1	0.9	2230	2.5	0.8
15 0330	5.4	1.6	30 0255	6.0	1.8	15 0425	6.1	1.9	30 0450	7.0	2.1	15 0425	6.5	2.0	30 0510	7.2	2.2
Sa 0945	3.4	1.0	Su 0820	2.8	0.9	Tu 1055	3.1	0.9	W 1105	2.1	0.6	Th 1055	3.0	0.9	F 1125	2.4	0.7
1555	6.3	1.9	1525	6.9	2.1	1700	6.5	2.0	1715	6.9	2.1	1655	6.2	1.9	1740	6.4	2.0
2240	3.3	1.0	2230	2.6	0.8	2320	2.9	0.9	2330	2.1	0.6	2245	2.7	0.8	2315	2.4	0.7
			31 0410	6.4	2.0										31 0610	7.5	2.3
			M 1020	2.5	0.8										Sa 1215	2.3	0.7
			1630	7.0	2.1										1830	6.4	2.0
			2315	2.2	0.7										2355	2.3	0.7

Time meridian 52° 30' W. 0000 is midnight. 1200 is noon.
 Heights are referred to the Canadian chart datum of soundings. Subtract 1.7 feet (0.5 meter) to refer these levels to the datum of N.O.S. charts.

EASTPORT, MAINE, 1983

Times and Heights of High and Low Waters

JANUARY						FEBRUARY						MARCH					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0553	-1.5	-0.5	16 0614	1.2	0.4	1 0105	20.2	6.2	16 0046	18.0	5.5	1 0613	-2.6	-0.8	16 0559	-0.4	-0.1
Sa 1157	21.3	6.5	Su 1212	18.1	5.5	Tu 0723	-2.0	-0.6	W 0704	0.4	0.1	Tu 1217	21.0	6.4	W 1158	18.8	5.7
1827	-3.1	-0.9	1839	0.1	0.0	1326	20.6	6.3	1302	18.3	5.6	1837	-2.9	-0.9	1817	-0.5	-0.2
						1950	-2.4	-0.7	1923	0.0	0.0						
2 0030	19.7	6.0	17 0038	17.0	5.2	2 0155	19.8	6.0	17 0123	18.0	5.5	2 0041	20.5	6.2	17 0016	18.8	5.7
Su 0647	-1.5	-0.5	M 0652	1.2	0.4	W 0814	-1.4	-0.4	Th 0742	0.4	0.1	W 0700	-2.4	-0.7	Th 0636	-0.5	-0.2
1251	21.0	6.4	1249	18.0	5.5	1419	19.6	6.0	1342	18.0	5.5	1305	20.3	6.2	1235	18.7	5.7
1920	-2.8	-0.9	1917	0.2	0.1	2040	-1.5	-0.5	2003	0.3	0.1	1924	-2.1	-0.6	1854	-0.3	-0.1
3 0125	19.5	5.9	18 0115	17.1	5.2	3 0248	19.1	5.8	18 0204	18.0	5.5	3 0128	20.0	6.1	18 0053	18.9	5.8
M 0741	-1.2	-0.4	Tu 0731	1.3	0.4	Th 0907	-0.7	-0.2	F 0824	0.6	0.2	Th 0750	-1.7	-0.5	F 0716	-0.5	-0.2
1345	20.3	6.2	1329	17.8	5.4	1512	18.4	5.6	1424	17.6	5.4	1352	19.3	5.9	1316	18.4	5.6
2013	-2.2	-0.7	1955	0.5	0.2	2133	-0.4	-0.1	2045	0.7	0.2	2011	-1.0	-0.3	1933	0.1	0.0
4 0219	19.1	5.8	19 0155	17.1	5.2	4 0340	18.4	5.6	19 0248	17.9	5.5	4 0216	19.2	5.9	19 0135	18.8	5.7
Tu 0837	-0.8	-0.2	W 0813	1.4	0.4	F 1002	0.2	0.1	Sa 0912	0.8	0.2	F 0837	-0.8	-0.2	Sa 0758	-0.3	-0.1
1441	19.4	5.9	1411	17.5	5.3	1607	17.3	5.3	1514	17.1	5.2	1442	18.0	5.5	1358	17.9	5.5
2107	-1.4	-0.4	2035	0.7	0.2	2226	0.7	0.2	2133	1.2	0.4	2101	0.2	0.1	2016	0.6	0.2
5 0315	18.7	5.7	20 0237	17.1	5.2	5 0435	17.6	5.4	20 0338	17.7	5.4	5 0305	18.2	5.5	20 0221	18.5	5.6
W 0935	-0.2	-0.1	Th 0858	1.5	0.5	Sa 1100	0.9	0.3	Su 1005	1.0	0.3	Sa 0929	0.3	0.1	Su 0847	0.1	0.0
1540	18.5	5.6	1457	17.1	5.2	1708	16.3	5.0	1609	16.7	5.1	1533	16.8	5.1	1450	17.3	5.3
2203	-0.6	-0.2	2120	1.0	0.3	2322	1.6	0.5	2227	1.6	0.5	2152	1.4	0.4	2107	1.1	0.3
6 0414	18.2	5.5	21 0325	17.1	5.2	6 0534	17.0	5.2	21 0434	17.6	5.4	6 0359	17.2	5.2	21 0312	18.1	5.5
Th 1034	0.3	0.1	F 0945	1.6	0.5	Su 1159	1.4	0.4	M 1105	1.0	0.3	Su 1024	1.2	0.4	M 0941	0.5	0.2
1641	17.6	5.4	1545	16.8	5.1	1808	15.7	4.8	1710	16.4	5.0	1629	15.8	4.8	1546	16.7	5.1
2300	0.2	0.1	2207	1.3	0.4				2328	1.8	0.5	2247	2.3	0.7	2205	1.6	0.5
7 0513	17.9	5.5	22 0413	17.2	5.2	7 0022	2.2	0.7	22 0537	17.7	5.4	7 0455	16.4	5.0	22 0412	17.7	5.4
F 1135	0.6	0.2	Sa 1039	1.5	0.5	M 0635	16.7	5.1	Tu 1210	0.8	0.2	M 1124	1.9	0.6	Tu 1044	0.8	0.2
1742	16.9	5.2	1640	16.5	5.0	1259	1.6	0.5	1816	16.4	5.0	1729	15.1	4.6	1650	16.4	5.0
2359	0.8	0.2	2300	1.5	0.5	1908	15.5	4.7				2346	2.9	0.9	2309	1.9	0.6
8 0610	17.6	5.4	23 0508	17.4	5.3	8 0119	2.4	0.7	23 0033	1.6	0.5	8 0555	16.0	4.9	23 0517	17.6	5.4
Sa 1235	0.8	0.2	Su 1136	1.2	0.4	Tu 0730	16.7	5.1	W 0642	18.1	5.5	Tu 1224	2.2	0.7	W 1150	0.7	0.2
1842	16.5	5.0	1739	16.5	5.0	1357	1.4	0.4	1315	0.2	0.1	1832	14.9	4.5	1759	16.5	5.0
			2358	1.5	0.5	2004	15.6	4.8	1922	17.0	5.2						
9 0056	1.2	0.4	24 0607	17.8	5.4	9 0215	2.3	0.7	24 0138	1.0	0.3	9 0046	3.0	0.9	24 0017	1.6	0.5
Su 0708	17.6	5.4	M 1235	0.7	0.2	W 0822	16.9	5.2	Th 0748	18.9	5.8	W 0655	16.1	4.9	Th 0626	17.9	5.5
1333	0.7	0.2	1840	16.7	5.1	1449	1.1	0.3	1418	-0.7	-0.2	1324	2.0	0.6	1258	0.2	0.1
1940	16.4	5.0				2054	15.9	4.8	2025	17.8	5.4	1931	15.2	4.6	1908	17.1	5.2
10 0152	1.4	0.4	25 0057	1.3	0.4	10 0304	1.9	0.6	25 0241	0.0	0.0	10 0143	2.7	0.8	25 0124	0.9	0.3
M 0801	17.6	5.4	Tu 0706	18.4	5.6	Th 0910	17.3	5.3	F 0847	19.8	6.0	Th 0751	16.4	5.0	F 0732	18.6	5.7
1426	0.6	0.2	1336	0.0	0.0	1536	0.7	0.2	1516	-1.7	-0.5	1417	1.6	0.5	1401	-0.6	-0.2
2033	16.4	5.0	1943	17.2	5.2	2139	16.3	5.0	2122	18.8	5.7	2023	15.7	4.8	2009	18.0	5.5
11 0242	1.5	0.5	26 0158	0.7	0.2	11 0350	1.5	0.5	26 0339	-1.0	-0.3	11 0234	2.1	0.6	26 0225	-0.1	0.0
Tu 0849	17.7	5.4	W 0805	19.2	5.9	F 0953	17.7	5.4	Sa 0945	20.6	6.3	F 0841	17.0	5.2	Sa 0833	19.4	5.9
1515	0.4	0.1	1436	-0.9	-0.3	1618	0.3	0.1	1611	-2.6	-0.8	1505	1.0	0.3	1500	-1.5	-0.5
2120	16.5	5.0	2041	18.0	5.5	2220	16.8	5.1	2216	19.8	6.0	2109	16.4	5.0	2105	19.1	5.8
12 0331	1.4	0.4	27 0255	-0.1	0.0	12 0432	1.1	0.3	27 0432	-1.9	-0.6	12 0321	1.4	0.4	27 0323	-1.2	-0.4
W 0933	17.9	5.5	Th 0903	20.1	6.1	Sa 1032	18.1	5.5	Su 1037	21.2	6.5	Sa 0924	17.6	5.4	Su 0929	20.2	6.2
1601	0.2	0.1	1534	-1.9	-0.6	1658	0.0	0.0	1702	-3.1	-0.9	1547	0.4	0.1	1553	-2.2	-0.7
2203	16.6	5.1	2137	18.8	5.7	2257	17.2	5.2	2307	20.4	6.2	2150	17.0	5.2	2158	20.0	6.1
13 0414	1.3	0.4	28 0353	-0.9	-0.3	13 0512	0.8	0.2	28 0523	-2.5	-0.8	13 0404	0.8	0.2	28 0415	-2.1	-0.6
Th 1015	18.0	5.5	F 0958	20.9	6.4	Su 1111	18.4	5.6	M 1128	21.3	6.5	Su 1006	18.1	5.5	M 1021	20.6	6.3
1643	0.0	0.0	1627	-2.7	-0.8	1736	-0.2	-0.1	1751	-3.2	-1.0	1627	0.0	0.0	1641	-2.6	-0.8
2243	16.7	5.1	2232	19.5	5.9	2334	17.5	5.3	2355	20.7	6.3	2227	17.7	5.4	2246	20.5	6.2
14 0456	1.2	0.4	29 0446	-1.6	-0.5	14 0548	0.5	0.2				14 0443	0.3	0.1	29 0505	-2.6	-0.8
F 1055	18.1	5.5	Sa 1052	21.4	6.5	M 1147	18.5	5.6				M 1043	18.5	5.6	Tu 1108	20.7	6.3
1722	0.0	0.0	1720	-3.2	-1.0	1812	-0.3	-0.1				1705	-0.4	-0.1	1728	-2.5	-0.8
2322	16.9	5.2	2324	20.1	6.1							2304	18.2	5.5	2331	20.6	6.3
15 0535	1.2	0.4	30 0539	-2.1	-0.6	15 0009	17.8	5.4				15 0521	-0.1	0.0	30 0552	-2.6	-0.8
Sa 1133	18.1	5.5	Su 1144	21.5	6.6	Tu 0625	0.4	0.1				Tu 1121	18.7	5.7	W 1154	20.3	6.2
1801	0.0	0.0	1811	-3.4	-1.0	1224	18.5	5.6				1740	-0.5	-0.2	1812	-2.1	-0.6
2359	17.0	5.2				1847	-0.2	-0.1				2340	18.6	5.7			
31 0015	20.3	6.2										31 0016	20.4	6.2			
M 0630	-2.2	-0.7										Th 0636	-2.2	-0.7			
1235	21.3	6.5										1240	19.6	6.0			
1900	-3.1	-0.9										1857	-1.2	-0.4			

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL						MAY						JUNE					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0059	19.7	6.0	16 0027	19.6	6.0	1 0115	18.3	5.6	16 0052	19.9	6.1	1 0216	16.9	5.2	16 0230	19.5	5.9
F 0722	-1.5	-0.5	Sa 0652	-1.2	-0.4	Su 0742	-0.2	-0.1	M 0723	-1.5	-0.5	W 0845	1.2	0.4	Th 0859	-1.4	-0.4
1326	18.6	5.7	1252	18.6	5.7	1343	16.9	5.2	1326	18.3	5.6	1448	15.8	4.8	1507	18.4	5.6
1942	-0.2	-0.1	1910	0.0	0.0	1958	1.5	0.5	1942	0.2	0.1	2104	2.6	0.8	2124	0.0	0.0
2 0145	18.8	5.7	17 0110	19.4	5.9	2 0158	17.5	5.3	17 0145	19.5	5.9	2 0304	16.5	5.0	17 0330	18.8	5.7
Sa 0810	-0.5	-0.2	Su 0737	-0.9	-0.3	M 0829	0.7	0.2	Tu 0816	-1.1	-0.3	Th 0933	1.6	0.5	F 0956	-0.9	-0.3
1411	17.5	5.3	1339	18.1	5.5	1430	16.2	4.9	1422	17.9	5.5	1538	15.7	4.8	1607	18.2	5.5
2029	0.9	0.3	1957	0.5	0.2	2047	2.2	0.7	2037	0.6	0.2	2154	2.7	0.8	2226	0.2	0.1
3 0230	17.8	5.4	18 0200	19.0	5.8	3 0247	16.8	5.1	18 0242	18.9	5.8	3 0356	16.2	4.9	18 0431	18.2	5.5
Su 0859	0.5	0.2	M 0830	-0.5	-0.2	Tu 0917	1.4	0.4	W 0914	-0.7	-0.2	F 1023	1.8	0.5	Sa 1055	-0.4	-0.1
1501	16.4	5.0	1433	17.5	5.3	1520	15.5	4.7	1520	17.5	5.3	1629	15.7	4.8	1707	18.2	5.5
2117	1.9	0.6	2051	1.0	0.3	2138	2.8	0.9	2138	0.9	0.3	2247	2.7	0.8	2328	0.3	0.1
4 0320	16.9	5.2	19 0253	18.4	5.6	4 0338	16.2	4.9	19 0344	18.4	5.6	4 0449	16.1	4.9	19 0535	17.8	5.4
M 0950	1.4	0.4	Tu 0927	0.0	0.0	W 1010	1.9	0.6	Th 1015	-0.3	-0.1	Sa 1115	1.8	0.5	Su 1156	-0.1	0.0
1554	15.5	4.7	1533	17.0	5.2	1615	15.2	4.6	1625	17.4	5.3	1722	16.0	4.9	1808	18.3	5.6
2212	2.7	0.8	2149	1.5	0.5	2231	3.1	0.9	2242	1.0	0.3	2342	2.4	0.7			
5 0417	16.1	4.9	20 0357	18.0	5.5	5 0434	15.8	4.8	20 0449	18.0	5.5	5 0543	16.1	4.9	20 0030	0.1	0.0
Tu 1045	2.1	0.6	W 1029	0.3	0.1	Th 1105	2.2	0.7	F 1118	-0.1	0.0	Su 1205	1.7	0.5	M 0637	17.6	5.4
1653	15.0	4.6	1637	16.7	5.1	1711	15.2	4.6	1729	17.6	5.4	1813	16.5	5.0	1255	0.2	0.1
2308	3.2	1.0	2255	1.6	0.5	2329	3.1	0.9	2348	0.7	0.2				1906	18.4	5.6
6 0515	15.7	4.8	21 0504	17.7	5.4	6 0532	15.8	4.8	21 0555	17.9	5.5	6 0034	1.9	0.6	21 0129	-0.1	0.0
W 1145	2.4	0.7	Th 1135	0.4	0.1	F 1200	2.1	0.6	Sa 1221	-0.2	-0.1	M 0635	16.4	5.0	Tu 0736	17.5	5.3
1753	14.9	4.5	1746	16.9	5.2	1806	15.5	4.7	1831	18.0	5.5	1256	1.4	0.4	1351	0.3	0.1
7 0008	3.2	1.0	22 0003	1.3	0.4	7 0025	2.7	0.8	22 0051	0.2	0.1	7 0124	1.2	0.4	22 0225	-0.3	-0.1
Th 0616	15.8	4.8	F 0613	17.9	5.5	Sa 0629	16.1	4.9	Su 0659	18.1	5.5	Tu 0727	16.9	5.2	W 0832	17.4	5.3
1242	2.2	0.7	1240	0.0	0.0	1253	1.8	0.5	1319	-0.4	-0.1	1346	1.1	0.3	1443	0.4	0.1
1850	15.2	4.6	1851	17.5	5.3	1858	16.1	4.9	1930	18.6	5.7	1951	18.0	5.5	2051	18.7	5.7
8 0106	2.8	0.9	23 0109	0.6	0.2	8 0117	2.0	0.6	23 0151	-0.4	-0.1	8 0215	0.4	0.1	23 0316	-0.5	-0.2
F 0711	16.2	4.9	Sa 0716	18.4	5.6	Su 0721	16.6	5.1	M 0759	18.3	5.6	W 0817	17.4	5.3	Th 0923	17.4	5.3
1338	1.8	0.5	1343	-0.6	-0.2	1343	1.3	0.4	1415	-0.5	-0.2	1433	0.6	0.2	1532	0.6	0.2
1943	15.8	4.8	1951	18.4	5.6	1948	16.9	5.2	2025	19.1	5.8	2038	18.7	5.7	2139	18.7	5.7
9 0159	2.1	0.6	24 0210	-0.4	-0.1	9 0207	1.2	0.4	24 0246	-1.0	-0.3	9 0303	-0.5	-0.2	24 0404	-0.6	-0.2
Sa 0804	16.8	5.1	Su 0817	19.0	5.8	M 0809	17.2	5.2	Tu 0853	18.5	5.6	Th 0906	17.9	5.5	F 1008	17.3	5.3
1426	1.2	0.4	1438	-1.1	-0.3	1428	0.8	0.2	1508	-0.6	-0.2	1520	0.2	0.1	1619	0.8	0.2
2030	16.6	5.1	2046	19.2	5.9	2031	17.8	5.4	2113	19.4	5.9	2124	19.5	5.9	2222	18.5	5.6
10 0247	1.3	0.4	25 0305	-1.2	-0.4	10 0254	0.4	0.1	25 0337	-1.3	-0.4	10 0350	-1.2	-0.4	25 0448	-0.5	-0.2
Su 0849	17.4	5.3	M 0910	19.5	5.9	Tu 0854	17.7	5.4	W 0941	18.5	5.6	F 0953	18.4	5.6	Sa 1051	17.1	5.2
1510	0.6	0.2	1531	-1.6	-0.5	1513	0.3	0.1	1555	-0.5	-0.2	1607	-0.2	-0.1	1702	1.0	0.3
2113	17.4	5.3	2137	19.9	6.1	2114	18.5	5.6	2159	19.5	5.9	2210	20.1	6.1	2302	18.4	5.6
11 0331	0.5	0.2	26 0357	-1.9	-0.6	11 0337	-0.4	-0.1	26 0426	-1.4	-0.4	11 0438	-1.8	-0.5	26 0530	-0.3	-0.1
M 0931	18.0	5.5	Tu 1001	19.7	6.0	W 0938	18.2	5.5	Th 1027	18.3	5.6	Sa 1040	18.8	5.7	Su 1130	17.0	5.2
1552	0.1	0.0	1619	-1.7	-0.5	1555	-0.1	0.0	1641	-0.2	-0.1	1654	-0.5	-0.2	1744	1.2	0.4
2153	18.2	5.5	2224	20.2	6.2	2156	19.2	5.9	2243	19.3	5.9	2257	20.5	6.2	2343	18.2	5.5
12 0411	-0.2	-0.1	27 0444	-2.2	-0.7	12 0419	-1.0	-0.3	27 0509	-1.3	-0.4	12 0527	-2.2	-0.7	27 0611	-0.1	0.0
Tu 1011	18.5	5.6	W 1049	19.6	6.0	Th 1020	18.6	5.7	F 1112	18.0	5.5	Su 1129	19.0	5.8	M 1211	16.8	5.1
1631	-0.3	-0.1	1704	-1.4	-0.4	1636	-0.4	-0.1	1725	0.2	0.1	1744	-0.7	-0.2	1825	1.4	0.4
2230	18.8	5.7	2308	20.1	6.1	2236	19.7	6.0	2325	19.0	5.8	2347	20.6	6.3			
13 0451	-0.7	-0.2	28 0529	-2.1	-0.6	13 0503	-1.5	-0.5	28 0552	-0.9	-0.3	13 0617	-2.3	-0.7	28 0024	17.9	5.5
W 1051	18.8	5.7	Th 1133	19.2	5.9	F 1104	18.9	5.8	Sa 1155	17.6	5.4	M 1220	19.0	5.8	Tu 0652	0.2	0.1
1708	-0.5	-0.2	1747	-0.9	-0.3	1720	-0.5	-0.2	1807	0.7	0.2	1835	-0.7	-0.2	1252	16.6	5.1
2308	19.2	5.9	2350	19.8	6.0	2321	20.1	6.1				1906	1.6	0.5			
14 0530	-1.1	-0.3	29 0615	-1.6	-0.5	14 0546	-1.8	-0.5	29 0007	18.5	5.6	14 0038	20.5	6.2	29 0104	17.6	5.4
Th 1130	18.9	5.8	F 1215	18.5	5.6	Sa 1149	18.9	5.8	Su 0635	-0.4	-0.1	Tu 0709	-2.2	-0.7	W 0733	0.5	0.2
1747	-0.5	-0.2	1831	-0.2	-0.1	1803	-0.4	-0.1	1236	1.7	5.2	1312	18.9	5.8	1333	16.5	5.0
2347	19.5	5.9							1849	1.3	0.4	1929	-0.5	-0.2	1947	1.8	0.5
15 0610	-1.2	-0.4	30 0032	19.1	5.8	15 0004	20.1	6.1	30 0048	18.0	5.5	15 0131	20.1	6.1	30 0145	17.3	5.3
F 1210	18.8	5.7	Sa 0657	-1.0	-0.3	Su 0633	-1.8	-0.5	M 0718	0.1	0.0	W 0803	-1.9	-0.6	Th 0814	0.8	0.2
1827	-0.4	-0.1	1300	17.8	5.4	1235	18.7	5.7	1318	16.6	5.1	1408	18.6	5.7	1415	16.4	5.0
			1915	0.6	0.2	1851	-0.2	-0.1	1931	1.8	0.5	2024	-0.2	-0.1	2032	2.0	0.6
									31 0131	17.4	5.3						
									Tu 0800	0.7	0.2						
									1401	16.2	4.9						
									2016	2.2	0.7						

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 Heights are referred to mean low water which is the chart datum of soundings.

EASTPORT, MAINE, 1983

Times and Heights of High and Low Waters

JULY				AUGUST				SEPTEMBER			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	h m	ft	h m	ft	h m	ft	h m	ft	h m	ft
1 0230	17.0	5.2	16 0309	19.1	5.8	1 0325	16.7	5.1	16 0442	16.8	5.1
F 0858	1.1	0.3	Sa 0933	-1.2	-0.4	M 0948	1.5	0.5	Tu 1057	1.2	0.4
1459	16.3	5.0	1542	18.8	5.7	1552	17.0	5.2	1709	17.5	5.3
2117	2.1	0.6	2203	-0.3	-0.1	2217	1.6	0.5	2335	0.9	0.3
2 0317	16.6	5.1	17 0410	18.2	5.5	2 0419	16.4	5.0	17 0544	16.1	4.9
Sa 0944	1.4	0.4	Su 1030	-0.4	-0.1	Tu 1038	1.7	0.5	W 1158	1.8	0.5
1546	16.4	5.0	1641	18.4	5.6	1644	17.1	5.2	1810	17.1	5.2
2205	2.2	0.7	2303	0.1	0.0	2310	1.5	0.5			
3 0405	16.4	5.0	18 0510	17.4	5.3	3 0513	16.2	4.9	18 0637	1.2	0.4
Su 1031	1.6	0.5	M 1127	0.4	0.1	W 1133	1.8	0.5	Th 0647	15.8	4.8
1636	16.6	5.1	1740	18.1	5.5	1740	17.4	5.3	1258	2.1	0.6
2259	2.0	0.6							1909	16.9	5.2
4 0458	16.3	5.0	19 0004	0.4	0.1	4 0008	1.2	0.4	19 0135	1.2	0.4
M 1119	1.7	0.5	Tu 0612	16.9	5.2	Th 0613	16.3	5.0	F 0746	15.8	4.8
1726	16.9	5.2	1227	0.9	0.3	1229	1.7	0.5	1356	2.1	0.6
2351	1.7	0.5	1839	17.9	5.5	1839	17.9	5.5	2003	17.1	5.2
5 0554	16.3	5.0	20 0104	0.5	0.2	5 0108	0.6	0.2	20 0230	1.0	0.3
Tu 1213	1.6	0.5	W 0714	16.6	5.1	F 0714	16.8	5.1	Sa 0838	16.0	4.9
1818	17.4	5.3	1324	1.3	0.4	1330	1.2	0.4	1449	1.8	0.5
			1936	17.8	5.4	1938	18.6	5.7	2054	17.4	5.3
6 0045	1.2	0.4	21 0201	0.4	0.1	6 0207	-0.3	-0.1	21 0319	0.6	0.2
W 0647	16.6	5.1	Th 0809	16.5	5.0	Sa 0812	17.4	5.3	Su 0923	16.4	5.0
1303	1.4	0.4	1420	1.4	0.4	1428	0.5	0.2	1534	1.4	0.4
1911	18.0	5.5	2028	17.8	5.4	2034	19.5	5.9	2139	17.7	5.4
7 0138	0.4	0.1	22 0255	0.3	0.1	7 0305	-1.2	-0.4	22 0403	0.3	0.1
Th 0743	17.0	5.2	F 0900	16.5	5.0	Su 0908	18.3	5.6	M 1006	16.8	5.1
1359	0.9	0.3	1511	1.4	0.4	1524	-0.4	-0.1	1616	1.0	0.3
2004	18.7	5.7	2117	17.9	5.5	2130	20.4	6.2	2219	18.1	5.5
8 0233	-0.4	-0.1	23 0342	0.2	0.1	8 0358	-2.1	-0.6	23 0443	0.0	0.0
F 0836	17.6	5.4	Sa 0947	16.6	5.1	M 1003	19.2	5.9	Tu 1042	17.2	5.2
1451	0.4	0.1	1558	1.3	0.4	1619	-1.3	-0.4	1656	0.7	0.2
2056	19.5	5.9	2200	18.0	5.5	2224	21.1	6.4	2256	18.3	5.6
9 0327	-1.2	-0.4	24 0428	0.0	0.0	9 0451	-2.9	-0.9	24 0520	-0.2	-0.1
Sa 0929	18.3	5.6	Su 1030	16.7	5.1	Tu 1055	19.9	6.1	W 1119	17.5	5.3
1543	-0.2	-0.1	1640	1.2	0.4	1711	-1.9	-0.6	1734	0.5	0.2
2147	20.3	6.2	2242	18.1	5.5	2316	21.5	6.6	2333	18.4	5.6
10 0418	-2.0	-0.6	25 0509	0.0	0.0	10 0542	-3.2	-1.0	25 0556	-0.2	-0.1
Su 1021	18.8	5.7	M 1109	16.9	5.2	W 1147	20.3	6.2	Th 1154	17.7	5.4
1636	-0.8	-0.2	1722	1.1	0.3	1803	-2.3	-0.7	1812	0.4	0.1
2240	20.8	6.3	2321	18.1	5.5				1302	20.5	6.2
11 0509	-2.5	-0.8	26 0548	0.0	0.0	11 0007	21.4	6.5	11 0009	18.3	5.6
M 1113	19.3	5.9	Tu 1146	17.0	5.2	Th 0633	-3.2	-1.0	F 0632	0.0	0.0
1728	-1.2	-0.4	1800	1.1	0.3	1237	20.5	6.2	1230	17.8	5.4
2332	21.1	6.4	2359	18.1	5.5	1856	-2.3	-0.7	1849	0.4	0.1
12 0600	-2.8	-0.9	27 0626	0.1	0.0	12 0059	21.0	6.4	27 0046	18.1	5.5
Tu 1204	19.6	6.0	W 1225	17.0	5.2	F 0723	-2.8	-0.9	Sa 0708	0.2	0.1
1820	-1.4	-0.4	1840	1.1	0.3	1329	20.3	6.2	M 0837	-0.3	-0.1
						1320	16.9	5.5	1443	18.7	5.7
						1847	-2.0	-0.6	1927	0.6	0.2
13 0024	21.0	6.4	28 0038	18.0	5.5	13 0152	20.1	6.1	13 0128	19.8	6.0
W 0652	-2.8	-0.9	Th 0703	0.2	0.1	Sa 0814	-2.0	-0.6	14 0057	18.0	5.5
1257	19.7	6.0	1302	17.1	5.2	1420	19.7	6.0	Su 0747	-1.5	-0.5
1913	-1.4	-0.4	1918	1.2	0.4	1345	17.8	5.4	M 0713	0.5	0.2
14 0118	20.7	6.3	29 0115	17.7	5.4	14 0245	19.0	5.8	15 0356	17.7	5.4
Th 0745	-2.5	-0.8	F 0742	0.5	0.2	Su 0906	-0.9	-0.3	W 1027	1.9	0.6
1350	19.5	5.9	1342	17.1	5.2	1514	19.0	5.8	1636	16.8	5.1
2008	-1.2	-0.4	1958	1.3	0.4	2136	-0.5	-0.2	1443	17.8	5.4
15 0213	20.0	6.1	30 0157	17.4	5.3	15 0343	17.9	5.5	15 0514	15.5	4.7
F 0838	-1.9	-0.6	Sa 0821	0.8	0.2	M 1001	0.2	0.1	16 0420	16.2	4.9
1445	19.2	5.9	1422	17.1	5.2	W 1090	1.5	0.5	Th 1128	2.6	0.8
2104	-0.8	-0.2	2042	1.5	0.5	1610	18.2	5.5	1737	16.3	5.0
						1515	17.4	5.3	1646	17.3	5.3
						2234	0.3	0.1	2319	1.0	0.3
31 0240	17.1	5.2				2141	1.2	0.4			
Su 0903	1.1	0.3				2237	1.3	0.4			
1505	17.0	5.2									
2125	1.6	0.5									

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER							
Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height		
	h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m		
1	0527	16.2	4.9	16	0029	2.0	0.6	1	0108	-0.4	-0.1	16	0127	1.4	0.4	1	0143	-0.5	-0.2
Sa	1145	1.9	0.6	Su	0639	15.4	4.7	Tu	0719	18.3	5.6	W	0732	16.8	5.1	Th	0753	19.2	5.9
	1754	17.6	5.4		1253	2.7	0.8		1338	-0.2	-0.1		1353	1.3	0.4		1417	-1.0	-0.3
					1858	16.2	4.9		1944	18.9	5.8		1954	16.9	5.2		2023	18.5	5.6
2	0026	0.5	0.2	17	0122	1.6	0.5	2	0207	-1.1	-0.3	17	0212	1.0	0.3	2	0238	-0.7	-0.2
Su	0634	16.8	5.1	M	0730	16.0	4.9	W	0815	19.3	5.9	Th	0817	17.6	5.4	F	0846	19.7	6.0
	1251	1.2	0.4		1345	2.0	0.6		1434	-1.3	-0.4		1438	0.6	0.2		1510	-1.5	-0.5
	1859	18.3	5.6		1949	16.7	5.1		2041	19.5	5.9		2039	17.4	5.3		2116	18.7	5.7
3	0128	-0.3	-0.1	18	0212	1.1	0.3	3	0300	-1.6	-0.5	18	0257	0.6	0.2	3	0329	-0.8	-0.2
M	0736	17.9	5.5	Tu	0817	16.7	5.1	Th	0907	20.1	6.1	F	0857	18.3	5.6	Sa	0935	19.9	6.1
	1354	0.1	0.0		1431	1.2	0.4		1529	-2.1	-0.6		1521	-0.1	0.0		1601	-1.8	-0.5
	2001	19.2	5.9		2036	17.3	5.3		2132	19.9	6.1		2121	17.9	5.5		2203	18.7	5.7
4	0226	-1.3	-0.4	19	0254	0.6	0.2	4	0350	-1.9	-0.6	19	0339	0.2	0.1	4	0417	-0.6	-0.2
Tu	0833	19.0	5.8	W	0857	17.5	5.3	F	0955	20.6	6.3	Sa	0939	18.9	5.8	Su	1021	19.9	6.1
	1452	-1.1	-0.3		1516	0.5	0.2		1617	-2.6	-0.8		1603	-0.7	-0.2		1648	-1.8	-0.5
	2058	20.1	6.1		2116	17.9	5.5		2222	19.9	6.1		2203	18.2	5.5		2251	18.4	5.6
5	0321	-2.1	-0.6	20	0335	0.2	0.1	5	0437	-1.8	-0.5	20	0418	0.0	0.0	5	0503	-0.3	-0.1
W	0926	20.1	6.1	Th	0937	18.1	5.5	Sa	1042	20.7	6.3	Su	1019	19.4	5.9	M	1105	19.6	6.0
	1545	-2.2	-0.7		1555	-0.1	0.0		1705	-2.6	-0.8		1644	-1.1	-0.3		1733	-1.5	-0.5
	2150	20.7	6.3		2155	18.2	5.5		2309	19.6	6.0		2246	18.4	5.6		2335	18.0	5.5
6	0411	-2.7	-0.8	21	0414	-0.1	0.0	6	0523	-1.4	-0.4	21	0500	-0.1	0.0	6	0548	0.2	0.1
Th	1016	20.8	6.3	F	1013	18.7	5.7	Su	1126	20.4	6.2	M	1059	19.6	6.0	Tu	1148	19.1	5.8
	1636	-2.8	-0.9		1635	-0.5	-0.2		1751	-2.3	-0.7		1726	-1.3	-0.4		1817	-1.0	-0.3
	2240	20.9	6.4		2234	18.5	5.6		2355	19.0	5.8		2327	18.5	5.6		2356	18.8	5.7
7	0459	-2.8	-0.9	22	0451	-0.2	-0.1	7	0609	-0.7	-0.2	22	0542	0.0	0.0	7	0017	17.5	5.3
F	1104	21.1	6.4	Sa	1050	19.0	5.8	H	1209	19.7	6.0	Tu	1142	19.7	6.0	W	0631	0.8	0.2
	1725	-3.1	-0.9		1713	-0.8	-0.2		1837	-1.6	-0.5		1811	-1.4	-0.4		1231	18.5	5.6
	2329	20.7	6.3		2313	18.5	5.6									1900	-0.4	-0.1	
8	0547	-2.4	-0.7	23	0528	-0.1	0.0	8	0041	18.2	5.5	23	0011	18.4	5.6	8	0102	17.0	5.2
Sa	1150	20.9	6.4	Su	1127	19.2	5.9	Tu	0654	0.2	0.1	W	0625	0.1	0.0	Th	0716	1.3	0.4
	1813	-2.8	-0.9		1750	-0.9	-0.3		1256	18.9	5.8		1227	19.6	6.0		1315	17.9	5.5
					2350	18.4	5.6		1923	-0.7	-0.2		1857	-1.2	-0.4		1945	0.3	0.1
9	0016	20.0	6.1	24	0606	0.1	0.0	9	0126	17.3	5.3	24	0059	18.1	5.5	9	0145	16.5	5.0
Su	0633	-1.7	-0.5	M	1205	19.2	5.9	W	0742	1.1	0.3	Th	0713	0.4	0.1	F	0802	1.9	0.6
	1236	20.3	6.2		1832	-0.8	-0.2		1342	18.0	5.5		1316	19.3	5.9		1400	17.2	5.2
	1900	-2.1	-0.6					2011	0.2	0.1		1947	-0.9	-0.3		2030	0.9	0.3	
10	0104	19.0	5.8	25	0032	18.1	5.5	10	0214	16.4	5.0	25	0150	17.8	5.4	10	0231	16.1	4.9
M	0720	-0.6	-0.2	Tu	0646	0.4	0.1	Th	0830	2.0	0.6	F	0807	0.7	0.2	Sa	0848	2.3	0.7
	1321	19.4	5.9		1246	19.0	5.8		1430	17.1	5.2		1411	18.9	5.8		1448	16.7	5.1
	1948	-1.1	-0.3		1914	-0.5	-0.2		2101	1.1	0.3		2042	-0.6	-0.2		2117	1.4	0.4
11	0152	17.9	5.5	26	0115	17.7	5.4	11	0305	15.7	4.8	26	0248	17.5	5.3	11	0320	15.8	4.8
Tu	0807	0.5	0.2	W	0728	0.9	0.3	F	0922	2.6	0.8	Sa	0904	1.0	0.3	Su	0938	2.6	0.8
	1411	18.3	5.6		1332	18.7	5.7		1522	16.3	5.0		1509	18.4	5.6		1538	16.2	4.9
	2039	0.0	0.0		2003	-0.2	-0.1		2154	1.7	0.5		2141	-0.2	-0.1		2205	1.7	0.5
12	0243	16.8	5.1	27	0205	17.2	5.2	12	0400	15.3	4.7	27	0349	17.3	5.3	12	0412	15.8	4.8
W	0858	1.6	0.5	Th	0821	1.3	0.4	Sa	1018	3.0	0.9	Su	1007	1.1	0.3	M	1030	2.7	0.8
	1502	17.2	5.2		1424	18.2	5.5		1620	15.9	4.8		1613	18.0	5.5		1631	16.0	4.9
	2133	1.0	0.3		2056	0.2	0.1		2250	2.0	0.6		2242	0.0	0.0		2257	1.9	0.6
13	0338	15.8	4.8	28	0301	16.8	5.1	13	0456	15.2	4.6	28	0452	17.5	5.3	13	0504	15.9	4.8
Th	0953	2.5	0.8	F	0919	1.7	0.5	Su	1114	3.0	0.9	M	1113	0.9	0.3	Tu	1123	2.5	0.8
	1600	16.4	5.0		1524	17.8	5.4		1719	15.8	4.8		1719	17.8	5.4		1726	15.9	4.8
	2229	1.8	0.5		2157	0.5	0.2		2344	2.1	0.6		2345	-0.1	0.0		2348	1.9	0.6
14	0439	15.2	4.6	29	0404	16.5	5.0	14	0552	15.5	4.7	29	0557	17.9	5.5	14	0555	16.3	5.0
F	1054	3.0	0.9	Sa	1023	1.8	0.5	M	1210	2.7	0.8	Tu	1217	0.4	0.1	W	1218	2.1	0.6
	1700	15.9	4.8		1629	17.5	5.3		1814	16.0	4.9		1824	18.0	5.5		1819	16.1	4.9
	2330	2.1	0.6		2301	0.6	0.2									1258	0.0	0.0	
15	0540	15.1	4.6	30	0511	16.7	5.1	15	0037	1.8	0.5	30	0046	-0.2	-0.1	15	0039	1.8	0.5
Sa	1154	3.0	0.9	Su	1130	1.5	0.5	Tu	0645	16.1	4.9	W	0657	18.6	5.7	F	0646	16.8	5.1
	1802	15.9	4.8		1737	17.7	5.4		1303	2.1	0.6		1319	-0.3	-0.1		1309	1.5	0.5
															1911	16.4	5.0		
	31	0005	0.2	0.1	M	0617	17.4	5.3								2004	17.4	5.3	
		1234	0.8	0.2											31	0218	0.4	0.1	
		1843	18.2	5.5											Sa	0826	18.8	5.7	
															1452	-0.6	-0.2		
															2100	17.5	5.3		

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY

FEBRUARY

MARCH

Day	Time Height			Time Height			Time Height			Time Height			Time Height		
	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0549 -0.7 -0.2	16 0022 8.2	2.5		1 0124 9.9	3.0		16 0056 8.7	2.7		1 0011 10.3	3.1		16 0558 -0.3	-0.1	
Sa 1204 11.3 3.4	Su 0613 0.7	0.2		Tu 0727 -0.9	-0.3		W 0700 0.1	0.0		Tu 0618 -1.3	-0.4		W 1206 9.3	2.8	
1833 -2.1 -0.6	1224 9.3	2.8		1339 10.4	3.2		1308 9.1	2.8		1231 10.7	3.3		1816 -0.4	-0.1	
1847 -0.2 -0.1	1847 -0.2	-0.1		2001 -1.5	-0.5		1922 -0.3	-0.1		1846 -1.6	-0.5				
2 0047 9.6 2.9	17 0055 8.2	2.5		2 0216 9.8	3.0		17 0132 8.8	2.7		2 0100 10.2	3.1		17 0025 9.3	2.8	
Su 0643 -0.6 -0.2	M 0649 0.8	0.2		W 0822 -0.6	-0.2		Th 0740 0.0	0.0		W 0708 -1.3	-0.4		Th 0635 -0.5	-0.2	
1258 11.0 3.4	1259 9.1	2.8		1434 9.7	3.0		1345 8.8	2.7		1321 10.1	3.1		1243 9.1	2.8	
1927 -1.8 -0.5	1920 -0.1	0.0		2051 -0.9	-0.3		1959 -0.2	-0.1		1932 -1.2	-0.4		1852 -0.4	-0.1	
3 0143 9.5 2.9	18 0129 8.2	2.5		3 0310 9.5	2.9		18 0209 8.9	2.7		3 0148 9.9	3.0		18 0101 9.4	2.9	
M 0743 -0.4 -0.1	Tu 0727 0.8	0.2		Th 0920 -0.3	-0.1		F 0822 0.0	0.0		Th 0800 -1.0	-0.3		F 0715 -0.7	-0.2	
1356 10.5 3.2	1334 8.9	2.7		1533 9.0	2.7		1428 8.6	2.6		1412 9.4	2.9		1323 9.0	2.7	
2022 -1.4 -0.4	1956 0.1	0.0		2146 -0.3	-0.1		2041 0.0	0.0		2020 -0.7	-0.2		1929 -0.2	-0.1	
4 0240 9.4 2.9	19 0206 8.3	2.5		4 0406 9.1	2.8		19 0254 9.0	2.7		4 0236 9.5	2.9		19 0140 9.5	2.9	
Tu 0843 -0.1 0.0	W 0808 0.8	0.2		F 1021 0.0	0.0		Sa 0910 -0.1	0.0		F 0851 -0.6	-0.2		Sa 0758 -0.7	-0.2	
1457 9.9 3.0	1415 8.7	2.7		1635 8.3	2.5		1518 8.3	2.5		1505 8.7	2.7		1408 8.7	2.7	
2118 -0.9 -0.3	2033 0.2	0.1		2243 0.2	0.1		2127 0.2	0.1		2109 0.0	0.0		2012 0.0	0.0	
5 0339 9.3 2.8	20 0243 8.3	2.5		5 0506 8.8	2.7		20 0342 9.0	2.7		5 0328 9.1	2.8		20 0225 9.5	2.9	
W 0947 0.1 0.0	Th 0853 0.7	0.2		Sa 1126 0.3	0.1		Su 1005 0.0	0.0		Sa 0949 -0.1	0.0		Su 0849 -0.5	-0.2	
1559 9.3 2.8	1457 8.4	2.6		1739 7.8	2.4		1613 8.0	2.4		1600 8.0	2.4		1457 8.4	2.6	
2218 -0.4 -0.1	2115 0.3	0.1		2342 0.7	0.2		2217 0.5	0.2		2203 0.6	0.2		2102 0.3	0.1	
6 0441 9.1 2.8	21 0329 8.5	2.6		6 0606 8.6	2.6		21 0436 9.1	2.8		6 0423 8.6	2.6		21 0315 9.4	2.9	
Th 1053 0.3 0.1	F 0943 0.6	0.2		Su 1230 0.4	0.1		M 1106 0.0	0.0		Su 1047 0.4	0.1		M 0944 -0.3	-0.1	
1707 8.7 2.7	1547 8.2	2.5		1848 7.5	2.3		1715 7.9	2.4		1703 7.5	2.3		1555 8.1	2.5	
2318 0.0 0.0	2201 0.4	0.1		2319 0.6	0.2		2300 1.2	0.4		2158 0.6	0.2				
7 0544 9.1 2.8	22 0416 8.6	2.6		7 0044 1.0	0.3		22 0539 9.3	2.8		7 0523 8.3	2.5		22 0415 9.3	2.8	
F 1200 0.3 0.1	Sa 1036 0.5	0.2		M 0707 8.6	2.6		Tu 1213 -0.2	-0.1		M 1150 0.7	0.2		Tu 1047 -0.1	0.0	
1813 8.3 2.5	1643 8.0	2.4		1331 0.4	0.1		1824 7.9	2.4		1808 7.3	2.2		1700 8.0	2.4	
	2252 0.5	0.2		1949 7.5	2.3					2302 0.9	0.3				
8 0018 0.3 0.1	23 0510 8.8	2.7		8 0140 1.1	0.3		23 0024 0.6	0.2		8 0003 1.5	0.5		23 0521 9.4	2.9	
Sa 0642 9.1 2.8	Su 1134 0.2	0.1		Tu 0802 8.7	2.7		W 0646 9.6	2.9		Tu 0624 8.2	2.5		W 1155 -0.1	0.0	
1304 0.2 0.1	1743 7.9	2.4		1427 -0.3	0.1		1320 -0.4	-0.1		1252 0.9	0.3		1812 8.1	2.5	
1917 8.1 2.5	2348 0.5	0.2		2042 7.6	2.3		1933 8.2	2.5		1910 7.3	2.2				
9 0117 0.5 0.2	24 0607 9.2	2.8		9 0231 1.1	0.3		24 0131 0.4	0.1		9 0104 1.6	0.5		24 0012 0.9	0.3	
Su 0741 9.1 2.8	M 1237 -0.2	-0.1		W 0854 8.8	2.7		Th 0752 10.0	3.0		W 0727 8.3	2.5		Th 0631 9.5	2.9	
1400 0.0 0.0	1848 8.0	2.4		1516 0.2	0.1		1423 -0.8	-0.2		1352 0.8	0.2		1305 -0.2	-0.1	
2015 8.0 2.4				2131 7.8	2.4		2039 8.7	2.7		2007 7.4	2.3		1922 8.5	2.6	
10 0210 0.6 0.2	25 0048 0.4	0.1		10 0321 1.0	0.3		25 0236 0.0	0.0		10 0200 1.5	0.5		25 0122 0.6	0.2	
M 0831 9.2 2.8	Tu 0707 9.6	2.9		Th 0937 9.0	2.7		F 0855 10.5	3.2		Th 0819 8.5	2.6		F 0741 9.8	3.0	
1455 -0.2 -0.1	1339 -0.6	-0.2		1559 0.0	0.0		1524 -1.3	-0.4		1443 0.7	0.2		1410 -0.5	-0.2	
2108 8.0 2.4	1951 8.2	2.5		2212 8.0	2.4		2137 9.2	2.8		2057 7.7	2.3		2026 9.0	2.7	
11 0300 0.6 0.2	26 0148 0.1	0.0		11 0401 0.8	0.2		26 0335 -0.5	-0.2		11 0250 1.3	0.4		26 0227 0.1	0.0	
Tu 0917 9.3 2.8	W 0807 10.1	3.1		F 1017 9.2	2.8		Sa 0953 10.9	3.3		F 0906 8.8	2.7		Sa 0844 10.2	3.1	
1541 -0.3 -0.1	1439 -1.1	-0.3		1638 -0.1	0.0		1619 -1.6	-0.5		1527 0.5	0.2		1508 -0.9	-0.3	
2154 8.1 2.5	2052 8.6	2.6		2249 8.2	2.5		2233 9.7	3.0		2138 8.0	2.4		2124 9.6	2.9	
12 0345 0.7 0.2	27 0248 -0.2	-0.1		12 0439 0.7	0.2		27 0433 -0.9	-0.3		12 0332 1.0	0.3		27 0327 -0.5	-0.2	
W 0959 9.3 2.8	Th 0906 10.6	3.2		Sa 1054 9.3	2.8		Su 1049 11.1	3.4		Sa 0947 9.1	2.8		Su 0943 10.5	3.2	
1623 -0.4 -0.1	1537 -1.6	-0.5		1713 -0.2	-0.1		1709 -1.9	-0.6		1606 0.3	0.1		1601 -1.2	-0.4	
2236 8.1 2.5	2149 9.1	2.8		2321 8.3	2.5		2322 10.1	3.1		2215 8.3	2.5		2215 10.0	3.0	
13 0423 0.7 0.2	28 0346 -0.5	-0.2		13 0515 0.5	0.2		28 0526 -1.2	-0.4		13 0412 0.6	0.2		28 0422 -1.0	-0.3	
Th 1038 9.4 2.9	F 1004 11.1	3.4		Su 1127 9.4	2.9		M 1141 11.0	3.4		Su 1025 9.2	2.8		M 1036 10.6	3.2	
1702 -0.4 -0.1	1633 -1.9	-0.6		1745 -0.2	-0.1		1758 -1.9	-0.6		1639 0.1	0.0		1651 -1.4	-0.4	
2314 8.1 2.5	2245 9.5	2.9		2353 8.5	2.6					2248 8.6	2.6		2303 10.3	3.1	
14 0502 0.7 0.2	29 0442 -0.8	-0.2		14 0550 0.4	0.1					14 0448 0.3	0.1		29 0512 -1.3	-0.4	
F 1116 9.4 2.9	Sa 1058 11.3	3.4		M 1159 9.3	2.8					M 1058 9.3	2.8		Tu 1125 10.5	3.2	
1737 -0.3 -0.1	1726 -2.1	-0.6		1818 -0.3	-0.1					1711 -0.1	0.0		1737 -1.4	-0.4	
2349 8.2 2.5	2338 9.8	3.0								2320 8.9	2.7		2349 10.4	3.2	
15 0537 0.7 0.2	30 0537 -1.5	-0.3		15 0024 8.6	2.6					15 0522 0.0	0.0		30 0601 -1.4	-0.4	
Sa 1149 9.4 2.9	Su 1153 11.3	3.4		Tu 0625 0.2	0.1					Tu 1132 9.3	2.8		W 1214 10.1	3.1	
1813 -0.3 -0.1	1818 -2.1	-0.6		1233 9.2	2.8					1743 -0.3	-0.1		1821 -1.1	-0.3	
				1850 -0.3	-0.1					2349 9.1	2.8				
31 0030 9.9	3.0												31 0034 10.3	3.1	
M 0632 1.0	-0.3												Th 0649 -1.3	-0.4	
1246 11.0	3.4												1301 9.6	2.9	
1908 -1.9	-0.6												1905 -0.7	-0.2	

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL												MAY												JUNE											
Time	Height	Time	Height																																
Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m												
1 0116	9.9	3.0		16 0032	10.0	3.0		1 0132	9.4	2.9		16 0058	10.5	3.2		1 0230	8.9	2.7		16 0239	10.3	3.1													
F 0735	-1.0	-0.3		Sa 0655	-1.2	-0.4		Su 0756	-0.4	-0.1		M 0727	-1.3	-0.4		W 0857	0.6	0.2		Th 0907	-0.9	-0.3													
1348	9.1	2.8		1304	9.0	2.7		1409	8.3	2.5		1340	9.1	2.8		1513	7.9	2.4		1526	9.3	2.8													
1949	-0.2	-0.1		1905	-0.2	-0.1		2004	0.9	0.3		1939	0.2	0.1		2106	1.7	0.5		2128	0.4	0.1													
2 0202	9.5	2.9		17 0116	10.0	3.0		2 0217	9.0	2.7		17 0150	10.4	3.2		2 0317	8.6	2.6		17 0342	9.9	3.0													
Sa 0824	-0.6	-0.2		Su 0742	-1.1	-0.3		M 0841	0.1	0.0		Tu 0822	-1.1	-0.3		Th 0942	0.9	0.3		F 1008	-0.6	-0.2													
1435	8.5	2.6		1353	8.9	2.7		1457	7.9	2.4		1437	8.9	2.7		1558	7.8	2.4		1630	9.3	2.8													
2035	0.4	0.1		1952	0.1	0.0		2051	1.3	0.4		2035	0.5	0.2		2155	1.8	0.5		2235	0.4	0.1													
3 0249	9.0	2.7		18 0204	10.0	3.0		3 0305	8.7	2.7		18 0249	10.1	3.1		3 0405	8.4	2.6		18 0449	9.5	2.9													
Su 0912	0.0	0.0		M 0833	-0.8	-0.2		Tu 0931	0.6	0.2		W 0921	-0.7	-0.2		F 1030	1.1	0.3		Sa 1109	-0.3	-0.1													
1528	7.9	2.4		1446	8.6	2.6		1547	7.7	2.3		1538	8.8	2.7		1647	7.9	2.4		1733	9.4	2.9													
2126	1.0	0.3		2045	0.5	0.2		2142	1.7	0.5		2139	0.7	0.2		2248	1.8	0.5		2343	0.4	0.1													
4 0340	8.6	2.6		19 0259	9.8	3.0		4 0355	8.4	2.6		19 0352	9.8	3.0		4 0457	8.2	2.5		19 0556	9.1	2.8													
M 1007	0.5	0.2		Tu 0931	-0.5	-0.2		W 1024	1.0	0.3		Th 1024	-0.4	-0.1		Sa 1118	1.1	0.3		Su 1210	-0.1	0.0													
1624	7.5	2.3		1544	8.4	2.6		1641	7.5	2.3		1645	8.9	2.7		1734	8.1	2.5		1835	9.5	2.9													
2221	1.5	0.5		2145	0.8	0.2		2237	2.0	0.6		2246	0.8	0.2		2342	1.6	0.5																	
5 0439	8.2	2.5		20 0400	9.6	2.9		5 0451	8.2	2.5		20 0501	9.5	2.9		5 0551	8.1	2.5		20 0051	0.2	0.1													
Tu 1108	0.9	0.3		W 1035	-0.2	-0.1		Th 1119	1.2	0.4		F 1128	-0.2	-0.1		Su 1204	1.1	0.3		M 0701	8.8	2.7													
1726	7.3	2.2		1652	8.4	2.6		1738	7.6	2.3		1751	9.0	2.7		1823	8.3	2.5		1309	0.1	0.0													
2320	1.8	0.5		2253	1.0	0.3		2334	2.0	0.6		2357	0.7	0.2		1933	9.7	3.0																	
6 0540	8.1	2.5		21 0510	9.5	2.9		6 0549	8.1	2.5		21 0611	9.4	2.9		6 0037	1.2	0.4		21 0152	-0.1	0.0													
W 1208	1.2	0.4		Th 1142	-0.1	0.0		F 1211	1.3	0.4		Sa 1232	-0.1	0.0		M 0641	8.1	2.5		Tu 0803	8.7	2.7													
1829	7.3	2.2		1803	8.5	2.6		1832	7.8	2.4		1854	9.3	2.8		1252	1.0	0.3		1405	0.2	0.1													
7 0022	1.9	0.6		22 0006	0.9	0.3		7 0032	1.8	0.5		22 0106	0.4	0.1		7 0125	0.7	0.2		22 0247	-0.3	-0.1													
Th 0640	8.1	2.5		F 0622	9.5	2.9		Sa 0644	8.2	2.5		Su 0719	9.3	2.8		Tu 0733	8.2	2.5		W 0900	8.6	2.6													
1307	1.2	0.4		1250	-0.1	0.0		1301	1.2	0.4		1333	-0.1	0.0		1338	0.7	0.2		1456	0.3	0.1													
1925	7.5	2.3		1912	8.9	2.7		1920	8.1	2.5		1954	9.7	3.0		1955	9.1	2.8		2114	9.8	3.0													
8 0120	1.8	0.5		23 0115	0.6	0.2		8 0123	1.5	0.5		23 0207	0.0	0.0		8 0215	0.2	0.1		23 0337	-0.5	-0.2													
F 0736	8.3	2.5		Sa 0731	9.6	2.9		Su 0736	8.3	2.5		M 0821	9.3	2.8		W 0823	8.4	2.6		Th 0951	8.6	2.6													
1359	1.1	0.3		1354	-0.3	-0.1		1349	1.0	0.3		1427	-0.2	-0.1		1423	0.5	0.2		1543	0.4	0.1													
2013	7.8	2.4		2013	9.4	2.9		2002	8.4	2.6		2047	10.0	3.0		2039	9.6	2.9		2201	9.8	3.0													
9 0210	1.5	0.5		24 0219	0.1	0.0		9 0212	1.0	0.3		24 0303	-0.5	-0.2		9 0303	-0.4	-0.1		24 0425	-0.6	-0.2													
Sa 0826	8.6	2.6		Su 0834	9.8	3.0		M 0821	8.5	2.6		Tu 0916	9.3	2.8		Th 0914	8.6	2.6		F 1038	8.5	2.6													
1442	0.9	0.3		1450	-0.5	-0.2		1431	0.7	0.2		1519	-0.2	-0.1		1511	0.2	0.1		1628	0.5	0.2													
2055	8.2	2.5		2107	9.9	3.0		2044	8.9	2.7		2135	10.1	3.1		2124	10.1	3.1		2243	9.7	3.0													
10 0256	1.0	0.3		25 0316	-0.5	-0.2		10 0255	0.4	0.1		25 0353	-0.8	-0.2		10 0351	-1.0	-0.3		25 0508	-0.6	-0.2													
Su 0911	8.8	2.7		M 0930	9.9	3.0		Tu 0907	8.7	2.7		W 1007	9.2	2.8		F 1001	8.9	2.7		Sa 1122	8.4	2.6													
1521	0.6	0.2		1541	-0.7	-0.2		1511	0.4	0.1		1606	-0.1	0.0		1557	0.0	0.0		1710	0.7	0.2													
2132	8.6	2.6		2156	10.2	3.1		2121	9.3	2.8		2221	10.1	3.1		2212	10.5	3.2		2324	9.7	3.0													
11 0337	0.5	0.2		26 0409	-0.9	-0.3		11 0339	-0.2	-0.1		26 0441	-1.0	-0.3		11 0440	-1.4	-0.4		26 0548	-0.4	-0.1													
M 0948	9.0	2.7		Tu 1022	9.9	3.0		W 0948	8.9	2.7		Th 1054	9.0	2.7		Sa 1051	9.1	2.8		Su 1201	8.3	2.5													
1557	0.3	0.1		1628	-0.8	-0.2		1551	0.1	0.0		1649	0.0	0.0		1646	-0.2	-0.1		1751	0.8	0.2													
2206	9.0	2.7		2242	10.4	3.2		2202	9.7	3.0		2303	10.1	3.1		2301	10.8	3.3																	
12 0415	0.0	0.0		27 0459	-1.2	-0.4		12 0421	-0.7	-0.2		27 0526	-1.0	-0.3		12 0529	-1.6	-0.5		27 0002	9.5	2.9													
Tu 1025	9.1	2.8		W 1110	9.8	3.0		Th 1030	9.0	2.7		F 1139	8.9	2.7		Su 1142	9.3	2.8		M 0628	-0.2	-0.1													
1633	0.0	0.0		1713	-0.7	-0.2		1630	-0.1	0.0		1731	0.2	0.1		1737	-0.2	-0.1		1241	8.3	2.5													
2241	9.3	2.8		2327	10.3	3.1		2240	10.1	3.1		2345	9.9	3.0		2351	10.9	3.3		1828	1.0	0.3													
13 0452	-0.4	-0.1		28 0542	-1.3	-0.4		13 0503	-1.2	-0.4		28 0608	-0.8	-0.2		13 0620	-1.7	-0.5		28 0042	9.4	2.9													
W 1102	9.2	2.8		Th 1156	9.5	2.9		F 1114	9.1	2.8		Sa 1222	8.6	2.6		M 1234	9.3	2.8		Tu 0706	0.0	0.0													
1706	-0.2	-0.1		1756	-0.4	-0.1		1713	-0.2	-0.1		1812	0.5	0.2		1830	-0.2	-0.1		1318	8.2	2.5													
2315	9.6	2.9		1837	-0.1	0.0		2325	10.4	3.2		1854	0.8	0.2		1926	0.0	0.0		1909	1.1	0.3													
14 0532	-0.8	-0.2		29 0008	10.1	3.1		14 0549	-1.4	-0.4		29 0026	9.6	2.9		14 0044	10.9	3.3		29 0119	9.2	2.8													
Th 1141	9.2	2.8		F 0628	-1.2	-0.4		Sa 1159	9.2	2.8		Su 0649	-0.5	-0.2		Tu 0715	-1.5	-0.5		W 0743	0.2	0.1													
1744	-0.3	-0.1		1242	9.1	2.8		1758	-0.2	-0.1		1303	8.4	2.6		1329	9.4	2.9		1356	8.1	2.5													
2351	9.9	3.0		1837	-0.1	0.0					1854	0.8	0.2		1926	0.0	0.0		1950	1.3	0.4														
15 0610	-1.1	-0.3		30 0050	9.8	3.0		15 0009	10.5	3.2		30 0105	9.4	2.8		15 0140	10.7	3.3		30 0200	9.0	2.7													
F 1219	9.2	2.8		Sa 0710	-0																														

PORTLAND, MAINE, 1983

Times and Heights of High and Low Waters

JULY

AUGUST

SEPTEMBER

Time Day	Height			Time Day	Height			Time Day	Height			Time Day	Height					
	h	m	ft		h	m	ft		h	m	ft		h	m	ft			
1 0241	8.7	2.7		16 0326	9.8	3.0		1 0332	8.2	2.5		1 0449	8.0	2.4		16 0036	0.7	0.2
F 0902	0.6	0.2		Sa 0947	-0.7	-0.2		M 0944	0.6	0.2		Tu 1115	0.6	0.2		F 0655	7.7	2.3
1515	8.1	2.5		1608	9.6	2.9		1557	8.6	2.6		1738	9.1	2.8		1709	9.2	2.8
2118	1.4	0.4		2219	0.0	0.0		2216	0.7	0.2						1248	1.5	0.5
															1909	8.7	2.7	
2 0323	8.5	2.6		17 0431	9.2	2.8		2 0421	8.0	2.4		17 0003	0.2	0.1		2 0551	8.0	2.4
Sa 0944	0.7	0.2		Su 1044	-0.2	-0.1		Tu 1032	0.7	0.2		W 0619	7.9	2.4		F 1154	0.9	0.3
1558	8.2	2.5		1707	9.5	2.9		1646	8.8	2.7		1215	0.9	0.3		Sa 0751	7.8	2.4
2205	1.3	0.4		2325	0.1	0.0		2309	0.5	0.2		1839	9.0	2.7		1345	1.4	0.4
															2005	8.9	2.7	
3 0411	8.2	2.5		18 0536	8.7	2.7		3 0515	7.9	2.4		18 0106	0.3	0.1		3 0045	-0.1	0.0
Su 1027	0.8	0.2		M 1144	0.1	0.0		W 1123	0.7	0.2		Th 0722	7.8	2.4		Sa 0659	8.3	2.5
1642	8.4	2.6		1808	9.4	2.9		1739	9.1	2.8		1317	1.1	0.3		1259	0.7	0.2
2256	1.2	0.4													1436	1.2	0.4	
															2051	9.1	2.8	
4 0502	8.1	2.5		19 0029	0.1	0.0		4 0007	0.2	0.1		19 0205	0.3	0.1		4 0149	-0.5	-0.2
M 1114	0.9	0.3		Tu 0641	8.3	2.5		Th 0615	8.0	2.4		F 0821	7.9	2.4		Su 0802	8.8	2.7
1730	8.6	2.6		1243	0.4	0.1		1219	0.7	0.2		1411	1.1	0.3		1400	0.3	0.1
2349	0.8	0.2		1907	9.4	2.9		1837	9.5	2.9		2032	9.1	2.8		2018	10.4	3.2
															2133	9.2	2.8	
5 0555	8.0	2.4		20 0130	0.0	0.0		5 0106	-0.2	-0.1		20 0255	0.2	0.1		5 0248	-0.9	-0.3
Tu 1203	0.8	0.2		W 0745	8.2	2.5		F 0717	8.2	2.5		Sa 0911	8.0	2.4		M 0901	9.3	2.8
1821	8.9	2.7		1341	0.6	0.2		1317	0.5	0.2		1502	1.1	0.3		1501	-0.2	-0.1
				2003	9.4	2.9		1934	9.9	3.0		2121	9.3	2.8		1557	0.7	0.2
															2212	9.3	2.8	
6 0044	0.4	0.1		21 0227	-0.1	0.0		6 0207	-0.6	-0.2		21 0341	0.2	0.1		6 0344	-1.3	-0.4
W 0649	8.0	2.4		Th 0841	8.1	2.5		Sa 0818	8.5	2.6		Su 0953	8.2	2.5		Tu 0956	9.8	3.0
1253	0.7	0.2		1436	0.8	0.2		1415	0.2	0.1		1546	1.0	0.3		1559	-0.7	-0.2
1912	9.3	2.8		2055	9.5	2.9		2034	10.4	3.2		2202	9.4	2.9		1633	0.4	0.1
															2246	9.3	2.8	
7 0138	-0.1	0.0		22 0318	-0.2	-0.1		7 0306	-1.0	-0.3		22 0425	0.1	0.0		7 0436	-1.6	-0.5
Th 0746	8.2	2.5		F 0932	8.2	2.5		Su 0916	9.0	2.7		M 1034	8.4	2.6		W 1049	10.3	3.1
1345	0.5	0.2		1524	0.8	0.2		1514	-0.1	0.0		1625	0.8	0.2		1654	-1.1	-0.3
2003	9.8	3.0		2141	9.5	2.9		2132	10.9	3.3		2241	9.5	2.9		2308	11.1	3.4
															2319	9.2	2.8	
8 0231	-0.6	-0.2		23 0404	-0.2	-0.1		8 0401	-1.4	-0.4		23 0459	0.1	0.0		8 0527	-1.7	-0.5
F 0842	8.5	2.6		Sa 1018	8.2	2.5		M 1012	9.4	2.9		Tu 1108	8.5	2.6		Th 1140	10.5	3.2
1439	0.2	0.1		1609	0.8	0.2		1610	-0.5	-0.2		1702	0.7	0.2		1748	-1.3	-0.4
2055	10.3	3.1		2225	9.5	2.9		2228	11.2	3.4		2316	9.5	2.9		2351	9.1	2.8
9 0327	-1.1	-0.3		24 0446	-0.2	-0.1		9 0455	-1.7	-0.5		24 0533	0.1	0.0		9 0001	10.9	3.3
Sa 0937	8.8	2.7		Su 1100	8.3	2.5		Tu 1107	9.8	3.0		W 1142	8.6	2.6		F 0616	-1.6	-0.5
1532	0.0	0.0		1649	0.9	0.3		1707	-0.8	-0.2		1738	0.6	0.2		Sa 1205	9.2	2.8
2148	10.8	3.3		2304	9.5	2.9		2323	11.3	3.4		2349	9.4	2.9		1819	-0.2	-0.1
															1842	-1.4	-0.4	
10 0418	-1.5	-0.5		25 0527	-0.1	0.0		10 0548	-1.8	-0.5		25 0605	0.1	0.0		10 0054	10.4	3.2
Su 1031	9.2	2.8		M 1138	8.3	2.5		W 1200	10.1	3.1		Th 1212	8.7	2.7		Sa 0705	-1.2	-0.4
1626	-0.3	-0.1		1727	0.9	0.3		1802	-0.9	-0.3		1813	0.5	0.2		1319	10.3	3.1
2241	11.1	3.4		2341	9.5	2.9									1242	9.2	2.8	
															1934	-1.2	-0.4	
															1857	-0.3	-0.1	
11 0512	-1.7	-0.5		26 0603	-0.1	0.0		11 0017	11.1	3.4		26 0023	9.2	2.8		11 0148	9.7	3.0
M 1123	9.4	2.9		Tu 1213	8.3	2.5		Th 0640	-1.7	-0.5		F 0636	0.1	0.0		Su 0756	-0.7	-0.2
1720	-0.4	-0.1		1804	0.9	0.3		1254	10.2	3.1		1242	8.7	2.7		1412	10.0	3.0
2336	11.2	3.4						1858	-0.9	-0.3		1849	0.4	0.1		2027	-0.8	-0.2
															1937	-0.3	-0.1	
12 0605	-1.8	-0.5		27 0017	9.4	2.9		12 0111	10.7	3.3		27 0056	9.0	2.7		12 0243	9.0	2.7
Tu 1219	9.7	3.0		W 0638	0.0	0.0		F 0731	-1.5	-0.5		Sa 0709	0.1	0.0		M 0849	-0.1	0.0
1816	-0.5	-0.2		1247	8.4	2.6		1347	10.1	3.1		1318	8.8	2.7		1504	9.5	2.9
				1842	0.9	0.3		1956	-0.8	-0.2		1927	0.3	0.1		1401	9.3	2.8
															2126	-0.3	-0.1	
13 0031	11.1	3.4		28 0052	9.2	2.8		13 0208	10.1	3.1		28 0135	8.7	2.7		13 0341	8.4	2.6
W 0659	-1.7	-0.5		Th 0711	0.1	0.0		Sa 0824	-1.0	-0.3		Su 0744	0.3	0.1		Tu 0944	0.5	0.2
1313	9.8	3.0		1321	8.4	2.6		1441	9.9	3.0		1353	8.8	2.7		1603	9.1	2.8
1913	-0.4	-0.1		1919	0.9	0.3		2054	-0.6	-0.2		2008	0.2	0.1		2227	0.1	0.0
															2118	-0.1	0.0	
14 0127	10.8	3.3		29 0128	9.0	2.7		14 0305	9.5	2.9		29 0214	8.5	2.6		14 0445	7.9	2.4
Th 0753	-1.5	-0.5		F 0747	0.3	0.1		Su 0918	-0.5	-0.2		M 0822	0.4	0.1		W 1043	1.1	0.3
1409	9.8	3.0		1356	8.4	2.6		1538	9.6	2.9		1433	8.9	2.7		1704	8.7	2.7
2012	-0.3	-0.1		2000	0.9	0.3		2155	-0.3	-0.1		2053	0.2	0.1		1547	9.3	2.8
															2332	0.5	0.2	
15 0225	10.4	3.2		30 0206	8.8	2.7		15 0408	8.8	2.7		30 0258	8.3	2.5		15 0551	7.7	2.3
F 0848	-1.1	-0.3		Sa 0823	0.4	0.1		M 1015	0.1	0.0		Tu 0907	0.6	0.2		Th 1146	1.4	0.4
1507	9.7	3.0		1433	8.4	2.6		1637	9.3	2.8		1518	8.9	2.7		1809	8.6	2.6
2115	-0.1	0.0		2040	0.8	0.2		2257	0.0	0.0		2144	0.2	0.1		1648	9.3	2.8
															2322	0.1	0.0	
31 0246	8.5	2.6						31 0350	8.1	2.5						28 0233	8.3	2.5
Su 0901	0.5</td																	

Times and Heights of High and Low Waters

OCTOBER				NOVEMBER				DECEMBER				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	
h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	
1 0538	8.2 2.5	16 0053	1.0 0.3	1 0117	-0.3 -0.1	16 0139	1.0 0.3	1 0154	-0.3 -0.1	16 0128	0.9 0.3	
Sa 1138	1.0 0.3	Su 0715	7.9 2.4	Tu 0736	9.5 2.9	W 0754	8.5 2.6	Th 0815	10.0 3.0	F 0742	8.8 2.7	
1757	9.5 2.9	1312	1.7 0.5	1344	0.1 0.0	1405	0.9 0.3	1434	-0.7 -0.2	1405	0.3 0.1	
	1927	8.6 2.6	1957	9.8 3.0	2015	8.4 2.6	2045	9.2 2.8	2013	8.0 2.4		
2 0029	-0.1 0.0	17 0146	1.0 0.3	2 0214	-0.6 -0.2	17 0221	0.8 0.2	2 0247	-0.4 -0.1	17 0213	0.6 0.2	
Su 0646	8.6 2.6	M 0802	8.2 2.5	W 0831	10.0 3.0	Th 0834	8.8 2.7	F 0906	10.3 3.1	Sa 0827	9.2 2.8	
1246	0.7 0.2	1402	1.3 0.4	1444	-0.6 -0.2	1447	0.4 0.1	1525	-1.1 -0.3	1450	-0.2 -0.1	
1903	9.9 3.0	2016	8.7 2.7	2056	10.0 3.0	2057	8.5 2.6	2138	9.2 2.8	2059	8.2 2.5	
3 0133	-0.4 -0.1	18 0229	0.8 0.2	3 0307	-0.8 -0.2	18 0258	0.5 0.2	3 0338	-0.4 -0.1	18 0255	0.4 0.1	
M 0749	9.1 2.8	Tu 0844	8.5 2.6	Th 0922	10.4 3.2	F 0911	9.2 2.8	Sa 0953	10.4 3.2	Su 0908	9.7 3.0	
1352	0.2 0.1	1444	0.9 0.3	1537	-1.1 -0.3	1527	-0.1 0.0	1615	-1.3 -0.4	1536	-0.8 -0.2	
2009	10.2 3.1	2058	8.9 2.7	2150	10.0 3.0	2136	8.6 2.6	2229	9.1 2.8	2145	8.5 2.6	
4 0231	-0.8 -0.2	19 0308	0.6 0.2	4 0356	-0.9 -0.3	19 0335	0.3 0.1	4 0425	-0.3 -0.1	19 0341	0.1 0.0	
Tu 0847	9.7 3.0	W 0921	8.8 2.7	F 1011	10.6 3.2	Sa 0945	9.5 2.9	Su 1039	10.3 3.1	M 0953	10.1 3.1	
1452	-0.4 -0.1	1525	0.5 0.2	1628	-1.5 -0.5	1606	-0.6 -0.2	1702	-1.4 -0.4	1620	-1.2 -0.4	
2108	10.6 3.2	2137	9.0 2.7	2241	9.9 3.0	2215	8.7 2.7	2315	9.0 2.7	2230	8.8 2.7	
5 0325	-1.1 -0.3	20 0343	0.4 0.1	5 0442	-0.9 -0.3	20 0413	0.1 0.0	5 0509	-0.1 0.0	20 0424	-0.1 0.0	
W 0940	10.2 3.1	Th 0953	9.1 2.8	Sa 1057	10.7 3.3	Su 1022	9.8 3.0	M 1121	10.2 3.1	Tu 1038	10.5 3.2	
1548	-1.0 -0.3	1602	0.1 0.0	1716	-1.6 -0.5	1647	-1.0 -0.3	1748	-1.2 -0.4	1706	-1.5 -0.5	
2202	10.7 3.3	2212	9.0 2.7	2330	9.6 2.9	2255	8.8 2.7	2318	9.0 2.7			
6 0417	-1.3 -0.4	21 0417	0.2 0.1	6 0527	-0.6 -0.2	21 0452	0.0 0.0	6 0000	8.8 2.7	21 0513	-0.2 -0.1	
Th 1030	10.6 3.2	F 1025	9.3 2.8	Su 1141	10.5 3.2	M 1102	10.1 3.1	Tu 0552	0.2 0.1	W 1124	10.7 3.3	
1641	-1.4 -0.4	1637	-0.3 -0.1	1804	-1.5 -0.5	1726	-1.2 -0.4	1206	9.9 3.0	1755	-1.6 -0.5	
2255	10.6 3.2	2247	9.0 2.7	2338	8.9 2.7	1830	-0.9 -0.3					
7 0504	-1.3 -0.4	22 0449	0.1 0.0	7 0016	9.3 2.8	22 0533	0.0 0.0	7 0043	8.5 2.6	22 0005	9.1 2.8	
F 1118	10.7 3.3	Sa 1057	9.5 2.9	M 0613	-0.2 -0.1	Tu 1144	10.3 3.1	W 0634	0.5 0.2	Th 0601	-0.2 -0.1	
1732	-1.6 -0.5	1713	-0.6 -0.2	1225	10.1 3.1	1811	-1.3 -0.4	1247	9.6 2.9	1214	10.7 3.3	
2344	10.3 3.1	2322	9.0 2.7	1850	-1.1 -0.3			1913	-0.5 -0.2	1844	-1.6 -0.5	
8 0551	-1.2 -0.4	23 0523	0.0 0.0	8 0103	8.8 2.7	23 0021	8.9 2.7	8 0127	8.3 2.5	23 0056	9.2 2.8	
Sa 1204	10.6 3.2	Su 1131	9.6 2.9	Tu 0658	0.2 0.1	W 0617	0.1 0.0	Th 0719	0.9 0.3	F 0655	-0.2 -0.1	
1822	-1.5 -0.5	1751	-0.8 -0.2	1312	9.7 3.0	1229	10.3 3.1	1329	9.3 2.8	1308	10.6 3.2	
	2359	8.9 2.7		1937	-0.7 -0.2	1858	-1.2 -0.4	1958	-0.1 0.0	1937	-1.4 -0.4	
9 0034	9.8 3.0	24 0600	0.1 0.0	9 0153	8.4 2.6	24 0111	8.8 2.7	9 0211	8.0 2.4	24 0150	9.2 2.8	
Su 0638	-0.8 -0.2	M 1209	9.8 3.0	W 0745	0.8 0.2	Th 0708	0.3 0.1	F 0804	1.2 0.4	Sa 0750	0.0 0.0	
1252	10.3 3.1	1831	-0.8 -0.2	1400	9.3 2.8	1320	10.2 3.1	1414	8.9 2.7	1404	10.3 3.1	
1911	-1.3 -0.4			2027	-0.1 0.0	1950	-1.0 -0.3	2041	0.3 0.1	2030	-1.1 -0.3	
10 0124	9.3 2.8	25 0041	8.8 2.7	10 0241	8.0 2.4	25 0203	8.7 2.7	10 0257	7.8 2.4	25 0248	9.2 2.8	
M 0727	-0.2 -0.1	Tu 0640	0.2 0.1	Th 0836	1.3 0.4	F 0801	0.5 0.2	Sa 0853	1.5 0.5	Su 0851	0.2 0.1	
1340	9.9 3.0	1250	9.8 3.0	1449	8.8 2.7	1414	10.0 3.0	1502	8.5 2.6	1504	9.8 3.0	
2001	-0.8 -0.2	1915	-0.8 -0.2	2118	0.4 0.1	2046	-0.7 -0.2	2128	0.7 0.2	2130	-0.8 -0.2	
11 0217	8.7 2.7	26 0126	8.6 2.6	11 0337	7.7 2.3	26 0302	8.7 2.7	11 0347	7.7 2.3	26 0350	9.2 2.8	
Tu 0815	0.4 0.1	W 0726	0.4 0.1	F 0930	1.7 0.5	Sa 0902	0.7 0.2	Su 0942	1.7 0.5	M 0957	0.3 0.1	
1429	9.3 2.8	1337	9.7 3.0	1544	8.5 2.6	1515	9.7 3.0	1554	8.2 2.5	1608	9.3 2.8	
2057	-0.2 -0.1	2003	-0.6 -0.2	2213	0.9 0.3	2147	-0.4 -0.1	2218	1.0 0.3	2229	-0.4 -0.1	
12 0313	8.1 2.5	27 0217	8.5 2.6	12 0434	7.6 2.3	27 0407	8.7 2.7	12 0435	7.7 2.3	27 0452	9.2 2.8	
W 0910	1.0 0.3	Th 0817	0.7 0.2	Sa 1027	1.9 0.6	Su 1009	0.8 0.2	M 1037	1.7 0.5	Tu 1105	0.3 0.1	
1525	8.9 2.7	1428	9.6 2.9	1643	8.2 2.5	1621	9.4 2.9	1646	8.0 2.4	1718	8.9 2.7	
2152	0.3 0.1	2059	-0.3 -0.1	2309	1.1 0.3	2250	-0.2 -0.1	2306	1.1 0.3	2333	-0.2 -0.1	
13 0413	7.7 2.3	28 0313	8.3 2.5	13 0533	7.6 2.3	28 0513	8.9 2.7	13 0526	7.8 2.4	28 0557	9.3 2.8	
Th 1008	1.5 0.5	F 0913	1.0 0.3	Su 1127	1.9 0.6	M 1119	0.7 0.2	Tu 1132	1.6 0.5	W 1214	0.1 0.0	
1627	8.5 2.6	1528	9.5 2.9	1742	8.1 2.5	1733	9.2 2.8	1741	7.8 2.4	1827	8.6 2.6	
2255	0.8 0.2	2200	-0.1 0.0	1837	8.2 2.5	2356	-0.2 -0.1	2354	1.1 0.3			
14 0516	7.6 2.3	29 0418	8.3 2.5	14 0005	1.2 0.4	29 0617	9.2 2.8	14 0614	8.1 2.5	29 0035	0.0 0.0	
F 1111	1.8 0.5	Sa 1019	1.1 0.3	M 0625	7.8 2.4	Tu 1229	0.4 0.1	W 1227	1.3 0.4	Th 0659	9.5 2.9	
1730	8.4 2.6	1635	9.4 2.9	1227	1.7 0.5	1842	9.2 2.8	1834	7.8 2.4	1320	-0.2 -0.1	
2357	1.0 0.3	2307	0.0 0.0	1837	8.2 2.5					1933	8.5 2.6	
15 0619	7.6 2.3	30 0527	8.5 2.6	15 0054	1.1 0.3	30 0057	-0.2 -0.1	15 0041	1.0 0.3	30 0133	0.1 0.0	
Sa 1212	1.8 0.5	Su 1129	1.0 0.3	Tu 0714	8.1 2.5	W 0718	9.6 2.9	Th 0659	8.4 2.6	F 0757	9.7 3.0	
1832	8.4 2.6	1745	9.4 2.9	1318	1.4 0.4	1334	-0.1 0.0	1318	0.8 0.2	1421	-0.6 -0.2	
				1930	8.3 2.5	1946	9.2 2.8	1923	7.8 2.4	2033	8.5 2.6	
31 0014	-0.1 0.0									31 0230	0.1 0.0	
M 0635	8.9 2.7									Sa 0850	9.9 3.0	
1239	0.6 0.2									1514	-0.8 -0.2	
1855	9.6 2.9									2128	8.5 2.6	

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0009	10.0	3.0	16 0028	8.6	2.6	1 0135	10.4	3.2	16 0116	9.2	2.8
Sa 0608	-0.9	-0.3	Su 0624	0.6	0.2	Tu 0738	-1.1	-0.3	W 0719	0.1	0.0
1223	11.7	3.6	1237	9.7	3.0	1354	10.9	3.3	1329	9.6	2.9
1847	-2.2	-0.7	1855	-0.4	-0.1	2009	-1.6	-0.5	1943	-0.3	-0.1
2 0102	10.1	3.1	17 0106	8.6	2.6	2 0227	10.3	3.1	17 0153	9.3	2.8
Su 0701	-0.9	-0.3	M 0703	0.6	0.2	W 0833	-0.8	-0.2	Th 0801	0.1	0.0
1318	11.5	3.5	1315	9.6	2.9	1449	10.3	3.1	1411	9.4	2.9
1940	-2.0	-0.6	1935	-0.3	-0.1	2059	-1.0	-0.3	2024	-0.1	0.0
3 0156	10.0	3.0	18 0145	8.7	2.7	3 0318	10.0	3.0	18 0235	9.4	2.9
M 0756	-0.7	-0.2	Tu 0745	0.7	0.2	Th 0929	-0.4	-0.1	F 0847	0.1	0.0
1413	11.0	3.4	1356	9.4	2.9	1542	9.6	2.9	1456	9.1	2.8
2033	-1.6	-0.5	2014	-0.1	0.0	2152	-0.3	-0.1	2105	0.2	0.1
4 0252	9.9	3.0	19 0227	8.7	2.7	4 0413	9.7	3.0	19 0321	9.4	2.9
Tu 0854	-0.4	-0.1	W 0830	0.7	0.2	F 1027	0.0	0.0	Sa 0938	0.1	0.0
1510	10.4	3.2	1438	9.2	2.8	1639	8.9	2.7	1547	8.8	2.7
2129	-1.1	-0.3	2056	0.1	0.0	2245	0.3	0.1	2156	0.4	0.1
5 0349	9.7	3.0	20 0310	8.8	2.7	5 0507	9.4	2.9	20 0410	9.5	2.9
W 0955	-0.1	0.0	Th 0917	0.7	0.2	Sa 1126	0.4	0.1	Su 1032	0.2	0.1
1608	9.8	3.0	1526	8.9	2.7	1739	8.3	2.5	1643	8.5	2.6
2224	-0.5	-0.2	2140	0.3	0.1	2341	0.8	0.2	2249	0.6	0.2
6 0446	9.6	2.9	21 0355	8.9	2.7	6 0603	9.2	2.8	21 0506	9.6	2.9
Th 1056	0.2	0.1	F 1007	0.7	0.2	Su 1227	0.6	0.2	M 1131	0.1	0.0
1710	9.2	2.8	1616	8.7	2.7	1838	7.9	2.4	1742	8.4	2.6
2322	0.0	0.0	2229	0.4	0.1	2348	0.7	0.2	2304	1.3	0.4
7 0543	9.5	2.9	22 0444	9.1	2.8	7 0038	1.1	0.3	22 0606	9.7	3.0
F 1201	0.3	0.1	Sa 1103	0.6	0.2	M 0700	9.0	2.7	Tu 1235	-0.1	0.0
1811	8.7	2.7	1709	8.5	2.6	1326	0.6	0.2	1845	8.4	2.6
			2321	0.6	0.2	1939	7.8	2.4			
8 0019	0.4	0.1	23 0536	9.3	2.8	8 0136	1.3	0.4	23 0051	0.6	0.2
Sa 0641	9.5	2.9	Su 1200	0.3	0.1	Tu 0755	9.0	2.7	W 0707	10.0	3.0
1301	0.3	0.1	1808	8.4	2.6	1421	0.5	0.2	1339	-0.4	-0.1
1913	8.4	2.6				2035	7.8	2.4	1949	8.7	2.7
9 0115	0.6	0.2	24 0017	0.6	0.2	9 0228	1.2	0.4	24 0154	0.3	0.1
Su 0734	9.5	2.9	M 0632	9.7	3.0	W 0846	9.1	2.8	Th 0810	10.4	3.2
1357	0.2	0.1	1259	-0.1	0.0	1509	0.4	0.1	1439	-0.9	-0.3
2010	8.2	2.5	1908	8.5	2.6	2124	8.0	2.4	2050	9.1	2.8
10 0206	0.8	0.2	25 0115	0.4	0.1	10 0316	1.0	0.3	25 0255	-0.2	-0.1
M 0827	9.5	2.9	Tu 0731	10.1	3.1	Th 0932	9.3	2.8	F 0911	10.9	3.3
1451	0.1	0.0	1400	-0.6	-0.2	1554	0.1	0.0	1535	-1.4	-0.4
2103	8.2	2.5	2008	8.8	2.7	2207	8.2	2.5	2148	9.6	2.9
11 0255	0.8	0.2	26 0213	0.1	0.0	11 0359	0.8	0.2	26 0351	-0.7	-0.2
Tu 0914	9.6	2.9	W 0827	10.6	3.2	F 1015	9.5	2.9	Sa 1007	11.2	3.4
1538	0.0	0.0	1458	-1.1	-0.3	1634	-0.1	0.0	1628	-1.8	-0.5
2148	8.3	2.5	2106	9.1	2.8	2246	8.4	2.6	2242	10.1	3.1
12 0340	0.8	0.2	27 0311	-0.3	-0.1	12 0441	0.6	0.2	27 0445	-1.2	-0.4
W 0957	9.7	3.0	Th 0924	11.1	3.4	Sa 1054	9.7	3.0	Su 1102	11.5	3.5
1620	-0.2	-0.1	1554	-1.6	-0.5	1713	-0.3	-0.1	1719	-2.0	-0.6
2233	8.3	2.5	2204	9.5	2.9	2324	8.7	2.7	2333	10.5	3.2
13 0423	0.7	0.2	28 0405	-0.7	-0.2	13 0521	0.4	0.1	28 0537	-1.5	-0.5
Th 1039	9.7	3.0	F 1020	11.5	3.5	Su 1134	9.8	3.0	M 1152	11.4	3.5
1700	-0.3	-0.1	1646	-2.0	-0.6	1750	-0.4	-0.1	1808	-2.0	-0.6
2311	8.4	2.6	2259	9.9	3.0				2254	9.0	2.7
14 0504	0.7	0.2	29 0500	-1.0	-0.3	14 0002	8.9	2.7	14 0454	0.1	0.0
F 1119	9.8	3.0	Sa 1115	11.7	3.6	M 0600	0.2	0.1	M 1107	9.8	3.0
1737	-0.4	-0.1	1738	-2.3	-0.7	1211	9.8	3.0	F 0903	9.1	2.8
2351	8.5	2.6	2352	10.2	3.1	1828	-0.5	-0.2	Sa 1028	9.6	2.9
15 0544	0.6	0.2	30 0553	-1.2	-0.4	15 0038	9.0	2.7	15 0534	-0.2	-0.1
Sa 1158	9.8	3.0	Su 1209	11.7	3.6	Tu 0639	0.1	0.0	Tu 1145	9.9	3.0
1816	-0.4	-0.1	1829	-2.2	-0.7				1757	-0.4	-0.1
31 0044	10.4	3.2				1905	-0.4	-0.1	2312	10.8	3.3
M 0645	-1.3	-0.4							31 0041	10.9	3.3
1302	11.4	3.5							Th 0655	-1.3	-0.4
1919	-2.0	-0.6							1309	10.2	3.1
									1912	-0.6	-0.2

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL						MAY						JUNE								
Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height			
	h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m			
1	0127	10.6	3.2	16	0054	10.6	3.2	1	0142	10.1	3.1	16	0122	11.0	3.4	1	0241	9.3	2.8	
F	0741	-1.0	-0.3	Sa	0715	-1.0	-0.3	Su	0801	-0.3	-0.1	M	0746	-1.3	-0.4	W	0904	0.4	0.1	
	1355	9.6	2.9		1326	9.6	2.9		1416	8.8	2.7		1401	9.5	2.9		1521	8.3	2.5	
	1958	0.0	0.0		1929	0.0	0.0		2011	0.9	0.3		2001	0.2	0.1		2118	1.6	0.5	
2	0212	10.2	3.1	17	0140	10.5	3.2	2	0225	9.6	2.9	17	0215	10.8	3.3	2	0331	9.0	2.7	
Sa	0827	-0.5	-0.2	Su	0804	-0.9	-0.3	M	0847	0.1	0.0	Tu	0841	-1.0	-0.3	Th	0952	0.7	0.2	
	1444	9.0	2.7		1415	9.3	2.8		1503	8.4	2.6		1457	9.3	2.8		1608	8.2	2.5	
	2044	0.6	0.2		2017	0.3	0.1		2100	1.4	0.4		2057	0.4	0.1		2210	1.7	0.5	
3	0300	9.7	3.0	18	0230	10.4	3.2	3	0315	9.2	2.8	18	0313	10.5	3.2	3	0420	8.8	2.7	
Su	0918	0.1	0.0	M	0857	-0.7	-0.2	Tu	0937	0.6	0.2	W	0937	-0.7	-0.2	F	1042	0.8	0.2	
	1534	8.5	2.6		1509	9.0	2.7		1553	8.1	2.5		1555	9.2	2.8		1659	8.3	2.5	
	2134	1.1	0.3		2111	0.6	0.2		2151	1.7	0.5		2157	0.6	0.2		2303	1.7	0.5	
4	0350	9.2	2.8	19	0326	10.2	3.1	4	0406	8.8	2.7	19	0414	10.1	3.1	4	0512	8.6	2.6	
M	1011	0.6	0.2	Tu	0953	-0.4	-0.1	W	1030	0.9	0.3	Th	1039	-0.5	-0.2	Sa	1133	0.9	0.3	
	1627	8.0	2.4		1608	8.8	2.7		1647	7.9	2.4		1658	9.2	2.8		1748	8.5	2.6	
	2227	1.6	0.5		2211	0.8	0.2		2247	1.9	0.6		2303	0.7	0.2		2358	1.5	0.5	
5	0443	8.8	2.7	20	0427	9.9	3.0	5	0459	8.6	2.6	20	0517	9.9	3.0	5	0606	8.6	2.6	
Tu	1107	0.9	0.3	W	1055	-0.2	-0.1	Th	1123	1.1	0.3	F	1140	-0.3	-0.1	Su	1223	0.9	0.3	
	1723	7.7	2.3		1711	8.7	2.7		1740	7.9	2.4		1800	9.4	2.9		1838	8.8	2.7	
	2323	1.8	0.5		2315	0.9	0.3		2344	1.9	0.6							1312	0.2	0.1
6	0541	8.5	2.6	21	0531	9.8	3.0	6	0555	8.5	2.6	21	0009	0.5	0.2	6	0053	1.1	0.3	
W	1205	1.1	0.3	Th	1159	-0.2	-0.1	F	1219	1.1	0.3	Sa	0623	9.7	3.0	M	0658	8.6	2.6	
	1822	7.7	2.3		1816	8.9	2.7		1834	8.1	2.5		1242	-0.2	-0.1		1312	0.8	0.2	
													1900	9.7	3.0		1926	9.2	2.8	
7	0022	1.8	0.5	22	0021	0.7	0.2	7	0040	1.6	0.5	22	0113	0.2	0.1	7	0144	0.7	0.2	
Th	0637	8.5	2.6	F	0638	9.8	3.0	Sa	0650	8.6	2.6	Su	0725	9.7	3.0	Tu	0749	8.8	2.7	
	1302	1.1	0.3		1301	-0.3	-0.1		1309	0.9	0.3		1339	-0.2	-0.1		1402	0.6	0.2	
	1917	7.8	2.4		1918	9.2	2.8		1923	8.4	2.6		1957	10.0	3.0		2013	9.7	3.0	
8	0119	1.6	0.5	23	0127	0.3	0.1	8	0133	1.3	0.4	23	0213	-0.1	0.0	8	0234	0.1	0.0	
F	0733	8.6	2.6	Sa	0741	10.0	3.0	Su	0742	8.8	2.7	M	0824	9.6	2.9	W	0840	9.0	2.7	
	1355	0.9	0.3		1402	-0.5	-0.2		1358	0.7	0.2		1432	-0.2	-0.1		1448	0.4	0.1	
	2009	8.1	2.5		2018	9.7	3.0		2010	8.9	2.7		2051	10.3	3.1		2058	10.2	3.1	
9	0213	1.3	0.4	24	0227	-0.2	-0.1	9	0222	0.8	0.2	24	0306	-0.5	-0.2	9	0322	-0.5	-0.2	
Sa	0825	8.9	2.7	Su	0840	10.2	3.1	M	0832	9.0	2.7	Tu	0919	9.6	2.9	Th	0930	9.3	2.8	
	1442	0.6	0.2		1456	-0.7	-0.2		1443	0.5	0.2		1522	-0.2	-0.1		1535	0.1	0.0	
	2055	8.5	2.6		2111	10.2	3.1		2055	9.4	2.9		2138	10.6	3.2		2145	10.7	3.3	
10	0258	0.8	0.2	25	0324	-0.7	-0.2	10	0309	0.2	0.1	25	0356	-0.8	-0.2	10	0411	-1.0	-0.3	
Su	0911	9.2	2.8	M	0937	10.3	3.1	Tu	0918	9.3	2.8	W	1009	9.6	2.9	F	1019	9.5	2.9	
	1525	0.3	0.1		1546	-0.8	-0.2		1527	0.2	0.1		1609	-0.1	0.0		1621	-0.1	0.0	
	2136	9.0	2.7		2202	10.6	3.2		2136	9.9	3.0		2223	10.7	3.3		2234	11.1	3.4	
11	0343	0.3	0.1	26	0414	-1.1	-0.3	11	0355	-0.3	-0.1	26	0442	-0.9	-0.3	11	0459	-1.4	-0.4	
M	0954	9.5	2.9	Tu	1028	10.3	3.1	W	1002	9.5	2.9	Th	1056	9.5	2.9	Sa	1120	8.8	2.7	
	1606	0.0	0.0		1633	-0.8	-0.2		1609	0.0	0.0		1651	0.1	0.0		1709	-0.3	-0.1	
	2215	9.5	2.9		2248	10.8	3.3		2219	10.4	3.2		2307	10.6	3.2		2322	11.4	3.5	
12	0425	-0.1	0.0	27	0502	-1.3	-0.4	12	0438	-0.8	-0.2	27	0526	-0.9	-0.3	12	0548	-1.6	-0.5	
Tu	1036	9.7	3.0	W	1116	10.2	3.1	Th	1047	9.7	3.0	F	1141	9.3	2.8	Su	1200	9.8	3.0	
	1645	-0.2	-0.1		1718	-0.6	-0.2		1651	-0.2	-0.1		1735	0.3	0.1		1759	-0.3	-0.1	
	2254	9.9	3.0		2332	10.9	3.3		2301	10.7	3.3		2349	10.5	3.2			1240	8.7	2.7
																	1834	0.9	0.3	
13	0506	-0.5	-0.2	28	0547	-1.3	-0.4	13	0523	-1.2	-0.4	28	0609	-0.7	-0.2	13	0013	11.5	3.5	
W	098	3.0	Th	1202	10.0	3.0	F	1133	9.8	3.0	Sa	1223	9.1	2.8	M	0628	-0.2	-0.1		
	1725	-0.3	-0.1		1801	-0.3	-0.1		1736	-0.2	-0.1		1817	0.6	0.2		1752	0.8	0.2	
	2333	10.2	3.1						2343	11.0	3.4						1253	9.8	3.0	
																1851	-0.3	-0.1		
14	0548	-0.8	-0.2	29	0015	10.7	3.3	14	0609	-1.4	-0.4	29	0031	10.2	3.1	14	0106	11.4	3.5	
Th	1158	9.8	3.0	F	0631	-1.1	-0.3	Sa	1219	9.8	3.0	Su	0651	-0.5	-0.2	Tu	0730	-1.6	-0.5	
	1804	-0.3	-0.1		1247	9.6	2.9		1820	-0.2	-0.1		1305	8.9	2.7		1346	9.8	3.0	
					1844	0.0	0.0					1859	0.8	0.2		1945	-0.2	-0.1		
15	0012	10.5	3.2	30	0058	10.5	3.2	15	0032	11.1	3.4	30	0114	9.9	3.0	15	0201	11.1	3.4	
F	0630	-1.0	-0.3	Sa	0716	-0.8	-0.2	Su	0655	-1.4	-0.4	M	0733	-0.2	-0.1	W	0825	-1.3	-0.4	
	1241	9.8	3.0		1330	9.2	2.8		1309	9.7	3.0		1350	8.6	2.6		1441	9.8	3.0	
	1845	-0.2	-0.1		1927	0.5	0.2		1909	-0.1	0.0		1942	1.1	0.3		2043	0.0	0.0	
													31	0156	9.6	2.9		2046	1.3	0.4
													Tu	0817	0.1	0.0				
														1433	8.4	2.6				
														2028	1.4	0.4				

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JULY				AUGUST				SEPTEMBER			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0257	9.2	2.8	16 0339	10.3	3.1	1 0357	8.8	2.7	16 0514	8.8	2.7
F 0915	0.4	0.1	Sa 0955	-0.7	-0.2	M 1008	0.8	0.2	Tu 1117	0.8	0.2
1531	8.6	2.6	1615 10.1	3.1		1622 9.2	2.8		1739 9.7	3.0	
2134	1.4	0.4	2226 0.0	0.0		2240 0.9	0.3				
2 0345	8.9	2.7	17 0440	9.7	3.0	2 0448	8.6	2.6	17 0002	0.5	0.2
Sa 1000	0.6	0.2	Su 1051	-0.1	0.0	Tu 1058	0.9	0.3	W 0616	8.4	2.6
1618	8.6	2.6	1713 10.0	3.0		1712 9.4	2.9		1217 1.2	0.4	
2224	1.4	0.4	2328 0.2	0.1		2335 0.7	0.2		1836 9.5	2.9	
3 0432	8.7	2.7	18 0540	9.2	2.8	3 0542	8.5	2.6	18 0103	0.6	0.2
Su 1050	0.8	0.2	M 1148	0.3	0.1	W 1150	1.0	0.3	Th 0717	8.2	2.5
1705	8.8	2.7	1810 9.9	3.0		1807 9.6	2.9		1313 1.3	0.4	
2318	1.2	0.4							1936 9.4	2.9	
4 0523	8.6	2.6	19 0030	0.3	0.1	4 0032	0.4	0.1	19 0202	0.6	0.2
M 1138	0.9	0.3	Tu 0642	8.8	2.7	Th 0639	8.5	2.6	F 0816	8.2	2.5
1752	9.1	2.8	1246 0.7	0.2		1248 0.9	0.3		1408 1.3	0.4	
			1908 9.9	3.0		1902 10.0	3.0		2029 9.4	2.9	
5 0011	0.9	0.3	20 0130	0.3	0.1	5 0130	0.0	0.0	20 0253	0.5	0.2
Tu 0618	8.6	2.6	W 0742	8.6	2.6	F 0739	8.7	2.7	Sa 0907	8.3	2.5
1229	0.9	0.3	1342 0.9	0.3		1344 0.6	0.2		1459 1.2	0.4	
1843	9.5	2.9	2001 9.8	3.0		2000 10.5	3.2		2116 9.5	2.9	
6 0106	0.5	0.2	21 0226	0.2	0.1	6 0229	-0.5	-0.2	21 0338	0.3	0.1
W 0712	8.6	2.6	Th 0840	8.5	2.6	Sa 0837	9.0	2.7	Su 0951	8.5	2.6
1320	0.7	0.2	1433 1.0	0.3		1442 0.2	0.1		1543 1.0	0.3	
1933	9.9	3.0	2052 9.9	3.0		2056 10.9	3.3		2201 9.7	3.0	
7 0200	0.0	0.0	22 0317	0.1	0.0	7 0324	-1.1	-0.3	22 0418	0.2	0.1
Th 0806	8.8	2.7	F 0932	8.5	2.6	Su 0935	9.5	2.9	M 1031	8.7	2.7
1414	0.5	0.2	1522 1.0	0.3		1537 -0.3	-0.1		1625 0.8	0.2	
2026	10.4	3.2	2140 9.9	3.0		2152 11.4	3.5		2241 9.8	3.0	
8 0255	-0.5	-0.2	23 0401	0.0	0.0	8 0418	-1.5	-0.5	23 0457	0.0	0.0
F 0901	9.1	2.8	Sa 1015	8.5	2.6	M 1029	9.9	3.0	Tu 1110	8.9	2.7
1506	0.2	0.1	1606 0.9	0.3		1631 -0.7	-0.2		1706 0.6	0.2	
2119	10.9	3.3	2224 9.9	3.0		2247 11.7	3.6		2319 9.9	3.0	
9 0346	-1.1	-0.3	24 0445	-0.1	0.0	9 0510	-1.9	-0.6	24 0535	-0.1	0.0
Sa 0956	9.4	2.9	Su 1057	8.6	2.6	Tu 1123	10.3	3.1	W 1146	9.1	2.8
1556	-0.1	0.0	1649 0.9	0.3		1726 -1.0	-0.3		1746 0.4	0.1	
2210	11.3	3.4	2306 9.9	3.0		2341 11.8	3.6		2358 9.9	3.0	
10 0437	-1.5	-0.5	25 0524	-0.1	0.0	10 0602	-2.0	-0.6	25 0611	-0.1	0.0
Su 1049	9.7	3.0	M 1138	8.7	2.7	W 1216	10.6	3.2	Th 1223	9.2	2.8
1648	-0.4	-0.1	1729 0.8	0.2		1818 -1.2	-0.4		1824 0.4	0.1	
2303	11.6	3.5	2345 9.9	3.0					1332 11.0	3.4	
11 0529	-1.8	-0.5	26 0603	-0.1	0.0	11 0035	11.7	3.6	26 0035	9.8	2.6
M 1142	10.0	3.0	Tu 1215	8.8	2.7	Th 0652	-1.9	-0.6	F 0648	-0.1	0.0
1741	-0.6	-0.2	1810 0.8	0.2		1307 10.8	3.3		1300 9.3	2.8	
2356	11.8	3.6				1912 -1.1	-0.3		1904 0.3	0.1	
12 0621	-1.9	-0.6	27 0023	9.9	3.0	12 0127	11.4	3.5	27 0114	9.7	3.0
Tu 1235	10.2	3.1	W 0642	-0.1	0.0	F 0743	-1.5	-0.5	Sa 0724	0.1	0.0
1835	-0.7	-0.2	1253 8.8	2.7		1358 10.8	3.3		1337 9.4	2.9	
			1850 0.8	0.2		2006 -0.9	-0.3		1943 0.3	0.1	
13 0051	11.7	3.6	28 0103	9.8	3.0	13 0222	10.8	3.3	13 0159	10.5	3.2
W 0713	-1.8	-0.5	Th 0719	0.0	0.0	Sa 0833	-1.0	-0.3	W 0804	-0.6	-0.2
1329	10.3	3.1	1332 8.9	2.7		1452 10.6	3.2		1421 10.7	3.3	
1930	-0.6	-0.2	1932 0.8	0.2		2102 -0.6	-0.2		2036 -0.8	-0.2	
14 0146	11.4	3.5	29 0143	9.6	2.9	14 0316	10.1	3.1	14 0443	8.5	2.6
Th 0806	-1.6	-0.5	F 0759	0.1	0.0	Su 0926	-0.4	-0.1	M 0846	0.5	0.2
1423	10.3	3.1	1411 8.9	2.7		1545 10.3	3.1		1500 9.5	2.9	
2027	-0.5	-0.2	2015 0.9	0.3		2158 -0.2	-0.1		2115 0.4	0.1	
15 0242	10.9	3.3	30 0225	9.4	2.9	15 0414	9.4	2.9	15 0544	8.1	2.5
F 0900	-1.2	-0.4	Sa 0840	0.3	0.1	M 1020	0.2	0.1	Tu 0932	0.8	0.2
1518	10.2	3.1	1453 9.0	2.7		1640 10.0	3.0		1547 9.5	2.9	
2125	-0.2	-0.1	2100 0.9	0.3		2300 0.2	0.1		2206 0.5	0.2	
31 0308	9.1	2.8				28 0155	9.4	2.9	28 0418	8.6	2.6
Su 0921	0.5	0.2				Su 0804	0.3	0.1	W 1023	1.0	0.3
1536	9.1	2.8							1639 9.5	2.9	
2148	0.9	0.3							2305 0.5	0.2	

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER												NOVEMBER												DECEMBER											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day							
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m									
1 0557	8.6	2.6	16 0048	1.1	0.3	1 0128	-0.4	-0.1	16 0144	0.8	0.2	1 0202	-0.3	-0.1	16 0144	0.7	0.2	1 0231	0.5	0.2	16 0144	0.7	0.2												
Sa 1203	1.0	0.3	Su 0704	8.0	2.4	Tu 0744	9.7	3.0	W 0757	8.8	2.7	Th 0821	10.3	3.1	F 0756	9.3	2.8	Sa 0842	9.8	3.0	F 0756	9.3	2.8												
1817	9.9	3.0	1307	1.7	0.5	1357	-0.1	0.0	1410	0.8	0.2	1439	-0.7	-0.2	1418	0.3	0.1	1506	-0.3	-0.1	1418	0.3	0.1												
			1920	8.7	2.7	2008	10.1	3.1	2018	8.8	2.7	2050	9.6	2.9	2024	8.5	2.6	2024	8.5	2.6	2024	8.5	2.6												
2 0049	-0.1	0.0	17 0141	0.9	0.3	2 0224	-0.7	-0.2	17 0227	0.6	0.2	2 0255	-0.4	-0.1	17 0231	0.5	0.2	2 0255	-0.4	-0.1	17 0231	0.5	0.2												
Su 0701	8.9	2.7	M 0755	8.3	2.5	W 0840	10.3	3.1	Th 0840	9.3	2.8	F 0911	10.6	3.2	Sa 0928	10.2	3.1	Sa 0842	9.8	3.0	Sa 0842	9.8	3.0												
1307	0.6	0.2	1358	1.3	0.4	1453	-0.7	-0.2	1455	0.3	0.1	1532	-1.0	-0.3	1552	-0.8	-0.2	1506	-0.3	-0.1	1552	-0.8	-0.2												
1923	10.2	3.1	2012	8.9	2.7	2106	10.3	3.1	2103	9.0	2.7	2143	9.6	2.9	2114	8.8	2.7	2114	8.8	2.7	2114	8.8	2.7												
3 0149	-0.4	-0.1	18 0227	0.7	0.2	3 0316	-0.9	-0.3	18 0309	0.4	0.1	3 0344	-0.3	-0.1	18 0316	0.3	0.1	18 0316	0.3	0.1	18 0316	0.3	0.1												
M 0802	9.4	2.9	Tu 0842	8.7	2.7	Th 0932	10.8	3.3	F 0922	9.7	3.0	Sa 0959	10.8	3.3	Su 0928	10.2	3.1	Su 0928	10.2	3.1	Su 0928	10.2	3.1												
1410	0.0	0.0	1447	0.9	0.3	1546	-1.2	-0.4	1538	-0.2	-0.1	1620	-1.2	-0.4	1639	-1.2	-0.4	1552	-0.8	-0.2	1552	-0.8	-0.2												
2024	10.6	3.2	2058	9.2	2.8	2159	10.4	3.2	2146	9.2	2.8	2233	9.5	2.9	2201	9.0	2.7	2201	9.0	2.7	2201	9.0	2.7												
4 0245	-0.9	-0.3	19 0309	0.4	0.1	4 0406	-0.9	-0.3	19 0351	0.2	0.1	4 0430	-0.2	-0.1	19 0401	0.1	0.0	19 0401	0.1	0.0	19 0401	0.1	0.0												
Tu 0859	10.0	3.0	W 0922	9.1	2.8	F 1020	11.1	3.4	Sa 1002	10.1	3.1	Su 1045	10.8	3.3	M 1015	10.6	3.2	M 1015	10.6	3.2	M 1015	10.6	3.2												
1507	-0.6	-0.2	1530	0.5	0.2	1636	-1.5	-0.5	1621	-0.6	-0.2	1707	-1.3	-0.4	1639	-1.2	-0.4	1639	-1.2	-0.4	1639	-1.2	-0.4												
2122	10.9	3.3	2140	9.4	2.9	2249	10.4	3.2	2231	9.3	2.8	2321	9.4	2.9	2248	9.3	2.8	2248	9.3	2.8	2248	9.3	2.8												
5 0338	-1.2	-0.4	20 0351	0.2	0.1	5 0452	-0.8	-0.2	20 0433	0.0	0.0	5 0513	0.0	0.0	20 0448	-0.2	-0.1	20 0448	-0.2	-0.1	20 0448	-0.2	-0.1												
W 0951	10.6	3.2	Th 1001	9.5	2.9	Sa 1106	11.2	3.4	Su 1041	10.5	3.2	M 1129	10.7	3.3	Tu 1101	11.0	3.4	Tu 1101	11.0	3.4	Tu 1101	11.0	3.4												
1601	-1.2	-0.4	1610	0.0	0.0	1724	-1.6	-0.5	1703	-1.0	-0.3	1750	-1.1	-0.3	1726	-1.5	-0.5	1726	-1.5	-0.5	1726	-1.5	-0.5												
2216	11.1	3.4	2220	9.5	2.9	2338	10.2	3.1	2312	9.4	2.9	2338	9.4	2.9	2338	9.4	2.9	2338	9.4	2.9	2338	9.4	2.9												
6 0428	-1.4	-0.4	21 0428	0.0	0.0	6 0537	-0.6	-0.2	21 0514	0.0	0.0	6 0004	9.2	2.8	21 0536	-0.3	-0.1	21 0536	-0.3	-0.1	21 0536	-0.3	-0.1												
Th 1041	11.1	3.4	F 1037	9.9	3.0	Su 1152	11.1	3.4	M 1124	10.7	3.3	Tu 0558	0.2	0.1	W 1148	11.2	3.4	W 1148	11.2	3.4	W 1148	11.2	3.4												
1652	-1.6	-0.5	1650	-0.3	-0.1	1810	-1.5	-0.5	1747	-1.2	-0.4	1213	10.5	3.2	1815	-1.7	-0.5	1815	-1.7	-0.5	1815	-1.7	-0.5												
2306	11.1	3.4	2301	9.6	2.9	2340	9.6	2.9	1855	-1.1	-0.3	2359	9.5	2.9	1834	-0.9	-0.3	1916	-0.6	-0.2	1903	-1.7	-0.5												
7 0516	-1.4	-0.4	22 0505	0.0	0.0	7 0024	9.9	3.0	22 0558	0.0	0.0	7 0050	9.0	2.7	22 0026	9.6	2.9	22 0026	9.6	2.9	22 0026	9.6	2.9												
F 1129	11.3	3.4	Sa 1115	10.1	3.1	M 0623	-0.2	-0.1	Tu 1208	10.8	3.3	W 0641	0.5	0.2	Th 0624	-0.4	-0.1	1239	11.2	3.4	Th 0624	-0.4	-0.1												
1742	-1.7	-0.5	1729	-0.6	-0.2	1236	10.8	3.3	1831	-1.3	-0.4	1255	10.1	3.1	1916	-0.6	-0.2	1903	-1.7	-0.5	1903	-1.7	-0.5												
2357	10.9	3.3	2340	9.6	2.9	1855	-1.1	-0.3	1920	-1.2	-0.4	2001	-0.2	-0.1	1955	-1.5	-0.5	1955	-1.5	-0.5	1955	-1.5	-0.5												
8 0603	-1.2	-0.4	23 0544	0.0	0.0	8 0111	9.4	2.9	23 0045	9.4	2.9	8 0132	8.7	2.7	23 0116	9.6	2.9	23 0116	9.6	2.9	23 0116	9.6	2.9												
Sa 1217	11.3	3.4	Su 1153	10.3	3.1	Tu 0706	0.2	0.1	W 0643	0.0	0.0	Th 0727	0.8	0.2	F 0716	-0.4	-0.1	1332	11.0	3.4	F 0716	-0.4	-0.1												
1830	-1.6	-0.5	1811	-0.8	-0.2	1322	10.4	3.2	1255	10.8	3.3	1340	9.8	3.0	1332	11.0	3.4	1332	11.0	3.4	1332	11.0	3.4												
9 0045	10.5	3.2	24 0020	9.6	2.9	9 0159	9.0	2.7	24 0132	9.3	2.8	9 0217	8.5	2.6	24 0211	9.6	2.9	24 0211	9.6	2.9	24 0211	9.6	2.9												
Su 0648	0.7	-0.2	M 0623	0.1	0.0	W 0752	0.7	0.2	Th 0732	0.2	0.1	F 0812	1.1	0.3	Sa 0812	-0.2	-0.1	Sa 0812	-0.2	-0.1	Sa 0812	-0.2	-0.1												
1303	11.1	3.4	1233	10.4	3.2	1409	9.9	3.0	1345	10.6	3.2	1426	9.4	2.9	1425	10.7	3.3	1425	10.7	3.3	1425	10.7	3.3												
1919	-1.3	-0.4	1853	-0.8	-0.2	2029	-0.2	-0.1	2012	-1.0	-0.3	2046	0.1	0.0	2048	-1.3	-0.4	2048	-1.3	-0.4	2048	-1.3	-0.4												
10 0135	10.0	3.0	25 0105	9.4	2.9	10 0246	8.5	2.6	25 0226	9.2	2.8	10 0304	8.3	2.5	25 0307	9.6	2.9	25 0307	9.6	2.9	25 0307	9.6	2.9												
M 0735	-0.2	-0.1	Tu 0705	0.3	0.1	Th 0843	1.2	0.4	F 0827	0.4	0.1	Sa 0900	1.3	0.4	Su 0909	-0.1	0.0	Su 0909	-0.1	0.0	Su 0909	-0.1	0.0												
1351	10.6	3.2	1316	10.4	3.2	1457	9.4	2.9	1441	10.4	3.2	1513	9.0	2.7	1523	10.3	3.1	1523	10.3	3.1	1523	10.3	3.1												
2007	-0.8	-0.2	1938	-0.7	-0.2	2120	0.3	0.1	2105	-0.8	-0.2	2134	0.4	0.1	2145	-0.9	-0.3	2145	-0.9	-0.3	2145	-0.9	-0.3												
11 0225	9.4	2.9	26 0151	9.2	2.8	11 0338	8.2	2.5	26 0323	9.1	2.8	11 0352	8.2	2.5	26 0403	9.6	2.9	26 0403	9.6	2.9	26 0403	9.6	2.9												
Tu 0822	0.5	0.2	W 0751	0.5	0.2	F 0934	1.6	0.5	Sa 0923	0.6	0.2	Su 0953	1.5	0.5	M 1011	0.1	0.0	M 1011	0.1	0.0	M 1011	0.1	0.0												
1440	10.1	3.1	1403	10.3	3.1	1550	8.9	2.7	1539	10.1	3.1	1603	8.7	2.7	1625	9.8	3.0	1625	9.8	3.0	1625	9.8	3.0												
2059	-0.2	-0.1	2028	-0.5	-0.2	2214	0.7	0.2	2204	-0.5	-0.2	2224	0.7	0.2	2242	-0.6	-0.2	2242	-0.6	-0.2	2242	-0.6	-0.2												
12 0317	8.8	2.7	27 0242	8.9	2.7	12 0432	8.0	2.4	27 0422	9.1	2.8	12 0442	8.2	2.5	27 0503	9.7	3.0	27 0503	9.7	3.0	27 0503	9.7	3.0												
W 0915	1.1	0.3	Th 0842	0.7	0.2	Sa 1030	1.8	0.5	Su 1027	0.6	0.2	M 1046	1.6	0.5	Tu 1115	0.1	0.0	Tu 1115	0.1	0.0	Tu 1115	0.1	0.0												
1531	9.5	2.9	1456	10.1	3.1	1643	8.6	2.6	1642	9.8	3.0	1656	8.4	2.6	1727	9.4	2.9	1727	9.4	2.9	1727	9.4	2.9												
2154	0.4	0.1	2123	-0.3	-0.1	2306	1.0	0.3	2305	-0.4	-0.1	2315	0.8	0																					

Times and Heights of High and Low Waters

JANUARY

FEBRUARY

MARCH

Day	Time Height			Time Height			Time Height			Time Height			Time Height		
	Day			Day			Day			Day			Day		
	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
Sa 0857	1 0209	-1.0	-0.3	16 0204	-0.2	-0.1	1 0345	-0.8	-0.2	16 0300	-0.3	-0.1	1 0242	-1.0	-0.3
	4.6	1.4		Su 0903	3.5	1.1	Tu 1022	4.0	1.2	W 0956	3.3	1.0	Tu 0908	4.1	1.2
	1500	-0.9	-0.3	1440	-0.1	0.0	1612	-0.7	-0.2	1519	-0.3	-0.1	1500	-0.9	-0.3
	2125	3.8	1.2	2124	3.0	0.9	2248	3.8	1.2	2214	3.3	1.0	2129	4.2	1.3
Su 0951	2 0305	-0.9	-0.3	17 0241	-0.1	0.0	2 0438	-0.5	-0.2	17 0340	-0.3	-0.1	2 0327	-0.8	-0.2
	4.4	1.3		M 0942	3.4	1.0	W 1113	3.6	1.1	Th 1035	3.1	0.9	W 0956	3.8	1.2
	1551	-0.7	-0.2	1513	-0.1	0.0	1659	-0.4	-0.1	1556	-0.3	-0.1	1540	-0.6	-0.2
	2219	3.7	1.1	2206	3.0	0.9	2340	3.6	1.1	2257	3.2	1.0	2219	4.0	1.2
M 1043	3 0400	-0.6	-0.2	18 0320	-0.1	0.0	3 0534	-0.2	-0.1	18 0424	-0.2	-0.1	3 0412	-0.5	-0.2
	4.1	1.2		Tu 1022	3.2	1.0	Th 1206	3.2	1.0	F 1120	2.9	0.9	Th 1043	3.4	1.0
	1641	-0.5	-0.2	1548	-0.1	0.0	1747	-0.1	0.0	1638	-0.2	-0.1	1619	-0.4	-0.1
	2315	3.6	1.1	2249	2.9	0.9				2347	3.2	1.0	2307	3.7	1.1
Tu 1142	4 0459	-0.4	-0.1	19 0400	0.0	0.0	4 0036	3.4	1.0	19 0514	-0.1	0.0	4 0457	-0.1	0.0
	3.7	1.1		W 1105	3.0	0.9	F 0635	0.2	0.1	Sa 1211	2.7	0.8	F 1133	3.1	0.9
	1736	-0.3	-0.1	1625	-0.1	0.0	1301	2.9	0.9	1726	-0.2	-0.1	1659	-0.1	0.0
				2333	2.9	0.9	1836	0.1	0.0				2321	3.5	1.1
W 0605	5 0011	3.5	1.1	20 0446	0.1	0.0	5 0135	3.2	1.0	20 0043	3.2	1.0	5 0000	3.4	1.0
	-0.1	0.0		Th 1152	2.8	0.9	Sa 0752	0.4	0.1	Su 0611	0.1	0.0	Sa 0547	0.2	0.1
	1238	3.4	1.0	1710	0.0	0.0	1359	2.6	0.8	1311	2.6	0.8	1224	2.7	0.8
	1833	-0.1	0.0				1936	0.3	0.1	1824	-0.1	0.0	1742	0.2	0.1
Th 0720	6 0111	3.4	1.0	21 0024	2.9	0.9	6 0233	3.1	0.9	21 0148	3.3	1.0	6 0056	3.1	0.9
	0.1	0.0		F 0539	0.2	0.1	Su 0920	0.5	0.2	M 0719	0.1	0.0	Su 0643	0.5	0.2
	1337	3.1	0.9	1244	2.7	0.8	1457	2.5	0.8	1417	2.6	0.8	1322	2.5	0.8
	1933	0.1	0.0	1758	0.0	0.0	2045	0.4	0.1	1929	-0.1	0.0	1832	0.4	0.1
F 0843	7 0210	3.4	1.0	22 0117	3.0	0.9	7 0331	3.1	0.9	22 0253	3.4	1.0	7 0156	2.9	0.9
	0.3	0.1		Sa 0639	0.2	0.1	M 1031	0.5	0.2	Tu 0839	0.1	0.0	M 0807	0.7	0.2
	1435	2.9	0.9	1341	2.7	0.8	1554	2.5	0.8	1525	2.8	0.9	1424	2.4	0.7
	2038	0.1	0.0				2154	0.4	0.1	2045	-0.2	-0.1	1937	0.6	0.2
Sa 0957	8 0309	3.4	1.0	23 0217	3.2	1.0	8 0423	3.2	1.0	23 0357	3.7	1.1	8 0256	2.9	0.9
	0.3	0.1		Su 0745	0.2	0.1	Tu 1124	0.4	0.1	W 0957	-0.1	0.0	Tu 0954	0.7	0.2
	1531	2.8	0.9	1445	2.7	0.8	1646	2.6	0.8	1626	3.1	0.9	1522	2.4	0.7
	2138	0.2	0.1	1958	-0.1	0.0	2246	0.3	0.1	2200	-0.4	-0.1	2107	0.6	0.2
Su 1053	9 0402	3.5	1.1	24 0318	3.5	1.1	9 0512	3.3	1.0	24 0455	4.0	1.2	9 0352	2.9	0.9
	0.2	0.1		M 0859	0.0	0.0	W 1159	0.3	0.1	Th 1103	-0.4	-0.1	W 1049	0.6	0.2
	1623	2.8	0.9	1545	2.9	0.9	1733	2.8	0.9	1722	3.5	1.1	1616	2.6	0.8
	2226	0.1	0.0	2107	-0.3	-0.1	2332	0.1	0.0	2308	-0.7	-0.2	2221	0.5	0.2
M 1140	10 0452	3.5	1.1	25 0417	3.8	1.2	10 0557	3.4	1.0	25 0551	4.2	1.3	10 0444	3.1	0.9
	0.2	0.1		Tu 1013	-0.2	-0.1	Th 1227	0.1	0.0	F 1159	-0.7	-0.2	Th 1124	0.4	0.1
	1711	2.8	0.9	1644	3.1	1.0	1817	3.0	0.9	1815	3.8	1.2	1706	2.8	0.9
	2308	0.0	0.0				2213	-0.5	-0.2				2311	0.3	0.1
Tu 1215	11 0537	3.6	1.1	26 0514	4.1	1.2	11 0007	0.0	0.0	26 0009	-0.9	-0.3	11 0529	3.2	1.0
	0.1	0.0		W 1116	-0.5	-0.2	F 0641	3.5	1.1	Sa 0643	4.4	1.3	F 1151	0.2	0.1
	1757	2.9	0.9	1738	3.4	1.0	1252	0.0	0.0	1249	-0.9	-0.3	1751	3.1	0.9
	2346	0.0	0.0				1859	3.1	0.9	1906	4.1	1.2	2345	0.0	0.0
W 1247	12 0620	3.7	1.1	27 0607	4.4	1.3	12 0041	-0.2	-0.1	27 0103	-1.1	-0.3	12 0613	3.4	1.0
	0.0	0.0		Th 1214	-0.7	-0.2	Sa 0721	3.6	1.1	Su 0732	4.4	1.3	Sa 1217	0.0	0.0
	1839	3.0	0.9	1833	3.7	1.1	1318	-0.1	0.0	1335	-1.0	-0.3	1833	3.3	1.0
							1940	3.2	1.0	1955	4.3	1.3			
Th 0702	13 0020	-0.1	0.0	28 0014	-1.0	-0.3	13 0115	-0.3	-0.1	28 0152	-1.1	-0.3	13 0020	-0.2	-0.1
	3.7	1.1		F 0659	4.6	1.4	Su 0759	3.6	1.1	M 0821	4.4	1.3	Su 0654	3.5	1.1
	1315	0.0	0.0	1305	-0.9	-0.3	1344	-0.2	-0.1	1418	-1.0	-0.3	1243	-0.2	-0.1
	1923	3.1	0.9	1924	3.9	1.2				2043	4.3	1.3	1911	3.5	1.1
F 0743	14 0054	-0.2	-0.1	29 0110	-1.1	-0.3	14 0149	-0.3	-0.1	28 0054	-1.0	-0.3	28 0054	-1.0	-0.3
	3.7	1.1		Sa 0750	4.6	1.4	M 0838	3.6	1.1	M 0732	3.6	1.1	Tu 0759	4.1	1.2
	1341	-0.1	0.0	1354	-1.0	-0.3	1414	-0.3	-0.1				1312	-0.3	-0.1
	2003	3.1	0.9	2015	4.0	1.2	2058	3.3	1.0	1950	3.6	1.1	2018	4.4	1.3
Sa 0823	15 0129	-0.2	-0.1	30 0204	-1.1	-0.3	15 0224	-0.4	-0.1	15 0128	-0.5	-0.2	30 0224	-0.9	-0.3
	3.7	1.1		Su 0840	4.5	1.4	Tu 0916	3.5	1.1	Tu 0810	3.6	1.1	W 0844	3.9	1.2
	1410	-0.1	0.0	1442	-1.0	-0.3	1446	-0.3	-0.1				1344	-0.4	-0.1
	2044	3.1	0.9	2106	4.1	1.2	2135	3.3	1.0	2028	3.7	1.1	2103	4.3	1.3
M 0932	31 0256	-1.0	-0.3										31 0303	-0.7	-0.2
	4.3	1.3											Th 0927	3.6	1.1
	1527	-0.9	-0.3										1503	-0.5	-0.2
	2156	4.0	1.2										2148	4.0	1.2

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL				MAY				JUNE			
Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height
	h m	ft m		h m	ft m		h m	ft m		h m	ft m
1	0345	-0.4 -0.1	16	0308	-0.6 -0.2	1	0351	0.1 0.0	15	0345	-0.5 -0.2
F 1013	3.3 1.0	Sa 0950	3.3 1.0	Su 1030	3.0 0.9	M 1028	3.4 1.0	W 1142	2.8 0.9	Th 1208	3.7 1.1
1540	-0.2 -0.1	1510	-0.5 -0.2	1542	0.2 0.1	1548	-0.3 -0.1	1638	0.7 0.2	1750	0.1 0.0
2235	3.7 1.1	2211	4.0 1.2	2251	3.4 1.0	2249	4.1 1.2	2358	3.0 0.9		
2	0422	-0.1 0.0	17	0355	-0.4 -0.1	2	0427	0.3 0.1	17	0441	-0.3 -0.1
Sa 1100	3.0 0.9	Su 1041	3.1 0.9	M 1121	2.8 0.9	Tu 1125	3.3 1.0	Th 1237	2.8 0.9	F 0627	0.0 0.0
1617	0.0 0.0	1556	-0.3 -0.1	1622	0.4 0.1	1645	-0.1 0.0	1731	0.8 0.2	1309	3.7 1.1
2323	3.4 1.0	2304	3.8 1.2	2342	3.1 0.9	2350	3.9 1.2			1904	0.2 0.1
3	0503	0.3 0.1	18	0446	-0.2 -0.1	3	0507	0.5 0.2	18	0539	-0.1 0.0
Su 1152	2.7 0.8	M 1139	3.0 0.9	Tu 1216	2.6 0.8	W 1227	3.3 1.0	F 0606	0.6 0.2	Sa 0730	0.1 0.0
1657	0.3 0.1	1649	-0.1 0.0	1707	0.6 0.2	1752	0.1 0.0	1330	2.9 0.9	1409	3.8 1.2
									1829	0.8 0.2	2025 0.3 0.1
4	0018	3.1 0.9	19	0003	3.6 1.1	4	0037	2.9 0.9	19	0053	3.7 1.1
M 0548	0.5 0.2	Tu 0546	0.0 0.0	W 0557	0.6 0.2	Th 0645	0.0 0.0	Sa 0701	0.5 0.2	Su 0832	0.1 0.0
1248	2.5 0.8	1240	2.9 0.9	1314	2.6 0.8	1332	3.4 1.0	1423	3.0 0.9	1507	3.9 1.2
1744	0.6 0.2	1755	0.1 0.0	1806	0.8 0.2	1912	0.2 0.1	1935	0.8 0.2	2139	0.2 0.1
5	0116	2.9 0.9	20	0109	3.5 1.1	5	0136	2.8 0.9	20	0156	3.6 1.1
Tu 0644	0.7 0.2	W 0655	0.1 0.0	Th 0656	0.7 0.2	F 0755	0.0 0.0	Su 0756	0.5 0.2	M 0930	0.1 0.0
1349	2.4 0.7	1348	3.0 0.9	1412	2.5 0.8	1432	3.6 1.1	1514	3.2 1.0	1600	4.1 1.2
1845	0.7 0.2	1910	0.1 0.0	1912	0.8 0.2	2038	0.2 0.1	2043	0.6 0.2	2242	0.2 0.1
6	0216	2.8 0.9	21	0216	3.5 1.1	6	0233	2.8 0.9	21	0259	3.5 1.1
W 0803	0.8 0.2	Th 0814	0.1 0.0	F 0759	0.7 0.2	Sa 0904	0.0 0.0	M 0851	0.3 0.1	Tu 1021	0.1 0.0
1449	2.5 0.8	1453	3.2 1.0	1507	2.8 0.9	1530	3.8 1.2	1602	3.5 1.1	1650	4.2 1.3
2006	0.8 0.2	2038	0.1 0.0	2031	0.8 0.2	2152	0.0 0.0	2144	0.4 0.1	2332	0.1 0.0
7	0314	2.8 0.9	22	0320	3.6 1.1	7	0327	2.9 0.9	22	0357	3.5 1.1
Th 0933	0.7 0.2	F 0928	-0.1 0.0	Sa 0859	0.5 0.2	Su 1002	-0.1 0.0	Tu 0944	0.1 0.0	W 1107	0.1 0.0
1544	2.7 0.8	1552	3.5 1.1	1557	3.1 0.9	1623	4.0 1.2	1648	3.9 1.2	1738	4.2 1.3
2134	0.6 0.2	2159	-0.1 0.0	2138	0.5 0.2	2255	-0.2 -0.1	2239	0.1 0.0		
8	0407	2.9 0.9	23	0418	3.7 1.1	8	0416	3.0 0.9	23	0450	3.6 1.1
F 1021	0.5 0.2	Sa 1029	-0.2 -0.1	Su 0950	0.3 0.1	M 1050	-0.2 -0.1	W 1034	-0.1 0.0	Th 0601	3.3 1.0
1634	2.9 0.9	1647	3.9 1.2	1642	3.4 1.0	1714	4.2 1.3	1735	4.2 1.3	1149	0.1 0.0
2231	0.4 0.1	2303	-0.4 -0.1	2231	0.3 0.1	2345	-0.3 -0.1	2329	-0.2 -0.1	1823	4.3 1.3
9	0455	3.1 0.9	24	0514	3.8 1.2	9	0503	3.2 1.0	24	0538	3.6 1.1
Sa 1055	0.3 0.1	Su 1119	-0.4 -0.1	M 1034	0.1 0.0	Tu 1135	-0.2 -0.1	Th 1124	-0.3 -0.1	F 0646	3.3 1.0
1719	3.2 1.0	1737	4.2 1.3	1725	3.7 1.1	1800	4.4 1.3	1822	4.5 1.4	1225	0.1 0.0
2314	0.2 0.1	2356	-0.6 -0.2	2316	0.0 0.0					1907	4.2 1.3
10	0540	3.3 1.0	25	0602	3.9 1.2	10	0547	3.4 1.0	25	0028	-0.3 -0.1
Su 1129	0.0 0.0	M 1201	-0.5 -0.2	Tu 1117	-0.1 0.0	W 0626	3.6 1.1	F 0648	3.6 1.1	Sa 0730	3.3 1.0
1801	3.5 1.1	1823	4.4 1.3	1807	4.0 1.2	1214	-0.3 -0.1	1212	-0.5 -0.2	1300	0.1 0.0
2351	-0.1 0.0			2359	-0.3 -0.1	1846	4.4 1.3	1909	4.6 1.4	1949	4.1 1.2
11	0622	3.5 1.1	26	0042	-0.7 -0.2	11	0630	3.5 1.1	26	0108	-0.3 -0.1
M 1201	-0.2 -0.1	Tu 0649	3.9 1.2	W 1156	-0.3 -0.1	Th 0709	3.5 1.1	Sa 0736	3.7 1.1	Su 0812	3.3 1.0
1840	3.7 1.1			1850	4.2 1.3	1250	-0.2 -0.1	1302	-0.6 -0.2	1336	0.2 0.1
1909	4.5 1.4					1928	4.4 1.3	1957	4.7 1.4	2030	4.0 1.2
12	0029	-0.3 -0.1	27	0124	-0.7 -0.2	12	0041	-0.5 -0.2	27	0145	-0.2 -0.1
Tu 0702	3.6 1.1	W 0734	3.8 1.2	Th 0713	3.6 1.1	F 0753	3.4 1.0	Su 0826	3.7 1.1	M 0856	3.3 1.0
1233	-0.4 -0.1	1319	-0.6 -0.2	1237	-0.5 -0.2	1325	-0.2 -0.1	1352	-0.6 -0.2	1413	0.2 0.1
1920	3.9 1.2	1953	4.5 1.4	1932	4.4 1.3	2013	4.2 1.3	2047	4.7 1.4	2113	3.8 1.2
13	0106	-0.5 -0.2	28	0205	-0.6 -0.2	13	0123	-0.5 -0.2	28	0218	-0.1 0.0
W 0743	3.6 1.1	Th 0818	3.6 1.1	F 0759	3.6 1.1	Sa 0836	3.3 1.0	M 0919	3.7 1.1	Tu 0940	3.2 1.0
1310	-0.5 -0.2	1356	-0.4 -0.1	1322	-0.6 -0.2	1400	0.0 0.0	1445	-0.5 -0.2	1452	0.4 0.1
1959	4.1 1.2	2037	4.3 1.3	2018	4.4 1.3	2055	4.0 1.2	2140	4.5 1.4	2155	3.6 1.1
14	0144	-0.6 -0.2	29	0239	-0.4 -0.1	14	0209	-0.7 -0.2	29	0250	0.0 0.0
Th 0822	3.5 1.1	F 0902	3.4 1.0	Sa 0844	3.5 1.1	Su 0919	3.2 1.0	Tu 1012	3.7 1.1	W 1024	3.1 0.9
1347	-0.5 -0.2	1431	-0.3 -0.1	1408	-0.5 -0.2	1436	0.1 0.0	1540	-0.3 -0.1	1532	0.5 0.2
2039	4.1 1.2	2121	4.0 1.2	2104	4.4 1.3	2137	3.8 1.2	2235	4.3 1.3	2238	3.4 1.0
15	0224	-0.6 -0.2	30	0316	-0.2 -0.1	15	0255	-0.6 -0.2	30	0323	0.2 0.1
F 0906	3.4 1.0	Sa 0945	3.2 1.0	Su 0934	3.5 1.1	M 1005	3.0 0.9	W 1110	3.7 1.1	Th 1110	3.1 0.9
1426	-0.5 -0.2	1506	-0.1 0.0	1455	-0.4 -0.1	1514	0.3 0.1	1641	-0.1 0.0	1612	0.6 0.2
2124	4.1 1.2	2204	3.7 1.1	2155	4.3 1.3	2222	3.5 1.1	2333	4.1 1.2	2322	3.2 1.0
						31	0358	0.3 0.1			
						Tu 1054	2.9 0.9				
						1553	0.5 0.2				
						2309	3.2 1.0				

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JULY						AUGUST						SEPTEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0443	0.4	0.1	16 0008	3.8	1.2	1 0021	3.0	0.9	16 0135	3.1	0.9	1 0147	2.8	0.9	16 0305	2.8	0.9
F 1158	3.0	0.9	Sa 0558	-0.1	0.0	M 0533	0.3	0.1	Tu 0712	0.5	0.2	Th 0653	0.3	0.1	F 0901	0.9	0.3
1659	0.7	0.2	1242	4.0	1.2	1257	3.4	1.0	1409	3.7	1.1	1423	3.7	1.1	1534	3.4	1.0
			1845	0.3	0.1	1813	0.6	0.2	2059	0.7	0.2	2000	0.5	0.2	2239	0.8	0.2
2 0011	3.0	0.9	17 0105	3.5	1.1	2 0114	2.9	0.9	17 0235	2.9	0.9	2 0253	3.0	0.9	17 0400	2.9	0.9
Sa 0526	0.4	0.1	Su 0655	0.1	0.0	Tu 0624	0.3	0.1	W 0817	0.6	0.2	F 0804	0.3	0.1	Sa 1015	0.8	0.2
1248	3.1	0.9	1340	3.9	1.2	1353	3.5	1.1	1507	3.7	1.1	1525	3.9	1.2	1624	3.5	1.1
1752	0.7	0.2	2003	0.4	0.1	1917	0.6	0.2	2213	0.7	0.2	2117	0.3	0.1	2322	0.6	0.2
3 0101	2.9	0.9	18 0205	3.3	1.0	3 0214	2.9	0.9	18 0333	2.9	0.9	3 0357	3.3	1.0	18 0450	3.1	0.9
Su 0613	0.4	0.1	M 0755	0.3	0.1	W 0724	0.3	0.1	Th 0930	0.7	0.2	Sa 0920	0.1	0.0	Su 1100	0.6	0.2
1339	3.2	1.0	1439	3.9	1.2	1449	3.7	1.1	1602	3.7	1.1	1626	4.2	1.3	1711	3.6	1.1
1850	0.7	0.2	2122	0.5	0.2	2027	0.5	0.2	2308	0.6	0.2	2229	0.0	0.0	2347	0.5	0.2
4 0156	2.9	0.9	19 0302	3.1	0.9	4 0316	3.0	0.9	19 0426	3.0	0.9	4 0453	3.6	1.1	19 0535	3.3	1.0
M 0704	0.4	0.1	Tu 0856	0.4	0.1	Th 0829	0.2	0.1	F 1031	0.6	0.2	Su 1031	-0.2	-0.1	M 1137	0.4	0.1
1432	3.4	1.0	1533	3.9	1.2	1549	4.0	1.2	1652	3.7	1.1	1720	4.5	1.4	1753	3.7	1.1
1954	0.6	0.2	2229	0.5	0.2	2136	0.3	0.1	2346	0.5	0.2	2325	-0.3	-0.1			
5 0251	2.9	0.9	20 0359	3.1	0.9	5 0416	3.2	1.0	20 0516	3.1	0.9	5 0548	4.0	1.2	20 0007	0.3	0.1
Tu 0803	0.3	0.1	W 0954	0.4	0.1	F 0934	0.0	0.0	Sa 1116	0.5	0.2	M 1135	-0.5	-0.2	Tu 0617	3.6	1.1
1523	3.7	1.1	1626	4.0	1.2	1644	4.3	1.3	1738	3.8	1.2	1814	4.7	1.4	1209	0.2	0.1
2059	0.5	0.2	2323	0.4	0.1	2244	0.0	0.0							1833	3.8	1.2
6 0346	3.0	0.9	21 0450	3.1	0.9	6 0512	3.5	1.1	21 0018	0.4	0.1	6 0017	-0.6	-0.2	21 0030	0.1	0.0
W 0901	0.1	0.0	Th 1044	0.4	0.1	Sa 1039	-0.2	-0.1	Su 0601	3.3	1.0	Tu 0639	4.4	1.3	W 0655	3.8	1.2
1615	4.0	1.2	1716	4.0	1.2	1738	4.6	1.4	1153	0.4	0.1	1230	-0.7	-0.2	1241	0.1	0.0
2205	0.2	0.1				2341	-0.3	-0.1	1822	3.9	1.2	1903	4.8	1.5	1914	3.9	1.2
7 0441	3.2	1.0	22 0004	0.4	0.1	7 0607	3.8	1.2	22 0044	0.3	0.1	7 0105	-0.7	-0.2	22 0057	0.0	0.0
Th 0959	-0.1	0.0	F 0538	3.2	1.0	Su 1140	-0.4	-0.1	M 0544	3.5	1.1	W 0729	4.6	1.4	Th 0733	3.9	1.2
1707	4.3	1.3	1128	0.3	0.1	1831	4.8	1.5	1230	0.3	0.1	1323	-0.8	-0.2	1313	0.0	0.0
2303	0.0	0.0	1801	4.1	1.2				1902	4.0	1.2	1953	4.8	1.5	1951	3.8	1.2
8 0533	3.4	1.0	23 0041	0.3	0.1	8 0036	-0.5	-0.2	23 0108	0.2	0.1	8 0150	-0.8	-0.2	23 0124	-0.1	0.0
F 1058	-0.3	-0.1	Sa 0624	3.3	1.0	M 0658	4.1	1.2	Tu 0724	3.6	1.1	Th 0818	4.7	1.4	F 0812	3.9	1.2
1757	4.6	1.4	1209	0.3	0.1	1239	-0.6	-0.2	1302	0.2	0.1	1414	-0.7	-0.2	1346	-0.1	0.0
2357	-0.3	-0.1	1845	4.1	1.2	1922	4.9	1.5	1941	4.0	1.2	2041	4.6	1.4	2030	3.7	1.1
9 0625	3.7	1.1	24 0106	0.3	0.1	9 0125	-0.7	-0.2	24 0133	0.1	0.0	9 0234	-0.7	-0.2	24 0157	-0.2	-0.1
Sa 1152	-0.4	-0.1	Su 0708	3.4	1.0	Tu 0750	4.3	1.3	W 0804	3.7	1.1	F 0906	4.7	1.4	Sa 0848	3.9	1.2
1849	4.8	1.5	1244	0.2	0.1	1334	-0.7	-0.2	1336	0.1	0.0	1503	-0.6	-0.2	1422	-0.1	0.0
			1926	4.1	1.2	2013	4.9	1.5	2020	3.9	1.2	2129	4.3	1.3	2107	3.6	1.1
10 0051	-0.5	-0.2	25 0135	0.2	0.1	10 0213	-0.7	-0.2	25 0159	0.0	0.0	10 0316	-0.5	-0.2	25 0229	-0.2	-0.1
Su 0717	3.9	1.2	M 0750	3.4	1.0	W 0840	4.5	1.4	Th 0842	3.7	1.1	Sa 0956	4.5	1.4	Su 0927	3.9	1.2
1248	-0.6	-0.2	1319	0.2	0.1	1428	-0.7	-0.2	1409	0.1	0.0	1551	-0.3	-0.1	1502	0.0	0.0
1940	4.9	1.5	2007	4.0	1.2	2103	4.7	1.4	2058	3.8	1.2	2219	3.9	1.2	2148	3.4	1.0
11 0141	-0.6	-0.2	26 0202	0.2	0.1	11 0300	-0.7	-0.2	26 0228	0.0	0.0	11 0358	-0.3	-0.1	26 0306	-0.1	0.0
M 0808	4.0	1.2	Tu 0831	3.5	1.1	Th 0932	4.5	1.4	F 0919	3.7	1.1	Su 1046	4.3	1.3	M 1009	3.8	1.2
1343	-0.6	-0.2	1354	0.2	0.1	1522	-0.5	-0.2	1445	0.2	0.1	1641	0.1	0.0	1543	0.1	0.0
2031	4.9	1.5	2047	3.9	1.2	2154	4.5	1.4	2137	3.6	1.1	2310	3.5	1.1	2230	3.1	0.9
12 0232	-0.7	-0.2	27 0231	0.2	0.1	12 0348	-0.5	-0.2	27 0300	0.0	0.0	12 0441	0.1	0.0	27 0345	0.0	0.0
Tu 0900	4.1	1.2	W 0911	3.5	1.1	F 1024	4.4	1.3	Sa 1001	3.6	1.1	M 1140	4.0	1.2	Tu 1057	3.7	1.1
1438	-0.5	-0.2	1431	0.3	0.1	1616	-0.3	-0.1	1522	0.2	0.1	1737	0.4	0.1	1630	0.2	0.1
2124	4.7	1.4	2127	3.7	1.1	2246	4.1	1.2	2214	3.4	1.0				2321	2.9	0.9
13 0321	-0.6	-0.2	28 0302	0.2	0.1	13 0433	-0.3	-0.1	28 0336	0.1	0.0	13 0005	3.2	1.0	28 0433	0.1	0.0
W 0954	4.1	1.2	Th 0953	3.4	1.0	Sa 1116	4.3	1.3	Su 1041	3.6	1.1	Tu 0528	0.4	0.1	W 1153	3.6	1.1
1535	-0.4	-0.1	1508	0.4	0.1	1712	0.0	0.0	1604	0.3	0.1	1237	3.7	1.1	1725	0.4	0.1
2217	4.5	1.4	2206	3.5	1.1	2339	3.7	1.1	2257	3.2	1.0	1844	0.7	0.2			
14 0412	-0.5	-0.2	29 0334	0.2	0.1	14 0521	0.0	0.0	29 0414	0.1	0.0	14 0103	2.9	0.9	29 0021	2.8	0.9
Th 1049	4.1	1.2	F 1035	3.4	1.0	Su 1212	4.1	1.2	M 1127	3.5	1.1	W 0619	0.6	0.2	Th 0528	0.2	0.1
1633	-0.2	-0.1	1548	0.4	0.1	1815	0.4	0.1	1651	0.4	0.1	1336	3.5	1.1	1255	3.6	1.1
2312	4.2	1.3	2248	3.3	1.0				2344	3.0	0.9	2020	0.9	0.3	1829	0.5	0.2
15 0504	-0.3	-0.1	30 0408	0.2	0.1	15 0035	3.4	1.0	30 0459	0.2	0.1	15 0205	2.8	0.9	30 0129	2.8	0.9
F 1144	4.1	1.2	Sa 1118	3.3	1.0	M 0611	0.3	0.1	Tu 1219	3.5	1.1	Th 0728	0.8	0.2	F 0636	0.3	0.1
1736	0.1	0.0	1630	0.5	0.2	1311	3.9	1.2	1744	0.5	0.2	1437	3.4	1.0	1403	3.7	1.1
			2331	3.1	0.9	1930	0.6	0.2				2146	0.9	0.3	1946	0.4	0.1
31 0449	0.3	0.1				31 0043	2.8	0.9									
Su 1206	3.3	1.0				W 0552	0.3	0.1									
			1718	0.6	0.2				1319	3.6	1.1						
						1848	0.6	0.2									

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0237	3.0	0.9	16 0330	2.9	0.9	1 0418	3.9	1.2	16 0427	3.3	1.0	1 0450	4.1	1.2	16 0434	3.5	1.1
Sa 0754	0.3	0.1	Su 0936	0.8	0.2	Tu 1023	-0.2	-0.1	W 1021	0.4	0.1	Th 1114	-0.3	-0.1	F 1018	0.2	0.1
1508	3.8	1.2	1552	3.2	1.0	1644	3.9	1.2	1645	3.2	1.0	1714	3.6	1.1	1655	3.0	0.9
2104	0.2	0.1	2229	0.6	0.2	2247	-0.4	-0.1	2223	0.2	0.1	2311	-0.4	-0.1	2216	-0.1	0.0
2 0341	3.4	1.0	17 0418	3.1	0.9	2 0511	4.3	1.3	17 0511	3.6	1.1	2 0538	4.3	1.3	17 0519	3.8	1.2
Su 0915	0.1	0.0	M 1031	0.6	0.2	W 1122	-0.5	-0.2	Th 1100	0.2	0.1	F 1203	-0.4	-0.1	Sa 1108	-0.1	0.0
1607	4.0	1.2	1639	3.3	1.0	1735	4.0	1.2	1729	3.3	1.0	1801	3.6	1.1	1740	3.2	1.0
2213	0.0	0.0	2255	0.4	0.1	2332	-0.6	-0.2	2303	-0.1	0.0	2353	-0.5	-0.2	2303	-0.4	-0.1
3 0437	3.8	1.2	18 0503	3.4	1.0	3 0559	4.5	1.4	18 0551	3.8	1.2	3 0625	4.4	1.3	18 0604	4.0	1.2
M 1029	-0.2	-0.1	Tu 1106	0.4	0.1	Th 1212	-0.6	-0.2	F 1140	-0.1	0.0	Sa 1245	-0.5	-0.2	Su 1156	-0.3	-0.1
1703	4.3	1.3	1722	3.5	1.1	1822	4.1	1.2	1812	3.4	1.0	1847	3.6	1.1	1826	3.3	1.0
2308	-0.3	-0.1	2319	0.1					2340	-0.3	-0.1				2351	-0.6	-0.2
4 0529	4.2	1.3	19 0545	3.6	1.1	4 0017	-0.7	-0.2	19 0633	4.1	1.2	4 0034	-0.5	-0.2	19 0649	4.3	1.3
Tu 1129	-0.5	-0.2	W 1137	0.2	0.1	F 0646	4.7	1.4	Sa 1221	-0.3	-0.1	Su 0711	4.4	1.3	M 1244	-0.5	-0.2
1755	4.4	1.3	1803	3.6	1.1	1259	-0.7	-0.2	1854	3.5	1.1	1327	-0.4	-0.1	1913	3.4	1.0
2356	-0.6	-0.2	2348	0.0	0.0	1908	4.0	1.2				1931	3.5	1.1			
5 0620	4.5	1.4	20 0625	3.8	1.2	5 0056	-0.7	-0.2	20 0020	-0.4	-0.1	5 0112	-0.5	-0.2	20 0039	-0.7	-0.2
W 1222	-0.7	-0.2	Th 1212	0.0	0.0	Sa 0732	4.7	1.4	Su 0713	4.2	1.3	M 0755	4.3	1.3	Tu 0736	4.4	1.3
1844	4.5	1.4	1842	3.7	1.1	1341	-0.6	-0.2	1303	-0.4	-0.1	1404	-0.3	-0.1	1330	-0.7	-0.2
						1954	3.9	1.2	1935	3.5	1.1				2001	3.5	1.1
6 0041	-0.7	-0.2	21 0018	-0.2	-0.1	6 0137	-0.6	-0.2	21 0059	-0.5	-0.2	6 0149	-0.4	-0.1	21 0128	-0.8	-0.2
Th 0707	4.8	1.5	F 0702	4.0	1.2	Su 0817	4.6	1.4	M 0756	4.3	1.3	Tu 0839	4.1	1.2	W 0824	4.4	1.3
1312	-0.8	-0.2	1247	-0.2	-0.1	1421	-0.4	-0.1	1344	-0.5	-0.2	1439	-0.2	-0.1	1417	-0.7	-0.2
1931	4.4	1.3	1921	3.7	1.1	2038	3.7	1.1	2018	3.4	1.0	2059	3.2	1.0	2050	3.5	1.1
7 0124	-0.8	-0.2	22 0051	-0.3	-0.1	7 0213	-0.4	-0.1	22 0141	-0.6	-0.2	7 0226	-0.2	-0.1	22 0218	-0.8	-0.2
F 0754	4.8	1.5	Sa 0742	4.1	1.2	M 0901	4.3	1.3	Tu 0841	4.3	1.3	W 0922	3.8	1.2	Th 0913	4.3	1.3
1358	-0.7	-0.2	1323	-0.3	-0.1	1501	-0.2	-0.1	1430	-0.5	-0.2	1513	0.0	0.0	1506	-0.7	-0.2
2017	4.3	1.3	2000	3.6	1.1	2124	3.4	1.0	2106	3.4	1.0	2145	3.0	0.9	2143	3.5	1.1
8 0203	-0.7	-0.2	23 0127	-0.4	-0.1	8 0250	-0.2	-0.1	23 0226	-0.5	-0.2	8 0303	0.0	0.0	23 0310	-0.7	-0.2
Sa 0840	4.7	1.4	Su 0821	4.2	1.3	Tu 0947	4.0	1.2	W 0929	4.2	1.3	Th 1006	3.6	1.1	F 1006	4.2	1.3
1442	-0.5	-0.2	1401	-0.3	-0.1	1542	0.1	0.0	1516	-0.4	-0.1	1548	0.2	0.1	1556	-0.6	-0.2
2103	4.0	1.2	2042	3.5	1.1	2212	3.1	0.9	2156	3.3	1.0	2232	2.9	0.9	2236	3.5	1.1
9 0244	-0.5	-0.2	24 0202	-0.4	-0.1	9 0327	0.1	0.0	24 0316	-0.4	-0.1	9 0343	0.2	0.1	24 0406	-0.5	-0.2
Sa 0927	4.5	1.4	M 0901	4.1	1.2	W 1036	3.7	1.1	Th 1020	4.0	1.2	F 1054	3.3	1.0	Sa 1102	3.9	1.2
1527	-0.3	-0.1	1442	-0.2	-0.1	1619	0.3	0.1	1606	-0.3	-0.1	1625	0.3	0.1	1649	-0.4	-0.1
2151	3.6	1.1	2123	3.3	1.0	2301	2.9	0.9	2251	3.2	1.0	2321	2.7	0.8	2334	3.5	1.1
10 0321	-0.2	-0.1	25 0242	-0.3	-0.1	10 0409	0.4	0.1	25 0409	-0.2	-0.1	10 0425	0.4	0.1	25 0505	-0.3	-0.1
M 1017	4.2	1.3	Tu 0946	4.0	1.2	Th 1126	3.3	1.0	F 1118	3.8	1.2	Sa 1142	3.0	0.9	Su 1200	3.7	1.1
1611	0.1	0.0	1526	-0.1	0.0	1702	0.6	0.2	1702	-0.1	0.0	1705	0.4	0.1	1747	-0.3	-0.1
2240	3.3	1.0	2211	3.1	0.9	2355	2.7	0.8	2352	3.1	0.9						
11 0403	0.1	0.0	26 0327	-0.2	-0.1	11 0454	0.6	0.2	26 0513	0.0	0.0	11 0016	2.7	0.8	26 0033	3.5	1.1
Tu 1107	3.8	1.2	W 1037	3.9	1.2	F 1221	3.1	0.9	Sa 1219	3.7	1.1	Su 0513	0.6	0.2	M 0613	-0.1	0.0
1656	0.4	0.1	1616	0.0	0.0	1752	0.7	0.2	1806	0.0	0.0	1235	2.8	0.9	1259	3.4	1.0
2331	3.0	0.9	2305	3.0	0.9							1752	0.5	0.2	1847	-0.2	-0.1
12 0444	0.4	0.1	27 0417	0.0	0.0	12 0056	2.6	0.8	27 0056	3.2	1.0	12 0110	2.7	0.8	27 0135	3.5	1.1
W 1202	3.5	1.1	Th 1133	3.7	1.1	Sa 0552	0.8	0.2	Su 0624	0.1	0.0	M 0608	0.7	0.2	Tu 0733	0.0	0.0
1749	0.7	0.2	1713	0.2	0.1	1320	2.9	0.9	1323	3.5	1.1	1329	2.7	0.8	1401	3.3	1.0
						1853	0.8	0.2	1914	0.0	0.0	1843	0.5	0.2	1954	-0.1	0.0
13 0031	2.7	0.8	28 0008	2.9	0.9	13 0155	2.6	0.8	28 0200	3.4	1.0	13 0206	2.7	0.8	28 0235	3.6	1.1
Th 0534	0.7	0.2	F 0518	0.1	0.0	Su 0701	0.9	0.3	M 0746	0.1	0.0	Tu 0712	0.7	0.2	W 0854	0.0	0.0
1259	3.2	1.0	1236	3.6	1.1	1416	2.9	0.9	1427	3.5	1.1	1424	2.7	0.8	1501	3.2	1.0
1903	0.9	0.3	1819	0.3	0.1	2002	0.7	0.2	2024	0.0	0.0	1940	0.4	0.1	2101	-0.1	0.0
14 0131	2.6	0.8	29 0115	3.0	0.9	14 0251	2.8	0.9	29 0301	3.6	1.1	14 0259	2.9	0.9	29 0333	3.8	1.2
F 0639	0.9	0.3	Sa 0627	0.3	0.1	M 0821	0.8	0.2	Tu 0909	0.0	0.0	W 0819	0.6	0.2	Th 1006	0.0	0.0
1359	3.1	0.9	1343	3.6	1.1	1511	2.9	0.9	1526	3.5	1.1	1517	2.8	0.9	1559	3.1	0.9
2050	0.9	0.3	1933	0.2	0.1	2101	0.6	0.2	2128	-0.2	-0.1	2035	0.3	0.1	2157	-0.2	-0.1
15 0235	2.7	0.8	30 0220	3.2	1.0	15 0341	3.0	0.9	30 0357	3.9	1.2	15 0347	3.2	1.0	30 0429	3.9	1.2
Sa 0808	0.9	0.3	Su 0751	0.2	0.1	Tu 0930	0.7	0.2	W 1018	-0.2	-0.1	Th 0924	0.4	0.1	F 1106	-0.1	0.0
1459	3.1	0.9	1449	3.7	1.1	1600	3.0	0.9	1622	3.5	1.1	1607	2.9	0.9	1652	3.1	0.9
2154	0.8	0.2	2049	0.1	0.0	2144	0.4	0.1	2221	-0.3	-0.1	2128	0.1	0.0	2250	-0.2	-0.1
			31 0322	3.5	1.1										31 0519	4.0	1.2
			M 0914	0.1	0.0										Sa 1156	-0.2	-0.1
			1549	3.8	1.2										1740	3.2	1.0
			2152	-0.1	0.0										2337	-0.3	-0.1

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY

FEBRUARY

MARCH

Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0424	-0.4	-0.1	16 0445	0.1	0.0	1 0604	-0.5	-0.2	16 0547	-0.1	0.0
Sa 1024	3.3	1.0	Su 1029	2.5	0.8	Tu 1159	2.6	0.8	W 1124	2.3	0.7
1712	-0.8	-0.2	1722	-0.3	-0.1	1832	-0.6	-0.2	1807	-0.2	-0.1
2306	2.4	0.7	2308	2.0	0.6				2349	2.3	0.7
2 0521	-0.4	-0.1	17 0531	0.1	0.0	2 0035	2.6	0.8	17 0634	0.0	0.0
Su 1120	3.1	0.9	M 1108	2.4	0.7	W 0703	-0.4	-0.1	Th 1203	2.2	0.7
1806	-0.7	-0.2	1803	-0.2	-0.1	1257	2.3	0.7	1848	-0.1	0.0
			2347	2.0	0.6						
3 0002	2.4	0.7	18 0516	0.2	0.1	3 0131	2.5	0.8	18 0032	2.4	0.7
M 0621	-0.3	-0.1	Tu 1149	2.3	0.7	Th 0804	-0.3	-0.1	F 0727	0.0	0.0
1219	2.8	0.9	1845	-0.1	0.0	1355	2.1	0.6	1248	2.0	0.6
1901	-0.6	-0.2				2019	-0.2	-0.1	1933	0.0	0.0
4 0101	2.4	0.7	19 0029	2.1	0.6	4 0231	2.5	0.8	19 0120	2.4	0.7
Tu 0725	-0.2	-0.1	W 0706	0.2	0.1	F 0908	-0.2	-0.1	Sa 0823	0.0	0.0
1320	2.5	0.8	1231	2.1	0.6	1459	1.8	0.5	1343	1.9	0.6
1956	-0.4	-0.1	1930	-0.1	0.0	2115	-0.1	0.0	2022	0.1	0.0
5 0206	2.4	0.7	20 0113	2.1	0.6	5 0333	2.4	0.7	20 0215	2.5	0.8
W 0830	-0.1	0.0	Th 0800	0.2	0.1	Sa 1008	-0.1	0.0	Su 0922	0.0	0.0
1425	2.2	0.7	1319	2.0	0.6	1605	1.7	0.5	1446	1.8	0.5
2053	-0.3	-0.1	2015	0.0	0.0	2211	0.0	0.0	2118	0.1	0.0
6 0306	2.5	0.8	21 0203	2.2	0.7	6 0433	2.4	0.7	21 0316	2.5	0.8
Th 0935	-0.1	0.0	F 0856	0.2	0.1	Su 1107	-0.1	0.0	M 1025	-0.1	0.0
1533	2.0	0.6	1415	1.9	0.6	1709	1.6	0.5	1553	1.7	0.5
2150	-0.2	-0.1	2104	0.1	0.0	2305	0.1	0.0	2219	0.1	0.0
7 0411	2.5	0.8	22 0255	2.3	0.7	7 0527	2.4	0.7	22 0420	2.6	0.8
F 1037	-0.1	0.0	Sa 0955	0.1	0.0	M 1201	-0.1	0.0	Tu 1122	-0.2	-0.1
1639	1.9	0.6	1517	1.8	0.5	1805	1.6	0.5	1702	1.8	0.5
2244	-0.1	0.0	2153	0.1	0.0	2358	0.1	0.0	2319	0.0	0.0
8 0507	2.5	0.8	23 0350	2.5	0.8	8 0620	2.4	0.7	23 0524	2.8	0.9
Sa 1135	-0.1	0.0	Su 1052	-0.1	0.0	Tu 1251	-0.1	0.0	W 1852	1.7	0.5
1740	1.8	0.5	1619	1.8	0.5				1804	1.9	0.6
2335	0.0	0.0	2246	0.0	0.0						
9 0558	2.6	0.8	24 0447	2.7	0.8	9 0047	0.1	0.0	24 0018	-0.2	-0.1
Su 1230	-0.2	-0.1	M 1146	-0.3	-0.1	W 0702	2.4	0.7	Th 0623	2.9	0.9
1830	1.7	0.5	1721	1.8	0.5	1333	-0.2	-0.1	1312	-0.5	-0.2
			2341	-0.1	0.0	1933	1.7	0.5	1900	2.2	0.7
10 0023	0.0	0.0	25 0542	2.9	0.9	10 0132	0.0	0.0	25 0115	-0.4	-0.1
M 0644	2.6	0.8	Tu 1239	-0.5	-0.2	Th 0742	2.4	0.7	F 0720	3.0	0.9
1317	-0.2	-0.1	1820	1.9	0.6	1415	-0.2	-0.1	1401	-0.7	-0.2
1916	1.7	0.5				2011	1.9	0.6	1955	2.4	0.7
11 0109	0.0	0.0	26 0033	-0.2	-0.1	11 0216	0.0	0.0	26 0211	-0.5	-0.2
Tu 0726	2.6	0.8	W 0638	3.0	0.9	F 0819	2.5	0.8	Sa 0814	3.0	0.9
1400	-0.3	-0.1	1331	-0.7	-0.2	1454	-0.3	-0.1	1450	-0.7	-0.2
1958	1.8	0.5	1915	2.1	0.6	2049	2.0	0.6	2046	2.6	0.8
12 0155	0.0	0.0	27 0128	-0.4	-0.1	12 0258	-0.1	0.0	27 0304	-0.7	-0.2
W 0803	2.6	0.8	Th 0731	3.2	1.0	Sa 0855	2.5	0.8	Su 0907	3.0	0.9
1440	-0.3	-0.1	1421	-0.8	-0.2	1532	-0.4	-0.1	1537	-0.8	-0.2
2035	1.8	0.5	2009	2.2	0.7	2125	2.1	0.6	2134	2.7	0.8
13 0237	0.0	0.0	28 0221	-0.5	-0.2	13 0339	-0.1	0.0	28 0357	-0.7	-0.2
Th 0839	2.6	0.8	F 0826	3.2	1.0	Su 0930	2.5	0.8	M 0957	2.9	0.9
1520	-0.3	-0.1	1511	-0.9	-0.3	1611	-0.4	-0.1	1625	-0.7	-0.2
2112	1.9	0.6	2102	2.4	0.7	2159	2.1	0.6	2225	2.8	0.9
14 0319	0.0	0.0	29 0315	-0.6	-0.2	14 0420	-0.1	0.0			
F 0916	2.6	-0.8	Sa 0918	3.2	1.0	M 1006	2.5	0.8			
1602	-0.3	-0.1	1600	-0.9	-0.3	1649	-0.3	-0.1			
2150	1.9	0.6	2153	2.5	0.8	2235	2.2	0.7			
15 0401	0.0	0.0	30 0411	-0.6	-0.2	15 0503	-0.1	0.0			
Sa 0952	2.6	0.8	Su 1011	3.1	0.9	Tu 1044	2.4	0.7			
1640	-0.3	-0.1	1650	-0.9	-0.3	1728	-0.3	-0.1			
2228	2.0	0.6	2246	2.6	0.8	2311	2.3	0.7			
31 0507	-0.6	-0.2									
M 1106	2.9	0.9									
1741	-0.8	-0.2									
2339	2.6	0.8									

31 0521 -0.5 -0.2
Th 1114 2.4 0.7
1730 -0.2 -0.1
2331 2.9 0.9

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL				MAY				JUNE				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
Day		Day		Day		Day		Day		Day		
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	
1 0613	-0.3	-0.1	16 0546	-0.3	-0.1	1 0636	0.0	0.0	16 0621	-0.3	-0.1	
F 1200	2.2	0.7	Sa 1123	2.4	0.7	Su 1221	2.1	0.6	M 1203	2.4	0.7	
1818	0.0	0.0	1741	0.1	0.0	1839	0.4	0.1	1819	0.3	0.1	
			2334	3.1	0.9				1337	2.1	0.6	
									1959	0.7	0.2	
2 0019	2.8	0.9	17 0639	-0.2	-0.1	2 0032	2.7	0.8	17 0011	3.2	1.0	
Sá 0704	-0.1	0.0	Su 1213	2.2	0.7	M 0725	0.2	0.1	Tu 0717	-0.2	-0.1	
1253	2.0	0.6	1834	0.2	0.1	1317	2.0	0.6	1304	2.3	0.7	
1911	0.2	0.1				1935	0.6	0.2	1925	0.3	0.1	
									2057	0.7	0.2	
3 0110	2.6	0.8	18 0026	3.0	0.9	3 0124	2.5	0.8	18 0117	3.0	0.9	
Su 0801	0.1	0.0	M 0736	-0.1	0.0	Tu 0821	0.3	0.1	W 0816	-0.1	0.0	
1349	1.9	0.6	1314	2.1	0.6	1412	2.0	0.6	1410	2.3	0.7	
2007	0.4	0.1	1935	0.3	0.1	2033	0.7	0.2	2031	0.3	0.1	
									2153	0.7	0.2	
4 0205	2.4	0.7	19 0127	2.9	0.9	4 0221	2.3	0.7	19 0223	2.8	0.9	
M 0857	0.2	0.1	Tu 0837	-0.1	0.0	W 0914	0.3	0.1	Th 0916	0.0	0.0	
1449	1.8	0.5	1420	2.1	0.6	1515	2.0	0.6	1516	2.4	0.7	
2105	0.5	0.2	2044	0.4	0.1	2132	0.7	0.2	2140	0.3	0.1	
									2247	0.6	0.2	
5 0305	2.3	0.7	20 0235	2.8	0.9	5 0320	2.2	0.7	20 0335	2.6	0.8	
Tu 0952	0.2	0.1	W 0938	0.0	0.0	Th 1007	0.3	0.1	F 1013	0.0	0.0	
1554	1.8	0.5	1529	2.1	0.6	1612	2.1	0.6	1622	2.6	0.8	
2206	0.5	0.2	2152	0.3	0.1	2229	0.6	0.2	2245	0.2	0.1	
									2337	0.4	0.1	
6 0407	2.2	0.7	21 0347	2.7	0.8	6 0419	2.2	0.7	21 0444	2.5	0.8	
W 1047	0.2	0.1	Th 1037	0.0	0.0	F 1057	0.3	0.1	Sa 1110	0.0	0.0	
1657	1.9	0.6	1637	2.3	0.7	1703	2.2	0.7	1721	2.8	0.9	
2303	0.5	0.2	2258	0.2	0.1	2322	0.5	0.2	2345	0.0	0.0	
										1843	3.1	0.9
7 0505	2.2	0.7	22 0457	2.7	0.8	7 0510	2.2	0.7	22 0547	2.5	0.8	
Th 1138	0.2	0.1	F 1135	-0.1	0.0	Sa 1142	0.2	0.1	Su 1201	0.0	0.0	
1745	2.0	0.6	1737	2.5	0.8	1745	2.4	0.7	1814	2.9	0.9	
2353	0.4	0.1	2358	0.0	0.0				1226	0.2	0.1	
									1822	3.0	0.9	
8 0554	2.3	0.7	23 0602	2.7	0.8	8 0010	0.4	0.1	23 0042	-0.1	0.0	
F 1225	0.1	0.0	Sa 1227	-0.1	0.0	Su 0600	2.3	0.7	M 0643	2.5	0.8	
1828	2.2	0.7	1832	2.7	0.8	1225	0.2	0.1	1251	0.0	0.0	
						1825	2.6	0.8	1902	3.1	0.9	
									1905	3.2	1.0	
9 0042	0.3	0.1	24 0055	-0.2	-0.1	9 0056	0.2	0.1	24 0133	-0.2	-0.1	
Sa 0639	2.3	0.7	Su 0658	2.7	0.8	M 0642	2.4	0.7	Tu 0733	2.4	0.7	
1307	0.0	0.0	1315	-0.2	-0.1	1305	0.1	0.0	1336	0.0	0.0	
1907	2.3	0.7	1921	2.9	0.9	1905	2.8	0.9	1947	3.2	1.0	
									1947	3.4	1.0	
10 0126	0.1	0.0	25 0147	-0.3	-0.1	10 0139	0.0	0.0	25 0222	-0.3	-0.1	
Su 0720	2.4	0.7	M 0750	2.7	0.8	Tu 0724	2.5	0.8	W 0819	2.4	0.7	
1345	0.0	0.0	1402	-0.2	-0.1	1346	0.1	0.0	1419	0.0	0.0	
1942	2.5	0.8	2007	3.1	0.9	1939	3.0	0.9	2029	3.2	1.0	
									2032	3.5	1.1	
11 0207	0.0	0.0	26 0237	-0.4	-0.1	11 0223	-0.2	-0.1	26 0306	-0.3	-0.1	
M 0757	2.5	0.8	Tu 0836	2.6	0.8	W 0805	2.5	0.8	Th 0901	2.3	0.7	
1424	-0.1	0.0	1446	-0.2	-0.1	1424	0.0	0.0	1504	0.1	0.0	
2016	2.7	0.8	2051	3.2	1.0	2019	3.2	1.0	2110	3.2	1.0	
									2120	3.6	1.1	
12 0249	-0.2	-0.1	27 0325	-0.5	-0.2	12 0305	-0.3	-0.1	12 0417	-0.5	-0.2	
Tu 0836	2.6	0.8	W 0921	2.5	0.8	Th 0846	2.5	0.8	F 0942	2.3	0.7	
1502	-0.1	0.0	1530	-0.1	0.0	1505	0.0	0.0	1547	0.2	0.1	
2053	2.9	0.9	2134	3.2	1.0	2058	3.3	1.0	2151	3.1	0.9	
									2210	3.6	1.1	
13 0330	-0.3	-0.1	28 0412	-0.4	-0.1	13 0348	-0.4	-0.1	13 0507	-0.5	-0.2	
W 0916	2.6	0.8	Th 1004	2.4	0.7	F 0930	2.5	0.8	Sa 1024	2.2	0.7	
1539	-0.1	0.0	1615	0.0	0.0	1546	0.0	0.0	1633	0.3	0.1	
2127	3.0	0.9	2216	3.1	0.9	2141	3.4	1.0	2231	3.0	0.9	
									2304	3.4	1.0	
14 0413	-0.3	-0.1	29 0458	-0.3	-0.1	14 0437	-0.4	-0.1	14 0600	-0.4	-0.1	
Th 0954	2.5	0.8	F 1049	2.3	0.7	Sa 1019	2.5	0.8	Su 1107	2.2	0.7	
1617	0.0	0.0	1701	0.1	0.0	1632	0.1	0.0	1719	0.4	0.1	
2206	3.1	0.9	2258	3.0	0.9	2226	3.4	1.0	2312	2.9	0.9	
									1911	0.2	0.1	
15 0458	-0.3	-0.1	30 0547	-0.1	0.0	15 0526	-0.4	-0.1	15 0003	3.2	1.0	
F 1039	2.5	0.8	Sa 1134	2.2	0.7	Su 1107	2.4	0.7	W 0656	-0.3	-0.1	
1657	0.0	0.0	1747	0.3	0.1	1721	0.2	0.1	1808	0.1	0.0	
2248	3.1	0.9	2344	2.9	0.9	2318	3.3	1.0	2355	2.7	0.8	
									1904	0.6	0.2	
31 0655	0.2	0.1										
Tu 1245	2.1	0.6										

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JULY				AUGUST				SEPTEMBER			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	h m	ft	h m	ft	h m	ft	h m	ft	h m	ft
1 0056	2.4 0.7	16 0152	2.7 0.8	1 0155	2.2 0.7	16 0336	2.1 0.6	1 0324	2.1 0.6	16 0516	2.1 0.6
F 0754	0.3 0.1	Sa 0822	-0.1 0.0	M 0844	0.4 0.1	Tu 0945	0.3 0.1	Th 0952	0.5 0.2	F 1113	0.6 0.2
1346	2.3 0.7	1432	2.9 0.9	1431	2.6 0.8	1604	2.8 0.9	1547	2.9 0.9	1729	2.6 0.8
2020	0.7 0.2	2103	0.1 0.0	2131	0.5 0.2	2241	0.2 0.1	2254	0.2 0.1	2358	0.3 0.1
2 0147	2.3 0.7	17 0259	2.4 0.7	2 0251	2.1 0.6	17 0445	2.0 0.6	2 0429	2.1 0.6	17 0612	2.2 0.7
Sa 0841	0.3 0.1	Su 0919	0.1 0.0	Tu 0931	0.5 0.2	W 1042	0.4 0.1	F 1052	0.4 0.1	Sa 1206	0.5 0.2
1434	2.4 0.7	1534	2.9 0.9	1524	2.7 0.8	1704	2.8 0.9	1650	3.0 0.9	1820	2.6 0.8
2114	0.6 0.2	2206	0.1 0.0	2226	0.4 0.1	2337	0.2 0.1	2350	0.1 0.0		
3 0239	2.2 0.7	18 0403	2.2 0.7	3 0351	2.1 0.6	18 0545	2.0 0.6	3 0532	2.3 0.7	18 0044	0.3 0.1
Su 0928	0.4 0.1	M 1015	0.2 0.1	W 1022	0.4 0.1	Th 1138	0.4 0.1	Sa 1152	0.3 0.1	Su 0653	2.3 0.7
1523	2.5 0.8	1634	2.9 0.9	1621	2.9 0.9	1758	2.8 0.9	1753	3.2 1.0	1253	0.4 0.1
2207	0.5 0.2	2306	0.1 0.0	2322	0.2 0.1					1902	2.6 0.8
4 0333	2.2 0.7	19 0506	2.1 0.6	4 0451	2.1 0.6	19 0030	0.2 0.1	4 0043	-0.1 0.0	19 0126	0.2 0.1
M 1015	0.4 0.1	Tu 1108	0.2 0.1	Th 1114	0.4 0.1	F 0636	2.1 0.6	Su 0630	2.5 0.8	M 0729	2.4 0.7
1613	2.6 0.8	1729	2.9 0.9	1713	3.1 0.9	1227	0.4 0.1	1248	0.1 0.0	1339	0.3 0.1
2301	0.4 0.1					1846	2.8 0.9	1849	3.3 1.0	1939	2.7 0.8
5 0429	2.1 0.6	20 0005	0.1 0.0	5 0015	0.0 0.0	20 0116	0.2 0.1	5 0133	-0.2 -0.1	20 0205	0.2 0.1
Tu 1101	0.3 0.1	W 0606	2.1 0.6	F 0550	2.2 0.7	Sa 0718	2.1 0.6	M 0723	2.7 0.8	Tu 0803	2.5 0.8
1700	2.8 0.9	1201	0.3 0.1	1209	0.2 0.1	1316	0.4 0.1	1344	-0.1 0.0	1421	0.2 0.1
2350	0.2 0.1	1822	3.0 0.9	1809	3.2 1.0	1928	2.8 0.9	1944	3.4 1.0	2016	2.7 0.8
6 0524	2.2 0.7	21 0054	0.1 0.0	6 0104	-0.2 -0.1	21 0158	0.2 0.1	6 0221	-0.3 -0.1	21 0242	0.1 0.0
W 1147	0.3 0.1	Th 0656	2.1 0.6	Sa 0645	2.4 0.7	Su 0758	2.2 0.7	Tu 0814	3.0 0.9	W 0839	2.7 0.8
1747	3.1 0.9	1248	0.3 0.1	1302	0.1 0.0	1400	0.3 0.1	1437	-0.3 -0.1	1501	0.2 0.1
		1906	3.0 0.9	1904	3.4 1.0	2006	2.8 0.9	2037	3.4 1.0	2051	2.8 0.9
7 0040	0.0 0.0	22 0143	0.1 0.0	7 0155	-0.3 -0.1	22 0237	0.1 0.0	7 0309	-0.4 -0.1	22 0319	0.1 0.0
Th 0617	2.2 0.7	F 0739	2.1 0.6	Su 0740	2.5 0.8	M 0833	2.3 0.7	W 0905	3.1 0.9	Th 0911	2.8 0.9
1233	0.2 0.1	1334	0.3 0.1	1355	-0.1 0.0	1443	0.3 0.1	1530	-0.4 -0.1	1540	0.1 0.0
1833	3.3 1.0	1948	2.9 0.9	1957	3.5 1.1	2042	2.8 0.9	2129	3.3 1.0	2127	2.7 0.8
8 0129	-0.2 -0.1	23 0225	0.0 0.0	8 0244	-0.4 -0.1	23 0316	0.1 0.0	8 0356	-0.4 -0.1	23 0356	0.1 0.0
F 0708	2.3 0.7	Sa 0822	2.1 0.6	M 0833	2.7 0.8	Tu 0909	2.4 0.7	Th 0954	3.3 1.0	F 0945	2.9 0.9
1321	0.1 0.0	1420	0.3 0.1	1448	-0.2 -0.1	1525	0.3 0.1	1623	-0.4 -0.1	1622	0.1 0.0
1923	3.5 1.1	2029	2.9 0.9	2050	3.5 1.1	2117	2.8 0.9	2221	3.1 0.9	2203	2.7 0.8
9 0216	-0.4 -0.1	24 0306	0.0 0.0	9 0333	-0.5 -0.2	24 0355	0.1 0.0	9 0444	-0.3 -0.1	24 0433	0.2 0.1
Sa 0759	2.5 0.8	Su 0859	2.2 0.7	Tu 0925	2.9 0.9	W 0944	2.5 0.8	F 1044	3.3 1.0	Sa 1018	2.9 0.9
1411	0.0 0.0	1503	0.3 0.1	1544	-0.3 -0.1	1606	0.3 0.1	1717	-0.4 -0.1	1704	0.1 0.0
2013	3.6 1.1	2105	2.9 0.9	2144	3.5 1.1	2153	2.8 0.9	2312	2.9 0.9	2241	2.6 0.8
10 0306	-0.5 -0.2	25 0345	0.0 0.0	10 0422	-0.5 -0.2	25 0433	0.1 0.0	10 0534	-0.2 -0.1	25 0510	0.3 0.1
Su 0851	2.6 0.8	M 0937	2.3 0.7	W 1017	3.0 0.9	Th 1019	2.6 0.8	Sa 1136	3.3 1.0	Su 1054	3.0 0.9
1502	-0.1 0.0	1547	0.3 0.1	1639	-0.3 -0.1	1649	0.3 0.1	1812	-0.2 -0.1	1749	0.1 0.0
2104	3.6 1.1	2143	2.8 0.9	2237	3.3 1.0	2231	2.7 0.8			2321	2.5 0.8
11 0356	-0.5 -0.2	26 0425	0.0 0.0	11 0512	-0.4 -0.1	26 0510	0.1 0.0	11 0005	2.7 0.8	26 0549	0.4 0.1
M 0943	2.7 0.8	Tu 1016	2.3 0.7	Th 1110	3.1 0.9	F 1056	2.7 0.8	Su 0624	0.0 0.0	M 1136	3.0 0.9
1557	-0.1 0.0	1631	0.4 0.1	1736	-0.3 -0.1	1733	0.3 0.1	1229	3.1 0.9	1837	0.2 0.1
2156	3.6 1.1	2219	2.8 0.9	2332	3.1 0.9	2307	2.6 0.8	1911	0.0 0.0		
12 0446	-0.5 -0.2	27 0506	0.1 0.0	12 0603	-0.3 -0.1	27 0549	0.2 0.1	12 0101	2.4 0.7	27 0007	2.4 0.7
Tu 1036	2.7 0.8	W 1054	2.4 0.7	F 1203	3.1 0.9	Sa 1133	2.7 0.8	M 0720	0.2 0.1	Tu 0634	0.5 0.2
1654	-0.1 0.0	1715	0.4 0.1	1835	-0.2 -0.1	1819	0.3 0.1	1326	3.0 0.9	1221	3.0 0.9
2252	3.4 1.0	2258	2.7 0.8			2347	2.5 0.8	2010	0.1 0.0	1931	0.3 0.1
13 0539	-0.5 -0.2	28 0547	0.1 0.0	13 0029	2.8 0.9	28 0631	0.3 0.1	13 0202	2.2 0.7	28 0058	2.2 0.7
W 1132	2.8 0.9	Th 1136	2.4 0.7	Sa 0657	-0.1 0.0	Su 1214	2.7 0.8	Tu 0815	0.4 0.1	W 0726	0.6 0.2
1754	-0.1 0.0	1803	0.5 0.2	1301	3.0 0.9	1906	0.4 0.1	1425	2.8 0.9	1314	2.9 0.9
2349	3.2 1.0	2339	2.6 0.8	1935	0.0 0.0			2109	0.3 0.1	2031	0.3 0.1
14 0632	-0.3 -0.1	29 0629	0.2 0.1	14 0130	2.6 0.8	29 0031	2.4 0.7	14 0308	2.1 0.6	29 0159	2.1 0.6
Th 1231	2.8 0.9	F 1216	2.4 0.7	Su 0752	0.0 0.0	M 0714	0.5 0.2	W 0916	0.5 0.2	Th 0826	0.6 0.2
1856	0.0 0.0	1850	0.5 0.2	1401	3.0 0.9	1257	2.7 0.8	1530	2.7 0.8	1417	2.9 0.9
				2038	0.1 0.0	2001	0.4 0.1	2210	0.3 0.1	2132	0.3 0.1
15 0050	2.9 0.9	30 0021	2.5 0.8	15 0231	2.3 0.7	30 0121	2.2 0.7	15 0415	2.0 0.6	30 0308	2.1 0.6
F 0726	-0.2 -0.1	Sa 0713	0.3 0.1	M 0848	0.2 0.1	Tu 0802	0.5 0.2	Th 1016	0.6 0.2	F 0934	0.6 0.2
1330	2.8 0.9	1258	2.5 0.8	1503	2.9 0.9	1346	2.8 0.9	1634	2.6 0.8	1524	2.9 0.9
1959	0.0 0.0	1943	0.5 0.2	2141	0.2 0.1	2058	0.4 0.1	2307	0.4 0.1	2231	0.2 0.1
31 0106	2.3 0.7					31 0219	2.1 0.6				
Su 0756	0.4 0.1					W 0854	0.6 0.2				
1345	2.5 0.8					1444	2.8 0.9				
2036	0.5 0.2					2157	0.3 0.1				

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER												NOVEMBER												DECEMBER																																																											
Day	Time			Height			Day	Time			Height			Day	Time			Height			Day	Time			Height			Day	Time			Height																																																			
	h	m	ft	m	h	m		h	m	ft	m	h	m		h	m	ft	m	h	m		h	m	ft	m	h	m		h	m	ft	m																																																			
1 0416	2.2	0.7	16 0535	2.2	0.7	1 0559	2.8	0.9	16 0009	0.2	0.1	1 0022	-0.1	0.0	16 0010	0.1	0.0	16 0010	0.1	0.0	Sa 1038	0.5	0.2	Su 1142	0.5	0.2	Tu 1227	-0.1	0.0	W 0614	2.6	0.8	Th 0635	3.0	0.9	F 0609	2.7	0.8																																													
1636	2.9	0.9	1745	2.4	0.7	1825	2.7	0.8	1243	0.2	0.1	1307	-0.4	-0.1	1254	-0.1	0.0	2327	0.1	0.0	1830	2.3	0.7	1905	2.3	0.7	1834	2.0	0.6																																																						
2 0519	2.4	0.7	17 0007	0.3	0.1	2 0046	-0.1	0.0	17 0051	0.1	0.0	2 0110	-0.1	0.0	17 0052	0.0	0.0	Su 1140	0.3	0.1	M 0617	2.4	0.7	W 0651	3.1	0.9	F 0721	3.1	0.9	Sa 0649	2.9	0.9																																																			
1739	3.0	0.9	1228	0.4	0.1	1320	-0.3	-0.1	1325	0.0	0.0	1357	-0.4	-0.1	1339	-0.3	-0.1	1827	2.5	0.8	1920	2.7	0.8	1911	2.3	0.7	1955	2.3	0.7																																																						
3 0020	0.0	0.0	18 0049	0.2	0.1	3 0134	-0.2	-0.1	18 0130	0.1	0.0	3 0156	-0.1	0.0	18 0133	0.0	0.0	M 0615	2.7	0.8	Tu 0655	2.5	0.8	Th 0738	3.3	1.0	Sa 0806	3.2	1.0	Su 0731	3.0	0.9																																																			
1238	0.0	0.0	1312	0.3	0.1	1411	-0.4	-0.1	1406	0.1	0.0	1445	-0.5	-0.2	1422	-0.5	-0.2	1838	3.1	0.9	1908	2.5	0.8	2009	2.7	0.8	1950	2.4	0.7	2039	2.2	0.7																																																			
4 0110	-0.2	-0.1	19 0128	0.2	0.1	4 0219	-0.2	-0.1	19 0208	0.1	0.0	4 0241	-0.1	0.0	19 0215	-0.1	0.0	Tu 0707	2.9	0.9	W 0728	2.7	0.8	F 0824	3.4	1.0	Sa 0800	3.1	0.9	Su 0849	3.2	1.0	M 0813	3.2	1.0																																																
1332	-0.2	-0.1	1354	0.2	0.1	1501	-0.5	-0.2	1448	-0.3	-0.1	1530	-0.4	-0.1	1507	-0.6	-0.2	1932	3.1	0.9	1947	2.6	0.8	2055	2.6	0.8	2029	2.4	0.7	2123	2.2	0.7	2048	2.2	0.7																																																
5 0158	-0.2	-0.1	20 0206	0.1	0.0	5 0304	-0.1	0.0	20 0245	0.0	0.0	5 0327	-0.1	0.0	20 0258	-0.2	-0.1	W 0756	3.2	1.0	Th 0803	2.9	0.9	Sa 0909	3.4	1.0	Su 0838	3.2	1.0	M 0932	3.1	0.9	Tu 0857	3.3	1.0																																																
1424	-0.4	-0.1	1433	0.0	0.0	1548	-0.5	-0.2	1531	-0.4	-0.1	1616	-0.4	-0.1	1553	-0.7	-0.2	2024	3.1	0.9	2022	2.6	0.8	2142	2.6	0.8	2110	2.4	0.7	2205	2.1	0.6	2135	2.3	0.7																																																
6 0244	-0.3	-0.1	21 0243	0.1	0.0	6 0349	-0.1	0.0	21 0324	0.0	0.0	6 0413	0.0	0.0	21 0347	-0.2	-0.1	Th 0844	3.4	1.0	F 0836	3.0	0.9	Su 0952	3.3	1.0	M 0918	3.3	1.0	Tu 1014	3.0	0.9	W 0944	3.3	1.0																																																
1515	-0.5	-0.2	1515	-0.1	0.0	1636	-0.4	-0.1	1615	-0.4	-0.1	1702	-0.3	-0.1	1640	-0.7	-0.2	2113	3.0	0.9	2058	2.6	0.8	2227	2.4	0.7	2154	2.4	0.7	2251	2.1	0.6	2225	2.3	0.7																																																
7 0330	-0.2	-0.1	22 0320	0.1	0.0	7 0437	0.1	0.0	22 0408	0.1	0.0	7 0459	0.2	0.1	22 0439	-0.2	-0.1	F 0930	3.4	1.0	Sa 0910	3.1	0.9	H 1038	3.2	1.0	Tu 1001	3.3	1.0	W 1056	2.8	0.9	Th 1035	3.2	1.0																																																
1606	-0.5	-0.2	1555	-0.1	0.0	1725	-0.2	-0.1	1702	-0.4	-0.1	1747	-0.2	-0.1	1731	-0.6	-0.2	2201	2.9	0.9	2136	2.6	0.8	2315	2.3	0.7	2241	2.3	0.7	2336	2.0	0.6	2317	2.3	0.7																																																
8 0417	-0.2	-0.1	23 0357	0.2	0.1	8 0525	0.2	0.1	23 0454	0.1	0.0	8 0551	0.3	0.1	23 0536	-0.1	0.0	Sa 1019	3.4	1.0	Su 0947	3.2	1.0	Tu 1125	3.0	0.9	W 1046	3.2	1.0	Th 1141	2.6	0.8	F 1129	3.0	0.9																																																
1656	-0.4	-0.1	1638	-0.1	0.0	1815	-0.1	0.0	1751	-0.3	-0.1	1834	-0.1	0.0	1824	-0.5	-0.2	2249	2.7	0.8	2215	2.5	0.8	2333	2.3	0.7	2333	2.3	0.7	1834	-0.1	0.0	1824	-0.5	-0.2																																																
9 0504	0.0	0.0	24 0435	0.2	0.1	9 0005	2.2	0.7	24 0547	0.2	0.1	9 0026	2.0	0.6	24 0013	2.3	0.7	Su 1106	3.3	1.0	M 1024	3.2	1.0	W 0619	0.4	0.1	Th 1139	3.1	0.9	F 0645	0.4	0.1	Sa 0637	-0.1	0.0	Tu 1230	2.4	0.7	1719	2.8	0.9	1923	0.0	0.0	1919	-0.4	-0.1																																				
1749	-0.2	-0.1	1724	-0.1	0.0	1215	2.8	0.9	1847	-0.3	-0.1	1230	2.4	0.7	1228	2.8	0.9	2340	2.5	0.8	2259	2.4	0.7	1906	0.1	0.0	1943	-0.2	-0.1	2014	0.1	0.0	2017	-0.3	-0.1																																																
10 0555	0.2	0.1	25 0516	0.3	0.1	10 0101	2.1	0.6	25 0029	2.2	0.7	10 0119	2.0	0.6	25 0115	2.4	0.7	M 1155	3.1	0.9	Tu 1107	3.2	1.0	Th 0714	0.5	0.2	F 0650	0.3	0.1	Sa 0741	0.5	0.2	Su 0742	0.0	0.0	1842	0.0	0.0	1813	0.0	0.0	1306	2.6	0.8	1237	2.9	0.9	1319	2.1	0.6	1332	2.5	0.8																														
11 0034	2.3	0.7	26 0605	0.4	0.1	11 0158	2.0	0.6	26 0133	2.3	0.7	11 0215	2.0	0.6	26 0218	2.4	0.7	Tu 0648	0.4	0.1	W 1156	3.1	0.9	F 0815	0.6	0.2	Sa 0757	0.3	0.1	Su 0838	0.5	0.2	M 0849	-0.1	0.0	1250	2.9	0.9	1906	0.0	0.0	2057	0.3	0.1	2042	0.1	0.0	2105	0.2	0.1	2114	-0.2	-0.1																														
12 0130	2.2	0.7	27 0042	2.2	0.7	12 0302	2.0	0.6	27 0239	-2.3	0.7	12 0309	2.1	0.6	27 0324	2.5	0.8	W 0746	0.5	0.2	Th 0704	0.5	0.2	Sa 0915	0.7	0.2	Su 0907	0.3	0.1	M 0937	0.5	0.2	Tu 0956	-0.1	0.0	1346	2.7	0.8	1253	3.0	0.9	1507	2.2	0.7	1455	2.5	0.8	1512	2.0	0.6	1549	2.1	0.6	2037	0.3	0.1	2149	0.3	0.1	2142	-0.1	0.0	2156	0.2	0.1	2211	-0.2	-0.1															
13 0236	2.1	0.6	28 0146	2.2	0.7	13 0401	2.1	0.6	28 0345	2.5	0.8	13 0401	2.2	0.7	28 0425	2.6	0.8	Th 0846	0.6	0.2	F 0811	0.6	0.2	Su 1015	0.6	0.2	M 1014	0.1	0.0	Tu 1030	0.4	0.1	W 1058	-0.2	-0.1	1450	2.5	0.8	1358	2.8	0.9	1607	2.2	0.7	1606	2.4	0.7	1609	1.9	0.6	1655	2.0	0.6	2135	0.4	0.1	2107	0.1	0.0	2239	0.3	0.1	2237	-0.1	0.0	2242	0.2	0.1	2305	-0.1	0.0												
14 0341	2.1	0.6	29 0255	2.2	0.7	14 0453	2.2	0.7	29 0447	2.7	0.8	14 0447	2.3	0.7	29 0524	2.7	0.8	F 0948	0.7	0.2	Sa 0920	0.5	0.2	M 1108	0.5	0.2	Tu 1116	0.0	0.0	W 1121	0.3	0.1	Th 1157	-0.3	-0.1	1554	2.4	0.7	1511	2.7	0.8	1658	2.2	0.7	1713	2.4	0.7	1701	1.9	0.6	1756	2.0	0.6	2231	0.4	0.1	2207	0.1	0.0	2326	0.2	0.1	2332	-0.1	0.0	2327	0.1	0.0	2358	-0.1	0.0												
15 0444	2.1	0.6	30 0402	2.4	0.7	15 0535	2.4	0.7	30 0542	2.8	0.9	15 0530	2.5	0.8	30 0617	2.8	0.9	Sa 1046	0.6	0.2	Su 1026	0.4	0.1	Tu 1158	0.4	0.1	W 1214	-0.2	-0.1	Th 1209	0.1	0.0	F 1251	-0.4	-0.1	1652	2.4	0.7	1621	2.7	0.8	1748	2.2	0.7	1812	2.3	0.7	1748	2.0	0.6	1852	1.9	0.6	2321	0.4	0.1	2303	0.0	0.0	31 0505	2.6	0.8	31 0048	-0.1	0.0	M 1129	0.1	0.0	1727	2.7	0.8	2356	0.0	0.0	31 0705	2.9	0.9	1342	-0.4	-0.1	1939	1.9	0.6

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
Day		Day		Day		Day		Day		Day		
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	
1 0004	6.8	2.1	16 0016	6.2	1.9	1 0131	7.0	2.1	16 0057	6.6	2.0	
Sa 0612	-0.8	-0.2	Su 0621	0.1	0.0	Tu 0747	-1.1	-0.3	W 0710	-0.3	-0.1	
1222	7.7	2.3	1227	6.8	2.1	1355	7.0	2.1	1313	6.6	2.0	
1849	-1.4	-0.4	1848	-0.3	-0.1	2014	-1.1	-0.3	1928	-0.3	-0.1	
2 0059	6.8	2.1	17 0051	6.3	1.9	2 0224	6.9	2.1	17 0134	6.6	2.0	
Su 0707	-0.7	-0.2	M 0659	0.2	0.1	W 0842	-0.8	-0.2	Th 0750	-0.2	-0.1	
1318	7.5	2.3	1302	6.7	2.0	1450	6.6	2.0	1352	6.4	2.0	
1944	-1.2	-0.4	1923	-0.2	-0.1	2106	-0.7	-0.2	2006	-0.2	-0.1	
3 0155	6.8	2.1	18 0128	6.3	1.9	3 0317	6.7	2.0	18 0216	6.6	2.0	
M 0806	-0.6	-0.2	Tu 0736	0.2	0.1	Th 0941	-0.6	-0.2	F 0834	-0.1	0.0	
1415	7.1	2.2	1341	6.5	2.0	1546	6.1	1.9	1439	6.1	1.9	
2040	-0.9	-0.3	2000	-0.1	0.0	2200	-0.3	-0.1	2048	0.0	0.0	
4 0251	6.7	2.0	19 0208	6.3	1.9	4 0414	6.5	2.0	19 0303	6.6	2.0	
Tu 0906	-0.4	-0.1	W 0819	0.3	0.1	F 1039	-0.3	-0.1	Sa 0925	0.0	0.0	
1514	6.7	2.0	1422	6.3	1.9	1645	5.7	1.7	1530	5.9	1.8	
2135	-0.6	-0.2	2040	0.0	0.0	2258	0.0	0.0	2139	0.2	0.1	
5 0350	6.6	2.0	20 0249	6.3	1.9	5 0513	6.3	1.9	20 0357	6.5	2.0	
W 1009	-0.3	-0.1	Th 0904	0.3	0.1	Sa 1141	-0.1	0.0	Su 1025	0.1	0.0	
1615	6.3	1.9	1509	6.1	1.9	1746	5.5	1.7	1630	5.6	1.7	
2234	-0.4	-0.1	2122	0.1	0.0	2356	0.2	0.1	2238	0.4	0.1	
6 0449	6.5	2.0	21 0337	6.4	2.0	6 0610	6.2	1.9	21 0454	6.5	2.0	
Th 1111	-0.2	-0.1	F 0954	0.3	0.1	Su 1240	0.0	0.0	M 1130	0.1	0.0	
1718	6.0	1.8	1559	5.9	1.8	1847	5.4	1.6	1736	5.6	1.7	
2333	-0.1	0.0	2213	0.2	0.1	2345	0.4	0.1	2317	0.6	0.2	
7 0549	6.5	2.0	22 0428	6.4	2.0	7 0052	0.4	0.1	22 0603	6.5	2.0	
F 1214	-0.2	-0.1	Sa 1055	0.3	0.1	M 0708	6.3	1.9	Tu 1239	0.0	0.0	
1820	5.8	1.8	1656	5.7	1.7	1337	0.1	0.0	1844	5.7	1.7	
2309	0.3	0.1	2309	1.945	5.5	1.7	1943	5.5	1.7	2334	0.6	0.2
8 0032	0.0	0.0	23 0527	6.5	2.0	8 0148	0.4	0.1	23 0055	0.3	0.1	
Sa 0648	6.6	2.0	Su 1156	0.1	0.0	Tu 0801	6.4	2.0	W 0711	6.7	2.0	
1315	-0.2	-0.1	1759	5.6	1.7	1428	0.0	0.0	1344	-0.3	-0.1	
1919	5.7	1.7	2033	5.6	1.7	2051	5.9	1.8	1951	5.9	1.8	
9 0126	0.0	0.0	24 0009	0.2	0.1	9 0238	0.3	0.1	24 0201	0.0	0.0	
Su 0740	6.6	2.0	M 0627	6.6	2.0	W 0851	6.5	2.0	Th 0814	7.0	2.1	
1408	-0.3	-0.1	1300	-0.1	0.0	1515	-0.1	0.0	1444	-0.6	-0.2	
2014	5.7	1.7	1904	5.7	1.7	2118	5.8	1.8	2051	6.3	1.9	
10 0217	0.1	0.0	25 0111	0.1	0.0	10 0323	0.2	0.1	25 0302	-0.4	-0.1	
M 0831	6.7	2.0	Tu 0729	6.9	2.1	Th 0932	6.7	2.0	F 0915	7.3	2.2	
1459	-0.4	-0.1	1401	-0.5	-0.2	1556	-0.2	-0.1	1540	-1.0	-0.3	
2102	5.8	1.8	2006	5.9	1.8	2200	6.0	1.8	2147	6.7	2.0	
11 0305	0.1	0.0	26 0214	-0.2	-0.1	11 0406	0.1	0.0	26 0358	-0.9	-0.3	
Tu 0917	6.8	2.1	W 0828	7.2	2.2	F 1012	6.8	2.1	Sa 1011	7.5	2.3	
1544	-0.4	-0.1	1500	-0.8	-0.2	1634	-0.3	-0.1	1633	-1.3	-0.4	
2145	5.9	1.8	2105	6.2	1.9	2237	6.2	1.9	2239	7.1	2.2	
12 0348	0.0	0.0	27 0313	-0.5	-0.2	12 0443	0.0	0.0	27 0453	-1.2	-0.4	
W 0958	6.9	2.1	Th 0927	7.4	2.3	Sa 1051	6.8	2.1	Su 1103	7.6	2.3	
1624	-0.5	-0.2	1556	-1.2	-0.4	1710	-0.4	-0.1	1722	-1.4	-0.4	
2226	6.0	1.8	2203	6.5	2.0	2313	6.4	2.0	2329	7.3	2.2	
13 0429	0.1	0.0	28 0410	-0.8	-0.2	13 0520	-0.1	0.0	28 0544	-1.4	-0.4	
Th 1038	6.9	2.1	F 1022	7.6	2.3	Su 1126	6.9	2.1	M 1153	7.5	2.3	
1701	-0.4	-0.1	1650	-1.4	-0.4	1745	-0.4	-0.1	1809	-1.4	-0.4	
2303	6.1	1.9	2256	6.8	2.1	2347	6.5	2.0	2241	6.7	2.0	
14 0508	0.1	0.0	29 0505	-1.0	-0.3	14 0557	-0.2	-0.1	14 0453	-0.3	-0.1	
F 1114	6.9	2.1	Sa 1116	7.7	2.3	M 1202	6.8	2.1	M 1058	6.9	2.1	
1737	-0.4	-0.1	1741	-1.5	-0.5	1818	-0.4	-0.1	1712	-0.3	-0.1	
2340	6.2	1.9	2349	7.0	2.1	1853	-0.4	-0.1	1745	-1.0	-0.3	
15 0544	0.1	0.0	30 0558	-1.2	-0.4	15 0022	6.6	2.0	15 0530	-0.4	-0.1	
Sa 1150	6.9	2.1	Su 1209	7.6	2.3	Tu 0633	-0.2	-0.1	Tu 1133	6.9	2.1	
1813	-0.3	-0.1	1832	-1.5	-0.5	1237	6.7	2.0	1746	-0.4	-0.1	
						1853	-0.4	-0.1	2351	7.0	2.1	
31 0041	7.1	2.2							31 0038	7.4	2.3	
M 0653	-1.2	-0.4							Th 0700	-1.2	-0.4	
1302	7.4	2.3							1307	6.7	2.0	
1923	-1.4	-0.4							1915	-0.5	-0.2	

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL						MAY						JUNE						
Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	
	h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m	
1	0123	7.1 2.2	16	0041	7.4 2.3	1	0138	6.9 2.1	16	0114	7.5 2.3	1	0235	6.6 2.0	16	0300	7.1 2.2	
F	0747	-0.8 -0.2	Sa	0707	-0.7 -0.2	Su	0803	-0.1 0.0	M	0744	-0.6 -0.2	W	0901	0.6 0.2	Th	0927	-0.3 -0.1	
1352	6.4 2.0	1313 6.5 2.0		1411 6.1 1.9		1355 6.6 2.0			1509 6.2 1.9		1541 6.9 2.1							
2000	-0.1 0.0	1917 0.1 0.0		2016 0.7 0.2		1959 0.3 0.1			2120 1.2 0.4		2157 0.2 0.1							
2	0210	6.8 2.1	17	0128	7.3 2.2	2	0224	6.7 2.0	17	0209	7.3 2.2	2	0322	6.4 2.0	17	0404	6.8 2.1	
Sa	0835	-0.4 -0.1	Su	0757	-0.5 -0.2	M	0850	0.3 0.1	Tu	0843	-0.3 -0.1	Th	0948	0.8 0.2	F	1027	-0.1 0.0	
1442	6.0 1.8	1404 6.3 1.9		1458 6.0 1.8		1452 6.5 2.0			1559 6.3 1.9		1642 6.9 2.1							
2050	0.3 0.1	2008 0.3 0.1		2106 1.0 0.3		2101 0.5 0.2			2212 1.3 0.4		2303 0.2 0.1							
3	0259	6.5 2.0	18	0221	7.1 2.2	3	0312	6.4 2.0	18	0312	7.0 2.1	3	0412	6.3 1.9	18	0508	6.6 2.0	
Su	0927	0.1 0.0	M	0852	-0.2 -0.1	Tu	0940	0.6 0.2	W	0943	-0.1 0.0	F	1036	0.9 0.3	Sa	1128	0.0 0.0	
1533	5.8 1.8	1501 6.2 1.9		1549 5.9 1.8		1557 6.5 2.0			1647 6.4 2.0		1743 7.0 2.1							
2141	0.7 0.2	2108 0.6 0.2		2159 1.2 0.4		2210 0.6 0.2			2305 1.2 0.4									
4	0351	6.3 1.9	19	0320	6.8 2.1	4	0405	6.2 1.9	19	0417	6.7 2.0	4	0506	6.2 1.9	19	0007	0.0 0.0	
M	1020	0.5 0.2	Tu	0954	0.1 0.0	W	1031	0.8 0.2	Th	1046	0.1 0.0	Sa	1126	0.9 0.3	Su	0613	6.4 2.0	
1628	5.6 1.7	1605 6.1 1.9		1641 6.0 1.8		1700 6.6 2.0			1737 6.5 2.0		1227 0.1 0.0							
2238	1.0 0.3	2216 0.7 0.2		2255 1.3 0.4		2319 0.5 0.2			2359 1.0 0.3		1842 7.1 2.2							
5	0447	6.1 1.9	20	0428	6.6 2.0	5	0500	6.1 1.9	20	0526	6.6 2.0	5	0559	6.2 1.9	20	0109	-0.2 -0.1	
Tu	1115	0.7 0.2	W	1100	0.2 0.1	Th	1125	1.0 0.3	F	1150	0.1 0.0	Su	1215	0.8 0.2	M	0717	6.3 1.9	
1724	5.6 1.7	1713 6.1 1.9		1734 6.1 1.9		1805 6.7 2.0			1827 6.7 2.0		1324 0.1 0.0							
2338	1.2 0.4	2328 0.7 0.2		2351 1.3 0.4							1938 7.2 2.2							
6	0546	6.0 1.8	21	0538	6.6 2.0	6	0554	6.1 1.9	21	0025	0.3 0.1	6	0051	0.7 0.2	21	0206	-0.3 -0.1	
W	1214	0.8 0.2	Th	1208	0.2 0.1	F	1216	0.9 0.3	Sa	0632	6.6 2.0	M	0652	6.2 1.9	Tu	0812	6.3 1.9	
1823	5.8 1.8	1821 6.3 1.9		1826 6.3 1.9		1252 0.1 0.0			1303 0.7 0.2		1417 0.1 0.0							
									1905 7.0 2.1		1916 6.9 2.1				2030	7.3 2.2		
7	0036	1.1 0.3	22	0037	0.4 0.1	7	0045	1.1 0.3	22	0127	-0.1 0.0	7	0141	0.4 0.1	22	0259	-0.5 -0.2	
Th	0642	6.1 1.9	F	0647	6.6 2.0	Sa	0648	6.2 1.9	Su	0735	6.6 2.0	Tu	0744	6.3 1.9	W	0904	6.3 1.9	
1306	0.8 0.2	1311 0.0 0.0		1306 0.8 0.2		1348 -0.1 0.0			1352 0.5 0.2		1507 0.1 0.0							
1915	6.0 1.8	1922 6.7 2.0		1916 6.5 2.0		2001 7.3 2.2			2004 7.2 2.2		2118 7.4 2.3							
8	0129	0.9 0.3	23	0141	0.0 0.0	8	0137	0.8 0.2	23	0225	-0.4 -0.1	8	0232	0.0 0.0	23	0345	-0.5 -0.2	
F	0735	6.3 1.9	Sa	0751	6.8 2.1	Su	0737	6.3 1.9	M	0833	6.7 2.0	W	0835	6.4 2.0	Th	0952	6.3 1.9	
1356	0.6 0.2	1409 -0.2 -0.1		1353 0.6 0.2		1441 -0.2 -0.1			1441 0.3 0.1		1553 0.1 0.0							
2001	6.3 1.9	2020 7.0 2.1		2001 6.8 2.1		2051 7.4 2.3			2051 7.5 2.3		2203 7.4 2.3							
9	0217	0.7 0.2	24	0241	-0.5 -0.2	9	0222	0.4 0.1	24	0317	-0.7 -0.2	9	0321	-0.4 -0.1	24	0430	-0.5 -0.2	
Sa	0823	6.5 2.0	Su	0849	6.9 2.1	M	0825	6.5 2.0	Tu	0923	6.7 2.0	Th	0923	6.5 2.0	F	1035	6.3 1.9	
1441	0.4 0.1	1503 -0.4 -0.1		1438 0.4 0.1		1529 -0.2 -0.1			1527 0.1 0.0		1636 0.2 0.1							
2046	6.6 2.0	2111 7.4 2.3		2044 7.1 2.2		2138 7.5 2.3			2139 7.7 2.3		2245 7.3 2.2							
10	0302	0.3 0.1	25	0334	-0.9 -0.3	10	0307	0.0 0.0	25	0404	-0.9 -0.3	10	0408	-0.7 -0.2	25	0512	-0.4 -0.1	
Su	0907	6.6 2.0	M	0940	7.0 2.1	Tu	0911	6.6 2.0	W	1011	6.6 2.0	F	1012	6.7 2.0	Sa	1117	6.4 2.0	
1521	0.2 0.1	1552 -0.6 -0.2		1519 0.2 0.1		1614 -0.2 -0.1			1615 0.0 0.0		1718 0.3 0.1							
2126	6.8 2.1	2159 7.6 2.3		2126 7.3 2.2		2224 7.6 2.3			2227 7.9 2.4		2325 7.3 2.2							
11	0344	0.0 0.0	26	0422	-1.1 -0.3	11	0351	-0.4 -0.1	26	0448	-0.9 -0.3	11	0457	-0.9 -0.3	26	0550	-0.3 -0.1	
M	0947	6.8 2.1	Tu	1029	7.0 2.1	W	0954	6.7 2.0	Th	1055	6.6 2.0	Sa	1103	6.8 2.1	Su	1155	6.4 2.0	
1559	0.0 0.0	1636 -0.6 -0.2		1600 0.0 0.0		1658 -0.1 0.0			1705 -0.1 0.0		1757 0.5 0.2							
2203	7.1 2.2	2245 7.6 2.3		2208 7.5 2.3		2306 7.5 2.3			2317 7.9 2.4									
12	0422	-0.4 -0.1	27	0508	-1.2 -0.4	12	0435	-0.7 -0.2	27	0531	-0.8 -0.2	12	0546	-1.0 -0.3	27	0003	7.1 2.2	
Tu	1027	6.8 2.1	W	1115	6.9 2.1	Th	1037	6.8 2.1	F	1138	6.5 2.0	Su	1154	6.8 2.1	M	0628	-0.1 0.0	
1636	-0.2 -0.1	1721 -0.6 -0.2		1643 -0.1 0.0		1740 0.1 0.0			1740 0.1 0.0		1757 -0.1 0.0				1233	6.4 2.0		
2242	7.2 2.2	2329 7.6 2.3		2251 7.7 2.3		2347 7.3 2.2			2347 7.3 2.2		1838 0.6 0.2							
13	0501	-0.6 -0.2	28	0553	-1.1 -0.3	13	0518	-0.8 -0.2	28	0613	-0.6 -0.2	13	0008	7.9 2.4	28	0041	7.0 2.1	
W	1107	6.8 2.1	Th	1158	6.7 2.0	F	1124	6.8 2.1	Sa	1219	6.4 2.0	M	0638	-0.9 -0.3	Tu	0707	0.1 0.0	
1714	-0.2 -0.1	1803 -0.4 -0.1		1726 -0.1 0.0		1820 0.3 0.1			1820 0.3 0.1		1246 6.9 2.1				1313	6.4 2.0		
2321	7.4 2.3			2337 7.7 2.3						1851 0.0 0.0		1917 0.8 0.2						
14	0540	-0.7 -0.2	29	0012	7.4 2.3	14	0603	-0.9 -0.3	29	0028	7.2 2.2	14	0102	7.7 2.3	29	0120	6.9 2.1	
Th	1146	6.8 2.1	F	0636	-0.9 -0.3	Sa	1210	6.7 2.0	Su	0654	-0.3 -0.1	Tu	0731	-0.8 -0.2	W	0744	0.2 0.1	
1753	-0.2 -0.1	1243 6.5 2.0		1812 0.0 0.0		1259 6.3 1.9			1342 6.9 2.1		1352 6.5 2.0							
2359	7.4 2.3	1847 -0.1 0.0				1902 0.6 0.2			1902 0.6 0.2		1950 0.1 0.0				1958 0.9 0.3			
15	0622	-0.8 -0.2	30	0054	7.2 2.2	15	0024	7.7 2.3	30	0109	7.0 2.1	15	0200	7.4 2.3	30	0200	6.7 2.0	
F	1228	6.7 2.0	Sa	0720	-0.5 -0.2	Su	0653	-0.8 -0.2	M	0734	0.0 0.0	W	0827	-0.5 -0.2	Th	0824	0.4 0.1	
1832	-0.1 0.0	1326 6.3 1.9		1300 6.7 2.0		1342 6.3 1.9			1440 6.9 2.1		1431 6.5 2.0							
		1930 0.3 0.1		1902 0.1 0.0		1947 0.8 0.2			1947 0.8 0.2		2053 0.2 0.1				2042 1.0 0.3			
						31	0150	6.8 2.1										
						Tu	0816	0.3 0.1										
							1424	6.2 1.9										
							2032	1.1 0.3										

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JULY				AUGUST				SEPTEMBER			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m
1 0243	6.5 2.0	16 0343	6.7 2.0	1 0338	6.2 1.9	16 0521	6.0 1.8	1 0506	5.9 1.8	16 0044	0.6 0.2
F 0904	0.5 0.2	Sa 1001	-0.2 -0.1	M 0950	0.6 0.2	Tu 1131	0.5 0.2	Th 1110	0.9 0.3	F 0652	5.9 1.8
1514	6.5 2.0	1617	7.1 2.2	1607	6.8 2.1	1746	6.8 2.1	1731	6.9 2.1	1258	1.0 0.3
2128	1.0 0.3	2241	-0.1 0.0	2231	0.7 0.2					1911	6.6 2.0
2 0328	6.4 2.0	17 0446	6.4 2.0	2 0432	6.0 1.8	17 0018	0.2 0.1	2 0006	0.5 0.2	17 0135	0.6 0.2
Sa 0949	0.7 0.2	Su 1101	0.0 0.0	Tu 1042	0.7 0.2	W 0623	5.9 1.8	F 0611	6.0 1.8	Sa 0745	6.2 1.9
1602	6.6 2.0	1717	7.0 2.1	1659	6.8 2.1	1232	0.7 0.2	1220	0.8 0.2	1353	0.9 0.3
2220	1.0 0.3	2343	0.0 0.0	2331	0.6 0.2	1846	6.8 2.1	1836	7.0 2.1	2001	6.8 2.1
3 0420	6.2 1.9	18 0550	6.2 1.9	3 0531	5.9 1.8	18 0116	0.3 0.1	3 0111	0.3 0.1	18 0225	0.5 0.2
Su 1034	0.7 0.2	M 1200	0.2 0.1	W 1138	0.8 0.2	Th 0723	5.9 1.8	Sa 0717	6.2 1.9	Su 0830	6.4 2.0
1651	6.7 2.0	1816	7.0 2.1	1757	7.0 2.1	1328	0.7 0.2	1327	0.6 0.2	1440	0.7 0.2
2314	0.9 0.3					1942	6.8 2.1	1940	7.3 2.2	2049	6.9 2.1
4 0513	6.1 1.9	19 0046	-0.1 0.0	4 0031	0.4 0.1	19 0210	0.2 0.1	4 0211	-0.1 0.0	19 0307	0.4 0.1
M 1125	0.7 0.2	Tu 0652	6.1 1.9	Th 0634	6.0 1.8	F 0817	6.1 1.9	Su 0820	6.6 2.0	M 0914	6.7 2.0
1742	6.8 2.1	1258	0.3 0.1	1240	7.0 2.1	1421	0.7 0.2	1430	0.2 0.1	1523	0.5 0.2
		1914	7.0 2.1	1859	7.2 2.2	2033	7.0 2.1	2041	7.5 2.3	2129	7.0 2.1
5 0007	0.7 0.2	20 0144	-0.1 0.0	5 0131	0.1 0.0	20 0259	0.2 0.1	5 0307	-0.5 -0.2	20 0347	0.2 0.1
Tu 0607	6.0 1.8	W 0751	6.0 1.8	F 0736	6.1 1.9	Sa 0905	6.3 1.9	M 0915	7.1 2.2	Tu 0951	6.9 2.1
1219	0.7 0.2	1353	0.4 0.1	1341	0.5 0.2	1509	0.6 0.2	1527	-0.3 -0.1	1603	0.3 0.1
1834	7.0 2.1	2007	7.1 2.2	1957	7.4 2.3	2118	7.1 2.2	2138	7.8 2.4	2207	7.1 2.2
6 0103	0.4 0.1	21 0238	-0.2 -0.1	6 0230	-0.2 -0.1	21 0342	0.1 0.0	6 0400	-0.8 -0.2	21 0422	0.1 0.0
W 0706	6.1 1.9	Th 0842	6.1 1.9	Sa 0836	6.4 2.0	Su 0946	6.5 2.0	Tu 1008	7.4 2.3	W 1027	7.1 2.2
1311	0.5 0.2	1444	0.4 0.1	1441	0.2 0.1	1551	0.5 0.2	1622	-0.7 -0.2	1640	0.1 0.0
1929	7.2 2.2	2057	7.2 2.2	2055	7.7 2.3	2200	7.1 2.2	2232	7.9 2.4	2243	7.1 2.2
7 0159	0.0 0.0	22 0324	-0.2 -0.1	7 0326	-0.6 -0.2	22 0419	0.0 0.0	7 0451	-1.0 -0.3	22 0457	0.0 0.0
Th 0801	6.2 1.9	F 0930	6.2 1.9	Su 0932	6.8 2.1	M 1023	6.6 2.0	W 1100	7.7 2.3	Th 1101	7.2 2.2
1406	0.4 0.1	1531	0.4 0.1	1539	-0.1 0.0	1632	0.4 0.1	1715	-1.0 -0.3	1715	0.0 0.0
2021	7.5 2.3	2142	7.2 2.2	2152	7.9 2.4	2237	7.2 2.2	2323	7.8 2.4	2318	7.1 2.2
8 0252	-0.3 -0.1	23 0407	-0.2 -0.1	8 0419	-0.9 -0.3	23 0456	0.0 0.0	8 0541	-1.1 -0.3	23 0529	0.0 0.0
F 0857	6.4 2.0	Sa 1012	6.3 1.9	M 1027	7.1 2.2	Tu 1100	6.8 2.1	Th 1149	7.8 2.4	F 1136	7.3 2.2
1501	0.2 0.1	1614	0.4 0.1	1636	-0.5 -0.2	1708	0.3 0.1	1806	-1.1 -0.3	1752	-0.1 0.0
2115	7.7 2.3	2224	7.2 2.2	2246	8.0 2.4	2313	7.2 2.2			2354	7.0 2.1
9 0347	-0.6 -0.2	24 0448	-0.2 -0.1	9 0512	-1.1 -0.3	24 0530	0.0 0.0	9 0015	7.6 2.3	24 0604	0.0 0.0
Sa 0950	6.6 2.0	Su 1052	6.4 2.0	Tu 1119	7.4 2.3	W 1134	6.9 2.1	F 0628	-1.0 -0.3	Sa 1209	7.3 2.2
1555	0.0 0.0	1656	0.4 0.1	1731	-0.7 -0.2	1743	0.2 0.1	1238	7.8 2.4	1828	-0.1 0.0
2208	7.9 2.4	2301	7.2 2.2	2340	8.0 2.4	2347	7.1 2.2	1857	-1.1 -0.3		
10 0438	-0.9 -0.3	25 0525	-0.1 0.0	10 0602	-1.1 -0.3	25 0604	0.0 0.0	10 0105	7.3 2.2	25 0031	6.8 2.1
Su 1045	6.9 2.1	M 1130	6.5 2.0	W 1211	7.5 2.3	Th 1209	7.0 2.1	Sa 0718	-0.7 -0.2	Su 0638	0.1 0.0
1649	-0.2 -0.1	1734	0.4 0.1	1825	-0.8 -0.2	1820	0.2 0.1	1329	7.6 2.3	1246	7.3 2.2
2301	8.0 2.4	2339	7.1 2.2					1951	-0.8 -0.2	1906	-0.1 0.0
11 0529	-1.0 -0.3	26 0601	0.0 0.0	11 0033	7.8 2.4	26 0024	7.0 2.1	11 0158	6.9 2.1	26 0110	6.6 2.0
M 1138	7.1 2.2	Tu 1206	6.6 2.0	Th 0654	-1.1 -0.3	F 0638	0.1 0.0	Su 0808	-0.3 -0.1	M 0715	0.3 0.1
1743	-0.3 -0.1	1811	0.5 0.2	1303	7.6 2.3	1243	7.0 2.1	1419	7.3 2.2	1326	7.2 2.2
2354	8.0 2.4			1919	-0.8 -0.2	1856	0.2 0.1	2045	-0.5 -0.2	1950	0.1 0.0
12 0622	-1.1 -0.3	27 0015	7.1 2.2	12 0126	7.5 2.3	27 0057	6.8 2.1	12 0252	6.4 2.0	27 0154	6.4 2.0
Tu 1230	7.2 2.2	W 0635	0.0 0.0	F 0744	-0.8 -0.2	Sa 0710	0.2 0.1	M 0901	0.1 0.0	Tu 0755	0.5 0.2
1840	-0.4 -0.1	1241	6.7 2.0	1355	7.5 2.3	1319	7.0 2.1	1515	7.0 2.1	1411	7.1 2.2
		1849	0.5 0.2	2016	-0.6 -0.2	1934	0.2 0.1	2143	-0.9 0.0	2037	0.2 0.1
13 0049	7.8 2.4	28 0051	6.9 2.1	13 0221	7.0 2.1	28 0136	6.6 2.0	13 0348	6.1 1.9	28 0245	6.2 1.9
W 0715	-1.0 -0.3	Th 0710	0.1 0.0	Sa 0837	-0.5 -0.2	Su 0747	0.3 0.1	Tu 0957	0.5 0.2	W 0847	0.8 0.2
1325	7.2 2.2	1317	6.7 2.0	1450	7.3 2.2	1357	7.0 2.1	1613	6.8 2.1	1503	7.0 2.1
1936	-0.4 -0.1	1926	0.6 0.2	2113	-0.4 -0.1	2016	0.3 0.1	2242	0.3 0.1	2136	0.4 0.1
14 0145	7.5 2.3	29 0128	6.8 2.1	14 0320	6.6 2.0	29 0219	6.4 2.0	14 0450	5.9 1.8	29 0341	6.0 1.8
Th 0808	-0.8 -0.2	F 0747	0.2 0.1	Su 0932	-0.1 0.0	M 0826	0.5 0.2	W 1058	0.9 0.3	Th 0946	1.0 0.3
1421	7.2 2.2	1355	6.7 2.0	1546	7.1 2.2	1440	7.0 2.1	1711	6.6 2.0	1605	6.9 2.1
2037	-0.3 -0.1	2008	0.6 0.2	2213	-0.2 -0.1	2105	0.4 0.1	2344	0.5 0.2	2239	0.6 0.2
15 0243	7.1 2.2	30 0208	6.6 2.0	15 0420	6.2 1.9	30 0306	6.2 1.9	15 0552	5.8 1.8	30 0447	6.0 1.8
F 0904	-0.5 -0.2	Sa 0824	0.4 0.1	M 1031	0.2 0.1	Tu 0912	1.0 0.3	F 1057	1.1 0.3		
1517	7.1 2.2	1435	6.8 2.1	1646	6.9 2.1	1528	6.9 2.1	1812	6.5 2.0	1713	6.8 2.1
2138	-0.2 -0.1	2050	0.6 0.2	2316	0.1 0.0	2158	0.5 0.2			2347	0.5 0.2
		31 0253	6.4 2.0			31 0402	6.0 1.8				
		Su 0904	0.5 0.2			W 1007	0.8 0.2				
		1516	6.8 2.1			1626	6.9 2.1				
		2138	0.7 0.2			2301	0.6 0.2				

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0556	6.1	1.9	16 0055	0.8	0.2	1 0135	-0.1	0.0	16 0140	0.6	0.2	1 0211	-0.3	-0.1	16 0137	0.4	0.1
Sa 1209	0.9	0.3	Su 0704	6.2	1.9	Tu 0746	7.1	2.2	W 0749	6.7	2.0	Th 0823	7.3	2.2	F 0749	6.8	2.1
1823	6.9	2.1	1316	1.1	0.3	1408	-0.2	-0.1	1409	0.5	0.2	1451	-0.8	-0.2	1417	0.0	0.0
			1924	6.5	2.0	2014	7.0	2.1	2012	6.4	2.0	2054	6.5	2.0	2017	6.0	1.8
2 0052	0.3	0.1	17 0143	0.7	0.2	2 0230	-0.4	-0.1	17 0223	0.4	0.1	2 0302	-0.4	-0.1	17 0225	0.2	0.1
Su 0702	6.5	2.0	M 0751	6.5	2.0	W 0841	7.4	2.3	Th 0833	7.0	2.1	F 0913	7.5	2.3	Sa 0836	7.0	2.1
1316	0.5	0.2	1405	0.8	0.2	1502	-0.7	-0.2	1454	0.1	0.0	1540	-1.0	-0.3	1503	-0.3	-0.1
1928	7.1	2.2	2009	6.6	2.0	2110	7.1	2.2	2055	6.5	2.0	2145	6.5	2.0	2107	6.2	1.9
3 0154	0.0	0.0	18 0226	0.5	0.2	3 0321	-0.6	-0.2	18 0305	0.2	0.1	3 0350	-0.5	-0.2	18 0311	0.0	0.0
M 0804	6.9	2.1	Tu 0833	6.8	2.1	Th 0931	7.7	2.3	F 0913	7.2	2.2	Sa 1000	7.5	2.3	Su 0921	7.3	2.2
1420	0.0	0.0	1449	0.5	0.2	1555	-1.0	-0.3	1536	-0.2	-0.1	1627	-1.1	-0.3	1550	-0.6	-0.2
2028	7.3	2.2	2053	6.8	2.1	2201	7.1	2.2	2137	6.5	2.0	2233	6.5	2.0	2153	6.3	1.9
4 0249	-0.4	-0.1	19 0307	0.3	0.1	4 0409	-0.7	-0.2	19 0344	0.0	0.0	4 0435	-0.5	-0.2	19 0355	-0.2	-0.1
Tu 0859	7.3	2.2	W 0912	7.0	2.1	F 1019	7.8	2.4	Sa 0952	7.4	2.3	Su 1047	7.5	2.3	M 1007	7.5	2.3
1515	-0.5	-0.2	1529	0.2	0.1	1643	-1.2	-0.4	1618	-0.5	-0.2	1714	-1.1	-0.3	1635	-0.9	-0.3
2123	7.5	2.3	2134	6.9	2.1	2248	7.0	2.1	2219	6.6	2.0	2317	6.4	2.0	2240	6.4	2.0
5 0342	-0.7	-0.2	20 0344	0.2	0.1	5 0456	-0.7	-0.2	20 0424	-0.1	0.0	5 0519	-0.3	-0.1	20 0444	-0.3	-0.1
W 0950	7.7	2.3	Th 0950	7.2	2.2	Sa 1105	7.8	2.4	Su 1033	7.5	2.3	M 1129	7.4	2.3	Tu 1054	7.6	2.3
1609	-0.9	-0.3	1608	-0.1	0.0	1730	-1.2	-0.4	1657	-0.7	-0.2	1756	-0.9	-0.3	1723	-1.0	-0.3
2216	7.6	2.3	2211	6.9	2.1	2335	6.9	2.1	2301	6.6	2.0	2328	6.5	2.0			
6 0430	-0.9	-0.3	21 0421	0.0	0.0	6 0539	-0.5	-0.2	21 0505	-0.1	0.0	6 0000	6.3	1.9	21 0531	-0.3	-0.1
Th 1038	7.9	2.4	F 1026	7.4	2.3	Su 1150	7.7	2.3	M 1114	7.6	2.3	Tu 0603	-0.1	0.0	W 1142	7.6	2.3
1659	-1.2	-0.4	1645	-0.3	-0.1	1815	-1.0	-0.3	1742	-0.7	-0.2	1212	7.2	2.2	1812	-1.0	-0.3
2306	7.5	2.3	2248	6.9	2.1	2346	6.6	2.0	1839	-0.6	-0.2						
7 0517	-0.9	-0.3	22 0457	0.0	0.0	7 0021	6.6	2.0	22 0548	0.0	0.0	7 0042	6.2	1.9	22 0017	6.6	2.0
F 1127	7.9	2.4	Sa 1102	7.5	2.3	M 0625	-0.2	-0.1	Tu 1159	7.6	2.3	W 0646	0.1	0.0	Th 0622	-0.3	-0.1
1748	-1.3	-0.4	1725	-0.4	-0.1	1235	7.5	2.3	1827	-0.7	-0.2	1255	7.0	2.1	1233	7.5	2.3
2355	7.3	2.2	2327	6.8	2.1	1902	-0.7	-0.2	1920	-0.3	-0.1	1902	-1.0	-0.3			
8 0604	-0.8	-0.2	23 0532	0.0	0.0	8 0107	6.4	2.0	23 0033	6.5	2.0	8 0126	6.1	1.9	23 0110	6.6	2.0
Sa 1213	7.8	2.4	Su 1140	7.5	2.3	Tu 0710	0.1	0.0	W 0634	0.1	0.0	Th 0731	0.4	0.1	F 0716	-0.3	-0.1
1837	-1.1	-0.3	1802	-0.5	-0.2	1321	7.2	2.2	1246	7.5	2.3	1338	6.8	2.1	1326	7.3	2.2
						1949	-0.3	-0.1	1915	-0.6	-0.2	2003	0.0	0.0	1954	-0.8	-0.2
9 0043	7.0	2.1	24 0006	6.7	2.0	9 0155	6.2	1.9	24 0123	6.4	2.0	9 0210	6.1	1.9	24 0203	6.6	2.0
Su 0650	-0.5	-0.2	M 0611	0.1	0.0	W 0758	0.5	0.2	Th 0726	0.3	0.1	F 0816	-0.7	0.2	Sa 0816	-0.2	-0.1
1300	7.6	2.3	1220	7.5	2.3	1407	6.8	2.1	1338	7.3	2.2	1421	6.5	2.0	1424	7.0	2.1
1926	-0.8	-0.2	1843	-0.4	-0.1	2035	0.1	0.0	2008	-0.3	-0.1	2047	0.3	0.1	2050	-0.6	-0.2
10 0131	6.6	2.0	25 0049	6.6	2.0	10 0243	6.0	1.8	25 0218	6.4	2.0	10 0256	6.0	1.8	25 0301	6.6	2.0
M 0739	-0.1	0.0	Tu 0649	0.3	0.1	Th 0849	0.9	0.3	F 0824	0.4	0.1	Sa 0904	0.9	0.3	Su 0917	-0.1	0.0
1349	7.3	2.2	1302	7.4	2.3	1458	6.6	2.0	1435	7.0	2.1	1509	6.3	1.9	1525	6.6	2.0
2016	-0.4	-0.1	1930	-0.2	-0.1	2126	0.5	0.2	2106	-0.1	0.0	2133	0.5	0.2	2149	-0.4	-0.1
11 0223	6.3	1.9	26 0136	6.4	2.0	11 0335	5.9	1.8	26 0317	6.3	1.9	11 0343	6.0	1.8	26 0404	6.5	2.0
Tu 0829	0.4	0.1	W 0738	0.5	0.2	F 0944	1.1	0.3	Sa 0930	0.6	0.2	Su 0956	1.0	0.3	M 1023	0.0	0.0
1440	6.9	2.1	1350	7.2	2.2	1551	6.3	1.9	1539	6.7	2.0	1558	6.1	1.9	1630	6.3	1.9
2109	0.1	0.0	2021	0.0	0.0	2220	0.7	0.2	2209	0.0	0.0	2221	0.6	0.2	2250	-0.2	-0.1
12 0317	6.0	1.8	27 0229	6.2	1.9	12 0430	5.9	1.8	27 0423	6.4	2.0	12 0433	6.1	1.9	27 0507	6.6	2.0
W 0925	0.8	0.2	Th 0832	0.8	0.2	Sa 1041	1.3	0.4	Su 1039	0.5	0.2	M 1049	1.0	0.3	Tu 1130	-0.1	0.0
1535	6.6	2.0	1448	7.0	2.1	1647	6.2	1.9	1646	6.5	2.0	1651	5.9	1.8	1735	6.1	1.9
2205	0.5	0.2	2120	0.2	0.1	2312	0.9	0.3	2312	0.1	0.0	2310	0.7	0.2	2352	-0.2	-0.1
13 0414	5.9	1.8	28 0330	6.1	1.9	13 0524	6.0	1.8	28 0527	6.5	2.0	13 0523	6.2	1.9	28 0608	6.7	2.0
Th 1023	1.1	0.3	F 0937	0.9	0.3	Su 1138	1.3	0.4	M 1147	0.3	0.1	Tu 1143	0.9	0.3	W 1235	-0.3	-0.1
1634	6.4	2.0	1549	6.8	2.1	1743	6.1	1.9	1754	6.4	2.0	1744	5.9	1.8	1842	6.0	1.8
2304	0.8	0.2	2225	0.4	0.1												
14 0514	5.9	1.8	29 0435	6.1	1.9	14 0005	0.9	0.3	29 0015	0.0	0.0	14 0001	0.7	0.2	29 0053	-0.2	-0.1
F 1123	1.3	0.4	Sa 1048	0.9	0.3	M 0616	6.2	1.9	Tu 0630	6.7	2.0	W 0613	6.3	1.9	Th 0708	6.8	2.1
1733	6.3	1.9	1659	6.7	2.0	1232	1.1	0.3	1252	0.0	0.0	1236	0.7	0.2	1337	-0.5	-0.2
			2331	0.4	0.1	1836	6.2	1.9	1900	6.4	2.0	1836	5.9	1.8	1943	6.0	1.8
15 0001	0.9	0.3	30 0544	6.3	1.9	15 0055	0.8	0.2	30 0114	-0.1	0.0	15 0050	0.5	0.2	30 0149	-0.2	-0.1
Sa 0610	6.0	1.8	Su 1200	0.7	0.2	Tu 0705	6.5	2.0	W 0729	7.0	2.1	Th 0703	6.5	2.0	F 0804	7.0	2.1
1223	1.3	0.4	1808	6.7	2.0	1324	0.8	0.2	1353	-0.4	-0.1	1327	0.4	0.1	1433	-0.7	-0.2
1831	6.4	2.0				1924	6.3	1.9	1959	6.5	2.0	1927	5.9	1.8	2039	6.0	1.8
31 0036	0.2	0.1	M 0647	6.7	2.0										31 0244	-0.3	-0.1
			1306	0.3	0.1										Sa 0857	7.1	2.2
			1914	6.8	2.1										1524	-0.9	-0.3
															2131	6.1	1.9

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day
h m	ft	h m	ft	h m	ft	h m	ft	h m	ft	h m	ft
1 0016	7.2	2.2	16 0021	6.5	2.0	1 0156	7.5	2.3	16 0045	7.2	2.2
Sa 0644	-0.8	-0.2	Su 0626	0.2	0.1	Tu 0831	-1.1	-0.3	W 0709	-0.2	-0.1
1224	8.1	2.5	1212	7.0	2.1	1415	7.4	2.3	1300	7.2	2.2
1935	-1.6	-0.5	1901	-0.2	-0.1	2100	-1.1	-0.3	1924	-0.3	-0.1
2 0113	7.2	2.2	17 0042	6.6	2.0	2 0252	7.3	2.2	17 0122	7.4	2.3
Su 0746	-0.7	-0.2	M 0656	0.2	0.1	W 0929	-0.8	-0.2	Th 0748	-0.2	-0.1
1322	7.8	2.4	1247	7.1	2.2	1516	6.9	2.1	1345	7.1	2.2
2031	-1.4	-0.4	1921	-0.2	-0.1	2153	-0.7	-0.2	2003	-0.3	-0.1
3 0215	7.2	2.2	18 0113	6.8	2.1	3 0350	7.1	2.2	18 0206	7.4	2.3
M 0849	-0.5	-0.2	Tu 0731	0.2	0.1	Th 1030	-0.5	-0.2	F 0831	-0.2	-0.1
1427	7.4	2.3	1324	7.0	2.1	1624	6.5	2.0	1431	6.9	2.1
2128	-1.1	-0.3	1954	-0.1	0.0	2248	-0.3	-0.1	2046	-0.1	0.0
4 0318	7.1	2.2	19 0153	6.9	2.1	4 0453	6.9	2.1	19 0254	7.4	2.3
Tu 0955	-0.5	-0.2	W 0812	0.2	0.1	F 1131	-0.3	-0.1	Sa 0922	0.0	0.0
1541	7.0	2.1	1407	6.9	2.1	1728	6.2	1.9	1523	6.6	2.0
2227	-0.7	-0.2	2033	-0.1	0.0	2349	0.1	0.0	2134	0.1	0.0
5 0427	7.0	2.1	20 0235	7.0	2.1	5 0556	6.8	2.1	20 0345	7.3	2.2
W 1100	-0.4	-0.1	Th 0857	0.2	0.1	Sa 1233	-0.1	0.0	Su 1018	0.2	0.1
1654	6.6	2.0	1456	6.7	2.0	1831	6.0	1.8	1619	6.3	1.9
2327	-0.5	-0.2	2116	0.0	0.0	2230	0.3	0.1	1651	6.1	1.9
6 0531	7.0	2.1	21 0324	7.0	2.1	6 0048	0.3	0.1	21 0443	7.2	2.2
Th 1205	-0.4	-0.1	F 0949	0.3	0.1	Su 0659	6.7	2.0	M 1127	0.3	0.1
1802	6.4	2.0	1547	6.5	2.0	1331	-0.1	0.0	1724	6.1	1.9
			2206	0.1	0.0	1931	6.0	1.8	2333	0.5	0.2
7 0027	-0.3	-0.1	22 0416	7.1	2.2	7 0144	0.4	0.1	22 0548	7.1	2.2
F 0633	7.0	2.1	Sa 1047	0.3	0.1	M 0756	6.8	2.1	Tu 1323	0.2	0.1
1305	-0.4	-0.1	1644	6.2	1.9	1427	-0.1	0.0	1838	6.0	1.8
1905	6.3	1.9	2259	0.2	0.1	2027	6.1	1.9	1857	5.9	1.8
8 0123	-0.1	0.0	23 0512	7.1	2.2	8 0237	0.4	0.1	23 0057	0.5	0.2
Sa 0731	7.1	2.2	Su 1153	0.2	0.1	Tu 0847	6.9	2.1	W 0700	7.1	2.2
1403	-0.5	-0.2	1747	6.1	1.9	1517	-0.2	-0.1	1442	-0.2	-0.1
2001	6.3	1.9				2117	6.2	1.9	2002	6.3	1.9
9 0216	-0.1	0.0	24 0001	0.3	0.1	9 0327	0.4	0.1	24 0242	0.2	0.1
Su 0824	7.1	2.2	M 0614	7.2	2.2	W 0936	7.0	2.1	Th 0821	7.3	2.2
1455	-0.6	-0.2	1325	0.0	0.0	1603	-0.3	-0.1	1541	-0.7	-0.2
2055	6.3	1.9	1855	6.1	1.9	2204	6.4	2.0	2117	6.7	2.0
10 0307	-0.1	0.0	25 0107	0.2	0.1	10 0410	0.3	0.1	25 0351	-0.3	-0.1
M 0914	7.2	2.2	Tu 0717	7.3	2.2	Th 1018	7.0	2.1	F 0932	7.6	2.3
1543	-0.7	-0.2	1450	-0.4	-0.1	1644	-0.3	-0.1	1635	-1.2	-0.4
2143	6.4	2.0	2005	6.3	1.9	2245	6.5	2.0	2217	7.2	2.2
11 0352	0.0	0.0	26 0227	0.0	0.0	11 0450	0.2	0.1	26 0449	-0.9	-0.3
Tu 1000	7.2	2.2	W 0824	7.6	2.3	F 1055	7.1	2.2	Sa 1034	7.9	2.4
1629	-0.7	-0.2	1551	-0.9	-0.3	1722	-0.3	-0.1	1725	-1.5	-0.5
2228	6.4	2.0	2117	6.6	2.0	2320	6.6	2.0	2308	7.6	2.3
12 0433	0.0	0.0	27 0346	-0.3	-0.1	12 0525	0.1	0.0	27 0540	-1.2	-0.4
W 1041	7.2	2.2	Th 0927	7.8	2.4	Sa 1121	7.0	2.1	Su 1127	8.0	2.4
1710	-0.7	-0.2	1649	-1.3	-0.4	1754	-0.3	-0.1	1811	-1.6	-0.5
2309	6.5	2.0	2220	6.9	2.1	2342	6.7	2.0	2357	7.8	2.4
13 0513	0.1	0.0	28 0449	-0.7	-0.2	13 0550	0.1	0.0	28 0631	-1.4	-0.4
Th 1116	7.1	2.2	F 1030	8.0	2.4	Su 1130	7.1	2.2	M 1218	8.0	2.4
1747	-0.6	-0.2	1740	-1.6	-0.5	1816	-0.3	-0.1	1858	-1.6	-0.5
2345	6.5	2.0	2316	7.3	2.2	2350	6.8	2.1	2302	7.0	2.1
14 0545	0.2	0.1	29 0547	-1.0	-0.3	14 0610	0.0	0.0			
F 1141	7.0	2.1	Sa 1129	8.1	2.5	M 1150	7.1	2.2			
1822	-0.4	-0.1	1830	-1.8	-0.5	1832	-0.3	-0.1			
15 0012	6.5	2.0	30 0010	7.5	2.3	15 0013	7.0	2.1			
Sa 0608	0.2	0.1	Su 0643	-1.2	-0.4	Tu 0636	-0.1	0.0			
1149	7.0	2.1	1224	8.0	2.4	1222	7.2	2.2			
1845	-0.3	-0.1	1919	-1.7	-0.5	1854	-0.3	-0.1			
31 0102	7.6	2.3									
M 0738	-1.2	-0.4									
1320	7.8	2.4									
2007	-1.5	-0.5									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									
15 0548	-0.3	-0.1									
Tu 1126	7.3	2.2									
1757	-0.3	-0.1									
2340	7.5	2.3									

WILLETS POINT, N.Y., 1983

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Times and Heights of High and Low Waters

OCTOBER				NOVEMBER				DECEMBER									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m		
1 0020	0.8	0.2	16 0147	0.9	0.3	1 0232	-0.2	-0.1	16 0224	0.7	0.2	1 0303	-0.5	-0.2	16 0141	0.5	0.2
Sa 0548	6.5	2.0	Su 0753	6.8	2.1	Tu 0822	7.5	2.3	W 0829	6.9	2.1	Th 0901	7.7	2.3	F 0739	7.0	2.1
1218	1.1	0.3	1406	1.1	0.3	1501	-0.4	-0.1	1455	0.5	0.2	1540	-1.2	-0.4	1453	0.1	0.0
1811	7.2	2.2	2016	6.9	2.1	2051	7.3	2.2	2048	6.5	2.0	2133	7.0	2.1	2015	6.2	1.9
2 0149	0.4	0.1	17 0234	0.8	0.2	2 0324	-0.5	-0.2	17 0302	0.5	0.2	2 0356	-0.7	-0.2	17 0232	0.3	0.1
Su 0715	6.8	2.1	M 0840	7.0	2.1	W 0915	7.9	2.4	Th 0850	7.2	2.2	F 0948	7.9	2.4	Sa 0824	7.3	2.2
1405	0.7	0.2	1453	0.8	0.2	1554	-0.9	-0.3	1535	0.1	0.0	1629	-1.4	-0.4	1541	-0.3	-0.1
1936	7.4	2.3	2101	7.0	2.1	2146	7.5	2.3	2115	6.6	2.0	2221	7.0	2.1	2103	6.4	2.0
3 0250	0.0	0.0	18 0317	0.6	0.2	3 0412	-0.8	-0.2	18 0330	0.3	0.1	3 0440	-0.7	-0.2	18 0315	0.1	0.0
M 0830	7.3	2.2	Tu 0920	7.2	2.2	T 1004	8.2	2.5	F 0911	7.4	2.3	Sa 1035	7.9	2.4	Su 0911	7.6	2.3
1511	0.0	0.0	1535	0.5	0.2	1645	-1.3	-0.4	1612	-0.2	-0.1	1716	-1.5	-0.5	1623	-0.6	-0.2
2053	7.7	2.3	2139	7.1	2.2	2234	7.6	2.3	2140	6.8	2.1	2309	7.0	2.1	2148	6.7	2.0
4 0344	-0.5	-0.2	19 0351	0.4	0.1	4 0459	-0.9	-0.3	19 0357	0.1	0.0	4 0524	-0.6	-0.2	19 0402	-0.1	0.0
Tu 0927	7.8	2.4	W 0951	7.3	2.2	F 1049	8.3	2.5	Sa 0943	7.7	2.3	Su 1119	7.9	2.4	M 0956	7.9	2.4
1607	-0.6	-0.2	1612	0.2	0.1	1732	-1.5	-0.5	1645	-0.5	-0.2	1802	-1.4	-0.4	1706	-0.9	-0.3
2152	7.9	2.4	2207	7.1	2.2	2321	7.5	2.3	2215	6.9	2.1	2352	6.9	2.1	2236	6.9	2.1
5 0433	-0.8	-0.2	20 0423	0.3	0.1	5 0541	-0.8	-0.2	20 0431	0.0	0.0	5 0604	-0.4	-0.1	20 0450	-0.3	-0.1
W 1018	8.2	2.5	Th 1008	7.5	2.3	Sa 1131	8.2	2.5	Su 1021	8.0	2.4	M 1158	7.7	2.3	Tu 1045	8.1	2.5
1658	-1.1	-0.3	1646	0.0	0.0	1817	-1.4	-0.4	1721	-0.7	-0.2	1844	-1.1	-0.3	1751	-1.1	-0.3
2244	8.1	2.5	2225	7.2	2.2	2254	7.1	2.2	2254	7.1	2.2	2324	7.0	2.1	2324	7.0	2.1
6 0519	-1.0	-0.3	21 0445	0.2	0.1	6 0006	7.4	2.3	21 0506	-0.1	0.0	6 0034	6.8	2.1	21 0538	-0.4	-0.1
Th 1105	8.4	2.6	F 1023	7.7	2.3	Su 0623	-0.6	-0.2	M 1103	8.1	2.5	Tu 0642	-0.1	0.0	W 1132	8.1	2.5
1747	-1.4	-0.4	1713	-0.2	-0.1	1213	8.0	2.4	1757	-0.8	-0.2	1234	7.4	2.3	1837	-1.1	-0.3
2333	8.0	2.4	2245	7.2	2.2	1903	-1.2	-0.4	2338	7.1	2.2	1926	-0.7	-0.2			
7 0603	-0.1	-0.3	22 0504	0.1	0.0	7 0050	7.1	2.2	22 0549	-0.1	0.0	7 0114	6.6	2.0	22 0013	7.1	2.2
F 1148	8.4	2.6	Sa 1051	7.9	2.4	M 0705	-0.2	-0.1	Tu 1148	8.2	2.5	W 0716	0.2	0.1	Th 0631	-0.3	-0.1
1837	-1.4	-0.4	1737	-0.4	-0.1	1254	7.7	2.3	1838	-0.7	-0.2	1306	7.2	2.2	1223	8.0	2.4
			2318	7.3	2.2	1946	-0.8	-0.2	2003	-0.3	-0.1	2003	-0.3	-0.1	1929	-1.0	-0.3
8 0020	7.8	2.4	23 0536	0.0	0.0	8 0137	6.8	2.1	23 0024	7.1	2.2	8 0153	6.5	2.0	23 0106	7.1	2.2
Sa 0647	-0.8	-0.2	Su 1127	8.1	2.5	Tu 0740	0.2	0.1	W 0634	0.0	0.0	Th 0746	0.5	0.2	F 0727	-0.2	-0.1
1234	8.3	2.5	1809	-0.4	-0.1	1332	7.4	2.3	1234	8.1	2.5	1338	6.9	2.1	1319	7.7	2.3
1922	-1.2	-0.4	2356	7.3	2.2	2033	-0.3	-0.1	1926	-0.6	-0.2	2039	0.1	0.0	2023	-0.8	-0.2
9 0108	7.5	2.3	24 0610	0.0	0.0	9 0223	6.6	2.0	24 0113	7.0	2.1	9 0228	6.3	1.9	24 0203	7.0	2.1
Su 0730	-0.4	-0.1	M 1208	8.2	2.5	W 0820	0.6	0.2	Th 0727	0.2	0.1	F 0815	0.8	0.2	Sa 0833	-0.1	0.0
1319	8.0	2.4	1847	-0.4	-0.1	1412	7.0	2.1	1326	7.8	2.4	1411	6.6	2.0	1417	7.3	2.2
2012	-0.8	-0.2	2356	7.3	2.2	2020	-0.3	-0.1	2020	-0.3	-0.1	2108	0.4	0.1	2126	-0.6	-0.2
10 0159	7.1	2.2	25 0040	7.2	2.2	10 0316	6.3	1.9	25 0208	6.8	2.1	10 0302	6.3	1.9	25 0305	6.9	2.1
M 0815	0.0	0.0	Tu 0650	0.2	0.1	Th 0902	1.0	0.3	F 0823	0.4	0.1	Sa 0857	1.0	0.3	Su 0955	0.0	0.0
1406	7.6	2.3	1252	8.1	2.5	1500	6.7	2.0	1421	7.4	2.3	1452	6.4	2.0	1524	6.9	2.1
2102	-0.3	-0.1	1931	-0.2	-0.1	2213	0.6	0.2	2126	-0.1	0.0	2139	0.6	0.2	2235	-0.4	-0.1
11 0252	6.8	2.1	26 0126	7.1	2.2	11 0416	6.2	1.9	26 0310	6.7	2.0	11 0342	6.2	1.9	26 0421	6.9	2.1
Tu 0902	0.5	0.2	W 0735	0.4	0.1	F 1005	1.3	0.4	Sa 0937	0.6	0.2	Su 0947	1.1	0.3	M 1115	0.0	0.0
1500	7.2	2.2	1340	7.9	2.4	1605	6.4	2.0	1526	7.0	2.1	1541	6.2	1.9	1650	6.5	2.0
2158	0.2	0.1	2020	0.0	0.0	2305	0.9	0.3	2253	0.1	0.0	2218	0.8	0.2	2343	-0.3	-0.1
12 0353	6.5	2.0	27 0217	6.9	2.1	12 0519	6.2	1.9	27 0424	6.7	2.0	12 0427	6.2	1.9	27 0540	6.9	2.1
W 1001	1.0	0.3	Th 0828	0.7	0.2	Sa 1120	1.5	0.5	Su 1125	0.6	0.2	M 1046	1.2	0.4	Tu 1225	-0.2	-0.1
1606	6.8	2.1	1433	7.6	2.3	1731	6.2	1.9	1645	6.7	2.0	1635	6.0	1.8	1817	6.4	2.0
2258	0.6	0.2	2118	0.3	0.1	1835	6.2	1.9	1825	6.6	2.0	2309	0.9	0.3			
13 0502	6.3	1.9	28 0316	6.7	2.0	13 0001	1.0	0.3	28 0008	0.1	0.0	13 0517	6.3	1.9	28 0048	-0.3	-0.1
Th 1107	1.3	0.4	F 0929	1.0	0.3	Su 0615	6.3	1.9	M 0555	6.8	2.1	Tu 1159	1.1	0.3	W 0649	7.1	2.2
1721	6.6	2.0	1534	7.3	2.2	1223	1.4	0.4	1243	0.3	0.1	1731	5.9	1.8	1331	-0.5	-0.2
2358	0.9	0.3	2239	0.6	0.2	1835	6.2	1.9	1825	6.6	2.0	2359	0.9	0.3	1925	6.4	2.0
14 0605	6.3	1.9	29 0424	6.5	2.0	14 0054	1.0	0.3	29 0112	-0.1	0.0	14 0606	6.5	2.0	29 0147	-0.3	-0.1
F 1212	1.4	0.4	Sa 1051	1.1	0.3	M 0707	6.5	2.0	Tu 0709	7.1	2.2	W 1308	0.8	0.2	Th 0749	7.3	2.2
1827	6.6	2.0	1645	7.0	2.1	1320	1.2	0.4	1349	-0.2	-0.1	1831	6.0	1.8	1428	-0.9	-0.3
			2118	0.3	0.1	1928	6.3	1.9	1941	6.7	2.0	2024	6.5	2.0			
15 0054	0.9	0.3	30 0024	0.5	0.2	15 0142	0.9	0.3	30 0210	-0.3	-0.1	15 0051	0.7	0.2	30 0242	-0.4	-0.1
Sa 0703	6.5	2.0	Su 0551	6.6	2.0	Tu 0752	6.7	2.0	W 0808	7.4	2.3	Th 0654	6.7	2.0	F 0845	7.4	2.3
1312	1.3	0.4	1251	0.8	0.2	1410	0.9	0.3	1447	-0.7	-0.2	1404	0.5	0.2	1522	-1.1	-0.3
1926	6.7	2.0	1816	6.9	2.1	2014	6.4	2.0	2040	6.9	2.1	1923	6.1	1.9	2119	6.6	2.0
			31 0133	0.2	0.1	M 0720	7.0	2.1							31 0335	-0.5	-0.2
			1402	0.2	0.1				1949	7.1	2.2				Sa 0936	7.5	2.3
														1613	-1.3	-0.4	
														2208	6.6	2.0	

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY			FEBRUARY			MARCH		
Time	Height	Day	Time	Height	Day	Time	Height	Day
h m	ft	m	h m	ft	m	h m	ft	m
1 0321	-0.9	-0.3	16 0332	-0.1	0.0	1 0450	-0.8	-0.2
Sa 0940	5.5	1.7	Su 0941	4.4	1.3	Tu 1112	5.0	1.5
1607	-1.3	-0.4	1608	-0.4	-0.1	1720	-1.0	-0.3
2219	4.4	1.3	2215	3.6	1.1	2346	4.6	1.4
2 0414	-0.8	-0.2	17 0403	0.1	0.0	2 0544	-0.5	-0.2
Su 1037	5.3	1.6	M 1016	4.3	1.3	W 1204	4.6	1.4
1656	-1.1	-0.3	1640	-0.2	-0.1	1810	-0.6	-0.2
2317	4.4	1.3	2253	3.6	1.1	2325	4.1	1.2
3 0507	-0.6	-0.2	18 0432	0.2	0.1	3 0039	4.5	1.4
M 1136	5.0	1.5	Tu 1049	4.1	1.2	Th 0641	-0.1	0.0
1749	-0.9	-0.3	1707	-0.1	0.0	F 1133	3.9	1.2
			2328	3.6	1.1	1728	0.0	0.0
4 0015	4.4	1.3	19 0502	0.3	0.1	4 0129	4.4	1.3
Tu 0607	-0.3	-0.1	W 1124	4.0	1.2	F 0746	0.2	0.1
1231	4.7	1.4	1736	0.0	0.0	1349	3.8	1.2
1847	-0.6	-0.2				1255	4.2	1.3
5 0109	4.3	1.3	20 0007	3.7	1.1	5 0222	4.2	1.3
W 0714	0.0	0.0	Th 0536	0.4	0.1	Sa 0851	0.3	0.1
1324	4.4	1.3	1203	3.9	1.2	Su 0724	0.4	0.1
1948	-0.4	-0.1	1807	0.1	0.0	1441	3.5	1.1
6 0204	4.3	1.3	21 0044	3.8	1.2	6 0318	4.1	1.2
Th 0823	0.1	0.0	F 0631	0.5	0.2	Su 0951	0.3	0.1
1420	4.0	1.2	1249	3.7	1.1	1541	3.3	1.0
2047	-0.3	-0.1	1855	0.2	0.1	2202	0.2	0.1
7 0258	4.3	1.3	22 0131	3.9	1.2	7 0417	4.0	1.2
F 0925	0.1	0.0	Sa 0804	0.5	0.2	M 1046	0.2	0.1
1518	3.8	1.2	1340	3.6	1.1	1645	3.3	1.0
2143	-0.2	-0.1	2012	0.2	0.1	2254	0.2	0.1
8 0356	4.3	1.3	23 0227	4.1	1.2	8 0513	4.1	1.2
Sa 1023	0.1	0.0	Su 0927	0.4	0.1	Tu 1137	0.1	0.0
1617	3.6	1.1	1444	3.5	1.1	1742	3.4	1.0
2233	-0.2	-0.1	2126	0.1	0.0	2342	0.1	0.0
9 0453	4.3	1.3	24 0336	4.3	1.3	9 0603	4.3	1.3
Su 1115	0.0	0.0	M 1031	0.1	0.0	W 1224	0.0	0.0
1715	3.5	1.1	1603	3.5	1.1	1832	3.5	1.1
2320	-0.2	-0.1	2231	-0.1	0.0	1811	4.1	1.2
10 0543	4.5	1.4	25 0446	4.6	1.4	10 0030	0.0	0.0
M 1202	-0.1	0.0	Tu 1128	-0.3	-0.1	Th 0648	4.4	1.3
1806	3.6	1.1	1718	3.7	1.1	1309	-0.2	-0.1
			1331	-0.1	0.0	1301	-0.9	-0.3
2331	-0.4	-0.1	1914	3.7	1.1	1904	4.5	1.4
11 0006	-0.2	-0.1	26 0550	5.0	1.5	11 0115	-0.1	0.0
Tu 0631	4.6	1.4	W 1224	-0.6	-0.2	F 0728	4.6	1.4
1248	-0.2	-0.1	1822	3.9	1.2	1351	-0.4	-0.1
1853	3.6	1.1				1955	3.8	1.2
12 0052	-0.2	-0.1	27 0027	-0.6	-0.2	12 0158	-0.2	-0.1
W 0711	4.6	1.4	Th 0646	5.3	1.6	Sa 0808	4.6	1.4
1335	-0.3	-0.1	1319	-0.9	-0.3	1432	-0.5	-0.2
1934	3.7	1.1	1918	4.2	1.3	2032	3.9	1.2
13 0136	-0.2	-0.1	28 0125	-0.9	-0.3	13 0237	-0.2	-0.1
Th 0751	4.7	1.4	F 0740	5.5	1.7	Su 0844	4.6	1.4
1416	-0.4	-0.1	1411	-1.2	-0.4	1508	-0.5	-0.2
2016	3.7	1.1	2010	4.5	1.4	2107	4.0	1.2
14 0218	-0.2	-0.1	29 0219	-1.1	-0.3	14 0313	-0.2	-0.1
F 0829	4.6	1.4	Sa 0832	5.6	1.7	M 0919	4.5	1.4
1457	-0.5	-0.2	1500	-1.4	-0.4	1542	-0.5	-0.2
2057	3.7	1.1	2105	4.6	1.4	2142	4.0	1.2
15 0256	-0.1	0.0	30 0310	-1.1	-0.3	15 0347	-0.2	-0.1
Sa 0906	4.6	1.4	Su 0925	5.5	1.7	Tu 0947	4.4	1.3
1534	-0.5	-0.2	1547	-1.4	-0.4	1611	-0.4	-0.1
2136	3.6	1.1	2158	4.7	1.4	2216	4.0	1.2
31 0400	-1.0	-0.3						
M 1019	5.3	1.6						
1634	-1.2	-0.4						
2253	4.7	1.4						

31 0408 -0.7 -0.2
Th 1019 4.6 1.4
1618 -0.5 -0.2
2241 5.0 1.5

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL				MAY				JUNE										
Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height				
	h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m				
1	0450	-0.4 -0.1	16	0421	-0.4 -0.1	1	0509	0.1 0.0	16	0501	-0.4 -0.1	1	0610	0.5 0.2	16	0021	5.2 1.6	
F	1108	4.3 1.3	Sa	1022	4.2 1.3	Su	1130	3.8 1.2	M	1117	4.2 1.3	W	1241	3.7 1.1	Th	0641	-0.3 -0.1	
	1658	-0.1 0.0		1615	0.0 0.0		1704	0.6 0.2		1653	0.2 0.1		1757	1.2 0.4		1305	4.6 1.4	
	2327	4.7 1.4		2237	5.0 1.5		2338	4.5 1.4		2328	5.2 1.6					1903	0.5 0.2	
2	0536	0.0 0.0	17	0503	-0.2 -0.1	2	0554	0.4 0.1	17	0553	-0.2 -0.1	2	0034	4.2 1.3	17	0118	5.0 1.5	
Sa	1157	3.9 1.2	Su	1117	4.0 1.2	M	1221	3.6 1.1	Tu	1219	4.1 1.2	Th	0703	0.7 0.2	F	0744	-0.1 0.0	
	1738	0.3 0.1		1654	0.2 0.1		1746	1.0 0.3		1754	0.5 0.2		1326	3.7 1.1		1401	4.7 1.4	
				2333	4.9 1.5							1914	1.4 0.4		2016	0.5 0.2		
3	0015	4.5 1.4	18	0557	0.0 0.0	3	0026	4.3 1.3	18	0031	5.0 1.5	3	0116	4.1 1.2	18	0214	4.7 1.4	
Su	0628	0.4 0.1	M	1218	3.9 1.2	Tu	0649	0.7 0.2	W	0700	0.0 0.0	F	0806	0.7 0.2	Sa	0846	-0.1 0.0	
	1246	3.7 1.1		1746	0.4 0.1		1309	3.5 1.1		1319	4.2 1.3		1411	3.8 1.2		1457	4.9 1.5	
	1832	0.7 0.2					1847	1.2 0.4		1916	0.6 0.2		2028	1.3 0.4		2122	0.4 0.1	
4	0103	4.2 1.3	19	0034	4.8 1.5	4	0112	4.1 1.2	19	0132	4.8 1.5	4	0206	4.0 1.2	19	0314	4.5 1.4	
M	0732	0.7 0.2	Tu	0711	0.2 0.1	W	0756	0.8 0.2	Th	0810	0.0 0.0	Sa	0858	0.7 0.2	Su	0941	-0.1 0.0	
	1337	3.4 1.0		1321	3.8 1.2		1401	3.5 1.1		1419	4.3 1.3		1457	3.9 1.2		1556	5.0 1.5	
	1942	1.0 0.3		1913	0.7 0.2		2012	1.3 0.4		2035	0.6 0.2		2130	1.2 0.4		2220	0.3 0.1	
5	0154	4.0 1.2	20	0139	4.6 1.4	5	0204	3.9 1.2	20	0235	4.7 1.4	5	0258	3.9 1.2	20	0415	4.3 1.3	
Tu	0839	0.8 0.2	W	0830	0.2 0.1	Th	0857	0.8 0.2	F	0912	-0.1 0.0	Su	0948	0.6 0.2	M	1033	-0.1 0.0	
	1434	3.3 1.0		1427	3.9 1.2		1454	3.6 1.1		1519	4.5 1.4		1548	4.2 1.3		1653	5.1 1.6	
	2054	1.1 0.3		2046	0.6 0.2		2116	1.2 0.4		2142	0.4 0.1		2221	0.9 0.3		2313	0.1 0.0	
6	0250	3.8 1.2	21	0248	4.6 1.4	6	0301	3.9 1.2	21	0338	4.6 1.4	6	0357	3.9 1.2	21	0515	4.3 1.3	
W	0938	0.7 0.2	Th	0935	0.1 0.0	F	0949	0.6 0.2	Sa	1009	-0.2 -0.1	M	1031	0.4 0.1	Tu	1121	-0.1 0.0	
	1533	3.4 1.0		1535	4.1 1.2		1550	3.7 1.1		1620	4.8 1.5		1641	4.5 1.4		1743	5.3 1.6	
	2156	1.0 0.3		2156	0.4 0.1		2211	1.0 0.3		2239	0.1 0.0		2310	0.6 0.2				
7	0353	3.8 1.2	22	0357	4.6 1.4	7	0401	3.9 1.2	22	0441	4.6 1.4	7	0454	4.0 1.2	22	0003	0.0 0.0	
Th	1030	0.5 0.2	F	1033	-0.2 -0.1	Sa	1036	0.5 0.2	Su	1100	-0.3 -0.1	Tu	1116	0.3 0.1	W	0606	4.2 1.3	
	1635	3.5 1.1		1641	4.4 1.3		1644	4.0 1.2		1716	5.1 1.6		1727	4.9 1.5		1208	0.0 0.0	
	2247	0.8 0.2		2257	0.0 0.0		2300	0.7 0.2		2333	-0.1 0.0		2358	0.2 0.1		1830	5.4 1.6	
8	0452	4.0 1.2	23	0503	4.7 1.4	8	0457	4.0 1.2	23	0537	4.6 1.4	8	0548	4.2 1.3	23	0052	-0.1 0.0	
F	1118	0.3 0.1	Sa	1124	-0.4 -0.1	Su	1119	0.3 0.1	M	1147	-0.3 -0.1	W	1158	0.1 0.0	Th	0654	4.2 1.3	
	1729	3.8 1.2		1739	4.8 1.5		1731	4.3 1.3		1808	5.3 1.6		1811	5.2 1.6		1254	0.1 0.0	
	2335	0.5 0.2		2351	-0.3 -0.1		2347	0.4 0.1							1912	5.4 1.6		
9	0543	4.2 1.3	24	0600	4.9 1.5	9	0546	4.2 1.3	24	0024	-0.3 -0.1	9	0045	-0.1 0.0	24	0139	-0.1 0.0	
Sa	1201	0.1 0.0	Su	1214	-0.6 -0.2	M	1201	0.1 0.0	Tu	0628	4.6 1.4	Th	0636	4.3 1.3	F	0740	4.2 1.3	
	1813	4.1 1.2		1828	5.2 1.6		1812	4.7 1.4		1233	-0.4 -0.1		1245	0.0 0.0		1339	0.2 0.1	
												1857	5.5 1.7		1954	5.3 1.6		
10	0022	0.3 0.1	25	0043	-0.5 -0.2	10	0032	0.1 0.0	25	0113	-0.4 -0.1	10	0136	-0.3 -0.1	25	0222	-0.1 0.0	
Su	0628	4.4 1.3	M	0651	5.0 1.5	Tu	0628	4.4 1.3	W	0717	4.6 1.4	F	0725	4.4 1.3	Sa	0824	4.1 1.2	
	1243	0.0 0.0		1301	-0.7 -0.2		1241	0.0 0.0		1319	-0.3 -0.1		1330	-0.1 0.0		1421	0.3 0.1	
	1853	4.4 1.3		1915	5.4 1.6		1851	5.0 1.5		1936	5.5 1.7		1941	5.7 1.7		2035	5.2 1.6	
11	0104	0.0 0.0	26	0133	-0.7 -0.2	11	0117	-0.2 -0.1	26	0159	-0.4 -0.1	11	0224	-0.5 -0.2	26	0304	-0.1 0.0	
M	0707	4.5 1.4	Tu	0738	4.9 1.5	W	0710	4.5 1.4	Th	0800	4.5 1.4	Sa	0813	4.4 1.3	Su	0907	4.1 1.2	
	1323	-0.2 -0.1		1346	-0.7 -0.2		1323	-0.1 0.0		1402	-0.2 -0.1		1421	-0.2 -0.1		1503	0.4 0.1	
	1927	4.7 1.4		1958	5.5 1.7		1927	5.3 1.6		2017	5.5 1.7		2029	5.8 1.8		2115	5.1 1.6	
12	0146	-0.2 -0.1	27	0218	-0.7 -0.2	12	0200	-0.4 -0.1	27	0244	-0.4 -0.1	12	0312	-0.7 -0.2	27	0344	0.0 0.0	
Tu	0744	4.6 1.4	W	0821	4.8 1.5	Th	0750	4.5 1.4	F	0845	4.3 1.3	Su	0907	4.4 1.3	M	0952	4.0 1.2	
	1402	-0.3 -0.1		1430	-0.6 -0.2		1401	-0.2 -0.1		1444	0.0 0.0		1508	-0.2 -0.1		1541	0.6 0.2	
	2002	4.9 1.5		2041	5.5 1.7		2004	5.5 1.7		2058	5.3 1.6		2121	5.8 1.8		2155	4.9 1.5	
13	0225	-0.4 -0.1	28	0303	-0.7 -0.2	13	0244	-0.5 -0.2	28	0326	-0.3 -0.1	13	0400	-0.7 -0.2	28	0422	0.1 0.0	
W	0821	4.6 1.4	Th	0906	4.6 1.4	F	0832	4.5 1.4	Sa	0928	4.1 1.2	M	1007	4.4 1.3	Tu	1039	3.9 1.2	
	1437	-0.3 -0.1		1510	-0.4 -0.1		1441	-0.2 -0.1		1523	0.2 0.1		1558	-0.1 0.0		1617	0.7 0.2	
	2034	5.0 1.5		2124	5.3 1.6		2046	5.5 1.7		2139	5.1 1.6		2221	5.6 1.7		2235	4.7 1.4	
14	0306	-0.5 -0.2	29	0345	-0.5 -0.2	14	0327	-0.6 -0.2	29	0405	0.1 0.0	14	0448	-0.6 -0.2	29	0459	0.2 0.1	
Th	0857	4.5 1.4	F	0952	4.3 1.3	Sa	0919	4.4 1.3	Su	1016	3.9 1.2	Tu	1107	4.5 1.4	W	1122	3.9 1.2	
	1509	-0.3 -0.1		1548	-0.1 0.0		1522	-0.1 0.0		1600	0.5 0.2		1651	0.1 0.0		1651	0.9 0.3	
	2108	5.1 1.6		2207	5.1 1.6		2133	5.5 1.7		2222	4.8 1.5		2320	5.4 1.6		2316	4.5 1.4	
15	0342	-0.5 -0.2	30	0427	-0.2 -0.1	15	0411	-0.5 -0.2	30	0445	0.1 0.0	15	0541	-0.4 -0.1	30	0536	0.4 0.1	
F	0934	4.4 1.3	Sa	1039	4.1 1.2	Su	1016	4.2 1.3	M	1104	3.8 1.2	W	1207	4.6 1.4	Th	1205	3.9 1.2	
	1541	-0.2 -0.1		1627	0.2 0.1		1605	0.0 0.0		1637	0.7 0.2		1752	0.3 0.1		1725	1.1 0.3	
	2147	5.1 1.6		2253	4.8 1.5		2227	5.3 1.6		2305	4.6 1.4					2352	4.3 1.3	
									31	0525	0.3 0.1		Tu	1152	3.7 1.1			
										1714	1.0 0.3							
										2351	4.4 1.3							

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JULY						AUGUST						SEPTEMBER					
Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height
	h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m
1	0610	0.6 0.2	16	0057	5.0 1.5	1	0029	4.2 1.3	16	0221	4.2 1.3	1	0147	3.9 1.2	16	0354	3.7 1.1
F	1244	3.9 1.2	Sa	0714	-0.1 0.0	M	0626	0.7 0.2	Tu	0840	0.6 0.2	Th	0757	0.9 0.3	F	1009	1.0 0.3
1805	1.2 0.4	1336	5.1 1.6	1311	4.5 1.4	1454	4.9 1.5	1432	4.9 1.5	1618	4.5 1.4	1432	4.9 1.5	1618	4.5 1.4	2249	0.7 0.2
		1951	0.5 0.2	1931	1.2 0.4	2130	0.7 0.2	2142	0.8 0.2	2249	0.7 0.2						
2	0032	4.2 1.3	17	0151	4.7 1.4	2	0115	4.0 1.2	17	0320	3.9 1.2	2	0306	3.8 1.2	17	0455	3.8 1.2
Sa	0655	0.7 0.2	Su	0813	0.1 0.0	Tu	0722	0.8 0.2	W	0939	0.7 0.2	F	0935	0.8 0.2	Sa	1100	0.9 0.3
1322	4.0 1.2	1428	5.0 1.5	1402	4.6 1.4	1553	4.8 1.5	1547	5.0 1.5	1715	4.6 1.4	1547	5.0 1.5	1715	4.6 1.4		
1919	1.3 0.4	2057	0.5 0.2	2059	1.1 0.3	2226	0.7 0.2	2243	0.5 0.2	2337	0.5 0.2						
3	0110	4.1 1.2	18	0247	4.3 1.3	3	0211	3.9 1.2	18	0422	3.8 1.2	3	0430	4.0 1.2	18	0547	4.1 1.2
Su	0750	0.7 0.2	M	0912	0.2 0.1	W	0841	0.8 0.2	Th	1031	0.7 0.2	Sa	1044	0.5 0.2	Su	1147	0.7 0.2
1404	4.2 1.3	1527	5.0 1.5	1458	4.8 1.5	1652	4.8 1.5	1700	5.3 1.6	1802	4.8 1.5	1700	5.3 1.6	1802	4.8 1.5		
2037	1.2 0.4	2156	0.5 0.2	2205	0.8 0.2	2318	0.6 0.2	2338	0.1 0.0								
4	0159	4.0 1.2	19	0347	4.1 1.2	4	0321	3.9 1.2	19	0522	3.9 1.2	4	0539	4.4 1.3	19	0022	0.3 0.1
M	0847	0.7 0.2	Tu	1005	0.3 0.1	Th	0953	0.6 0.2	F	1122	0.7 0.2	Su	1145	0.2 0.1	M	0632	4.3 1.3
1450	4.4 1.3	1623	5.0 1.5	1609	5.0 1.5	1745	4.9 1.5	1801	5.6 1.7	1232	0.6 0.2	1232	0.6 0.2	1845	4.9 1.5		
2140	1.0 0.3	2252	0.4 0.1	2303	0.5 0.2												
5	0255	3.9 1.2	20	0449	4.0 1.2	5	0441	4.0 1.2	20	0006	0.4 0.1	5	0032	-0.3 -0.1	20	0104	0.1 0.0
Tu	0941	0.6 0.2	W	1056	0.3 0.1	F	1056	0.4 0.1	Sa	0614	4.0 1.2	M	0635	4.9 1.5	Tu	0711	4.6 1.4
1546	4.7 1.4	1718	5.1 1.6	1715	5.4 1.6	1211	0.6 0.2	1243	-0.2 -0.1	1315	0.4 0.1	1243	-0.2 -0.1	1315	0.4 0.1		
2234	0.7 0.2	2342	0.3 0.1	2358	0.1 0.0	1830	5.0 1.5	1856	5.8 1.8	1923	5.0 1.5	1856	5.8 1.8	1923	5.0 1.5		
6	0401	3.9 1.2	21	0545	4.0 1.2	6	0550	4.2 1.3	21	0053	0.3 0.1	6	0123	-0.6 -0.2	21	0143	0.0 0.0
W	1030	0.4 0.1	Th	1145	0.4 0.1	Sa	1155	0.2 0.1	Su	0659	4.2 1.3	Tu	0727	5.2 1.6	W	0748	4.7 1.4
1644	5.0 1.5	1808	5.2 1.6	1816	5.7 1.7	1257	0.5 0.2	1338	-0.4 -0.1	1357	0.2 0.1	1338	-0.4 -0.1	1357	0.2 0.1		
2329	0.4 0.1					1912	5.1 1.6	1947	6.0 1.8	1958	5.0 1.5	1947	6.0 1.8	1958	5.0 1.5		
7	0509	4.0 1.2	22	0032	0.2 0.1	7	0053	-0.2 -0.1	22	0135	0.1 0.0	7	0211	-0.8 -0.2	22	0219	0.0 0.0
Th	1123	0.3 0.1	F	0635	4.1 1.2	Su	0649	4.6 1.4	M	0740	4.4 1.3	W	0816	5.5 1.7	Th	0822	4.8 1.5
1742	5.3 1.6	1232	0.4 0.1	1254	-0.1 0.0	1340	0.4 0.1	1429	-0.6 -0.2	1435	0.2 0.1	1429	-0.6 -0.2	1435	0.2 0.1		
		1853	5.2 1.6	1910	5.9 1.8	1950	5.2 1.6	2036	5.9 1.8	2030	5.0 1.5	2036	5.9 1.8	2030	5.0 1.5		
8	0019	0.1 0.0	23	0117	0.1 0.0	8	0145	-0.5 -0.2	23	0215	0.0 0.0	8	0257	-0.9 -0.3	23	0254	0.0 0.0
F	0609	4.2 1.3	Sa	0720	4.1 1.2	M	0743	4.9 1.5	Tu	0818	4.5 1.4	Th	0906	5.7 1.7	F	0853	4.9 1.5
1214	0.1 0.0	1318	0.4 0.1	1351	-0.3 -0.1	1422	0.4 0.1	1518	-0.6 -0.2	1510	0.1 0.0	1518	-0.6 -0.2	1510	0.1 0.0		
1832	5.7 1.7	1933	5.2 1.6	2002	6.1 1.9	2027	5.1 1.6	2126	5.7 1.7	2102	4.8 1.5	2126	5.7 1.7	2102	4.8 1.5		
9	0115	-0.3 -0.1	24	0201	0.0 0.0	9	0234	-0.8 -0.2	24	0252	0.0 0.0	9	0342	-0.8 -0.2	24	0323	0.1 0.0
Sa	0705	4.4 1.3	Su	0805	4.2 1.3	Tu	0836	5.1 1.6	W	0854	4.5 1.4	F	0958	5.7 1.7	Sa	0925	4.9 1.5
1309	-0.1 0.0	1402	0.4 0.1	1445	-0.5 -0.2	1459	0.4 0.1	1606	-0.5 -0.2	1544	0.2 0.1	1606	-0.5 -0.2	1544	0.2 0.1		
1923	5.9 1.8	2014	5.2 1.6	2054	6.0 1.8	2102	5.0 1.5	2219	5.4 1.6	2131	4.6 1.4	2219	5.4 1.6	2131	4.6 1.4		
10	0205	-0.5 -0.2	25	0242	0.0 0.0	10	0322	-0.9 -0.3	25	0326	0.0 0.0	10	0426	-0.6 -0.2	25	0350	0.2 0.1
Su	0757	4.6 1.4	M	0844	4.2 1.3	W	0931	5.3 1.6	Th	0929	4.6 1.4	Sa	1050	5.6 1.7	Su	0953	4.9 1.5
1405	-0.2 -0.1	1443	0.5 0.2	1536	-0.5 -0.2	1534	0.4 0.1	1655	-0.2 -0.1	1616	0.3 0.1	1655	-0.2 -0.1	1616	0.3 0.1		
2015	6.0 1.8	2052	5.1 1.6	2150	5.9 1.8	2134	4.9 1.5	2312	5.0 1.5	2203	4.4 1.3	2312	5.0 1.5	2203	4.4 1.3		
11	0254	-0.7 -0.2	26	0320	0.0 0.0	11	0408	-0.8 -0.2	26	0357	0.1 0.0	11	0511	-0.2 -0.1	26	0411	0.3 0.1
M	0854	4.7 1.4	Tu	0926	4.2 1.3	Th	1026	5.4 1.6	F	1005	4.6 1.4	Su	1141	5.4 1.6	M	1027	4.9 1.5
1457	-0.3 -0.1	1521	0.5 0.2	1626	-0.3 -0.1	1606	0.5 0.2	1746	0.2 0.1	1648	0.5 0.2	1626	-0.3 -0.1	1648	0.5 0.2		
2110	5.9 1.8	2129	5.0 1.5	2245	5.6 1.7	2204	4.7 1.4	2245	4.7 1.4	2245	4.2 1.3	2245	4.2 1.3				
12	0343	-0.8 -0.2	27	0356	0.0 0.0	12	0455	-0.6 -0.2	27	0423	0.3 0.1	12	0005	4.6 1.4	27	0440	0.4 0.1
Tu	0952	4.8 1.5	W	1008	4.2 1.3	F	1120	5.4 1.6	Sa	1035	4.6 1.4	M	0559	0.2 0.1	Tu	1114	4.9 1.5
1550	-0.3 -0.1	1555	0.6 0.2	1717	-0.1 0.0	1635	0.6 0.2	1233	5.1 1.6	1730	0.6 0.2	1233	5.1 1.6	1730	0.6 0.2		
2206	5.8 1.8	2206	4.8 1.5	2338	5.3 1.6	2235	4.5 1.4	1847	0.6 0.2	2336	4.0 1.2	1847	0.6 0.2	2336	4.0 1.2		
13	0431	-0.8 -0.2	28	0429	0.2 0.1	13	0543	-0.3 -0.1	28	0443	0.4 0.1	13	0058	4.3 1.3	28	0516	0.6 0.2
W	1050	4.9 1.5	Th	1047	4.2 1.3	Sa	1215	5.3 1.6	Su	1109	4.6 1.4	Tu	0658	0.7 0.2	W	1207	4.8 1.5
1643	-0.1 0.0	1629	0.7 0.2	1817	0.2 0.1	1704	0.7 0.2	1327	4.9 1.5	1833	0.8 0.2	1327	4.9 1.5	1833	0.8 0.2		
2304	5.6 1.7	2240	4.6 1.4			2309	4.3 1.3	1955	0.8 0.2								
14	0520	-0.6 -0.2	29	0458	0.3 0.1	14	0031	4.9 1.5	29	0509	0.5 0.2	14	0152	4.0 1.2	29	0036	3.9 1.2
Th	1148	5.0 1.5	F	1125	4.2 1.3	Su	0637	0.0 0.0	M	1146	4.7 1.4	W	0804	1.0 0.3	Th	0609	0.8 0.2
1738	0.1 0.0	1659	0.9 0.3	1307	5.2 1.6	1744	0.9 0.3	1420	4.7 1.4	1308	4.8 1.5	1744	0.9 0.3	1308	4.8 1.5		
		2311	4.5 1.4	1921	0.5 0.2	2352	4.1 1.2	2100	0.9 0.3	2008	0.9 0.3	2100	0.9 0.3	2008	0.9 0.3		
15	0002	5.3 1.6	30	0525	0.5 0.2	15	0126	4.5 1.4	30	0544	0.7 0.2	15	0252	3.8 1.2	30	0146	3.8 1.2
F	0615	-0.4 -0.1	Sa	1157	4.3 1.3	M	0738	0.4 0.1	Tu	1233	4.7 1.4	Th	0910	1.1 0.3	F	0747	1.0 0.3
1242	5.1 1.6	1730	1.0 0.3	1358	5.0 1.5	1844	1.0 0.3	1519	4.5 1.4	1418	4.8 1.5	1519	4.5 1.4	1418	4.8 1.5		
1842	0.3 0.1	2346	4.3 1.3	2028	0.7 0.2			2157	0.8 0.2	2124	0.7 0.2	2157	0.8 0.2	2124	0.7 0.2		
		31	0549	0.6 0.2			31	0044	4.0 1.2								
		Su	1234	4.4 1.3			W	0633	0.8 0.2								
			1812	1.1 0.3			1327	4.8 1.5									

Times and Heights of High and Low Waters

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY			FEBRUARY			MARCH			
Time	Height	Day	Time	Height	Day	Time	Height	Day	
Day	h m	ft m	Day	h m	ft m	Day	h m	ft m	
1 0249	-1.0 -0.3	16 0256	0.0 0.0	1 0417	-0.9 -0.3	16 0347	-0.1 0.0	1 0310	-1.1 -0.3
Sa 0900	5.7 1.7	Su 0901	4.6 1.4	Tu 1026	5.1 1.6	W 0951	4.4 1.3	Tu 0914	5.3 1.6
1537	-1.3 -0.4	1531	-0.4 -0.1	1649	-1.1 -0.3	1608	-0.3 -0.1	1536	-1.2 -0.4
2136	4.6 1.4	2122	3.7 1.1	2303	4.7 1.4	2209	4.2 1.3	2143	5.2 1.6
2 0341	-0.9 -0.3	17 0331	0.1 0.0	2 0508	-0.6 -0.2	17 0421	0.0 0.0	2 0356	-0.9 -0.3
Su 0955	5.5 1.7	M 0936	4.4 1.3	W 1117	4.7 1.4	Th 1029	4.2 1.3	W 1000	5.0 1.5
1626	-1.2 -0.4	1605	-0.3 -0.1	1738	-0.7 -0.2	1640	-0.2 -0.1	1619	-0.9 -0.3
2233	4.5 1.4	2200	3.7 1.1	2354	4.6 1.4	2251	4.2 1.3	2229	5.0 1.5
3 0435	-0.7 -0.2	18 0403	0.2 0.1	3 0602	-0.3 -0.1	18 0501	0.1 0.0	3 0442	-0.6 -0.2
M 1050	5.1 1.6	Tu 1016	4.3 1.3	Th 1207	4.3 1.3	F 1114	4.0 1.2	Th 1047	4.6 1.4
1717	-1.0 -0.3	1639	-0.2 -0.1	1830	-0.4 -0.1	1716	-0.1 0.0	1701	-0.5 -0.2
2330	4.4 1.3	2240	3.7 1.1			2337	4.3 1.3	2317	4.8 1.5
4 0532	-0.4 -0.1	19 0440	0.3 0.1	4 0045	4.4 1.3	19 0554	0.2 0.1	4 0529	-0.2 -0.1
Tu 1146	4.8 1.5	W 1055	4.1 1.2	F 0702	0.0 0.0	Sa 1202	3.8 1.2	F 1135	4.2 1.3
1812	-0.7 -0.2	1711	-0.1 0.0	1259	3.9 1.2	1804	0.0 0.0	1746	-0.1 0.0
		2322	3.7 1.1	1925	-0.1 0.0			2314	4.7 1.4
5 0026	4.4 1.3	20 0521	0.4 0.1	5 0136	4.3 1.3	20 0028	4.3 1.3	5 0006	4.5 1.4
W 0633	-0.1 0.0	Th 1140	3.9 1.2	Sa 0804	0.2 0.1	Su 0702	0.3 0.1	Sa 1055	4.1 1.2
1239	4.4 1.3	1754	0.0 0.0	1354	3.6 1.1	1257	3.7 1.1	1650	0.0 0.0
1910	-0.5 -0.2			2022	0.1 0.0	1910	0.1 0.0		
6 0121	4.3 1.3	21 0009	3.9 1.2	6 0231	4.1 1.2	21 0129	4.4 1.3	6 0055	4.3 1.3
Th 0739	0.0 0.0	F 0618	0.4 0.1	Su 0903	0.3 0.1	M 0819	0.3 0.1	Su 0922	0.4 0.1
1336	4.1 1.2	1228	3.8 1.2	1452	3.3 1.0	1405	3.6 1.1	1315	3.5 1.1
2006	-0.3 -0.1	1846	0.0 0.0	2116	0.2 0.1	2024	0.1 0.0	1937	0.5 0.2
7 0218	4.3 1.3	22 0102	4.0 1.2	7 0330	4.1 1.2	22 0239	4.5 1.4	7 0148	4.1 1.2
F 0840	0.1 0.0	Sa 0732	0.4 0.1	M 0959	0.2 0.1	Tu 0929	0.1 0.0	M 0824	0.5 0.2
1433	3.8 1.2	1324	3.7 1.1	1555	3.3 1.0	1521	3.6 1.1	1411	3.3 1.0
2101	-0.2 -0.1	1949	0.0 0.0	2208	0.2 0.1	2133	-0.1 0.0	2038	0.6 0.2
8 0315	4.3 1.3	23 0202	4.2 1.3	8 0427	4.2 1.3	23 0353	4.7 1.4	8 0247	4.0 1.2
Sa 0937	0.1 0.0	Su 0845	0.3 0.1	Tu 1051	0.1 0.0	W 1032	-0.3 -0.1	Tu 0923	0.5 0.2
1533	3.6 1.1	1430	3.6 1.1	1655	3.4 1.0	1634	3.9 1.2	1516	3.2 1.0
2152	-0.2 -0.1	2052	-0.1 0.0	2259	0.1 0.0	2236	-0.3 -0.1	2139	0.6 0.2
9 0411	4.4 1.3	24 0308	4.4 1.3	9 0520	4.4 1.3	24 0500	5.0 1.5	9 0348	4.0 1.2
Su 1030	0.0 0.0	M 0949	0.0 0.0	W 1140	0.0 0.0	Th 1131	-0.6 -0.2	W 1016	0.4 0.1
1633	3.6 1.1	1540	3.7 1.1	1745	3.5 1.1	1736	4.3 1.3	1622	3.4 1.0
2241	-0.2 -0.1	2151	-0.3 -0.1	2347	0.1 0.0	2337	-0.6 -0.2	2230	0.5 0.2
10 0502	4.5 1.4	25 0414	4.8 1.5	10 0605	4.6 1.4	25 0557	5.4 1.6	10 0446	4.2 1.3
M 1120	-0.1 0.0	Tu 1049	-0.3 -0.1	Th 1227	-0.2 -0.1	F 1226	-0.9 -0.3	Th 1107	0.2 0.1
1724	3.6 1.1	1649	3.9 1.2	1829	3.7 1.1	1829	4.7 1.4	1716	3.6 1.1
2326	-0.2 -0.1	2250	-0.6 -0.2					2320	0.3 0.1
11 0548	4.7 1.4	26 0518	5.1 1.6	11 0034	0.0 0.0	26 0035	-0.9 -0.3	11 0536	4.4 1.3
Tu 1208	-0.2 -0.1	W 1147	-0.7 -0.2	F 0646	4.7 1.4	Sa 0651	5.6 1.7	F 1155	0.0 0.0
1808	3.7 1.1	1750	4.2 1.3	1312	-0.3 -0.1	1318	-1.2 -0.4	1803	3.9 1.2
		2350	-0.8 -0.2	1909	3.9 1.2	1920	5.0 1.5		
12 0011	-0.2 -0.1	27 0613	5.5 1.7	12 0119	-0.1 0.0	27 0130	-1.1 -0.3	12 0008	0.1 0.0
W 0629	4.8 1.5	Th 1245	-1.0 -0.3	Sa 0725	4.8 1.5	Su 0740	5.7 1.7	Sa 0621	4.6 1.4
1254	-0.3 -0.1	1845	4.5 1.4	1352	-0.4 -0.1	1407	-1.3 -0.4	1238	-0.2 -0.1
1850	3.7 1.1			1946	4.0 1.2	2007	5.2 1.6	1841	4.2 1.3
13 0056	-0.2 -0.1	28 0048	-1.0 -0.3	13 0200	-0.2 -0.1	28 0221	-1.2 -0.4	13 0054	0.0 0.0
Th 0709	4.8 1.5	F 0704	5.7 1.7	Su 0802	4.8 1.5	M 0827	5.6 1.7	Su 0659	4.8 1.5
1337	-0.4 -0.1	1338	-1.3 -0.4	1430	-0.5 -0.2	1453	-1.3 -0.4	1320	-0.3 -0.1
1930	3.8 1.2	1936	4.7 1.4	2023	4.1 1.2	2056	5.3 1.6	1919	4.4 1.3
14 0139	-0.1 0.0	29 0143	-1.2 -0.4	14 0237	-0.2 -0.1			14 0135	-0.2 -0.1
F 0747	4.8 1.5	Sa 0755	5.8 1.8	M 0839	4.7 1.4			M 0738	4.8 1.5
1418	-0.4 -0.1	1428	-1.4 -0.4	1505	-0.4 -0.1			1358	-0.4 -0.1
2007	3.8 1.2	2026	4.9 1.5	2056	4.1 1.2			1954	4.6 1.4
15 0219	-0.1 0.0	30 0237	-1.2 -0.4	15 0312	-0.2 -0.1			15 0214	-0.3 -0.1
Sa 0824	4.7 1.4	Su 0845	5.7 1.7	Tu 0914	4.6 1.4			Tu 0813	4.8 1.5
1456	-0.4 -0.1	1518	-1.4 -0.4	1537	-0.4 -0.1			1433	-0.4 -0.1
2046	3.7 1.1	2118	4.9 1.5	2133	4.1 1.2			2027	4.7 1.4
		31 0328	-1.1 -0.3					31 0334	-0.8 -0.2
		M 0936	5.4 1.6					Th 0933	4.8 1.5
		1603	-1.3 -0.4					1547	-0.5 -0.2
		2210	4.8 1.5					2157	5.2 1.6

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

SANDY HOOK, N.J., 1983

Times and Heights of High and Low Waters

JULY				AUGUST				SEPTEMBER			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0537	0.5	0.2	16 0012	5.0	1.5	1 0006	4.2	1.3	16 0133	4.2	1.3
F 1149	4.0	1.2	Sa 0639	-0.2	-0.1	M 0615	0.6	0.2	Tu 0757	0.5	0.2
1746	1.1	0.3	1255	5.1	1.6	1238	4.5	1.4	1411	4.9	1.5
2356	4.3	1.3	1908	0.3	0.1	1906	1.0	0.3	2044	0.7	0.2
2 0620	0.5	0.2	17 0108	4.7	1.4	2 0057	4.1	1.2	17 0230	3.9	1.2
Sa 1234	4.1	1.2	Su 0735	0.0	0.0	Tu 0713	0.6	0.2	W 0853	0.6	0.2
1846	1.2	0.4	1348	5.0	1.5	1331	4.7	1.4	1507	4.8	1.5
			2013	0.4	0.1	2016	0.9	0.3	2140	0.6	0.2
3 0044	4.2	1.3	18 0203	4.4	1.3	3 0157	4.0	1.2	18 0335	3.8	1.2
Su 0713	0.6	0.2	M 0832	0.1	0.0	W 0815	0.5	0.2	Th 0948	0.7	0.2
1322	4.3	1.3	1445	5.0	1.5	1434	4.9	1.5	1607	4.8	1.5
1951	1.1	0.3	2113	0.4	0.1	2121	0.7	0.2	2235	0.6	0.2
4 0136	4.1	1.2	19 0305	4.1	1.2	4 0303	4.0	1.2	19 0435	3.8	1.2
M 0803	0.5	0.2	Tu 0925	0.2	0.1	Th 0917	0.4	0.1	F 1040	0.6	0.2
1415	4.5	1.4	1542	5.0	1.5	1540	5.1	1.6	1702	5.0	1.5
2052	0.9	0.3	2208	0.4	0.1	2221	0.4	0.1	2323	0.4	0.1
5 0236	4.0	1.2	20 0405	4.0	1.2	5 0417	4.1	1.2	20 0531	4.0	1.2
Tu 0859	0.4	0.1	W 1017	0.3	0.1	F 1017	0.2	0.1	Sa 1129	0.6	0.2
1513	4.7	1.4	1638	5.1	1.6	1644	5.5	1.7	1748	5.1	1.6
2150	0.6	0.2	2300	0.3	0.1	2318	0.0	0.0			
6 0341	4.1	1.2	21 0502	4.0	1.2	6 0521	4.4	1.3	21 0009	0.3	0.1
W 0950	0.2	0.1	Th 1105	0.3	0.1	Sa 1116	-0.1	0.0	Su 0614	4.2	1.3
1613	5.1	1.6	1728	5.2	1.6	1744	5.8	1.8	1216	0.5	0.2
2243	0.3	0.1	2350	0.2	0.1				1830	5.2	1.6
7 0443	4.2	1.3	22 0551	4.1	1.2	7 0014	-0.3	-0.1	22 0054	0.1	0.0
Th 1043	0.0	0.0	F 1151	0.4	0.1	Su 0616	0.6	0.1	M 0656	4.4	1.3
1709	5.5	1.7	1813	5.3	1.6	1216	-0.3	-0.1	1301	0.4	0.1
2339	0.0	0.0				1837	6.1	1.9	1909	5.3	1.6
8 0539	4.4	1.3	23 0038	0.2	0.1	8 0109	-0.6	-0.2	23 0135	0.0	0.0
F 1136	-0.1	0.0	Sa 0637	4.2	1.3	M 0709	5.1	1.6	Tu 0733	4.5	1.4
1801	5.8	1.8	1237	0.4	0.1	1314	-0.5	-0.2	1345	0.4	0.1
			1853	5.4	1.6	1927	6.3	1.9	1947	5.2	1.6
9 0035	-0.3	-0.1	24 0122	0.1	0.0	9 0202	-0.9	-0.3	24 0213	0.0	0.0
Sa 0633	4.7	1.4	Su 0718	4.2	1.3	Tu 0800	5.3	1.6	W 0809	4.6	1.4
1232	-0.3	-0.1	1323	0.4	0.1	1409	-0.6	-0.2	1423	0.4	0.1
1851	6.1	1.9	1932	5.3	1.6	2017	6.2	1.9	2022	5.2	1.6
10 0129	-0.6	-0.2	25 0205	0.0	0.0	10 0250	-1.0	-0.3	25 0249	0.0	0.0
Su 0725	4.8	1.5	M 0756	4.3	1.3	W 0851	5.5	1.7	Th 0845	4.6	1.4
1327	-0.4	-0.1	1405	0.4	0.1	1502	-0.6	-0.2	1459	0.4	0.1
1941	6.2	1.9	2010	5.3	1.6	2108	6.0	1.8	2056	5.0	1.5
11 0222	-0.8	-0.2	26 0242	0.0	0.0	11 0338	-0.9	-0.3	26 0322	0.1	0.0
M 0817	5.0	1.5	Tu 0835	4.3	1.3	Th 0944	5.5	1.7	F 0918	4.6	1.4
1423	-0.4	-0.1	1446	0.5	0.2	1553	-0.5	-0.2	1534	0.5	0.2
2033	6.2	1.9	2046	5.1	1.6	2200	5.7	1.7	2131	4.8	1.5
12 0312	-0.9	-0.3	27 0319	0.1	0.0	12 0425	-0.7	-0.2	27 0351	0.2	0.1
Tu 0910	5.0	1.5	W 0914	4.2	1.3	F 1037	5.5	1.7	Sa 0954	4.6	1.4
1517	-0.4	-0.1	1522	0.6	0.2	1644	-0.3	-0.1	1608	0.6	0.2
2126	6.0	1.8	2123	4.9	1.5	2253	5.3	1.6	2208	4.6	1.4
13 0400	-0.8	-0.2	28 0352	0.1	0.0	13 0513	-0.5	-0.2	28 0419	0.3	0.1
W 1008	5.1	1.6	Th 0951	4.2	1.3	Sa 1130	5.4	1.6	Su 1032	4.7	1.4
1610	-0.3	-0.1	1557	0.7	0.2	1739	0.0	0.0	1645	0.7	0.2
2221	5.7	1.7	2202	4.8	1.5	2346	4.9	1.5	2250	4.4	1.3
14 0450	-0.7	-0.2	29 0424	0.3	0.1	14 0604	-0.1	0.0	29 0452	0.4	0.1
Th 1104	5.1	1.6	F 1029	4.3	1.3	Su 1223	5.2	1.6	M 1114	4.7	1.4
1704	-0.1	0.0	1632	0.8	0.2	1839	0.4	0.1	1727	0.8	0.2
2317	5.4	1.6	2239	4.6	1.4				1333	4.7	1.4
15 0543	-0.5	-0.2	30 0458	0.4	0.1	15 0039	4.5	1.4	30 0531	0.5	0.2
F 1159	5.1	1.6	Sa 1110	4.3	1.3	M 0658	0.2	0.1	Tu 1204	4.8	1.5
1804	0.2	0.1	1711	0.9	0.3	1316	5.0	1.5	1847	4.6	1.4
			2321	4.4	1.3	1941	0.6	0.2	1905	0.7	0.2
31 0533	0.5	0.2	Su 1153	4.4	1.3				1300	4.8	1.5
			1801	1.0	0.3				1947	0.9	0.3
31 0028	4.0	1.2									
W 0628	0.7	0.2									

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m
1 0233	3.9 1.2	16 0327	3.7 1.1	1 0433	4.8 1.5	16 0431	4.2 1.3	1 0505	5.1 1.6	16 0433	4.4 1.3						
Sa 0845	0.6 0.2	Su 0945	1.0 0.3	Tu 1041	-0.2 -0.1	W 1046	0.4 0.1	Th 1120	-0.5 -0.2	F 1057	0.1 0.0						
1458	4.9 1.5	1548	4.3 1.3	1651	5.0 1.5	1649	4.2 1.3	1726	4.5 1.4	1657	3.9 1.2						
2145	0.2 0.1	2215	0.4 0.1	2310	-0.6 -0.2	2300	-0.1 0.0	2334	-0.7 -0.2	2300	-0.3 -0.1						
2 0346	4.2 1.3	17 0427	4.0 1.2	2 0526	5.3 1.6	17 0518	4.5 1.4	2 0555	5.4 1.6	17 0524	4.8 1.5						
Su 0954	0.3 0.1	M 1035	0.7 0.2	W 1136	-0.5 -0.2	Th 1132	0.1 0.0	F 1211	-0.7 -0.2	Sa 1147	-0.2 -0.1						
1609	5.1 1.6	1643	4.5 1.4	1747	5.1 1.6	1736	4.4 1.3	1813	4.5 1.4	1747	4.1 1.2						
2241	-0.1 0.0	2259	0.2 0.1			2342	-0.2 -0.1			2347	-0.4 -0.1						
3 0451	4.7 1.4	18 0513	4.3 1.3	3 0000	-0.8 -0.2	18 0558	4.9 1.5	3 0022	-0.7 -0.2	18 0608	5.1 1.6						
M 1054	-0.1 0.0	Tu 1120	0.5 0.2	Th 0614	5.6 1.7	F 1217	-0.1 0.0	Sa 0638	5.6 1.7	Su 1237	-0.5 -0.2						
1710	5.4 1.6	1728	4.7 1.4	1229	-0.7 -0.2	1818	4.5 1.4	1259	-0.7 -0.2	1833	4.2 1.3						
2334	-0.5 -0.2	2342	0.0 0.0	1833	5.2 1.6			1858	4.5 1.4								
4 0547	5.2 1.6	19 0555	4.6 1.4	4 0046	-0.8 -0.2	19 0022	-0.3 -0.1	4 0108	-0.7 -0.2	19 0033	-0.6 -0.2						
Tu 1150	-0.4 -0.1	W 1205	0.3 0.1	F 0659	5.9 1.8	Sa 0637	5.2 1.6	Su 0721	5.6 1.7	M 0651	5.4 1.6						
1804	5.7 1.7	1811	4.8 1.5	1318	-0.8 -0.2	1303	-0.3 -0.1	1348	-0.7 -0.2	1326	-0.7 -0.2						
				1918	5.1 1.6	1858	4.5 1.4	1940	4.3 1.3	1920	4.3 1.3						
5 0024	-0.7 -0.2	20 0023	-0.1 0.0	5 0133	-0.8 -0.2	20 0104	-0.4 -0.1	5 0151	-0.5 -0.2	20 0122	-0.7 -0.2						
W 0635	5.6 1.7	Th 0632	4.9 1.5	Sa 0741	5.9 1.8	Su 0716	5.4 1.6	M 0802	5.4 1.6	Tu 0736	5.5 1.7						
1245	-0.7 -0.2	1248	0.1 0.0	1405	-0.8 -0.2	1349	-0.5 -0.2	1430	-0.7 -0.2	1415	-0.9 -0.3						
1853	5.8 1.8	1850	4.9 1.5	2001	4.9 1.5	1939	4.5 1.4	2022	4.2 1.3	2006	4.3 1.3						
6 0112	-0.9 -0.3	21 0101	-0.2 -0.1	6 0216	-0.7 -0.2	21 0146	-0.4 -0.1	6 0233	-0.3 -0.1	21 0211	-0.7 -0.2						
Th 0721	5.9 1.8	F 0709	5.1 1.6	Su 0823	5.8 1.8	M 0754	5.5 1.7	Tu 0842	5.2 1.6	W 0822	5.6 1.7						
1337	-0.8 -0.2	1332	-0.1 0.0	1451	-0.7 -0.2	1432	-0.5 -0.2	1512	-0.5 -0.2	1503	-0.9 -0.3						
1939	5.7 1.7	1926	4.9 1.5	2044	4.6 1.4	2021	4.4 1.3	2103	3.9 1.2	2056	4.3 1.3						
7 0159	-0.9 -0.3	22 0139	-0.2 -0.1	7 0258	-0.4 -0.1	22 0228	-0.4 -0.1	7 0312	-0.1 0.0	22 0259	-0.7 -0.2						
F 0806	6.0 1.8	Sa 0743	5.3 1.6	M 0907	5.5 1.7	Tu 0836	5.5 1.7	W 0922	4.9 1.5	Th 0912	5.4 1.6						
1426	-0.8 -0.2	1410	-0.2 -0.1	1533	-0.4 -0.1	1517	-0.5 -0.2	1554	-0.3 -0.1	1551	-0.9 -0.3						
2025	5.5 1.7	2002	4.8 1.5	2128	4.3 1.3	2107	4.2 1.3	2147	3.7 1.1	2151	4.2 1.3						
8 0243	-0.8 -0.2	23 0215	-0.2 -0.1	8 0338	-0.1 0.0	23 0311	-0.3 -0.1	8 0352	0.2 0.1	23 0351	-0.6 -0.2						
Sa 0849	5.9 1.8	Su 0818	5.3 1.6	Tu 0951	5.2 1.6	W 0923	5.4 1.6	Th 1005	4.7 1.4	F 1006	5.3 1.6						
1512	-0.7 -0.2	1451	-0.2 -0.1	1618	-0.2 -0.1	1603	-0.4 -0.1	1634	-0.1 0.0	1640	-0.8 -0.2						
2109	5.1 1.6	2041	4.6 1.4	2213	4.0 1.2	2200	4.1 1.2	2234	3.6 1.1	2248	4.2 1.3						
9 0326	-0.5 -0.2	24 0251	-0.1 0.0	9 0419	0.3 0.1	24 0357	-0.1 0.0	9 0431	0.4 0.1	24 0445	-0.4 -0.1						
Su 0936	5.7 1.7	M 0855	5.3 1.6	W 1037	4.9 1.5	Th 1016	5.2 1.6	F 1050	4.4 1.3	Sa 1103	5.0 1.5						
1557	-0.4 -0.1	1531	-0.1 0.0	1701	0.1 0.0	1653	-0.3 -0.1	1717	0.1 0.0	1733	-0.7 -0.2						
2155	4.7 1.4	2123	4.4 1.3	2301	3.7 1.1	2258	4.0 1.2	2322	3.5 1.1	2346	4.2 1.3						
10 0407	-0.2 -0.1	25 0325	0.0 0.0	10 0501	0.6 0.2	25 0450	0.1 0.0	10 0517	0.7 0.2	25 0546	-0.2 -0.1						
M 1023	5.4 1.6	Tu 0937	5.2 1.6	Th 1124	4.5 1.4	F 1114	5.0 1.5	Sa 1135	4.1 1.2	Su 1201	4.7 1.4						
1642	-0.1 0.0	1613	0.0 0.0	1751	0.4 0.1	1751	-0.2 -0.1	1802	0.2 0.1	1833	-0.5 -0.2						
2244	4.3 1.3	2209	4.1 1.2	2356	3.5 1.1												
11 0448	0.2 0.1	26 0405	0.2 0.1	11 0554	0.9 0.3	26 0001	3.9 1.2	11 0009	3.4 1.0	26 0045	4.3 1.3						
Tu 1111	5.1 1.6	W 1026	5.1 1.6	F 1215	4.3 1.3	Sa 0554	0.3 0.1	Su 0610	0.8 0.2	M 0654	0.0 0.0						
1733	0.3 0.1	1701	0.2 0.1	1847	0.6 0.2	1215	4.7 1.4	1223	4.0 1.2	1300	4.4 1.3						
2335	4.0 1.2	2305	3.9 1.2			1857	-0.1 0.0	1855	0.3 0.1	1934	-0.5 -0.2						
12 0538	0.6 0.2	27 0453	0.4 0.1	12 0047	3.4 1.0	27 0103	4.0 1.2	12 0100	3.5 1.1	27 0144	4.4 1.3						
W 1202	4.7 1.4	Th 1122	4.9 1.5	Sa 0658	1.1 0.3	Su 0711	0.3 0.1	M 0716	0.9 0.3	Tu 0803	0.0 0.0						
1828	0.6 0.2	1804	0.3 0.1	1305	4.1 1.2	1319	4.6 1.4	1313	3.8 1.2	1400	4.2 1.3						
				1947	0.6 0.2	2003	-0.2 -0.1	1951	0.3 0.1	2035	-0.4 -0.1						
13 0028	3.7 1.1	28 0007	3.8 1.2	13 0144	3.5 1.1	28 0206	4.2 1.3	13 0151	3.6 1.1	28 0244	4.5 1.4						
Th 0635	1.0 0.3	F 0559	0.6 0.2	Su 0805	1.1 0.3	M 0824	0.2 0.1	Tu 0819	0.8 0.2	W 0908	-0.1 0.0						
1254	4.5 1.4	1226	4.8 1.5	1401	4.0 1.2	1424	4.5 1.4	1406	3.7 1.1	1503	4.0 1.2						
1931	0.8 0.2	1915	0.4 0.1	2043	0.5 0.2	2102	-0.3 -0.1	2043	0.2 0.1	2129	-0.5 -0.2						
14 0124	3.6 1.1	29 0115	3.9 1.2	14 0243	3.6 1.1	29 0311	4.5 1.4	14 0246	3.7 1.1	29 0345	4.7 1.4						
F 0742	1.1 0.3	Sa 0719	0.7 0.2	M 0905	0.9 0.3	Tu 0927	0.0 0.0	W 0916	0.6 0.2	Th 1006	-0.3 -0.1						
1349	4.3 1.3	1332	4.7 1.4	1500	4.0 1.2	1530	4.4 1.3	1505	3.7 1.1	1606	3.9 1.2						
2031	0.8 0.2	2024	0.2 0.1	2132	0.3 0.1	2156	-0.5 -0.2	2130	0.1 0.0	2220	-0.5 -0.2						
15 0226	3.5 1.1	30 0222	4.0 1.2	15 0339	3.8 1.2	30 0410	4.8 1.5	15 0342	4.0 1.2	30 0443	4.8 1.5						
Sa 0848	1.1 0.3	Su 0838	0.5 0.2	Tu 0958	0.7 0.2	W 1025	-0.3 -0.1	Th 1007	0.4 0.1	F 1059	-0.4 -0.1						
1448	4.2 1.3	1443	4.7 1.4	1557	4.1 1.2	1630	4.5 1.4	1601	3.8 1.2	1705	3.9 1.2						
2127	0.6 0.2	2126	0.0 0.0	2217	0.1 0.0	2247	-0.6 -0.2	2215	-0.1 0.0	2310	-0.5 -0.2						
31 0330	4.4 1.3									31 0534	5.0 1.5						
M 0942	0.2 0.1									Sa 1152	-0.5 -0.2						
1550	4.8 1.5									1755	4.0 1.2						
2220	-0.3 -0.1									2357	-0.5 -0.2						

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0249	5.6	1.7	16 0306	4.9	1.5	1 0419	6.1	1.9	16 0346	5.4	1.6
Sa 0954	-0.6	-0.2	Su 0949	-0.2	-0.1	Tu 1117	-0.5	-0.2	W 1058	-0.1	0.0
1510	6.9	2.1	1515	5.9	1.8	1638	6.5	2.0	1559	5.8	1.8
2237	-0.8	-0.2	2230	-0.2	-0.1	2348	-0.6	-0.2	2322	-0.1	0.0
2 0343	5.6	1.7	17 0342	4.9	1.5	2 0512	6.0	1.8	17 0416	5.5	1.7
Su 1045	-0.6	-0.2	M 1033	-0.2	-0.1	W 1207	-0.4	-0.1	Th 1145	-0.1	0.0
1605	6.7	2.0	1551	5.8	1.8	1732	6.2	1.9	1635	5.6	1.7
2327	-0.8	-0.2	2311	-0.2	-0.1	1804	-0.3	-0.1	1827	-0.1	0.0
3 0440	5.6	1.7	18 0418	4.9	1.5	3 0034	-0.5	-0.2	18 0004	-0.1	0.0
M 1137	-0.5	-0.2	Tu 1117	-0.2	-0.1	Th 0607	5.9	1.8	F 0456	5.5	1.7
1700	6.5	2.0	1623	5.7	1.7	1259	-0.3	-0.1	1233	-0.1	0.0
			2352	-0.2	-0.1	1827	5.8	1.8	1720	5.4	1.6
4 0017	-0.7	-0.2	19 0451	4.9	1.5	4 0122	-0.4	-0.1	19 0047	-0.1	0.0
Tu 0537	5.6	1.7	W 1202	-0.1	0.0	F 0703	5.8	1.8	Sa 0540	5.6	1.7
1231	-0.4	-0.1	1701	5.5	1.7	1352	-0.2	-0.1	1324	0.0	0.0
1757	6.3	1.9				1924	5.5	1.7	1812	5.1	1.6
5 0106	-0.7	-0.2	20 0034	-0.2	-0.1	5 0211	-0.3	-0.1	20 0133	-0.1	0.0
W 0636	5.6	1.7	Th 0532	5.0	1.5	Sa 0757	5.7	1.7	Su 0642	5.6	1.7
1324	-0.3	-0.1	1252	-0.1	0.0	1446	-0.1	0.0	1422	0.1	0.0
1855	6.0	1.8	1746	5.3	1.6	2020	5.2	1.6	1916	4.9	1.5
6 0156	-0.6	-0.2	21 0117	-0.2	-0.1	6 0301	-0.3	-0.1	21 0228	-0.1	0.0
Th 0735	5.7	1.7	F 0621	5.1	1.6	Su 0852	5.6	1.7	M 0748	5.6	1.7
1420	-0.2	-0.1	1347	0.0	0.0	1542	-0.1	0.0	1524	0.1	0.0
1954	5.7	1.7	1841	5.1	1.6	2117	5.0	1.5	2024	4.8	1.5
7 0248	-0.5	-0.2	22 0206	-0.2	-0.1	7 0353	-0.2	-0.1	22 0330	-0.1	0.0
F 0831	5.7	1.7	Sa 0718	5.2	1.6	M 0946	5.6	1.7	Tu 0854	5.8	1.8
1517	-0.1	0.0	1445	0.0	0.0	1636	-0.1	0.0	1627	0.1	0.0
2050	5.5	1.7	1947	4.9	1.5	2211	4.9	1.5	2131	4.9	1.5
8 0339	-0.4	-0.1	23 0258	-0.2	-0.1	8 0444	-0.2	-0.1	23 0433	-0.1	0.0
Sa 0927	5.8	1.8	Su 0821	5.4	1.6	Tu 1038	5.6	1.7	W 0959	6.0	1.8
1613	-0.1	0.0	1547	0.0	0.0	1730	-0.1	0.0	1727	0.0	0.0
2145	5.4	1.6	2051	4.8	1.5	2303	4.9	1.5	2233	5.2	1.6
9 0430	-0.3	-0.1	24 0356	-0.2	-0.1	9 0537	-0.2	-0.1	24 0535	-0.2	-0.1
Su 1018	5.9	1.8	M 0923	5.6	1.7	W 1127	5.7	1.7	Th 1059	6.3	1.9
1708	-0.1	0.0	1649	0.0	0.0	1822	-0.2	-0.1	1824	-0.1	0.0
2238	5.2	1.6	2152	4.9	1.5	2353	5.0	1.5	2332	5.5	1.7
10 0520	-0.3	-0.1	25 0457	-0.3	-0.1	10 0626	-0.2	-0.1	25 0634	-0.3	-0.1
M 1108	5.9	1.8	Tu 1021	5.9	1.8	Th 1214	5.9	1.8	F 1156	6.7	2.0
1800	-0.2	-0.1	1748	-0.2	-0.1	1909	-0.2	-0.1	1920	-0.2	-0.1
2329	5.2	1.6	2252	5.0	1.5				1747	0.1	0.0
11 0609	-0.2	-0.1	26 0556	-0.3	-0.1	11 0040	5.1	1.6	26 0027	5.9	1.8
Tu 1155	6.0	1.8	W 1119	6.3	1.9	F 0714	-0.2	-0.1	Sa 0731	-0.3	-0.1
1851	-0.2	-0.1	1848	-0.3	-0.1	1257	6.0	1.8	1251	6.9	2.1
			2350	5.2	1.6	1957	-0.2	-0.1	2011	-0.3	-0.1
12 0016	5.1	1.6	27 0653	-0.5	-0.2	12 0123	5.2	1.6	27 0121	6.2	1.9
W 0656	-0.2	-0.1	Th 1214	6.6	2.0	Sa 0801	-0.2	-0.1	Su 0824	-0.4	-0.1
1240	6.0	1.8	1942	-0.5	-0.2	1338	6.0	1.8	1343	7.0	2.1
1939	-0.3	-0.1				2040	-0.2	-0.1	2100	-0.4	-0.1
13 0103	5.1	1.6	28 0045	5.5	1.7	13 0203	5.2	1.6	28 0212	6.5	2.0
Th 0741	-0.2	-0.1	F 0749	-0.6	-0.2	Su 0846	-0.2	-0.1	M 0915	-0.4	-0.1
1321	6.0	1.8	1309	6.8	2.1	1417	6.1	1.9	1433	7.0	2.1
2024	-0.3	-0.1	2035	-0.6	-0.2	2122	-0.1	0.0	2148	-0.4	-0.1
14 0146	5.0	1.5	29 0138	5.7	1.7	14 0240	5.3	1.6	14 0134	5.7	1.7
F 0825	-0.2	-0.1	Sa 0842	-0.6	-0.2	M 0931	-0.2	-0.1	M 0824	0.0	0.0
1401	6.0	1.8	1401	6.9	2.1	1452	6.0	1.8	1350	6.2	1.9
2108	-0.3	-0.1	2127	-0.7	-0.2	2204	-0.1	0.0	2053	0.1	0.0
15 0227	4.9	1.5	30 0232	5.9	1.8	15 0314	5.3	1.6	15 0210	5.9	1.8
Sa 0908	-0.2	-0.1	Su 0935	-0.6	-0.2	Tu 1014	-0.2	-0.1	Tu 0909	0.0	0.0
1439	5.9	1.8	1452	6.9	2.1	1526	5.9	1.8	1426	6.2	1.9
2150	-0.2	-0.1	2214	-0.7	-0.2	2243	-0.1	0.0	2135	0.2	0.1
31 0324	6.0	1.8							2202	0.2	0.1
M 1026	-0.6	-0.2							31 0325	7.0	2.1
1545	6.8	2.1							Th 1030	0.0	0.0
2302	-0.7	-0.2							1547	6.5	2.0
									2244	0.2	0.1

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL			MAY			JUNE								
Time	Height													
Day		Day		Day										
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0411	6.8	2.1	16 0327	6.7	2.0	1 0423	6.6	2.0	16 0358	7.0	2.1	1 0517	6.1	1.9
F 1116	0.1	0.0	Sa 1109	0.0	0.0	Su 1123	0.3	0.1	M 1142	0.0	0.0	W 1231	0.4	0.1
1636	6.1	1.9	1600	5.7	1.7	1656	5.6	1.7	1638	5.6	1.7	1802	5.2	1.6
2327	0.3	0.1	2315	0.3	0.1	2335	0.6	0.2	2347	0.4	0.1	1306	-0.1	0.0
												1827	5.9	1.8
2 0457	6.4	2.0	17 0412	6.6	2.0	2 0507	6.3	1.9	17 0453	6.8	2.1	2 0034	0.7	0.2
Sa 1202	0.1	0.0	Su 1200	0.1	0.0	M 1218	0.3	0.1	Tu 1234	0.0	0.0	Th 0607	5.9	1.8
1725	5.7	1.7	1649	5.5	1.7	1746	5.3	1.6	1738	5.6	1.7	1319	0.4	0.1
												1359	0.0	0.0
3 0010	0.3	0.1	18 0002	0.3	0.1	3 0018	0.6	0.2	18 0042	0.4	0.1	3 0127	0.7	0.2
Su 0546	6.1	1.9	M 0503	6.5	2.0	Tu 0557	6.0	1.8	W 0554	6.6	2.0	F 0701	5.8	1.8
1248	0.2	0.1	1252	0.1	0.0	1304	0.4	0.1	1328	0.1	0.0	1407	0.4	0.1
1819	5.3	1.6	1746	5.3	1.6	1839	5.2	1.6	1841	5.6	1.7	1950	5.3	1.6
												2030	6.3	1.9
4 0053	0.3	0.1	19 0055	0.3	0.1	4 0106	0.6	0.2	19 0138	0.5	0.2	4 0222	0.7	0.2
M 0639	5.8	1.8	Tu 0605	6.3	1.9	W 0650	5.8	1.8	Th 0700	6.5	2.0	Sa 0800	5.7	1.7
1338	0.2	0.1	1347	0.2	0.1	1353	0.4	0.1	1423	0.2	0.1	1459	0.5	0.2
1914	5.1	1.6	1851	5.3	1.6	1935	5.1	1.6	1946	5.8	1.8	2043	5.5	1.7
												2128	6.6	2.0
5 0142	0.4	0.1	20 0154	0.4	0.1	5 0159	0.6	0.2	20 0239	0.5	0.2	5 0322	0.7	0.2
Tu 0734	5.7	1.7	W 0711	6.3	1.9	Th 0748	5.7	1.7	F 0805	6.4	2.0	Su 0856	5.7	1.7
1430	0.3	0.1	1444	0.3	0.1	1445	0.5	0.2	1519	0.2	0.1	1551	0.5	0.2
2011	5.0	1.5	1958	5.4	1.6	2031	5.2	1.6	2048	6.1	1.9	2134	5.8	1.8
												2221	6.8	2.1
6 0235	0.4	0.1	21 0256	0.5	0.2	6 0256	0.6	0.2	21 0340	0.6	0.2	6 0421	0.7	0.2
W 0831	5.6	1.7	Th 0820	6.3	1.9	F 0846	5.8	1.8	Sa 0907	6.4	2.0	M 0950	5.7	1.7
1523	0.3	0.1	1543	0.3	0.1	1538	0.5	0.2	1615	0.2	0.1	1644	0.5	0.2
2108	5.1	1.6	2103	5.7	1.7	2126	5.5	1.7	2148	6.5	2.0	2222	6.2	1.9
												2311	7.0	2.1
7 0331	0.4	0.1	22 0358	0.5	0.2	7 0355	0.6	0.2	22 0441	0.5	0.2	7 0520	0.5	0.2
Th 0927	5.7	1.7	F 0925	6.4	2.0	Sa 0941	5.9	1.8	Su 1006	6.5	2.0	Tu 1041	5.8	1.8
1617	0.4	0.1	1641	0.3	0.1	1633	0.5	0.2	1709	0.3	0.1	1737	0.4	0.1
2202	5.3	1.6	2204	6.1	1.9	2217	5.8	1.8	2243	6.9	2.1	2309	6.5	2.0
												2358	7.1	2.2
8 0428	0.4	0.1	23 0500	0.4	0.1	8 0452	0.6	0.2	23 0539	0.5	0.2	8 0616	0.4	0.1
F 1021	5.9	1.8	Sa 1025	6.6	2.0	Su 1031	6.0	1.8	M 1102	6.6	2.0	W 1129	5.8	1.8
1711	0.4	0.1	1736	0.3	0.1	1724	0.5	0.2	1800	0.3	0.1	1828	0.4	0.1
2254	5.5	1.7	2300	6.6	2.0	2304	6.1	1.9	2334	7.2	2.2	2351	6.8	2.1
												24042	7.1	2.2
9 0525	0.3	0.1	24 0558	0.4	0.1	9 0550	0.5	0.2	24 0632	0.4	0.1	9 0709	0.2	0.1
Sa 1110	6.1	1.9	Su 1121	6.8	2.1	M 1120	6.1	1.9	Tu 1153	6.6	2.0	Th 1216	5.8	1.8
1803	0.4	0.1	1829	0.3	0.1	1814	0.5	0.2	1849	0.4	0.1	1917	0.4	0.1
2340	5.8	1.8	2353	7.0	2.1	2346	6.4	2.0				1950	0.5	0.2
												2033	0.5	0.2
10 0619	0.3	0.1	25 0653	0.3	0.1	10 0643	0.4	0.1	25 0021	7.3	2.2	10 0036	7.1	2.2
Su 1158	6.2	1.9	M 1214	6.9	2.1	Tu 1206	6.1	1.9	W 0724	0.3	0.1	F 0802	0.1	0.0
1851	0.4	0.1	1918	0.3	0.1	1902	0.5	0.2	1241	6.5	2.0	1303	5.9	1.8
												1351	5.7	1.7
11 0024	6.1	1.9	26 0043	7.3	2.2	11 0028	6.7	2.0	26 0106	7.3	2.2	11 0119	7.2	2.2
M 0710	0.2	0.1	Tu 0746	0.3	0.1	W 0734	0.3	0.1	Th 0812	0.3	0.1	Sa 0852	0.0	0.0
1240	6.3	1.9	1304	6.9	2.1	1248	6.1	1.9	1329	6.3	1.9	1349	5.9	1.8
1937	0.4	0.1	2005	0.4	0.1	1949	0.5	0.2	2019	0.6	0.2	2056	0.2	0.1
												2113	0.6	0.2
12 0103	6.3	1.9	27 0129	7.4	2.3	12 0106	6.9	2.1	27 0148	7.2	2.2	12 0206	7.3	2.2
Tu 0800	0.2	0.1	W 0834	0.2	0.1	Th 0825	0.1	0.0	F 0858	0.3	0.1	Su 0942	-0.1	0.0
1320	6.3	1.9	1350	6.7	2.0	1330	6.1	1.9	1413	6.1	1.9	1439	5.9	1.8
2022	0.4	0.1	2050	0.4	0.1	2035	0.4	0.1	2101	0.6	0.2	2147	0.2	0.1
												2155	0.6	0.2
13 0139	6.5	2.0	28 0213	7.3	2.2	13 0146	7.0	2.1	28 0230	7.1	2.2	13 0254	7.3	2.2
W 0847	0.1	0.0	Th 0921	0.2	0.1	F 0915	0.1	0.0	Sa 0940	0.3	0.1	M 1033	-0.1	0.0
1359	6.2	1.9	1436	6.5	2.0	1411	6.0	1.8	1457	5.9	1.8	1530	5.8	1.8
2105	0.4	0.1	2132	0.5	0.2	2121	0.4	0.1	2142	0.7	0.2	2237	0.2	0.1
												2237	0.6	0.2
14 0214	6.6	2.0	29 0257	7.2	2.2	14 0226	7.1	2.2	29 0310	6.8	2.1	14 0345	7.2	2.2
Th 0934	0.1	0.0	F 1006	0.3	0.1	Sa 1003	0.0	0.0	Su 1024	0.3	0.1	Tu 1123	-0.1	0.0
1436	6.1	1.9	1522	6.2	1.9	1457	5.9	1.8	1542	5.6	1.7	1626	5.8	1.8
2147	0.4	0.1	2213	0.6	0.2	2208	0.3	0.1	2221	0.7	0.2	2330	0.3	0.1
												2320	0.6	0.2
15 0249	6.7	2.0	30 0339	6.9	2.1	15 0310	7.1	2.2	30 0351	6.6	2.0	15 0440	7.0	2.1
F 1022	0.0	0.0	Sa 1051	0.3	0.1	Su 1053	0.0	0.0	M 1106	0.4	0.1	W 1215	-0.1	0.0
1515	5.9	1.8	1608	5.9	1.8	1544	5.7	1.7	1626	5.4	1.6	1725	5.8	1.8
2230	0.3	0.1	2253	0.6	0.2	2255	0.3	0.1	2303	0.7	0.2			
												31 0433	6.3	1.9
												Tu 1149	0.4	0.1
												1712	5.3	1.6
												2347	0.7	0.2

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

HAMPTON ROADS (Sewells Pt.), VA., 1983

Times and Heights of High and Low Waters

JANUARY

FEBRUARY

MARCH

Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
Day		Day		Day		Day		Day			
h m	ft	m	h m	ft	m	h m	ft	m	h m		
1 0406	-0.6	-0.2	16 0414	-0.4	-0.1	1 0543	-0.4	-0.1	16 0506	-0.3	-0.1
Sa 1031	3.0	0.9	Su 1033	2.1	0.6	Tu 1157	2.7	0.8	W 1114	2.1	0.6
1656	-0.6	-0.2	1654	-0.5	-0.2	1813	-0.4	-0.1	1724	-0.3	-0.1
2300	2.5	0.8	2256	1.7	0.5				2338	2.1	0.6
2 0502	-0.5	-0.2	17 0452	-0.3	-0.1	2 0028	2.6	0.8	17 0546	-0.2	-0.1
Su 1124	2.9	0.9	M 1108	2.1	0.6	W 0638	-0.2	-0.1	Th 1151	2.0	0.6
1746	-0.5	-0.2	1728	-0.4	-0.1	1247	2.5	0.8	1759	-0.3	-0.1
2354	2.5	0.8	2333	1.7	0.5	1901	-0.3	-0.1			
3 0559	-0.3	-0.1	18 0530	-0.2	-0.1	3 0121	2.5	0.8	18 0017	2.2	0.7
M 1218	2.8	0.9	Tu 1144	2.0	0.6	Th 0735	0.0	0.0	F 0631	-0.1	0.0
1839	-0.3	-0.1	1801	-0.3	-0.1	1340	2.3	0.7	1231	2.0	0.6
					1951	-0.1	0.0	1835	-0.2	-0.1	
4 0052	2.5	0.8	19 0010	1.8	0.5	4 0217	2.4	0.7	19 0105	2.3	0.7
Tu 0658	-0.1	0.0	W 0610	-0.2	-0.1	F 0834	0.1	0.0	Sa 0721	0.0	0.0
1313	2.6	0.8	1223	1.9	0.6	1434	2.0	0.6	1321	1.9	0.6
1933	-0.2	-0.1	1837	-0.3	-0.1	2043	0.0	0.0	1927	-0.1	0.0
5 0150	2.5	0.8	20 0052	1.9	0.6	5 0314	2.3	0.7	20 0158	2.3	0.7
W 0801	0.0	0.0	Th 0657	-0.1	0.0	Sa 0939	0.2	0.1	Su 0817	0.1	0.0
1412	2.4	0.7	1302	1.8	0.5	1534	1.8	0.5	1417	1.9	0.6
2029	-0.1	0.0	1916	-0.2	-0.1	2139	0.1	0.0	2023	-0.1	0.0
6 0251	2.4	0.7	21 0137	2.0	0.6	6 0411	2.2	0.7	21 0302	2.4	0.7
Th 0907	-0.1	0.0	F 0750	0.0	0.0	Su 1044	0.2	0.1	M 0929	0.2	0.1
1510	2.2	0.7	1351	1.8	0.5	1634	1.7	0.5	1522	1.8	0.5
2125	0.0	0.0	2003	-0.2	-0.1	2237	0.1	0.0	2131	0.0	0.0
7 0352	2.4	0.7	22 0233	2.1	0.6	7 0511	2.2	0.7	22 0410	2.5	0.8
F 1012	0.2	0.1	Sa 0849	0.0	0.0	M 1143	0.1	0.0	Tu 1041	0.1	0.0
1612	2.0	0.6	1445	1.7	0.5	1733	1.6	0.5	1636	1.9	0.6
2221	0.0	0.0	2056	-0.2	-0.1	2330	0.0	0.0	2241	-0.1	0.0
8 0449	2.4	0.7	23 0332	2.2	0.7	8 0604	2.2	0.7	23 0519	2.6	0.8
Sa 1115	0.1	0.0	Su 0956	0.0	0.0	Tu 1235	0.0	0.0	W 1150	0.0	0.0
1709	1.8	0.5	1551	1.7	0.5	1829	1.6	0.5	1747	2.0	0.6
2313	0.0	0.0	2157	-0.2	-0.1				2352	-0.2	-0.1
9 0544	2.3	0.7	24 0434	2.3	0.7	9 0025	-0.1	0.0	24 0624	2.7	0.8
Su 1214	0.0	0.0	M 1102	-0.1	0.0	W 0651	2.2	0.7	Th 1251	-0.2	-0.1
1804	1.7	0.5	1657	1.8	0.5	1322	-0.2	-0.1	1853	2.2	0.7
			2302	-0.3	-0.1	1917	1.6	0.5			
10 0003	-0.1	0.0	25 0539	2.5	0.8	10 0112	-0.2	-0.1	25 0058	-0.4	-0.1
M 0635	2.3	0.7	Tu 1208	-0.2	-0.1	Th 0736	2.2	0.7	F 0724	2.9	0.9
1304	-0.1	0.0	1803	1.9	0.6	1403	-0.3	-0.1	1346	-0.4	-0.1
1855	1.7	0.5			1959	1.6	0.5	1951	2.5	0.8	
11 0053	-0.2	-0.1	26 0006	-0.4	-0.1	11 0154	-0.3	-0.1	26 0157	-0.5	-0.2
Tu 0718	2.3	0.7	W 0640	2.6	0.8	F 0816	2.2	0.7	Sa 0818	3.0	0.9
1348	-0.3	-0.1	1307	-0.4	-0.1	1440	-0.4	-0.1	1437	-0.5	-0.2
1941	1.6	0.5	1906	2.0	0.6	2040	1.7	0.5	2044	2.7	0.8
12 0136	-0.3	-0.1	27 0107	-0.6	-0.2	12 0236	-0.4	-0.1	27 0252	-0.6	-0.2
W 0800	2.3	0.7	Th 0738	2.8	0.9	Sa 0855	2.2	0.7	Su 0910	3.0	0.9
1430	-0.4	-0.1	1403	-0.5	-0.2	1516	-0.5	-0.2	1526	-0.5	-0.2
2023	1.6	0.5	2003	2.2	0.7	2116	1.8	0.5	2135	2.8	0.9
13 0218	-0.4	-0.1	28 0207	-0.7	-0.2	13 0315	-0.4	-0.1	28 0344	-0.6	-0.2
Th 0841	2.3	0.7	F 0832	2.9	0.9	Su 0932	2.2	0.7	M 0959	3.0	0.9
1509	-0.5	-0.2	1456	-0.6	-0.2	1550	-0.5	-0.2	1613	-0.5	-0.2
2104	1.6	0.5	2058	2.4	0.7	2152	1.9	0.6	2224	2.9	0.9
14 0257	-0.4	-0.1	29 0302	-0.7	-0.2	14 0352	-0.4	-0.1	15 0429	-0.4	-0.1
F 0919	2.2	0.7	Sa 0925	3.0	0.9	M 1008	2.2	0.7	Tu 1040	2.1	0.6
1545	-0.5	-0.2	1547	-0.7	-0.2	1622	-0.5	-0.2	1652	-0.4	-0.1
2142	1.6	0.5	2151	2.5	0.8	2227	1.9	0.6	2224	2.2	0.7
15 0336	-0.4	-0.1	30 0357	-0.7	-0.2	15 0429	-0.4	-0.1	15 0329	-0.4	-0.1
Sa 0956	2.2	0.7	Su 1016	3.0	0.9	Tu 1040	2.1	0.6	Tu 0938	2.3	0.7
1619	-0.5	-0.2	1637	-0.7	-0.2	1652	-0.4	-0.1	1547	-0.4	-0.1
2221	1.7	0.5	2243	2.6	0.8	2303	2.0	0.6	2121	2.2	0.7
31 0450	-0.6	-0.2							15 0329	-0.4	-0.1
M 1106	2.9	0.9							30 0416	-0.3	-0.1
1724	-0.6	-0.2							Tu 1024	2.8	0.9
2335	2.6	0.8							1547	-0.4	-0.1
									1629	-0.2	-0.1
									2201	3.1	0.9
									31 0503	-0.2	-0.1
									Th 1106	2.6	0.8
									1711	-0.1	0.0
									2329	2.9	0.9

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL						MAY						JUNE					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0548	0.0	0.0	16 0509	-0.1	0.0	1 0609	0.2	0.1	16 0546	0.0	0.0	1 0039	2.3	0.7	16 0102	2.9	0.9
F 1150	2.4	0.7	Sa 1108	2.3	0.7	Su 1207	2.1	0.6	M 1148	2.4	0.7	W 0708	0.2	0.1	Th 0726	0.1	0.0
1753	0.0	0.0	1706	-0.1	0.0	1802	0.3	0.1	1746	0.1	0.0	1311	1.9	0.6	1339	2.6	0.8
			2333	2.9	0.9							1905	0.4	0.1	1945	0.2	0.1
2 0015	2.8	0.9	17 0557	0.1	0.0	2 0027	2.6	0.8	17 0015	3.0	0.9	2 0123	2.2	0.7	17 0203	2.8	0.9
Sa 0636	0.2	0.1	Su 1157	2.3	0.7	M 0655	0.3	0.1	Tu 0642	0.1	0.0	Th 0752	0.2	0.1	F 0825	0.2	0.1
1234	2.2	0.7	1754	0.1	0.0	1255	2.0	0.6	1246	2.4	0.7	1401	1.9	0.6	1441	2.7	0.8
1836	0.2	0.1				1849	0.4	0.1	1847	0.2	0.1	1958	0.4	0.1	2054	0.3	0.1
3 0102	2.6	0.8	18 0025	2.9	0.9	3 0112	2.4	0.7	18 0113	2.9	0.9	3 0213	2.1	0.6	18 0305	2.6	0.8
Su 0727	0.3	0.1	M 0652	0.2	0.1	Tu 0742	0.3	0.1	W 0742	0.2	0.1	F 0838	0.2	0.1	Sa 0923	0.2	0.1
1324	2.1	0.6	1250	2.3	0.7	1345	1.9	0.6	1349	2.5	0.8	1453	1.9	0.6	1545	2.7	0.8
1924	0.4	0.1	1852	0.2	0.1	1939	0.5	0.2	1953	0.3	0.1	2055	0.4	0.1	2201	0.3	0.1
4 0150	2.4	0.7	19 0124	2.8	0.9	4 0203	2.3	0.7	19 0219	2.8	0.9	4 0304	2.0	0.6	19 0407	2.5	0.8
M 0821	0.4	0.1	Tu 0753	0.3	0.1	W 0835	0.4	0.1	Th 0845	0.3	0.1	Sa 0924	0.2	0.1	Su 1021	0.2	0.1
1416	1.9	0.6	1355	2.3	0.7	1440	1.9	0.6	1458	2.5	0.8	1545	2.0	0.6	1647	2.8	0.9
2015	0.5	0.2	1958	0.4	0.1	2036	0.5	0.2	2105	0.4	0.1	2153	0.3	0.1	2307	0.3	0.1
5 0246	2.3	0.7	20 0230	2.8	0.9	5 0257	2.2	0.7	20 0326	2.7	0.8	5 0357	2.0	0.6	20 0507	2.4	0.7
Tu 0920	0.5	0.2	W 0900	0.4	0.1	Th 0929	0.4	0.1	F 0948	0.3	0.1	Su 1013	0.1	0.0	M 1115	0.1	0.0
1520	1.8	0.5	1505	2.3	0.7	1539	1.9	0.6	1606	2.6	0.8	1634	2.1	0.6	1745	2.8	0.9
2116	0.5	0.2	2112	0.4	0.1	2136	0.5	0.2	2218	0.4	0.1	2250	0.2	0.1			
6 0344	2.2	0.7	21 0340	2.7	0.8	6 0353	2.1	0.6	21 0430	2.7	0.8	6 0450	1.9	0.6	21 0008	0.2	0.1
W 1017	0.4	0.1	Th 1009	0.4	0.1	F 1021	0.3	0.1	Sa 1049	0.2	0.1	M 1059	0.0	0.0	Tu 0603	2.3	0.7
1621	1.8	0.5	1618	2.4	0.7	1633	1.9	0.6	1707	2.7	0.8	1723	2.3	0.7	1208	0.1	0.0
2218	0.4	0.1	2228	0.4	0.1	2236	0.4	0.1	2324	0.3	0.1	2342	0.1	0.0	1835	2.8	0.9
7 0444	2.2	0.7	22 0449	2.8	0.9	7 0449	2.1	0.6	22 0532	2.6	0.8	7 0542	2.0	0.6	22 0101	0.1	0.0
Th 1113	0.3	0.1	F 1114	0.3	0.1	Sa 1108	0.2	0.1	Su 1144	0.1	0.0	Tu 1146	-0.1	0.0	W 0656	2.2	0.7
1717	1.8	0.5	1725	2.6	0.8	1723	2.1	0.6	1806	2.8	0.9	1811	2.5	0.8	1256	0.0	0.0
2318	0.3	0.1	2336	0.2	0.1	2331	0.2	0.1							1923	2.8	0.9
8 0536	2.2	0.7	23 0554	2.8	0.9	8 0539	2.1	0.6	23 0024	0.1	0.0	8 0033	-0.1	0.0	23 0151	0.0	0.0
F 1201	0.2	0.1	Sa 1211	0.1	0.0	Su 1152	0.0	0.0	M 0629	2.6	0.8	W 0632	2.0	0.6	Th 0744	2.1	0.6
1806	1.9	0.6	1824	2.8	0.9	1808	2.2	0.7	1236	0.0	0.0	1233	-0.2	-0.1	1342	0.0	0.0
									1857	2.9	0.9	1901	2.6	0.8	2008	2.8	0.9
9 0011	0.2	0.1	24 0038	0.1	0.0	9 0021	0.0	0.0	24 0117	0.0	0.0	9 0125	-0.2	-0.1	24 0236	-0.1	0.0
Sa 0625	2.2	0.7	Su 0651	2.8	0.9	M 0625	2.1	0.6	Tu 0720	2.5	0.8	Th 0721	2.1	0.6	F 0830	2.1	0.6
1243	0.0	0.0	1302	0.0	0.0	1234	-0.1	0.0	1323	-0.1	0.0	1318	-0.3	-0.1	1424	-0.1	0.0
1851	2.1	0.6	1917	2.9	0.9	1853	2.4	0.7	1946	3.0	0.9	1947	2.8	0.9	2051	2.7	0.8
10 0059	0.0	0.0	25 0134	-0.1	0.0	10 0107	-0.1	0.0	25 0207	-0.1	0.0	10 0214	-0.3	-0.1	25 0318	-0.1	0.0
Su 0709	2.2	0.7	M 0741	2.8	0.9	Tu 0711	2.1	0.6	W 0807	2.4	0.7	F 0810	2.2	0.7	Sa 0914	2.0	0.6
1322	-0.1	0.0	1351	-0.1	0.0	1315	-0.2	-0.1	1407	-0.1	0.0	1407	-0.4	-0.1	1506	-0.1	0.0
1933	2.2	0.7	2007	3.1	0.9	1934	2.5	0.8	2030	3.0	0.9	2037	3.0	0.9	2131	2.6	0.8
11 0141	-0.2	-0.1	26 0224	-0.2	-0.1	11 0154	-0.2	-0.1	26 0254	-0.1	0.0	11 0301	-0.4	-0.1	26 0358	-0.2	-0.1
M 0750	2.2	0.7	Tu 0831	2.7	0.8	W 0753	2.2	0.7	Th 0852	2.3	0.7	Sa 0900	2.3	0.7	Su 0955	2.0	0.6
1359	-0.2	-0.1	1436	-0.2	-0.1	1353	-0.3	-0.1	1449	-0.1	0.0	1457	-0.4	-0.1	1547	-0.1	0.0
2010	2.4	0.7	2054	3.1	0.9	2016	2.7	0.8	2111	2.9	0.9	2126	3.1	0.9	2210	2.6	0.8
12 0223	-0.3	-0.1	27 0312	-0.2	-0.1	12 0236	-0.3	-0.1	27 0339	-0.1	0.0	12 0352	-0.3	-0.1	27 0437	-0.1	0.0
Tu 0828	2.3	0.7	W 0916	2.7	0.8	Th 0837	2.3	0.7	F 0935	2.2	0.7	Su 0951	2.4	0.7	M 1035	2.0	0.6
1434	-0.3	-0.1	1518	-0.2	-0.1	1436	-0.3	-0.1	1530	-0.1	0.0	1549	-0.3	-0.1	1627	0.0	0.0
2047	2.5	0.8	2137	3.1	0.9	2059	2.9	0.9	2155	2.8	0.9	2217	3.1	0.9	2247	2.5	0.8
13 0303	-0.3	-0.1	28 0358	-0.2	-0.1	13 0322	-0.3	-0.1	28 0421	-0.1	0.0	13 0442	-0.3	-0.1	28 0514	-0.1	0.0
W 0908	2.3	0.7	Th 0958	2.5	0.8	F 0920	2.3	0.7	Sa 1016	2.1	0.6	M 1044	2.5	0.8	Tu 1114	1.9	0.6
1509	-0.3	-0.1	1558	-0.1	0.0	1518	-0.3	-0.1	1612	0.0	0.0	1643	-0.2	-0.1	1709	0.1	0.0
2127	2.7	0.8	2218	3.0	0.9	2143	3.0	0.9	2235	2.7	0.8	2309	3.1	0.9	2325	2.4	0.7
14 0342	-0.3	-0.1	29 0442	-0.1	0.0	14 0407	-0.3	-0.1	29 0501	-0.1	0.0	14 0535	-0.2	-0.1	29 0551	-0.1	0.0
Th 0945	2.3	0.7	F 1040	2.4	0.7	Sa 1006	2.3	0.7	Su 1058	2.1	0.6	Tu 1140	2.5	0.8	W 1154	1.9	0.6
1545	-0.3	-0.1	1639	0.0	0.0	1603	-0.2	-0.1	1652	0.1	0.0	1741	-0.1	0.0	1749	0.1	0.0
2205	2.8	0.9	2300	2.9	0.9	2229	3.0	0.9	2314	2.6	0.8						
15 0424	-0.2	-0.1	30 0525	0.0	0.0	15 0457	-0.2	-0.1	30 0543	0.0	0.0	15 0005	3.0	0.9	30 0005	2.3	0.7
F 1024	2.3	0.7	Sa 1122	2.3	0.7	Su 1056	2.4	0.7	M 1140	2.0	0.6	W 0630	-0.1	0.0	Th 0631	0.0	0.0
1624	-0.2	-0.1	1719	0.1	0.0	1653	-0.1	0.0	1734	0.2	0.1	1238	2.6	0.8	1236	1.9	0.6
2247	2.9	0.9	2343	2.7	0.8	2320	3.0	0.9	2357	2.5	0.8	1842	0.1	0.0	1833	0.2	0.1
									31 0626	0.1	0.0						
									Tu 1226	1.9	0.6						
									1818	0.3	0.1						

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

HAMPTON ROADS (Sewells Pt.), VA., 1983

Times and Heights of High and Low Waters

JULY

AUGUST

SEPTEMBER

Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	h m	ft	h m	ft	h m	ft	h m	ft	h m	ft
1 0045	2.2	0.7	16 0142	2.8	0.9	1 0132	2.1	0.6	16 0310	2.4	0.7
F 0708	0.1	0.0	Sa 0758	0.1	0.0	M 0742	0.2	0.1	Tu 0915	0.5	0.2
1320	2.0	0.6	1420	2.8	0.9	1409	2.4	0.7	1550	2.8	0.9
1920	0.3	0.1	2035	0.3	0.1	2027	0.4	0.1	2219	0.6	0.2
2 0127	2.1	0.6	17 0241	2.6	0.8	2 0222	2.0	0.6	17 0414	2.2	0.7
Sa 0748	0.1	0.0	Su 0853	0.2	0.1	Tu 0831	0.2	0.1	W 1015	0.5	0.2
1406	2.0	0.6	1520	2.8	0.9	1505	2.5	0.8	1649	2.7	0.8
2011	0.3	0.1	2140	0.4	0.1	2126	0.4	0.1	2320	0.6	0.2
3 0212	2.0	0.6	18 0340	2.4	0.7	3 0321	2.0	0.6	18 0513	2.1	0.6
Su 0830	0.1	0.0	M 0949	0.3	0.1	W 0927	0.2	0.1	Th 1113	0.5	0.2
1454	2.1	0.6	1619	2.8	0.9	1604	2.6	0.8	1744	2.7	0.8
2106	0.3	0.1	2245	0.4	0.1	2231	0.3	0.1			
4 0306	1.9	0.6	19 0440	2.2	0.7	4 0423	2.0	0.6	19 0017	0.5	0.2
M 0918	0.1	0.0	Tu 1046	0.3	0.1	Th 1029	0.1	0.0	F 0611	2.1	0.6
1548	2.2	0.7	1717	2.7	0.8	1706	2.7	0.8	1206	0.4	0.1
2204	0.2	0.1	2347	0.4	0.1	2336	0.2	0.1	1834	2.7	0.8
5 0402	1.9	0.6	20 0539	2.1	0.6	5 0529	2.1	0.6	20 0106	0.3	0.1
Tu 1009	0.0	0.0	W 1140	0.2	0.1	F 1132	0.0	0.0	Sa 0701	2.1	0.6
1641	2.4	0.7	1812	2.7	0.8	1807	2.9	0.9	1257	0.3	0.1
2304	0.1	0.0							1920	2.6	0.8
6 0457	1.9	0.6	21 0040	0.3	0.1	6 0037	0.1	0.0	21 0147	0.2	0.1
W 1101	-0.1	0.0	Th 0635	2.1	0.6	Sa 0633	2.3	0.7	Su 0746	2.2	0.7
1736	2.5	0.8	1231	0.2	0.1	1237	-0.1	0.0	1341	0.2	0.1
			1859	2.7	0.8	1906	3.1	0.9	2002	2.6	0.8
7 0002	0.0	0.0	22 0130	0.1	0.0	7 0133	-0.1	0.0	22 0224	0.1	0.0
Th 0556	2.0	0.6	F 0722	2.0	0.6	Su 0733	2.5	0.8	M 0825	2.2	0.7
1158	-0.2	-0.1	1320	0.1	0.0	1333	-0.2	-0.1	1423	0.1	0.0
1832	2.7	0.8	1945	2.7	0.8	2002	3.2	1.0	2040	2.6	0.8
8 0058	-0.1	0.0	23 0213	0.0	0.0	8 0226	-0.2	-0.1	23 0301	0.0	0.0
F 0653	2.1	0.6	Sa 0807	2.0	0.6	M 0828	2.7	0.8	Tu 0904	2.3	0.7
1253	-0.3	-0.1	1403	0.0	0.0	1432	-0.3	-0.1	1503	0.0	0.0
1925	2.9	0.9	2028	2.6	0.8	2056	3.3	1.0	2119	2.6	0.8
9 0153	-0.3	-0.1	24 0254	-0.1	0.0	9 0316	-0.3	-0.1	24 0334	-0.1	0.0
Sa 0749	2.2	0.7	Su 0851	2.0	0.6	Tu 0921	2.9	0.9	W 0939	2.3	0.7
1349	-0.4	-0.1	1444	0.0	0.0	1527	-0.3	-0.1	1540	0.0	0.0
2018	3.1	0.9	2108	2.6	0.8	2149	3.3	1.0	2152	2.6	0.8
10 0244	-0.3	-0.1	25 0331	-0.1	0.0	10 0407	-0.3	-0.1	25 0407	0.0	0.0
Su 0842	2.4	0.7	M 0931	2.0	0.6	W 1015	3.0	0.9	Th 1013	2.4	0.7
1444	-0.4	-0.1	1526	-0.1	0.0	1623	-0.2	-0.1	1616	0.0	0.0
2112	3.2	1.0	2145	2.5	0.8	2239	3.3	1.0	2227	2.5	0.8
11 0335	-0.4	-0.1	26 0408	-0.2	-0.1	11 0455	-0.2	-0.1	26 0439	0.0	0.0
M 0938	2.5	0.8	Tu 1008	2.1	0.6	Th 1108	3.1	0.9	F 1048	2.5	0.8
1539	-0.4	-0.1	1605	0.0	0.0	1717	-0.1	0.0	1654	0.1	0.0
2203	3.2	1.0	2221	2.5	0.8	2330	3.2	1.0	2259	2.4	0.7
12 0426	-0.3	-0.1	27 0443	-0.1	0.0	12 0545	-0.1	0.0	27 0509	0.1	0.0
Tu 1032	2.7	0.8	W 1047	2.1	0.6	F 1200	3.1	0.9	Sa 1125	2.5	0.8
1635	-0.3	-0.1	1642	0.0	0.0	1813	0.1	0.0	1730	0.2	0.1
2256	3.2	1.0	2257	2.4	0.7				2335	2.4	0.7
13 0518	-0.3	-0.1	28 0517	-0.1	0.0	13 0023	3.0	0.9	28 0542	0.2	0.1
W 1127	2.8	0.9	Th 1122	2.1	0.6	Sa 0634	0.1	0.0	Su 1226	3.3	1.0
1732	-0.1	0.0	1721	0.1	0.0	1255	3.1	0.9	1845	0.4	0.1
2349	3.1	0.9	2332	2.3	0.7	1909	0.3	0.1			
14 0610	-0.1	0.0	29 0549	0.0	0.0	14 0115	2.8	0.9	29 0013	2.3	0.7
Th 1223	2.8	0.9	F 1159	2.2	0.7	Su 0727	0.3	0.1	M 0618	0.3	0.1
1830	0.0	0.0	1801	0.2	0.1	1350	3.0	0.9	1243	2.6	0.8
						2009	0.5	0.2	1858	0.5	0.2
15 0044	2.9	0.9	30 0009	2.2	0.7	15 0212	2.6	0.8	30 0057	2.3	0.7
F 0702	0.0	0.0	Sa 0623	0.1	0.0	M 0819	0.4	0.1	Tu 0700	0.3	0.1
1319	2.8	0.9	1238	2.2	0.7	1447	2.9	0.9	1132	2.7	0.8
1930	0.2	0.1	1844	0.3	0.1	2113	0.6	0.2	1953	0.6	0.2
						31 0047	2.2	0.7	31 0148	2.2	0.7
						Su 0700	0.1	0.0	W 0753	0.4	0.1
						1321	2.3	0.7	1430	2.7	0.8
						1932	0.3	0.1	2058	0.6	0.2

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

HAMPTON ROADS (Sewells Pt.), VA., 1983

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Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m
1 0348	2.5 0.8	16 0507	2.2 0.7	1 0550	2.9 0.9	16 0556	2.3 0.7	1 0006	0.0 0.0	16 0555	2.2 0.7						
Sa 0956	0.6 0.2	Su 1108	0.6 0.2	Tu 1206	0.3 0.1	W 1211	0.1 0.0	Th 0628	2.9 0.9	F 1221	-0.2 -0.1						
1629	3.0 0.9	1723	2.5 0.8	1816	2.9 0.9	1811	2.1 0.6	1251	0.0 0.0	1814	1.7 0.5						
2255	0.6 0.2	2347	0.4 0.1					1853	2.5 0.8								
2 0502	2.7 0.8	17 0556	2.3 0.7	2 0029	0.2 0.1	17 0019	0.0 0.0	2 0056	-0.1 0.0	17 0015	-0.3 -0.1						
Su 1110	0.5 0.2	M 1201	0.5 0.2	W 0647	3.1 0.9	Th 0638	2.4 0.7	F 0720	3.0 0.9	Sa 0645	2.3 0.7						
1736	3.1 0.9	1811	2.4 0.7	1304	0.1 0.0	1256	0.0 0.0	1344	-0.1 0.0	1309	-0.3 -0.1						
2357	0.4 0.1			1912	2.9 0.9	1857	2.1 0.6	1943	2.4 0.7	1903	1.8 0.5						
3 0604	2.9 0.9	18 0029	0.3 0.1	3 0120	0.0 0.0	18 0059	-0.1 0.0	3 0145	-0.2 -0.1	18 0101	-0.4 -0.1						
M 1216	0.3 0.1	Tu 0639	2.4 0.7	Th 0738	3.3 1.0	F 0719	2.5 0.8	Sa 0808	3.0 0.9	Su 0730	2.5 0.8						
1835	3.2 1.0	1245	0.3 0.1	1357	0.0 0.0	1339	-0.2 -0.1	1433	-0.2 -0.1	1354	-0.4 -0.1						
		1854	2.5 0.8	2002	2.9 0.9	1938	2.1 0.6	2031	2.3 0.7	1949	1.9 0.6						
4 0053	0.2 0.1	19 0106	0.1 0.0	4 0207	-0.1 0.0	19 0138	-0.2 -0.1	4 0229	-0.2 -0.1	19 0147	-0.5 -0.2						
Tu 0702	3.1 0.9	W 0717	2.5 0.8	F 0827	3.3 1.0	Sa 0759	2.7 0.8	Su 0852	3.0 0.9	M 0815	2.7 0.8						
1315	0.1 0.0	1330	0.1 0.0	1447	-0.1 0.0	1421	-0.2 -0.1	1519	-0.3 -0.1	1440	-0.5 -0.2						
1931	3.3 1.0	1936	2.5 0.8	2050	2.9 0.9	2019	2.1 0.6	2116	2.3 0.7	2037	2.0 0.6						
5 0142	0.1 0.0	20 0141	0.0 0.0	5 0252	-0.1 0.0	20 0216	-0.3 -0.1	5 0314	-0.2 -0.1	20 0236	-0.6 -0.2						
W 0755	3.3 1.0	Th 0756	2.6 0.8	Sa 0912	3.3 1.0	Su 0840	2.8 0.9	M 0936	2.9 0.9	Tu 0903	2.8 0.9						
1410	0.0 0.0	1408	0.0 0.0	1535	-0.1 0.0	1503	-0.3 -0.1	1602	-0.2 -0.1	1527	-0.5 -0.2						
2023	3.3 1.0	2014	2.5 0.8	2136	2.8 0.9	2101	2.2 0.7	2200	2.2 0.7	2127	2.1 0.6						
6 0231	0.0 0.0	21 0217	0.0 0.0	6 0337	0.0 0.0	21 0256	-0.3 -0.1	6 0355	-0.2 -0.1	21 0323	-0.5 -0.2						
Th 0846	3.5 1.1	F 0831	2.7 0.8	Su 0958	3.3 1.0	M 0921	2.9 0.9	Tu 1018	2.8 0.9	W 0950	2.8 0.9						
1501	-0.1 0.0	1447	-0.1 0.0	1621	0.0 0.0	1547	-0.3 -0.1	1647	-0.2 -0.1	1615	-0.5 -0.2						
2110	3.3 1.0	2050	2.4 0.7	2220	2.6 0.8	2143	2.2 0.7	2243	2.1 0.6	2217	2.2 0.7						
7 0318	0.0 0.0	22 0252	0.0 0.0	7 0419	0.1 0.0	22 0337	-0.2 -0.1	7 0437	-0.1 0.0	22 0413	-0.5 -0.2						
F 0933	3.5 1.1	Sa 0908	2.8 0.9	M 1040	3.1 0.9	Tu 1005	2.9 0.9	W 1100	2.6 0.8	Th 1039	2.8 0.9						
1551	0.0 0.0	1526	-0.1 0.0	1706	0.1 0.0	1631	-0.2 -0.1	1728	-0.1 0.0	1704	-0.4 -0.1						
2157	3.2 1.0	2127	2.4 0.7	2306	2.5 0.8	2228	2.3 0.7	2325	2.0 0.6	2308	2.3 0.7						
8 0403	0.0 0.0	23 0327	0.0 0.0	8 0502	0.2 0.1	23 0424	-0.1 0.0	8 0520	0.0 0.0	23 0509	-0.3 -0.1						
Sa 1021	3.5 1.1	Su 0946	2.9 0.9	Tu 1127	3.0 0.9	W 1052	2.9 0.9	Th 1141	2.5 0.8	F 1132	2.8 0.9						
1640	0.1 0.0	1607	0.0 0.0	1754	0.2 0.1	1719	-0.1 0.0	1809	0.0 0.0	1756	-0.3 -0.1						
2243	3.0 0.9	2203	2.4 0.7	2354	2.3 0.7	2317	2.3 0.7										
9 0447	0.1 0.0	24 0402	0.0 0.0	9 0548	0.3 0.1	24 0514	0.0 0.0	9 0012	1.9 0.6	24 0002	2.3 0.7						
Su 1109	3.4 1.0	M 1024	3.0 0.9	W 1212	2.8 0.9	Th 1143	2.9 0.9	F 0605	0.1 0.0	Sa 0605	-0.2 -0.1						
1729	0.2 0.1	1645	0.1 0.0	1841	0.3 0.1	1810	0.1 0.0	1223	2.3 0.7	1226	2.7 0.8						
2330	2.8 0.9	2245	2.4 0.7					1852	0.0 0.0	1848	-0.2 -0.1						
10 0532	0.3 0.1	25 0440	0.1 0.0	10 0041	2.2 0.7	25 0010	2.3 0.7	10 0058	1.9 0.6	25 0100	2.4 0.7						
M 1155	3.2 1.0	Tu 1107	3.0 0.9	Th 0636	0.5 0.2	F 0610	0.1 0.0	Sa 0652	0.2 0.1	Su 0708	0.0 0.0						
1818	0.4 0.1	1731	0.2 0.1	1258	2.6 0.8	1239	2.8 0.9	1308	2.1 0.6	1324	2.6 0.8						
		2328	2.4 0.7	1931	0.4 0.1	1907	0.2 0.1	1935	0.1 0.0	1945	-0.1 0.0						
11 0019	2.6 0.8	26 0526	0.3 0.1	11 0135	2.1 0.6	26 0111	2.4 0.7	11 0147	1.8 0.5	26 0203	2.5 0.8						
Tu 0619	0.5 0.2	W 1154	3.0 0.9	F 0727	0.6 0.2	Sa 0713	0.3 0.1	Su 0743	0.3 0.1	M 0814	0.1 0.0						
1243	3.0 0.9	1823	0.4 0.1	1350	2.4 0.7	1340	2.7 0.8	1354	2.0 0.6	1425	2.4 0.7						
1910	0.6 0.2			2022	0.5 0.2	2006	0.2 0.1	2022	0.1 0.0	2043	0.0 0.0						
12 0109	2.4 0.7	27 0019	2.4 0.7	12 0229	2.0 0.6	27 0218	2.4 0.7	12 0237	1.8 0.5	27 0307	2.5 0.8						
W 0708	0.7 0.2	Th 0618	0.4 0.1	Sa 0827	0.6 0.2	Su 0825	0.4 0.1	M 0840	0.3 0.1	Tu 0924	0.1 0.0						
1337	2.9 0.9	1249	3.0 0.9	1443	2.3 0.7	1445	2.7 0.8	1445	1.9 0.6	1531	2.3 0.7						
2008	0.7 0.2	1919	0.5 0.2	2117	0.4 0.1	2109	0.3 0.1	2109	0.1 0.0	2144	0.0 0.0						
13 0206	2.3 0.7	28 0119	2.4 0.7	13 0325	2.0 0.6	28 0327	2.5 0.8	13 0329	1.9 0.6	28 0410	2.5 0.8						
Th 0805	0.8 0.2	F 0721	0.5 0.2	Su 0927	0.6 0.2	M 0939	0.3 0.1	Tu 0936	0.2 0.1	W 1033	0.1 0.0						
1433	2.7 0.8	1353	2.9 0.9	1541	2.2 0.7	1553	2.6 0.8	1538	1.8 0.5	1634	2.2 0.7						
2106	0.7 0.2	2022	0.6 0.2	2206	0.4 0.1	2212	0.2 0.1	2156	0.0 0.0	2244	0.0 0.0						
14 0309	2.2 0.7	29 0227	2.5 0.8	14 0421	2.1 0.6	29 0433	2.7 0.8	14 0419	1.9 0.6	29 0513	2.6 0.8						
F 0906	0.8 0.2	Sa 0833	0.6 0.2	M 1028	0.5 0.2	Tu 1049	0.3 0.1	W 1036	0.1 0.0	Th 1139	0.0 0.0						
1532	2.6 0.8	1502	2.9 0.9	1634	2.1 0.6	1659	2.5 0.8	1633	1.7 0.5	1736	2.1 0.6						
2206	0.7 0.2	2129	0.6 0.2	2254	0.3 0.1	2310	0.1 0.0	2242	-0.1 0.0	2340	-0.1 0.0						
15 0411	2.2 0.7	30 0340	2.6 0.8	15 0510	2.1 0.6	30 0534	2.8 0.9	15 0509	2.1 0.6	30 0612	2.6 0.8						
Sa 1008	0.8 0.2	Su 0949	0.6 0.2	Tu 1121	0.3 0.1	W 1153	0.1 0.0	Th 1129	0.0 0.0	F 1237	-0.1 0.0						
1629	2.5 0.8	1612	2.9 0.9	1726	2.1 0.6	1758	2.5 0.8	1723	1.7 0.5	1835	2.0 0.6						
2300	0.6 0.2	2235	0.5 0.2	2339	0.1 0.0			2331	-0.2 -0.1								
		31 0449	2.7 0.8							31 0033	-0.2 -0.1						
		M 1100	0.4 0.1							Sa 0702	2.7 0.8						
		1718	2.9 0.9							1331	-0.2 -0.1						
		2335	0.3 0.1							1926	2.0 0.6						

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0312	-1.5	-0.5	16 0310	-0.2	-0.1	1 0442	-1.4	-0.4	16 0403	-0.3	-0.1
Sa 0921	8.4	2.6	Su 0918	6.8	2.1	Tu 1049	7.6	2.3	W 1000	6.6	2.0
1552 -1.1 -0.3			1550 0.0	0.0		1709 -1.1 -0.3			1631 -0.2 -0.1		
2149 6.9 2.1			2126 6.0	1.8		2323 7.0	2.1		2218 6.6	2.0	
2 0405	-1.3	-0.4	17 0347	-0.1	0.0	2 0534	-0.9	-0.3	17 0443	-0.1	0.0
Su 1016	8.1	2.5	M 0951	6.7	2.0	W 1141	7.0	2.1	Th 1039	6.4	2.0
1643 -0.9 -0.3			1627 0.0	0.0		1759 -0.8 -0.2			1706 -0.2 -0.1		
2248 6.8 2.1			2203 6.0	1.8					2302 6.7	2.0	
3 0459	-1.0	-0.3	18 0427	0.0	0.0	3 0018	6.8	2.1	18 0525	0.0	0.0
M 1111	7.7	2.3	Tu 1027	6.5	2.0	Th 0628	-0.5	-0.2	F 1121	6.2	1.9
1736 -0.7 -0.2			1701 0.1	0.0		1231 6.5	2.0		1749 -0.1	0.0	
2348 6.7 2.0			2245 6.0	1.8		1849 -0.4	-0.1		2349 6.7	2.0	
4 0557	-0.7	-0.2	19 0506	0.2	0.1	4 0110	6.6	2.0	19 0616	0.3	0.1
Tu 1207	7.3	2.2	W 1108	6.3	1.9	F 0724	0.0	0.0	Sa 1210	6.0	1.8
1829 -0.5 -0.2			1741 0.1	0.0		1323 6.0	1.8		1839 0.0	0.0	
2331 6.1 1.9						1942 -0.1	0.0				
5 0047	6.6	2.0	20 0551	0.3	0.1	5 0205	6.3	1.9	20 0043	6.7	2.0
W 0657	-0.3	-0.1	Th 1151	6.2	1.9	Sa 0824	0.3	0.1	Su 0716	0.5	0.2
1303 6.8 2.1			1827 0.2	0.1		1414 5.7	1.7		1306 5.8	1.8	
1927 -0.3 -0.1						2041 0.1	0.0		1941 0.0	0.0	
6 0147	6.5	2.0	21 0021	6.2	1.9	6 0304	6.2	1.9	21 0145	6.7	2.0
Th 0758	0.0	0.0	F 0645	0.5	0.2	Su 0924	0.5	0.2	M 0825	0.5	0.2
1358 6.4 2.0			1242 6.0	1.8		1510 5.4	1.6		1409 5.7	1.7	
2025 -0.2 -0.1			1918 0.1	0.0		2135 0.2	0.1		2049 -0.1	0.0	
7 0248	6.5	2.0	22 0115	6.4	2.0	7 0406	6.2	1.9	22 0254	6.8	2.1
F 0901	0.1	0.0	Sa 0746	0.5	0.2	M 1018	0.5	0.2	Tu 0936	0.4	0.1
1457 6.1 1.9			1334 5.8	1.8		1610 5.3	1.6		1522 5.7	1.7	
2120 -0.1 0.0			2015 0.0	0.0		2227 0.2	0.1		2155 -0.4	-0.1	
8 0348	6.6	2.0	23 0214	6.6	2.0	8 0503	6.2	1.9	23 0407	7.0	2.1
Sa 0957	0.2	0.1	Su 0852	0.4	0.1	Tu 1110	0.4	0.1	W 1041	0.0	0.0
1554 5.9 1.8			1433 5.8	1.8		1709 5.4	1.6		1638 6.0	1.8	
2212 -0.1 0.0			2116 -0.2	-0.1		2315 0.1	0.0		2258 -0.8	-0.2	
9 0444	6.7	2.0	24 0319	6.8	2.1	9 0555	6.4	2.0	24 0518	7.4	2.3
Su 1049	0.1	0.0	M 0957	0.2	0.1	W 1158	0.3	0.1	Th 1142	-0.4	-0.1
1649 5.8 1.8			1543 5.8	1.8		1758 5.6	1.7		1747 6.4	2.0	
2258 -0.2 -0.1			2215 -0.6	-0.2		2315 0.1	0.0		2153 0.7	0.2	
10 0534	6.8	2.1	25 0426	7.2	2.2	10 0003	-0.1	0.0	25 0000	-1.2	-0.4
M 1140	0.1	0.0	Tu 1100	-0.1	0.0	Th 0637	6.6	2.0	F 0619	7.8	2.4
1740 5.8 1.8			1652 6.0	1.8		1243 0.1	0.0		1240 -0.8	-0.2	
2346 -0.2 -0.1			2315 -0.9	-0.3		1841 5.8	1.8		1847 7.0	2.1	
11 0621	6.9	2.1	26 0531	7.6	2.3	11 0048	-0.2	-0.1	26 0056	-1.5	-0.5
Tu 1226	0.0	0.0	W 1200	-0.5	-0.2	F 0715	6.8	2.1	Sa 0712	8.1	2.5
1824 5.9 1.8			1758 6.4	2.0		1328 0.0	0.0		1333 -1.2	-0.4	
						1918 6.0	1.8		1941 7.4	2.3	
12 0030	-0.3	-0.1	27 0011	-1.3	-0.4	12 0131	-0.3	-0.1	27 0152	-1.7	-0.5
W 0701	7.0	2.1	Th 0631	8.0	2.4	Sa 0749	6.9	2.1	Su 0803	8.2	2.5
1312 0.0 0.0			1256 -0.9	-0.3		1408 -0.2	-0.1		1423 -1.4	-0.4	
1903 5.9 1.8			1856 6.7	2.0		1954 6.1	1.9		2029 7.7	2.3	
13 0112	-0.3	-0.1	28 0109	-1.6	-0.5	13 0212	-0.4	-0.1	28 0245	-1.8	-0.5
Th 0738	7.0	2.1	F 0725	8.3	2.5	Su 0823	6.9	2.1	M 0849	8.1	2.5
1354 -0.1	0.0		1352 -1.2	-0.4		1445 -0.2	-0.1		1510 -1.5	-0.5	
1940 6.0 1.8			1951 7.0	2.1		2028 6.3	1.9		2116 7.7	2.3	
14 0154	-0.3	-0.1	29 0205	-1.8	-0.5	14 0249	-0.4	-0.1	14 0147	-0.3	-0.1
F 0812	7.0	2.1	Sa 0817	8.4	2.6	M 0854	6.8	2.1	M 0755	6.9	2.1
1435 -0.1	0.0		1443 -1.4	-0.4		1521 -0.3	-0.1		1414 -0.3	-0.1	
2015 6.0 1.8			2043 7.2	2.2		2102 6.4	2.0		2002 6.9	2.1	
15 0234	-0.3	-0.1	30 0259	-1.8	-0.5	15 0326	-0.4	-0.1	15 0226	-0.4	-0.1
Sa 0845	6.9	2.1	Su 0908	8.3	2.5	Tu 0926	6.7	2.0	Tu 0827	6.9	2.1
1513 -0.1	0.0		1533 -1.4	-0.4		1557 -0.3	-0.1		1451 -0.3	-0.1	
2050 6.0 1.8			2136 7.2	2.2		2139 6.5	2.0		2037 7.1	2.2	
31 0350	-1.7	-0.5							2138 8.0	2.4	
M 0958	8.0	2.4							2219 7.6	2.3	
1621 -1.3	-0.4										
2229 7.2	2.2										

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL						MAY						JUNE													
Time	Height	Time	Height	Time	Height	Time	Height																		
Day		Day		Day		Day		Day		Day		Day		Day		Day									
h m	ft m	h m	ft m	h m	ft m	h m	ft m																		
1 0442	-0.6 -0.2	16 0407	-0.3 -0.1	1 0457	0.1 0.0	16 0443	-0.2 -0.1	1 0556	0.6 0.2	16 0623	-0.3 -0.1	F 1033	6.7 2.0	Sa 0954	6.6 2.0	Su 1043	6.1 1.9	M 1035	6.4 2.0						
1647	-0.3 -0.1	1616	-0.3 -0.1	1656	0.4 0.1	1654	-0.2 -0.1	W 1141	5.7 1.7	Th 1236	6.6 2.0	2304	7.2 2.2	2218	7.8 2.4	2312	6.8 2.1	2301	7.8 2.4	1754	1.0 0.3	1846	0.0 0.0		
2 0525	-0.1 0.0	17 0453	0.0 0.0	2 0540	0.5 0.2	17 0538	0.0 0.0	2 0005	6.3 1.9	17 0052	7.2 2.2	Sa 1117	6.3 1.9	Su 1043	6.3 1.9	M 1126	5.8 1.8	Tu 1136	6.2 1.9	Th 0644	0.8 0.2	F 0723	-0.3 -0.1		
1732	0.2 0.1	1704	-0.1 0.0	1741	0.8 0.2	1753	0.0 0.0	1230	5.7 1.7	1340	6.7 2.0	2349	6.8 2.1	2312	7.6 2.3	2357	6.5 2.0	1850	1.2 0.4	1952	0.1 0.0	1340	6.7 2.0		
3 0613	0.4 0.1	18 0546	0.2 0.1	3 0629	0.8 0.2	18 0002	7.5 2.3	3 0055	6.2 1.9	18 0153	6.9 2.1	Su 1201	5.9 1.8	M 1138	6.1 1.9	Tu 1215	5.6 1.7	W 0639	0.1 0.0	F 0737	0.8 0.2	Sa 0822	-0.3 -0.1		
1818	0.6 0.2	1802	0.2 0.1	1831	1.1 0.3	1242	6.2 1.9	1324	5.8 1.8	1444	6.9 2.1	1908	0.3 0.1	1930	1.3 0.4	2009	0.3 0.1	1858	0.2 0.1	1947	1.2 0.4	2058	0.1 0.0	1444	6.9 2.1
4 0036	6.4 2.0	19 0010	7.3 2.2	4 0046	6.2 1.9	19 0106	7.2 2.2	4 0144	6.0 1.8	19 0255	6.6 2.0	M 0706	0.8 0.2	Tu 0647	0.5 0.2	W 0724	1.0 0.3	Th 0743	0.2 0.1	Sa 0830	0.7 0.2	Su 0920	-0.3 -0.1		
1251	5.6 1.7	1242	6.0 1.8	1308	5.5 1.7	1351	6.3 1.9	1416	6.0 1.8	1545	7.1 2.2	1912	1.0 0.3	1908	0.3 0.1	1930	1.3 0.4	2009	0.3 0.1	2049	1.1 0.3	2159	0.0 0.0	1545	7.1 2.2
5 0129	6.1 1.9	20 0116	7.1 2.2	5 0139	6.0 1.8	20 0213	7.0 2.1	5 0239	6.0 1.8	20 0356	6.5 2.0	Tu 0803	1.0 0.3	W 0757	0.5 0.2	Th 0820	1.0 0.3	F 0848	0.0 0.0	Su 0919	0.5 0.2	M 1012	-0.4 -0.1		
1346	5.4 1.6	1353	6.0 1.8	1404	5.6 1.7	1502	6.6 2.0	1512	6.3 1.9	1644	7.3 2.2	2015	1.1 0.3	2020	0.3 0.1	2033	1.3 0.4	2117	0.1 0.0	2144	0.9 0.3	2254	-0.1 0.0	1644	7.3 2.2
6 0228	5.9 1.8	21 0226	7.0 2.1	6 0236	6.0 1.8	21 0319	6.9 2.1	6 0333	6.0 1.8	21 0454	6.4 2.0	W 0903	1.1 0.3	Th 0906	0.4 0.1	F 0916	0.9 0.3	Sa 0946	-0.2 -0.1	M 1008	0.2 0.1	Tu 1102	-0.4 -0.1		
1446	5.4 1.6	1509	6.2 1.9	1503	5.8 1.8	1609	7.0 2.1	1607	6.7 2.0	1738	7.6 2.3	2115	1.1 0.3	2132	0.1 0.0	2132	1.1 0.3	2218	-0.1 0.0	2236	0.5 0.2	2345	-0.1 0.0	1738	7.6 2.3
7 0331	5.9 1.8	22 0337	7.0 2.1	7 0333	6.0 1.8	22 0424	6.9 2.1	7 0430	6.1 1.9	22 0545	6.3 1.9	Th 0959	0.9 0.3	F 1009	0.0 0.0	Sa 1005	0.6 0.2	Su 1041	-0.4 -0.1	Tu 1054	-0.1 0.0	W 1150	-0.4 -0.1		
1548	5.5 1.7	1623	6.7 2.0	1601	6.1 1.9	1708	7.4 2.3	1700	7.2 2.2	1824	7.7 2.3	2211	0.9 0.3	2234	-0.2 -0.1	2225	0.8 0.2	2315	-0.4 -0.1	2327	0.2 0.1	1824	7.7 2.3		
8 0433	6.1 1.9	23 0446	7.2 2.2	8 0430	6.2 1.9	23 0523	6.9 2.1	8 0523	6.3 1.9	23 0634	-0.2 -0.1	F 1049	0.7 0.2	Sa 1105	-0.4 -0.1	Su 1052	0.3 0.1	M 1129	-0.6 -0.2	W 1140	-0.4 -0.1	Th 0632	6.3 1.9		
1646	5.9 1.8	1726	7.2 2.2	1654	6.6 2.0	1800	7.8 2.4	1750	7.7 2.3	1907	7.7 2.3	2303	0.6 0.2	2331	-0.6 -0.2	2315	0.5 0.2	1750	7.7 2.3	1907	7.7 2.3	1235	-0.4 -0.1		
9 0524	6.3 1.9	24 0545	7.4 2.3	9 0521	6.4 2.0	24 0006	-0.5 -0.2	9 0017	-0.1 0.0	24 0120	-0.2 -0.1	Sa 1134	0.4 0.1	Su 1156	-0.7 -0.2	M 1134	0.0 0.0	Tu 0611	6.9 2.1	Th 0612	6.5 2.0	F 0713	6.3 1.9		
1737	6.3 1.9	1819	7.8 2.4	1742	7.1 2.2	1216	-0.7 -0.2	1226	-0.6 -0.2	1317	-0.3 -0.1	2350	0.3 0.1	1845	8.0 2.4	1845	8.1 2.5	1838	8.1 2.5	1946	7.7 2.3	1317	-0.3 -0.1		
10 0608	6.6 2.0	25 0026	-0.9 -0.3	10 0001	0.1 0.0	25 0056	-0.6 -0.2	10 0108	-0.3 -0.1	25 0240	-0.1 0.0	Su 1217	0.1 0.0	M 0636	7.5 2.3	Tu 0605	6.6 2.0	W 0657	6.9 2.1	F 0701	6.5 2.0	Sa 0753	6.2 1.9		
1819	6.7 2.0	1245	-0.9 -0.3	1219	-0.2 -0.1	1301	-0.7 -0.2	1315	-0.8 -0.2	1402	-0.1 0.0	1908	8.1 2.5	1824	7.5 2.3	1824	7.5 2.3	1928	8.1 2.5	1926	8.4 2.6	2023	7.5 2.3	1402	-0.1 0.0
11 0035	0.0 0.0	26 0117	-1.0 -0.3	11 0048	-0.1 0.0	26 0143	-0.6 -0.2	11 0159	-0.5 -0.2	26 0246	-0.1 0.0	M 0645	6.8 2.1	Tu 0722	7.5 2.3	W 0647	6.7 2.0	Th 0738	6.8 2.1	Sa 0749	6.7 2.0	Su 0830	6.1 1.9		
1259	-0.1 0.0	1330	-0.9 -0.3	1300	-0.4 -0.1	1345	-0.6 -0.2	1405	-0.9 -0.3	1442	0.0 0.0	1858	7.2 2.2	1950	8.3 2.5	1905	7.9 2.4	2006	8.0 2.4	2013	8.5 2.6	2057	7.3 2.2	1442	0.0 0.0
12 0118	-0.2 -0.1	27 0205	-1.0 -0.3	12 0133	-0.3 -0.1	27 0227	-0.5 -0.2	12 0250	-0.6 -0.2	27 0327	0.0 0.0	Tu 0721	6.9 2.1	W 0803	7.4 2.3	Th 0728	6.8 2.1	F 0818	6.6 2.0	Su 0838	6.7 2.0	M 0906	6.0 1.8		
1338	-0.3 -0.1	1415	-0.9 -0.3	1343	-0.6 -0.2	1427	-0.4 -0.1	1457	-0.9 -0.3	1522	0.2 0.1	1935	7.5 2.3	2031	8.3 2.5	1947	8.2 2.5	2043	7.8 2.4	2103	8.4 2.6	2133	7.1 2.2	1522	0.2 0.1
13 0200	-0.4 -0.1	28 0250	-0.9 -0.3	13 0219	-0.5 -0.2	28 0310	-0.3 -0.1	13 0341	-0.6 -0.2	28 0406	0.2 0.1	W 0758	7.0 2.1	Th 0844	7.1 2.2	F 0808	6.8 2.1	Sa 0854	6.4 2.0	M 0931	6.6 2.0	Tu 0944	5.9 1.8		
1416	-0.4 -0.1	1456	-0.7 -0.2	1428	-0.6 -0.2	1509	-0.1 0.0	1550	-0.8 -0.2	1602	0.4 0.1	2112	8.0 2.4	2110	8.0 2.4	2030	8.3 2.5	2120	7.5 2.3	2157	8.2 2.5	2208	6.9 2.1	1602	0.4 0.1
14 0241	-0.4 -0.1	29 0333	-0.6 -0.2	14 0305	-0.5 -0.2	29 0350	-0.1 0.0	14 0432	-0.6 -0.2	29 0445	0.3 0.1	Th 0832	6.9 2.1	F 0922	6.8 2.1	Sa 0851	6.7 2.0	Su 0933	6.1 1.9	M 1011	5.9 1.8	W 1133	6.5 2.0		
1453	-0.4 -0.1	1536	-0.4 -0.1	1514	-0.6 -0.2	1547	0.2 0.1	1645	-0.6 -0.2	1640	0.6 0.2	2149	7.7 2.3	2149	7.7 2.3	2115	8.3 2.5	2157	7.2 2.2	2253	7.9 2.4	2248	6.7 2.0	1640	0.6 0.2
15 0323	-0.4 -0.1	30 0415	-0.3 -0.1	15 0352	-0.4 -0.1	30 0432	0.2 0.1	15 0527	-0.5 -0.2	30 0524	0.4 0.1	F 0912	6.8 2.1	Sa 1002	6.4 2.0	Su 0939	6.6 2.0	M 1011	5.9 1.8	W 1133	6.5 2.0	Th 1109	5.9 1.8		
1535	-0.4 -0.1	1616	0.0 0.0	1601	-0.5 -0.2	1627	0.5 0.2	1744	-0.3 -0.1	1723	0.8 0.2	2131	7.9 2.4	2229	7.3 2.2	2206	8.1 2.5	2237	6.8 2.1	2353	7.6 2.3	2328	6.5 2.0	1723	0.8 0.2
2320								31 0512	0.4 0.1																
								Tu 1055	5.8 1.8																
								1709	0.7 0.2																
								2320	6.6 2.0																

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0411	-1.5	-0.5	16 0405	-0.2	-0.1	1 0535	-1.3	-0.4	16 0455	0.0	0.0
Sa 1013	8.9	2.7	Su 0956	7.5	2.3	Tu 1133	8.1	2.5	W 1033	7.3	2.2
1650	-0.9	-0.3	1640	0.0	0.0	1801	-0.9	-0.3	1722	0.0	0.0
2240	7.4	2.3	2158	6.8	2.1				2248	7.5	2.3
2 0503	-1.3	-0.4	17 0442	0.0	0.0	2 0006	7.6	2.3	17 0533	0.1	0.0
Su 1103	8.6	2.6	M 1027	7.4	2.3	W 0625	-0.9	-0.3	Th 1109	7.2	2.2
1740	-0.8	-0.2	1717	0.1	0.0	1220	7.6	2.3	1759	0.0	0.0
2333	7.3	2.2	2235	6.8	2.1	1847	-0.6	-0.2	2333	7.6	2.3
3 0554	-1.0	-0.3	18 0517	0.1	0.0	3 0055	7.4	2.3	18 0615	0.2	0.1
M 1154	8.2	2.5	Tu 1100	7.3	2.2	Th 0715	-0.4	-0.1	F 1154	7.1	2.2
1829	-0.6	-0.2	1754	0.1	0.0	1308	7.1	2.2	1841	0.1	0.0
			2314	6.9	2.1	1935	-0.3	-0.1			
4 0031	7.2	2.2	19 0556	0.2	0.1	4 0147	7.2	2.2	19 0023	7.6	2.3
Tu 0648	-0.7	-0.2	W 1139	7.2	2.2	F 0809	0.0	0.0	Sa 0708	0.4	0.1
1247	7.8	2.4	1833	0.2	0.1	1356	6.7	2.0	1244	6.9	2.1
1919	-0.4	-0.1				2028	0.0	0.0	1932	0.1	0.0
5 0127	7.1	2.2	20 0001	7.1	2.2	5 0239	7.0	2.1	20 0121	7.7	2.3
W 0743	-0.3	-0.1	Th 0638	0.3	0.1	Sa 0905	0.3	0.1	Su 0812	0.6	0.2
1340	7.4	2.3	1223	7.1	2.2	1443	6.4	2.0	1345	6.6	2.0
2012	-0.2	-0.1	1916	0.2	0.1	2122	0.2	0.1	2038	0.1	0.0
6 0222	7.1	2.2	21 0052	7.2	2.2	6 0332	6.9	2.1	21 0224	7.7	2.3
Th 0840	0.0	0.0	F 0733	0.5	0.2	Su 1001	0.4	0.1	M 0924	0.6	0.2
1431	7.0	2.1	1315	6.9	2.1	1537	6.2	1.9	1452	6.5	2.0
2106	-0.1	0.0	2010	0.2	0.1	2216	0.2	0.1	2148	0.0	0.0
7 0317	7.1	2.2	22 0149	7.3	2.2	7 0430	6.9	2.1	22 0336	7.7	2.3
F 0938	0.1	0.0	Sa 0839	0.6	0.2	M 1055	0.4	0.1	Tu 1036	0.3	0.1
1524	6.7	2.0	1411	6.7	2.0	1633	6.1	1.9	1608	6.5	2.0
2159	-0.1	0.0	2110	0.0	0.0	2310	0.1	0.0	2254	-0.4	-0.1
8 0413	7.1	2.2	23 0251	7.5	2.3	8 0529	7.0	2.1	23 0451	7.9	2.4
Sa 1034	0.2	0.1	Su 0950	0.5	0.2	Tu 1148	0.3	0.1	W 1139	0.0	0.0
1618	6.5	2.0	1516	6.6	2.0	1732	6.2	1.9	1727	6.8	2.1
2251	-0.2	-0.1	2214	-0.2	-0.1				2355	-0.8	-0.2
9 0509	7.2	2.2	24 0357	7.6	2.3	9 0000	0.0	0.0	24 0603	8.2	2.5
Su 1127	0.1	0.0	M 1057	0.2	0.1	W 0621	7.1	2.2	Th 1237	-0.5	-0.2
1713	6.4	2.0	1627	6.5	2.0	1237	0.2	0.1	1837	7.2	2.2
2341	-0.3	-0.1	2315	-0.5	-0.2	1827	6.4	2.0			
10 0604	7.4	2.3	25 0510	7.9	2.4	10 0049	-0.2	-0.1	25 0055	-1.3	-0.4
M 1217	0.0	0.0	Tu 1158	-0.1	0.0	Th 0712	7.3	2.2	F 0706	8.6	2.6
1808	6.5	2.0	1742	6.7	2.0	1323	0.0	0.0	1333	-0.9	-0.3
						1914	6.6	2.0	1936	7.7	2.3
11 0029	-0.4	-0.1	26 0014	-0.9	-0.3	11 0135	-0.3	-0.1	26 0151	-1.6	-0.5
Tu 0654	7.5	2.3	W 0621	8.3	2.5	F 0752	7.5	2.3	Sa 0802	8.9	2.7
1306	-0.1	0.0	1257	-0.5	-0.2	1410	-0.1	0.0	1425	-1.2	-0.4
1856	6.5	2.0	1851	7.0	2.1	1955	6.8	2.1	2029	8.1	2.5
12 0116	-0.4	-0.1	27 0112	-1.3	-0.4	12 0221	-0.3	-0.1	27 0245	-1.8	-0.5
W 0738	7.6	2.3	Th 0722	8.7	2.7	Sa 0831	7.5	2.3	Su 0852	8.9	2.7
1351	-0.1	0.0	1354	-0.8	-0.2	1453	-0.1	0.0	1515	-1.3	-0.4
1941	6.6	2.0	1951	7.3	2.2	2031	6.9	2.1	2118	8.4	2.6
13 0200	-0.4	-0.1	28 0208	-1.6	-0.5	13 0303	-0.3	-0.1	28 0336	-1.8	-0.5
Th 0818	7.7	2.3	F 0817	8.9	2.7	Su 0903	7.5	2.3	M 0936	8.7	2.7
1437	-0.1	0.0	1448	-1.1	-0.3	1534	-0.2	-0.1	1603	-1.3	-0.4
2018	6.7	2.0	2044	7.6	2.3	2104	7.0	2.1	2204	8.4	2.6
14 0245	-0.4	-0.1	29 0302	-1.8	-0.5	14 0341	-0.2	-0.1	14 0237	-0.1	0.0
F 0854	7.7	2.3	Sa 0908	9.0	2.7	M 0931	7.5	2.3	M 0834	7.5	2.3
1521	-0.1	0.0	1540	-1.2	-0.4	1611	-0.1	0.0	1502	-0.1	0.0
2052	6.7	2.0	2136	7.8	2.4	2136	7.2	2.2	2039	7.6	2.3
15 0326	-0.3	-0.1	30 0355	-1.8	-0.5	15 0419	-0.1	0.0	15 0318	-0.1	0.0
Sa 0926	7.6	2.3	Su 0958	8.9	2.7	Tu 1000	7.4	2.3	Tu 0906	7.5	2.3
1603	-0.1	0.0	1629	-1.3	-0.4	1648	-0.1	0.0	1540	-0.1	0.0
2126	6.7	2.0	2224	7.8	2.4	2210	7.3	2.2	2115	7.8	2.4
31 0445	-1.6	-0.5									
M 1045	8.5	2.6									
1716	-1.1	-0.3									
2314	7.7	2.3									
31 0448	-0.9	-0.3									
Th 1034	7.7	2.3									
1701	-0.5	-0.2									
2304	8.3	2.5									

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL				MAY				JUNE			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0533	-0.5	-0.2	16 0504	0.1	0.0	1 0550	0.1	0.0	16 0544	0.0	0.0
F 1114	7.2	2.2	Sa 1031	7.1	2.2	Su 1120	6.7	2.0	M 1117	6.8	2.1
1742	-0.1	0.0	1714	0.0	0.0	1751	0.4	0.1	1754	-0.1	0.0
2343	8.0	2.4	2256	8.5	2.6	2349	7.7	2.3	2343	8.4	2.6
2 0618	0.0	0.0	17 0551	0.3	0.1	2 0634	0.4	0.1	17 0636	0.1	0.0
Sa 1152	6.9	2.1	Su 1120	6.9	2.1	M 1201	6.6	2.0	Tu 1218	6.7	2.0
1825	0.3	0.1	1802	0.2	0.1	1836	0.7	0.2	1850	0.1	0.0
			2349	8.3	2.5				1939	1.0	0.3
3 0028	7.6	2.3	18 0645	0.4	0.1	3 0033	7.4	2.3	18 0044	8.1	2.5
Su 0704	0.4	0.1	M 1217	6.7	2.0	Tu 0721	0.7	0.2	W 0735	0.2	0.1
1236	6.6	2.0	1858	0.3	0.1	1247	6.5	2.0	1325	6.7	2.0
1911	0.6	0.2				1926	1.0	0.3	1952	0.2	0.1
4 0113	7.3	2.2	19 0050	8.1	2.5	4 0119	7.2	2.2	19 0148	7.9	2.4
M 0753	0.7	0.2	Tu 0745	0.5	0.2	W 0812	0.8	0.2	Th 0835	0.1	0.0
1324	6.4	2.0	1324	6.6	2.0	1337	6.4	2.0	1433	6.9	2.1
2004	0.9	0.3	2004	0.4	0.1	2020	1.1	0.3	2057	0.2	0.1
5 0203	7.0	2.1	20 0156	7.9	2.4	5 0211	7.0	2.1	20 0249	7.7	2.3
Tu 0849	0.9	0.3	W 0852	0.5	0.2	Th 0905	0.8	0.2	F 0934	-0.1	0.0
1416	6.3	1.9	1438	6.7	2.0	1433	6.5	2.0	1538	7.2	2.2
2101	1.0	0.3	2114	0.3	0.1	2120	1.1	0.3	2202	0.0	0.0
6 0257	6.9	2.1	21 0306	7.8	2.4	6 0304	6.9	2.1	21 0353	7.6	2.3
W 0944	0.9	0.3	Th 0956	0.3	0.1	F 0958	0.7	0.2	Sa 1030	-0.3	-0.1
1511	6.3	1.9	1551	7.0	2.1	1530	6.7	2.0	1641	7.6	2.3
2201	1.0	0.3	2220	0.0	0.0	2217	1.0	0.3	2300	-0.2	-0.1
7 0356	6.9	2.1	22 0414	7.9	2.4	7 0402	6.9	2.1	22 0455	7.5	2.3
Th 1039	0.8	0.2	F 1057	-0.1	0.0	Sa 1049	0.4	0.1	Su 1124	-0.6	-0.2
1612	6.5	2.0	1659	7.4	2.3	1628	7.0	2.1	1741	8.0	2.4
2256	0.8	0.2	2321	-0.4	-0.1	2313	0.7	0.2	2356	-0.5	-0.2
8 0454	6.9	2.1	23 0523	8.0	2.4	8 0457	7.0	2.1	23 0553	7.5	2.3
F 1129	0.5	0.2	Sa 1150	-0.5	-0.2	Su 1139	0.2	0.1	M 1214	-0.8	-0.2
1711	6.7	2.0	1803	8.0	2.4	1723	7.3	2.2	1837	8.4	2.6
2347	0.5	0.2							1235	-0.4	-0.1
9 0550	7.1	2.2	24 0017	-0.7	-0.2	9 0003	0.5	0.2	24 0048	-0.6	-0.2
Sa 1218	0.3	0.1	Su 0622	8.1	2.5	M 0553	7.0	2.1	Tu 0648	7.5	2.3
1806	7.1	2.2	1243	-0.8	-0.2	1225	0.0	0.0	1302	-0.8	-0.2
			1859	8.5	2.6	1816	7.7	2.3	1925	8.7	2.7
10 0037	0.3	0.1	25 0112	-1.0	-0.3	10 0053	0.2	0.1	25 0140	-0.7	-0.2
Su 0639	7.3	2.2	M 0715	8.2	2.5	Tu 0643	7.1	2.2	W 0735	7.4	2.3
1303	0.1	0.0	1331	-1.0	-0.3	1311	-0.2	-0.1	1349	-0.8	-0.2
1854	7.5	2.3	1950	8.8	2.7	1904	8.1	2.5	2010	8.8	2.7
11 0124	0.1	0.0	26 0203	-1.1	-0.3	11 0141	0.0	0.0	26 0229	-0.7	-0.2
M 0724	7.4	2.3	Tu 0803	8.1	2.5	W 0729	7.2	2.2	Th 0819	7.3	2.2
1346	-0.1	0.0	1418	-1.0	-0.3	1354	-0.3	-0.1	1435	-0.6	-0.2
1936	7.8	2.4	2034	9.0	2.7	1949	8.5	2.6	2049	8.7	2.7
12 0209	0.0	0.0	27 0252	-1.1	-0.3	12 0230	-0.1	0.0	27 0315	-0.6	-0.2
Tu 0802	7.4	2.3	W 0846	7.9	2.4	Th 0811	7.2	2.2	F 0858	7.1	2.2
1428	-0.1	0.0	1504	-0.8	-0.2	1439	-0.3	-0.1	1520	-0.4	-0.1
2013	8.1	2.5	2115	8.9	2.7	2031	8.7	2.7	2129	8.5	2.6
13 0255	0.0	0.0	28 0340	-0.9	-0.3	13 0317	-0.1	0.0	28 0358	-0.4	-0.1
W 0837	7.4	2.3	Th 0927	7.6	2.3	F 0853	7.1	2.2	Sa 0935	6.9	2.1
1509	-0.2	-0.1	1549	-0.6	-0.2	1525	-0.3	-0.1	1602	-0.2	-0.1
2051	8.3	2.5	2155	8.7	2.7	2115	8.8	2.7	2205	8.2	2.5
14 0337	0.0	0.0	29 0423	-0.6	-0.2	14 0407	-0.1	0.0	29 0442	-0.2	-0.1
Th 0913	7.3	2.2	F 1004	7.3	2.2	Sa 0936	7.0	2.1	Su 1011	6.7	2.0
1550	-0.1	0.0	1631	-0.3	-0.1	1613	-0.3	-0.1	1643	0.1	0.0
2129	8.5	2.6	2232	8.4	2.6	2200	8.8	2.7	2240	7.9	2.4
15 0420	0.0	0.0	30 0508	-0.3	-0.1	15 0453	-0.1	0.0	30 0524	0.1	0.0
F 0950	7.2	2.2	Sa 1040	7.0	2.1	Su 1024	6.9	2.1	M 1048	6.6	2.0
1629	-0.1	0.0	1712	0.1	0.0	1701	-0.2	-0.1	1724	0.4	0.1
2211	8.5	2.6	2311	8.0	2.4	2248	8.6	2.6	2317	7.6	2.3
									2334	8.4	2.6
									2357	7.3	2.2
									31 0605	0.3	0.1
									Tu 1128	6.5	2.0
									1805	0.6	0.2
									2354	7.4	2.3

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JULY				AUGUST				SEPTEMBER			
Time Day	Height h m	Time Day	Height ft m	Time Day	Height h m	Time Day	Height ft m	Time Day	Height h m	Time Day	Height ft m
1 0655	0.3 0.1	16 0110	7.7 2.3	1 0047	7.2 2.2	16 0222	6.8 2.1	1 0214	6.9 2.1	16 0339	6.6 2.0
F 1223	6.8 2.1	Sa 0744	-0.4 -0.1	M 0742	0.3 0.1	Tu 0859	0.3 0.1	Th 0912	0.5 0.2	F 1017	0.9 0.3
1858	0.8 0.2	1358	7.5 2.3	1326	7.6 2.3	1515	7.6 2.3	1502	8.2 2.5	1633	7.6 2.3
		2014	0.1 0.0	2012	1.1 0.3	2143	0.9 0.3	2204	1.1 0.3	2259	1.1 0.3
2 0039	7.2 2.2	17 0201	7.3 2.2	2 0141	7.0 2.1	17 0317	6.5 2.0	2 0325	6.8 2.1	17 0436	6.7 2.0
Sa 0739	0.3 0.1	Su 0837	-0.3 -0.1	Tu 0838	0.3 0.1	W 0953	0.4 0.1	F 1021	0.3 0.1	Sa 1111	0.8 0.2
1312	7.0 2.1	1452	7.6 2.3	1424	7.8 2.4	1614	7.6 2.3	1613	8.4 2.6	1729	7.7 2.3
1952	1.0 0.3	2114	0.3 0.1	2120	1.1 0.3	2238	0.8 0.2	2310	0.7 0.2	2349	0.9 0.3
3 0129	7.0 2.1	18 0257	6.9 2.1	3 0241	6.8 2.1	18 0414	6.4 2.0	3 0444	7.0 2.1	18 0536	6.9 2.1
Su 0830	0.3 0.1	M 0931	-0.2 -0.1	W 0940	0.2 0.1	Th 1047	0.4 0.1	Sa 1123	-0.1 0.0	Su 1200	0.6 0.2
1406	7.2 2.2	1549	7.6 2.3	1527	8.0 2.4	1710	7.7 2.3	1726	8.7 2.7	1819	7.9 2.4
2053	1.0 0.3	2212	0.4 0.1	2228	0.9 0.3	2329	0.7 0.2				
4 0220	6.9 2.1	19 0351	6.6 2.0	4 0346	6.6 2.0	19 0513	6.5 2.0	4 0008	0.2 0.1	19 0035	0.6 0.2
M 0922	0.2 0.1	Tu 1025	-0.2 -0.1	Th 1042	0.0 0.0	F 1139	0.3 0.1	Su 0600	7.4 2.3	M 0629	7.2 2.2
1500	7.4 2.3	1646	7.7 2.3	1634	8.2 2.5	1806	7.8 2.4	1224	-0.6 -0.2	1248	0.5 0.2
2157	0.9 0.3	2307	0.3 0.1	2329	0.5 0.2			1832	9.1 2.8	1904	8.1 2.5
5 0316	6.7 2.0	20 0449	6.5 2.0	5 0501	6.7 2.0	20 0020	0.6 0.2	5 0104	-0.2 -0.1	20 0121	0.4 0.1
Tu 1016	0.0 0.0	W 1117	-0.2 -0.1	F 1142	-0.4 -0.1	Sa 0609	6.6 2.0	M 0705	7.9 2.4	Tu 0714	7.5 2.3
1602	7.7 2.3	1742	7.8 2.4	1744	8.5 2.6	1229	0.2 0.1	1320	-0.9 -0.3	1333	0.4 0.1
2257	0.6 0.2	2358	0.2 0.1			1853	8.0 2.4	1930	9.4 2.9	1943	8.2 2.5
6 0420	6.6 2.0	21 0545	6.5 2.0	6 0029	0.1 0.0	21 0106	0.4 0.1	6 0157	-0.6 -0.2	21 0203	0.3 0.1
W 1111	-0.2 -0.1	Th 1206	-0.2 -0.1	Sa 0614	6.9 2.1	Su 0659	6.9 2.1	Tu 0802	8.4 2.6	W 0752	7.7 2.3
1702	8.0 2.4	1835	8.0 2.4	1240	-0.7 -0.2	1315	0.2 0.1	1415	-1.1 -0.3	1417	0.4 0.1
2354	0.3 0.1			1848	8.9 2.7	1938	8.1 2.5	2021	9.5 2.9	2016	8.2 2.5
7 0527	6.6 2.0	22 0048	0.1 0.0	7 0126	-0.3 -0.1	22 0152	0.2 0.1	7 0249	-0.9 -0.3	22 0245	0.2 0.1
Th 1206	-0.5 -0.2	F 0639	6.6 2.0	Su 0719	7.3 2.2	M 0742	7.1 2.2	W 0851	8.8 2.7	Th 0826	8.0 2.4
1807	8.4 2.6	1254	-0.2 -0.1	1338	-1.0 -0.3	1401	0.2 0.1	1509	-1.2 -0.4	1459	0.5 0.2
		1922	8.1 2.5	1946	9.2 2.8	2015	8.2 2.5	2109	9.4 2.9	2047	8.1 2.5
8 0050	0.0 0.0	23 0136	0.0 0.0	8 0221	-0.6 -0.2	23 0237	0.1 0.0	8 0338	-1.0 -0.3	23 0323	0.2 0.1
F 0632	6.7 2.0	Sa 0726	6.7 2.0	M 0815	7.7 2.3	Tu 0821	7.3 2.2	Th 0940	8.9 2.7	F 0900	8.1 2.5
1259	-0.7 -0.2	1341	-0.2 -0.1	1433	-1.2 -0.4	1443	0.2 0.1	1600	-1.0 -0.3	1538	0.6 0.2
1906	8.7 2.7	2003	8.1 2.5	2039	9.4 2.9	2048	8.1 2.5	2155	9.1 2.8	2116	8.0 2.4
9 0146	-0.3 -0.1	24 0222	0.0 0.0	9 0314	-0.9 -0.3	24 0317	0.1 0.0	9 0424	-0.9 -0.3	24 0400	0.3 0.1
Sa 0733	6.9 2.1	Su 0807	6.8 2.1	Tu 0908	8.0 2.4	W 0853	7.4 2.3	F 1029	8.9 2.7	Sa 0932	8.3 2.5
1354	-0.9 -0.3	1426	-0.1 0.0	1527	-1.2 -0.4	1525	0.3 0.1	1650	-0.7 -0.2	1615	0.8 0.2
2000	9.0 2.7	2040	8.1 2.5	2129	9.3 2.8	2117	8.1 2.5	2240	8.6 2.6	2146	7.8 2.4
10 0241	-0.5 -0.2	25 0306	-0.1 0.0	10 0403	-1.0 -0.3	25 0356	0.1 0.0	10 0509	-0.7 -0.2	25 0434	0.4 0.1
Su 0828	7.1 2.2	M 0845	6.8 2.1	W 0959	8.1 2.5	Th 0926	7.5 2.3	Sa 1116	8.7 2.7	Su 1008	8.4 2.6
1449	-1.0 -0.3	1511	0.0 0.0	1619	-1.1 -0.3	1603	0.5 0.2	1739	-0.3 -0.1	1656	0.9 0.3
2053	9.1 2.8	2114	8.0 2.4	2218	9.1 2.8	2145	7.9 2.4	2324	8.1 2.5	2219	7.7 2.3
11 0335	-0.7 -0.2	26 0348	-0.1 0.0	11 0451	-1.0 -0.3	26 0432	0.2 0.1	11 0554	-0.3 -0.1	26 0510	0.5 0.2
M 0921	7.3 2.2	Tu 0920	6.9 2.1	Th 1050	8.2 2.5	F 0958	7.6 2.3	Su 1205	8.4 2.6	M 1048	8.4 2.6
1544	-1.1 -0.3	1550	0.2 0.1	1711	-0.9 -0.3	1639	0.6 0.2	1828	0.2 0.1	1735	1.1 0.3
2143	9.1 2.8	2145	7.9 2.4	2304	8.6 2.6	2213	7.8 2.4			2300	7.5 2.3
12 0425	-0.8 -0.2	27 0427	0.0 0.0	12 0538	-0.8 -0.2	27 0507	0.3 0.1	12 0010	7.5 2.3	27 0549	0.6 0.2
Tu 1014	7.4 2.3	W 0952	6.9 2.1	F 1142	8.1 2.5	Sa 1034	7.8 2.4	M 0640	0.1 0.0	Tu 1137	8.4 2.6
1637	-1.0 -0.3	1629	0.3 0.1	1802	-0.5 -0.2	1716	0.8 0.2	1254	8.1 2.5	1823	1.3 0.4
2233	8.9 2.7	2214	7.8 2.4	2354	8.1 2.5	2248	7.7 2.3	1919	0.7 0.2	2349	7.3 2.2
13 0514	-0.8 -0.2	28 0504	0.1 0.0	13 0625	-0.6 -0.2	28 0541	0.4 0.1	13 0057	7.1 2.2	28 0639	0.7 0.2
W 1108	7.4 2.3	Th 1027	7.0 2.1	Sa 1236	8.0 2.4	Su 1114	7.9 2.4	Tu 0729	0.5 0.2	W 1231	8.4 2.6
1730	-0.8 -0.2	1706	0.5 0.2	1854	-0.1 0.0	1753	1.0 0.3	1347	7.9 2.4	1924	1.4 0.4
2325	8.5 2.6	2245	7.6 2.3			2327	7.5 2.3	2012	1.1 0.3		
14 0603	-0.8 -0.2	29 0541	0.2 0.1	14 0042	7.6 2.3	29 0618	0.5 0.2	14 0148	6.8 2.1	29 0049	7.0 2.1
Th 1205	7.4 2.3	F 1104	7.1 2.2	Su 0713	-0.3 -0.1	M 1202	8.0 2.4	W 0822	0.8 0.2	Th 0742	0.8 0.2
1822	-0.5 -0.2	1743	0.7 0.2	1327	7.9 2.4	1844	1.1 0.3	1440	7.7 2.3	1335	8.3 2.5
		2318	7.5 2.3	1947	0.4 0.1			2109	1.3 0.4	2033	1.4 0.4
15 0018	8.1 2.5	30 0618	0.2 0.1	15 0132	7.1 2.2	30 0015	7.3 2.2	15 0240	6.6 2.0	30 0158	6.9 2.1
F 0652	-0.6 -0.2	Sa 1146	7.3 2.2	M 0804	0.1 0.0	Tu 0703	0.5 0.2	Th 0921	1.0 0.3	F 0851	0.7 0.2
1300	7.5 2.3	1823	0.8 0.2	1422	7.8 2.4	1255	8.1 2.5	1536	7.6 2.3	1443	8.4 2.6
1916	-0.2 -0.1			2045	0.7 0.2	1942	1.3 0.4	2204	1.3 0.4	2145	1.2 0.4
31 0000	7.3 2.2					31 0111	7.0 2.1				
Su 0655	0.3 0.1					W 0802	0.6 0.2				
1236	7.4 2.3					1356	8.1 2.5				
1913	1.0 0.3					2053	1.3 0.4				

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER					
Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height	Day	Time	Height
	h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m		h m	ft m
1	0314	7.0 2.1	16	0357	6.8 2.1	1	0530	8.0 2.4	16	0506	7.3 2.2	1	0608	8.4 2.6	16	0515	7.5 2.3
Sa	1001	0.5 0.2	Su	1038	1.1 0.3	Tu	1147	-0.3 -0.1	W	1144	0.7 0.2	Th	1222	-0.5 -0.2	F	1200	0.5 0.2
	1556	8.5 2.6		1641	7.5 2.3		1750	8.6 2.6		1736	7.3 2.2		1821	7.8 2.4		1740	6.8 2.1
	2249	0.7 0.2		2313	0.9 0.3												
2	0433	7.3 2.2	17	0454	7.0 2.1	2	0016	-0.5 -0.2	17	0008	0.2 0.1	2	0040	-0.8 -0.2	17	0017	-0.2 -0.1
Su	1107	0.0 0.0	M	1129	0.9 0.3	W	0629	8.6 2.6	Th	0558	7.7 2.3	F	0702	8.7 2.7	Sa	0612	7.8 2.4
	1707	8.7 2.7		1736	7.7 2.3		1243	-0.6 -0.2		1233	0.6 0.2		1314	-0.7 -0.2		1251	0.2 0.1
	2347	0.2 0.1					1845	8.7 2.7		1825	7.4 2.3		1914	7.8 2.4		1836	6.8 2.1
3	0545	7.8 2.4	18	0001	0.6 0.2	3	0106	-0.8 -0.2	18	0053	0.0 0.0	3	0129	-0.9 -0.3	18	0106	-0.4 -0.1
M	1206	-0.4 -0.1	Tu	0550	7.4 2.3	Th	0724	9.1 2.8	F	0645	8.0 2.4	Sa	0751	8.9 2.7	Su	0704	8.2 2.5
	1812	9.0 2.7		1216	0.7 0.2		1336	-0.8 -0.2		1320	0.4 0.1		1405	-0.7 -0.2		1343	0.1 0.0
				1822	7.8 2.4		1936	8.7 2.7		1910	7.4 2.3		2000	7.7 2.3		1926	6.9 2.1
4	0041	-0.3 -0.1	19	0045	0.4 0.1	4	0155	-0.9 -0.3	19	0138	-0.1 0.0	4	0215	-0.9 -0.3	19	0154	-0.6 -0.2
Tu	0648	8.4 2.6	W	0637	7.7 2.3	F	0813	9.3 2.8	Sa	0730	8.3 2.5	Su	0836	8.9 2.7	M	0754	8.4 2.6
	1301	-0.8 -0.2		1304	0.6 0.2		1427	-0.8 -0.2		1407	0.3 0.1		1453	-0.6 -0.2		1433	-0.1 0.0
	1909	9.3 2.8		1905	7.9 2.4		2022	8.5 2.6		1951	7.4 2.3		2042	7.5 2.3		2013	7.0 2.1
5	0133	-0.7 -0.2	20	0128	0.2 0.1	5	0242	-0.9 -0.3	20	0219	-0.1 0.0	5	0302	-0.7 -0.2	20	0245	-0.7 -0.2
W	0743	9.0 2.7	Th	0721	8.0 2.4	Sa	0857	9.4 2.9	Su	0812	8.6 2.6	M	0916	8.7 2.7	Tu	0840	8.6 2.6
	1356	-0.9 -0.3		1349	0.5 0.2		1517	-0.6 -0.2		1453	0.3 0.1		1541	-0.4 -0.1		1524	-0.1 0.0
	1959	9.3 2.8		1944	7.9 2.4		2106	8.2 2.5		2029	7.4 2.3		2122	7.3 2.2		2100	7.1 2.2
6	0223	-0.9 -0.3	21	0210	0.2 0.1	6	0328	-0.7 -0.2	21	0304	-0.2 -0.1	6	0347	-0.5 -0.2	21	0334	-0.8 -0.2
Th	0832	9.3 2.8	F	0759	8.3 2.5	Su	0940	9.2 2.8	M	0852	8.7 2.7	Tu	0957	8.4 2.6	W	0927	8.7 2.7
	1448	-1.0 -0.3		1432	0.5 0.2		1604	-0.4 -0.1		1539	0.3 0.1		1624	-0.2 -0.1		1613	-0.2 -0.1
	2047	9.2 2.8		2018	7.9 2.4		2145	7.9 2.4		2108	7.3 2.2		2157	7.1 2.2		2147	7.0 2.1
7	0310	-0.9 -0.3	22	0250	0.2 0.1	7	0413	-0.4 -0.1	22	0347	-0.1 0.0	7	0429	-0.2 -0.1	22	0423	-0.8 -0.2
F	0919	9.4 2.9	Sa	0835	8.5 2.6	M	1021	8.8 2.7	Tu	0935	8.7 2.7	W	1034	8.1 2.5	Th	1015	8.6 2.6
	1539	-0.8 -0.2		1514	0.6 0.2		1649	0.0 0.0		1626	0.4 0.1		1706	0.1 0.0		1703	-0.2 -0.1
	2131	8.8 2.7		2050	7.8 2.4		2226	7.5 2.3		2151	7.2 2.2		2234	6.9 2.1		2237	7.0 2.1
8	0356	-0.7 -0.2	23	0329	0.2 0.1	8	0456	0.0 0.0	23	0435	-0.1 0.0	8	0511	0.1 0.0	23	0514	-0.7 -0.2
Sa	1003	9.3 2.8	Su	0909	8.6 2.6	Tu	1103	8.4 2.6	W	1020	8.6 2.6	Th	1112	7.8 2.4	F	1106	8.4 2.6
	1627	-0.5 -0.2		1556	0.7 0.2		1734	0.4 0.1		1715	0.5 0.2		1749	0.3 0.1		1752	-0.2 -0.1
	2213	8.4 2.6		2122	7.6 2.3		2304	7.2 2.2		2237	7.0 2.1		2314	6.7 2.0		2333	7.0 2.1
9	0441	-0.4 -0.1	24	0408	0.3 0.1	9	0538	0.3 0.1	24	0524	0.0 0.0	9	0552	0.3 0.1	24	0607	-0.5 -0.2
Su	1048	9.0 2.7	M	0949	8.7 2.7	W	1145	8.0 2.4	Th	1112	8.5 2.6	F	1149	7.5 2.3	Sa	1201	8.1 2.5
	1714	-0.1 0.0		1640	0.8 0.2		1818	0.7 0.2		1805	0.6 0.2		1831	0.5 0.2		1844	-0.2 -0.1
	2255	7.9 2.4		2202	7.5 2.3		2346	6.9 2.1		2333	6.9 2.1		2354	6.6 2.0			
10	0524	-0.1 0.0	25	0450	0.4 0.1	10	0622	0.7 0.2	25	0618	0.1 0.0	10	0634	0.6 0.2	25	0034	7.0 2.1
M	1133	8.6 2.6	Tu	1030	8.7 2.7	Th	1227	7.7 2.3	F	1210	8.3 2.5	Sa	1231	7.3 2.2	Su	0703	-0.3 -0.1
	1801	0.4 0.1		1724	1.0 0.3		1905	1.0 0.3		1900	0.6 0.2		1916	0.7 0.2		1258	7.8 2.4
	2337	7.4 2.3		2244	7.3 2.2											1938 -0.1 0.0	
11	0609	0.4 0.1	26	0533	0.5 0.2	11	0031	6.7 2.0	26	0039	6.8 2.1	11	0042	6.6 2.0	26	0136	7.1 2.2
Tu	1220	8.2 2.5	W	1120	8.6 2.6	F	0710	1.0 0.3	Sa	0716	0.2 0.1	Su	0723	0.8 0.2	M	0804	-0.2 -0.1
	1850	0.9 0.3		1813	1.1 0.3		1315	7.5 2.3		1311	8.1 2.5		1315	7.1 2.2		1354	7.5 2.3
				2335	7.1 2.2		1956	1.2 0.4		2000	0.5 0.2		2005	0.7 0.2		2036	-0.2 -0.1
12	0019	7.0 2.1	27	0626	0.6 0.2	12	0122	6.6 2.0	27	0147	6.9 2.1	12	0132	6.6 2.0	27	0240	7.2 2.2
W	0655	0.8 0.2	Th	1218	8.4 2.6	Sa	0804	1.2 0.4	Su	0821	0.3 0.1	M	0815	1.0 0.3	Tu	0906	-0.1 0.0
	1308	7.9 2.4		1912	1.2 0.4		1404	7.3 2.2		1414	7.9 2.4		1401	7.0 2.1		1454	7.3 2.2
	1940	1.2 0.4					2049	1.2 0.4		2102	0.4 0.1		2057	0.7 0.2		2134	-0.3 -0.1
13	0110	6.8 2.1	28	0039	6.9 2.1	13	0217	6.6 2.0	28	0257	7.2 2.2	13	0224	6.8 2.1	28	0343	7.4 2.3
Th	0747	1.1 0.3	F	0727	0.7 0.2	Su	0901	1.2 0.4	M	0927	0.2 0.1	Tu	0913	1.0 0.3	W	1008	-0.1 0.0
	1400	7.6 2.3		1321	8.3 2.5		1455	7.2 2.2		1518	7.8 2.4		1453	6.9 2.1		1553	7.1 2.2
	2033	1.4 0.4		2017	1.2 0.4		2143	1.0 0.3		2201	0.0 0.0		2149	0.5 0.2		2230	-0.4 -0.1
14	0201	6.7 2.0	29	0152	6.9 2.1	14	0312	6.8 2.1	29	0404	7.5 2.3	14	0319	6.9 2.1	29	0445	7.6 2.3
F	0843	1.3 0.4	Sa	0837	0.7 0.2	M	0959	1.2 0.4	Tu	1030	-0.1 0.0	W	1012	0.9 0.3	Th	1106	-0.2 -0.1
	1452	7.5 2.3		1428	8.3 2.5		1549	7.2 2.2		1622	7.8 2.4		1545	6.8 2.1		1655	6.9 2.1
	2129	1.4 0.4		2125	0.9 0.3		2233	0.8 0.2		2257	-0.3 -0.1		2240	0.3 0.1		2323	-0.6 -0.2
15	0258	6.7 2.0	30	0307	7.1 2.2	15	0410	7.0 2.1	30	0508	7.9 2.4	15	0417	7.2 2.2	30	0545	7.9 2.4
Sa	0941	1.3 0.4	Su	0945	0.4 0.1	Tu	1052	1.0 0.3	W	1127	-0.3 -0.1	Th	1108	0.7 0.2	F	1200	-0.4 -0.1
	1548	7.5 2.3		1538	8.3 2.5		1644	7.3 2.2		1724	7.8 2.4		1644	6.8 2.1		1755	6.9 2.1
	2224	1.2 0.4		2227	0.5 0.2		2321	0.5 0.2		2350	-0.6 -0.2		2331	0.0 0.0			
				31	0422	7.5 2.3									31	0014	-0.7 -0.2
				M	1049	0.1 0.0									Sa	0640	8.1 2.5
					1646	8.4 2.6										1252	-0.5 -0.2
					2323	0.0 0.0										1849	7.0 2.1

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY

FEBRUARY

MARCH

Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
Day		Day		Day		Day		Day			
h m	ft	m	h m	ft	m	h m	ft	m	h m		
1 0315	-1.2	-0.4	16 0310	-0.3	-0.1	1 0455	-1.1	-0.3	16 0403	-0.3	-0.1
Sa 1006	5.3	1.6	Su 1002	4.3	1.3	Tu 1128	4.6	1.4	W 1043	4.1	1.2
1609	-1.0	-0.3	1555	-0.1	0.0	1730	-1.1	-0.3	1630	-0.3	-0.1
2227	4.3	1.3	2214	3.6	1.1	2354	4.4	1.3	2257	4.0	1.2
2 0413	-1.0	-0.3	17 0347	-0.1	0.0	2 0554	-0.7	-0.2	17 0443	-0.2	-0.1
Su 1059	5.1	1.6	M 1037	4.2	1.3	W 1218	4.3	1.3	Th 1115	4.0	1.2
1703	-0.9	-0.3	1627	-0.1	0.0	1821	-0.8	-0.2	1707	-0.3	-0.1
2324	4.3	1.3	2249	3.7	1.1				2336	4.1	1.2
3 0512	-0.7	-0.2	18 0422	0.0	0.0	3 0046	4.3	1.3	18 0531	0.0	0.0
M 1152	4.9	1.5	Tu 1109	4.1	1.2	Th 0653	-0.3	-0.1	F 1154	3.8	1.2
1800	-0.7	-0.2	1703	0.0	0.0	1309	4.0	1.2	1752	-0.2	-0.1
			2327	3.7	1.1				1741	-0.6	-0.2
4 0020	4.3	1.3	19 0507	0.1	0.0	4 0142	4.2	1.3	19 0020	4.1	1.2
Tu 0615	-0.4	-0.1	W 1145	4.0	1.2	F 0755	0.0	0.0	Sa 0625	0.1	0.0
1246	4.6	1.4	1741	0.0	0.0	1404	3.8	1.2	1239	3.7	1.1
1855	-0.6	-0.2				2007	-0.3	-0.1	1842	-0.2	-0.1
5 0119	4.3	1.3	20 0004	3.8	1.2	5 0239	4.1	1.2	20 0111	4.1	1.2
W 0719	-0.2	-0.1	Th 0554	0.3	0.1	Sa 0856	0.2	0.1	Su 0729	0.3	0.1
1345	4.4	1.3	1222	3.9	1.2	1500	3.5	1.1	1335	3.5	1.1
1952	-0.4	-0.1	1826	0.0	0.0	2103	-0.1	0.0	1940	-0.1	0.0
6 0219	4.3	1.3	21 0049	3.9	1.2	6 0339	4.1	1.2	21 0218	4.2	1.3
Th 0825	0.0	0.0	F 0649	0.4	0.1	Su 0956	0.3	0.1	M 0840	0.2	0.1
1441	4.1	1.2	1308	3.8	1.2	1559	3.4	1.0	1444	3.4	1.0
2047	-0.3	-0.1	1917	0.0	0.0	2159	0.0	0.0	2049	-0.2	-0.1
7 0317	4.3	1.3	22 0143	4.0	1.2	7 0437	4.1	1.2	22 0334	4.2	1.3
F 0928	0.1	0.0	Sa 0751	0.4	0.1	M 1049	0.3	0.1	Tu 0953	0.1	0.0
1538	3.9	1.2	1403	3.6	1.1	1655	3.4	1.0	1557	3.4	1.0
2141	-0.2	-0.1	2013	-0.1	0.0				2157	-0.4	-0.1
8 0415	4.4	1.3	23 0245	4.1	1.2	8 0532	4.1	1.2	23 0449	4.4	1.3
Sa 1026	0.2	0.1	Su 0902	0.3	0.1	Tu 1142	0.2	0.1	W 1100	-0.2	-0.1
1634	3.8	1.2	1504	3.5	1.1	1747	3.4	1.0	1713	3.6	1.1
2231	-0.2	-0.1	2113	-0.3	-0.1	2337	-0.1	0.0	2305	-0.7	-0.2
9 0510	4.4	1.3	24 0352	4.3	1.3	9 0624	4.2	1.3	24 0556	4.6	1.4
Su 1121	0.1	0.0	M 1010	0.1	0.0	W 1227	0.1	0.0	Th 1201	-0.6	-0.2
1726	3.7	1.1	1618	3.5	1.1	1833	3.5	1.1	1819	3.8	1.2
2320	-0.2	-0.1	2215	-0.5	-0.2				1713	3.5	1.1
10 0558	4.5	1.4	25 0502	4.5	1.4	10 0022	-0.2	-0.1	25 0006	-1.0	-0.3
M 1209	0.0	0.0	Tu 1115	-0.3	-0.1	Th 0705	4.3	1.3	F 0656	4.8	1.5
1815	3.6	1.1	1726	3.6	1.1	1308	-0.1	0.0	1254	-0.9	-0.3
			2318	-0.8	-0.2	1919	3.6	1.1	1915	4.1	1.2
11 0005	-0.3	-0.1	26 0609	4.7	1.4	11 0104	-0.3	-0.1	26 0104	-1.3	-0.4
Tu 0646	4.5	1.4	W 1215	-0.6	-0.2	F 0747	4.3	1.3	Sa 0749	5.0	1.5
1252	-0.1	0.0	1832	3.7	1.1				1347	-1.2	-0.4
1902	3.6	1.1				1959	3.6	1.1	2008	4.4	1.3
12 0047	-0.3	-0.1	27 0015	-1.1	-0.3	12 0142	-0.4	-0.1	27 0158	-1.4	-0.4
W 0730	4.5	1.4	Th 0709	4.9	1.5	Su 0826	4.3	1.3	Su 0840	5.0	1.5
1334	-0.1	0.0	1312	-0.9	-0.3	1421	-0.3	-0.1	1435	-1.3	-0.4
1943	3.6	1.1	1928	3.9	1.2	2037	3.7	1.1	2100	4.5	1.4
13 0125	-0.4	-0.1	28 0114	-1.4	-0.4	13 0217	-0.4	-0.1	28 0251	-1.4	-0.4
Th 0810	4.5	1.4	F 0805	5.1	1.6	Su 0903	4.3	1.3	M 0929	4.9	1.5
1413	-0.2	-0.1	1405	-1.2	-0.4	1453	-0.4	-0.1	1523	-1.4	-0.4
2024	3.6	1.1	2025	4.1	1.2	2114	3.8	1.2	2147	4.6	1.4
14 0202	-0.4	-0.1	29 0209	-1.5	-0.5	14 0252	-0.4	-0.1			
F 0849	4.4	1.3	Sa 0857	5.1	1.6	M 0936	4.3	1.3	14 0153	-0.4	-0.1
1448	-0.2	-0.1	1457	-1.3	-0.4	1524	-0.4	-0.1	1418	-0.4	-0.1
2101	3.6	1.1	2118	4.3	1.3	2149	3.8	1.2	1454	-1.1	-0.3
15 0236	-0.3	-0.1	30 0305	-1.5	-0.5	15 0326	-0.4	-0.1	15 0229	-0.4	-0.1
Sa 0926	4.4	1.3	Su 0949	5.1	1.6	Tu 1011	4.2	1.3	Tu 0908	4.3	1.3
1523	-0.2	-0.1	1547	-1.3	-0.4	1556	-0.4	-0.1	1450	-0.4	-0.1
2138	3.6	1.1	2209	4.3	1.3	2222	3.9	1.2	2120	4.3	1.3
31 0400	-1.3	-0.4							2208	4.9	1.5
			M 1038	4.9	1.5				31 0412	-0.7	-0.2
			1638	-1.2	-0.4				Th 1031	4.3	1.3
			2300	4.4	1.3				1618	-0.7	-0.2
									2251	4.8	1.5

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 Heights are referred to mean low water which is the chart datum of soundings.

MAYPORT, FLA., 1983

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Times and Heights of High and Low Waters

APRIL				MAY				JUNE									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m	Day	h m	ft	m		
1 0459	-0.4	-0.1	16 0416	-0.3	-0.1	1 0517	0.1	0.0	16 0500	-0.3	-0.1	1 0002	4.3	1.3	16 0038	4.8	1.5
F 1114	4.1	1.2	Sa 1039	4.1	1.2	Su 1128	3.8	1.2	M 1120	4.0	1.2	W 0613	0.5	0.2	Th 0648	-0.5	-0.2
1703	-0.3	-0.1	1618	-0.4	-0.1	1707	0.2	0.1	1659	-0.3	-0.1	1226	3.6	1.1	1311	4.2	1.3
2336	4.6	1.4	2259	4.8	1.5	2349	4.5	1.4	2349	4.9	1.5	1802	0.7	0.2	1905	-0.1	0.0
2 0551	0.0	0.0	17 0506	-0.1	0.0	2 0605	0.4	0.1	17 0600	-0.2	-0.1	2 0049	4.1	1.2	17 0138	4.6	1.4
Sa 1200	3.9	1.2	Su 1126	3.9	1.2	M 1215	3.7	1.1	Tu 1221	3.9	1.2	Th 0659	0.6	0.2	F 0748	-0.4	-0.1
1746	0.0	0.0	1708	-0.2	-0.1	1753	0.5	0.2	1802	-0.1	0.0	1316	3.6	1.1	1414	4.3	1.3
			2352	4.7	1.4							1853	0.9	0.3	2014	0.0	0.0
3 0023	4.4	1.3	18 0605	0.1	0.0	3 0037	4.3	1.3	18 0050	4.7	1.4	3 0134	4.0	1.2	18 0238	4.4	1.3
Su 0642	0.3	0.1	M 1221	3.8	1.2	Tu 0657	0.7	0.2	W 0705	-0.1	0.0	F 0745	0.6	0.2	Sa 0845	-0.4	-0.1
1247	3.7	1.1	1807	0.0	0.0	1303	3.6	1.1	1324	4.0	1.2	1407	3.7	1.1	1516	4.4	1.3
1837	0.4	0.1				1845	0.8	0.2	1912	0.1	0.0	1953	0.9	0.3	2120	0.0	0.0
4 0116	4.2	1.3	19 0053	4.6	1.4	4 0130	4.1	1.2	19 0156	4.6	1.4	4 0226	3.9	1.2	19 0338	4.2	1.3
M 0738	0.6	0.2	Tu 0712	0.2	0.1	W 0749	0.8	0.2	Th 0808	-0.1	0.0	Sa 0834	0.6	0.2	Su 0940	-0.4	-0.1
1340	3.6	1.1	1327	3.8	1.2	1357	3.6	1.1	1430	4.1	1.2	1458	3.9	1.2	1615	4.6	1.4
1934	0.6	0.2	1915	0.2	0.1	1945	0.9	0.3	2026	0.1	0.0	2054	0.9	0.3	2221	0.0	0.0
5 0214	4.1	1.2	20 0203	4.5	1.4	5 0225	4.0	1.2	20 0300	4.5	1.4	5 0317	3.9	1.2	20 0435	4.1	1.2
Tu 0838	0.8	0.2	W 0822	0.2	0.1	Th 0844	0.8	0.2	F 0910	-0.2	-0.1	Su 0921	0.4	0.1	M 1031	-0.4	-0.1
1438	3.5	1.1	1437	3.8	1.2	1454	3.7	1.1	1535	4.3	1.3	1551	4.0	1.2	1710	4.7	1.4
2037	0.8	0.2	2031	0.2	0.1	2048	1.0	0.3	2135	0.1	0.0	2153	0.7	0.2	2318	-0.1	0.0
6 0314	4.0	1.2	21 0317	4.5	1.4	6 0322	4.0	1.2	21 0404	4.4	1.3	6 0412	3.8	1.2	21 0530	4.0	1.2
W 0933	0.8	0.2	Th 0928	0.1	0.0	F 0933	0.8	0.2	Sa 1007	-0.3	-0.1	M 1007	0.2	0.1	Tu 1121	-0.5	-0.2
1538	3.6	1.1	1548	4.0	1.2	1549	3.8	1.2	1637	4.5	1.4	1644	4.3	1.3	1803	4.8	1.5
2137	0.8	0.2	2144	0.1	0.0	2146	0.9	0.3	2239	-0.1	0.0	2248	0.4	0.1			
7 0415	4.0	1.2	22 0423	4.5	1.4	7 0418	4.0	1.2	22 0502	4.4	1.3	7 0503	3.8	1.2	22 0009	-0.2	-0.1
Th 1025	0.7	0.2	F 1028	-0.1	0.0	Sa 1018	0.6	0.2	Su 1058	-0.5	-0.2	Tu 1055	-0.1	0.0	W 0619	3.9	1.2
1635	3.7	1.1	1652	4.3	1.3	1641	4.0	1.2	1733	4.7	1.4	1735	4.5	1.4	1206	-0.5	-0.2
2231	0.6	0.2	2249	-0.2	-0.1	2239	0.7	0.2	2334	-0.3	-0.1	2339	0.1	0.0	1849	4.8	1.5
8 0508	4.1	1.2	23 0525	4.6	1.4	8 0508	4.1	1.2	23 0555	4.3	1.3	8 0555	3.9	1.2	23 0056	-0.3	-0.1
F 1111	0.6	0.2	Sa 1122	-0.4	-0.1	Su 1100	0.3	0.1	M 1147	-0.6	-0.2	W 1142	-0.4	-0.1	Th 0707	3.8	1.2
1727	3.9	1.2	1751	4.6	1.4	1730	4.2	1.3	1822	4.9	1.5	1825	4.7	1.4	1249	-0.5	-0.2
2321	0.4	0.1	2348	-0.4	-0.1	2328	0.4	0.1							1934	4.8	1.5
9 0556	4.2	1.3	24 0619	4.7	1.4	9 0555	4.1	1.2	24 0027	-0.4	-0.1	9 0030	-0.2	-0.1	24 0141	-0.3	-0.1
Sa 1153	0.3	0.1	Su 1211	-0.7	-0.2	M 1142	0.0	0.0	Tu 0644	4.2	1.3	Th 0646	3.9	1.2	F 0752	3.8	1.2
1814	4.1	1.2	1843	4.8	1.5	1815	4.5	1.4	1232	-0.7	-0.2	1230	-0.7	-0.2	1331	-0.5	-0.2
								1910	5.0	1.5	1914	4.9	1.5	2016	4.8	1.5	
10 0006	0.2	0.1	25 0042	-0.6	-0.2	10 0014	0.1	0.0	25 0115	-0.5	-0.2	10 0119	-0.5	-0.2	25 0222	-0.3	-0.1
Su 0641	4.3	1.3	M 0709	4.6	1.4	Tu 0640	4.1	1.2	W 0731	4.2	1.3	F 0739	3.9	1.2	Sa 0834	3.7	1.1
1230	0.1	0.0	1258	-0.8	-0.2	1219	-0.3	-0.1	1315	-0.7	-0.2	1316	-0.9	-0.3	1411	-0.4	-0.1
1855	4.3	1.3	1931	5.0	1.5	1900	4.7	1.4	1955	5.0	1.5	2005	5.1	1.6	2057	4.7	1.4
11 0048	0.0	0.0	26 0131	-0.8	-0.2	11 0057	-0.2	-0.1	26 0201	-0.5	-0.2	11 0210	-0.7	-0.2	26 0304	-0.2	-0.1
M 0721	4.3	1.3	Tu 0755	4.6	1.4	W 0723	4.1	1.2	Th 0815	4.0	1.2	Sa 0829	4.0	1.2	Su 0913	3.7	1.1
1304	-0.2	-0.1	1341	-0.9	-0.3	1301	-0.5	-0.2	1356	-0.6	-0.2	1405	-0.9	-0.3	1449	-0.3	-0.1
1936	4.5	1.4	2017	5.1	1.6	1943	4.9	1.5	2038	4.9	1.5	2057	5.2	1.6	2136	4.6	1.4
12 0125	-0.2	-0.1	27 0219	-0.8	-0.2	12 0141	-0.4	-0.1	27 0244	-0.5	-0.2	12 0303	-0.8	-0.2	27 0342	-0.1	0.0
Tu 0800	4.3	1.3	W 0839	4.4	1.3	Th 0806	4.1	1.2	F 0856	3.9	1.2	Su 0922	4.0	1.2	M 0953	3.7	1.1
1339	-0.4	-0.1	1423	-0.8	-0.2	1343	-0.6	-0.2	1436	-0.5	-0.2	1459	-0.9	-0.3	1527	-0.1	0.0
2014	4.6	1.4	2059	5.1	1.6	2026	5.0	1.5	2117	4.8	1.5	2149	5.2	1.6	2213	4.5	1.4
13 0206	-0.4	-0.1	28 0303	-0.7	-0.2	13 0228	-0.5	-0.2	28 0326	-0.3	-0.1	13 0355	-0.8	-0.2	28 0418	0.0	0.0
W 0837	4.3	1.3	Th 0923	4.3	1.3	F 0851	4.1	1.2	Sa 0937	3.8	1.2	M 1015	4.0	1.2	Tu 1033	3.6	1.1
1414	-0.5	-0.2	1505	-0.7	-0.2	1427	-0.7	-0.2	1514	-0.3	-0.1	1552	-0.8	-0.2	1603	0.1	0.0
2053	4.7	1.4	2142	5.0	1.5	2112	5.1	1.6	2200	4.7	1.4	2245	5.1	1.6	2252	4.4	1.3
14 0246	-0.4	-0.1	29 0348	-0.5	-0.2	14 0315	-0.6	-0.2	29 0408	-0.1	0.0	14 0451	-0.7	-0.2	29 0456	0.2	0.1
Th 0916	4.2	1.3	F 1005	4.1	1.2	Sa 0937	4.1	1.2	Su 1019	3.7	1.1	Tu 1112	4.1	1.2	W 1112	3.7	1.1
1452	-0.5	-0.2	1544	-0.4	-0.1	1514	-0.7	-0.2	1553	-0.1	0.0	1651	-0.6	-0.2	1641	0.3	0.1
2131	4.8	1.5	2224	4.8	1.5	2201	5.1	1.6	2238	4.6	1.4	2339	5.0	1.5	2331	4.3	1.3
15 0330	-0.4	-0.1	30 0432	-0.2	-0.1	15 0405	-0.5	-0.2	30 0447	0.1	0.0	15 0549	-0.6	-0.2	30 0531	0.3	0.1
F 0955	4.2	1.3	Sa 1046	3.9	1.2	Su 1028	4.0	1.2	M 1059	3.7	1.1	Tu 1141	3.6	1.1	Th 1152	3.7	1.1
1534	-0.5	-0.2	1626	-0.1	0.0	1604	-0.5	-0.2	1632	0.2	0.1	1757	-0.3	-0.1	1723	0.5	0.2
2211	4.9	1.5	2307	4.6	1.4	2252	5.0	1.5	2320	4.4	1.3						

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JULY						AUGUST						SEPTEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0007	4.1	1.2	16 0113	4.6	1.4	1 0045	4.1	1.2	16 0236	4.1	1.2	1 0206	4.1	1.2	16 0402	4.2	1.3
F 0610	0.4	0.1	Sa 0719	-0.5	-0.2	M 0650	0.3	0.1	Tu 0839	0.3	0.1	Th 0812	0.6	0.2	F 1002	1.1	0.3
1234	3.8	1.2	1349	4.5	1.4	1321	4.3	1.3	1518	4.8	1.5	1457	4.9	1.5	1641	4.9	1.5
1810	0.7	0.2	1954	0.0	0.0	1925	0.8	0.2	2135	0.7	0.2	2119	1.0	0.3	2253	1.2	0.4
2 0046	4.0	1.2	17 0211	4.3	1.3	2 0134	3.9	1.2	17 0336	4.0	1.2	2 0319	4.1	1.2	17 0457	4.3	1.3
Sa 0650	0.4	0.1	Su 0815	-0.4	-0.1	Tu 0742	0.3	0.1	W 0936	0.4	0.1	F 0919	0.4	0.1	Sa 1057	1.0	0.3
1318	3.9	1.2	1447	4.5	1.4	1417	4.4	1.3	1617	4.8	1.5	1612	5.0	1.5	1733	5.0	1.5
1905	0.8	0.2	2100	0.2	0.1	2031	0.8	0.2	2232	0.7	0.2	2225	0.7	0.2	2342	1.0	0.3
3 0132	3.9	1.2	18 0308	4.1	1.2	3 0231	3.8	1.2	18 0434	3.9	1.2	3 0433	4.2	1.3	18 0547	4.4	1.3
Su 0737	0.4	0.1	M 0910	-0.2	-0.1	W 0839	0.2	0.1	Th 1031	0.4	0.1	Sa 1029	0.2	0.1	Su 1143	0.9	0.3
1407	4.0	1.2	1548	4.5	1.4	1521	4.6	1.4	1713	4.8	1.5	1721	5.3	1.6	1819	5.1	1.6
2004	0.8	0.2	2200	0.2	0.1	2140	0.7	0.2	2324	0.7	0.2	2327	0.3	0.1			
4 0219	3.8	1.2	19 0406	3.9	1.2	4 0338	3.8	1.2	19 0527	4.0	1.2	4 0543	4.4	1.3	19 0020	0.9	0.3
M 0827	0.2	0.1	Tu 1004	-0.2	-0.1	Th 0940	0.0	0.0	F 1121	0.4	0.1	Su 1132	-0.1	0.0	M 0632	4.6	1.4
1500	4.1	1.2	1646	4.7	1.4	1628	4.7	1.4	1803	4.9	1.5	1823	5.5	1.7	1225	0.7	0.2
2109	0.7	0.2	2257	0.2	0.1	2245	0.4	0.1							1900	5.2	1.6
5 0315	3.7	1.1	20 0501	3.8	1.2	5 0449	3.8	1.2	20 0009	0.6	0.2	5 0025	-0.1	0.0	20 0058	0.7	0.2
Tu 0919	0.1	0.0	W 1056	-0.1	0.0	F 1044	-0.2	-0.1	Sa 0617	4.0	1.2	M 0643	4.7	1.4	Tu 0715	4.7	1.4
1558	4.3	1.3	1738	4.7	1.4	1736	5.0	1.5	1208	0.3	0.1	1232	-0.4	-0.1	1304	0.6	0.2
2210	0.4	0.1	2350	0.2	0.1	2345	0.0	0.0	1851	4.9	1.5	1918	5.6	1.7	1939	5.2	1.6
6 0414	3.7	1.1	21 0555	3.8	1.2	6 0555	4.0	1.2	21 0054	0.4	0.1	6 0115	-0.4	-0.1	21 0132	0.5	0.2
W 1014	-0.2	-0.1	Th 1142	-0.1	0.0	Sa 1145	-0.5	-0.2	Su 0703	4.1	1.2	Tu 0738	5.0	1.5	W 0754	4.9	1.5
1657	4.6	1.4	1827	4.7	1.4	1837	5.2	1.6	1250	0.2	0.1	1328	-0.6	-0.2	1340	0.5	0.2
2308	0.1	0.0							1931	5.0	1.5	2010	5.7	1.7	2015	5.1	1.6
7 0516	3.7	1.1	22 0035	0.1	0.0	7 0042	-0.3	-0.1	22 0132	0.3	0.1	7 0205	-0.6	-0.2	22 0203	0.4	0.1
Th 1108	-0.5	-0.2	F 0643	3.8	1.2	Su 0657	4.2	1.3	M 0745	4.2	1.3	W 0830	5.3	1.6	Th 0831	5.0	1.5
1756	4.8	1.5	1228	-0.2	-0.1	1241	-0.8	-0.2	1329	0.2	0.1	1421	-0.7	-0.2	1414	0.5	0.2
			1913	4.8	1.5	1933	5.4	1.6	2010	5.0	1.5	2059	5.7	1.7	2050	5.1	1.6
8 0005	-0.2	-0.1	23 0120	0.0	0.0	8 0136	-0.6	-0.2	23 0208	0.3	0.1	8 0253	-0.7	-0.2	23 0233	0.4	0.1
F 0617	3.8	1.2	Sa 0728	3.8	1.2	M 0755	4.4	1.3	Tu 0825	4.3	1.3	Th 0921	5.4	1.6	F 0905	5.0	1.5
1203	-0.7	-0.2	1310	-0.2	-0.1	1339	-1.0	-0.3	1405	0.2	0.1	1515	-0.6	-0.2	1449	0.5	0.2
1852	5.0	1.5	1955	4.8	1.5	2028	5.5	1.7	2047	4.9	1.5	2147	5.5	1.7	2123	5.0	1.5
9 0101	-0.5	-0.2	24 0200	0.0	0.0	9 0227	-0.8	-0.2	24 0240	0.2	0.1	9 0341	-0.7	-0.2	24 0304	0.4	0.1
Sa 0715	3.9	1.2	Su 0810	3.8	1.2	Tu 0849	4.6	1.4	W 0900	4.4	1.3	F 1011	5.5	1.7	Sa 0937	5.1	1.6
1256	-0.9	-0.3	1350	-0.2	-0.1	1435	-1.0	-0.3	1439	0.2	0.1	1609	-0.4	-0.1	1526	0.6	0.2
1949	5.2	1.6	2034	4.7	1.4	2119	5.5	1.7	2122	4.9	1.5	2236	5.3	1.6	2157	4.9	1.5
10 0153	-0.7	-0.2	25 0238	0.0	0.0	10 0318	-0.9	-0.3	25 0310	0.2	0.1	10 0429	-0.4	-0.1	25 0337	0.4	0.1
Su 0811	4.0	1.2	M 0850	3.8	1.2	W 0943	4.8	1.5	Th 0937	4.5	1.4	Sa 1101	5.5	1.7	Su 1013	5.1	1.6
1351	-1.1	-0.3	1426	-0.1	0.0	1530	-0.9	-0.3	1514	0.3	0.1	1704	0.0	0.0	1604	0.7	0.2
2043	5.3	1.6	2113	4.7	1.4	2211	5.4	1.6	2154	4.8	1.5	2323	5.0	1.5	2230	4.7	1.4
11 0247	-0.9	-0.3	26 0314	0.0	0.0	11 0410	-0.9	-0.3	26 0342	0.3	0.1	11 0517	-0.1	0.0	26 0414	0.5	0.2
M 0906	4.2	1.3	Tu 0928	3.9	1.2	Th 1035	4.9	1.5	F 1009	4.5	1.4	Su 1152	5.4	1.6	M 1050	5.2	1.6
1447	-1.1	-0.3	1502	0.0	0.0	1627	-0.7	-0.2	1547	0.5	0.2	1800	0.4	0.1	1650	0.9	0.3
2136	5.3	1.6	2149	4.6	1.4	2301	5.2	1.6	2226	4.7	1.4				2307	4.6	1.4
12 0340	-1.0	-0.3	27 0345	0.0	0.0	12 0459	-0.8	-0.2	27 0411	0.3	0.1	12 0013	4.7	1.4	27 0457	0.6	0.2
Tu 1001	4.3	1.3	W 1006	3.9	1.2	F 1128	5.0	1.5	Sa 1043	4.6	1.4	M 0608	0.2	0.1	Tu 1135	5.2	1.6
1542	-1.0	-0.3	1536	0.2	0.1	1725	-0.4	-0.1	1625	0.6	0.2	1246	5.2	1.6	1740	1.1	0.3
2230	5.2	1.6	2224	4.5	1.4	2352	4.9	1.5	2258	4.6	1.4	1901	0.7	0.2	2354	4.5	1.4
13 0433	-0.9	-0.3	28 0417	0.1	0.0	13 0552	-0.5	-0.2	28 0446	0.4	0.1	13 0106	4.5	1.4	28 0546	0.8	0.2
W 1056	4.4	1.3	Th 1043	4.0	1.2	Sa 1223	4.9	1.5	Su 1119	4.7	1.4	Tu 0705	0.6	0.2	W 1226	5.1	1.6
1642	-0.8	-0.2	1613	0.3	0.1	1826	0.0	0.0	1709	0.8	0.2	1343	5.0	1.5	1842	1.2	0.4
2323	5.1	1.6	2259	4.4	1.3				2333	4.4	1.3	2002	1.0	0.3			
14 0528	-0.8	-0.2	29 0451	0.2	0.1	14 0045	4.6	1.4	29 0525	0.5	0.2	14 0203	4.3	1.3	29 0049	4.4	1.3
Th 1153	4.5	1.4	F 1117	4.0	1.2	Su 0645	-0.2	-0.1	M 1200	4.7	1.4	W 0804	0.9	0.3	Th 0645	0.9	0.3
1744	-0.5	-0.2	1653	0.5	0.2	1319	4.9	1.5	1800	0.9	0.3	1443	4.9	1.5	1331	5.1	1.6
			2331	4.3	1.3	1930	0.3	0.1				2104	1.2	0.4	1951	1.3	0.4
15 0018	4.8	1.5	30 0525	0.3	0.1	15 0140	4.4	1.3	30 0012	4.3	1.3	15 0302	4.2	1.3	30 0156	4.3	1.3
F 0623	-0.7	-0.2	Sa 1154	4.1	1.2	M 0740	0.0	0.0	Tu 0613	0.6	0.2	Th 0904	1.0	0.3	F 0754	0.9	0.3
1250	4.5	1.4	1736	0.7	0.2	1418	4.8	1.5	1247	4.8	1.5	1544	4.9	1.5	1446	5.1	1.6
1847	-0.2	-0.1				2034	0.6	0.2	1858	1.1	0.3	2202	1.2	0.4	2104	1.1	0.3
31 0007	4.2	1.3				31 0101	4.2	1.3				31 0709	0.6	0.2			
Su 0604	0.3	0.1							2007	1.1	0.3						
1235	4.2	1.3															
1826	0.8	0.2															

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

OCTOBER						NOVEMBER						DECEMBER					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m
1 0313	4.4 1.3	16 0421	4.5 1.4	1 0518	5.1 1.6	16 0518	4.7 1.4	1 0555	5.2 1.6	16 0520	4.5 1.4						
Sa 0909	0.8 0.2	Su 1023	1.4 0.4	Tu 1116	0.3 0.1	W 1116	1.0 0.3	Th 1158	0.0 0.0	F 1121	0.5 0.2						
1559	5.3 1.6	1653	5.0 1.5	1748	5.3 1.6	1740	4.6 1.4	1818	4.7 1.4	1738	4.0 1.2						
2212	0.9 0.3	2300	1.2 0.4	2342	0.0 0.0	2329	0.6 0.2			2324	0.0 0.0						
2 0427	4.6 1.4	17 0513	4.7 1.4	2 0614	5.4 1.6	17 0602	4.9 1.5	2 0007	-0.4 -0.1	17 0609	4.7 1.4						
Su 1020	0.5 0.2	M 1111	1.2 0.4	W 1211	0.0 0.0	Th 1159	0.7 0.2	F 0646	5.4 1.6	Sa 1211	0.2 0.1						
1708	5.4 1.6	1740	5.0 1.5	1838	5.3 1.6	1822	4.6 1.4	1251	-0.2 -0.1	1827	4.0 1.2						
2310	0.5 0.2	2340	1.0 0.3					1907	4.6 1.4								
3 0532	4.9 1.5	18 0558	4.8 1.5	3 0030	-0.2 -0.1	18 0006	0.4 0.1	3 0052	-0.5 -0.2	18 0009	-0.3 -0.1						
M 1124	0.2 0.1	Tu 1155	1.0 0.3	Th 0703	5.7 1.7	F 0645	5.1 1.6	Sa 0733	5.4 1.6	Su 0657	4.9 1.5						
1806	5.6 1.7	1822	5.1 1.6	1304	-0.2 -0.1	1240	0.5 0.2	1337	-0.3 -0.1	1258	-0.1 0.0						
				1928	5.3 1.6	1904	4.6 1.4	1953	4.5 1.4	1917	4.0 1.2						
4 0004	0.1 0.0	19 0017	0.8 0.2	4 0115	-0.4 -0.1	19 0045	0.1 0.0	4 0137	-0.5 -0.2	19 0055	-0.5 -0.2						
Tu 0627	5.3 1.6	W 0640	5.0 1.5	F 0752	5.8 1.8	Sa 0727	5.2 1.6	Su 0818	5.4 1.6	M 0744	5.1 1.6						
1222	-0.1 0.0	1235	0.8 0.2	1352	-0.2 -0.1	1323	0.3 0.1	1423	-0.3 -0.1	1345	-0.3 -0.1						
1859	5.7 1.7	1904	5.1 1.6	2014	5.2 1.6	1945	4.6 1.4	2037	4.4 1.3	2006	4.1 1.2						
5 0054	-0.2 -0.1	20 0050	0.6 0.2	5 0200	-0.4 -0.1	20 0123	0.0 0.0	5 0218	-0.4 -0.1	20 0143	-0.7 -0.2						
W 0722	5.6 1.7	Th 0720	5.2 1.6	Sa 0837	5.8 1.8	Su 0808	5.3 1.6	M 0900	5.3 1.6	Tu 0834	5.2 1.6						
1317	-0.3 -0.1	1312	0.6 0.2	1441	-0.2 -0.1	1405	0.1 0.0	1508	-0.2 -0.1	1434	-0.5 -0.2						
1949	5.7 1.7	1942	5.1 1.6	2059	5.0 1.5	2027	4.5 1.4	2120	4.2 1.3	2054	4.1 1.2						
6 0140	-0.4 -0.1	21 0124	0.4 0.1	6 0243	-0.3 -0.1	21 0204	-0.1 0.0	6 0300	-0.2 -0.1	21 0233	-0.8 -0.2						
Th 0811	5.8 1.8	F 0758	5.3 1.6	Su 0923	5.7 1.7	M 0850	5.4 1.6	Tu 0945	5.1 1.6	W 0925	5.2 1.6						
1408	-0.4 -0.1	1349	0.5 0.2	1528	0.0 0.0	1450	0.1 0.0	1552	0.0 0.0	1526	-0.5 -0.2						
2036	5.6 1.7	2018	5.0 1.5	2143	4.8 1.5	2110	4.5 1.4	2203	4.1 1.2	2144	4.1 1.2						
7 0226	-0.5 -0.2	22 0156	0.3 0.1	7 0327	-0.1 0.0	22 0248	-0.2 -0.1	7 0341	0.0 0.0	22 0324	-0.7 -0.2						
F 0859	5.9 1.8	Sa 0834	5.4 1.6	M 1007	5.6 1.7	Tu 0936	5.4 1.6	W 1027	4.9 1.5	Th 1016	5.2 1.6						
1458	-0.3 -0.1	1426	0.5 0.2	1614	0.2 0.1	1537	0.1 0.0	1635	0.2 0.1	1618	-0.5 -0.2						
2122	5.4 1.6	2054	4.9 1.5	2227	4.6 1.4	2155	4.4 1.3	2245	4.0 1.2	2237	4.2 1.3						
8 0311	-0.4 -0.1	23 0231	0.3 0.1	8 0409	0.2 0.1	23 0334	-0.1 0.0	8 0422	0.3 0.1	23 0418	-0.6 -0.2						
Sa 0945	5.8 1.8	Su 0911	5.4 1.6	Tu 1053	5.4 1.6	W 1023	5.4 1.6	Th 1109	4.8 1.5	F 1109	5.1 1.6						
1548	-0.1 0.0	1505	0.5 0.2	1702	0.6 0.2	1630	0.2 0.1	1717	0.5 0.2	1712	-0.4 -0.1						
2208	5.2 1.6	2131	4.8 1.5	2311	4.4 1.3	2246	4.3 1.3	2327	3.9 1.2	2333	4.2 1.3						
9 0357	-0.1 0.0	24 0310	0.3 0.1	9 0454	0.6 0.2	24 0425	0.1 0.0	9 0507	0.5 0.2	24 0517	-0.4 -0.1						
Su 1032	5.7 1.7	M 0950	5.4 1.6	W 1139	5.1 1.6	Th 1115	5.3 1.6	F 1152	4.6 1.4	Sa 1204	4.9 1.5						
1638	0.2 0.1	1550	0.6 0.2	1752	0.9 0.3	1723	0.3 0.1	1800	0.7 0.2	1809	-0.4 -0.1						
2255	4.9 1.5	2210	4.7 1.4			2341	4.3 1.3										
10 0441	0.2 0.1	25 0349	0.4 0.1	10 0000	4.3 1.3	25 0524	0.3 0.1	10 0013	3.9 1.2	25 0034	4.2 1.3						
M 1120	5.5 1.7	Tu 1033	5.4 1.6	Th 0543	0.9 0.3	F 1215	5.1 1.6	Sa 0552	0.8 0.2	Su 0623	-0.1 0.0						
1731	0.6 0.2	1638	0.7 0.2	1229	4.9 1.5	1824	0.4 0.1	1237	4.4 1.3	1301	4.7 1.4						
2341	4.7 1.4	2253	4.6 1.4	1845	1.1 0.3			1849	0.8 0.2	1909	-0.3 -0.1						
11 0531	0.6 0.2	26 0438	0.5 0.2	11 0050	4.2 1.3	26 0044	4.3 1.3	11 0101	3.9 1.2	26 0135	4.3 1.3						
Tu 1210	5.3 1.6	W 1122	5.4 1.6	F 0639	1.2 0.4	Sa 0630	0.5 0.2	Su 0645	0.3 0.3	M 0733	0.0 0.0						
1827	1.0 0.3	1731	0.9 0.3	1319	4.8 1.5	1319	5.0 1.5	1324	4.3 1.3	1403	4.5 1.4						
		2345	4.5 1.4	1942	1.3 0.4	1930	0.4 0.1	1935	0.9 0.3	2009	-0.3 -0.1						
12 0032	4.5 1.4	27 0531	0.7 0.2	12 0144	4.2 1.3	27 0150	4.4 1.3	12 0151	3.9 1.2	27 0239	4.4 1.3						
W 0624	1.0 0.3	Th 1220	5.3 1.6	Sa 0738	1.4 0.4	Su 0743	0.6 0.2	M 0743	1.1 0.3	Tu 0843	0.1 0.0						
1304	5.1 1.6	1834	1.0 0.3	1415	4.7 1.4	1423	4.9 1.5	1413	4.2 1.3	1505	4.3 1.3						
1926	1.3 0.4			2035	1.3 0.4	2033	0.3 0.1	2022	0.8 0.2	2106	-0.3 -0.1						
13 0127	4.4 1.3	28 0047	4.4 1.3	13 0240	4.2 1.3	28 0258	4.5 1.4	13 0245	4.0 1.2	28 0342	4.5 1.4						
Th 0722	1.3 0.4	F 0634	0.9 0.3	Su 0840	1.5 0.5	M 0857	0.5 0.2	Tu 0841	1.1 0.3	W 0948	0.1 0.0						
1403	5.0 1.5	1325	5.2 1.6	1510	4.6 1.4	1528	4.8 1.5	1506	4.1 1.2	1604	4.1 1.2						
2027	1.5 0.5	1943	1.0 0.3	2124	1.3 0.4	2133	0.2 0.1	2108	0.7 0.2	2202	-0.4 -0.1						
14 0226	4.3 1.3	29 0157	4.4 1.3	14 0336	4.3 1.3	29 0402	4.8 1.5	14 0335	4.2 1.3	29 0441	4.7 1.4						
F 0827	1.4 0.4	Sa 0748	0.9 0.3	M 0939	1.4 0.4	Tu 1004	0.4 0.1	W 0938	1.0 0.3	Th 1049	0.0 0.0						
1503	4.9 1.5	1437	5.2 1.6	1605	4.6 1.4	1628	4.8 1.5	1557	4.0 1.2	1702	4.0 1.2						
2123	1.5 0.5	2052	0.9 0.3	2211	1.1 0.3	2228	0.0 0.0	2154	0.5 0.2	2256	-0.4 -0.1						
15 0325	4.3 1.3	30 0309	4.6 1.4	15 0428	4.5 1.4	30 0502	5.0 1.5	15 0428	4.3 1.3	30 0537	4.8 1.5						
Sa 0927	1.4 0.4	Su 0904	0.8 0.2	Tu 1031	1.2 0.4	W 1105	0.2 0.1	Th 1031	0.8 0.2	F 1145	-0.2 -0.1						
1600	4.9 1.5	1546	5.2 1.6	1655	4.6 1.4	1726	4.7 1.4	1649	4.0 1.2	1757	4.0 1.2						
2215	1.4 0.4	2154	0.7 0.2	2250	0.9 0.3	2318	-0.2 -0.1	2239	0.3 0.1	2345	-0.5 -0.2						
		31 0417	4.8 1.5							31 0628	4.8 1.5						
		M 1013	0.6 0.2							Sa 1234	-0.3 -0.1						
		1649	5.3 1.6							1848	3.9 1.2						
		2250	0.3 0.1														

Time meridian 75° W. 0000 is midnight. 1200 is noon.
Heights are referred to mean low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0045	-1.6	-0.5	16 0052	-0.7	-0.2	1 0159	-1.5	-0.5	16 0133	-0.6	-0.2
Sa 0642	6.6	2.0	Su 0634	5.6	1.7	Tu 0754	6.4	2.0	W 0710	5.9	1.8
1300	0.0	0.0	1301	0.5	0.2	1422	-0.7	-0.2	1345	-0.1	0.0
1839	7.3	2.2	1834	6.3	1.9	2004	6.5	2.0	1926	6.1	1.9
2 0132	-1.4	-0.4	17 0127	-0.5	-0.2	2 0247	-1.0	-0.3	17 0204	-0.3	-0.1
Su 0730	6.5	2.0	M 0705	5.7	1.7	W 0838	6.2	1.9	Th 0745	6.0	1.8
1350	0.0	0.0	1333	0.5	0.2	1510	-0.5	-0.2	1418	-0.1	0.0
1928	7.1	2.2	1909	6.2	1.9	2050	6.0	1.8	2004	5.9	1.8
3 0221	-1.2	-0.4	18 0202	-0.3	-0.1	3 0334	-0.4	-0.1	18 0239	0.0	0.0
M 0818	6.3	1.9	Tu 0738	5.7	1.7	Th 0924	5.9	1.8	F 0821	6.0	1.8
1444	0.2	0.1	1409	0.6	0.2	1606	-0.2	-0.1	1500	0.0	0.0
2020	6.6	2.0	1945	6.1	1.9	2142	5.4	1.6	2049	5.5	1.7
4 0313	-0.7	-0.2	19 0236	-0.1	0.0	4 0425	0.1	0.0	19 0318	0.4	0.1
Tu 0908	6.1	1.9	W 0815	5.7	1.7	F 1011	5.5	1.7	Sa 0905	5.8	1.8
1539	0.3	0.1	1447	0.7	0.2	1702	0.1	0.0	1555	0.2	0.1
2113	6.1	1.9	2025	5.8	1.8	2238	4.9	1.5	2140	5.1	1.6
5 0406	-0.3	-0.1	20 0313	0.2	0.1	5 0524	0.6	0.2	20 0414	0.8	0.2
W 1003	5.9	1.8	Th 0855	5.7	1.7	Sa 1106	5.2	1.6	Su 0957	5.6	1.7
1639	0.5	0.2	1534	0.7	0.2	1804	0.2	0.1	1707	0.3	0.1
2213	5.6	1.7	2113	5.5	1.7	2345	4.5	1.4	2246	4.7	1.4
6 0504	0.2	0.1	21 0401	0.6	0.2	6 0625	1.0	0.3	21 0531	1.2	0.4
Th 1059	5.7	1.7	F 0942	5.6	1.7	Su 1209	5.0	1.5	M 1100	5.4	1.6
1741	0.5	0.2	1633	0.8	0.2	1907	0.2	0.1	1828	0.3	0.1
2320	5.2	1.6	2209	5.1	1.6				1722	0.3	0.1
7 0604	0.5	0.2	22 0457	0.9	0.3	7 0102	4.3	1.3	22 0009	4.5	1.4
F 1202	5.6	1.7	Sa 1037	5.5	1.7	M 0729	1.1	0.3	Tu 0656	1.2	0.4
1844	0.4	0.1	1747	0.7	0.2	1316	5.0	1.5	1219	5.3	1.6
			2316	4.8	1.5	2009	0.1	0.0	1944	-0.1	0.0
8 0034	4.9	1.5	23 0609	1.1	0.3	8 0216	4.4	1.3	23 0137	4.6	1.4
Sa 0706	0.7	0.2	Su 1138	5.5	1.7	Tu 0829	1.0	0.3	W 0808	0.9	0.3
1304	5.6	1.7	1859	0.4	0.1	1421	5.1	1.6	1341	5.5	1.7
1945	0.2	0.1				2104	-0.1	0.0	2050	-0.6	-0.2
9 0145	4.9	1.5	24 0036	4.7	1.4	9 0314	4.6	1.4	24 0253	5.1	1.6
Su 0805	0.8	0.2	M 0720	1.1	0.3	W 0922	0.8	0.2	Th 0911	0.4	0.1
1403	5.6	1.7	1248	5.5	1.7	1515	5.3	1.6	1453	5.9	1.8
2042	0.0	0.0	2008	0.0	0.0	2154	-0.4	-0.1	2147	-1.1	-0.3
10 0250	5.0	1.5	25 0157	4.9	1.5	10 0402	4.8	1.5	25 0354	5.6	1.7
M 0858	0.8	0.2	Tu 0826	0.9	0.3	Th 1010	0.5	0.2	F 1007	-0.2	-0.1
1455	5.8	1.8	1401	5.8	1.8	1602	5.6	1.7	1555	6.3	1.9
2131	-0.3	-0.1	2109	-0.6	-0.2	2237	-0.6	-0.2	2239	-1.5	-0.5
11 0338	5.1	1.6	26 0307	5.2	1.6	11 0439	5.1	1.6	26 0444	6.1	1.9
Tu 0946	0.7	0.2	W 0927	0.5	0.2	F 1052	0.3	0.1	Sa 1057	-0.7	-0.2
1541	5.9	1.8	1506	6.2	1.9	1639	5.8	1.8	1648	6.7	2.0
2218	-0.5	-0.2	2204	-1.1	-0.3	2319	-0.8	-0.2	2326	-1.8	-0.5
12 0423	5.3	1.6	27 0407	5.6	1.7	12 0513	5.3	1.6	27 0528	6.5	2.0
W 1031	0.6	0.2	Th 1020	0.1	0.0	Sa 1130	0.1	0.0	Su 1143	-1.1	-0.3
1620	6.1	1.9	1602	6.6	2.0	1713	6.0	1.8	1734	6.9	2.1
2300	-0.7	-0.2	2255	-1.6	-0.5	2354	-0.9	-0.3			
13 0500	5.4	1.6	28 0458	6.0	1.8	13 0542	5.5	1.7	28 0009	-1.9	-0.6
Th 1111	0.5	0.2	F 1111	-0.3	-0.1	Su 1206	0.0	0.0	M 0609	6.7	2.0
1655	6.2	1.9	1656	6.9	2.1	1747	6.1	1.9	1229	-1.3	-0.4
2339	-0.8	-0.2	2343	-1.9	-0.6				1818	7.0	2.1
14 0532	5.5	1.7	29 0545	6.3	1.9	14 0029	-0.9	-0.3	14 0513	5.7	1.7
F 1149	0.4	0.1	Sa 1159	-0.6	-0.2	M 0610	5.7	1.7	M 1142	-0.4	-0.1
1730	6.3	1.9	1745	7.1	2.2	1239	-0.1	0.0	1726	6.1	1.9
						1818	6.2	1.9			
15 0016	-0.8	-0.2	30 0029	-1.9	-0.6	15 0102	-0.8	-0.2	15 0002	-0.7	-0.2
Sa 0603	5.6	1.7	Su 0629	6.5	2.0	Tu 0640	5.8	1.8	Tu 0541	6.0	1.8
1226	0.4	0.1	1246	-0.8	-0.2	1313	-0.1	0.0	1216	-0.5	-0.2
1802	6.3	1.9	1831	7.1	2.2	1850	6.2	1.9	1759	6.3	1.9
31 0114	-1.8	-0.5	M 0714	6.5	2.0				1842	6.6	2.0
			1333	-0.8	-0.2				31 0107	-0.7	-0.2
			1917	6.9	2.1				Th 0653	6.7	2.0
									1330	-1.3	-0.4
									1919	6.3	1.9

Time meridian 60° W. 0000 is midnight. 1200 is noon.
Heights are referred to the chart datum of soundings.

Times and Heights of High and Low Waters

APRIL						MAY						JUNE					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day		Day		Day		Day		Day	
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0147	-0.3	-0.1	16 0117	0.2	0.1	1 0159	0.7	0.2	16 0148	0.7	0.2	1 0300	1.5	0.5	16 0334	0.8	0.2
F 0727	6.5	2.0	Sa 0650	6.8	2.1	Su 0730	6.3	1.9	M 0719	6.8	2.1	W 0820	5.8	1.8	Th 0902	6.2	1.9
1412	-1.0	-0.3	1341	-0.8	-0.2	1427	-0.4	-0.1	1420	-0.8	-0.2	1529	0.3	0.1	1601	-0.3	-0.1
1957	5.9	1.8	1933	6.1	1.9	2010	5.6	1.7	2015	6.0	1.8	2108	5.4	1.6	2201	6.1	1.9
2 0228	0.3	0.1	17 0156	0.6	0.2	2 0241	1.1	0.3	17 0241	1.0	0.3	2 0353	1.6	0.5	17 0438	0.8	0.2
Sa 0802	6.1	1.9	Su 0732	6.6	2.0	M 0806	5.9	1.8	Tu 0809	5.6	2.0	Th 0908	5.5	1.7	F 1006	5.8	1.8
1455	-0.5	-0.2	1427	-0.6	-0.2	1513	0.0	0.0	1516	-0.4	-0.1	1622	0.6	0.2	1703	0.0	0.0
2036	5.5	1.7	2018	5.8	1.8	2050	5.3	1.6	2112	5.8	1.8	2158	5.3	1.6	2304	6.0	1.8
3 0310	0.8	0.2	18 0246	0.9	0.3	3 0329	1.5	0.5	18 0345	1.2	0.4	3 0454	1.7	0.5	18 0544	0.7	0.2
Su 0839	5.7	1.7	M 0818	6.3	1.9	Tu 0849	5.6	1.7	W 0908	6.0	1.8	F 1006	5.2	1.6	Sa 1118	5.5	1.7
1544	-0.1	0.0	1524	-0.3	-0.1	1603	0.4	0.1	1621	-0.1	0.0	1719	0.9	0.3	1806	0.3	0.1
2121	5.1	1.6	2116	5.5	1.7	2140	5.0	1.5	2217	5.6	1.7	2254	5.2	1.6			
4 0402	1.3	0.4	19 0348	1.2	0.4	4 0429	1.7	0.5	19 0456	1.2	0.4	4 0557	1.6	0.5	19 0008	6.0	1.8
M 0924	5.3	1.6	Tu 0915	5.9	1.8	W 0940	5.2	1.6	Th 1017	5.6	1.7	Sa 1110	5.0	1.5	Su 0649	0.4	0.1
1642	0.4	0.1	1633	0.1	0.0	1704	0.7	0.2	1729	0.1	0.0	1819	1.0	0.3	1233	5.3	1.6
2214	4.7	1.4	2225	5.2	1.6	2238	4.8	1.5	2330	5.6	1.7	2353	5.3	1.6	1907	0.5	0.2
5 0507	1.6	0.5	20 0506	1.4	0.4	5 0536	1.8	0.5	20 0609	1.0	0.3	5 0659	1.3	0.4	20 0110	6.1	1.9
Tu 1022	4.9	1.5	W 1025	5.5	1.7	Th 1046	4.9	1.5	F 1138	5.4	1.6	Su 1219	5.0	1.5	M 0749	0.1	0.0
1745	0.7	0.2	1748	0.2	0.1	1807	0.9	0.3	1835	0.2	0.1	1915	1.0	0.3	1347	5.3	1.6
2320	4.4	1.3	2345	5.1	1.6	2346	4.8	1.5							2005	0.6	0.2
6 0616	1.7	0.5	21 0627	1.3	0.4	6 0643	1.6	0.5	21 0042	5.8	1.8	6 0051	5.5	1.7	21 0205	6.3	1.9
W 1135	4.7	1.4	Th 1150	5.3	1.6	F 1202	4.8	1.5	Sa 0715	0.6	0.2	M 0755	0.8	0.2	Tu 0843	-0.3	-0.1
1852	0.7	0.2	1902	0.1	0.0	1908	0.8	0.2	1259	5.4	1.6	1329	5.1	1.6	1450	5.5	1.7
									1937	0.1	0.0	2009	1.0	0.3	2059	0.7	0.2
7 0039	4.4	1.3	22 0108	5.3	1.6	7 0052	4.9	1.5	22 0147	6.1	1.9	7 0144	5.8	1.8	22 0256	6.4	2.0
Th 0723	1.5	0.5	F 0737	0.8	0.2	Sa 0743	1.3	0.4	Su 0814	0.1	0.0	Tu 0847	0.3	0.1	W 0933	-0.6	-0.2
1256	4.7	1.4	1317	5.4	1.6	1315	4.9	1.5	1411	5.6	1.7	1429	5.3	1.6	1543	5.6	1.7
1955	0.6	0.2	2006	-0.1	0.0	2005	0.7	0.2	2034	0.1	0.0	2059	0.9	0.3	2149	0.7	0.2
8 0149	4.6	1.4	23 0216	5.7	1.7	8 0149	5.3	1.6	23 0240	6.4	2.0	8 0234	6.2	1.9	23 0341	6.5	2.0
F 0821	1.1	0.3	Sa 0837	0.2	0.1	Su 0837	0.8	0.2	M 0909	-0.4	-0.1	W 0933	-0.2	-0.1	Th 1020	-0.8	-0.2
1408	4.9	1.5	1430	5.7	-1.7	1417	5.2	1.6	1511	5.9	1.8	1523	5.6	1.7	1628	5.8	1.8
2048	0.3	0.1	2104	-0.4	-0.1	2053	0.5	0.2	2126	0.0	0.0	2146	0.8	0.2	2233	0.7	0.2
9 0245	5.0	1.5	24 0311	6.2	1.9	9 0237	5.6	1.7	24 0327	6.6	2.0	9 0319	6.5	2.0	24 0423	6.6	2.0
Sa 0914	0.7	0.2	Su 0933	-0.4	-0.1	M 0922	0.3	0.1	Tu 0958	-0.8	-0.2	Th 1020	-0.6	-0.2	F 1103	-0.9	-0.3
1501	5.3	1.6	1530	6.1	1.9	1511	-5.5	1.7	1602	6.1	1.9	1612	5.9	1.8	1706	5.8	1.8
2135	0.1	0.0	2154	-0.6	-0.2	2139	0.4	0.1	2212	0.0	0.0	2231	0.7	0.2	2315	0.8	0.2
10 0327	5.4	1.6	25 0357	6.6	2.0	10 0319	6.0	1.8	25 0410	6.8	2.1	10 0404	6.8	2.1	25 0458	6.6	2.0
Su 0959	0.2	0.1	M 1020	-0.9	-0.3	Tu 1007	-0.2	-0.1	W 1042	-1.1	-0.3	F 1103	-1.0	-0.3	Sa 1143	-0.8	-0.2
1546	5.5	1.7	1620	6.4	2.0	1556	5.8	1.8	1645	6.2	1.9	1700	6.2	1.9	1743	5.9	1.8
2218	-0.1	0.0	2239	-0.7	-0.2	2220	0.3	0.1	2257	0.1	0.0	2316	0.6	0.2	2356	0.8	0.2
11 0404	5.8	1.8	26 0439	6.9	2.1	11 0357	6.4	2.0	26 0447	6.8	2.1	11 0450	7.1	2.2	26 0534	6.5	2.0
M 1037	-0.2	-0.1	Tu 1105	-1.3	-0.4	W 1047	-0.6	-0.2	Th 1124	-1.2	-0.4	Sa 1148	-1.2	-0.4	Su 1223	-0.7	-0.2
1627	5.9	1.8	1705	6.6	2.0	1636	6.1	1.9	1726	6.2	1.9	1744	6.3	1.9	1816	5.9	1.8
2256	-0.2	-0.1	2322	-0.6	-0.2	2300	0.3	0.1	2338	0.3	0.1						
12 0436	6.1	1.9	27 0516	7.0	2.1	12 0434	6.7	2.0	27 0521	6.8	2.1	12 0002	0.5	0.2	27 0036	0.9	0.3
Tu 1116	-0.5	-0.2	W 1147	-1.4	-0.4	Th 1126	-0.9	-0.3	F 1203	-1.1	-0.3	Su 0535	7.2	2.2	M 0608	6.5	2.0
1703	6.2	1.9	1744	6.6	2.0	1717	6.3	1.9	1802	6.1	1.9	1233	-1.3	-0.4	1301	-0.6	-0.2
2332	-0.3	-0.1				2339	0.3	0.1				1830	6.4	2.0	1848	5.8	1.8
13 0509	6.4	2.0	28 0003	-0.4	-0.1	13 0511	6.9	2.1	28 0017	0.5	0.2	13 0048	0.6	0.2	28 0114	1.1	0.3
W 1150	-0.8	-0.2	Th 0550	6.9	2.1	F 1204	-1.1	-0.3	Sa 0555	6.7	2.0	M 0621	7.1	2.2	Tu 0640	6.4	2.0
1737	6.3	1.9	1227	-1.4	-0.4	1758	6.4	2.0	1244	-0.9	-0.3	1321	-1.2	-0.4	1338	-0.4	-0.1
			1822	6.4	2.0				1835	6.0	1.8	1919	6.4	2.0	1923	5.8	1.8
14 0005	-0.2	-0.1	29 0042	0.0	0.0	14 0018	0.4	0.1	29 0056	0.8	0.2	14 0140	0.6	0.2	29 0152	1.2	0.4
Th 0541	6.6	2.0	F 0623	6.8	2.1	Sa 0548	7.0	2.1	Su 0628	6.5	2.0	Tu 0711	7.0	2.1	W 0717	6.2	1.9
1227	-0.9	-0.3	1305	-1.2	-0.4	1246	-1.1	-0.3	1322	-0.7	-0.2	1410	-1.0	-0.3	1418	-0.1	0.0
1814	6.4	2.0	1857	6.2	1.9	1839	6.3	1.9	1909	5.8	1.8	2010	6.3	1.9	1959	5.8	1.8
15 0041	0.0	0.0	30 0119	0.3	0.1	15 0101	0.5	0.2	30 0135	1.0	0.3	15 0236	0.7	0.2	30 0231	1.3	0.4
F 0614	6.8	2.1	Sa 0655	6.6	2.0	Su 0633	7.0	2.1	M 0703	6.3	1.9	W 0803	6.6	2.0	Th 0754	6.0	1.8
1302	-0.9	-0.3	1346	-0.8	-0.2	1330	-1.0	-0.3	1402	-0.4	-0.1	1503	-0.7	-0.2	1457	0.2	0.1
1851	6.3	1.9	1932	5.9	1.8	1925	6.2	1.9	1946	5.7	1.7	2103	6.2	1.9	2036	5.8	1.8
									31 0215	1.3	0.4						
									Tu 0739	6.1	1.9						
									1444	0.0	0.0						
									2025	5.5	1.7						

Time meridian 60° W. 0000 is midnight. 1200 is noon.
Heights are referred to the chart datum of soundings.

Times and Heights of High and Low Waters

JULY

AUGUST

SEPTEMBER

Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day		Day		Day		Day		Day	
h m	ft m	h m	ft m	h m	ft m	h m	ft m	h m	ft m
1 0316	1.4 0.4	16 0414	0.4 0.1	1 0417	1.2 0.4	16 0541	0.6 0.2	1 0557	1.2 0.4
F 0839	5.8 1.8	Sa 0945	6.0 1.8	M 0945	5.6 1.7	Tu 1125	5.2 1.6	Th 1131	5.3 1.6
1539	0.5 0.2	1633 0.2 0.1	1625 1.4 0.4	1800 1.6 0.5	1814 2.3 0.7	1814 2.3 0.7	1323 5.1 1.6		
2116	5.7 1.7	2229 6.3 1.9	2209 6.2 1.9	2343 6.0 1.8	2339 6.2 1.9	1937 2.3 0.7			
2 0409	1.4 0.4	17 0515	0.4 0.1	2 0520	1.2 0.4	17 0646	0.7 0.2	2 0713	0.9 0.3
Sa 0929	5.5 1.7	Su 1051	5.5 1.7	Tu 1046	5.3 1.6	W 1242	5.0 1.5	F 1259	5.3 1.6
1627	0.8 0.2	1731 0.7 0.2	1728 1.7 0.5	1904 1.8 0.5	1934 2.1 0.6		1432 5.4 1.6		
2206	5.7 1.7	2328 6.2 1.9	2304 6.1 1.9			2037 2.0 0.6			
3 0507	1.4 0.4	18 0617	0.4 0.1	3 0630	1.0 0.3	18 0051	5.9 1.8	3 0100	6.3 1.9
Su 1025	5.2 1.6	M 1203	5.2 1.6	W 1200	5.1 1.6	Th 0747	0.6 0.2	Sa 0819	0.5 0.2
1723	1.1 0.3	1833 1.0 0.3	1842 1.8 0.5	1357 5.1 1.6	1421 5.7 1.7	1421 5.7 1.7	1519 5.8 1.8		
2258	5.7 1.7			2005 1.8 0.5	2040 1.7 0.5	2127 1.6 0.5			
4 0609	1.2 0.4	19 0028	6.1 1.9	4 0011	6.1 1.9	19 0157	6.0 1.8	4 0213	6.6 2.0
M 1130	5.1 1.5	Tu 0718	0.3 0.1	Th 0739	0.7 0.2	F 0843	0.4 0.1	Su 0919	-0.1 0.0
1822	1.3 0.4	1315 5.1 1.6	1321 5.2 1.6	1504 5.3 1.6	1523 6.3 1.9	1523 6.3 1.9	1559 6.2 1.9		
2355	5.8 1.8	1935 1.2 0.4	1952 1.7 0.5	2101 1.6 0.5	2138 1.1 0.3	2138 1.1 0.3	2210 1.3 0.4		
5 0712	0.9 0.3	20 0128	6.1 1.9	5 0120	6.3 1.9	20 0253	6.1 1.9	5 0319	7.1 2.2
Tu 1241	5.0 1.5	W 0816	0.1 0.0	F 0840	0.2 0.1	Sa 0933	0.2 0.1	M 1010	-0.5 -0.2
1923	1.4 0.4	1426 5.2 1.6	1434 5.5 1.7	1551 5.6 1.7	1615 6.9 2.1	1615 6.9 2.1	1631 6.5 2.0		
		2031 1.2 0.4	2056 1.4 0.4	2151 1.4 0.4	2231 0.5 0.2	2231 0.5 0.2	2249 1.0 0.3		
6 0054	6.0 1.8	21 0226	6.1 1.9	6 0229	6.6 2.0	21 0341	6.4 2.0	6 0415	7.5 2.3
W 0811	0.4 0.1	Th 0909	6.2 0.2	Sa 0936	-0.3 -0.1	Su 1020	0.0 0.0	Tu 1059	-0.9 -0.3
1352	5.2 1.6	1525 5.3 1.6	1538 5.9 1.8	1628 5.9 1.8	1701 7.3 2.2	1701 7.3 2.2	1700 6.8 2.1		
2021	1.3 0.4	2125 1.2 0.4	2152 1.1 0.3	2234 1.2 0.4	2319 0.0 0.0	2319 0.0 0.0	2326 0.7 0.2		
7 0152	6.2 1.9	22 0317	6.3 1.9	7 0328	7.0 2.1	22 0423	6.6 2.0	7 0505	7.8 2.4
Th 0904	-0.1 0.0	F 0959	-0.3 -0.1	Su 1028	-0.8 -0.2	M 1100	-0.2 -0.1	W 1143	-1.0 -0.3
1456	5.5 1.7	1612 5.5 1.7	1631 6.4 2.0	1700 6.1 1.9	1743 7.7 2.3	1743 7.7 2.3	1726 7.0 2.1		
2117	1.1 0.3	2212 1.1 0.3	2244 0.6 0.2	2315 1.0 0.3					
8 0250	6.6 2.0	23 0400	6.4 2.0	8 0424	7.3 2.2	23 0457	6.7 2.0	8 0005	-0.3 -0.1
F 0956	-0.5 -0.2	Sa 1041	-0.5 -0.2	M 1116	-1.1 -0.3	Tu 1137	-0.2 -0.1	Th 0552	7.8 2.4
1554	5.8 1.8	1652 5.7 1.7	1720 6.8 2.1	1732 6.3 1.9	1226 6.9 -0.3	1226 6.9 -0.3	1216 0.4 0.1		
2210	0.9 0.3	2255 1.0 0.3	2334 0.3 0.1	2352 0.8 0.2	1825 7.8 2.4	1825 7.8 2.4	1756 7.2 2.2		
9 0343	6.9 2.1	24 0439	6.5 2.0	9 0516	7.5 2.3	24 0530	6.8 2.1	9 0050	-0.4 -0.1
Sa 1045	-0.9 -0.3	Su 1124	-0.5 -0.2	Tu 1203	-1.3 -0.4	W 1213	-0.2 -0.1	F 0637	7.7 2.3
1645	6.2 1.9	1725 5.8 1.8	1805 7.1 2.2	1800 6.5 2.0	1309 0.5 -0.2	1309 0.5 -0.2	1247 0.6 0.2		
2300	0.7 0.2	2336 1.0 0.3			1903 7.8 2.4	1903 7.8 2.4	1822 7.4 2.3		
10 0434	7.1 2.2	25 0516	6.5 2.0	10 0022	0.0 0.0	25 0026	0.8 0.2	10 0135	-0.4 -0.1
Su 1133	-1.2 -0.4	M 1202	-0.5 -0.2	W 0604	7.6 2.3	Th 0602	6.9 2.1	Sa 0719	7.4 2.3
1734	6.4 2.0	1757 6.0 1.8	1250 -1.3 -0.4	1245 0.0 0.0	1354 0.0 0.0	1354 0.0 0.0	1316 0.9 0.3		
2349	0.5 0.2		1848 7.3 2.2	1827 6.7 2.0	1943 7.6 2.3	1943 7.6 2.3	1855 7.4 2.3		
11 0524	7.3 2.2	26 0015	0.9 0.3	11 0110	-0.1 0.0	26 0100	0.7 0.2	11 0222	-0.1 0.0
M 1220	-1.4 -0.4	Tu 0549	6.6 2.0	Th 0653	7.5 2.3	F 0634	6.8 2.1	Su 0804	6.9 2.1
1821	6.6 2.0	1239 -0.4 -0.1	1333 -1.0 -0.3	1317 0.2 0.1	1436 0.6 0.2	1436 0.6 0.2	1346 1.2 0.4		
		1826 6.1 1.9	1933 7.3 2.2	1855 6.8 2.1	2023 7.3 2.2	2023 7.3 2.2	1930 7.4 2.3		
12 0037	0.3 0.1	27 0052	0.9 0.3	12 0159	-0.1 0.0	27 0133	0.8 0.2	12 0313	0.2 0.1
Tu 0613	7.3 2.2	W 0623	6.6 2.0	F 0740	7.2 2.2	Sa 0708	6.7 2.0	M 0852	6.3 1.9
1308	-1.3 -0.4	1314 -0.3 -0.1	1420 -0.5 -0.2	1346 0.5 0.2	1526 1.2 0.4	1526 1.2 0.4	1420 1.6 0.5		
1908	6.8 2.1	1858 6.2 1.9	2015 7.2 2.2	1927 6.9 2.1	2105 6.8 2.1	2105 6.8 2.1	2010 7.2 2.2		
13 0127	0.3 0.1	28 0127	1.0 0.3	13 0249	0.0 0.0	28 0207	0.8 0.2	13 0406	0.6 0.2
W 0703	7.2 2.2	Th 0656	6.5 2.0	Sa 0828	6.7 2.0	Su 0743	6.5 2.0	Tu 0940	5.8 1.8
1356	-1.1 -0.3	1348 0.0 0.0	1508 0.0 0.0	1418 0.9 0.3	1619 1.8 0.5	1619 1.8 0.5	1510 2.1 0.6		
1955	6.8 2.1	1929 6.2 1.9	2100 6.9 2.1	2002 6.9 2.1	2153 6.4 2.0	2153 6.4 2.0	2100 6.9 2.1		
14 0220	0.3 0.1	29 0202	1.0 0.3	14 0342	0.2 0.1	29 0244	0.9 0.3	14 0504	1.0 0.3
Th 0754	6.9 2.1	F 0732	6.4 2.0	Su 0921	6.2 1.9	M 0825	6.2 1.9	W 1043	5.3 1.6
1446	-0.8 -0.2	1420 0.3 0.1	1601 0.6 0.2	1452 1.3 0.4	1722 2.2 0.7	1722 2.2 0.7	1628 2.4 0.7		
2044	6.7 2.0	2002 6.3 1.9	2148 6.6 2.0	2043 6.8 2.1	2254 6.0 1.8	2254 6.0 1.8	2201 6.6 2.0		
15 0315	0.3 0.1	30 0241	1.1 0.3	15 0440	0.5 0.2	30 0332	1.1 0.3	15 0609	1.2 0.4
F 0847	6.4 2.0	Sa 0810	6.1 1.9	M 1019	9.6 1.7	Tu 0913	5.9 1.8	Th 1200	5.1 1.6
1537	-0.3 -0.1	1457 0.6 0.2	1656 1.2 0.4	1534 1.7 0.5	1832 2.4 0.7	1832 2.4 0.7	1801 2.5 0.8		
2134	6.5 2.0	2039 6.3 1.9	2242 6.3 1.9	2129 6.6 2.0	2319 6.3 1.9	2319 6.3 1.9			
		31 0324	1.1 0.3		31 0438	1.2 0.4			
		Su 0855	5.9 1.8		W 1014	5.5 1.7			
		1537	1.0 0.3		1648	2.1 0.6			
		2121	6.2 1.9		2227	6.4 2.0			

Time meridian 60° W. 0000 is midnight. 1200 is noon.
Heights are referred to the chart datum of soundings.

Times and Heights of High and Low Waters

Time meridian 60° W. 0000 is midnight. 1200 is noon.
Heights are referred to the chart datum of soundings.

JANUARY			FEBRUARY			MARCH					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
Day	Day	Day	Day	Day	Day	Day	Day	Day	Day		
h m	ft	m	h m	ft	m	h m	ft	m	h m		
1 0548	7.8	2.4	16 0545	7.2	2.2	1 0055	0.4	0.1	16 0028	0.7	0.2
Sa 1151	0.8	0.2	Su 1146	1.3	0.4	Tu 0703	7.8	2.4	W 0634	7.7	2.3
1802	8.3	2.5	1755	7.6	2.3	1311	0.7	0.2	1242	0.7	0.2
						1923	7.9	2.4	1854	7.9	2.4
2 0023	0.3	0.1	17 0012	1.0	0.3	2 0137	0.8	0.2	17 0103	0.8	0.2
Su 0636	7.6	2.3	M 0620	7.2	2.2	W 0745	7.6	2.3	Th 0711	7.7	2.3
1239	1.0	0.3	1223	1.3	0.4	1356	1.0	0.3	1321	0.8	0.2
1852	8.0	2.4	1834	7.6	2.3	2008	7.5	2.3	1932	7.7	2.3
3 0111	0.6	0.2	18 0049	1.1	0.3	3 0219	1.2	0.4	18 0140	1.0	0.3
M 0726	7.4	2.3	Tu 0700	7.2	2.2	Th 0830	7.2	2.2	F 0750	7.5	2.3
1332	1.3	0.4	1303	1.4	0.4	1441	1.4	0.4	1403	1.0	0.3
1942	7.6	2.3	1913	7.4	2.3	2054	7.0	2.1	2017	7.4	2.3
4 0201	1.0	0.3	19 0129	1.2	0.4	4 0304	1.7	0.5	19 0225	1.4	0.4
Tu 0817	7.1	2.2	W 0739	7.1	2.2	F 0918	6.9	2.1	Sa 0835	7.3	2.2
1425	1.6	0.5	1345	1.4	0.4	1531	1.8	0.5	1451	1.2	0.4
2038	7.2	2.2	1958	7.3	2.2	2146	6.5	2.0	2107	7.0	2.1
5 0257	1.4	0.4	20 0214	1.4	0.4	5 0355	2.1	0.6	20 0315	1.8	0.5
W 0910	6.8	2.1	Th 0824	7.0	2.1	Sa 1008	6.5	2.0	Su 0928	7.8	2.1
1523	1.8	0.5	1433	1.6	0.5	1630	2.1	0.6	1549	1.6	0.5
2134	6.8	2.1	2046	7.0	2.1	2246	6.2	1.9	2210	6.6	2.0
6 0352	1.8	0.5	21 0302	1.6	0.5	6 0453	2.5	0.8	21 0416	2.1	0.6
Th 1011	6.6	2.0	F 0915	6.9	2.1	Su 1110	6.3	1.9	M 1034	6.7	2.0
1625	2.0	0.6	1528	1.7	0.5	1736	2.3	0.7	1704	1.8	0.5
2239	6.5	2.0	2144	6.8	2.1	2353	5.9	1.8	2326	6.3	1.9
7 0453	2.1	0.6	22 0357	1.8	0.5	7 0600	2.7	0.8	22 0536	2.4	0.7
F 1111	6.5	2.0	Sa 1013	6.8	2.1	M 1219	6.2	1.9	Tu 1155	6.6	2.0
1729	2.1	0.6	1632	1.8	0.5	1845	2.3	0.7	1827	1.8	0.5
2344	6.3	1.9	2248	6.6	2.0						
8 0554	2.2	0.7	23 0501	2.0	0.6	8 0106	5.9	1.8	23 0050	6.4	2.0
Sa 1211	6.5	2.0	Su 1117	6.8	2.1	Tu 0709	2.6	0.8	W 0658	2.3	0.7
1830	2.0	0.6	1741	1.7	0.5	1325	6.3	1.9	1315	6.8	2.1
						1951	2.2	0.7	1943	1.5	0.5
9 0045	6.3	1.9	24 0000	6.6	2.0	9 0207	6.1	1.9	24 0205	6.7	2.0
Su 0653	2.2	0.7	M 0609	2.0	0.6	W 0810	2.4	0.7	Th 0813	1.9	0.6
1306	6.6	2.0	1227	6.9	2.1	1423	6.5	2.0	1426	7.3	2.2
1928	1.9	0.6	1853	1.5	0.5	2047	1.9	0.6	2050	1.1	0.3
10 0141	6.4	2.0	25 0112	6.7	2.0	10 0300	6.4	2.0	25 0305	7.2	2.2
M 0746	2.1	0.6	Tu 0717	1.9	0.6	Th 0903	2.1	0.6	F 0911	1.3	0.4
1359	6.8	2.1	1333	7.2	2.2	1513	6.9	2.1	1524	7.7	2.3
2020	1.7	0.5	1959	1.2	0.4	2132	1.6	0.5	2143	0.6	0.2
11 0231	6.6	2.0	26 0215	7.0	2.1	11 0343	6.7	2.0	26 0356	7.7	2.3
Tu 0831	2.0	0.6	W 0820	1.6	0.5	F 0945	1.8	0.5	Sa 1002	0.8	0.2
1444	7.0	2.1	1434	7.6	2.3	1554	7.2	2.2	1612	8.2	2.5
2103	1.5	0.5	2058	0.8	0.2	2210	1.3	0.4	2230	0.3	0.1
12 0314	6.7	2.0	27 0313	7.3	2.2	12 0420	7.0	2.1	27 0440	8.1	2.5
W 0916	1.8	0.5	Th 0919	1.2	0.4	Sa 1022	1.5	0.5	Su 1047	0.4	0.1
1524	7.2	2.2	1529	7.9	2.4	1633	7.5	2.3	1658	8.4	2.6
2145	1.3	0.4	2151	0.4	0.1	2246	1.0	0.3	2311	0.1	0.0
13 0354	6.9	2.1	28 0406	7.7	2.3	13 0455	7.3	2.2	28 0520	8.3	2.5
Th 0956	1.6	0.5	F 1009	0.9	0.3	Su 1059	1.2	0.4	M 1128	0.2	0.1
1606	7.4	2.3	1621	8.2	2.5	1708	7.7	2.3	1739	8.5	2.6
2222	1.1	0.3	2241	0.2	0.1	2321	0.8	0.2	2349	0.1	0.0
14 0432	7.0	2.1	29 0454	7.9	2.4	14 0528	7.5	2.3			
F 1033	1.5	0.5	Sa 1058	0.7	0.2	M 1132	1.0	0.3	M 1039	0.9	0.3
1642	7.5	2.3	1709	8.4	2.6	1741	7.9	2.4	1646	7.9	2.4
2259	1.0	0.3	2327	0.1	0.0	2354	0.7	0.2	2257	0.7	0.2
15 0508	7.1	2.2	30 0538	8.0	2.4	15 0602	7.7	2.3			
Sa 1110	1.4	0.4	Su 1143	0.5	0.2	Tu 1207	0.8	0.2	Tu 1111	0.5	0.2
1720	7.6	2.3	1754	8.4	2.6	1817	7.9	2.4	1721	8.1	2.5
2336	1.0	0.3							2329	0.5	0.2
31 0011	0.2	0.1									
M 0622	8.0	2.4									
1228	0.6	0.2									
1839	8.2	2.5									

Time meridian 52° 30' W. 0000 is midnight. 1200 is noon.

Heights are referred to the chart datum of soundings.

Seasonal variations in sea level have not been included in these predictions.

31 0602 8.3 2.5

Th 1215 0.2 0.1

1826 8.0 2.4

Times and Heights of High and Low Waters

APRIL												MAY												JUNE														
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day		Day				
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m			
1 0028	0.7	0.2	16 0010	0.6	0.2	1 0030	1.3	0.4	16 0034	1.1	0.3	1 0129	2.1	0.6	16 0217	1.7	0.5	F 0636	8.1	2.5	M 0644	8.0	2.4	W 0740	6.8	2.1	Th 0830	7.2	2.2									
1249	0.5	0.2	1234	0.2	0.1	1255	1.0	0.3	1307	0.6	0.2	1404	1.8	0.5	1457	1.3	0.4	1900	7.6	2.3	1847	7.8	2.4	1905	7.0	2.1	1921	7.2	2.2	2017	6.3	1.9	2115	6.8	2.1			
2 0103	1.1	0.3	17 0049	1.0	0.3	2 0105	1.7	0.5	17 0124	1.5	0.5	2 0222	2.4	0.7	17 0323	1.9	0.6	Sa 0709	7.7	2.3	Su 0657	8.0	2.4	M 0715	7.2	2.2	Tu 0734	7.5	2.3	Th 0833	6.5	2.0	F 0936	6.9	2.1			
1326	0.9	0.3	1317	0.5	0.2	1337	1.4	0.4	1401	1.1	0.3	1459	2.1	0.6	1600	1.6	0.5	1937	7.1	2.2	1932	7.4	2.3	1948	6.5	2.0	2019	6.8	2.1	2118	6.1	1.9	2218	6.7	2.0			
3 0137	1.6	0.5	18 0133	1.4	0.4	3 0148	2.2	0.7	18 0222	2.0	0.6	3 0323	2.6	0.8	18 0432	2.0	0.6	Su 0745	7.2	2.2	M 0745	7.6	2.3	Tu 0800	6.7	2.0	W 0835	7.0	2.1	F 0936	6.3	1.9	Sa 1045	6.7	2.0			
1404	1.4	0.4	1409	1.0	0.3	1424	1.9	0.6	1507	1.5	0.5	1603	2.2	0.7	1704	1.8	0.5	2017	6.6	2.0	2024	6.8	2.1	2041	6.1	1.9	2128	6.5	2.0	2224	6.1	1.9	2324	6.7	2.0			
4 0217	2.2	0.7	19 0225	2.0	0.6	4 0241	2.6	0.8	19 0334	2.3	0.7	4 0434	2.6	0.8	19 0539	1.9	0.6	M 0829	6.7	2.0	Tu 0841	7.0	2.1	W 0854	6.2	1.9	Sa 1048	6.2	1.9	Su 1153	6.7	2.0						
1451	2.0	0.6	1510	1.6	0.5	1523	2.3	0.7	1621	1.8	0.5	1710	2.2	0.7	1808	1.8	0.5	2107	6.0	1.8	2133	6.1	1.9	2147	5.8	1.8	2247	6.3	1.9	2331	6.3	1.9	2431	6.0	1.8			
5 0310	2.7	0.8	20 0338	2.5	0.8	5 0355	2.9	0.9	20 0458	2.4	0.7	5 0545	2.4	0.7	20 0624	6.8	2.1	Tu 0923	6.1	1.9	W 0955	6.5	2.0	Th 1010	5.9	1.8	F 1112	6.5	2.0	Su 1155	6.4	2.0	M 0641	1.7	0.5			
1555	2.5	0.8	1631	2.0	0.6	1642	2.6	0.8	1739	1.9	0.6	1813	2.0	0.6	1813	2.0	0.6	2219	5.6	1.7	2259	6.1	1.9	2311	5.7	1.7	2352	5.6	1.7	2451	5.7	1.7	2551	5.6	1.7			
6 0427	3.1	0.9	21 0510	2.6	0.8	6 0523	2.9	0.9	21 0003	6.5	2.0	6 0029	6.6	2.0	21 0117	7.0	2.1	W 1044	5.8	1.8	Th 1126	6.3	1.9	F 1137	5.9	1.8	Sa 0616	2.1	0.6	M 0645	2.0	0.6	Tu 0735	1.5	0.5			
1721	2.7	0.8	1801	2.0	0.6	1803	2.5	0.8	1229	6.7	2.0	1256	6.7	2.0	1349	6.8	2.1	2352	5.6	1.7	1848	1.7	0.5	1909	1.8	0.5	1954	1.7	0.5	2056	1.6	0.5						
7 0603	3.1	0.9	22 0029	6.3	1.9	7 0027	6.0	1.8	22 0107	6.9	2.1	7 0122	7.0	2.1	22 0205	7.2	2.2	Th 1219	5.8	1.8	F 0640	2.3	0.7	Sa 0639	2.6	0.8	Su 0720	1.7	0.5	Tu 0736	1.5	0.5						
1850	2.6	0.8	1253	6.6	2.0	1248	6.2	1.9	1330	7.0	2.1	1347	7.0	2.1	1436	7.4	2.3	1957	1.5	0.5	1907	2.1	0.6	1943	1.5	0.5	1957	1.5	0.5	2036	1.6	0.5						
8 0114	5.9	1.8	23 0138	6.8	2.1	8 0125	6.5	2.0	23 0157	7.3	2.2	8 0208	7.4	2.3	23 0247	7.4	2.3	F 0725	2.7	0.8	Sa 0747	1.8	0.5	Su 0735	2.1	0.6	W 0823	1.0	0.3	Th 0908	1.1	0.3						
1335	6.1	1.9	1359	7.1	2.2	1346	6.7	2.0	1423	7.2	2.2	1436	7.4	2.3	1516	7.0	2.1	1954	2.2	0.7	2015	1.3	0.4	1957	1.7	0.5	2042	1.2	0.4	2118	1.5	0.5						
9 0210	6.4	2.0	24 0228	7.3	2.2	9 0210	7.0	2.1	24 0240	7.6	2.3	9 0252	7.8	2.4	24 0327	7.5	2.3	Sa 0820	2.2	0.7	Su 0839	1.2	0.4	M 0821	1.5	0.5	Tu 0855	0.9	0.3	Th 0909	0.6	0.2	F 0946	1.0	0.3			
1431	6.7	2.0	1450	7.5	2.3	1431	7.1	2.2	1505	7.5	2.3	1521	7.6	2.3	1556	7.1	2.2	2042	1.7	0.5	2101	0.9	0.3	2039	1.3	0.4	2111	1.1	0.3	2124	0.9	0.3	2157	1.5	0.5			
10 0252	6.9	2.1	25 0313	7.8	2.4	10 0250	7.5	2.3	25 0319	7.8	2.4	10 0336	8.1	2.5	25 0406	7.6	2.3	Su 0900	1.6	0.5	M 0924	0.7	0.2	Tu 0901	1.0	0.3	W 0935	0.6	0.2	F 0953	0.3	0.1	Sa 1025	1.0	0.3			
1509	7.2	2.2	1535	7.9	2.4	1511	7.6	2.3	1545	7.6	2.3	1606	7.8	2.4	1635	7.1	2.2	2121	1.2	0.4	2140	0.7	0.2	2119	0.9	0.3	2146	1.0	0.3	2209	0.8	0.2	2234	1.5	0.5			
11 0329	7.4	2.3	26 0350	8.1	2.5	11 0327	7.9	2.4	26 0356	8.0	2.4	11 0418	8.3	2.5	26 0443	7.6	2.3	M 0937	1.1	0.3	Tu 1002	0.3	0.1	W 0940	0.5	0.2	Th 1010	0.5	0.2	Sa 1038	0.1	0.0	Su 1102	1.0	0.3			
1545	7.6	2.3	1612	8.0	2.4	1550	7.9	2.4	1620	7.6	2.3	1651	7.8	2.4	1712	7.1	2.2	2154	0.9	0.3	2217	0.6	0.2	2156	0.7	0.2	2221	1.0	0.3	2251	0.8	0.2	2311	1.5	0.5			
12 0401	7.8	2.4	27 0425	8.3	2.5	12 0404	8.2	2.5	27 0428	8.0	2.4	12 0503	8.3	2.5	27 0522	7.5	2.3	Tu 1012	0.6	0.2	W 1038	0.2	0.1	Th 1017	0.2	0.1	F 1046	0.5	0.2	Su 1123	0.2	0.1	M 1140	1.0	0.3			
1621	8.0	2.4	1648	8.1	2.5	1629	8.1	2.5	1656	7.5	2.3	1736	7.8	2.4	1749	7.0	2.1	2227	0.6	0.2	2252	0.6	0.2	2233	0.6	0.2	2256	1.1	0.3	2338	0.9	0.3	2349	1.5	0.5			
13 0435	8.1	2.5	28 0459	8.3	2.5	13 0440	8.4	2.6	28 0503	7.9	2.4	13 0549	8.2	2.5	28 0559	7.4	2.3	W 1045	0.3	0.1	Th 1113	0.2	0.1	F 1057	0.0	0.0	Sa 1120	0.6	0.2	M 1210	0.3	0.1	Tu 1218	1.2	0.4			
1655	8.2	2.5	1722	8.0	2.4	1707	8.1	2.5	1731	7.4	2.3	1826	7.6	2.3	1828	6.9	2.1	2300	0.5	0.2	2324	0.7	0.2	2310	0.6	0.2	2329	1.3	0.4	1927	6.6	2.0	2012	7.0	2.1	1955	6.7	2.0
14 0507	8.4	2.6	29 0531	8.2	2.5	14 0519	8.5	2.6	29 0538	7.8	2.4	14 0626	8.1	0.3	29 0631	1.6	0.5	Th 1119	0.0	0.0	F 1146	0.3	0.1	Sa 1136	0.0	0.0	W 1156	0.8	0.2	Tu 0639	8.0	2.4	W 0639	7.3	2.2			
1730	8.2	2.5	1755	7.7	2.3	1747	7.9	2.4	1807	7.2	2.2	1827	7.2	2.2	1844	6.9	2.1	2335	0.5	0.2	2357	1.0	0.3	2350	0.8	0.2	2319	1.1	0.3	1916	7.3	2.2	1911	6.8	2.1			
15 0541	8.4	2.6	30 0604	8.0	2.4	15 0559	8.3	2.5	30 0005	1.5	0.5	15 0119	1.4	0.4	28 0559	7.4	2.3	F 1156	0.0	0.0	Sa 1220	0.6	0.2	W 1220	0.2	0.1	M 0614	7.5	2.3	W 0732	7.6	2.3	Th 0724	7.1	2.2			
1807	8.1	2.5	1830	7.4	2.3	1833	7.6	2.3	1844	6.9	2.1	1916	7.3	2.2	1911	6.8	2.1	1927	6.6	2.0	1927	6.6	2.0	2012	7.0	2.1	1955	6.7	2.0									
31 0044	1.8	0.5	Tu 0655	7.2	2.2	1316	1.4	0.4	1927	6.6	2.0	31 0044	1.8	0.5	Tu 0655	7.2	2.2	1316	1.4	0.4	1927	6.6	2.0	1927	6.6	2.0	1927	6.6	2.0	1927	6.6	2.0						

Time meridian 52° 30' W. 0000 is midnight. 1200 is noon.

Heights are referred to the chart datum of soundings.

Seasonal variations in sea level have not been included in these predictions.

Times and Heights of High and Low Waters

JANUARY				FEBRUARY				MARCH			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day	Day
h m	ft	m	h m	ft	m	h m	ft	m	h m	ft	m
1 0054	5.2	1.6	16 0206	4.6	1.4	1 0224	4.5	1.4	16 0306	4.4	1.3
Sa 0618	12.8	3.9	Su 0824	12.9	3.9	Tu 0754	12.9	3.9	W 0906	12.4	3.8
1342	2.0	0.6	1436	2.1	0.6	1500	2.0	0.6	1518	3.0	0.9
1930	12.2	3.7	2100	12.9	3.9	2054	13.1	4.0	2130	12.8	3.9
2 0148	4.8	1.5	17 0248	4.5	1.4	2 0318	3.7	1.1	17 0336	3.9	1.2
Su 0712	12.9	3.9	M 0900	12.7	3.9	W 0854	12.9	3.9	Th 0924	12.2	3.7
1430	1.6	0.5	1512	2.2	0.7	1548	1.9	0.6	1554	3.0	0.9
2018	12.4	3.8	2136	12.8	3.9	2142	13.4	4.1	2142	12.7	3.9
3 0242	4.3	1.3	18 0324	4.3	1.3	3 0412	2.8	0.9	18 0412	3.1	1.0
M 0806	13.0	4.0	Tu 0936	12.5	3.8	Th 1000	12.9	3.9	F 0948	12.2	3.7
1518	1.3	0.4	1548	2.2	0.7	1636	1.8	0.5	1624	2.9	0.9
2106	12.7	3.9	2206	12.8	3.9	2236	13.6	4.2	2200	12.8	3.9
4 0336	3.7	1.1	19 0400	3.9	1.2	4 0506	2.0	0.6	19 0448	2.4	0.7
Tu 0900	13.0	4.0	W 1000	12.4	3.8	F 1100	13.0	4.0	Sa 1024	12.3	3.7
1606	1.1	0.4	1618	2.2	0.7	1724	1.8	0.5	1700	2.8	0.8
2200	13.0	4.0	2230	12.8	3.9	2324	13.8	4.2	2230	13.0	4.0
5 0424	3.0	0.9	20 0436	3.3	1.0	5 0554	1.4	0.4	20 0530	1.7	0.5
W 1000	13.0	4.0	Th 1024	12.4	3.8	Sa 1200	13.0	4.0	Su 1106	12.3	3.8
1654	1.1	0.3	1654	2.2	0.7	1812	2.0	0.6	1736	2.8	0.8
2254	13.3	4.1	2248	13.0	4.0	2318	13.1	4.0	2312	13.2	4.0
6 0518	2.5	0.8	21 0512	2.7	0.8	6 0018	13.9	4.2	21 0612	1.4	0.4
Th 1106	12.9	3.9	F 1100	12.5	3.8	Su 0648	1.1	0.4	M 1154	12.2	3.7
1742	1.3	0.4	1724	2.2	0.7	1300	12.9	3.9	1818	3.0	0.9
2348	13.5	4.1	2318	13.1	4.0	1900	2.4	0.7	2354	13.2	4.0
7 0612	2.0	0.6	22 0548	2.2	0.7	7 0112	13.8	4.2	22 0654	1.3	0.4
F 1212	12.9	3.9	Sa 1142	12.6	3.8	M 0742	1.1	0.4	Tu 1248	12.1	3.7
1830	1.8	0.5	1806	2.5	0.8	1354	12.8	3.9	1900	3.5	1.1
			2354	13.2	4.0	1954	2.9	0.9			
8 0042	13.6	4.2	23 0656	1.9	0.6	8 0212	13.6	4.2	23 0042	13.2	4.0
Sa 0706	1.9	0.6	Su 1230	12.5	3.8	Tu 0842	1.3	0.4	W 0748	1.6	0.5
1318	12.8	3.9	1848	2.9	0.9	1500	12.7	3.9	1342	11.8	3.6
1924	2.4	0.7				2054	3.5	1.1	1954	4.2	1.3
9 0136	13.5	4.1	24 0036	13.2	4.0	9 0312	13.5	4.1	24 0136	13.0	4.0
Su 0806	1.9	0.6	M 0718	1.9	0.6	W 0942	1.6	0.5	Th 0842	2.0	0.6
1418	12.7	3.9	1318	12.3	3.8	1600	12.7	3.9	1448	11.6	3.5
2024	3.1	1.0	1930	3.5	1.1	2154	4.0	1.2	2048	4.9	1.5
10 0236	13.4	4.1	25 0118	13.1	4.0	10 0418	13.4	4.1	25 0230	12.8	3.9
M 0912	2.0	0.6	Tu 0812	2.2	0.7	Th 1042	1.8	0.5	F 0948	2.4	0.7
1530	12.6	3.8	1418	12.1	3.7	1700	12.9	3.9	1600	11.6	3.6
2130	3.7	1.1	2018	4.3	1.3	2300	4.4	1.3	2154	5.5	1.7
11 0342	13.3	4.0	26 0212	12.9	3.9	11 0518	13.4	4.1	26 0336	12.6	3.8
Tu 1018	2.1	0.6	W 0912	2.4	0.7	F 1142	1.9	0.6	Sa 1054	2.7	0.8
1636	12.7	3.9	1518	11.9	3.6	1800	13.0	4.0	1706	11.9	3.6
2236	4.1	1.3	2118	4.9	1.5				1624	12.9	3.9
12 0454	13.3	4.0	27 0306	12.8	3.9	12 0000	4.6	1.4	27 0448	12.6	3.8
W 1118	2.0	0.6	Th 1018	2.6	0.8	Sa 0612	13.4	4.1	Su 1154	2.8	0.9
1736	12.8	3.9	1624	11.8	3.6	1230	2.1	0.6	1806	12.3	3.8
2336	4.3	1.3	2224	5.4	1.7	1854	13.2	4.0			
13 0554	13.3	4.1	28 0400	12.7	3.9	13 0048	4.8	1.5	13 0536	13.3	4.0
Th 1212	1.9	0.6	F 1118	2.6	0.8	Su 0706	13.3	4.0	M 0554	12.7	3.9
1836	12.9	3.9	1724	11.9	3.6	1324	2.3	0.7	1254	2.8	0.9
			2324	5.6	1.7	1942	13.2	4.0	1854	12.7	3.9
14 0030	4.4	1.4	29 0506	12.8	3.9	14 0136	4.8	1.5	14 0018	4.8	1.5
F 0648	13.3	4.1	Sa 1218	2.5	0.8	W 0748	13.0	4.0	M 0630	13.2	4.0
1306	1.9	0.6	1818	12.2	3.7	1406	2.6	0.8	1248	2.8	0.8
1930	13.0	4.0				2030	13.1	4.0	1906	13.4	4.1
15 0118	4.5	1.4	30 0030	5.5	1.7	15 0224	4.7	1.4	15 0112	4.7	1.4
Sa 0736	13.2	4.0	Su 0600	12.9	3.9	Tu 0830	12.7	3.9	W 0718	12.9	3.9
1348	2.0	0.6	1312	2.3	0.7	1442	2.8	0.9	1330	3.1	1.0
2012	13.0	4.0	1912	12.4	3.8	2106	13.0	4.0	1948	13.3	4.1
			31 0130	5.1	1.6				1218	2.4	0.7
			M 0700	12.9	3.9				1812	13.4	4.1
			1406	2.2	0.7				1748	12.5	3.8
			2000	12.8	3.9				2018	13.4	4.1

Time meridian 45° W. 0000 is midnight. 1200 is noon.
Heights are referred to the chart datum of soundings.

TABLE 2.—TIDAL DIFFERENCES AND OTHER CONSTANTS
EXPLANATION OF TABLE

The publication of full daily predictions is necessarily limited to a comparatively small number of stations. Tide predictions for many other places, however, can be obtained by applying certain differences to the predictions for the reference stations in table 1. The following pages list the places called "subordinate stations" for which such predictions can be made and the differences or ratios to be used. These differences or ratios are to be applied to the predictions for the proper reference station which is listed in table 2 in bold face type above the differences for the subordinate station. The stations in this table are arranged in geographical order. The index at the end of this volume will assist in locating a particular station.

Caution.—The time and height differences listed in table 2 are average differences derived from comparisons of simultaneous tide observations at the subordinate location and its reference station. Because these figures are constant, they cannot provide for the daily variances of the actual tide. Therefore, it must be realized that although the application of the time and height differences will generally provide reasonably accurate approximations, they cannot result in as accurate predictions as those for the reference stations which are based upon much longer periods of analyses and which do provide for daily variances. In addition, at subordinate stations where the tide is chiefly diurnal, the tide correctors are intended primarily to be used to approximate the times and heights of the higher high and the lower low waters. When the lower high water and higher low water at the reference station are nearly the same height, great reliance should not be placed on the calculated corresponding tides at the subordinate station.

Time difference.—To determine the time of high water or low water at any station listed in this table there is given in the columns headed "Differences, Time" the hours and minutes to be added to or subtracted from the time of high or low water at some reference station. A plus (+) sign indicates that the tide at the subordinate station is later than at the reference station and the difference should be added, a minus (−) sign that it is earlier and should be subtracted.

To obtain the tide at a subordinate station on any date apply the difference to the tide at the reference station for that same date. In some cases, however, to obtain an a. m. tide it may be necessary to use the preceding day's p. m. tide at the reference station, or to obtain a p. m. tide it may be necessary to use the following day's a. m. tide. For example, if a high water occurs at a reference station at 2200 on July 2, and the tide at the subordinate station occurs 3 hours later, then high water will occur at 0100 on July 3 at the subordinate station. For the second case, if a high water at a reference station occurs at 0200 on July 17, and the tide at the subordinate station occurs 5 hours earlier, the high water at the subordinate station will occur at 2100 on July 16. The necessary allowance for change in date when the international date line is crossed is included in the time differences. In such cases use the same date at the reference station as desired for the subordinate station as explained above.

The results obtained by the application of the time differences will be in the kind of time indicated by the time meridian shown above the name of the subordinate station. Summer or daylight saving time is not used in the tide tables.

Height differences.—The height of the tide, referred to the datum of charts, is obtained by means of the height differences or ratios. A plus (+) sign indicates that the difference should be added to the height at the reference station and a minus (−) sign that it should be subtracted. All height differences, ranges, and levels in table 2 are in feet but may be converted to meters by the use of table 7.

TABLE 2.—TIDAL DIFFERENCES AND OTHER CONSTANTS

Ratio.—For some stations height differences would give unsatisfactory predictions. In such cases they have been omitted and one or two ratios are given. Where two ratios are given, one in the "height of high water" column and one in the "height of low water" column, the high waters and low waters at the reference station should be multiplied by these respective ratios. Where only one is given, the omitted ratio is either unreliable or unknown.

For some subordinate stations there is given in parentheses a ratio as well as a correction in feet. In those instances, each predicted high and low water at the reference station should first be multiplied by the ratio and then the correction in feet is to be added to or subtracted from each product as indicated.

As an example, at Port of Spain, Trinidad, the values in the time and height difference columns in Table 2 are given as $-0\ 44$, $-1\ 12$, and $(^*0.31+1.4)$ as referred to the reference station at Punta Gorda, Venezuela. If we assume that the time predictions in column (1) below are those of Punta Gorda on a particular day, application of the time and height corrections in columns (2) and (3) would result in the tide predictions for Port of Spain in column (4).

(1)	(2)	(3)	(4)			
Time h.m.	Height ft	Time Corrections h.m.	Height Corrections	Time h.m.	Height ft	Height meters
0326	0.6	$-1\ 12$	$\times 0.31+1.4$	0214	1.6	0.5
0900	5.1	$-0\ 44$	$\times 0.31+1.4$	0816	3.0	0.9
1608	-0.3	$-1\ 12$	$\times 0.31+1.4$	1456	1.3	0.4
2148	5.4	$-0\ 44$	$\times 0.31+1.4$	2104	3.1	0.9

Range.—The *mean range* is the difference in height between mean high water and mean low water. The *spring range* is the average semidiurnal range occurring semimonthly as the result of the Moon being new or full. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal. Where the tide is chiefly of the diurnal type the table gives the *diurnal range*, which is the difference in height between mean higher high water and mean lower low water.

Datum.—The datum of the predictions obtained through the height differences or ratios is also the datum of the largest scale chart for the locality. To obtain the depth at the time of high or low water, the predicted height should be added to the depth on the chart unless such height is negative (—), when it should be subtracted. To find the height at times between high and low water see table 3. On some charts the depths are given in meters and in such cases the heights of the tide can be reduced to meters by the use of table 7. The chart datum for the Atlantic Coast of the United States and for a part of the West Indies is *mean low water*. For the rest of the area covered by these tables the datums generally used are approximately *mean low water*, *mean low water springs*, *Gulf Coast Low Water Datum*, *mean lower low water*, *Indian spring low water*, or *the lowest possible low water*.

Mean Tide Level (Half Tide Level).—The mean tide level is a plane midway between mean low water and mean high water. Tabular values are reckoned from chart datum.

NOTE.—Dashes are entered in the place of data which are unknown, unreliable, or not applicable.

Mean Lower Low Water

Effective November 28, 1980, the term Mean Lower Low Water (MLLW) began to replace the term Gulf Coast Low Water Datum (GCLWD) as chart datum on nautical charts, bathymetric maps, and in the Tide Tables and Coast Pilots of the National Ocean Survey covering the Gulf Coast of the United States.

The area affected by this action extends from the International Border between the United States and Mexico, then easterly along the Gulf Coast of the United States to the southeast corner of Florida, including the Florida Keys.

More specifically, the boundary between the datum of Mean Low Water of the Atlantic Coast and the datum of Mean Lower Low Water of the Gulf Coast is defined as extending:

- a. from the intersection of the most westerly segment of the southern boundary of the Biscayne National Monument and the land (just south of Mangrove Point);
- b. along the southwest segments of the southern boundary of the Monument to Old Rhodes Point on the southeast corner of Old Rhodes Key;
- c. then from Old Rhodes Point to the northwest corner of the John Pennekamp Coral Reef State Park;
- d. along the land of the northwestern boundary of the Park (with the exception of the coastal indentations of Largo Sound) to the southwest corner (just southwest of Rock Harbor); and
- e. then from the southwest corner of the John Pennekamp Coral Reef State Park along its southwestern boundary and continuing straight out to sea just south of and beyond Molasses Reef.

Appropriate content changes have been made in this tide table to conform to the newly defined chart datum.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Lat.	Long.	Time	Height	High Water	Low Water	Mean Spring		
		° °'	N W	h. m.	h. m.	ft	ft	ft	ft	ft
		on HALIFAX, p.20								
171	Cartwright Harbour.....	53 42	57 02	-0 03	-0 34	-1.3	-0.6	3.7	4.9	3.4
173	Curlew Harbour.....	53 45	56 33	-0 07	-0 38	-1.6	-0.9	3.7	4.9	3.1
175	Comfort Bight.....	53 09	55 46	-0 32	-1 03	-1.9	-1.0	3.5	4.6	2.9
177	Square Island Harbour.....	52 44	55 49	-0 34	-1 05	-2.0	-1.1	3.5	4.7	2.8
179	Port Marnham.....	52 23	55 44	-0 43	-1 14	-2.7	-1.0	2.7	3.6	2.5
180	Battle Harbour.....	52 16	55 36	-1 03	-1 30	-2.1	-0.3	2.6	3.8	3.1
		on HARRINGTON HARBOUR, p.12								
181	Strait of Bell Isle Chateau Bay.....	52 00	55 50	-3 08	-3 19	*0.69	*0.81	2.4	3.1	2.5
183	Red Bay.....	51 43	56 25	-2 00	-1 55	*0.56	*0.56	2.1	2.6	2.0
185	Fortneau Bay.....	51 27	56 53	-0 26	-0 17	*0.78	*0.81	2.9	3.7	2.8
		on HALIFAX, p.20								
201	NEWFOUNDLAND, East Coast Pistolet Bay.....	51 30	55 44	-0 14	-0 28	*0.46	*0.29	2.4	3.1	1.8
203	Ariego Bay.....	51 10	56 00	-0 34	-0 34	-2.6	-1.5	3.3	4.3	2.3
205	Wild Cove.....	50 42	56 10	-0 49	-1 01	-2.0	-1.1	3.5	4.7	2.8
207	Sops Island, White Bay.....	49 50	56 46	-0 49	-1 24	*0.46	*0.29	2.4	3.4	1.8
209	Exploits Lower Harbour.....	49 32	55 04	-0 34	-1 09	-3.1	-1.3	2.6	3.5	2.1
211	Fogo Harbour.....	49 43	54 16	-0 34	-0 42	-2.6	-1.3	3.1	4.2	2.4
213	Valleyfield.....	49 10	53 37	-0 46	-1 13	*0.45	*0.33	2.2	2.9	1.8
215	Port Union.....	48 30	53 05	-0 53	-1 15	*0.49	*0.48	2.2	3.0	2.1
217	Random Head Harbour, Trinity Bay.....	48 06	53 34	-0 53	-1 05	*0.48	*0.33	2.4	3.2	1.9
219	Harbour Grace, Conception Bay.....	47 41	53 12	-0 28	-0 46	*0.51	*0.33	2.6	3.5	2.0
221	St. John's.....	47 34	52 42	-0 34	-0 46	*0.52	*0.38	2.6	3.5	2.1
		on ARGENTIA, p.4								
223	NEWFOUNDLAND, South Coast Trepassey Harbour.....	46 43	53 23	-0 19	-0 11	-1.2	-0.5	4.2	5.6	3.5
225	St. Mary Harbour, St. Mary Bay.....	46 55	53 35	-0 14	-0 06	-1.2	-0.5	4.2	5.6	3.5
227	Placentia Bay ARGENTIA.....	47 18	53 59	Daily predictions				4.9	6.3	4.4
229	Woody Island.....	47 47	54 10	+0 09	+0 09	-0.5	-0.3	4.7	6.0	4.0
231	Mortier Bay.....	47 10	55 09	+0 15	+0 26	-1.0	-0.8	4.7	6.0	3.5
233	Great St. Lawrence Harbour.....	46 55	55 22	+0 28	+0 55	-0.7	+0.3	3.9	5.0	4.2
		Time meridian, 60°W								
235	St. Pierre Hbr., St. Pierre Island.....	46 47	56 10	-0 09	+0 13	-0.8	+0.2	3.9	5.0	4.1
		Time meridian, 52°30'W								
237	Fortune Bay Grande le Pierre Harbour.....	47 40	54 47	+1 09	+1 09	-1.0	+0.2	3.7	4.8	4.0
239	Belleoram.....	47 32	55 25	+0 57	+0 57	(*0.67+0.8)		3.3	4.3	3.8
241	Ship Cove, Bay d'Espoir.....	47 52	55 50	+0 45	+0 53	-0.4	0.0	4.5	5.5	4.2
243	Great Jervis Harbour, Bay d'Espoir.....	47 39	56 11	+0 38	+1 05	-1.1	+0.1	3.7	4.8	3.9
245	Hare Bay.....	47 37	56 32	+0 41	+1 08	(*0.67+0.6)		3.3	4.3	3.6
247	Grey River.....	47 34	57 07	+0 45	+1 12	(*0.63+0.7)		3.1	4.0	3.5
249	Connioye Bay.....	47 40	57 54	+0 50	+0 50	(*0.59+0.7)		2.9	3.8	3.3
251	La Poile Bay.....	47 40	58 24	+1 15	+1 15	(*0.63+0.6)		3.1	4.0	3.4
		on HARRINGTON HARBOUR, p.12								
253	Port Aux Basques.....	47 35	59 09	-1 24	-1 28	*0.80	*0.75	3.1	4.0	2.8
255	Codroy Road.....	47 53	59 24	-1 22	-1 27	*0.74	*0.75	2.8	3.7	2.6
		NEWFOUNDLAND, West Coast								
257	St. Georges Harbour.....	48 27	58 30	-0 28	-0 38	*0.78	*0.88	2.8	3.5	2.8
259	Port-au-Port.....	48 33	58 45	+0 05	+0 10	-1.3	-1.0	3.5	4.5	2.4
261	Frenchman's Cove, Bay of Islands.....	49 04	58 10	+0 10	+0 10	-0.5	0.0	3.3	4.2	3.3
263	Norris Cove, Bonne Bay.....	49 31	57 52	+0 10	+0 10	-0.7	-0.4	3.5	4.4	3.0
265	Portland Cove.....	50 11	57 36	+0 19	+0 19	-0.6	-0.4	3.6	4.6	3.0
267	Port Saunders.....	50 39	57 18	+0 07	+0 03	-0.3	-0.3	3.8	4.9	3.2
269	Castors Harbour, St. John Bay.....	50 55	56 59	+0 10	+0 10	*0.78	*0.75	3.0	4.1	2.7
271	St. Barbe Bay.....	51 12	56 46	0 00	0 00	*0.78	*0.56	3.3	4.4	2.6
		QUEBEC, Gulf of St. Lawrence								
		Time meridian, 60°W								
273	Bradore Bay.....	51 28	57 15	-0 35	-0 30	-0.6	-0.1	3.3	4.4	3.1
275	Mistanoque Harbour.....	51 16	58 12	-0 15	-0 15	-0.4	-0.1	3.5	4.6	3.3
277	HARRINGTON HARBOUR.....	50 30	59 28	Daily predictions				3.8	4.9	3.5
279	Wapitagan Harbour.....	50 12	60 01	+0 15	+0 15	-0.3	+0.1	3.4	4.4	3.4
281	Kegaska.....	50 12	61 14	+0 40	+0 40	-0.9	-0.2	3.1	4.0	3.0
283	Natashquan.....	50 12	61 50	+1 00	+1 10	-0.8	-0.1	3.1	4.0	3.1
285	Betchewun Harbour.....	50 14	63 11	+2 09	+2 13	-0.7	-0.4	3.5	4.6	3.0

Endnotes can be found at the end of table 2.

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES					RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height			Mean	Spring		
				High Water	Low Water	High Water	Low Water					
		° °	° °	N	W	h. m.	h. m.	ft	ft	ft	ft	
NOVA SCOTIA, Bay of Fundy Time meridian, 60°W												
565	Ile Haute.....	45 15	65 00	-0 02	-0 02	+7.4	+0.7	27.5	31.5	18.5		
567	Spencer Island.....	45 20	64 42	+0 17	+0 21	*1.47	*1.50	30.5	35.0	21.2		
569	Minas Basin											
571	Parrsboro (Partridge Island) <2>....	45 22	64 20	+0 51	+0 49	+14.7	--	34.4	39.0	22.3		
573	Horton Bluff, Avon River.....	45 06	64 13	+0 58	+1 02	*1.76	*1.38	38.1	43.6	24.6		
575	Windsor <2>....	45 00	64 08	+1 03	--	+19.5	--	--	--	--		
577	Burntcoat Head.....	45 18	63 49	+1 06	+1 12	*1.90	*2.18	38.4	43.5	27.9		
579	Truro <2>....	45 22	63 20	+1 43	--	+26.1	--	--	--	--		
581	Spicer Cove, Chignecto Bay.....	45 26	64 54	+0 12	+0 16	+7.0	+0.8	27.0	30.0	18.3		
583	Joggins <2>....	45 41	64 28	+0 14	+0 26	+14.2	+1.8	33.2	37.0	22.4		
	Amherst Point, Cumberland Basin.....	45 50	64 17	+0 33	+0 45	*1.69	*1.55	35.6	40.5	24.0		
NEW BRUNSWICK, Bay of Fundy												
Petitcodiac River <3>												
585	Grindstone Island.....	45 43	64 37	+0 21	+0 28	*1.49	*1.45	31.1	35.6	21.4		
587	Hopewell Cape.....	45 52	64 35	+0 14	+0 39	*1.64	*1.85	33.2	38.0	24.0		
589	Moncton <2> <3>....	46 05	64 46	+0 46	--	+17.2	--	--	--	--		
591	Salisbury.....	46 01	65 03	+1 31	--	+18.2	--	--	--	--		
601	Herring Cove.....	45 35	64 58	+0 22	+0 20	+8.4	+0.9	28.3	32.4	19.1		
603	Quaco Bay.....	45 20	65 32	+0 11	+0 12	+2.0	-0.3	23.1	26.3	15.3		
605	ST. JOHN <4>....	45 15	66 04	Daily predictions				20.8	23.7	14.4		
607	Indiantown, St. John River.....	45 16	66 05	+1 30	+2 25	--	--	1.2	1.4	2.4		
609	Lepreau Harbour.....	45 07	66 29	-0 01	+0 03	-2.3	-0.5	19.0	21.7	13.0		
611	L'Etang Harbour.....	45 02	66 49	+0 01	+0 05	-3.2	-0.8	18.4	21.0	12.4		
613	North Head, Grand Manan Island.....	44 46	66 45	-0 05	-0 05	-4.5	-0.9	17.2	19.3	11.7		
615	Seal Cove, Grand Manan Island.....	44 37	66 51	-0 15	-0 17	*0.68	*0.65	14.3	16.3	9.8		
617	Outer Wood Island <5>....	44 36	66 48	-0 25	-0 27	-7.8	-0.8	13.8	16.2	10.1		
619	Machias Seal Island <5>....	44 30	67 06	-0 01	--	-9.6	-1.7	12.9	14.5	8.8		
620	Welshpool, Campobello Island <5>....	44 53	66 57	-0 01	+0 06	-3.5	-1.0	18.3	21.2	12.1		
621	Wilsons Beach, Campobello Island <5>....	44 56	66 56	0 00	+0 01	-3.7	+0.1	17.0	19.4	12.6		
622	Back Bay, Letite Harbour <5>....	45 03	66 52	0 00	-0 03	-3.5	0.0	17.3	20.1	12.6		
623	Midjik Bluff, Passamaquoddy Bay <5>....	45 07	66 54	+0 12	+0 17	-2.0	-0.5	19.3	22.0	13.1		
624	St. Andrews, Passamaquoddy Bay <5>....	45 04	67 03	+0 14	+0 20	-2.3	0.0	18.5	21.2	13.2		
625	The Ledge, St. Croix River <5>....	45 10	67 12	+0 17	+0 30	-0.8	0.0	20.0	22.8	14.0		
MAINE Time meridian, 75°W												
on EASTPORT, p.28												
627	EASTPORT.....	44 54	66 59	Daily predictions				18.2	20.7	9.1		
629	Gleason Cove, Western Passage.....	44 58	67 03	+0 08	+0 07	+0.2	0.0	18.4	20.9	9.2		
	St. Croix River											
631	Robbinston.....	45 05	67 06	+0 09	+0 09	+1.0	0.0	19.2	21.8	9.6		
633	St. Croix Island.....	45 08	67 08	+0 10	+0 12	+1.4	0.0	19.6	22.3	9.8		
637	Calais.....	45 11	67 17	+0 31	+0 34	+1.8	0.0	20.0	22.8	10.0		
	Cobscook Bay											
639	Deep Cove, Moose Island.....	44 54	67 01	+0 08	+0 09	+0.5	0.0	18.7	21.3	9.3		
641	East Bay.....	44 56	67 07	+0 14	+0 16	+0.9	0.0	19.1	21.8	9.5		
643	Coffins Point.....	44 52	67 07	+0 33	+0 38	+0.1	0.0	18.3	20.8	9.1		
645	Birch Islands.....	44 52	67 09	+1 05	+1 17	-0.6	0.0	17.6	20.0	8.8		
647	Horan Head, South Bay.....	44 52	67 04	+0 18	+0 21	+1.0	0.0	19.2	21.9	9.6		
649	Lubec.....	44 52	66 59	-0 03	-0 01	-0.7	0.0	17.5	20.0	8.7		
651	West Quoddy Head.....	44 49	66 59	-0 09	-0 15	-2.5	0.0	15.7	17.9	7.8		
653	Moose Cove.....	44 44	67 06	-0 10	-0 16	-3.4	0.0	14.8	16.9	7.4		
655	Cutler, Little River.....	44 39	67 13	-0 12	-0 17	-4.6	0.0	13.6	15.5	6.8		
657	Stone Island, Machias Bay.....	44 36	67 22	-0 12	-0 29	-5.8	0.0	12.4	14.1	6.2		
659	Machiasport, Machias River.....	44 42	67 24	0 00	-0 10	-5.6	0.0	12.6	14.4	6.3		
661	Shoppee Point, Englishman Bay.....	44 37	67 30	-0 06	-0 14	-6.1	0.0	12.1	13.8	6.1		
663	Roque Island Harbor, Englishman Bay.....	44 34	67 31	-0 11	-0 14	-5.9	0.0	12.3	14.0	6.1		
on PORTLAND, p.32												
665	Steele Harbor Island.....	44 30	67 33	-0 28	-0 20	+2.5	0.0	11.6	13.3	5.8		
667	Jonesport, Moosabec Reach.....	44 32	67 36	-0 23	-0 17	+2.4	0.0	11.5	13.2	5.8		
669	Gibbs Island, Pleasant River.....	44 33	67 46	-0 20	-0 11	+2.2	0.0	11.3	13.0	5.6		
671	Addison, Pleasant River.....	44 37	67 45	0 00	+0 04	+2.7	0.0	11.8	13.6	5.9		
673	Trafton Island, Narraguagus Bay.....	44 29	67 50	-0 23	-0 20	+2.0	0.0	11.1	12.8	5.5		
675	Milbridge, Narraguagus River.....	44 32	67 53	-0 20	-0 05	+2.2	0.0	11.3	13.0	5.6		
677	Pigeon Hill Bay.....	44 27	67 52	-0 21	-0 18	+2.0	0.0	11.1	12.8	5.6		
678	Green Island, Petit Manan Bar.....	44 22	67 52	-0 28	-0 24	+1.5	0.0	10.6	12.2	5.3		
679	Pinkham Bay, Dyer Bay.....	44 28	67 55	-0 23	-0 18	+1.8	0.0	10.9	12.5	5.4		
681	Garden Point, Gouldsboro Bay.....	44 28	67 59	-0 23	-0 18	+1.7	0.0	10.8	12.4	5.4		
683	Corea Harbor.....	44 24	67 58	-0 25	-0 20	+1.4	0.0	10.5	12.1	5.2		
685	Prospect Harbor.....	44 24	68 01	-0 24	-0 15	+1.4	0.0	10.5	12.1	5.2		
	Frenchman Bay											
701	Winter Harbor.....	44 23	68 05	-0 23	-0 09	+1.0	0.0	10.1	11.6	5.0		
703	Eastern Point Harbor.....	44 28	68 10	-0 20	-0 14	+1.4	0.0	10.5	12.1	5.2		
705	Sullivan.....	44 31	68 12	-0 10	-0 05	+1.4	0.0	10.5	12.1	5.2		
707	Mount Desert Narrows.....	44 26	68 22	-0 08	-0 08	+1.4	0.0	10.5	12.1	5.3		

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES					RANGES		Mean Tide Level			
		Lat.	Long.	Time Height				Mean Spring						
				High Water	Low Water	High Water	Low Water							
		° °	° °	h. m.	h. m.	ft	ft	ft	ft	ft	ft			
		N	W	on PORTLAND, p.32										
	MAINE Time meridian, 75°W													
709	Mount Desert Island													
711	Salsbury Cove.....	44 26	68 17	-0 15	-0 12	+1.5	0.0	10.6	12.2	5.3				
713	Bar Harbor.....	44 23	68 12	-0 22	-0 19	+1.4	0.0	10.5	12.1	5.2				
715	Southwest Harbor.....	44 16	68 19	-0 22	-0 12	+1.1	0.0	10.2	11.7	5.1				
717	Mount Desert.....	44 22	68 20	-0 16	-0 08	+1.5	0.0	10.6	12.2	5.3				
719	Bass Harbor.....	44 14	68 21	-0 18	-0 11	+0.8	0.0	9.9	11.3	5.0				
	Pretty Marsh Harbor.....	44 20	68 25	-0 13	-0 13	+1.1	0.0	10.2	11.7	5.1				
721	Blue Hill Bay													
723	Union River.....	44 30	68 26	-0 09	-0 08	+1.3	0.0	10.4	11.9	5.2				
725	Blue Hill Harbor.....	44 24	68 34	-0 13	-0 08	+1.0	0.0	10.1	11.6	5.0				
727	Allen Cove.....	44 18	68 33	-0 12	-0 12	+1.2	0.0	10.3	11.8	5.1				
729	Hackerel Cove.....	44 10	68 26	-0 20	-0 13	+0.9	0.0	10.0	11.5	5.0				
	Burnt Coat Harbor, Swans Island.....	44 09	68 27	-0 23	-0 13	+0.4	0.0	9.5	10.8	4.7				
	MAINE, Penobscot Bay													
731	Eggemoggin Reach													
733	Naskeag Harbor.....	44 14	68 33	-0 16	-0 14	+1.1	0.0	10.2	11.6	5.1				
735	Center Harbor.....	44 16	68 35	-0 13	-0 07	+1.0	0.0	10.1	11.5	5.0				
736	Sedgwick.....	44 18	68 38	-0 11	-0 06	+1.1	0.0	10.2	11.7	5.1				
737	Isle Au Haut.....	44 04	68 38	-0 23	-0 19	+0.2	0.0	9.3	10.7	4.7				
739	Kimball Island.....	44 04	68 39	-0 20	-0 20	0.0	0.0	9.1	10.4	4.6				
741	Head Harbor, Isle Au Haut.....	44 01	68 37	-0 20	-0 20	0.0	0.0	9.6	10.9	4.8				
743	Oceanville, Deer Isle.....	44 12	68 38	-0 18	-0 17	+1.0	0.0	10.1	11.5	5.0				
745	Stonington, Deer Isle.....	44 09	68 40	-0 18	-0 17	+0.6	0.0	9.7	11.0	4.8				
747	Northwest Harbor, Deer Isle.....	44 14	68 41	-0 12	-0 12	+1.0	0.0	10.1	11.5	5.0				
749	Matinicus Harbor.....	43 52	68 53	-0 17	-0 12	-0.1	0.0	9.0	10.4	4.5				
751	Vinalhaven, Vinalhaven Island.....	44 03	68 50	-0 13	-0 06	+0.2	0.0	9.3	10.7	4.6				
753	Iron Point, North Haven Island.....	44 08	68 52	-0 13	-0 13	+0.4	0.0	9.5	10.8	4.8				
755	North Haven Island.....	44 09	68 53	-0 13	-0 15	+0.7	0.0	9.8	11.1	4.9				
757	Pulpit Harbor, North Haven Island.....	44 23	68 48	-0 04	-0 01	+0.6	0.0	9.7	11.1	4.8				
	Castine.....	44 25	68 44	+0 11	+0 29	+1.2	0.0	10.3	11.7	5.1				
	Penobscot River													
759	Fort Point.....	44 28	68 49	-0 06	-0 05	+1.2	0.0	10.3	11.8	5.1				
761	Bucksport.....	44 34	68 48	-0 02	-0 01	+1.9	0.0	11.0	12.5	5.5				
763	South Orrington.....	44 42	68 49	+0 01	+0 04	+3.2	0.0	12.3	14.0	6.1				
765	Hampden.....	44 45	68 50	+0 02	+0 06	+3.7	0.0	12.8	14.6	6.4				
767	Bangor.....	44 48	68 46	+0 04	+0 13	+4.0	0.0	13.1	14.9	6.5				
769	Belfast.....	44 26	69 00	-0 08	-0 01	+0.9	0.0	10.0	11.5	5.0				
771	Camden.....	44 12	69 03	-0 12	-0 06	+0.5	0.0	9.6	10.9	4.8				
773	Rockland.....	44 06	69 06	-0 16	-0 13	+0.6	0.0	9.7	11.2	4.8				
775	Owls Head.....	44 06	69 03	-0 16	-0 13	+0.3	0.0	9.4	10.7	4.7				
777	Dyer Point, Weskeag River.....	44 02	69 07	-0 10	-0 10	+0.5	0.0	9.6	10.9	4.8				
	MAINE, Outer Coast													
779	Tenants Harbor.....	43 58	69 12	-0 11	-0 11	+0.2	0.0	9.3	10.6	4.6				
781	Monhegan Island.....	43 46	69 19	-0 13	-0 09	-0.3	0.0	8.8	10.1	4.4				
783	Burnt Island, Georges Islands.....	43 52	69 18	-0 13	-0 12	-0.2	0.0	8.9	10.2	4.4				
	St. George River													
785	Port Clyde.....	43 56	69 16	-0 11	-0 07	-0.2	0.0	8.9	10.2	4.4				
787	Otis Cove.....	43 59	69 14	-0 15	-0 14	0.0	0.0	9.1	10.5	4.5				
789	Thomaston.....	44 04	69 11	-0 04	-0 03	+0.3	0.0	9.4	10.8	4.7				
791	New Harbor, Muscongus Bay.....	43 52	69 29	-0 10	-0 05	-0.3	0.0	8.8	10.1	4.4				
793	Muscongus Harbor, Muscongus Sound.....	43 58	69 27	-0 09	-0 03	-0.1	0.0	9.0	10.4	4.5				
795	Friendship Harbor.....	43 58	69 20	-0 18	-0 11	-0.1	0.0	9.0	10.4	4.5				
	Medomak River													
797	Jones Neck.....	44 01	69 23	-0 10	-0 05	0.0	0.0	9.1	10.5	4.5				
799	Waldoboro.....	44 06	69 23	-0 16	-0 04	+0.4	0.0	9.5	10.9	4.8				
801	Pemaquid Harbor, Johns Bay.....	43 53	69 32	-0 05	-0 01	-0.3	0.0	8.8	10.1	4.4				
	Damariscotta River													
803	East Boothbay.....	43 52	69 35	-0 02	+0 04	-0.2	0.0	8.9	10.2	4.4				
805	Newcastle.....	44 02	69 32	+0 16	+0 28	+0.2	0.0	9.3	10.7	4.6				
807	Damariscotta Harbor, Damariscotta Island.....	43 46	69 37	-0 09	-0 10	-0.3	0.0	8.8	10.1	4.4				
809	Boothbay Harbor.....	43 51	69 38	-0 06	-0 05	-0.3	0.0	8.8	10.1	4.4				
811	Southport, Townsend Gut.....	43 51	69 40	+0 01	+0 01	-0.2	0.0	8.9	10.2	4.4				
	Sheepscot River													
813	Isle of Springs.....	43 52	69 41	-0 02	-0 04	-0.2	0.0	8.9	10.3	4.4				
815	Cross River entrance.....	43 56	69 40	+0 07	+0 04	0.0	0.0	9.1	10.5	4.5				
817	Wiscasset.....	44 00	69 40	+0 16	+0 04	+0.3	0.0	9.4	10.8	4.7				
819	Sheepscot (below rapids).....	44 03	69 37	+0 20	+0 20	+0.5	0.0	9.6	11.0	4.8				
821	Back River.....	43 57	69 41	+0 34	+0 31	0.0	0.0	9.1	10.5	4.5				
823	Robinhood, Sasanoa River.....	43 51	69 44	+0 14	+0 14	-0.3	0.0	8.8	10.1	4.4				
825	Mill Point, Sasanoa River.....	43 53	69 46	+0 35	+0 43	-0.3	0.0	8.8	10.1	4.4				
827	Upper Hell Gate, Sasanoa River.....	43 54	69 47	+1 11	+1 31	-2.1	0.0	7.0	8.0	3.5				
	MAINE, Kennebec River													
829	Fort Popham.....	43 45	69 47	+0 09	+0 04	-0.7	0.0	8.4	9.7	4.2				
831	Phippsburg.....	43 49	69 49	+0 26	+0 28	-1.1	0.0	8.0	9.2	4.0				

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NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
		° °'	N W	h. m.	h. m.	ft	ft	ft	ft	ft	
	on PORTLAND, p.32										
Maine, Kennebac River Time meridian, 75°W											
833	Bath.....	43 55	69 49	+1 01	+1 17	-2.7	0.0	6.4	7.4	3.2	
835	Sturgeon Island, Merrymeeting Bay.....	43 59	69 50	+2 00	+2 04	*0.58	*0.58	5.3	6.1	2.6	
837	Androscoggin River entrance.....	43 57	69 53	+2 24	+3 26	*0.52	*0.52	4.7	5.4	2.3	
839	Brunswick, Androscoggin River.....	43 55	69 58	+2 35	+4 36	*0.42	*0.42	3.8	4.4	1.9	
841	Bowdoinham, Cathance River.....	44 00	69 54	+2 34	+2 42	*0.63	*0.63	5.7	6.6	2.8	
843	Richmond.....	44 05	69 48	+2 48	+3 03	*0.58	*0.58	5.3	6.0	2.6	
845	Nehumkeag Island.....	44 10	69 45	+3 21	+3 46	*0.58	*0.58	5.3	6.0	2.6	
847	Gardiner.....	44 14	69 46	+3 43	+4 25	*0.55	*0.55	5.0	5.7	2.5	
849	Hallowell.....	44 17	69 47	+3 54	+5 03	*0.47	*0.47	4.3	4.9	2.1	
851	Augusta.....	44 19	69 46	+4 03	+5 33	*0.45	*0.45	4.1	4.6	2.0	
MAINE, Casco Bay											
853	Small Point Harbor.....	43 44	69 51	-0 12	-0 09	-0.3	0.0	8.8	10.1	4.4	
855	Cundy Harbor, New Meadows River.....	43 47	69 54	-0 01	-0 02	-0.2	0.0	8.9	10.2	4.4	
857	Howard Point, New Meadows River.....	43 53	69 53	-0 05	+0 01	-0.1	0.0	9.0	10.3	4.5	
859	Lowell Cove, Orrs Island.....	43 45	69 59	-0 07	-0 06	-0.3	0.0	8.8	10.1	4.4	
861	Harpswell Harbor.....	43 46	70 00	-0 05	-0 05	-0.1	0.0	9.0	10.4	4.5	
863	South Harpswell, Potts Harbor.....	43 44	70 01	+0 02	+0 01	-0.2	0.0	8.9	10.2	4.4	
865	Wilson Cove, Middle Bay.....	43 49	69 59	+0 02	+0 02	0.0	0.0	9.1	10.5	4.5	
867	Little Flying Point, Maquoit Bay.....	43 50	70 03	-0 01	-0 01	-0.1	0.0	9.0	10.3	4.5	
869	South Freeport.....	43 49	70 06	+0 12	+0 10	-0.1	0.0	9.0	10.3	4.5	
871	Chebeague Point, Great Chebeague Island.....	43 46	70 06	-0 04	-0 06	-0.1	0.0	9.0	10.4	4.5	
873	Prince Point.....	43 46	70 10	-0 02	-0 04	-0.1	0.0	9.0	10.4	4.5	
875	Peaks Island.....	43 39	70 12	-0 04	-0 08	-0.1	0.0	9.0	10.4	4.5	
877	PORTLAND.....	43 40	70 15	Daily predictions				9.1	10.4	4.6	
MAINE, Outer Coast-Continued											
879	Richmond Island.....	43 33	70 14	-0 03	0 00	-0.2	0.0	8.9	10.1	4.4	
881	Old Orchard Beach.....	43 31	70 22	0 00	-0 03	-0.3	0.0	8.8	10.1	4.4	
883	Wood Island Harbor.....	43 27	70 21	+0 02	-0 04	-0.4	0.0	8.7	9.9	4.3	
885	Cape Porpoise.....	43 22	70 26	+0 12	+0 17	-0.4	0.0	8.7	9.9	4.3	
887	Kennebunkport.....	43 21	70 28	+0 16	+0 16	-0.5	0.0	8.6	9.9	4.3	
889	York Harbor.....	43 08	70 38	+0 03	+0 13	-0.5	0.0	8.6	9.9	4.3	
MAINE and NEW HAMPSHIRE											
Portsmouth Harbor											
891	Jaffrey Point.....	43 03	70 43	-0 03	-0 05	-0.4	0.0	8.7	10.0	4.4	
893	Gerrish Island.....	43 04	70 42	-0 02	-0 03	-0.4	0.0	8.7	10.0	4.4	
895	Fort Point.....	43 04	70 43	+0 03	+0 07	-0.5	0.0	8.6	9.9	4.3	
897	Kittery Point.....	43 05	70 42	-0 07	+0 01	-0.4	0.0	8.7	10.0	4.4	
899	Seavey Island.....	43 05	70 45	+0 23	+0 13	-1.0	0.0	8.1	9.3	4.0	
901	Portsmouth.....	43 05	70 45	+0 22	+0 17	-1.3	0.0	7.8	9.0	3.9	
903	Piscataqua River	43 05	70 46	+0 37	+0 28	-1.6	0.0	7.5	8.6	3.7	
905	Atlantic Heights.....	43 07	70 50	+1 33	+1 27	-2.7	0.0	6.4	7.4	3.2	
907	Dover Point.....	43 11	70 50	+1 35	+1 52	-2.3	0.0	6.8	7.8	3.4	
909	Salmon Falls River entrance.....	43 03	70 55	+2 19	+2 41	-2.3	0.0	6.8	7.8	3.4	
911	Squamscott River RR Bridge.....	42 59	70 37	+0 02	-0 02	-0.6	0.0	8.5	9.8	4.2	
913	Gosport Harbor, Isles of Shoals.....	42 54	70 49	+0 14	+0 32	-0.8	0.0	8.3	9.5	4.1	
MASSACHUSETTS, Outer Coast											
915	Merrimack River entrance.....	42 49	70 49	+0 20	+0 24	-0.8	0.0	8.3	9.5	4.1	
917	Newburyport, Merrimack River.....	42 49	70 52	+0 31	+1 11	-1.3	0.0	7.8	9.0	3.9	
919	Plum Island Sound (south end).....	42 43	70 47	+0 12	+0 37	-0.5	0.0	8.6	9.9	4.3	
921	Annisquam.....	42 39	70 41	0 00	-0 07	-0.4	0.0	8.7	10.1	4.4	
923	Rockport.....	42 40	70 37	+0 04	+0 02	-0.5	0.0	8.6	10.0	4.3	
	on BOSTON, p.36										
925	Gloucester.....	42 36	70 40	-0 03	-0 06	-0.8	0.0	8.7	10.1	4.3	
927	Manchester Harbor.....	42 34	70 47	-0 02	-0 06	-0.7	0.0	8.8	10.2	4.4	
929	Beverly.....	42 32	70 53	0 00	-0 05	-0.5	0.0	9.0	10.4	4.5	
931	Salem.....	42 31	70 53	+0 02	+0 01	-0.7	0.0	8.8	10.2	4.4	
933	Marblehead.....	42 30	70 51	-0 02	-0 06	-0.4	0.0	9.1	10.6	4.5	
	Broad Sound										
935	Nahant.....	42 25	70 55	-0 01	-0 02	-0.5	0.0	9.0	10.4	4.5	
937	Lynn Harbor.....	42 27	70 58	+0 08	+0 04	-0.3	0.0	9.2	10.7	4.6	
	Boston Harbor										
939	Boston Light.....	42 20	70 53	0 00	+0 01	-0.5	0.0	9.0	10.4	4.5	
941	Lovell Island, The Narrows.....	42 20	70 56	+0 02	+0 01	-0.4	0.0	9.1	10.6	4.5	
943	Deer Island (south end).....	42 21	70 58	-0 01	-0 02	-0.2	0.0	9.3	10.8	4.6	
945	Belle Isle Inlet entrance.....	42 23	71 00	+0 18	+0 15	0 0	0.0	9.5	11.0	4.7	
947	Castle Island.....	42 20	71 01	-0 02	0 00	-0.1	0.0	9.4	10.9	4.7	

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
Boston Harbor Time meridian, 75°W											
949	BOSTON.....	42 21	71 03								
951	Dover St. Bridge, Fort Point Channel.....	42 21	71 04	+0 04	+0 06	+0.1	0.0	9.5	11.0	4.7	
953	Charles River	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	
Hingham Bay											
971	Nut Island.....	42 17	70 57	+0 07	+0 03	-0.3	0.0	9.2	10.7	4.6	
973	Sheep Island.....	42 17	70 55	+0 07	+0 03	0.0	0.0	9.5	11.0	4.7	
975	Weymouth Fore River Bridge.....	42 15	70 58	+0 07	+0 04	0.0	0.0	9.5	11.0	4.7	
977	Weymouth Back River Bridge.....	42 15	70 56	+0 06	+0 05	0.0	0.0	9.5	11.0	4.7	
979	Crow Point, Hingham Harbor entrance.....	42 16	70 54	0 00	+0 03	-0.1	0.0	9.4	10.9	4.7	
981	Hingham.....	42 15	70 53	+0 07	+0 06	0.0	0.0	9.5	11.0	4.7	
983	Nantasket Beach, Weir River.....	42 16	70 52	+0 04	+0 05	-0.1	0.0	9.4	10.9	4.7	
985	Strawberry Hill.....	42 17	70 53	+0 05	+0 05	0.0	0.0	9.5	11.0	4.7	
987	Hull.....	42 18	70 55	+0 03	+0 05	-0.2	0.0	9.3	10.8	4.7	
Cohasset Harbor to Davis Bank											
989	Cohasset Harbor (White Head).....	42 15	70 47	+0 02	-0 04	-0.7	0.0	8.8	10.2	4.4	
991	Scituate.....	42 12	70 43	-0 05	0 00	-0.7	0.0	8.8	10.2	4.4	
992	Damons Point, North River.....	42 10	70 44	+0 18	+0 34	-1.0	0.0	8.5	9.9	4.2	
993	Cape Cod	42 00	70 36	+0 02	+0 07	-0.3	0.0	9.2	10.7	4.6	
995	Gurnet Point.....	41 58	70 40	+0 05	+0 20	0.0	0.0	9.5	11.0	4.7	
997	Plymouth.....	41 46	70 30	-0 01	-0 02	-0.8	0.0	8.7	10.1	4.3	
999	Cape Cod Canal, east entrance.....	41 43	70 17	+0 09	+0 28	0.0	0.0	9.5	11.0	4.7	
1001	Barnstable Harbor, Beach Point.....	41 55	70 02	+0 12	+0 28	+0.5	0.0	10.0	11.6	5.0	
1003	Wellfleet.....	42 03	70 11	+0 14	+0 16	-0.4	0.0	9.1	10.6	4.5	
1005	Provincetown.....	42 04	70 15	-0 03	-0 04	-0.5	0.0	9.0	10.4	4.5	
1007	Cape Cod	42 00	70 01	+0 10	+0 09	-1.9	0.0	7.6	8.8	3.8	
1009	Cape Cod Lighthouse, SE of.....	41 48	69 56	+0 30	+0 56	*0.63	*0.63	6.0	7.0	3.0	
1011	Nauset Harbor.....	41 40	69 56	+0 30	+0 24	-2.8	0.0	6.7	7.8	3.3	
1013	Chatham (outer coast).....	41 41	69 57	+1 54	+2 24	*0.38	*0.38	3.6	4.2	1.8	
1015	Chatham (inside).....	41 44	69 59	+2 26	+3 25	*0.34	*0.34	3.2	3.7	1.6	
1017	Pleasant Bay.....	41 33	70 00	+0 40	+0 32	*0.39	*0.39	3.7	4.3	1.8	
1019	Monomoy Point.....	41 42	67 46	-0 49	-0 45	*0.44	*0.44	4.2	4.8	2.1	
1021	Georges Shoal.....	41 08	69 39	+0 04	-0 27	*0.14	*0.14	1.3	1.5	0.6	
Nantucket Sound, North Side											
1023	Stage Harbor.....	41 40	69 58	+0 55	+0 46	*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	
1035	Poponesset Island, Poponesset Bay.....	41 35	70 28	+2 01	+1 50	*0.24	*0.24	2.3	2.8	1.1	
1037	Succonnesset Point.....	41 33	70 29	+0 52	+0 37	*0.20	*0.20	1.9	2.3	0.9	
1039	Falmouth Heights.....	41 33	70 36	-0 18	-0 11	*0.14	*0.14	1.3	1.6	0.6	
Nantucket Island											
1041	Tom Nevers Head.....	41 14	70 01	-0 57	-1 22	*0.13	*0.13	1.2	1.4	0.6	
1043	Siasconset.....	41 16	69 58	+0 15	+0 19	*0.13	*0.13	1.2	1.4	0.6	
1045	Wauwinet (outer shore).....	41 20	70 00	+1 06	+0 57	*0.35	*0.35	3.3	4.0	1.6	
1047	Great Point.....	41 23	70 03	+0 41	+0 26	*0.33	*0.33	3.1	3.7	1.5	
1049	Nantucket.....	41 17	70 06	+1 05	+0 50	*0.32	*0.32	3.0	3.6	1.5	
1051	Eel Point.....	41 17	70 12	+0 37	+0 05	*0.24	*0.24	2.3	2.7	1.1	
1053	Tuckernuck Island, East Pond.....	41 18	70 15	+0 46	+0 27	*0.27	*0.27	2.6	3.1	1.3	
1055	Muskeget Island, north side.....	41 20	70 18	+0 23	+0 13	*0.21	*0.21	2.0	2.4	1.0	
1057	Smith Point, north side.....	41 17	70 14	+0 46	-0 32	*0.16	*0.16	1.5	1.9	0.8	
on NEWPORT, p.40											
1059	Miacomet Rip.....	41 14	70 06	+0 18	+0 55	*0.49	*0.49	1.7	2.0	0.8	
Martha's Vineyard											
1061	Wasque Point, Chappaquiddick Island.....	41 22	70 27	+2 05	+3 25	*0.31	*0.31	1.1	1.4	0.6	
1063	Off Jobs Neck Pond.....	41 21	70 35	+0 04	+0 27	-0.8	0.0	2.7	3.2	1.3	
1065	Off Chilmark Pond.....	41 20	70 43	-0 13	+0 09	-0.6	0.0	2.9	3.5	1.4	

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
	Martha's Vineyard Time meridian, 75°W	° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft	
1066	Squibnocket Point.....	41 19	70 46	-0 42	+0 03	-0.6	0.0	2.9	3.7	1.5	
1067	Nomans Land.....	41 16	70 49	-0 16	+0 23	-0.5	0.0	3.0	3.6	1.5	
1069	Gay Head.....	41 21	70 50	-0 03	+0 50	-0.6	0.0	2.9	3.5	1.4	
1071	Menemsha Bight.....	41 21	70 46	+0 05	+0 42	-0.8	0.0	2.7	3.4	1.3	
1073	Cedar Tree Neck.....	41 26	70 42	+0 13	+1 37	-1.3	0.0	2.2	2.8	1.1	
1075	Off Lake Tashmoo.....	41 28	70 38	+1 11	+2 16	*0.60	*0.60	2.1	2.5	1.0	
				on NEWPORT, p.40							
1077	West Chop.....	41 29	70 36	+0 16	-0 31	*0.15	*0.15	1.4	1.7	0.7	
1079	Vineyard Haven.....	41 27	70 36	+0 25	-0 01	*0.18	*0.18	1.7	2.0	0.8	
1081	East Chop.....	41 28	70 34	+0 27	-0 14	*0.18	*0.18	1.7	2.0	0.8	
1083	Oak Bluffs.....	41 27	70 33	+0 30	-0 14	*0.18	*0.18	1.7	2.0	0.8	
1085	Edgartown.....	41 23	70 31	+0 55	+0 16	*0.20	*0.20	1.9	2.3	0.9	
1087	Cape Poge, Chappaquiddick Island.....	41 25	70 27	+0 44	+0 02	*0.23	*0.23	2.2	2.6	1.1	
				on BOSTON, p.36							
1089	Nobska Point.....	41 31	70 39	+0 44	+2 10	*0.43	*0.43	1.5	1.9	0.7	
	Woods Hole										
1091	Little Harbor.....	41 31	70 40	+0 35	+2 26	*0.40	*0.40	1.4	1.8	0.7	
1093	Oceanographic Institution.....	41 31	70 40	+0 27	+2 04	*0.51	*0.51	1.8	2.2	0.9	
1095	Uncatena Island (south side).....	41 31	70 42	+0 15	+0 27	+0.1	0.0	3.6	4.5	1.8	
1097	Tarpaulin Cove.....	41 28	70 46	+0 14	+1 28	*0.54	*0.54	1.9	2.4	0.9	
	Quicks Hole										
1099	South side.....	41 26	70 51	-0 07	+0 14	-1.0	0.0	2.5	3.1	1.2	
1101	Middle.....	41 27	70 51	+0 03	+0 15	-0.5	0.0	3.0	3.7	1.5	
1103	North side.....	41 27	70 51	-0 05	-0 03	0.0	0.0	3.5	4.4	1.7	
				on NEWPORT, p.40							
1105	Cuttuhunk Pond entrance.....	41 25	70 55	+0 04	+0 06	-0.1	0.0	3.4	4.2	1.7	
1107	Penikese Island.....	41 27	70 55	-0 14	-0 11	-0.1	0.0	3.4	4.2	1.7	
1109	Kettle Cove.....	41 29	70 47	+0 12	+0 07	+0.3	0.0	3.8	4.7	1.9	
1111	West Falmouth Harbor.....	41 36	70 39	+0 24	+0 23	+0.5	0.0	4.0	5.0	2.0	
1113	Barlows Landing, Pocasset Harbor.....	41 41	70 38	+0 27	+0 23	+0.5	0.0	4.0	5.0	2.0	
1115	Abiels Ledge.....	41 42	70 40	+0 14	+0 21	+0.4	0.0	3.9	4.9	2.0	
1117	Monument Beach.....	41 43	70 37	+0 26	+0 23	+0.5	0.0	4.0	5.0	2.0	
1119	Cape Cod Canal, RR. bridge <6>.....	41 44	70 37	+1 18	- -	0.0	0.0	3.5	4.1	1.8	
1121	Great Hill.....	41 43	70 43	+0 20	+0 20	+0.6	0.0	4.1	5.1	2.0	
1123	Wareham, Wareham River.....	41 45	70 43	+0 25	+0 21	+0.6	0.0	4.1	5.1	2.0	
1125	Bird Island.....	41 40	70 43	+0 08	+0 03	+0.7	0.0	4.2	5.2	2.1	
1127	Marion.....	41 42	70 46	+0 12	+0 15	+0.5	0.0	4.0	5.0	2.0	
1129	Mattapoisett.....	41 39	70 49	+0 13	+0 10	+0.4	0.0	3.9	4.9	2.0	
1131	West Island (west side).....	41 36	70 50	+0 12	+0 13	+0.2	0.0	3.7	4.6	1.8	
1133	Clarks Point.....	41 36	70 54	+0 06	+0 08	+0.2	0.0	3.7	4.6	1.8	
1135	New Bedford.....	41 38	70 55	+0 10	+0 12	+0.2	0.0	3.7	4.6	1.8	
1137	Belleville, Acushnet River.....	41 40	70 55	+0 10	+0 14	+0.3	0.0	3.8	4.7	1.9	
1139	South Dartmouth, Apponagansett Bay.....	41 35	70 57	+0 28	+0 38	+0.2	0.0	3.7	4.6	1.8	
1141	Dumpling Rocks.....	41 32	70 55	+0 04	+0 03	+0.2	0.0	3.7	4.6	1.8	
1143	Westport River.....	41 30	71 06	+0 12	+0 38	-0.5	0.0	3.0	3.7	1.5	
1145	Hix Bridge, East Branch.....	41 34	71 04	+1 43	+2 35	-0.8	0.0	2.7	3.4	1.3	
				RHODE ISLAND, Narragansett Bay							
1147	Sakonnet.....	41 28	71 12	-0 10	+0 04	-0.4	0.0	3.1	3.9	1.6	
1149	Tiverton (between bridges).....	41 38	71 13	+0 21	+0 21	+0.3	0.0	3.8	4.7	1.9	
1151	Beavertail Point.....	41 27	71 24	-0 02	-0 05	0.0	0.0	3.5	4.4	1.8	
1153	NEWPORT.....	41 30	71 20				Daily predictions	3.5	4.4	1.8	
1155	Prudence Island, Sandy Point.....	41 36	71 18	+0 10	+0 09	+0.4	0.0	3.9	4.9	2.0	
1157	Bristol Point.....	41 39	71 16	+0 21	+0 12	+0.5	0.0	4.0	5.0	2.0	
				RHODE ISLAND and MASSACHUSETTS Narragansett Bay-Continued							
1159	Fall River, Massachusetts.....	41 44	71 08	+0 31	+0 34	+0.9	0.0	4.4	5.5	2.2	
1161	Taunton, Taunton River, Mass.....	41 53	71 06	+1 09	+2 26	-0.7	0.0	2.8	3.5	1.4	
1163	Bristol.....	41 40	71 16	+0 10	0 00	+0.6	0.0	4.1	5.1	2.0	
1165	Warren.....	41 44	71 17	+0 21	+0 04	+1.1	0.0	4.6	5.7	2.3	
1167	Nayatt Point.....	41 43	71 20	+0 12	+0 03	+1.1	0.0	4.6	5.7	2.3	
1169	Providence.....	41 48	71 24	+0 14	+0 05	+1.1	0.0	4.6	5.7	2.3	
1171	Pawtucket, Seekonk River.....	41 52	71 23	+0 21	+0 14	+1.1	0.0	4.6	5.8	2.3	
1173	East Greenwich.....	41 40	71 27	+0 16	+0 08	+0.5	0.0	4.0	5.0	2.0	
1175	Wickford.....	41 34	71 27	+0 12	+0 07	+0.3	0.0	3.8	4.7	1.9	
1177	Narragansett Pier.....	41 25	71 27	-0 08	+0 16	-0.3	0.0	3.2	4.0	1.6	

Endnotes can be found at the end of table 2.

CAUTION

Cape Cod Canal, Railroad Bridge, No. 1119

Predictions of the times of low water must be used with caution because of the peculiarities in the behavior of the tide. Since the tide may be practically at a stand for as much as two hours before or after the predicted times of low water, the levels at other than high and low water times cannot be obtained in the usual way as in Table 3 (Height of Tide at Any Time). The peculiar behavior of the tide near low water, which is prevalent at this place, is illustrated by the first three curves; however there are brief periods each month when the behavior is as depicted by the fourth curve.

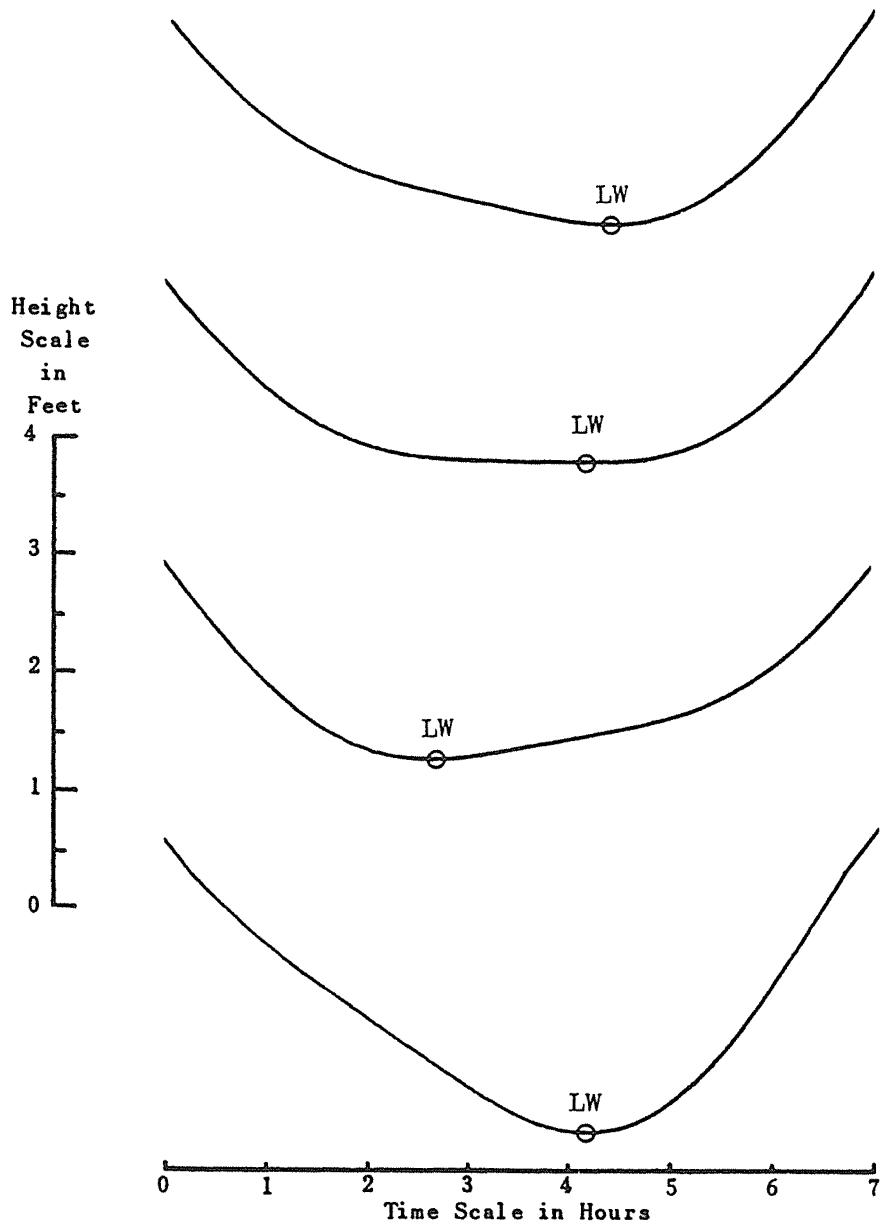


TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

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NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
		° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft	
RHODE ISLAND, Outer Coast Time meridian, 75°W											
1179	Point Judith Harbor of Refuge.....	41 22	71 29	-0 07	+0 22	-0.4	0.0	3.1	3.9	1.5	
1181	Block Island (Great Salt Pond).....	41 11	71 35	+0 05	+0 12	-0.9	0.0	2.6	3.2	1.3	
1183	Block Island (Old Harbor).....	41 10	71 33	-0 14	+0 17	-0.6	0.0	2.9	3.6	1.4	
1185	Watch Hill Point.....	41 18	71 52	+0 44	+1 21	-0.9	0.0	2.6	3.2	1.3	
on NEWPORT, p.40											
1186	Westerly, Pawcatuck River.....	41 23	71 50	-0 27	+0 02	+0.1	0.0	2.7	3.2	1.3	
CONNECTICUT, Long Island Sound											
1187	Stonington, Fishers Island Sound.....	41 20	71 54	-0 33	-0 41	+0.1	0.0	2.7	3.2	1.3	
1189	Noank, Mystic River entrance.....	41 19	71 59	-0 23	-0 08	-0.3	0.0	2.3	2.7	1.2	
1191	West Harbor, Fishers Island, N. Y.	41 16	72 00	-0 01	-0 06	-0.1	0.0	2.5	3.0	1.2	
1192	Silver Eel Pond, Fishers Island, N. Y.	41 15	72 02	-0 17	-0 04	-0.3	0.0	2.3	2.7	1.1	
1193	Thames River NEW LONDON, State Pier.....	41 22	72 06	Daily predictions				2.6	3.1	1.3	
1195	Smith Cove entrance.....	41 24	72 06	-0 01	+0 10	-0.1	0.0	2.5	3.0	1.2	
1197	Norwich.....	41 31	72 05	+0 12	+0 25	+0.4	0.0	3.0	3.6	1.5	
1199	Millstone Point.....	41 18	72 10	+0 08	+0 01	+0.1	0.0	2.7	3.2	1.3	
Connecticut River											
1200	Saybrook Jetty.....	41 16	72 21	+1 10	+0 45	+0.9	0.0	3.5	4.2	1.7	
1201	Saybrook Point.....	41 17	72 21	+1 10	+0 53	+0.6	0.0	3.2	3.8	1.6	
1202	Lyme, highway bridge.....	41 19	72 21	+1 24	+1 10	+0.5	0.0	3.1	3.7	1.5	
1203	Essex.....	41 21	72 23	+1 38	+1 38	+0.4	0.0	3.0	3.6	1.5	
1204	Connecticut River Hadlyme <7>.....	41 25	72 26	+2 18	+2 23	+0.1	0.0	2.7	3.2	1.3	
1205	East Haddam.....	41 27	72 28	+2 41	+2 53	+0.3	0.0	2.9	3.5	1.4	
1206	Haddam <7>.....	41 29	72 30	+2 47	+3 08	-0.1	0.0	2.5	3.0	1.2	
1207	Higginum Creek.....	41 30	72 33	+2 54	+3 25	0.0	0.0	2.6	3.1	1.3	
1209	Portland <7>.....	41 34	72 38	+3 50	+4 28	-0.4	0.0	2.2	2.6	1.1	
1211	Rocky Hill <7>.....	41 39	72 38	+4 43	+5 44	-0.6	0.0	2.0	2.4	1.0	
1213	Hartford <7>.....	41 46	72 40	+5 29	+6 52	-0.7	0.0	1.9	2.3	1.0	
on BRIDGEPORT, p.48											
1214	Westbrook, Duck Island Roads.....	41 16	72 28	-0 23	-0 34	-2.6	0.0	4.1	4.7	2.0	
1215	Duck Island.....	41 15	72 29	-0 25	-0 37	-2.2	0.0	4.5	5.2	2.2	
1217	Madison.....	41 16	72 36	-0 20	-0 32	-1.8	0.0	4.9	5.6	2.4	
1219	Falkner Island.....	41 13	72 39	-0 13	-0 27	-1.3	0.0	5.4	6.2	2.7	
1220	Sachem Head.....	41 15	72 42	-0 10	-0 17	-1.3	0.0	5.4	6.2	2.7	
1221	Money Island.....	41 15	72 45	-0 11	-0 25	-1.1	0.0	5.6	6.4	2.8	
1223	Branford Harbor.....	41 16	72 49	-0 07	-0 20	-0.8	0.0	5.9	6.8	2.9	
1225	New Haven Harbor entrance.....	41 14	72 55	-0 08	-0 16	-0.5	0.0	6.2	7.1	3.1	
1227	New Haven (city dock).....	41 18	72 55	+0 02	-0 03	-0.7	0.0	6.0	6.9	3.0	
1229	Milford Harbor.....	41 13	73 03	-0 07	-0 12	-0.1	0.0	6.6	7.6	3.3	
1231	Stratford, Housatonic River.....	41 11	73 07	+0 27	+0 59	-1.2	0.0	5.5	6.3	2.7	
1233	Shelton, Housatonic River.....	41 19	73 05	+1 36	+2 42	-1.7	0.0	5.0	5.8	2.5	
1235	BRIDGEPORT.....	41 10	73 11	Daily predictions				6.7	7.7	3.4	
1237	Black Rock Harbor entrance.....	41 09	73 13	-0 03	-0 05	+0.2	0.0	6.9	7.9	3.4	
1239	Saugatuck River entrance.....	41 06	73 22	-0 01	-0 01	+0.3	0.0	7.0	8.0	3.5	
1241	South Norwalk.....	41 06	73 25	+0 10	+0 13	+0.4	0.0	7.1	8.2	3.5	
1243	Greens Ledge.....	41 03	73 27	-0 01	-0 03	+0.5	0.0	7.2	8.3	3.6	
1245	Stamford.....	41 02	73 33	+0 04	+0 06	+0.5	0.0	7.2	8.3	3.6	
1247	Cos Cob Harbor.....	41 01	73 36	+0 06	+0 09	+0.5	0.0	7.2	8.3	3.6	
1249	Greenwich.....	41 01	73 37	+0 02	-0 01	+0.7	0.0	7.4	8.5	3.7	
1251	Great Captain Island.....	40 59	73 37	+0 01	-0 01	+0.6	0.0	7.3	8.4	3.6	
NEW YORK Long Island Sound, North Side											
on WILLETS POINT, p.52											
1253	Port Chester.....	41 00	73 40	-0 09	-0 12	+0.1	0.0	7.2	8.5	3.6	
1254	Rye Beach.....	40 58	73 40	-0 28	-0 29	+0.1	0.0	7.2	8.4	3.6	
1255	Mamaroneck.....	40 56	73 44	-0 08	-0 11	+0.2	0.0	7.3	8.6	3.6	
1257	New Rochelle.....	40 54	73 47	-0 24	-0 17	+0.1	0.0	7.2	8.6	3.6	
1259	Davids Island.....	40 53	73 46	-0 02	-0 07	+0.1	0.0	7.2	8.5	3.6	
1261	City Island.....	40 51	73 47	-0 03	-0 03	+0.1	0.0	7.2	8.5	3.6	
1263	Throgs Neck.....	40 48	73 48	+0 02	+0 14	-0.1	0.0	7.0	8.2	3.5	
East River											
1265	Whitestone.....	40 48	73 49	+0 02	+0 14	0.0	0.0	7.1	8.3	3.5	
1267	Old Ferry Point.....	40 48	73 50	+0 04	+0 16	0.0	0.0	7.1	8.3	3.5	
1269	College Point, Flushing Bay.....	40 47	73 51	+0 20	+0 28	-0.6	0.0	6.5	7.6	3.2	
1271	Northern Blvd. Bridge, Flushing Creek....	40 46	73 50	+0 23	+0 37	-0.3	0.0	6.8	8.0	3.4	
1273	Westchester, Westchester Creek.....	40 50	73 50	+0 10	+0 16	-0.1	0.0	7.0	8.3	3.5	
1275	Hunts Point.....	40 48	73 52	+0 08	+0 15	-0.2	0.0	6.9	8.1	3.4	
1277	Westchester Ave. Bridge, Bronx River....	40 50	73 53	+0 10	+0 17	-0.2	0.0	6.9	8.1	3.4	
1279	North Brother Island.....	40 48	73 54	+0 09	+0 17	-0.5	0.0	6.6	7.8	3.3	
1281	Port Morris (Stony Point).....	40 48	73 54	+0 13	+0 16	-0.8	0.0	6.3	7.4	3.1	

Endnotes can be found at the end of table 2.

TABLE 2. -- TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Lat.	Long.	Time	Height	High Water	Low Water	High Water	Low Water	
		° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft
	New York, East River Time meridian, 75°W									
1283	Lawrence Point.....	40 47	73 55	-0 03	+0 13	-0.7	0.0	6.4	7.6	3.2
1285	Wolcott Avenue.....	40 47	73 55	-0 03	+0 13	-1.0	0.0	6.1	7.2	3.0
		on WILLETS POINT, p.52								
1287	Pot Cove, Astoria.....	40 47	73 56	+2 20	+2 29	+0.8	0.0	5.3	6.3	2.6
1289	Hell Gate, Hallets Point.....	40 47	73 56	+2 00	+2 04	+0.6	0.0	5.1	6.1	2.5
1291	Horns Hook, East 90th Street.....	40 47	73 57	+1 50	+1 30	+0.3	0.0	4.8	5.8	2.4
1293	Welfare Island, north end.....	40 46	73 56	+1 45	+1 25	+0.3	0.0	4.8	5.8	2.4
1295	37th Avenue, Long Island City.....	40 46	73 57	+1 30	+1 10	0.0	0.0	4.5	5.5	2.2
1297	East 41st Street, New York City.....	40 45	73 58	+1 20	+0 56	-0.2	0.0	4.3	5.2	2.1
1299	Hunters Point, Newtown Creek.....	40 44	73 57	+1 18	+0 53	-0.4	0.0	4.1	4.9	2.0
1301	English Kills entrance, Newtown Creek.....	40 43	73 55	+1 30	+1 04	-0.3	0.0	4.2	5.0	2.1
1303	East 27th Street, Bellevue Hospital.....	40 44	73 58	+1 08	+1 03	-0.3	0.0	4.2	5.0	2.1
1305	East 19th Street, New York City.....	40 44	73 58	+1 02	+0 58	-0.4	0.0	4.1	4.9	2.0
1307	North 3d Street, Brooklyn.....	40 43	73 58	+0 55	+0 42	-0.4	0.0	4.1	4.9	2.0
1309	Williamsburg Bridge.....	40 43	73 58	+0 52	+0 38	-0.4	0.0	4.1	4.9	2.0
1311	Wallabout Bay.....	40 42	73 59	+0 50	+0 35	-0.4	0.0	4.1	4.9	2.0
1313	Brooklyn Bridge.....	40 42	74 00	+0 13	+0 07	-0.2	0.0	4.3	5.2	2.1
	Harlem River									
1315	East 110th Street, New York City.....	40 47	73 56	+1 52	+1 35	+0.6	0.0	5.1	6.1	2.6
1317	Willis Avenue Bridge.....	40 48	73 56	+1 47	+1 30	+0.5	0.0	5.0	6.0	2.5
1319	Madison Avenue Bridge.....	40 49	73 56	+1 52	+1 35	+0.4	0.0	4.9	5.9	2.4
1321	Central Bridge.....	40 50	73 56	+1 52	+1 35	+0.2	0.0	4.7	5.7	2.3
1323	Washington Bridge.....	40 51	73 56	+1 52	+1 35	-0.1	0.0	4.4	5.2	2.2
1325	University Heights Bridge.....	40 52	73 55	+1 40	+1 30	-0.5	0.0	4.0	4.8	2.0
1327	Broadway Bridge.....	40 52	73 55	+1 20	+1 20	-0.7	0.0	3.8	4.6	1.9
1329	Spuyten Duyvil Bridge.....	40 53	73 56	+1 01	+1 03	-0.9	0.0	3.6	4.3	1.8
	Long Island Sound, South Side									
		on WILLETS POINT, p.52								
1331	WILLETS POINT.....	40 48	73 47		Daily predictions			7.1	8.3	3.5
1333	Hewlett Point.....	40 50	73 45	-0 03	-0 03	0.0	0.0	7.1	8.3	3.5
1335	Port Washington, Manhasset Bay.....	40 50	73 42	-0 01	+0 11	+0.2	0.0	7.3	8.6	3.6
1337	Execution Rocks.....	40 53	73 44	-0 06	-0 08	+0.2	0.0	7.3	8.6	3.6
1339	Glen Cove, Hempstead Harbor.....	40 52	73 39	-0 11	-0 06	+0.2	0.0	7.3	8.6	3.6
	Oyster Bay									
1341	Oyster Bay Harbor.....	40 53	73 32	+0 08	+0 11	+0.6	0.0	7.3	8.4	3.6
1343	Bayville Bridge.....	40 54	73 33	+0 13	+0 18	+0.7	0.0	7.4	8.5	3.7
1345	Cold Spring Harbor.....	40 52	73 28	+0 08	+0 06	+0.7	0.0	7.4	8.5	3.7
1347	Eatons Neck Point.....	40 57	73 24	+0 03	+0 06	+0.4	0.0	7.1	8.2	3.6
1349	Lloyd Harbor entrance, Huntington Bay.....	40 55	73 26	+0 03	+0 01	+0.7	0.0	7.4	8.5	3.7
1351	Northport, Northport Bay.....	40 54	73 21	+0 03	+0 06	+0.6	0.0	7.3	8.4	3.6
1353	Nissequogue River entrance.....	40 54	73 14	-0 03	-0 06	+0.3	0.0	7.0	8.0	3.5
1355	Stony Brook, Smithtown Bay.....	40 55	73 09	+0 08	+0 08	-0.6	0.0	6.1	7.0	3.0
1357	Stratford Shoal.....	41 04	73 06	-0 05	-0 09	-0.1	0.0	6.6	7.6	3.3
1359	Port Jefferson Harbor entrance.....	40 58	73 05	+0 03	-0 01	-0.1	0.0	6.6	7.6	3.3
1361	Port Jefferson.....	40 57	73 05	+0 06	+0 03	-0.1	0.0	6.5	7.6	3.3
1363	Setauket Harbor.....	40 57	73 06	+0 04	+0 09	0.0	0.0	6.7	7.7	3.3
1365	Conscience Bay entrance (Narrows).....	40 58	73 07	+0 02	+0 02	0.0	0.0	6.7	7.7	3.3
1367	Mount Sinai Harbor.....	40 58	73 02	+0 05	+0 16	-0.7	0.0	6.0	6.9	3.0
1369	Herod Point.....	40 58	72 50	-0 07	-0 16	-0.8	0.0	5.9	6.8	2.9
1370	Northville.....	40 59	72 39	-0 02	-0 05	-1.3	0.0	5.4	6.2	2.7
1371	Hattituck Inlet.....	41 01	72 34	+0 05	-0 06	-1.5	0.0	5.2	6.0	2.6
1373	Horton Point.....	41 05	72 27	-0 20	-0 35	*0.60	*0.60	4.0	4.6	2.0
1374	Hashamomuck Beach.....	41 06	72 24	+0 04	-0 15	*0.63	*0.63	4.2	4.8	2.1
1375	Truman Beach.....	41 08	72 19	-0 42	-0 52	*0.51	*0.51	3.4	3.9	1.7
		on NEW LONDON, p.44								
1377	Plum Gut Harbor, Plum Island.....	41 10	72 12	+0 27	+0 16	0.0	0.0	2.6	3.1	1.3
1379	Little Gull Island.....	41 12	72 06	+0 12	-0 22	-0.4	0.0	2.2	2.6	1.1
1381	SHELTER ISLAND SOUND Orient.....	41 08	72 18	+0 36	+0 36	-0.1	0.0	2.5	3.0	1.2
1383	Greenport.....	41 06	72 22	+1 04	+0 49	-0.2	0.0	2.4	2.9	1.2
1385	Southold.....	41 04	72 25	+1 43	+1 33	-0.3	0.0	2.3	2.7	1.1
1387	Noyack Bay.....	41 00	72 20	+2 05	+1 44	-0.3	0.0	2.3	2.7	1.1
1389	Sag Harbor.....	41 00	72 18	+0 59	+0 48	-0.1	0.0	2.5	3.0	1.2
1391	Cedar Point.....	41 02	72 16	+0 44	+0 27	-0.1	0.0	2.5	3.0	1.2
	PECONIC BAYS									
1393	New Suffolk.....	41 00	72 28	+2 26	+2 11	0.0	0.0	2.6	3.1	1.3
1395	South Jamesport.....	40 56	72 35	+2 32	+2 40	+0.1	0.0	2.7	3.2	1.3
1397	Shinnecock Canal.....	40 54	72 30	+2 33	+2 31	-0.2	0.0	2.4	2.9	1.2
1399	Threemile Harbor ent., Gardiners Bay.....	41 02	72 11	+0 21	+0 02	-0.2	0.0	2.4	2.9	1.2
1401	Promised Land, Napeague Bay.....	41 00	72 05	-0 14	-0 08	-0.3	0.0	2.3	2.7	1.1
1403	Montauk Harbor entrance.....	41 04	71 56	-0 25	-0 16	-0.7	0.0	1.9	2.3	0.9
1405	Montauk, Fort Pond Bay.....	41 03	71 58	-0 29	-0 24	-0.5	0.0	2.1	2.5	1.1
1407	Montauk Point, north side.....	41 04	71 52	-1 13	-1 31	-0.6	0.0	2.0	2.4	1.0

Endnotes can be found at the end of table 2.

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

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NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
		° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft	
Long Island, South Side Time meridian, 75°W											
on SANDY HOOK, p.64											
1409	Shinnecock inlet (ocean).....	40 50	72 28	-0 50	-1 08	*0.63	*0.63	2.9	3.5	1.4	
1411	Ponquogue Bridge, Shinnecock Bay.....	40 51	72 30	+0 29	+0 14	-2.3	0.0	2.3	2.8	1.2	
1413	Potunk Point, Moriches Bay.....	40 48	72 39	+3 35	+3 35	*0.11	*0.11	0.5	0.6	0.2	
1415	Moriches Inlet.....	40 46	72 45	-0 56	-1 11	*0.63	*0.63	2.9	3.5	1.4	
1417	Mastic Beach, Moriches Bay.....	40 45	72 50	+3 28	+3 39	*0.11	*0.11	0.5	0.6	0.2	
1419	Fire Island Breakwater.....	40 37	73 18	-0 39	-0 51	-0.5	0.0	4.1	5.0	2.0	
1421	Democrat Point, Fire Island Inlet.....	40 38	73 18	-0 38	-0 29	*0.57	*0.57	2.6	3.1	1.3	
1422	Great South Bay										
1423	Fire Island Coast Guard Station.....	40 38	73 16	-0 19	-0 17	*0.41	*0.41	1.9	2.3	0.9	
1425	Fire Island Radiobeacon.....	40 38	73 13	+0 47	+1 20	*0.15	*0.15	0.7	0.8	0.3	
1427	West Fire Island.....	40 39	73 12	+2 11	+2 16	*0.13	*0.13	0.6	0.7	0.3	
1429	Point o' Woods.....	40 39	73 08	+2 28	+2 33	*0.15	*0.15	0.7	0.8	0.3	
1431	Bellport, Bellport Bay.....	40 45	72 56	+3 44	+4 14	*0.17	*0.17	0.8	1.0	0.4	
1433	Patchogue.....	40 45	73 01	+3 23	+3 47	*0.15	*0.15	0.7	0.8	0.3	
1435	Sayville (Brown Creek).....	40 44	73 04	+3 39	+3 44	*0.13	*0.13	0.6	0.7	0.3	
1437	Great River, Connetquot River.....	40 43	73 09	+3 20	+3 30	*0.15	*0.15	0.7	0.8	0.3	
1439	Bay Shore.....	40 43	73 14	+2 23	+2 39	*0.13	*0.13	0.6	0.7	0.3	
1441	Oakbeach.....	40 38	73 17	+2 24	+2 56	*0.15	*0.15	0.7	0.8	0.3	
1443	Babylon.....	40 41	73 19	+2 12	+2 39	*0.13	*0.13	0.6	0.7	0.3	
1445	Gilgo Heading.....	40 37	73 24	+2 23	+2 56	*0.24	*0.24	1.1	1.3	0.5	
1447	Amityville.....	40 39	73 25	+2 21	+3 03	*0.26	*0.26	1.2	1.4	0.6	
1449	Biltmore Shores, South Oyster Bay.....	40 40	73 28	+2 05	+2 30	*0.30	*0.30	1.4	1.7	0.7	
	Jones Inlet (Point Lookout).....	40 35	73 35	-0 19	-0 27	*0.78	*0.78	3.6	4.3	1.8	
	Hempstead Bay										
1451	Deep Creek Meadow.....	40 36	73 32	+1 02	+1 09	*0.52	*0.52	2.4	2.9	1.2	
1453	Green Island.....	40 37	73 30	+1 22	+1 29	*0.41	*0.41	1.9	2.3	0.9	
1455	Cuba Island.....	40 37	73 31	+1 08	+1 20	*0.50	*0.50	2.3	2.8	1.1	
1457	Bellmore, Bellmore Creek.....	40 40	73 31	+1 29	+1 56	*0.43	*0.43	2.0	2.4	1.0	
1459	Neds Creek.....	40 37	73 33	+0 50	+0 52	-1.9	0.0	2.7	3.3	1.3	
1461	Freeport Creek.....	40 38	73 34	+0 34	+0 27	-1.5	0.0	3.1	3.8	1.5	
1463	Freeport, Baldwin Bay.....	40 38	73 35	+0 38	+0 53	-1.6	0.0	3.0	3.6	1.5	
1465	Long Beach.....	40 36	73 39	+0 19	0 00	-0.7	0.0	3.9	4.7	1.9	
1467	Long Beach (outer coast).....	40 35	73 39	-0 29	-0 35	-0.1	0.0	4.5	5.4	2.2	
	Hempstead Bay-Continued										
1469	East Rockaway.....	40 38	73 40	+0 42	+0 45	-0.7	0.0	3.9	4.7	1.9	
1471	Woodmere, Broswere Bay.....	40 37	73 42	+0 35	+0 48	-0.7	0.0	3.9	4.7	1.9	
1473	East Rockaway Inlet.....	40 36	73 44	-0 06	-0 16	-0.5	0.0	4.1	5.0	2.0	
	Jamaica Bay										
1475	Plumb Beach Channel.....	40 35	73 55	+0 03	-0 05	+0.3	0.0	4.9	5.9	2.4	
1477	Barren Island, Rockaway Inlet.....	40 35	73 53	0 00	-0 06	+0.4	0.0	5.0	6.0	2.5	
1479	Beach Channel (bridge).....	40 35	73 49	+0 38	+0 22	+0.5	0.0	5.1	6.2	2.5	
1481	Motts Basin.....	40 37	73 46	+0 40	+0 46	+0.8	0.0	5.4	6.5	2.7	
1483	Norton Point, Head of Bay.....	40 38	73 45	+0 39	+0 43	+0.8	0.0	5.4	6.5	2.7	
1485	J. F. K. International Airport.....	40 37	73 47	+0 26	+0 43	+0.7	0.0	5.3	6.4	2.6	
1487	Grassy Bay (bridge).....	40 39	73 50	+0 44	+0 45	+0.6	0.0	5.2	6.3	2.6	
1489	Canarsie.....	40 38	73 53	+0 28	+0 06	+0.6	0.0	5.2	6.3	2.6	
1491	Mill Basin.....	40 37	73 55	+0 29	+0 02	+0.6	0.0	5.2	6.3	2.6	
NEW YORK and NEW JERSEY New York Harbor											
1493	Coney Island.....	40 34	73 59	-0 03	-0 19	+0.1	0.0	4.7	5.7	2.3	
1495	Norton Point, Gravesend Bay.....	40 35	74 00	-0 03	+0 01	+0.1	0.0	4.7	5.7	2.3	
1497	Fort Wadsworth, The Narrows.....	40 36	74 03	+0 02	+0 12	-0.3	0.0	4.3	5.2	2.1	
1499	Fort Hamilton, The Narrows.....	40 37	74 02	+0 03	+0 05	+0.1	0.0	4.7	5.7	2.3	
	on NEW YORK, p.56										
1501	Bay Ridge.....	40 38	74 02	-0 24	-0 24	+0.1	0.0	4.6	5.5	2.3	
1503	St. George, Staten Island.....	40 39	74 04	-0 21	-0 18	0.0	0.0	4.5	5.4	2.2	
1505	Bayonne, New Jersey.....	40 41	74 06	-0 19	-0 08	0.0	0.0	4.5	5.4	2.2	
1507	Gowanus Bay.....	40 40	74 01	-0 19	-0 15	-0.1	0.0	4.4	5.3	2.2	
1509	Governors Island.....	40 42	74 01	-0 11	-0 06	-0.1	0.0	4.4	5.3	2.2	
1511	NEW YORK (The Battery).....	40 42	74 01	Daily Predictions				4.5	5.4	2.2	
Hudson River <8>											
1513	Jersey City, Con Rail RR. Ferry, N. J....	40 43	74 02	+0 07	+0 07	-0.1	0.0	4.4	5.3	2.2	
1515	New York, Desbrosses Street.....	40 43	74 01	+0 10	+0 10	-0.1	0.0	4.4	5.3	2.2	
1517	New York, Chelsea Docks.....	40 45	74 01	+0 17	+0 16	-0.2	0.0	4.3	5.2	2.1	
1519	Hoboken, Castle Point, N. J.....	40 45	74 01	+0 17	+0 16	-0.2	0.0	4.3	5.2	2.1	
1521	Weehawken, Days Point, N. J.....	40 46	74 01	+0 24	+0 23	-0.3	0.0	4.2	5.0	2.1	
1523	New York, Union Stock Yards.....	40 47	74 00	+0 27	+0 26	-0.3	0.0	4.2	5.0	2.1	
1525	New York, 130th Street.....	40 49	73 58	+0 37	+0 35	-0.5	0.0	4.0	4.8	2.0	
1527	George Washington Bridge.....	40 51	73 57	+0 46	+0 43	-0.6	0.0	3.9	4.6	1.9	
1529	Spuyten Duyvil, west of RR. bridge.....	40 53	73 56	+0 58	+0 53	-0.7	0.0	3.8	4.5	1.9	
1531	Yonkers.....	40 56	73 54	+1 09	+1 10	-0.8	0.0	3.7	4.4	1.8	

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	Hudson River <8> Time meridian, 75°W	° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft	
on NEW YORK, p.56											
1533	Dobbs Ferry.....	41 01	73 53	+1 29	+1 40	-1.1	0.0	3.4	4.0	1.7	
1535	Tarrytown.....	41 05	73 52	+1 45	+1 54	-1.3	0.0	3.2	3.7	1.6	
1537	Ossining.....	41 10	73 52	+1 53	+2 14	-1.4	0.0	3.1	3.6	1.5	
1539	Haverstraw.....	41 12	73 58	+1 59	+2 25	-1.6	0.0	2.9	3.4	1.4	
1541	Peekskill.....	41 17	73 56	+2 24	+3 00	-1.3	+0.3	2.9	3.4	1.7	
1543	West Point.....	41 24	73 57	+3 16	+3 37	-1.5	+0.3	2.7	3.1	1.6	
1545	Newburgh.....	41 30	74 00	+3 42	+4 00	-1.5	+0.2	2.8	3.2	1.6	
1547	New Hamburg.....	41 35	73 57	+4 00	+4 25	-1.5	+0.1	2.9	3.3	1.5	
1549	Poughkeepsie.....	41 42	73 57	+4 30	+4 43	-1.3	+0.1	3.1	3.5	1.6	
1551	Hyde Park.....	41 47	73 57	+4 56	+5 09	-1.3	0.0	3.2	3.6	1.6	
1553	Kingston Point.....	41 56	73 58	+5 16	+5 31	-0.9	-0.1	3.7	4.2	1.7	
1555	Tivoli.....	42 04	73 56	+5 46	+6 01	-0.8	-0.2	3.9	4.4	1.7	
1557	Catskill.....	42 13	73 51	+6 37	+6 55	-0.7	-0.3	4.1	4.6	1.7	
1559	Hudson.....	42 15	73 48	+6 54	+7 09	-0.9	-0.4	4.0	4.4	1.6	
on ALBANY, p.60											
1561	Coxsackie.....	42 21	73 48	-1 01	-1 38	-0.5	+0.2	3.9	4.3	2.1	
1563	New Baltimore.....	42 27	73 47	-0 34	-0 56	-0.1	+0.4	4.1	4.5	2.4	
1565	Castleton-on-Hudson.....	42 32	73 46	-0 17	-0 29	-0.2	+0.1	4.3	4.7	2.2	
1567	ALBANY.....	42 39	73 45	Daily predictions				4.6	5.0	2.5	
1569	Troy.....	42 44	73 42	+0 08	+0 10	+0.1	0.0	4.7	5.1	2.3	
The Kills and Newark Bay											
on NEW YORK, p.56											
1571	Kill Van Kull										
1573	Constable Hook.....	40 39	74 05	-0 34	-0 21	0.0	0.0	4.5	5.4	2.2	
1575	New Brighton.....	40 39	74 05	-0 12	-0 18	0.0	0.0	4.5	5.4	2.2	
1577	Port Richmond.....	40 38	74 08	-0 03	+0 05	0.0	0.0	4.5	5.4	2.2	
1579	Bergen Point.....	40 39	74 08	+0 03	+0 03	+0.1	0.0	4.6	5.5	2.3	
1581	Shooters Island.....	40 39	74 10	+0 06	+0 18	+0.1	0.0	4.6	5.5	2.3	
1583	Port Newark Terminal.....	40 41	74 08	-0 01	+0 18	+0.6	0.0	5.1	6.1	2.5	
1585	Newark, Passaic River.....	40 44	74 10	+0 22	+0 52	+0.6	0.0	5.1	6.1	2.5	
1586	Passaic, Gregory Ave. bridge.....	40 51	74 07	+0 49	+1 57	+0.6	0.0	5.1	6.1	2.5	
1587	Hackensack River										
1588	Kearny Point.....	40 44	74 06	+0 09	+0 33	+0.5	0.0	5.0	6.0	2.5	
1589	Secaucus.....	40 48	74 04	+1 13	+1 09	+0.6	0.0	5.1	6.1	2.6	
	Little Ferry.....	40 51	74 02	+1 22	+1 14	+0.8	0.0	5.3	6.4	2.7	
	Hackensack.....	40 53	74 02	+1 33	+1 58	+0.8	0.0	5.3	6.4	2.6	
on SANDY HOOK, p.64											
1591	Arthur Kill										
1593	Elizabethport.....	40 39	74 11	+0 25	+0 39	+0.3	0.0	4.9	5.9	2.4	
1595	Chelsea.....	40 36	74 12	+0 24	+0 35	+0.4	0.0	5.0	6.0	2.5	
1597	Carteret.....	40 35	74 13	+0 23	+0 31	+0.5	0.0	5.1	6.2	2.6	
1599	Rossville.....	40 33	74 13	+0 17	+0 25	+0.7	0.0	5.3	6.4	2.6	
1601	Tottenville.....	40 31	74 15	+0 03	+0 13	+0.7	0.0	5.3	6.4	2.6	
	Perth Amboy.....	40 30	74 16	+0 13	+0 19	+0.6	0.0	5.2	6.3	2.6	
Lower New York Bay, Raritan Bay, etc.											
1603	New Dorp Beach.....	40 34	74 06	-0 04	+0 04	+0.3	0.0	4.9	5.9	2.4	
1605	Great Kills Harbor.....	40 33	74 08	+0 07	+0 19	+0.1	0.0	4.7	5.7	2.4	
1607	Princes Bay.....	40 31	74 12	+0 01	+0 04	+0.3	0.0	4.9	5.9	2.4	
	Raritan River										
1609	South Amboy.....	40 29	74 17	+0 05	+0 15	+0.4	0.0	5.0	6.0	2.5	
1611	Washington Canal.....	40 28	74 22	+0 34	+0 50	+1.0	0.0	5.6	6.8	2.8	
1613	South River highway bridge.....	40 27	74 22	+0 55	+1 02	+0.9	0.0	5.5	6.7	2.8	
1615	New Brunswick.....	40 29	74 26	+0 46	+1 26	+1.2	0.0	5.8	7.0	2.9	
1617	Keypoint.....	40 26	74 12	+0 08	+0 19	+0.4	0.0	5.0	6.0	2.5	
1619	Keansburg.....	40 27	74 09	-0 03	-0 01	+0.3	0.0	4.9	5.9	2.4	
1621	Port Monmouth.....	40 26	74 05	-0 02	-0 02	+0.2	0.0	4.8	5.8	2.4	
1623	Atlantic Highlands.....	40 25	74 02	-0 01	0 00	+0.1	0.0	4.7	5.7	2.3	
1625	SANDY HOOK.....	40 28	74 01	Daily predictions				4.6	5.6	2.3	
Sandy Hook Bay											
1627	Shrewsbury River										
1629	Highlands.....	40 24	73 59	+0 35	+0 55	-0.8	0.0	3.8	4.6	1.9	
1631	Red Bank, Navesink River.....	40 21	74 04	+1 48	+2 23	*0.65	*0.65	3.0	3.6	1.5	
1633	Normandie.....	40 23	73 59	+1 09	+1 45	*0.63	*0.63	2.9	3.5	1.4	
1635	Sea Bright.....	40 21	73 59	+2 10	+2 38	*0.37	*0.37	1.7	2.1	0.8	
	Branchport, Pleasure Bay.....	40 19	74 00	+3 00	+3 26	*0.37	*0.37	1.7	2.1	0.8	
NEW JERSEY, Outer Coast											
1637	Sea Bright.....	40 22	73 58	-0 34	-0 45	-0.2	0.0	4.4	5.3	2.2	
1639	Long Branch.....	40 18	73 59	-0 34	-0 45	-0.2	0.0	4.4	5.3	2.2	

Endnotes can be found at the end of table 2.

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

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NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level		
		Lat.	Long.	Time	Height	High Water	Low Water	High Water	Low Water			
NEW JERSEY, Outer Coast Time meridian, 75°W												
on SANDY HOOK, p.64												
1641	Asbury Park.....	40 13	74 00	-0 34	-0 45	-0.3	0.0	4.3	5.2	2.1		
1643	Shark River Inlet (entrance).....	40 11	74 01	-0 18	-0 36	-0.6	0.0	4.0	4.8	2.0		
1645	Municipal Boat Basin, Shark River.....	40 11	74 02	+0 27	+0 36	-0.9	0.0	3.7	4.4	1.8		
1647	Sea Girt.....	40 08	74 02	-0 34	-0 45	-0.3	0.0	4.3	5.2	2.1		
1649	Manasquan Inlet.....	40 06	74 02	-0 12	-0 36	-0.6	0.0	4.0	4.8	2.0		
Manasquan River												
1651	Railroad bridge.....	40 06	74 03	+0 20	+0 05	-1.1	0.0	3.5	4.2	1.7		
1653	Riviera Beach.....	40 06	74 05	+0 51	+1 25	-1.5	0.0	3.1	3.8	1.5		
1655	Seaside Park (ocean).....	39 55	74 05	-0 33	-0 44	-0.4	0.0	4.2	5.1	2.1		
Barneget Bay												
1657	Mantoloking.....	40 02	74 03	+5 34	+5 34	*0.11	*0.11	0.5	0.6	0.2		
1659	Coates Point, highway bridge.....	39 57	74 07	+4 19	+4 28	*0.11	*0.11	0.5	0.6	0.2		
1661	Toms River (town).....	39 57	74 12	+4 37	+4 47	*0.13	*0.13	0.6	0.7	0.3		
1663	Waretown.....	39 47	74 11	+2 33	+2 49	*0.13	*0.13	0.6	0.7	0.3		
1665	Oyster Cr. Chan. (off Sedge Island).....	39 47	74 08	+2 16	+2 17	*0.13	*0.13	0.6	0.7	0.3		
1667	Barneget Inlet.....	39 46	74 06	-0 20	-0 21	-1.5	0.0	3.1	3.8	1.5		
1669	Harvey Cedars.....	39 42	74 08	+3 15	+4 02	*0.17	*0.17	0.8	1.0	0.4		
Little Egg Harbor												
1671	Manahawkin Bridge.....	39 39	74 11	+2 33	+3 20	*0.33	*0.33	1.5	1.8	0.7		
1673	Long Point.....	39 36	74 16	+1 48	+1 56	*0.48	*0.48	2.2	2.7	1.1		
1675	Tuckerton Creek entrance.....	39 35	74 20	+1 40	+1 54	*0.52	*0.52	2.4	2.9	1.2		
1677	Beach Haven.....	39 34	74 15	+1 47	+2 01	*0.48	*0.48	2.2	2.7	1.1		
1679	Holgate.....	39 32	74 16	+1 11	+1 07	*0.57	*0.57	2.6	3.1	1.3		
Great Bay												
1681	Little Egg Inlet.....	39 30	74 18	-0 01	-0 03	-0.9	0.0	3.7	4.5	1.8		
1683	Seven Islands.....	39 31	74 20	+0 12	+0 16	-1.2	0.0	3.4	4.1	1.7		
1685	Graveling Point.....	39 32	74 24	+1 05	+1 18	-1.2	0.0	3.4	4.1	1.7		
1687	Mullica River, highway bridge.....	39 33	74 28	+1 55	+2 12	-1.3	0.0	3.3	4.0	1.6		
1689	Main Marsh Thorofare.....	39 29	74 23	+1 04	+1 30	-1.3	0.0	3.3	4.0	1.6		
1691	Brigantine Channel.....	39 27	74 21	+0 01	+0 03	-1.1	0.0	3.5	4.2	1.7		
1693	Grassy Bay.....	39 26	74 24	+1 08	+1 11	-1.2	0.0	3.4	4.1	1.7		
1695	Abscon Creek entrance, Abscon Bay.....	39 25	74 29	+1 04	+1 17	-1.0	0.0	3.6	4.4	1.8		
1697	Broad Creek, Middle Thorofare.....	39 24	74 26	+0 55	+0 33	-1.2	0.0	3.4	4.1	1.7		
1699	Abscon Inlet (Gardner Basin).....	39 23	74 25	+0 14	-0 01	-1.0	0.0	3.6	4.4	1.8		
1701	Beach Thorofare (railroad bridges).....	39 22	74 27	+0 52	+0 40	-0.8	0.0	3.8	4.6	1.9		
1703	Atlantic City, Steel Pier.....	39 21	74 25	-0 26	-0 35	-0.5	0.0	4.1	5.0	2.0		
1705	Chester (highway bridge).....	39 21	74 28	+0 49	+0 45	-0.6	0.0	4.0	4.8	2.0		
1707	Beach Thorofare (Shelter Island).....	39 21	74 30	+0 39	+0 32	-0.7	0.0	3.9	4.7	1.9		
1709	Dock Thorofare (bridge).....	39 21	74 32	+0 48	+0 32	-0.8	0.0	3.8	4.6	1.9		
1711	Longport (inside).....	39 18	74 32	+0 05	-0 01	-0.7	0.0	3.9	4.7	2.0		
1713	Great Egg Harbor Inlet.....	39 18	74 34	+0 12	-0 05	-0.8	0.0	3.8	4.6	1.9		
1715	Ocean City (9th Street bridge).....	39 17	74 35	+0 24	+0 19	-0.9	0.0	3.7	4.5	1.8		
1717	Great Egg Harbor Bay.....	39 18	74 38	+0 44	+0 57	-1.0	0.0	3.6	4.4	1.8		
Great Egg Harbor River												
1719	Scull Landing.....	39 22	74 43	+1 43	+1 54	-0.9	0.0	3.7	4.5	1.8		
1721	Mays Landing.....	39 27	74 44	+2 34	+2 39	-0.6	0.0	4.0	4.8	2.0		
1723	Peck Bay (34th Street bridge).....	39 15	74 38	+0 51	+1 02	-0.9	0.0	3.7	4.5	1.8		
1725	Devils Island, Crook Horn Creek.....	39 14	74 39	+0 37	+0 22	-1.0	0.0	3.6	4.4	1.8		
1727	Corson Inlet (bridges).....	39 13	74 39	+0 09	+0 04	-0.7	0.0	3.9	4.7	1.9		
1729	Ben Hands Thorofare.....	39 12	74 40	+0 48	+0 32	-0.9	0.0	3.7	4.5	1.8		
1731	Sea Isle City (Ludlam Thoro. bridge).....	39 09	74 42	+0 45	+0 49	-0.8	0.0	3.8	4.6	1.9		
1733	Sea Isle City (beach).....	39 09	74 41	-0 19	-0 19	-0.5	0.0	4.1	5.0	2.0		
1735	Townsend's Inlet.....	39 07	74 43	+0 06	+0 04	-0.8	0.0	3.8	4.6	1.9		
1737	Long Reach.....	39 06	74 45	+0 53	+0 53	-0.8	0.0	3.8	4.6	1.9		
1739	Great Sound (ent. to Cressy Thoro.).....	39 05	74 47	+1 03	+1 05	-0.5	0.0	4.1	5.0	2.0		
1741	Stone Harbor (Great Chan. bridge).....	39 03	74 46	+0 42	+0 26	-0.5	0.0	4.1	5.0	2.0		
1743	Hereford Inlet (North Wildwood).....	39 01	74 48	+0 02	+0 02	-0.5	0.0	4.1	5.0	2.0		
1745	Wildwood (beach).....	38 59	74 48	-0 15	-0 19	-0.5	0.0	4.1	5.0	2.0		
1747	Grassy Sound Channel (hwy. bridge).....	39 02	74 49	+0 40	+0 28	-0.5	0.0	4.1	5.0	2.0		
1749	West Wildwood (Grassy Sound bridge).....	39 00	74 50	+0 45	+0 29	-0.3	0.0	4.3	5.2	2.1		
1751	Swain Channel.....	38 59	74 52	+0 54	+0 27	-0.2	0.0	4.4	5.3	2.2		
1753	Cape May Harbor.....	38 57	74 53	-0 02	-0 16	-0.2	0.0	4.4	5.3	2.2		
1755	Cape May, Municipal Pier.....	38 56	74 55	+0 02	-0 17	-0.3	0.0	4.3	5.2	2.1		
NEW JERSEY and DELAWARE Delaware Bay, Eastern Shore												
on BREAKWATER HARBOR, p.68												
1757	Five Fathom Bank.....	38 51	74 38	-0 43	-0 38	0.0	0.0	4.1	4.9	2.0		
1759	McCrie Shoal.....	38 51	74 51	-0 22	-0 21	+0.2	0.0	4.3	5.2	2.1		
1761	Cape May Point.....	38 56	74 58	-0 10	-0 04	+0.6	0.0	4.7	5.6	2.3		
1762	Cape May, ferry terminal.....	38 58	74 58	-0 04	-0 01	+0.8	0.0	4.9	5.8	2.4		
1763	Bay Shore Channel.....	38 58	74 58	-0 09	-0 03	+0.8	0.0	4.9	5.8	2.4		
1765	Miami Beach.....	39 02	74 56	+0 17	+0 26	+1.0	0.0	5.1	6.1	2.5		
1767	Dennis Creek entrance.....	39 10	74 54	+0 48	+1 04	+1.5	0.0	5.6	6.6	2.8		
1769	East Point, Maurice River Cove.....	39 12	75 02	+0 53	+1 12	+1.6	0.0	5.7	6.7	2.8		
Maurice River												
1771	Port Norris.....	39 14	75 02	+1 14	+1 38	+1.6	0.0	5.7	6.7	2.8		
1773	Mauricetown.....	39 17	75 00	+1 48	+2 21	+1.7	0.0	5.8	6.8	2.9		
1775	Millville.....	39 24	75 02	+2 37	+3 23	+1.9	0.0	6.0	7.0	3.0		
1777	Egg Island Point.....	39 11	75 08	+0 33	+1 02	+1.6	0.0	5.7	6.7	2.8		

Endnotes can be found at the end of table 2.

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	NEW JERSEY and DELAWARE Delaware Bay, Eastern Shore Time meridian, 75°W	° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft	
				on REEDY POINT, p.72							
1779	Fortescue.....	39 14	75 10	-2 05	-2 19	+0.4	0.0	5.9	7.0	2.9	
1781	Ben Davis Point.....	39 17	75 17	-1 40	-1 49	+0.5	0.0	6.0	6.9	3.0	
1783	Cohansey River Entrance.....	39 21	75 22	-1 30	-1 29	+0.5	0.0	6.0	6.9	3.0	
1785	Laning Wharf.....	39 23	75 20	-1 10	-1 14	+0.5	0.0	6.0	6.8	3.0	
1787	Fairton.....	39 23	75 14	+0 05	-0 24	+0.7	0.0	6.2	7.0	3.1	
1789	Bridgeton.....	39 25	75 14	+0 27	-0 13	+1.0	0.0	6.5	7.3	3.2	
1791	Bay Side.....	39 23	75 24	-1 23	-1 22	+0.6	0.0	6.1	6.9	3.0	
	DEL., N.J., and PA. Delaware Bay, Central Lighthouses			on BREAKWATER HARBOR, p.68							
1793	Brandywine Shoal Light.....	38 59	75 07	+0 09	+0 28	+0.8	0.0	4.9	5.9	2.4	
1795	Fourteen Foot Bank Light.....	39 03	75 11	+0 18	+0 48	+1.1	0.0	5.2	6.2	2.6	
1797	Miah Maull Shoal Light.....	39 08	75 13	+0 28	+1 08	+1.4	0.0	5.5	6.5	2.7	
1799	Elbow of Cross Ledge Light.....	39 11	75 16	+0 40	+1 21	+1.5	0.0	5.6	6.5	2.8	
				on REEDY POINT, p.72							
1801	Ship John Shoal Light.....	39 18	75 23	-1 32	-1 36	+0.2	0.0	5.7	6.6	2.8	
	Delaware Bay, Western Shore			on BREAKWATER HARBOR, p.68							
1803	Cape Henlopen.....	38 48	75 05	-0 05	-0 05	0.0	0.0	4.1	4.9	2.0	
1805	BREAKWATER HARBOR.....	38 47	75 06			Daily predictions		4.1	4.9	2.1	
1807	Roosevelt Inlet.....	38 49	75 12	+0 09	+0 13	+0.3	0.0	4.4	5.2	2.2	
1809	Mispillion River entrance.....	38 57	75 19	+0 33	+1 00	+0.5	0.0	4.6	5.4	2.3	
1811	Murderkill River entrance.....	39 04	75 24	+0 56	+1 32	+0.7	0.0	4.8	5.7	2.4	
1813	St. Jones River entrance.....	39 04	75 24	+0 57	+1 33	+0.7	0.0	4.8	5.7	2.4	
1815	Mahon River entrance.....	39 11	75 24	+1 13	+1 52	+1.3	0.0	5.4	6.3	2.7	
1817	Leipsic River entrance.....	39 15	75 24	+1 18	+1 59	+1.4	0.0	5.5	6.4	2.7	
1819	Leipsic, Leipsic River.....	39 15	75 31	+3 42	+3 50	-0.6	0.0	3.5	4.0	1.7	
				on REEDY POINT, p.72							
1821	Woodland Beach.....	39 20	75 28	-1 15	-1 14	+0.4	0.0	5.9	6.8	2.9	
	Delaware River			on BREAKWATER HARBOR, p.68							
1823	Liston Point.....	39 25	75 32	-0 55	-0 59	+0.2	0.0	5.7	6.4	2.8	
1825	Taylors Bridge, Blackbird Creek.....	39 24	75 36	+1 47	+0 54	-2.6	0.0	2.9	3.3	1.4	
1827	Reedy Island.....	39 31	75 34	-0 16	-0 16	+0.1	0.0	5.6	6.2	2.8	
1831	Salem, Salem River.....	39 35	75 28	+0 19	+0 20	+0.1	0.0	5.6	6.1	2.8	
1833	REEDY POINT.....	39 34	75 34			Daily predictions		5.5	6.0	2.7	
	Chesapeake and Delaware Canal			on REEDY POINT, p.72							
1835	Biddle Point, Delaware.....	39 33	75 37	-0 05	+0 01	-0.4	0.0	5.1	5.5	2.5	
1837	Summit Bridge, Delaware.....	39 33	75 44	-0 34	-0 55	*0.64	*0.64	3.5	3.9	1.7	
1839	Chesapeake City, Maryland.....	39 32	75 49	-0 30	-1 06	*0.49	*0.49	2.7	3.0	1.4	
1841	Pea Patch Island, Delaware.....	39 35	75 34	+0 08	+0 12	0.0	0.0	5.5	6.0	2.7	
1843	New Castle, Delaware.....	39 39	75 34	+0 30	+0 49	+0.1	0.0	5.6	6.0	2.8	
1845	Deepwater Point, N. J.....	39 42	75 31	+0 46	+1 11	+0.1	0.0	5.6	6.0	2.8	
1847	Christina River entrance, Del.....	39 43	75 31	+0 51	+1 16	+0.1	0.0	5.6	5.9	2.8	
1849	Wilmington, Christina River, Del.....	39 44	75 33	+0 56	+1 27	+0.2	0.0	5.7	6.0	2.8	
1851	Edgemoor, Del.....	39 45	75 30	+0 56	+1 27	+0.1	0.0	5.6	5.9	2.8	
1853	Oldmans Point, N. J.....	39 46	75 28	+1 03	+1 34	+0.1	0.0	5.6	5.9	2.8	
				on PHILADELPHIA, p.76							
1855	Marcus Hook, Pa.....	39 49	75 25	-1 12	-1 06	-0.6	0.0	5.6	5.9	2.8	
1857	Chester, Pa.....	39 51	75 21	-0 51	-0 45	-0.5	0.0	5.7	6.0	2.8	
1859	Billingsport, N. J.....	39 51	75 14	-0 31	-0 25	-0.5	0.0	5.7	6.0	2.8	
1861	Fort Mifflin, Pa.....	39 52	75 13	-0 21	-0 15	-0.5	0.0	5.7	6.0	2.8	
1863	Schuylkill River Girard Point, Pa.....	39 54	75 12	-0 17	-0 10	-0.5	0.0	5.7	6.0	2.8	
1865	Point Breeze, Pa.....	39 55	75 12	-0 13	-0 05	-0.5	0.0	5.7	6.0	2.8	
1867	Grays Ferry Bridge, Pa.....	39 57	75 12	-0 07	+0 01	-0.4	0.0	5.8	6.1	2.9	
1869	Fairmount Bridge, Pa.....	39 58	75 11	+0 02	+0 11	-0.4	0.0	5.8	6.1	2.9	
1871	Philadelphia, South Broad St., Pa.....	39 53	75 11	-0 17	-0 11	-0.4	0.0	5.8	6.1	2.9	
1873	Gloucester City, N. J.....	39 54	75 08	-0 05	+0 02	-0.4	0.0	5.8	6.1	2.9	
1875	Philadelphia, Washington Ave., Pa.....	39 56	75 08	+0 04	+0 11	-0.3	0.0	5.9	6.2	3.0	
1877	PHILADELPHIA, Pier 11 North, Pa.....	39 57	75 08			Daily predictions		6.2	6.6	3.1	
1879	Camden, Cooper Point, N. J.....	39 57	75 08	+0 12	+0 19	-0.3	0.0	5.9	6.2	3.0	
1881	Philadelphia, Pier 80 N (old site), Pa.....	39 58	75 07	+0 18	+0 26	-0.3	0.0	5.9	6.2	3.0	
1883	Philadelphia, Bridesburg, Pa.....	40 00	75 04	+0 34	+0 43	-0.2	0.0	6.0	6.3	3.0	
1885	Torresdale, Pa.....	40 03	74 59	+1 06	+1 17	0.0	0.0	6.2	6.5	3.1	

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES					RANGES		Mean Tide Level	
		Lat.	Long.	Time	Height	High Water	Low Water	High Water	Low Water	Mean	Spring	
	NEW JERSEY and PENNSYLVANIA Delaware River—Continued Time meridian, 75°W	° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft	ft	ft
				on PHILADELPHIA, p. 76								
1887	Burlington, N. J.....	40 05	74 52	+1 30	+1 43	+0.2	0.0	6.4	6.7	3.2		
1889	Bristol, Pa.....	40 06	74 51	+1 37	+1 51	+0.3	0.0	6.5	6.8	3.3		
1891	Florence, N. J.....	40 07	74 48	+1 47	+2 05	+0.4	0.0	6.6	6.9	3.3		
1893	Bordentown, N. J.....	40 09	74 43	+1 49	+2 15	+0.5	0.0	6.7	7.0	3.3		
1895	Trenton, N. J.....	40 11	74 45	+1 55	+2 40	+0.6	0.0	6.8	7.1	3.4		
	DELAWARE, Outer Coast			on SANDY HOOK, p. 64								
1897	Rehoboth Beach.....	38 43	75 05	-0 07	-0 21	-0.7	0.0	3.9	4.7	1.9		
	Indian River											
1899	Inlet (bridge).....	38 37	75 04	+0 34	-0 18	*0.59	*0.59	2.7	3.2	1.3		
1900	Inlet (Coast Guard Station).....	38 37	75 04	+0 41	+0 18	*0.46	*0.46	2.1	2.5	1.1		
1901	Oak Orchard.....	38 36	75 10	+2 44	+3 11	*0.20	*0.20	0.9	1.1	0.5		
1903	Possum Point.....	38 35	75 16	+3 09	+4 00	*0.22	*0.22	1.0	1.2	0.5		
1905	Rehoboth Bay.....	—	—	—	—	—	—	0.5	0.6	0.2		
1907	Fenwick Island Light.....	38 27	75 03	-0 13	-0 19	-0.9	0.0	3.7	4.5	1.8		
	MARYLAND, Outer Coast											
1909	Ocean City (outer coast).....	38 20	75 05	-0 28	-0 30	-1.2	0.0	3.4	4.1	1.7		
1910	Ocean City (Isle of Wight Bay).....	38 20	75 05	-0 14	-0 25	-2.4	0.0	2.2	2.7	1.1		
1911	North Beach Coast Guard Station.....	38 12	75 09	-0 28	-0 29	-1.2	0.0	3.4	4.1	1.7		
	MARYLAND and VIRGINIA Chincoteague Bay											
1913	Assateague Beach, Toms Cove.....	37 52	75 22	+0 06	+0 16	-1.0	0.0	3.6	4.4	1.8		
1915	Chincoteague Point.....	37 54	75 25	+0 05	+0 11	*0.57	*0.57	2.6	3.1	1.3		
1917	Bogues Bay, Chincoteague Inlet.....	37 53	75 30	+0 38	+0 57	-1.6	0.0	3.0	3.6	1.5		
1918	Wishart Point, Bogues Bay.....	37 53	75 30	+0 20	+0 42	-2.0	0.0	2.6	3.1	1.3		
1919	Chincoteague, Chincoteague Channel.....	37 56	75 23	+0 40	+0 47	*0.37	*0.37	1.7	2.1	0.9		
1921	Piney Island, Assateague Channel.....	37 56	75 21	+1 05	+1 13	*0.46	*0.46	2.1	2.5	1.0		
1923	Greenbackville.....	38 00	75 23	+2 19	+2 48	*0.13	*0.13	0.6	0.7	0.3		
1925	George Island Landing.....	38 02	75 22	+2 53	+3 02	*0.13	*0.13	0.6	0.7	0.3		
1927	Assacorkin Island.....	38 04	75 19	+3 33	+3 42	*0.09	*0.09	0.4	0.5	0.2		
1928	Public Landing.....	38 09	75 17	+4 58	+5 27	*0.09	*0.09	0.4	0.5	0.2		
	VIRGINIA, Outer Coast											
1929	Wallop Island.....	37 50	75 29	-0 23	-0 32	-1.0	0.0	3.6	4.4	1.8		
1930	Gargathy Neck.....	37 47	75 34	+1 05	+0 56	-1.6	0.0	3.0	3.6	1.5		
1931	Metomkin Inlet.....	37 40	75 36	+0 35	+0 12	-1.0	0.0	3.6	4.4	1.8		
1932	Folly Creek, Metomkin Inlet.....	37 42	75 38	+0 58	+0 41	-1.3	0.0	3.3	4.0	1.7		
1933	Wachapreague Inlet (inside).....	37 35	75 37	+0 09	+0 03	-0.7	0.0	3.9	4.7	1.9		
1935	Quinby Inlet entrance.....	37 28	75 40	+0 04	-0 12	-0.6	0.0	4.0	4.8	2.0		
1937	The Swash, south end.....	37 30	75 40	+0 19	+0 14	-0.7	0.0	3.9	4.7	1.9		
1939	Great Machipongo Inlet (inside).....	37 24	75 43	+0 36	+0 23	-0.7	0.0	3.9	4.7	1.9		
1941	Upshur Neck, south end.....	37 28	75 48	+0 50	+0 52	-0.2	0.0	4.4	5.3	2.2		
1943	Sand Shoal Inlet (Coast Guard Station).....	37 18	75 47	+0 08	-0 11	-0.5	0.0	4.1	4.9	2.0		
1945	Ship Shoal Inlet.....	37 13	75 48	+0 26	+0 09	-0.6	0.0	4.0	4.8	2.0		
1947	Smith Island (Coast Guard Station).....	37 07	75 55	+0 23	+0 59	-1.1	0.0	3.5	4.2	1.7		
	Chesapeake Bay, Eastern Shore			on HAMPTON ROADS, p. 88								
1949	Fishermans Island.....	37 06	75 59	-0 43	-0 55	+0.5	0.0	3.0	3.6	1.5		
1951	Kiptopeke Beach (ferry).....	37 10	75 59	-0 36	-0 30	+0.2	0.0	2.7	3.2	1.4		
1953	Old Plantation Flats.....	37 14	76 03	-0 23	-0 10	-0.1	0.0	2.4	2.9	1.2		
1955	Cape Charles Harbor.....	37 16	76 01	-0 14	+0 02	-0.1	0.0	2.4	2.9	1.2		
1957	Nassawadox Creek.....	37 28	75 58	+1 00	+0 53	-0.7	0.0	1.8	2.2	0.9		
1959	Gaskins Point, Occohannock Creek.....	37 33	75 55	+1 36	+2 08	-0.8	0.0	1.7	2.0	0.9		
1961	Pungoteague Creek.....	37 40	75 50	+2 26	+2 42	-0.8	0.0	1.7	2.0	0.8		
1963	Onancock, Onancock Creek.....	37 43	75 45	+2 56	+3 14	-0.7	0.0	1.8	2.2	0.9		
1965	Watts Island.....	37 48	75 54	+3 03	+3 07	-0.9	0.0	1.6	1.9	0.8		
1967	Tangier Sound Light.....	37 47	75 58	+2 55	+2 53	*0.64	*0.64	1.6	1.9	0.8		
1969	Muddy Creek Entrance.....	37 51	75 40	+3 18	+3 48	-0.3	0.0	2.2	2.6	1.1		
1970	Guard Shore.....	37 51	75 42	+3 07	+3 42	-0.2	0.0	2.3	2.7	1.2		
	MARYLAND Chesapeake Bay, Eastern Shore											
1971	Ape Hole Creek, Pocomoke Sound.....	37 58	75 49	+3 28	+3 53	-0.2	0.0	2.3	2.8	1.1		
	Pocomoke River											
1973	Shelltown.....	37 59	75 38	+3 33	+4 11	-0.1	0.0	2.4	2.9	1.2		
1975	Pocomoke City.....	38 05	75 34	+5 50	+6 10	-0.9	0.0	1.6	2.0	0.8		
1976	Snowhill, city park.....	38 10	75 24	+7 36	+7 48	-0.6	0.0	1.9	2.3	1.0		
1977	Janes Island Light.....	37 58	75 55	+3 55	+3 55	-0.7	0.0	1.8	2.2	0.9		
1979	Crisfield, Little Annemessex River.....	37 59	75 52	+3 51	+4 00	-0.5	0.0	2.0	2.4	1.0		

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Lat.	Long.	Time	Height	Mean	Spring			
		° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft
MARYLAND										
Chesapeake Bay, Eastern Shore										
Time meridian, 75°W										
on HAMPTON ROADS, p.88										
1981	Long Point, Big Annemessex River.....	38 03	75 48	+4 20	+4 41	-0.4	0.0	2.1	2.5	1.0
1983	Teague Creek, Manokin River.....	38 06	75 50	+4 39	+5 00	-0.4	0.0	2.1	2.5	1.0
1985	Ewell, Smith Island.....	38 00	76 02	+4 00	+4 26	*0.64	*0.64	1.6	1.9	0.8
1987	Solomons Lump Light.....	38 03	76 01	+4 17	+4 20	-0.8	0.0	1.7	2.0	0.8
1989	Holland Island Bar Light.....	38 04	76 06	+4 17	+4 25	*0.56	*0.56	1.4	1.7	0.7
1990	Chance.....	38 10	75 57	+4 41	+4 53	-0.3	0.0	2.2	2.6	1.1
1991	Sharkfin Shoal Light.....	38 12	75 59	+4 47	+5 01	-0.3	0.0	2.2	2.6	1.1
1993	Great Shoals Light, Monie Bay.....	38 13	75 53	+5 01	+5 17	-0.2	0.0	2.3	2.8	1.2
	Wicomico River									
1995	Whitehaven.....	38 16	75 47	+5 28	+5 42	-0.1	0.0	2.4	2.9	1.2
1997	Salisbury.....	38 22	75 36	+6 22	+6 19	+0.5	0.0	3.0	3.6	1.5
	Nanticoke River									
1999	Roaring Point.....	38 16	75-55	+5 01	+5 30	-0.2	0.0	2.3	2.8	1.2
2001	Vienna.....	38 29	75 49	+7 42	+7 45	-0.3	0.0	2.2	2.6	1.1
2003	Sharptown.....	38 32	75 43	+8 20	+8 23	0.0	0.0	2.5	3.0	1.3
2005	Fishing Point, Fishing Bay.....	38 18	76 01	+5 05	+5 29	0.0	0.0	2.5	3.0	1.2
2007	Hooper Strait Light.....	38 14	76 05	+4 56	+5 02	-0.8	0.0	1.7	2.0	0.8
on BALTIMORE, p.80										
2009	Hooper Island Light.....	38 15	76 15	-5 07	-5 23	+0.4	0.0	1.5	1.8	0.7
2010	Hooper Island.....	38 18	76 12	-5 00	-4 51	+0.4	0.0	1.5	1.7	0.8
2011	Barren Island.....	38 20	76 16	-4 52	-5 07	+0.2	0.0	1.3	1.5	0.6
	Little Choptank River									
2013	Taylors Island, Slaughter Creek.....	38 28	76 18	-3 09	-3 25	+0.1	0.0	1.2	1.4	0.6
2015	Woolford, Church Creek.....	38 30	76 10	-3 25	-3 10	+0.3	0.0	1.4	1.6	0.7
2017	Cherry Island, Beckwiths Creek.....	38 34	76 13	-3 21	-3 11	+0.2	0.0	1.3	1.5	0.6
2019	Hudson Creek.....	38 35	76 15	-3 49	-3 31	+0.3	0.0	1.4	1.6	0.7
2021	Sharps Island Light.....	38 38	76 23	-3 51	-4 00	+0.2	0.0	1.3	1.5	0.6
	Choptank River									
2023	Choptank River Light.....	38 39	76 11	-3 17	-3 18	+0.3	0.0	1.4	1.6	0.7
2025	Cambridge.....	38 34	76 04	-2 44	-2 39	+0.5	0.0	1.6	1.8	0.8
2027	Choptank.....	38 41	75 57	-2 13	-1 58	+0.5	0.0	1.6	1.8	0.8
2029	Dover Bridge.....	38 45	76 00	-0 38	-0 53	+0.6	0.0	1.7	1.9	0.9
2031	Denton.....	38 53	75 50	+0 13	+0 22	+1.1	0.0	2.2	2.5	1.1
2033	Greensboro.....	38 58	75 49	+1 18	+1 08	+1.4	0.0	2.5	2.9	1.2
2035	Wayman Wharf, Tuckahoe Creek.....	38 53	75 57	+0 53	+0 25	+1.3	0.0	2.4	2.8	1.2
	Tred Avon River									
2037	Oxford.....	38 42	76 10	-3 05	-3 00	+0.3	0.0	1.4	1.6	0.7
2039	Easton Point.....	38 46	76 06	-2 59	-2 50	+0.5	0.0	1.6	1.8	0.8
2041	Deep Neck Point, Broad Creek.....	38 44	76 14	-3 10	-3 01	+0.3	0.0	1.4	1.6	0.7
2043	St. Michaels, San Domingo Creek.....	38 46	76 14	-3 08	-3 06	+0.3	0.0	1.4	1.6	0.7
2045	Avalon, Dogwood Harbor.....	38 42	76 20	-3 08	-3 03	+0.2	0.0	1.3	1.5	0.6
2047	Poplar Island.....	38 46	76 23	-3 12	-3 18	+0.1	0.0	1.2	1.3	0.6
2049	Ferry Cove, Eastern Bay.....	38 46	76 20	-3 01	-3 04	-0.1	0.0	1.0	1.2	0.5
2051	Claiborne, Eastern Bay.....	38 50	76 17	-2 40	-2 43	0.0	0.0	1.1	1.3	0.5
2053	St. Michaels, Miles River.....	38 47	76 13	-2 18	-2 08	+0.1	0.0	1.2	1.4	0.6
2055	Wye Landing, Wye East River.....	38 54	76 06	-2 05	-1 51	+0.2	0.0	1.3	1.5	0.6
2057	Kent Island Narrows.....	38 58	76 15	-1 44	-1 38	+0.1	0.0	1.2	1.4	0.6
2058	Matapeake, Kent Island.....	38 58	76 21	-1 24	-1 49	-0.1	0.0	1.0	1.2	0.5
2059	Bloody Point Bar Light.....	38 50	76 24	-2 46	-2 54	0.0	0.0	1.1	1.3	0.5
	Chester River									
2061	Love Point.....	39 02	76 18	-0 24	-0 46	0.0	0.0	1.1	1.3	0.6
2063	Queenstown.....	39 00	76 10	-0 08	-0 24	+0.2	0.0	1.3	1.5	0.6
2065	Shipyard Landing, Langford Creek.....	39 10	76 11	+0 14	+0 05	+0.4	0.0	1.5	1.7	0.7
2067	Centreville Landing, Corsica River.....	39 03	76 04	+0 06	-0 01	+0.5	0.0	1.6	1.8	0.8
2069	Cliffs Point.....	39 06	76 08	-0 02	-0 17	+0.4	0.0	1.5	1.7	0.7
2070	Cliffs Wharf.....	39 07	76 08	-0 02	-0 14	+0.4	0.0	1.5	1.7	0.8
2071	Chestertown.....	39 12	76 04	+0 43	+0 24	+0.7	0.0	1.8	2.1	0.9
2073	Crumpton.....	39 15	75 56	+1 18	+1 13	+1.3	0.0	2.4	2.8	1.2
2075	Millington.....	39 15	75 50	+2 03	+2 30	+0.9	0.0	2.0	2.3	1.0
2077	Deep Landing, Swan Creek.....	39 09	76 16	-0 12	-0 19	0.0	0.0	1.1	1.3	0.5
2079	Tolchester.....	39 13	76 15	+0 24	+0 13	+0.1	0.0	1.2	1.4	0.6
2081	Horton Creek entrance.....	39 18	76 10	+1 07	+1 03	+0.2	0.0	1.3	1.5	0.6
	Sassafras River									
2083	Betterton.....	39 22	76 04	+2 27	+2 08	+0.5	0.0	1.6	1.8	0.8
2085	Georgetown.....	39 22	75 53	+2 01	+1 55	+0.9	0.0	2.0	2.3	1.0
	Elk River									
2087	Town Point Neck.....	39 30	75 55	+3 16	+3 00	+1.0	0.0	2.1	2.4	1.0
2089	Courthouse Point.....	39 31	75 53	+2 49	+2 38	+1.1	0.0	2.2	2.5	1.1
	C & D Canal (See Delaware River)....									
2091	Old Frenchtown Wharf.....	39 34	75 51	+3 00	+2 45	+1.2	0.0	2.3	2.6	1.1
2093	Charlestown, Northeast River.....	39 34	75 58	+3 38	+3 48	+0.8	0.0	1.9	2.2	0.9
Chesapeake Bay, Western Shore										
	Susquehanna River									
2095	Havre de Grace.....	39 32	76 05	+3 10	+3 30	+0.7	0.0	1.8	2.0	0.9
2097	Port Deposit.....	39 36	76 07	+4 00	+4 48	+1.0	0.0	2.1	2.4	1.0

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TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
°	'	°	'	h.	m.	ft	ft	ft	ft	ft	
	N		W	on HAMPTON ROADS, p.88							
2321	Mumfort Islands.....	37 16	76 31	+0 19	+0 12	0.0	0.0	2.5	3.0	1.2	
2323	Penniman Spit.....	37 17	76 35	+0 41	+0 44	0.0	0.0	2.5	3.0	1.2	
2324	Cheatham Annex.....	37 18	76 35	+0 43	+0 35	0.0	0.0	2.5	3.0	1.2	
2325	Queen Creek (2 miles upstream).....	37 18	76 39	+1 00	+0 59	-0.1	0.0	2.4	2.9	1.2	
2327	Clay Bank.....	37 21	76 37	+0 50	+0 49	+0.3	0.0	2.8	3.4	1.4	
2329	Allmondsville.....	37 23	76 39	+0 59	+1 02	+0.3	0.0	2.8	3.3	1.4	
2330	Roane Point.....	37 27	76 42	+1 42	+1 45	+0.3	0.0	2.8	3.4	1.4	
2331	West Point.....	37 32	76 48	+2 07	+2 33	+0.3	0.0	2.8	3.4	1.4	
	Mattaponi River										
2333	Wakema.....	37 39	76 54	+3 29	+3 52	+0.9	0.0	3.4	3.9	1.7	
2335	Walkerton.....	37 43	77 02	+4 26	+4 54	+1.4	0.0	3.9	4.5	1.9	
	Pamunkey River										
2337	Sweet Hall Landing.....	37 34	76 54	+3 48	+4 06	+0.2	0.0	2.7	3.1	1.3	
2339	Lester Manor.....	37 35	76 59	+4 40	+4 55	+0.3	0.0	2.8	3.2	1.4	
2341	White House.....	37 35	77 01	+5 09	+5 24	+0.5	0.0	3.0	3.4	1.5	
2343	Northbury.....	37 37	77 07	+5 58	+6 13	+0.8	0.0	3.3	3.8	1.6	
	Chesapeake Bay, Western Shore-Con.										
2345	York Point, Poquoson River.....	37 10	76 24	-0 07	+0 01	-0.1	0.0	2.4	2.9	1.2	
2347	Messick Point, Back River.....	37 06	76 19	-0 26	-0 05	-0.2	0.0	2.3	2.8	1.2	
	Hampton Roads										
2349	Old Point Comfort.....	37 00	76 19	-0 04	-0 14	0.0	0.0	2.5	3.0	1.3	
2351	Hampton River.....	37 01	76 20	+0 02	-0 07	+0.1	0.0	2.6	3.1	1.3	
2353	HAMPTON ROADS (Sewells Pt.).....	36 57	76 20	Daily predictions							
2355	Lafayette River.....	36 54	76 18	+0 11	+0 20	+0.1	0.0	2.6	3.1	1.3	
2357	Lafayette River, Granby St. Bridge..	36 53	76 17	+0 26	+0 32	+0.2	0.0	2.7	3.2	1.3	
	Elizabeth River										
2359	Craney Island.....	36 54	76 20	+0 13	-0 01	+0.1	0.0	2.6	3.1	1.3	
2361	Port Norfolk, Western Branch.....	36 51	76 20	+0 17	+0 24	+0.1	0.0	2.6	3.1	1.3	
2363	Norfolk.....	36 51	76 18	+0 18	+0 15	+0.3	0.0	2.8	3.4	1.4	
2365	Portsmouth, Southern Branch.....	36 49	76 18	+0 20	+0 20	+0.3	0.0	2.8	3.4	1.4	
	Hansemond River										
2367	Pig Point.....	36 55	76 26	+0 37	+0 35	+0.3	0.0	2.8	3.4	1.4	
2369	Town Point.....	36 53	76 30	+0 33	+0 39	+0.5	0.0	3.0	3.6	1.5	
2371	Holidays Point (bridge).....	36 50	76 33	+0 51	+0 58	+0.5	0.0	3.0	3.6	1.5	
2373	Suffolk.....	36 44	76 35	+1 37	+1 30	+1.3	0.0	3.8	4.6	1.9	
	James River										
2375	Chuckatuck Creek entrance.....	36 55	76 30	+0 45	+0 52	+0.3	0.0	2.8	3.4	1.4	
2377	Newport News.....	36 58	76 26	+0 24	+0 23	+0.1	0.0	2.6	3.1	1.3	
2378	Huntington Park.....	37 01	76 28	+0 40	+0 39	+0.1	0.0	2.6	3.1	1.3	
2379	Henchville.....	37 05	76 32	+0 58	+1 14	+0.1	0.0	2.6	3.1	1.3	
2381	Smithfield, Pagan River.....	36 59	76 38	+1 29	+1 23	+0.3	0.0	2.8	3.4	1.4	
2383	Burwell Bay.....	37 03	76 40	+1 20	+1 39	-0.1	0.0	2.4	2.9	1.2	
2385	Huberri Point.....	37 08	76 38	+2 00	+2 21	-0.1	0.0	2.4	2.9	1.2	
2387	Hog Point.....	37 12	76 41	+2 15	+2 33	-0.4	0.0	2.1	2.5	1.0	
2388	Scotland.....	37 11	76 47	+2 51	+3 20	-0.6	0.0	1.9	2.1	1.0	
2389	Jamestown Island.....	37 12	76 47	+2 58	+3 31	-0.5	0.0	2.0	2.4	1.0	
2391	Dillard Wharf, Chickahominy River	37 12	76 52	+3 33	+4 10	-0.6	0.0	1.9	2.3	0.9	
2393	Ferry Point (bridge).....	37 16	76 53	+3 56	+4 21	-0.6	0.0	1.9	2.3	1.0	
2395	Wright Island Landing.....	37 21	76 52	+4 39	+4 58	-0.3	0.0	2.2	2.6	1.1	
2397	Mount Airy.....	37 21	76 55	+5 05	+5 33	-0.3	0.0	2.2	2.6	1.1	
2399	Lanexa.....	37 24	76 54	+5 35	+6 03	+0.1	0.0	2.6	3.1	1.3	
2401	Clarendon.....	37 14	76 57	+3 58	+4 30	-0.7	0.0	1.8	2.0	0.9	
2403	Sturgeon Point.....	37 18	77 00	+4 32	+5 04	-0.4	0.0	2.1	2.5	1.0	
2405	Windmill Point.....	37 18	77 06	+5 26	+5 51	-0.2	0.0	2.3	2.7	1.1	
2406	Willcox Wharf, Charles City.....	37 19	77 06	+5 25	+5 45	-0.3	0.0	2.2	2.4	1.1	
2407	Westover.....	37 19	77 09	+5 47	+6 12	-0.1	0.0	2.4	2.8	1.2	
2409	Jordon Point.....	37 19	77 13	+6 11	+6 34	0.0	0.0	2.5	2.9	1.2	
	on WASHINGTON, p.84										
2411	City Point (Hopewell).....	37 19	77 16	-4 55	-5 12	-0.3	0.0	2.6	3.0	1.3	
2413	Petersburg, Appomattox River.....	37 14	77 24	-4 25	-4 00	0.0	0.0	2.9	3.3	1.4	
2415	Bermuda Hundred.....	37 20	77 16	-4 50	-5 05	-0.3	0.0	2.6	3.0	1.3	
2417	Haxall.....	37 22	77 15	-4 43	-4 52	-0.2	0.0	2.7	3.1	1.4	
2419	Curles, 1 mile north of.....	37 24	77 18	-4 25	-4 26	-0.1	0.0	2.8	3.2	1.4	
2420	Chester.....	37 23	77 23	-4 12	-3 59	0.0	0.0	2.9	3.2	1.5	
2421	Meadowville.....	37 23	77 19	-4 34	-4 33	0.0	0.0	2.9	3.3	1.4	
2423	Kingsland Reach.....	37 24	77 23	-4 32	-4 28	+0.1	0.0	3.0	3.5	1.5	
2425	Falling Creek entrance.....	37 26	77 26	-4 21	-4 08	+0.3	0.0	3.2	3.7	1.6	
2427	Richmond Deepwater Terminal.....	37 27	77 25	-4 18	-4 01	+0.4	0.0	3.3	3.8	1.6	
2429	Lower Rocketts.....	37 30	77 25	-3 52	-3 32	+0.3	0.0	3.2	3.6	1.6	
2431	Richmond (river locks).....	37 32	77 25	-3 49	-3 26	+0.3	0.0	3.2	3.6	1.6	

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
		° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft	
	Chesapeake Bay, Southern Shore Time meridian, 75°W			on HAMPTON ROADS, p.88							
2433	Little Creek (RR. Terminal).....	36 55	76 11	-0 48	-0 50	+0.1	0.0	2.6	3.1	1.3	
2435	Lynnhaven Inlet Highway bridge, east of.....	36 54	76 05	-0 09	+0 06	-0.5	0.0	2.0	2.4	1.0	
2436	Lynnhaven Bay Bayville.....	36 54	76 06	+0 50	+1 43	-0.8	0.0	1.7	2.0	0.9	
2437	Buchanan Creek entrance.....	36 52	76 07	+1 00	+1 51	-0.6	0.0	1.9	2.3	0.9	
2438	Long Creek.....	36 54	76 04	+0 48	+1 19	*0.32	*0.32	0.8	1.0	0.4	
2439	Brown Cove.....	36 52	76 04	+0 46	+1 43	-0.8	0.0	1.7	2.0	0.8	
2440	Cape Henry.....	36 56	76 00	-0 48	-1 10	+0.3	0.0	2.8	3.4	1.4	
	VIRGINIA, Outer Coast										
2441	Virginia Beach.....	36 51	75 58	-1 26	-1 30	+0.9	0.0	3.4	4.1	1.7	
2442	False Cape.....	36 36	75 53	-1 41	-1 40	+1.1	0.0	3.6	4.3	1.8	
	NORTH CAROLINA, Outer Coast										
2443	Currituck Beach Light.....	36 23	75 50	-1 46	-1 45	+1.1	0.0	3.6	4.3	1.8	
2444	Albemarle and Pamlico Sounds <9>.....	—	—	—	—	—	—	—	—	—	
2445	Kitty Hawk (ocean).....	36 06	75 43	-1 50	-1 49	+0.7	0.0	3.2	3.8	1.6	
2446	Jennetts Pier (ocean).....	35 55	75 36	-1 54	-1 50	+0.8	0.0	3.3	3.9	1.6	
2447	Roanoke Sound Channel.....	35 48	75 35	+0 27	+0 37	-2.0	0.0	0.5	0.6	0.3	
2448	Oregon Inlet Marina.....	35 48	75 33	-0 38	+0 26	-1.9	0.0	0.6	0.7	0.3	
2449	Oregon Inlet.....	35 46	75 31	-1 13	-1 07	-0.5	0.0	2.0	2.4	1.0	
2450	Oregon Inlet Bridge.....	35 46	75 32	-1 27	-1 35	-0.6	0.0	1.9	2.3	1.0	
2451	Oregon Inlet Channel.....	35 46	75 34	-1 19	-1 14	-1.3	0.0	1.2	1.4	0.6	
2452	Old House Channel.....	35 46	75 35	-0 36	-0 12	-1.8	0.0	0.7	0.8	0.4	
2453	Oregon Inlet (USCG Station).....	35 46	75 32	-1 40	-1 31	-0.8	0.0	1.7	2.0	0.9	
2454	Davis Slough.....	35 45	75 33	-1 01	-0 41	-1.6	0.0	0.9	1.1	0.5	
2455	Cape Hatteras.....	35 14	75 31	-1 54	-2 05	+1.1	0.0	3.6	4.3	1.8	
2456	Hatteras (ocean).....	35 12	75 42	-2 02	-2 05	+0.9	0.0	3.4	4.1	1.7	
2457	Hatteras Inlet.....	35 12	75 44	-1 39	-1 39	-0.5	0.0	2.0	2.4	1.0	
2458	Ocracoke Inlet.....	35 04	76 01	-1 38	-1 41	-0.6	0.0	1.9	2.3	0.9	
2459	Ocracoke, Ocracoke Inlet.....	35 07	75 59	-1 23	-1 00	*0.40	*0.40	1.0	1.2	0.5	
2461	Cape Lookout.....	34 37	76 32	-2 04	-2 13	+1.2	0.0	3.7	4.4	1.9	
2463	Shell Point, Harkers Island.....	34 41	76 32	+0 12	+0 45	-1.2	0.0	1.3	1.6	0.6	
2465	Beaufort (Pivers Island).....	34 43	76 40	-1 01	-1 09	+0.5	0.0	3.0	3.6	1.5	
2467	Morehead City.....	34 43	76 42	-0 58	-1 05	+0.4	0.0	2.9	3.5	1.4	
2469	Atlantic Beach.....	34 42	76 43	-2 02	-2 03	+1.1	0.0	3.6	4.3	1.8	
2471	Bogue Inlet.....	34 39	77 06	-1 34	-1 37	-0.3	0.0	2.2	2.6	1.1	
2473	New River Inlet.....	34 32	77 20	-1 31	-1 35	+0.5	0.0	3.0	3.6	1.5	
2475	New Topsail Inlet.....	34 22	77 38	-1 27	-0 52	+0.5	0.0	3.0	3.5	1.5	
		on CHARLESTON, p.96									
2477	Masonboro Inlet.....	34 11	77 49	-0 14	+0 05	-1.4	0.0	3.8	4.5	1.9	
2479	Wilmington Beach.....	34 02	77 54	-0 48	-0 38	-1.2	0.0	4.0	4.7	2.0	
2481	Cape Fear.....	33 51	77 58	-0 33	-0 28	-0.7	0.0	4.5	5.1	2.2	
2483	Cape Fear River Bald Head.....	33 52	78 00	-0 17	-0 11	-0.9	0.0	4.3	4.9	2.2	
2485	Fort Caswell.....	33 54	78 01	-0 12	-0 05	-1.0	0.0	4.2	4.8	2.1	
2487	Southport.....	33 55	78 01	0 00	+0 11	-1.1	0.0	4.1	4.6	2.0	
2489	Reaves Point.....	34 00	77 57	+0 15	+0 45	-1.3	0.0	3.9	4.3	2.0	
		on WILMINGTON, p.92									
2491	Campbell Island.....	34 07	77 56	-0 49	-0 44	-0.4	0.0	3.8	4.0	1.9	
2493	WILMINGTTON.....	34 14	77 57	Daily predictions				4.2	4.5	2.1	
2495	Castle Hayne, Northeast River.....	34 21	77 56	+2 40	+2 55	*0.40	*0.40	1.7	1.9	0.8	
2497	Bannermans Br., Northeast River.....	34 35	77 46	+5 54	+6 09	*0.31	*0.31	1.3	1.4	0.6	
		on CHARLESTON, p.96									
2500	Yaupon Beach.....	33 54	78 05	-0 39	-0 49	-0.3	0.0	4.9	5.8	2.4	
2501	Lockwoods Folly Inlet.....	33 55	78 14	-0 29	-0 12	-1.0	0.0	4.2	4.8	2.1	
2503	Shallotte Inlet (Bowen Point).....	33 55	78 22	+0 10	+0 28	-0.6	0.0	4.6	5.4	2.3	
2505	Tubbs Inlet.....	33 53	78 29	-0 19	-0 12	-0.7	0.0	4.5	5.1	2.2	
	SOUTH CAROLINA, Outer Coast										
2507	Little River, 1 mile above mouth.....	33 51	78 34	0 00	+0 03	-0.2	0.0	5.0	5.9	2.5	
2509	Little River (town), Little River.....	33 52	78 37	+0 29	+0 02	0.0	0.0	5.2	6.1	2.6	
2511	Myrtle Beach.....	33 41	78 53	-0 27	-0 27	-0.1	0.0	5.1	6.0	2.5	
2513	Murrells Inlet.....	33 32	79 02	-0 09	+0 20	-0.7	0.0	4.5	5.3	2.2	
2514	Pawleys Island.....	33 26	79 07	-0 29	-0 30	-0.4	0.0	4.8	5.6	2.4	
2515	North Inlet.....	33 20	79 10	-0 18	0 00	-0.7	0.0	4.5	5.3	2.2	
	Winyah Bay										
2517	Entrance (south jetty).....	33 11	79 09	-0 28	-0 28	-0.6	0.0	4.6	5.4	2.3	
2519	Georgetown Lighthouse.....	33 13	79 11	+0 26	+0 25	-1.4	0.0	3.8	4.4	1.9	
2521	Estherville-Minim Creek Canal (ferry)...	33 15	79 16	+0 31	+1 04	*0.63	*0.63	3.3	3.9	1.6	

Endnotes can be found at the end of table 2.

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
		°	'	°	'	h. m.	h. m.	ft	ft	ft	
		N		W							
						on CHARLESTON, p.96					
2523	Frazier Point.....	33 19	79 17	+1 19	+2 03	-1.7	0.0	3.5	4.1	1.7	
2525	Georgetown, Sampit River.....	33 22	79 17	+1 27	+2 25	*0.63	*0.63	3.3	3.9	1.6	
2527	Georgetown, Pee Dee River bridge.....	33 22	79 16	+1 34	+2 35	*0.63	*0.63	3.3	3.9	1.6	
2529	Waccamaw River Schooner Creek entrance.....	33 27	79 10	+2 21	+3 18	*0.62	*0.62	3.2	3.8	1.6	
2531	Wachesaw Ldg., 1 mile south of.....	33 33	79 06	+3 06	+4 08	*0.56	*0.56	2.9	3.4	1.4	
2533	Bull Creek entrance.....	33 36	79 06	+3 38	+4 41	*0.44	*0.44	2.3	2.7	1.1	
2535	Enterprise Landing.....	33 40	79 04	+4 54	+5 31	*0.38	*0.38	2.0	2.4	1.0	
2537	Toddville.....	33 45	79 04	+7 10	+7 07	*0.25	*0.25	1.3	1.5	0.6	
2539	Conway.....	33 50	79 02	+7 47	+7 56	*0.23	*0.23	1.2	1.4	0.6	
		SOUTH CAROLINA, Outer Coast-Con.									
2541	North Santee River Inlet.....	33 08	79 15	-0 16	0 00	-0.7	0.0	4.5	5.3	2.2	
2543	Minim Creek ent., North Santee River.....	33 12	79 16	-0 02	+1 02	-1.3	0.0	3.9	4.6	1.9	
2544	Cedar Island Point, South Santee River.....	33 07	79 16	-0 23	+0 04	-1.1	0.0	4.1	4.8	2.0	
2545	Brown Island, South Santee River.....	33 09	79 20	+0 20	+1 27	-1.1	0.0	4.1	4.8	2.0	
2547	Cape Romain.....	33 01	79 21	-0 29	-0 21	-0.5	0.0	4.7	5.5	2.3	
2549	Cape Romain, 46 miles east of.....	33 05	78 26	-1 12	-1 17	-1.1	0.0	4.1	4.8	2.0	
2551	Bull Bay Five Fathom Creek entrance.....	33 00	79 30	-0 13	-0 11	-0.3	0.0	4.9	5.8	2.4	
2553	McClellanville, Jeremy Creek.....	33 05	79 28	+0 20	+0 21	-0.1	0.0	5.1	6.0	2.5	
2555	Harbor River entrance.....	33 02	79 32	-0 04	+0 32	-0.3	0.0	4.9	5.8	2.4	
2557	Jack Creek entrance.....	32 56	79 35	-0 21	-0 19	-0.2	0.0	5.0	5.9	2.5	
2559	Wharf Creek entrance.....	32 55	79 37	+0 05	-0 12	-0.1	0.0	5.1	6.0	2.5	
2561	Sewee Bay.....	32 56	79 39	+0 06	+0 07	-0.2	0.0	5.0	5.9	2.5	
2563	Capers Inlet.....	32 51	79 42	-0 16	-0 14	0.0	0.0	5.2	6.1	2.6	
2565	Deweese Inlet.....	32 50	79 44	-0 09	-0 16	-0.2	0.0	5.0	5.9	2.5	
2567	Isle of Palms (outer coast).....	32 47	79 47	-0 16	-0 17	0.0	0.0	5.2	6.1	2.6	
2569	Sullivans Island (outer coast).....	32 46	79 50	-0 15	-0 16	0.0	0.0	5.2	6.1	2.6	
		Charleston Harbor									
2571	Entrance (north jetty).....	32 44	79 48	-0 16	-0 19	0.0	0.0	5.2	6.1	2.6	
2573	Fort Sumter.....	32 45	79 52	-0 09	-0 13	-0.2	0.0	5.0	5.9	2.5	
2575	The Cove.....	32 46	79 52	-0 08	-0 06	-0.1	0.0	5.1	6.0	2.6	
2577	CHARLESTON (Customhouse Wharf).....	32 47	79 55	Daily predictions				5.2	6.1	2.6	
2579	Shipyard Creek, 0.8 mile above entrance.	32 50	79 57	+0 27	+0 16	+0.1	0.0	5.3	6.3	2.6	
2581	Cooper River North Charleston.....	32 52	79 58	+0 40	+0 36	0.0	0.0	5.2	6.1	2.6	
2583	Goose Creek entrance.....	32 54	79 57	+0 50	+0 40	0.0	0.0	5.2	6.1	2.6	
2585	Yeaman's Hall, Goose Creek.....	32 56	79 59	+2 36	+2 03	-0.2	0.0	5.0	5.9	2.5	
2587	Snow Point, north of.....	32 57	79 56	+1 27	+1 14	-0.3	0.0	4.9	5.8	2.4	
2589	Dean Hall.....	33 03	79 56	+2 46	+2 27	-1.1	0.0	4.1	4.8	2.0	
2591	Quimby Creek, East Branch.....	33 06	79 49	+4 08	+3 47	-0.9	0.0	4.3	5.1	2.1	
2593	RR. bridge, West Branch.....	33 06	79 57	+3 18	+3 05	-1.0	0.0	4.2	5.0	2.1	
2597	Wando River Cainhoy.....	32 55	79 50	+0 57	+0 39	+0.8	0.0	6.0	7.1	3.0	
2599	Woodsville.....	32 55	79 44	+2 07	+1 22	+1.1	0.0	6.3	7.4	3.2	
2601	Ashley River Happoo Creek (highway bridge).....	32 46	79 58	+0 22	+0 22	0.0	0.0	5.2	6.1	2.6	
2603	Highway bridge.....	32 47	79 58	+0 22	+0 15	0.0	0.0	5.2	6.1	2.6	
2605	Highway bridge (2 miles above).....	32 50	79 58	+0 25	+0 17	+0.3	0.0	5.5	6.5	2.8	
2607	Bees Ferry bridge.....	32 51	80 03	+1 14	+1 07	+0.3	0.0	5.5	6.4	2.8	
2609	Magnolia Gardens.....	32 53	80 05	+1 16	+1 06	+0.4	0.0	5.6	6.6	2.8	
2611	Greggs Landing.....	32 56	80 09	+1 47	+1 35	+0.9	0.0	6.1	7.2	3.0	
		SOUTH CAROLINA, Outer Coast-Con.									
2613	Folly Island (outer coast).....	32 39	79 56	-0 15	-0 18	0.0	0.0	5.2	6.1	2.6	
2615	Folly River (below bridge).....	32 39	79 58	+0 13	-0 09	+0.2	0.0	5.4	6.4	2.7	
2617	Legareville, 1 mile above, Stono River.....	32 41	80 00	+0 13	+0 06	0.0	0.0	5.2	6.1	2.6	
2619	Elliott Cut, Stono River.....	32 46	80 00	+0 48	+0 49	0.0	0.0	5.2	6.1	2.6	
2621	Church Flats, RR. bridge, Stono River.....	32 45	80 08	+2 06	+1 47	+0.5	0.0	5.7	6.7	2.8	
2623	North Edisto River Rockville, Bohicket Creek.....	32 36	80 12	+0 20	+0 05	+0.6	0.0	5.8	6.8	2.9	
2624	Point of Pines.....	32 35	80 14	+0 16	+0 11	+0.4	0.0	5.6	6.5	2.8	
2625	Dawho River entrance.....	32 38	80 16	+0 46	+0 27	+0.9	0.0	6.1	7.2	3.0	
2627	Dawho Ferry, Dawho River.....	32 38	80 20	+1 18	+1 00	+1.3	0.0	6.5	7.7	3.2	
2629	Toogoodoo Creek, 2 miles above ent..	32 40	80 18	+1 11	+0 35	+1.2	0.0	6.4	7.6	3.2	
2631	Yonges Island, Wadmalaw River.....	32 41	80 14	+1 19	+0 34	+1.4	0.0	6.6	7.8	3.3	
2633	Ravens Point, Church Creek.....	32 42	80 09	+1 43	+0 49	+1.8	0.0	7.0	8.3	3.5	
		on SAVANNAH RIVER ENT., p.100									
2635	Edisto Beach, Edisto Island.....	32 30	80 18	-0 35	-0 41	-1.0	0.0	5.9	6.9	2.9	
2637	South Edisto River Big Bay Creek entrance.....	32 30	80 20	0 00	-0 09	-0.8	0.0	6.1	7.2	3.0	
2639	Peters Point, St. Pierre Creek.....	32 32	80 21	+0 17	+0 04	-0.7	0.0	6.2	7.3	3.1	
2641	Watts Cut ent., 0.8 mile south of...	32 36	80 23	+0 38	+0 55	-0.6	0.0	6.3	7.4	3.1	
2643	Dawho River entrance.....	32 39	80 23	+1 28	+1 42	-0.6	0.0	6.3	7.4	3.1	
2645	Jacksonboro.....	32 46	80 27	+3 16	+4 21	*0.28	*0.28	1.9	2.2	0.9	

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NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
		° °	N W	h. m.	h. m.	ft	ft	ft	ft	ft	
	on SAVANNAH RIVER ENT., p.100										
St. Helena Sound Time meridian, 75°W											
2647	Harbor River entrance.....	32 24	80 27	-0 01	-0 05	-0.8	0.0	6.1	7.1	3.0	
2649	Combahee Bank.....	32 29	80 26	+0 04	+0 05	-0.7	0.0	6.2	7.3	3.1	
2651	Seabrook, Ashepoo River.....	32 31	80 25	+0 13	+0 15	-0.7	0.0	6.2	7.3	3.1	
2653	Hutchinson Island, Ashepoo River.....	32 33	80 29	+0 41	+0 52	-0.6	0.0	6.3	7.4	3.1	
2655	Fields Point, Combahee River.....	32 34	80 33	+0 48	+0 58	-0.5	0.0	6.4	7.5	3.2	
2657	Highway Bridge, Combahee River.....	32 39	80 41	+2 50	+2 51	*0.64	*0.64	4.4	5.1	2.2	
2659	Lucy Point Creek ent., Morgan River.....	32 27	80 37	+0 58	+0 27	-0.1	0.0	6.8	8.0	3.4	
2661	Summerhouse Point, Bull River.....	32 32	80 34	+1 03	+0 33	-0.3	0.0	6.6	7.8	3.3	
2663	Brickyard Point, Coosaw River.....	32 30	80 40	+1 20	+1 07	+0.4	0.0	7.3	8.5	3.6	
2665	Coosaw River.....	32 32	80 41	+1 25	+1 09	+0.3	0.0	7.2	8.4	3.6	
2667	Fripp Inlet, Hunting Island.....	32 21	80 28	+0 01	-0 22	-0.7	0.0	6.2	7.3	3.1	
Port Royal Sound											
2669	Martins Industry.....	32 07	80 35	-0 30	-0 41	-0.5	0.0	6.4	7.6	3.2	
2671	Hilton Head.....	32 14	80 40	-0 08	-0 16	-0.3	0.0	6.6	7.8	3.3	
2673	Club Bridge Creek entrance.....	32 20	80 33	+0 30	-0 20	-0.1	0.0	6.8	8.0	3.4	
2675	Station Creek.....	32 19	80 36	+0 28	-0 19	0.0	0.0	6.9	8.1	3.4	
2677	Chowan Creek, Distant Island.....	32 23	80 38	+1 03	+0 30	+0.2	0.0	7.1	8.3	3.5	
2679	Parris Island, Beaufort River.....	32 21	80 40	+0 35	+0 17	+0.2	0.0	7.1	8.3	3.5	
2681	Port Royal, Battery Creek.....	32 22	80 41	+0 37	+0 24	+0.3	0.0	7.2	8.5	3.6	
2683	Beaufort, Beaufort River.....	32 26	80 40	+1 13	+0 46	+0.5	0.0	7.4	8.7	3.7	
2684	Colleton River Mouth.....	32 19	80 48	+0 46	+0 34	+0.4	0.0	7.3	8.5	3.7	
2685	Victoria Bluff, Colleton River.....	32 18	80 48	+1 03	+0 37	+0.6	0.0	7.5	8.8	3.7	
2687	Baileys Landing, Okatee River.....	32 21	80 54	+1 33	+0 59	+1.2	0.0	8.1	9.5	4.0	
2689	Lemon Island, Chechessee River.....	32 22	80 50	+1 04	+0 45	+0.7	0.0	7.6	8.9	3.8	
2691	Archers Creek entrance, Broad River.....	32 21	80 44	+0 41	+0 27	+0.2	0.0	7.1	8.3	3.5	
2693	Corning Landing, Whale Branch.....	32 30	80 47	+1 29	+1 13	+1.0	0.0	7.9	9.2	3.9	
2695	Skull Creek, north entrance.....	32 16	80 44	+0 26	+0 20	+0.1	0.0	7.0	8.3	3.5	
2697	Skull Creek, south entrance.....	32 13	80 47	+0 33	+0 08	+0.7	0.0	7.6	9.0	3.8	
2699	Haig Point, Daufuskie Island.....	32 09	80 50	+0 09	-0 07	+0.3	0.0	7.2	8.4	3.6	
2701	Bluffton, May River.....	32 14	80 52	+0 54	+0 21	+1.2	0.0	8.1	9.5	4.0	
2703	Daufuskie Landing, New River.....	32 06	80 54	+0 23	+0 24	+0.3	0.0	7.2	8.5	3.6	
2705	Walls Cut, Turtle Island.....	32 05	80 55	+0 08	+0 16	+0.2	0.0	7.1	8.3	3.6	
GEORGIA Savannah River											
2707	Tybee Light.....	32 02	80 51	-0 08	-0 15	-0.1	0.0	6.8	8.0	3.4	
2709	SAVANNAH RIVER ENTRANCE.....	32 02	80 54	Daily predictions			0.0	6.9	8.1	3.5	
	on SAVANNAH, p.104										
2711	Fort Jackson.....	32 05	81 02	-0 07	-0 14	+0.1	0.0	7.5	8.7	3.8	
2713	SAVANNAH.....	32 05	81 05	Daily predictions			0.0	7.4	8.6	3.7	
2715	Port Wentworth.....	32 09	81 08	+0 33	+0 41	-0.4	0.0	7.0	8.1	3.5	
2717	S.C.L. RR. bridge.....	32 14	81 09	+1 15	+2 12	-1.2	0.0	6.2	7.2	3.1	
Tybee Creek and Wassaw Sound											
	on SAVANNAH RIVER ENT., p.100										
2719	Tybee Creek entrance.....	31 59	80 51	-0 07	+0 02	-0.1	0.0	6.8	8.0	3.4	
2721	Beach Hammock.....	31 57	80 56	+0 01	-0 10	0.0	0.0	6.9	8.1	3.4	
2723	Romerly Marsh Creek.....	31 56	81 00	+0 10	-0 06	+0.2	0.0	7.1	8.3	3.5	
	Wilmington River										
2725	Savannah-Oglethorpe Hotel.....	32 00	81 00	+0 16	+0 03	+0.9	0.0	7.8	9.1	3.9	
2727	Thunderbolt.....	32 02	81 03	+0 34	+0 09	+1.0	0.0	7.9	9.2	3.9	
2729	North entrance.....	32 04	81 00	+0 42	+0 41	+0.7	0.0	7.6	8.9	3.8	
2731	Isle of Hope, Skidaway River.....	31 59	81 03	+0 52	+0 25	+0.9	0.0	7.8	9.1	3.9	
Ossabaw Sound											
	on SAVANNAH RIVER ENT., p.100										
2733	Egg Islands.....	31 50	81 05	+0 06	+0 07	+0.3	0.0	7.2	8.4	3.6	
2735	Vernon View, Burnside River.....	31 56	81 06	+0 42	+0 28	+0.6	0.0	7.5	8.8	3.8	
2737	Coffee Bluff, Forest River.....	31 56	81 09	+1 07	+0 39	+0.6	0.0	7.5	8.8	3.7	
2739	Fort McAllister, Ogeechee River.....	31 53	81 13	+0 50	+1 13	0.0	0.0	6.9	8.1	3.4	
2741	Highway bridge, Ogeechee River.....	31 59	81 17	+3 21	+4 22	*0.14	*0.14	1.0	1.2	0.5	
2743	Cane Patch Creek entrance.....	31 49	81 09	+0 57	+0 40	+0.3	0.0	7.2	8.4	3.6	
St. Catherines and Sapelo Sounds											
	on SAVANNAH RIVER ENT., p.100										
2745	Walburg Creek entrance.....	31 42	81 09	+0 25	+0 20	+0.2	0.0	7.1	8.3	3.6	
2747	Kilkenny Club, Kilkenny Creek.....	31 47	81 12	+0 31	+0 13	+1.0	0.0	7.9	9.2	3.9	
2749	Sunbury, Medway River.....	31 46	81 17	+0 56	+0 42	+0.6	0.0	7.5	8.8	3.8	
2751	Belfast, Belfast River.....	31 49	81 18	+1 25	+1 07	+0.9	0.0	7.8	9.1	3.9	

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Lat.	Long.	Time	Height	High Water	Low Water	Mean Spring		
		° N	° W	h. m.	h. m.	ft	ft	ft	ft	ft
	St. Catherines and Sapelo Sounds Time meridian, 75°W									
2753	North Newport River.....	31 40	81 16	+0 58	+0 33	+0.7	0.0	7.6	8.9	3.8
2755	South Newport River.....	31 38	81 16	+0 39	+0 44	+0.5	0.0	7.4	8.7	3.7
2756	Dallas Bluff, Julianton River.....	31 35	81 19	+0 50	+1 01	+0.7	0.0	7.6	8.9	3.8
2757	Blackbeard Island.....	31 32	81 12	+0 20	+0 19	0.0	0.0	6.9	8.1	3.4
2758	Dog Hammock, Sapelo River.....	31 32	81 16	+0 31	+0 23	+0.2	0.0	7.1	8.3	3.6
2759	Pine Harbor, Sapelo River.....	31 33	81 22	+1 05	+1 01	+0.3	0.0	7.2	8.4	3.6
2760	Eagle Creek, Mud River.....	31 31	81 17	+0 23	+0 16	+0.3	0.0	7.2	8.4	3.6
2761	Mud River, at Old Teakettle Creek.....	31 29	81 19	+0 47	+0 43	+0.5	0.0	7.4	8.7	3.7
	Doboy and Altamaha Sounds									
2762	Blackbeard Creek, Blackbeard Island.....	31 29	81 13	+0 21	+0 44	-0.4	0.0	6.5	7.6	3.3
2763	Sapelo Island.....	31 23	81 17	+0 00	+0 02	-0.1	0.0	6.8	8.0	3.4
2765	Hudson Creek entrance.....	31 27	81 21	+0 39	+0 28	+0.3	0.0	7.2	8.4	3.6
2767	Threemile Cut entrance, Darien River....	31 21	81 23	+0 46	+0 52	+0.2	0.0	7.1	8.3	3.5
2769	Darien, Darien River.....	31 22	81 26	+1 10	+1 12	+0.4	0.0	7.3	8.5	3.6
2771	Wolf Island.....	31 20	81 19	+0 06	+0 35	-0.3	0.0	6.6	7.7	3.3
2773	Champney Island, South Altamaha River...	31 20	81 28	+1 12	+2 30	-1.7	0.0	5.2	6.1	2.6
2775	Hampton River entrance.....	31 13	81 19	+0 18	+0 01	-0.3	0.0	6.6	7.8	3.3
2777	Jones Creek entrance, Hampton River.....	31 18	81 20	+1 05	+0 10	+0.3	0.0	7.2	8.5	3.6
	St. Simons Sound									
2779	St. Simons Sound Bar.....	31 06	81 19	+0 01	-0 05	-0.4	0.0	6.5	7.6	3.2
2781	St. Simons Light.....	31 08	81 24	+0 24	+0 28	-0.3	0.0	6.6	7.7	3.3
2783	Frederica River.....	31 13	81 24	+0 50	+0 53	+0.3	0.0	7.2	8.4	3.6
2785	Troup Creek entrance, Mackay River.....	31 13	81 26	+0 54	+0 49	+0.3	0.0	7.2	8.4	3.6
2787	Brunswick, East River.....	31 09	81 30	+0 55	+0 40	+0.4	0.0	7.3	8.5	3.6
2789	Blackbeard Creek entrance.....	31 11	81 31	+1 05	+0 39	+0.7	0.0	7.6	8.9	3.8
2791	Dillard Creek.....	31 14	81 34	+1 34	+0 59	+1.1	0.0	8.0	9.4	4.0
2793	Buffalo River entrance.....	31 13	81 35	+1 39	+0 55	+1.1	0.0	8.0	9.4	4.0
2795	Highway bridge, South Brunswick River...	31 09	81 34	+1 09	+0 46	+0.7	0.0	7.6	8.9	3.8
2797	Jekyll Point.....	31 01	81 26	+0 28	+0 28	-0.3	0.0	6.6	7.7	3.3
2799	Jointer Island, Jointer Creek.....	31 06	81 30	+1 02	+0 49	+0.3	0.0	7.2	8.4	3.6
	Little Satilla River									
2801	2.5 miles above mouth.....	31 04	81 30	+0 47	+0 49	-0.1	0.0	6.8	8.0	3.4
2803	8 miles above mouth.....	31 06	81 34	+1 15	+1 20	+0.4	0.0	7.3	8.5	3.6
2805	Below Spring Bluff.....	31 10	81 37	+2 00	+1 49	+0.6	0.0	7.5	8.8	3.7
2807	Dover Bluff, Dover Creek.....	31 01	81 32	+0 57	+0 49	+0.1	0.0	7.0	8.2	3.5
	Satilla River									
2809	Todd Creek entrance.....	30 58	81 31	+0 43	+0 59	-0.2	0.0	6.7	7.8	3.3
2811	Bailey Cut, 0.8 mile west of.....	30 59	81 36	+0 57	+1 20	0.0	0.0	6.9	8.1	3.4
2813	Ceylon.....	30 58	81 39	+1 25	+1 53	-0.3	0.0	6.6	7.7	3.3
2815	Burnt Fort.....	30 57	81 54	+4 46	+5 23	*0.46	*0.46	3.2	3.7	1.6
2817	Cumberland Wharf, Cumberland River.....	30 56	81 27	+0 40	+0 42	-0.1	0.0	6.8	8.0	3.4
2819	Floyd Creek, 2.8 miles above entrance...	30 56	81 30	+0 59	+0 39	+0.2	0.0	7.1	8.3	3.5
	GEORGIA and FLORIDA Cumberland Sound									
2821	St. Marys Entrance, north jetty.....	30 43	81 26	+0 15	+0 15	-1.1	0.0	5.8	6.8	2.9
2823	Crooked River entrance.....	30 51	81 29	+1 23	+1 12	-0.1	0.0	6.8	8.0	3.4
2825	Harriets Bluff, Crooked River.....	30 52	81 35	+2 09	+2 12	-0.5	0.0	6.4	7.5	3.2
2827	St. Marys, St. Marys River.....	30 43	81 33	+1 21	+1 13	-0.9	0.0	6.0	7.0	3.0
2829	Crandall, St. Marys River.....	30 43	81 37	+2 10	+1 59	-1.8	0.0	5.1	6.0	2.5
								on MAYPORT, p.108		
2831	Fernandina Beach (outer coast).....	30 38	81 26	-0 18	-0 01	+1.2	0.0	5.7	6.7	2.8
2833	Fernandina Beach, Amelia River.....	30 40	81 28	+0 32	+0 16	+1.5	0.0	6.0	7.0	3.0
2835	Chester, Bells River.....	30 41	81 32	+0 49	+0 41	+1.9	0.0	6.4	7.5	3.2
2837	S.C.L. RR. bridge, Kingsley Creek.....	30 38	81 29	+0 59	+0 43	+1.5	0.0	6.0	7.0	3.0
	FLORIDA Nassau Sound and Fort George River									
2839	Nassau Sound.....	30 31	81 27	-0 03	+0 06	+0.9	0.0	5.4	6.3	2.7
2841	Amelia City, South Amelia River.....	30 35	81 28	+0 54	+1 03	+1.1	0.0	5.6	6.6	2.8
2843	Nassauville, Nassau River.....	30 34	81 31	+1 04	+1 37	+0.3	0.0	4.8	5.6	2.4
2845	Mink Creek entrance, Nassau River.....	30 32	81 34	+1 58	+2 32	-0.6	0.0	3.9	4.6	1.9
2847	Halfmoon Island, highway bridge.....	30 34	81 36	+3 00	+3 21	-1.0	0.0	3.5	4.1	1.7
2849	Sawpit Creek entrance.....	30 31	81 27	-0 02	+0 30	+0.5	0.0	5.0	5.8	2.5
2851	Fort George Island, Fort George River...	30 26	81 26	+0 29	+0 39	+0.3	0.0	4.8	5.6	2.4
	FLORIDA, St. Johns River									
2853	South Jetty.....	30 24	81 23	-0 23	-0 17	+0.4	0.0	4.9	5.7	2.4
2855	MAYPORT.....	30 24	81 26	Daily predictions				4.5	5.3	2.3

Endnotes can be found at the end of table 2.

TABLE 2. — TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
		° °'	N W	h. m.	h. m.	ft	ft	ft	ft	ft	
FLORIDA, St. Johns River Time meridian, 75°W											
2857	Pablo Creek bascule bridge.....	30 19	81 26	+1 39	+1 15	*0.64	*0.64	2.9	3.4	1.4	
2859	Fulton.....	30 23	81 30	+0 29	+0 42	-1.1	0.0	3.4	4.0	1.7	
2861	Dame Point.....	30 23	81 33	+0 46	+0 55	*0.67	*0.67	3.0	3.5	1.5	
2863	Phoenix Park (Cummers Hill).....	30 23	81 38	+0 58	+1 25	*0.44	*0.44	2.0	2.3	1.0	
2865	Jacksonville (Dredge Depot).....	30 21	81 37	+1 24	+1 50	*0.44	*0.44	2.0	2.3	1.0	
2867	Jacksonville (RR. bridge).....	30 19	81 40	+2 06	+2 13	*0.27	*0.27	1.2	1.4	0.6	
2869	Ortega River entrance.....	30 17	81 42	+2 27	+2 50	*0.20	*0.20	0.9	1.1	0.5	
2871	Orange Park.....	30 10	81 42	+3 49	+4 14	*0.16	*0.16	0.7	0.8	0.3	
2873	Green Cove Springs.....	30 00	81 40	+5 26	+6 13	*0.18	*0.18	0.8	0.9	0.4	
2875	East Tocol.....	29 51	81 34	+6 47	+7 18	*0.22	*0.22	1.0	1.2	0.5	
2877	Bridgeport.....	29 45	81 34	+6 58	+7 32	*0.24	*0.24	1.1	1.3	0.5	
2879	Palatka.....	29 39	81 38	+7 26	+8 21	*0.27	*0.27	1.2	1.4	0.6	
2881	Welaka.....	29 29	81 40	+7 46	+8 25	*0.11	*0.11	0.5	0.6	0.2	
FLORIDA, East Coast											
2883	Atlantic Beach.....	30 20	81 24	-0 25	-0 18	+0.7	0.0	5.2	6.0	2.6	
2885	St. Augustine Inlet.....	29 53	81 17	-0 21	-0 01	0.0	0.0	4.5	5.3	2.2	
2887	St. Augustine.....	29 54	81 18	+0 14	+0 43	-0.3	0.0	4.2	5.0	2.1	
2889	Daytona Beach (ocean).....	29 14	81 00	-0 33	-0 32	-0.4	0.0	4.1	4.9	2.0	
on MIAMI HARBOR ENT., p.112											
2891	Ponce de Leon Inlet.....	29 04	80 55	+0 06	+0 20	-0.2	0.0	2.3	2.7	1.2	
2893	Cape Canaveral.....	28 26	80 34	-0 41	-0 41	+1.0	0.0	3.5	4.1	1.8	
2894	Oak Hill, Mosquito Lagoon <21>.....	28 52	80 50	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
Indian River											
2895	Melbourne <22>.....	28 06	80 37	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
2896	Palm Bay.....	28 02	80 35	+3 40	+4 19	*0.10	*0.10	0.2	0.2	0.1	
2897	Wabasso.....	27 45	80 26	+2 48	+3 19	*0.16	*0.16	0.4	0.5	0.2	
2898	Vero Beach.....	27 38	80 22	+3 21	+3 50	*0.32	*0.32	0.8	1.0	0.4	
2900	Fort Pierce.....	27 27	80 19	+1 08	+1 01	*0.48	*0.48	1.2	1.4	0.6	
2901	Jensen Beach.....	27 14	80 13	+2 40	+3 06	*0.40	*0.40	1.0	1.2	0.5	
2902	Sebastian Inlet.....	27 52	80 27	-0 24	-0 20	-0.4	0.0	2.1	2.5	1.0	
2903	Vero Beach (ocean).....	27 40	80 22	-0 31	-0 25	+0.9	0.0	3.4	4.0	1.7	
2905	Fort Pierce Inlet, south jetty.....	27 28	80 17	-0 09	-0 14	+0.1	0.0	2.6	3.1	1.3	
St. Lucie River											
2907	North Fork.....	27 15	80 19	+2 50	+3 29	*0.40	*0.40	1.0	1.2	0.5	
2908	Stuart.....	27 12	80 16	+2 37	+3 33	*0.36	*0.36	0.9	1.1	0.4	
2909	South Fork.....	27 10	80 15	+2 54	+3 34	*0.36	*0.36	0.9	1.1	0.4	
2911	Sewall Point.....	27 10	80 11	+1 35	+2 11	*0.36	*0.36	0.9	1.1	0.4	
2912	Seminole Shores.....	27 11	80 10	-0 30	-0 14	+0.5	0.0	3.0	3.6	1.5	
2913	Great Pocket.....	27 09	80 10	+1 18	+1 51	*0.44	*0.44	1.1	1.3	0.6	
2914	Gomez, South Jupiter Narrows.....	27 06	80 08	+1 56	+2 41	*0.52	*0.52	1.3	1.6	0.6	
2916	Hobe Sound - State Park.....	27 02	80 06	+1 46	+2 22	-0.9	0.0	1.6	1.9	0.8	
2917	Conch Bar, Jupiter Sound.....	26 59	80 06	+1 19	+1 38	-0.8	0.0	1.7	2.0	0.8	
2918	Jupiter Sound, south end.....	26 57	80 05	+0 46	+0 49	-0.5	0.0	2.0	2.4	1.0	
2919	Jupiter Inlet.....	26 57	80 04	+0 15	+0 01	0.0	0.0	2.5	3.0	1.2	
Loxahatchee River											
2921	Tequesta.....	26 57	80 06	+1 18	+2 02	-0.7	0.0	1.8	2.2	0.9	
2922	North Fork.....	26 58	80 07	+1 27	+1 59	-0.6	0.0	1.9	2.3	1.0	
2923	Southwest Fork (spillway).....	26 56	80 09	+1 15	+1 49	-0.5	0.0	2.0	2.4	1.0	
2924	Northwest Fork.....	26 59	80 08	+1 34	+2 10	-0.5	0.0	2.0	2.4	1.0	
2926	Southwest Fork.....	26 57	80 07	+1 15	+1 47	-0.6	0.0	1.9	2.3	1.0	
2927	Jupiter, Lake Worth Creek.....	26 56	80 05	+0 57	+1 16	-0.4	0.0	2.1	2.5	1.0	
2928	Donald Ross Bridge.....	26 53	80 04	+0 43	+0 54	-0.2	0.0	2.3	2.8	1.2	
2929	North Palm Beach, Lake Worth Creek.....	26 50	80 03	+0 05	+0 17	+0.4	0.0	2.9	3.4	1.4	
2931	Port of Palm Beach, Lake Worth.....	26 46	80 03	0 00	+0 12	+0.1	0.0	2.6	3.1	1.3	
2932	Palm Beach (ocean).....	26 43	80 02	-0 21	-0 18	+0.3	0.0	2.8	3.3	1.4	
2933	West Palm Beach Canal.....	26 39	80 03	+1 08	+1 36	0.0	0.0	2.5	2.8	1.2	
2934	Lake Worth Pier (ocean).....	26 37	80 02	-0 19	-0 17	+0.3	0.0	2.8	3.3	1.4	
2936	Boynton Beach.....	26 33	80 03	+1 26	+2 09	0.0	0.0	2.5	2.8	1.2	
2937	Delray Beach.....	26 28	80 04	+1 45	+2 09	0.0	0.0	2.5	2.9	1.2	
2938	Yamato.....	26 24	80 04	+1 43	+1 59	-0.1	0.0	2.4	2.8	1.2	
2939	Boca Raton.....	26 21	80 05	+0 47	+1 13	-0.3	0.0	2.2	2.5	1.1	
2941	Deerfield Beach.....	26 19	80 05	+0 51	+1 07	-0.1	0.0	2.4	2.9	1.2	
2942	Hillsboro Beach, Intracoastal waterway.....	26 16	80 05	+0 26	+0 38	+0.3	0.0	2.8	3.2	1.4	
2943	Hillsboro Inlet (inside).....	26 16	80 05	+0 08	+0 06	0.0	0.0	2.5	2.9	1.2	
2944	Lauderdale-by-the-sea.....	26 11	80 06	-0 08	-0 08	+0.1	0.0	2.6	3.1	1.3	
Fort Lauderdale											
2946	Bahia Mar Yacht Club.....	26 07	80 06	+0 19	+0 38	-0.1	0.0	2.4	2.8	1.2	
2947	Andrews Ave. bridge, New River.....	26 07	80 09	+0 39	+0 56	-0.4	0.0	2.1	2.4	1.0	
2948	Port Everglades.....	26 06	80 07	-0 06	-0 06	+0.1	0.0	2.6	3.1	1.3	
2949	South Port Everglades.....	26 05	80 07	0 00	+0 01	0.0	0.0	2.5	2.9	1.3	
2951	Hollywood Beach.....	26 02	80 07	+1 00	+1 08	-0.4	0.0	2.1	2.4	1.0	
2952	Golden Beach.....	25 58	80 08	+1 36	+2 04	-0.4	0.0	2.1	2.4	1.0	
2953	Sunny Isles, Biscayne Creek.....	25 56	80 08	+2 23	+2 27	-0.7	0.0	1.8	2.2	0.9	
2954	North Miami Beach.....	25 56	80 07	-0 04	0 00	0.0	0.0	2.5	3.0	1.2	
2956	Bakers Haulover Inlet (inside).....	25 54	80 08	+1 17	+1 35	-0.5	0.0	2.0	2.4	1.0	
2957	Indian Creek.....	25 52	80 09	+1 36	+1 50	-0.4	0.0	2.1	2.5	1.1	
2958	Miami Beach.....	25 46	80 08	0 00	0 00	0.0	0.0	2.5	3.0	1.3	
2959	MIAMI HARBOR ENTRANCE.....	25 46	80 08	Daily predictions				2.5	3.0	1.3	

Endnotes can be found at the end of table 2.

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

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NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Lat.	Long.	Time		Height		Mean Spring			
				High Water	Low Water	High Water	Low Water				
	VENEZUELA Time meridian, 60°W	° °	N W	h. m.	h. m.	ft	ft	ft	ft	ft	
3551	ISLA ZAPARA, Lake Maracaibo.....	11 00	71 35			Daily predictions		2.8	3.0	2.7	
3552	Bahia de Tablazos, Lake Maracaibo.....	10 53	71 35	+0 30	+0 11	*0.61	*0.31	2.1	2.3	1.5	
3553	Punta de Palmas.....	10 48	71 37	+0 35	+0 16	*0.49	*0.31	1.6	1.8	1.2	
						on ISLA ZAPARA, p.152					
3554	AMUAY.....	11 45	70 13			Daily predictions		- -	1.2	0.6	
3555	La Guaira t.....	10 36	66 56	-2 29	-1 59	+0.8	+1.0	- -	1.0	1.5	
3557	Carenero t.....	10 32	66 07	-1 51	-1 59	+0.8	+1.0	- -	1.0	1.5	
3559	Cumana t.....	10 28	64 11	-2 37	-1 02	-0.1	0.0	- -	1.1	0.5	
3561	Porlamar, Isla de Margarita t.....	10 57	63 51	-1 19	-0 59	+0.6	0.0	- -	1.8	0.9	
3563	Carupano t.....	10 40	63 15	-1 17	-0 42	+0.2	0.0	- -	1.4	0.7	
						on AMUAY, p.156					
3565	Gulf of Paria Macuro.....	10 39	61 56	-1 15	-2 05	*0.38	*0.38	2.2	2.7	1.4	
3567	Puerto de Hierro.....	10 37	62 05	-0 46	-1 19	*0.59	*0.59	3.3	4.2	2.0	
3569	Barra de Maturin, channel entrance.....	10 18	62 31	-0 22	-0 45	-1.0	+0.2	4.6	5.7	2.8	
3571	PUNTA GORDA, Rio San Juan.....	10 10	62 38			Daily predictions		5.8	7.1	3.2	
3573	Boca Pedernales entrance.....	10 01	62 12	-0 03	-0 34	-1.3	+0.2	4.3	5.4	2.6	
3575	Rio Orinoco ent., Isla Ramon Isidro.....	8 39	60 35	+0 07	-0 12	+0.2	+1.0	5.0	6.7	3.8	
						on PUNTA GORDA, p.160					
3577	TRINIDAD Stauples Bay.....	10 41	61 39	-1 07	-2 02	(*0.33+1.7)		1.9	2.5	2.8	
3579	Carenage Bay.....	10 41	61 36	-0 58	-1 40	(*0.34+1.6)		2.0	2.6	2.7	
3581	Port of Spain.....	10 39	61 31	-0 44	-1 12	(*0.31+1.4)		1.8	2.3	2.4	
3583	Bonasue pier.....	10 05	61 52	-0 43	-1 15	-1.0	+1.4	3.4	4.4	3.4	
3585	Erin Bay.....	10 04	61 39	-0 50	-1 41	-0.3	+1.2	4.3	5.6	3.6	
3587	Guayaguayare Bay.....	10 09	61 01	-1 32	-2 09	(*0.53+1.3)		3.1	3.8	3.0	
3588	Nariva River.....	10 24	61 02	-1 06	-2 16	(*0.41+1.3)		2.4	3.1	2.5	
						on SURINAME RIVIER, p.164					
3589	GUYANA Time meridian, 56°15'W	6 52	58 25	+0 37	+1 01	+1.6	+1.0	6.6	8.3	5.6	
3591	Parika, Essequibo River.....	6 48	58 10	+0 17	+0 01	+0.9	+1.1	5.8	8.0	5.3	
						on SURINAME RIVIER, p.164					
3593	SURINAM Time meridian, 52°30'W	5 57	56 59	+0 09	+0 21	+1.1	0.0	7.1	9.2	4.9	
3595	Nickerie River.....	6 00	55 14			Daily predictions		6.0	7.6	4.3	
3597	SURINAME RIVIER ENTRANCE.....	5 49	55 09	+1 09	+1 42	0.0	0.0	6.0	7.3	4.3	
						on SURINAME RIVIER, p.164					
3599	FRENCH GUIANA Time meridian, 60°W	5 45	53 58	+0 48	+0 54	+0.7	+1.2	5.5	7.2	5.2	
3601	Rio Maroni entrance.....	5 17	52 35	+0 23	+0 23	+1.7	+2.2	5.5	7.2	6.2	
3603	Iles du Salut.....	4 56	52 20	+0 45	+0 45	+2.4	+1.8	6.6	7.8	6.4	
						on SURINAME RIVIER, p.164					
3605	BRAZIL <16> Time meridian, 45°W.	3 49	51 01	+1 54	+1 49	+1.5	+0.3	7.2	9.5	5.2	
3607	Cape Cassipore.....	2 50	50 53	+2 40	+2 54	(*2.42-0.2)		14.5	19.0	10.1	
3609	Rio Cunani entrance.....	2 09	50 30	+2 10	+2 22	(*2.42-0.2)		14.5	19.0	10.1	
3611	Ilha de Maraca anchorage.....	0 55	50 05	+7 39	+8 10	+8.3	+1.1	13.2	15.7	9.0	
3613	Ilha do Brigue, Amazon River.....	0 11	50 43	+7 01	+7 13	*2.08	*2.23	12.3	16.2	9.0	
3615	Ponta Pedreira, Amazon River.....	0 03	51 11	+11 27	+12 43	+2.8	+0.4	8.4	9.5	5.9	
		S	W								
3617	Canal de Braganca, Rio Para entrance.....	0 23	47 55	+6 39	+6 39	+1.8	-0.1	7.9	10.4	5.1	
3619	Salinopolis.....	0 39	47 23	+3 08	+3 22	*1.99	*1.54	12.5	15.9	8.3	
3621	Belem (Para).....	1 27	48 30	+7 04	+8 07	+2.9	+0.7	8.2	10.1	6.1	
3623	Ilhas de Sao Joao.....	1 17	44 55	+2 01	+2 01	*1.70	*1.31	10.7	14.1	7.0	
3625	Sao Luiz.....	2 32	44 18	+2 58	+2 55	(*2.35-0.7)		14.1	17.1	9.3	
3627	Santana, Recifes de.....	2 16	43 36	+1 16	+1 15	*1.58	*1.15	10.0	13.1	6.5	
3629	Tutoia, Baia da.....	2 46	42 14	+0 41	+0 40	+2.4	+0.4	8.0	10.0	5.7	
3631	Luis Correia.....	2 53	41 40	+0 31	+0 43	+1.8	+0.4	7.4	9.4	5.4	
3633	Camocim.....	2 53	40 52	+1 37	+1 36	+2.0	+0.4	7.6	9.7	5.5	
3635	Rio Ceara (bar).....	3 41	38 37	+0 17	+0 09	+0.2	-0.1	6.3	8.3	4.3	
3637	Fortaleza.....	3 43	38 29	+0 22	+0 18	+0.2	-0.3	6.5	8.5	4.2	
						on RECIFE, p.168					
3639	Time meridian, 30°W	3 50	32 25	+1 32	+1 33	-1.2	-0.5	4.5	6.0	2.9	
3641	Fernando de Noronha.....	3 51	33 49	+1 43	+1 44	+2.3	0.0	7.5	10.0	4.9	

Endnotes can be found at the end of table 2.

TABLE 2. -- TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level		
		Lat.	Long.	Time		Height		Mean Spring				
				High Water	Low Water	High Water	Low Water					
		°	'	°	'	s	w	ft	ft	ft		
BRAZIL <16> Time meridian, 45°W												
3643	Macau, Rio Acu.....	5 06	36 41	+1 29	+1 58	+0.6	-0.1	5.9	7.6	4.1		
3645	Natal.....	5 47	35 12	+0 28	+0 30	+0.1	-0.2	5.5	7.3	3.7		
3647	Cabedelo.....	6 58	34 50	+0 36	+0 37	+0.1	-0.2	5.5	7.2	3.7		
3649	Tambau.....	7 06	34 50	-0 04	-0 03	+0.7	-0.1	6.0	7.6	4.1		
3651	RECIFE.....	8 03	34 52	Daily predictions				5.3	7.1	3.8		
3653	Maceio.....	9 40	35 43	+0 10	+0 14	-0.3	-0.2	5.1	6.8	3.6		
3655	Rio Sao Francisco (bar).....	10 31	36 24	+0 06	+0 14	-0.7	0.0	4.5	6.0	3.5		
3657	Aracaju.....	10 56	37 03	+0 33	+0 48	-0.8	-0.3	4.7	6.1	3.3		
3659	Salvador.....	12 58	38 31	-0 02	-0 08	+0.6	+0.4	5.5	7.4	4.3		
3661	Ponta de Areia.....	12 47	38 30	+0 10	+0 06	+0.6	-0.1	5.9	7.6	4.0		
3663	Morro de Sao Paulo.....	13 21	38 54	-0 11	-0 13	-0.6	0.0	4.6	6.0	3.5		
3665	Camamu.....	13 54	38 58	-0 08	-0 04	-0.2	+0.1	4.9	6.5	3.8		
3667	Ilheus.....	14 48	39 02	-0 33	-0 32	-0.9	-0.3	4.6	5.8	3.2		
3669	Canavieiras.....	15 40	38 56	+0 16	+0 22	-1.0	-0.2	4.5	5.8	3.1		
3671	Santa Cruz Cabralia.....	16 17	39 02	-0 35	-0 35	-1.2	-0.5	4.5	6.0	2.9		
3673	Cumuruxatiba.....	17 06	39 11	-0 23	-0 09	+0.4	+0.3	5.3	7.2	4.2		
3675	Caravelas.....	17 43	39 09	-0 50	-0 49	-0.8	-0.5	4.9	6.4	3.1		
3677	Abrolhos Anchorage.....	17 58	38 42	-0 01	+0 04	+0.6	+0.1	5.7	7.6	4.2		
3679	Vitoria.....	20 19	40 19	-0 34	-0 35	*0.66	*0.75	3.3	4.6	2.6		
3681	Guarapari.....	20 40	40 30	+0 12	+0 17	*0.62	*0.75	3.1	4.2	2.5		
on RIO DE JANEIRO, p.172												
3683	Sao Joao da Barra.....	21 38	41 03	+0 34	-0 42	-0.1	-0.2	2.6	3.6	2.1		
3685	Macae (Imbitiba Bay).....	22 23	41 46	-0 23	-1 08	0.0	-0.2	2.7	3.6	2.1		
3687	Armacao dos Buzios.....	22 45	41 53	-0 01	-0 55	-0.1	-0.1	2.5	3.4	2.1		
3689	Cabo Frio.....	23 00	42 03	-0 03	-0 05	*0.91	*0.90	2.3	3.2	2.0		
3691	RIO DE JANEIRO.....	22 54	43 10	Daily predictions				2.5	3.5	2.2		
3693	Itacurussa.....	22 56	43 55	+0 50	-0 26	0.0	-0.1	2.6	3.3	2.2		
3695	Angra dos Reis.....	23 01	44 19	-0 35	-0 40	*0.86	*0.86	2.1	3.0	1.9		
3697	Parati.....	23 14	44 43	-0 09	-1 25	-0.1	0.0	2.4	3.4	2.2		
3699	Sao Sebastiao.....	23 49	45 24	-0 28	-1 24	*0.94	*1.00	2.3	3.3	2.2		
3701	SANTOS.....	23 56	46 19	Daily predictions				2.6	3.8	2.4		
3703	Cananeia.....	25 01	47 56	+1 09	-1 09	+0.4	+0.2	2.7	4.1	2.6		
3705	Paranagua.....	25 31	48 27	+1 51	-1 32	+1.8	+0.2	4.1	6.0	3.2		
3707	Sao Francisco do Sul.....	26 15	48 38	+0 38	- - -	+0.8	-0.1	3.4	4.8	2.6		
3709	Itajai.....	26 54	48 39	-0 08	-0 16	(*0.76+0.4)		1.9	2.8	2.1		
3711	Porto Belo.....	27 09	48 33	-0 38	-0 28	*0.74	*0.74	1.8	2.5	1.7		
3713	Florianopolis.....	27 36	48 34	-0 14	+0 15	*0.69	*0.70	1.7	2.4	1.6		
3715	Imbituba.....	28 14	48 39	-0 17	-1 10	*0.54	*0.50	1.4	2.0	1.2		
3717	Laguna.....	28 30	48 47	+1 10	-1 31	(*0.32+0.4)		0.8	1.2	1.1		
3719	Barra do Rio Grande <18> t.....	32 10	52 05	- - -	- - -	- - -	- - -	-	0.8	0.3		
URUGUAY												
3721	Montevideo.....	34 55	56 13	-5 10	-7 11	(*0.52+1.6)		1.1	1.4	3.0		
3723	Colonia, Rio de la Plata.....	34 28	57 51	+0 17	-0 33	(*0.52+1.2)		1.1	1.3	2.6		
ARGENTINA												
3725	Rio de la Plata BUENOS AIRES.....	34 36	58 22	Daily predictions				2.1	2.5	2.6		
3727	La Plata.....	34 50	57 53	-1 50	-2 04	+0.2	+0.6	1.7	2.0	3.0		
3729	Banco Chico.....	34 50	57 30	-3 00	-3 24	+0.8	+0.8	2.1	2.5	3.4		
3731	Banco Cuirassier.....	35 06	57 08	-5 25	-5 39	+0.8	+0.8	2.1	2.5	3.4		
3733	Punta Piedras.....	35 26	57 07	-7 10	-7 23	+2.2	+1.1	3.2	3.8	4.2		
3735	Punta Norte del Cabo San Antonio <17>.....	36 18	56 47	-8 50	-9 26	+1.2	+0.3	3.0	3.7	3.3		
3737	Mar del Plata <17>.....	38 03	57 33	-0 02	+0 14	+0.7	+0.2	2.6	3.0	3.0		
3739	Quequen <17>.....	38 35	58 42	-0 18	-0 22	+1.5	-0.3	3.9	4.2	3.2		
on PUERTO BELGRANO, p.184												
3741	Faro Recalada.....	39 00	61 16	-0 20	-0 15	-4.1	-0.7	6.5	7.1	5.6		
3743	Monte Hermoso.....	38 59	61 41	-0 18	-0 27	-2.8	-0.8	7.9	9.1	6.2		
3745	Punta Ancla.....	38 57	62 00	-0 15	+0 06	-1.1	-0.3	9.1	9.9	7.2		
3747	Puerto Rosales.....	38 55	62 04	0 00	+0 07	+0.1	-0.1	10.1	11.0	8.0		
3749	PUERTO BELGRANO.....	38 53	62 06	Daily predictions				9.9	10.8	8.0		
3751	Ingeniero White.....	38 47	62 16	+0 33	+0 18	+0.6	+0.4	10.1	11.0	8.5		
3753	General Daniel Cerri.....	38 45	62 23	+0 47	+0 36	*1.19	*1.20	11.8	12.9	9.5		
3755	Canal del Sur, Isla Bermejo.....	39 01	61 58	-0 28	-0 12	-1.3	-0.2	8.8	9.6	7.2		
3757	Canal Bermejo, Isla Trinidad.....	39 05	61 58	-0 30	-0 14	-1.9	-0.4	8.4	9.2	6.8		
3759	Punta Lobos, Isla Trinidad.....	39 14	61 53	-0 48	-0 46	-2.5	-0.6	8.0	8.8	6.4		
3761	Punta Laberinto.....	39 26	62 03	-0 49	-0 58	-2.1	-0.9	8.7	9.6	6.5		
3763	Bahia Anegada, Islote NW.....	40 01	62 10	-1 39	-1 47	(*0.66-0.5)		6.5	7.2	4.8		
3765	Bahia San Blas.....	40 33	62 14	-3 19	-3 28	*0.53	*0.40	5.6	6.0	4.0		
3767	Segunda Barranca.....	40 47	62 17	-4 49	-4 57	(*0.55-0.4)		5.4	5.9	4.0		
3769	Punta Redonda, Rio Negro entrance.....	41 02	62 46	-5 48	-5 57	-1.0	-1.0	9.9	11.2	7.0		

Endnotes can be found at the end of table 2.

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	POSITION		DIFFERENCES					RANGES		Mean Tide Level
		Lat.	Long.	Time	Height	High Water	Low Water	High Water	Low Water	Mean Spring	
	ARGENTINA Time meridian, 45°W	° S	° W	h. m.	h. m.	ft	ft	ft	ft	ft	ft
				on COMODORO RIVADAVIA, p.188							
3771	Golfo San Matias										
3773	Caleta de los Loros.....	41 02	64 06	+7 14	+7 08	*1.45	*1.39	20.3	24.0	14.8	
	Puerto San Antonio.....	40 48	64 52	+7 30	+7 23	(*1.57-1.6)		21.9	25.6	14.6	
3775	Golfo San Jose										
3777	San Roman.....	42 15	64 14	+7 15	+7 18	(*1.42-1.1)		19.8	23.4	13.5	
3779	Pueyrredon (Fondeadero).....	42 24	64 09	+7 46	+7 40	(*1.52-2.2)		21.2	24.6	13.5	
3781	La Argentina (Fondeadero).....	42 23	64 34	+7 04	+6 58	*1.31	*1.36	18.0	23.3	13.5	
3783	Punta Norte.....	42 05	63 46	+6 50	+6 44	-0.8	-1.4	14.5	17.0	9.5	
3785	Caleta Valdes.....	42 31	63 36	+5 04	+4 58	-5.2	-1.9	10.6	12.4	6.7	
	Golfo Nuevo										
3787	Punta Ninfas (Fondeadero).....	42 57	64 25	+2 48	+3 31	-2.3	-1.0	12.6	15.4	8.6	
3789	Puerto Piramides.....	42 35	64 17	+2 56	+3 33	-2.7	-1.3	12.5	15.0	8.3	
3791	Puerto Madryn.....	42 46	65 02	+3 08	+3 42	-0.8	-0.1	13.2	16.0	9.8	
3793	Bahia Engano.....	43 20	65 04	+2 06	+2 00	-2.7	-1.3	12.5	15.2	8.2	
3795	Isla Escondida.....	43 43	65 17	+2 10	+2 05	-3.3	-0.3	10.9	13.1	8.5	
3797	Bahia Janssen.....	44 02	65 14	+1 48	+2 03	-4.1	-1.9	11.7	13.9	7.3	
3799	Cabo Raso.....	44 20	65 14	+1 41	+1 26	-4.8	-1.6	10.7	12.4	7.0	
3801	Bahia Cruz.....	44 27	65 19	+2 13	+2 07	-6.1	-2.1	9.9	11.5	6.2	
3803	Santa Elena, Puerto.....	44 31	65 22	+1 45	+1 40	-3.1	-0.4	11.2	13.6	8.5	
3805	Bahia Camarones.....	44 54	65 36	+1 10	+1 14	-2.3	+0.1	11.5	13.7	9.2	
	Golfo San Jorge										
3807	Caleta Leones.....	45 03	65 37	+1 11	+1 05	-0.7	-0.2	13.4	14.7	9.8	
3809	Bahia Gil (Caleta Horno).....	45 02	65 41	+0 42	+0 36	-1.7	+0.3	11.9	14.1	9.6	
3811	Puerto Melo.....	45 01	65 50	+0 27	+0 24	-1.5	+0.1	12.3	14.6	9.6	
3813	Isla Tova.....	45 06	65 59	+0 27	+0 24	-1.5	+0.1	12.3	14.6	9.6	
3815	Bahia Bustamante.....	45 07	66 32	+0 28	+0 23	-0.8	+0.7	12.4	14.7	10.2	
3817	COMODORO RIVADAVIA.....	45 52	67 29			Daily predictions		14.0	16.3	10.3	
3819	Cabo Blanco.....	47 12	65 45	-1 15	-1 20	-2.3	-0.3	11.9	13.2	9.0	
3821	Puerto Deseado.....	47 45	65 55	-2 52	-2 44	-0.6	+1.0	12.4	14.5	10.5	
3823	Bahia-Oso Marino.....	47 56	65 48	-3 35	-3 40	-1.2	+1.2	11.5	14.1	10.3	
3825	Bahia de los Nodales.....	48 01	65 57	-3 01	-3 06	-1.2	+0.1	12.6	15.3	9.7	
3827	Bahia Laura.....	48 23	66 29	-5 28	-5 28	+6.7	-1.9	22.5	25.4	12.7	
3829	Bahia San Julian (Punta Pena).....	49 15	67 40	-4 58	-5 04	(*1.40-1.4)		19.5	23.6	13.0	
				on PUNTA LOYOLA, p.192							
3831	Santa Cruz (Punta Quilla).....	50 07	68 25	+0 43	+0 44	+0.2	+0.1	26.0	32.4	20.4	
3833	Ria Coig.....	50 57	69 10	-0 05	-0 04	0.0	-0.7	26.6	32.2	19.9	
3835	PUNTA LOYOLA.....	51 36	69 01			Daily predictions		25.9	32.4	20.3	
3837	Rio Gallegos (Reducion Beacon).....	51 37	69 13	+0 21	+0 30	+4.2	+1.1	29.0	36.2	22.9	
3839	Cabo Virgenes.....	52 21	68 22	-0 36	-0 55	-2.1	0.0	23.8	29.8	19.2	
	Tierra del Fuego <19>										
3841	Bahia San Sebastian.....	53 10	68 30	-7 50	-7 55	*1.69	*1.91	22.8	28.6	17.7	
3843	Rio Grande (Mueller).....	53 48	67 41	-7 50	-7 55	*1.15	*1.18	15.8	19.2	11.8	
3845	Cabo San Pablo.....	54 17	66 42	-8 48	-8 53	*1.17	*1.27	16.0	19.3	12.2	
				on PUERTO BELGRANO, p.184							
3847	Bahia Thetis.....	54 38	65 15	+1 28	+1 20	-1.4	-0.2	8.7	10.6	7.2	
	SOUTH ATLANTIC OCEAN ISLANDS Time meridian, 60°W					on PICTOU, p.8					
3849	Falkland Islands Port Louis (Berkeley Sound).....	51 33	58 09	+7 50	+7 47	-0.9	-1.0	3.3	4.2	3.0	
3851	Stanley Harbor.....	51 42	57 51	+7 51	+7 48	-1.0	-1.0	3.2	4.2	2.9	
	Time meridian, 31°45'W										
3853	South Georgia Royal Bay (Moltke Harbor).....	54 31	36 01	+9 58	+10 19	*0.36	*0.13	1.7	2.3	1.2	
3855	Leith Harbor.....	54 08	36 41	+9 15	+9 35	*0.64	*0.65	2.0	2.7	2.5	
	Time meridian, local										
3857	South Orkneys Scotia Bay, Laurie Island.....	60 44	44 39	+8 21	+8 32	-0.3	-0.6	3.5	5.0	3.5	
3859	South Shetlands Port Foster, Deception Island.....	62 58	60 34	+8 26	+8 38	0.0	-0.1	3.3	4.3	3.9	
	Time meridian, 45°W										
3860	Admiralty Bay.....	62 03	58 24	+9 49	+10 05	-0.5	-0.4	3.1	4.4	3.5	

Endnotes can be found at the end of table 2.

* RATIO. If the ratio is accompanied by a correction factor multiply the heights of the high and low waters at the reference station by the ratio and then apply the correction factor. See note and example on pages 197 and 198.

† The tide at this location is chiefly diurnal. SEE CAUTION NOTE ON PAGE 197.

< 1> Neap low water falls lower than spring low water.

< 2> Wharves are dry at low water.

< 3> There is a bore in the Petitcodiac River. It arrives at Moncton about 2h 30m before high water at St. John; its height is about 3 to 3 1/2 feet on average spring tides, but it sometimes exceeds 5 feet on highest tides. On small tides it is not much more than a large ripple.

< 4> The Reversing Falls at St. John. -- The most turbulence in the gorge occurs on days when the tides are largest. On largest tides the outward fall is between 15 and 16 1/2 feet and is accompanied by a greater turbulence than the inward fall which is between 11 and 12 1/2 feet. The outward fall is at its greatest between 2 hours before and 1 hour after low water at St John: the inward fall is greater just before the time of high water.

< 5> For Eastern Standard time subtract one hour from the predictions obtained using these differences.

< 6> Low water time difference is +2h 47m. SEE CAUTION NOTE ON PAGE 210.

< 7> Tidal information applies only during low river stages.

< 8> Values for the Hudson River above the George Washington Bridge are based upon averages for the six months May to October, when the freshwater discharge is at a minimum.

< 9> In Albemarle and Pamlico Sounds, except near the inlets, the periodic tide has a mean range of less than 0.5 foot.

<10> In the eastern part of Florida Bay the periodic tide has a mean range of less than 0.5 foot.

<11> In Choctawhatchee and Perdido Bays the periodic tide has a mean range of less than 0.5 foot.

<12> At New Orleans the diurnal range of the tide during low river stages averages 0.8 foot. There is no periodic tide at high river stages.

<13> For places on the Pacific coast, see "Tide Tables, West Coast of North and South America."

<14> Inside, in the various bays, except near the inlets, the periodic tide has a mean range of less than 0.5 foot.

<15> Spring range is given instead of diurnal range.

<16> A "Pororoca", a bore, reported to vary from 5 to 15 feet at spring tides, occurs in the Araguay, Guama and Guajara Rivers.

<17> Predictions will be approximate.

<18> Diurnal range is given instead of spring range.

<19> For places in Magellan Strait, on the south coast of Tierra del Fuego and on the Pacific coast, see "Tide Tables, West Coast of North and South America."

<20> The time differences should be applied only to the higher high and the lower low water times of the reference station.

<21> From Oak Hill southward in Mosquito Lagoon the periodic tide is negligible.

<22> In Indian River north of Melbourne, in Banana River and in Banana Creek, the periodic tides are negligible.

<23> Nearby tidal surveys suggest that the tides may actually occur 1/2 to 3/4 of an hour later than these time differences indicate.

TABLE 3.—HEIGHT OF TIDE AT ANY TIME

EXPLANATION OF TABLE

Although the footnote of table 3 may be sufficient explanation, two examples are given here to illustrate its use.

Example 1.—Find the height of the tide at 0755 at New York (The Battery), N.Y., on a day when the predicted tides from table 1 are given as:

Low Water		High Water	
Time	Height	Time	Height
h.m.	ft	h.m.	ft
0522	0.1	1114	4.2
1741	0.6	2310	4.1

An inspection of the above example shows that the desired time falls between the two morning tides.

The duration of rise is $11^{\text{h}}\ 14^{\text{m}} - 5^{\text{h}}\ 22^{\text{m}} = 5^{\text{h}}\ 52^{\text{m}}$.

The time after low water for which the height is required is $7^{\text{h}}\ 55^{\text{m}} - 5^{\text{h}}\ 22^{\text{m}} = 2^{\text{h}}\ 33^{\text{m}}$.

The range of tide is $4.2 - 0.1 = 4.1$ feet.

The duration of rise or fall in table 3 is given in heavy-faced type for each 20 minutes from $4^{\text{h}}\ 00^{\text{m}}$ to $10^{\text{h}}\ 40^{\text{m}}$. The nearest tabular value to $5^{\text{h}}\ 52^{\text{m}}$, the above duration of rise, is $6^{\text{h}}\ 00^{\text{m}}$; and on the horizontal line of $6^{\text{h}}\ 00^{\text{m}}$ the nearest tabular time to $2^{\text{h}}\ 33^{\text{m}}$ after low water for which the height is required is $2^{\text{h}}\ 36^{\text{m}}$. Following down the column in which this $2^{\text{h}}\ 36^{\text{m}}$ is found to its intersection with the line of the range 4.0 feet (which is the nearest tabular value to the above range of 4.1 feet) the correction is found to be 1.6 feet, which being reckoned from low water must be added, making $0.1 + 1.6 = 1.7$ feet, or 0.5 meter which is the required height above mean low water, the datum for New York.

Example 2.—Find the height of the tide at 0300 at Portland, Maine, on a day when the predicted tides from table 1 are given as:

High Water		Low Water	
Time	Height	Time	Height
h.m.	ft	h.m.	ft
0012	11.3	0638	-2.0
1251	10.0	1853	-0.8

The duration of fall is $6^{\text{h}}\ 38^{\text{m}} - 00^{\text{h}}\ 12^{\text{m}} = 6^{\text{h}}\ 26^{\text{m}}$.

The time after high water for which the height is required is $3^{\text{h}}\ 00^{\text{m}} - 00^{\text{h}}\ 12^{\text{m}} = 2^{\text{h}}\ 48^{\text{m}}$.

The range of tide is $11.3 - (-2.0) = 13.3$ feet.

Entering table 3 at the duration of fall of $6^{\text{h}}\ 20^{\text{m}}$, which is the nearest value to $6^{\text{h}}\ 26^{\text{m}}$, the nearest value on the horizontal line to $2^{\text{h}}\ 48^{\text{m}}$ is $2^{\text{h}}\ 45^{\text{m}}$ after high water. Following down this column to its intersection with a range of 13.5 feet which is the nearest tabular value to 13.3 feet, one obtains 5.3 which, being calculated from high water, must be subtracted from it. The approximate height at $03^{\text{h}}\ 00^{\text{m}}$ is, therefore, $11.3 - 5.3 = 6.0$ feet or 1.8 meters.

When the duration of rise or fall is greater than $10^{\text{h}}\ 40^{\text{m}}$, enter the table with one-half the given duration and with one-half the time from the nearest high or low water; but if the duration of rise or fall is less than 4 hours, enter the table with double the given duration and with double the time from the nearest high or low water.

TABLE 3.—HEIGHT OF TIDE AT ANY TIME

Similarly, when the range of tide is greater than 20 feet, enter the table with one-half the given range. The tabular correction should then be doubled before applying it to the given high or low water height. If the range of tide is greater than 40 feet, take one-third of the range and multiply the tabular correction by 3.

If the height at any time is desired for a place listed in table 2, predictions of the high and low waters for the day in question should be obtained by the use of the differences given for the place in that table. Having obtained these predictions, the height for any intermediate time is obtained in the same manner as illustrated in the foregoing examples.

GRAPHICAL METHOD

If the height of the tide is required for a number of times on a certain day the full tide curve for the day may be obtained by the *one-quarter, one-tenth rule*. The procedure is as follows:

1. On cross-section paper plot the high and low water points in the order of their occurrence for the day, measuring time horizontally and height vertically. These are the basic points for the curve.
2. Draw light straight lines connecting the points representing successive high and low waters.
3. Divide each of these straight lines into four equal parts. The halfway point of each line gives another point for the curve.
4. At the quarter point adjacent to high water draw a vertical line above the point and at the quarter point adjacent to low water draw a vertical line below the point, making the length of these lines equal to one-tenth of the range between the high and low waters used. The points marking the ends of these vertical lines give two additional intermediate points for the curve.
5. Draw a smooth curve through the points of high and low waters and the intermediate points, making the curve well rounded near high and low waters. This curve will approximate the actual tide curve and heights for any time of the day may be readily scaled from it.

Caution.—Both methods presented are based on the assumption that the rise and fall conform to simple cosine curves. Therefore the heights obtained will be approximate. The roughness of approximation will vary as the tide curve differs from a cosine curve.

An example of the use of the graphical method is illustrated below. Using the same predicted tides as in example 2, the approximate height at 03^h 00^m could be determined as shown below.

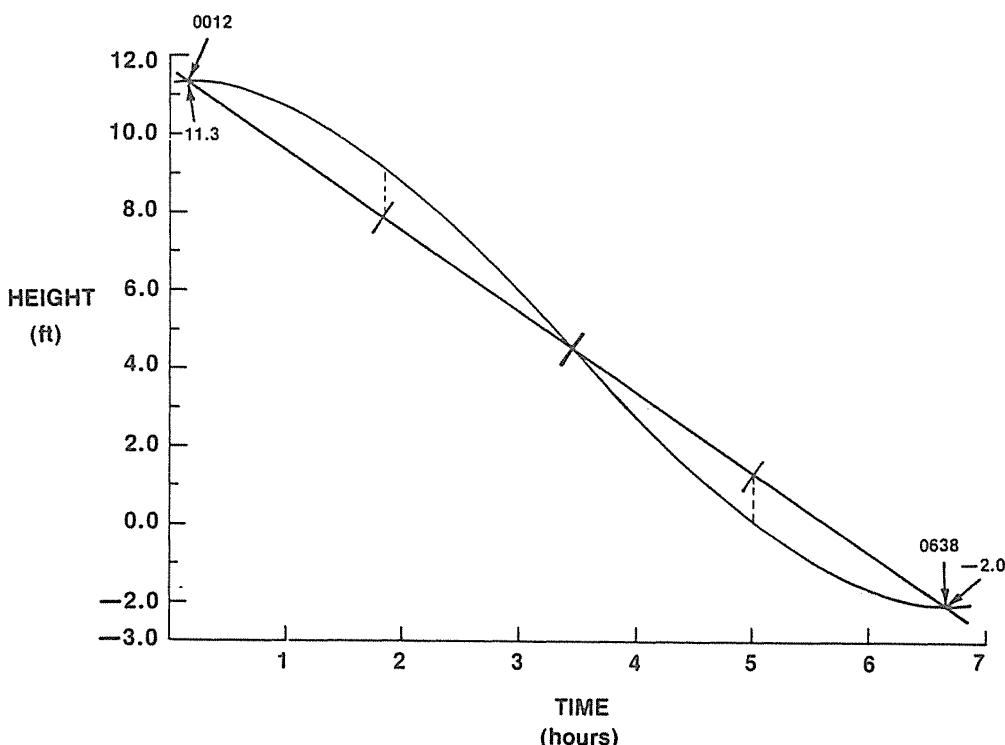


TABLE 3.—HEIGHT OF TIDE AT ANY TIME

Time from the nearest high water or low water																
Duration of rise or fall, see footnote	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
4 00	0 08	0 16	0 24	0 32	0 40	0 48	0 56	1 04	1 12	1 20	1 28	1 36	1 44	1 52	2 00	
4 20	0 09	0 17	0 26	0 35	0 43	0 52	1 01	1 09	1 18	1 27	1 35	1 44	1 53	2 01	2 10	
4 40	0 09	0 19	0 28	0 37	0 47	0 56	1 05	1 15	1 24	1 33	1 43	1 52	2 01	2 11	2 20	
5 00	0 10	0 20	0 30	0 40	0 50	1 00	1 10	1 20	1 30	1 40	1 50	2 00	2 10	2 20	2 30	
5 20	0 11	0 21	0 32	0 43	0 53	1 04	1 15	1 25	1 36	1 47	1 57	2 08	2 19	2 29	2 40	
5 40	0 11	0 23	0 34	0 45	0 57	1 08	1 19	1 31	1 42	1 53	2 05	2 16	2 27	2 39	2 50	
6 00	0 12	0 24	0 36	0 48	1 00	1 12	1 24	1 36	1 48	2 00	2 12	2 24	2 36	2 48	3 00	
6 20	0 13	0 25	0 38	0 51	1 03	1 16	1 29	1 41	1 54	2 07	2 19	2 32	2 45	2 57	3 10	
6 40	0 13	0 27	0 40	0 53	1 07	1 20	1 33	1 47	2 00	2 13	2 27	2 40	2 53	3 07	3 20	
7 00	0 14	0 28	0 42	0 56	1 10	1 24	1 38	1 52	2 06	2 20	2 34	2 48	3 02	3 16	3 30	
7 20	0 15	0 29	0 44	0 59	1 13	1 28	1 43	1 57	2 12	2 27	2 41	2 56	3 11	3 25	3 40	
7 40	0 15	0 31	0 46	1 01	1 17	1 32	1 47	2 03	2 18	2 33	2 49	3 04	3 19	3 35	3 50	
8 00	0 16	0 32	0 48	1 04	1 20	1 36	1 52	2 08	2 24	2 40	2 56	3 12	3 28	3 44	4 00	
8 20	0 17	0 33	0 50	1 07	1 23	1 40	1 57	2 13	2 30	2 47	3 03	3 20	3 37	3 53	4 10	
8 40	0 17	0 35	0 52	1 09	1 27	1 44	2 01	2 19	2 36	2 53	3 11	3 28	3 45	4 03	4 20	
9 00	0 18	0 36	0 54	1 12	1 30	1 48	2 06	2 24	2 42	3 00	3 18	3 36	3 54	4 12	4 30	
9 20	0 19	0 37	0 56	1 15	1 33	1 52	2 11	2 29	2 48	3 07	3 25	3 44	4 03	4 21	4 40	
9 40	0 19	0 39	0 58	1 17	1 37	1 56	2 15	2 35	2 54	3 13	3 33	3 52	4 11	4 31	4 50	
10 00	0 20	0 40	1 00	1 20	1 40	2 00	2 20	2 40	3 00	3 20	3 40	4 00	4 20	4 40	5 00	
10 20	0 21	0 41	1 02	1 23	1 43	2 04	2 25	2 45	3 06	3 27	3 47	4 08	4 29	4 49	5 10	
10 40	0 21	0 43	1 04	1 25	1 47	2 08	2 29	2 51	3 12	3 33	3 55	4 16	4 37	4 59	5 20	
Range of tide, see footnote	Correction to height															
Fl.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.
0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
1.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5
1.5	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.8
2.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
2.5	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.9	1.0	1.1	1.2	
3.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.0	1.2	1.3	1.5	
3.5	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.6	0.7	0.9	1.0	1.2	1.4	1.6	1.8	
4.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.8	1.0	1.2	1.4	1.6	1.8	2.0	
4.5	0.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.9	1.1	1.3	1.6	1.8	2.0	2.2	
5.0	0.0	0.1	0.2	0.3	0.5	0.6	0.8	1.0	1.2	1.5	1.7	2.0	2.2	2.5		
5.5	0.0	0.1	0.2	0.4	0.5	0.7	0.9	1.1	1.4	1.6	1.9	2.2	2.5	2.8		
6.0	0.0	0.1	0.1	0.3	0.4	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.7	3.0	
6.5	0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.1	1.3	1.6	1.9	2.2	2.6	2.9	3.2	
7.0	0.0	0.1	0.2	0.3	0.5	0.7	0.9	1.2	1.4	1.8	2.1	2.4	2.8	3.1	3.5	
7.5	0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.2	1.5	1.9	2.2	2.6	3.0	3.4	3.8	
8.0	0.0	0.1	0.2	0.3	0.5	0.8	1.0	1.3	1.6	2.0	2.4	2.8	3.2	3.6	4.0	
8.5	0.0	0.1	0.2	0.4	0.6	0.8	1.1	1.4	1.8	2.1	2.5	2.9	3.4	3.8	4.2	
9.0	0.0	0.1	0.2	0.4	0.6	0.9	1.2	1.5	1.9	2.2	2.7	3.1	3.6	4.0	4.5	
9.5	0.0	0.1	0.2	0.4	0.6	0.9	1.2	1.6	2.0	2.4	2.8	3.3	3.8	4.3	4.8	
10.0	0.0	0.1	0.2	0.4	0.7	1.0	1.3	1.7	2.1	2.5	3.0	3.5	4.0	4.5	5.0	
10.5	0.0	0.1	0.3	0.5	0.7	1.0	1.3	1.7	2.2	2.6	3.1	3.6	4.2	4.7	5.2	
11.0	0.0	0.1	0.3	0.5	0.7	1.1	1.4	1.8	2.3	2.8	3.3	3.8	4.4	4.9	5.5	
11.5	0.0	0.1	0.3	0.5	0.8	1.1	1.5	1.9	2.4	2.9	3.4	4.0	4.6	5.1	5.8	
12.0	0.0	0.1	0.3	0.5	0.8	1.1	1.5	2.0	2.5	3.0	3.6	4.1	4.8	5.4	6.0	
12.5	0.0	0.1	0.3	0.5	0.8	1.2	1.6	2.1	2.6	3.1	3.7	4.3	5.0	5.6	6.2	
13.0	0.0	0.1	0.3	0.6	0.9	1.2	1.7	2.2	2.7	3.2	3.9	4.5	5.1	5.8	6.5	
13.5	0.0	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.8	3.4	4.0	4.7	5.3	6.0	6.8	
14.0	0.0	0.2	0.3	0.6	0.9	1.3	1.8	2.3	2.9	3.5	4.2	4.8	5.5	6.3	7.0	
14.5	0.0	0.2	0.4	0.6	1.0	1.4	1.9	2.4	3.0	3.6	4.3	5.0	5.7	6.5	7.2	
15.0	0.0	0.2	0.4	0.6	1.0	1.4	1.9	2.5	3.1	3.8	4.4	5.2	5.9	6.7	7.5	
15.5	0.0	0.2	0.4	0.7	1.0	1.5	2.0	2.6	3.2	3.9	4.6	5.4	6.1	6.9	7.8	
16.0	0.0	0.2	0.4	0.7	1.1	1.5	2.1	2.6	3.3	4.0	4.7	5.5	6.3	7.2	8.0	
16.5	0.0	0.2	0.4	0.7	1.1	1.6	2.1	2.7	3.4	4.1	4.9	5.7	6.5	7.4	8.2	
17.0	0.0	0.2	0.4	0.7	1.1	1.6	2.2	2.8	3.5	4.2	5.0	5.9	6.7	7.6	8.5	
17.5	0.0	0.2	0.4	0.8	1.2	1.7	2.2	2.9	3.6	4.4	5.2	6.0	6.9	7.8	8.8	
18.0	0.0	0.2	0.4	0.8	1.2	1.7	2.3	3.0	3.7	4.5	5.3	6.2	7.1	8.1	9.0	
18.5	0.1	0.2	0.5	0.8	1.2	1.8	2.4	3.1	3.8	4.6	5.5	6.4	7.3	8.3	9.2	
19.0	0.1	0.2	0.5	0.8	1.3	1.8	2.4	3.1	3.9	4.8	5.6	6.6	7.5	8.5	9.5	
19.5	0.1	0.2	0.5	0.8	1.3	1.9	2.5	3.2	4.0	4.9	5.8	6.7	7.7	8.7	9.8	
20.0	0.1	0.2	0.5	0.9	1.3	1.9	2.6	3.3	4.1	5.0	5.9	6.9	7.9	9.0	10.0	

Obtain from the predictions the high water and low water, one of which is before and the other after the time for which the height is required. The difference between the times of occurrence of these tides is the duration of rise or fall, and the difference between their heights is the range of tide for the above table. Find the difference between the nearest high or low water and the time for which the height is required.

Enter the table with the duration of rise or fall, printed in heavy-faced type, which most nearly agrees with the actual value, and on that horizontal line find the time from the nearest high or low water which agrees most nearly with the corresponding actual difference. The correction sought is in the column directly below, on the line with the range of tide.

When the nearest tide is high water, subtract the correction.

When the nearest tide is low water, add the correction.

TABLE 7.—CONVERSION OF FEET TO METERS

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Feet	Tenths of a Foot										Feet
	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
0	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0
1	0.30	0.34	0.37	0.40	0.43	0.46	0.49	0.52	0.55	0.58	1
2	0.61	0.64	0.67	0.70	0.73	0.76	0.79	0.82	0.85	0.88	2
3	0.91	0.94	0.98	1.01	1.04	1.07	1.10	1.13	1.16	1.19	3
4	1.22	1.25	1.28	1.31	1.34	1.37	1.40	1.43	1.46	1.49	4
5	1.52	1.55	1.58	1.62	1.65	1.68	1.71	1.74	1.77	1.80	5
6	1.83	1.86	1.89	1.92	1.95	1.98	2.01	2.04	2.07	2.10	6
7	2.13	2.16	2.19	2.23	2.26	2.29	2.32	2.35	2.38	2.41	7
8	2.44	2.47	2.50	2.53	2.56	2.59	2.62	2.65	2.68	2.71	8
9	2.74	2.77	2.80	2.83	2.87	2.90	2.93	2.96	2.99	3.02	9
10	3.05	3.08	3.11	3.14	3.17	3.20	3.23	3.26	3.29	3.32	10
11	3.35	3.38	3.41	3.44	3.47	3.51	3.54	3.57	3.60	3.63	11
12	3.66	3.69	3.72	3.75	3.78	3.81	3.84	3.87	3.90	3.93	12
13	3.96	3.99	4.02	4.05	4.08	4.11	4.15	4.18	4.21	4.24	13
14	4.27	4.30	4.33	4.36	4.39	4.42	4.45	4.48	4.51	4.54	14
15	4.57	4.60	4.63	4.66	4.69	4.72	4.75	4.79	4.82	4.85	15
16	4.88	4.91	4.94	4.97	5.00	5.03	5.06	5.09	5.12	5.15	16
17	5.18	5.21	5.24	5.27	5.30	5.33	5.36	5.39	5.43	5.46	17
18	5.49	5.52	5.55	5.58	5.61	5.64	5.67	5.70	5.73	5.76	18
19	5.79	5.82	5.85	5.88	5.91	5.94	5.97	6.00	6.04	6.07	19
20	6.10	6.13	6.16	6.19	6.22	6.25	6.28	6.31	6.34	6.37	20
21	6.40	6.43	6.46	6.49	6.52	6.55	6.58	6.61	6.64	6.68	21
22	6.71	6.74	6.77	6.80	6.83	6.86	6.89	6.92	6.95	6.98	22
23	7.01	7.04	7.07	7.10	7.13	7.16	7.19	7.22	7.25	7.28	23
24	7.32	7.35	7.38	7.41	7.44	7.47	7.50	7.53	7.56	7.59	24
25	7.62	7.65	7.68	7.71	7.74	7.77	7.80	7.83	7.86	7.89	25
26	7.92	7.96	7.99	8.02	8.05	8.08	8.11	8.14	8.17	8.20	26
27	8.23	8.26	8.29	8.32	8.35	8.38	8.41	8.44	8.47	8.50	27
28	8.53	8.56	8.60	8.63	8.66	8.69	8.72	8.75	8.78	8.81	28
29	8.84	8.87	8.90	8.93	8.96	8.99	9.02	9.05	9.08	9.11	29
30	9.14	9.17	9.20	9.24	9.27	9.30	9.33	9.36	9.39	9.42	30
31	9.45	9.48	9.51	9.54	9.57	9.60	9.63	9.66	9.69	9.72	31
32	9.75	9.78	9.81	9.85	9.88	9.91	9.94	9.97	10.00	10.03	32
33	10.06	10.09	10.12	10.15	10.18	10.21	10.24	10.27	10.30	10.33	33
34	10.36	10.39	10.42	10.45	10.49	10.52	10.55	10.58	10.61	10.64	34
35	10.67	10.70	10.73	10.76	10.79	10.82	10.85	10.88	10.91	10.94	35
36	10.97	11.00	11.03	11.06	11.09	11.13	11.16	11.19	11.22	11.25	36
37	11.28	11.31	11.34	11.37	11.40	11.43	11.46	11.49	11.52	11.55	37
38	11.58	11.61	11.64	11.67	11.70	11.73	11.77	11.80	11.83	11.86	38
39	11.89	11.92	11.95	11.98	12.01	12.04	12.07	12.10	12.13	12.16	39
40	12.19	12.22	12.25	12.28	12.31	12.34	12.37	12.41	12.44	12.47	40
41	12.50	12.53	12.56	12.59	12.62	12.65	12.68	12.71	12.74	12.77	41
42	12.80	12.83	12.86	12.89	12.92	12.95	12.98	13.01	13.05	13.08	42
43	13.11	13.14	13.17	13.20	13.23	13.26	13.29	13.32	13.35	13.38	43
44	13.41	13.44	13.47	13.50	13.53	13.56	13.59	13.62	13.66	13.69	44
45	13.72	13.75	13.78	13.81	13.84	13.87	13.90	13.93	13.96	13.99	45
46	14.02	14.05	14.08	14.11	14.14	14.17	14.20	14.23	14.26	14.30	46
47	14.33	14.36	14.39	14.42	14.45	14.48	14.51	14.54	14.57	14.60	47
48	14.63	14.66	14.69	14.72	14.75	14.78	14.81	14.84	14.87	14.90	48
49	14.94	14.97	15.00	15.03	15.06	15.09	15.12	15.15	15.18	15.21	49
50	15.24	15.27	15.30	15.33	15.36	15.39	15.42	15.45	15.48	15.51	50

TIDE TABLES

Advance information relative to the rise and fall of the tide is given in annual tide tables. These tables include the predicted times and heights of high and low waters for every day in the year for a number of reference stations and differences for obtaining similar predictions for numerous other places.

Tide Tables, Central and Western Pacific Ocean and Indian Ocean.

Tide Tables, East Coast of North and South America (Including Greenland).

Tide Tables, Europe and West Coast of Africa (Including the Mediterranean Sea).

Tide Tables, West Coast of North and South America (Including the Hawaiian Islands).

TIDAL BENCH MARKS

To provide permanent points for the observed heights of the tide and the tidal datum planes determined therefrom, a system of bench marks is established at each tide station. The descriptions and elevations of these bench marks along our coast are compiled, published, and available for distribution. Requests for such bench mark data should specify the coastal locality for which the information is desired.

TIDAL CURRENT TABLES

Accompanying the rise and fall of the tide is a periodic horizontal flow of the water known as the tidal current. Advance information relative to these currents is made available in annual tidal current tables which include daily predictions of the times of slack water and the times and velocities of strength of flood and ebb currents for a number of waterways together with differences for obtaining predictions for numerous other places.

Tidal Current Tables, Atlantic Coast of North America.

Tidal Current Tables, Pacific Coast of North America and Asia.

TIDAL CURRENT CHARTS

Each publication consists of a set of 12 charts which depict, by means of arrows and figures, the direction and speed of the tidal current for each hour of the tidal cycle. The charts, which may be used for any year, present a comprehensive view of the tidal current movement in the respective waterways as a whole and also supply a means for readily determining for any time the direction and speed of the current at various localities throughout the water areas covered. The Narragansett Bay tidal current chart is to be used with the annual tide tables. The other charts require the annual tidal current tables.

Tidal Current Charts, Boston Harbor.

Tidal Current Charts, Charleston Harbor, S.C.

Tidal Current Charts, Delaware Bay and River.

Tidal Current Charts, Long Island Sound and Block Island Sound.

Tidal Current Charts, Narragansett Bay.

Tidal Current Charts, Narragansett Bay to Nantucket Sound.

Tidal Current Charts, New York Harbor.

Tidal Current Charts, Puget Sound, Northern Part.

Tidal Current Charts, Puget Sound, Southern Part.

Tidal Current Charts, San Francisco Bay.

Tidal Current Charts, Upper Chesapeake Bay.

Tidal Current Charts, Tampa Bay.

TIDAL CURRENT DIAGRAMS

The tidal current diagrams are a series of 12 monthly diagrams to be used with the tidal current charts to give the user a convenient method to determine the current flow on a particular day.

Tidal Current Diagrams for Long Island Sound and Block Island Sound.

Tidal Current Diagrams for Boston Harbor.

Tidal Current Diagrams for New York Harbor.

Tidal Current Diagrams for Upper Chesapeake Bay.

ANNUAL INEQUALITY—Seasonal variation in the water level or current, more or less periodic, due chiefly to meteorological causes.

APOGEAN TIDES OR TIDAL CURRENTS—Tides of decreased range or currents of decreased speed occurring monthly as the result of the Moon being in apogee (farthest from the Earth).

AUTOMATIC TIDE GAGE—An instrument that automatically registers the rise and fall of the tide. In some instruments, the registration is accomplished by recording the heights at regular intervals in digital format, in others by a continuous graph in which the height, versus corresponding time of the tide, is recorded.

BENCH MARK (BM)—A fixed physical object or marks used as reference for a vertical datum. A *tidal bench mark* is one near a tide station to which the tide staff and tidal datums are referred. A *geodetic bench mark* identifies a surveyed point in the National Geodetic Vertical Network.

CHART DATUM—The tidal datum to which soundings on a chart are referred. It is usually taken to correspond to a low water elevation of the tide, and its depression below mean sea level is represented by the symbol Zo.

CURRENT—Generally, a horizontal movement of water. Currents may be classified as *tidal* and *nontidal*. Tidal currents are caused by gravitational interactions between the Sun, Moon, and Earth and are a part of the same general movement of the sea that is manifested in the vertical rise and fall, called *tide*. Nontidal currents include the permanent currents in the general circulatory systems of the sea as well as temporary currents arising from more pronounced meteorological variability.

CURRENT DIFFERENCE—Difference between the time of slack water (or minimum current) or strength of current in any locality and the time of the corresponding phase of the tidal current at a reference station, for which predictions are given in the *Tidal Current Tables*.

CURRENT ELLIPSE—A graphic representation of a rotary current in which the velocity of the current at different hours of the tidal cycle is represented by radius vectors and vectorial angles. A line joining the extremities of the radius vectors will form a curve roughly approximating an ellipse. The cycle is completed in one-half tidal day or in a whole tidal day according to whether the tidal current is of the semidiurnal or the diurnal type. A current of the mixed type will give a curve of two unequal loops each tidal day.

CURRENT METER—An instrument for measuring the speed and direction or just the speed of a current. The measurements are usually Eulerian since the meter is most often fixed or moored at a specific location.

DATUM (vertical)—For marine applications, a base elevation used as a reference from which to reckon heights or depths. It is called a *tidal datum* when defined by a certain phase of the tide. Tidal datums are local datums and should not be extended into areas which have differing topographic features without substantiating measurements. In order that they may be recovered when needed, such datums are referenced to fixed points known as *bench marks*.

DAYLIGHT SAVING TIME—A time used during the summer in some localities in which clocks are advanced 1 hour from the usual standard time.

DIURNAL—Having a period or cycle of approximately 1 tidal day. Thus, the tide is said to be diurnal when only one high water and one low water occur during a tidal day, and the tidal current is said to be diurnal when there is a single flood and single ebb period in the tidal day. A rotary current is diurnal if it changes its direction through all points of the compass once each tidal day.

DIURNAL INEQUALITY—The difference in height of the two high waters or of the two low waters of each day; also the difference in speed between the two flood tidal currents or the two ebb tidal currents of each day. The difference changes with the declination of the Moon and to a lesser extent with the declination of the Sun. In general, the inequality tends to increase with an increasing declination, either north or south, and to diminish as the Moon approaches the Equator. *Mean diurnal high water inequality* (DHQ) is one-half the average difference between the two high waters of each day observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). It is obtained by subtracting the mean of all high waters from the mean of the higher high waters. *Mean diurnal low water inequality* (DLQ) is one-half the average difference between the two low waters of each day observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). It is obtained by subtracting the mean of the lower low waters from the mean of all low waters. *Tropic high water inequality* (HWQ) is the average difference between the two high waters of the day at the times of the tropic tides. *Tropic low water inequality* (LWQ) is the average difference between the two low waters of the day at the times of the tropic tides. Mean and tropic inequalities as defined above are applicable only when the type of tide is either semidiurnal or mixed. Diurnal inequality is sometimes called *declinational inequality*.

GLOSSARY OF TERMS

DOUBLE EBB—An ebb tidal current where, after ebb begins, the speed increases to a maximum called *first ebb*; it then decreases, reaching a *minimum ebb* near the middle of the ebb period (and at some places it may actually run in a flood direction for a short period); it then again ebbs to a maximum speed called *second ebb* after which it decreases to slack water.

DOUBLE FLOOD—A flood tidal current where, after flood begins, the speed increases to a maximum called *first flood*; it then decreases, reaching a *minimum flood* near the middle of the flood period (and at some places it may actually run in an ebb direction for a short period); it then again floods to a maximum speed called *second flood* after which it decreases to slack water.

DOUBLE TIDE—A double-headed tide, that is, a high water consisting of two maxima of nearly the same height separated by a relatively small depression, or a low water consisting of two minima separated by a relatively small elevation. Sometimes, it is called an *agger*.

DURATION OF FLOOD AND DURATION OF EBB—*Duration of flood* is the interval of time in which a tidal current is flooding, and the *duration of ebb* is the interval in which it is ebbing. Together they cover, on an average, a period of 12.42 hours for a semidiurnal tidal current or a period of 24.84 hours for a diurnal current. In a normal semidiurnal tidal current, the duration of flood and duration of ebb will each be approximately equal to 6.21 hours, but the times may be modified greatly by the presence of a nontidal flow. In a river the duration of ebb is usually longer than the duration of flood because of the freshwater discharge, especially during the spring when snow and ice melt are the predominant influences.

DURATION OF RISE AND DURATION OF FALL—*Duration of rise* is the interval from low water to high water, and *duration of fall* is the interval from high water to low water. Together they cover, on an average, a period of 12.42 hours for a semidiurnal tide or a period of 24.84 hours for a diurnal tide. In a normal semidiurnal tide, the duration of rise and duration of fall will each be approximately equal to 6.21 hours, but in shallow waters and in rivers there is a tendency for a decrease in the duration of rise and a corresponding increase in the duration of fall.

EBB CURRENT—The movement of a tidal current away from shore or down a tidal river or estuary. In the mixed type of reversing tidal current, the terms *greater ebb* and *lesser ebb* are applied respectively to the ebb tidal currents of greater and lesser speed of each day. The terms *maximum ebb* and *minimum ebb* are applied to the maximum and minimum speeds of a current running continuously ebb, the speed alternately increasing and decreasing without

coming to a slack or reversing. The expression *maximum ebb* is also applicable to any ebb current at the time of greatest speed.

EQUATORIAL TIDAL CURRENTS—Tidal currents occurring semimonthly as a result of the Moon being over the Equator. At these times the tendency of the Moon to produce a diurnal inequality in the tidal current is at a minimum.

EQUATORIAL TIDES—Tides occurring semi-monthly as the result of the Moon being over the Equator. At these times the tendency of the Moon to produce a diurnal inequality in the tide is at a minimum.

FLOOD CURRENT—The movement of a tidal current toward the shore or up a tidal river or estuary. In the mixed type of reversing current, the terms *greater flood* and *lesser flood* are applied respectively to the flood currents of greater and lesser speed of each day. The terms *maximum flood* and *minimum flood* are applied to the maximum and minimum speeds of a flood current, the speed of which alternately increases and decreases without coming to a slack or reversing. The expression *maximum flood* is also applicable to any flood current at the time of greatest speed.

GREAT DIURNAL RANGE (*Gt*)—The difference in height between mean higher high water and mean lower low water. The expression may also be used in its contracted form, *diurnal range*.

GULF COAST LOW WATER DATUM—A chart datum. Specifically, the tidal datum designated for the coastal waters of the Gulf Coast of the United States. It is defined as *mean lower low water* when the type of tide is mixed and *mean low water* when the type of tide is diurnal.

HALF-TIDE LEVEL—See *mean tide level*.

HIGH WATER (HW)—The maximum height reached by a rising tide. The height may be due solely to the periodic tidal forces or it may have superimposed upon it the effects of prevailing meteorological conditions. Use of the synonymous term, *high tide*, is discouraged.

HIGHER HIGH WATER (HHW)—The higher of the two high waters of any tidal day.

HIGHER LOW WATER (HLW)—The higher of the two low waters of any tidal day.

HYDRAULIC CURRENT—A current in a channel caused by a difference in the surface level at the two ends. Such a current may be expected in a strait connecting two bodies of water in which the tides differ in time or range. The current in the East River, N.Y., connecting Long Island Sound and New York Harbor, is an example.

KNOT—A speed unit of 1 international nautical mile (1,852.0 meters or 6,076.11549 international feet) per hour.

LOW WATER (LW)—The minimum height reached by a falling tide. The height may be due solely to the periodic tidal forces or it may have superimposed upon it the effects of meteorological conditions. Use of the synonymous term, *low tide*, is discouraged.

LOWER HIGH WATER (LHW)—The lower of the two high waters of any tidal day.

LOWER LOW WATER (LLW)—The lower of the two low waters of any tidal day.

LUNAR DAY—The time of the rotation of the Earth with respect to the Moon, or the interval between two successive upper transits of the Moon over the meridian of a place. The mean lunar day is approximately 24.84 solar hours long, or 1.035 times as long as the mean solar day.

LUNAR INTERVAL—The difference in time between the transit of the Moon over the meridian of Greenwich and over a local meridian. The average value of this interval expressed in hours is $0.069 L$, in which L is the local longitude in degrees, positive for west longitude and negative for east longitude. The lunar interval equals the difference between the local and Greenwich interval of a tide or current phase.

LUNICURRENT INTERVAL—The interval between the Moon's transit (upper or lower) over the local or Greenwich meridian and a specified phase of the tidal current following the transit. Examples: *strength of flood interval* and *strength of ebb interval*, which may be abbreviated to *flood interval* and *ebb interval*, respectively. The interval is described as local or Greenwich according to whether the reference is to the Moon's transit over the local or Greenwich meridian. When not otherwise specified, the reference is assumed to be local.

LUNITIDAL INTERVAL—The interval between the Moon's transit (upper or lower) over the local or Greenwich meridian and the following high or low water. The average of all high water intervals for all phases of the Moon is known as *mean high water lunital interval* and is abbreviated to *high water interval* (HWI). Similarly the *mean low water lunital interval* is abbreviated to *low water interval* (LWI). The interval is described as local or Greenwich according to whether the reference is to the transit over the local or Greenwich meridian. When not otherwise specified, the reference is assumed to be local.

MEAN HIGH WATER (MHW)—A tidal datum. The average of all the high water heights observed over the National Tidal Datum Epoch. (See *High Water*.) For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN HIGHER HIGH WATER (MHHW)—A tidal datum. The average of the highest high water height of each tidal day observed over the

National Tidal Datum Epoch. For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN HIGHER HIGH WATER LINE (MHHWL)—The intersection of the land with the water surface at the elevation of mean higher high water.

MEAN LOW WATER (MLW)—A tidal datum. The average of all the low water heights observed over the National Tidal Datum Epoch. (See *Low Water*.) For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN LOW WATER SPRINGS (MLWS)—A tidal datum. Frequently abbreviated *spring low water*. The arithmetic mean of the low water heights occurring at the time of the spring tides observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch).

MEAN LOWER LOW WATER (MLLW)—A tidal datum. The average of the lowest low water height of each tidal day observed over the National Tidal Datum Epoch. For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN RANGE OF TIDE (Mn)—The difference in height between mean high water and mean low water.

MEAN RIVER LEVEL—A tidal datum. The average height of the surface of a tidal river at any point for all stages of the tide observed over a 19-year Metonic cycle (the National Tidal Datum Epoch), usually determined from hourly height readings. In rivers subject to occasional freshets the river level may undergo wide variations, and for practical purposes certain months of the year may be excluded in the determination of tidal datums. For charting purposes, tidal datums for rivers are usually based on observations during selected periods when the river is at or near low water stage.

MEAN SEA LEVEL (MSL)—A tidal datum. The arithmetic mean of hourly water elevations observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Shorter series are specified in the name; e.g., monthly mean sea level and yearly mean sea level.

MEAN TIDE LEVEL (MTL)—Also called half-tide level. A tidal datum midway between mean high water and mean low water.

MIXED TIDE—Type of tide with a large inequality in the high and/or low water heights, with two high waters and two low waters usually occurring each tidal day. In strictness, all tides are mixed but the name is usually applied to the tides intermediate to those predominantly semidiurnal and those predominantly diurnal.

NEAP TIDES OR TIDAL CURRENTS—Tides of decreased range or tidal currents of decreased speed occurring semimonthly as the result of the Moon being in quadrature. The *neap range* (*Np*) of the tide is the average semidiurnal range occurring at the time of neap tides and is most conveniently computed from the harmonic constants. It is smaller than the mean range where the type of tide is either semidiurnal or mixed and is of no practical significance where the type of tide is diurnal. The average height of the high waters of the neap tides is called *neap high water* or *high water neaps* (MHWN) and the average height of the corresponding low waters is called *neap low water* or *low water neaps* (MLWN).

PERIGEAN TIDES OR TIDAL CURRENTS—Tides of increased range or tidal currents of increased speed occurring monthly as the result of the Moon being in perigee or nearest the Earth. The *perigean range* (*Pn*) of tide is the average semidiurnal range occurring at the time of perigean tides and is most conveniently computed from the harmonic constants. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal.

RANGE OF TIDE—The difference in height between consecutive high and low waters. The *mean range* is the difference in height between mean high water and mean low water. Where the type of tide is diurnal the mean range is the same as the diurnal range. For other ranges, see great diurnal, spring, neap, perigean, apogean, and tropic tides.

REFERENCE STATION—A tide or current station for which independent daily predictions are given in the *Tide Tables* and *Tidal Current Tables*, and from which corresponding predictions are obtained for subordinate stations by means of differences and ratios.

REVERSING CURRENT—A tidal current which flows alternately in approximately opposite directions with a slack water at each reversal of direction. Currents of this type usually occur in rivers and straits where the direction of flow is more or less restricted to certain channels. When the movement is towards the shore or up a stream, the current is said to be flooding, and when in the opposite direction it is said to be ebbing. The combined flood and ebb movement including the slack water covers, on an average, 12.42 hours for the semidiurnal current. If unaffected by a nontidal flow, the flood and ebb movements will each last about 6 hours, but when combined with such a flow, the durations of flood and ebb may be quite unequal. During the flow in each direction the speed of the current will vary from zero at the time of slack water to a maximum about midway between the slacks.

ROTARY CURRENT—A tidal current that flows continually with the direction of flow changing

through all points of the compass during the tidal period. Rotary currents are usually found offshore where the direction of flow is not restricted by any barriers. The tendency for the rotation in direction has its origin in the Coriolis force and, unless modified by local conditions, the change is clockwise in the Northern Hemisphere and counterclockwise in the Southern. The speed of the current usually varies throughout the tidal cycle, passing through the two maxima in approximately opposite directions and the two minima with the direction of the current at approximately 90° from the direction at time of maximum speed.

SEMIIDIURNAL—Having a period or cycle of approximately one-half of a tidal day. The predominating type of tide throughout the world is semidiurnal, with two high waters and two low waters each tidal day. The tidal current is said to be semidiurnal when there are two flood and two ebb periods each day.

SET (OF CURRENT)—The direction *towards* which the current flows.

SLACK WATER—The state of a tidal current when its speed is near zero, especially the moment when a reversing current changes direction and its speed is zero. The term is also applied to the entire period of low speed near the time of turning of the current when it is too weak to be of any practical importance in navigation. The relation of the time of slack water to the tidal phases varies in different localities. For standing tidal waves, slack water occurs near the times of high and low water, while for progressive tidal waves, slack water occurs midway between high and low water.

SPRING TIDES OR TIDAL CURRENTS—Tides of increased range or tidal currents of increased speed occurring semimonthly as the result of the Moon being new or full. The *spring range* (*Sg*) of tide is the average semidiurnal range occurring at the time of spring tides and is most conveniently computed from the harmonic constants. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal. The mean of the high waters of the spring tide is called *spring high water* or *mean high water springs* (MHWS), and the average height of the corresponding low waters is called *spring low water* or *mean low water springs* (MLWS).

STAND OF TIDE—Sometimes called a platform tide. An interval at high or low water when there is no sensible change in the height of the tide. The water level is stationary at high and low water for only an instant, but the change in level near these times is so slow that it is not usually perceptible. In general, the duration of the apparent stand will depend upon the range of tide, being longer for a small range than for a large range, but where there is a tendency for a double tide the stand may last for several hours even with a large range of tide.

STANDARD TIME—A kind of time based upon the transit of the Sun over a certain specified meridian, called the *time meridian*, and adopted for use over a considerable area. With a few exceptions, standard time is based upon some meridian which differs by a multiple of 15° from the meridian of Greenwich.

STRENGTH OF CURRENT—Phase of tidal current in which the speed is a maximum; also the speed at this time. Beginning with slack before flood in the period of a reversing tidal current (or minimum before flood in a rotary current), the speed gradually increases to flood strength and then diminishes to slack before ebb (or minimum before ebb in a rotary current), after which the current turns in direction, the speed increases to ebb strength and then diminishes to slack before flood completing the cycle. If it is assumed that the speed throughout the cycle varies as the ordinates of a cosine curve, it can be shown that the average speed for an entire flood or ebb period is equal to $2/\pi$ or 0.6366 of the speed of the corresponding strength of current.

SUBORDINATE CURRENT STATION—(1) A current station from which a relatively short series of observations is reduced by comparison with simultaneous observations from a control current station.

(2) A station listed in the *Tidal Current Tables* for which predictions are to be obtained by means of differences and ratios applied to the full predictions at a reference station.

SUBORDINATE TIDE STATION—(1) A tide station from which a relatively short series of observations is reduced by comparison with simultaneous observations from a tide station with a relatively long series of observations. (2) A station listed in the *Tide Tables* for which predictions are to be obtained by means of differences and ratios applied to the full predictions at a reference station.

TIDAL CURRENT TABLES—Tables which give daily predictions of the times and speeds of the tidal currents. These predictions are usually supplemented by current differences and constants through which additional predictions can be obtained for numerous other places.

TIDAL DIFFERENCE—Difference in time or height of a high or low water at a subordinate station and at a reference station for which predictions are given in the *Tide Tables*. The difference, when applied according to sign to the prediction at the reference station, gives the corresponding time or height for the subordinate station.

TIDE—The periodic rise and fall of the water resulting from gravitational interactions be-

tween the Sun, Moon, and Earth. The vertical component of the particulate motion of a tidal wave. Although the accompanying horizontal movement of the water is part of the same phenomenon, it is preferable to designate the motion as tidal current.

TIDE TABLES—Tables which give daily predictions of the times and heights of high and low waters. These predictions are usually supplemented by tidal differences and constants through which additional predictions can be obtained for numerous other places.

TIME MERIDIAN—A meridian used as a reference for time.

TROPIC CURRENTS—Tidal currents occurring semimonthly when the effect of the Moon's maximum declination is greatest. At these times the tendency of the Moon to produce a diurnal inequality in the current is at a maximum.

TROPIC RANGES—The *great tropic range* (G_c), or *tropic range*, is the difference in height between tropic higher high water and tropic lower low water. The *small tropic range* (S_c) is the difference in height between tropic lower high water and tropic higher low water. The *mean tropic range* (M_c) is the mean between the great tropic range and the small tropic range. The small tropic range and the mean tropic range are applicable only when the type of tide is semidiurnal or mixed. Tropic ranges are most conveniently computed from the harmonic constants.

TROPIC TIDES—Tides occurring semimonthly when the effect of the Moon's maximum declination is greatest. At these times there is a tendency for an increase in the diurnal range. The tidal datums pertaining to the tropic tides are designated as *tropic higher high water* (T_{cHHW}), *tropic lower high water* (T_{cLHW}), *tropic higher low water* (T_{cHLW}), and *tropic lower low water* (T_{cLLW}).

TYPE OF TIDE—A classification based on characteristic forms of a tide curve. Qualitatively, when the two high waters and two low waters of each tidal day are approximately equal in height, the tide is said to be *semidiurnal*; when there is a relatively large diurnal inequality in the high or low waters or both, it is said to be *mixed*; and when there is only one high water and one low water in each tidal day, it is said to be *diurnal*.

VANISHING TIDE—In a mixed tide with very large diurnal inequality, the lower high water (or higher low water) frequently becomes indistinct (or vanishes) at time of extreme declinations. During these periods the diurnal tide has such overriding dominance that the semi-diurnal tide, although still present, cannot be readily seen on the tide curve.

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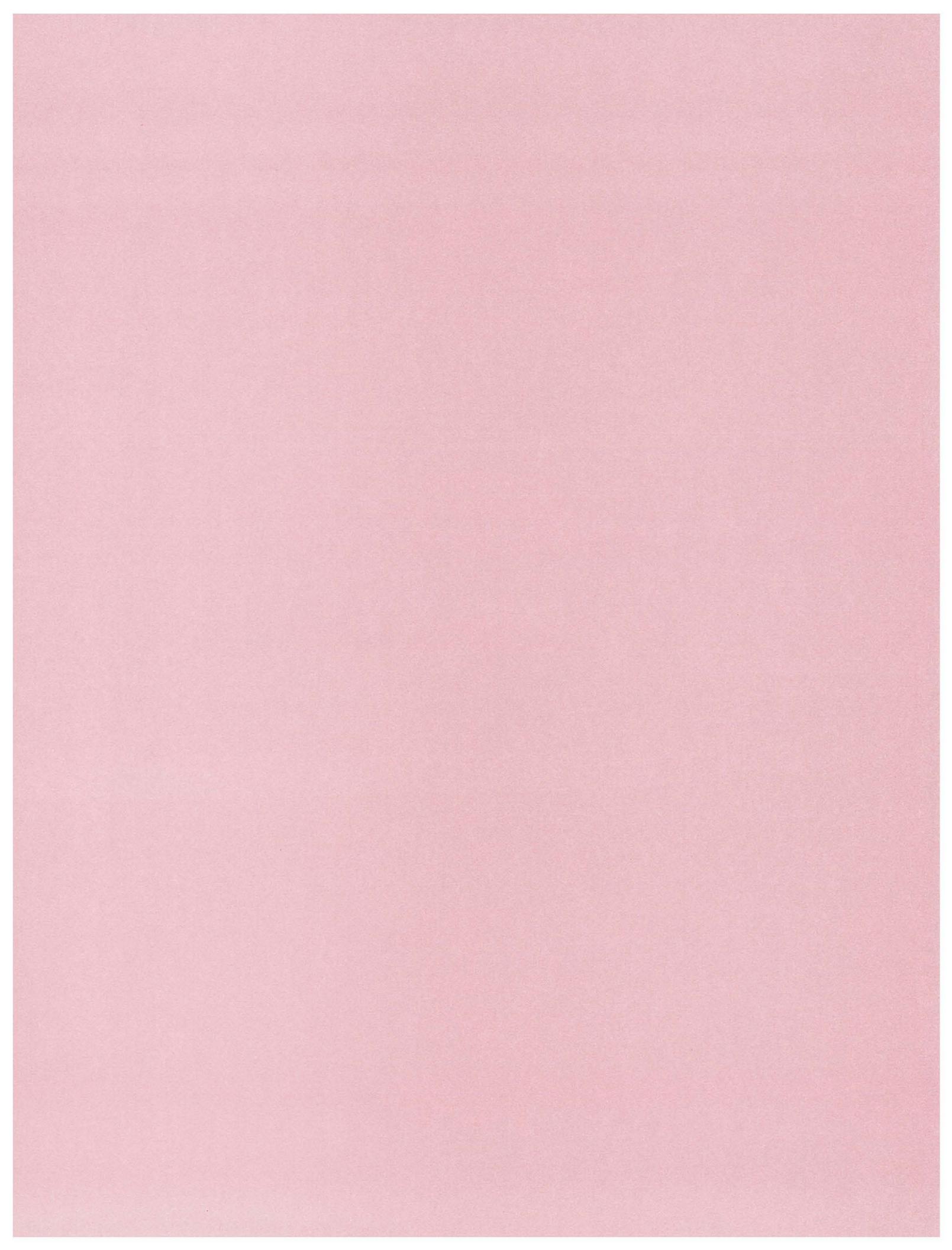
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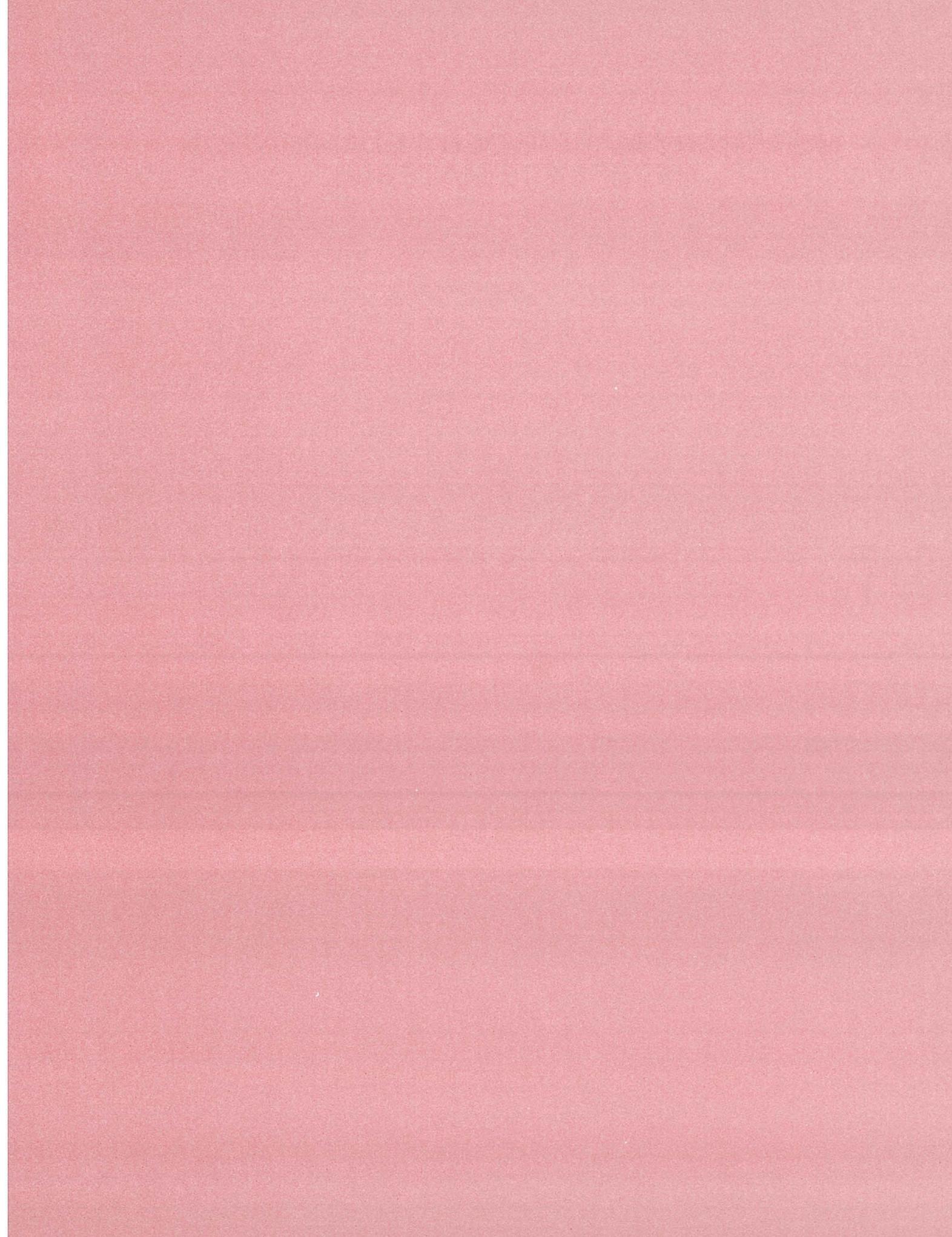
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**MERCHANT MARINE DECK EXAMINATION
REFERENCE MATERIAL**

PART TWO

1983

**TIDAL CURRENT
TABLES**

ATLANTIC COAST of NORTH AMERICA

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IMPORTANT NOTICES

Daylight saving time is not used in this publication. All daily tidal current predictions and predictions compiled by the use of Table 2 data are based on the standard time meridian indicated for each location. Predicted times may be converted to daylight saving times, where necessary, by adding 1 hour to these data. In converting times from the Astronomical Data page, it should be remembered that daylight saving time is based on a meridian 15° east of the normal standard meridian for a particular place.

Current data have been presented in a different format in Table 2. The new manner of presentation will enable the user to approximate more accurately the times and speeds of the various current phases. Slight changes in terminology also have been made. A full explanation of the proper use of the new table is given on the pages immediately preceding the data.

TIDAL CURRENT TABLES

INTRODUCTION

Current tables for the use of mariners have been published by the National Ocean Survey (formerly the Coast and Geodetic Survey) since 1890. Tables for the Atlantic coast first appeared as a part of the tide tables and consisted of brief directions for obtaining the times of the current for a few locations from the times of high and low waters. Daily predictions of slack water for five stations were given for the year 1916, and by 1923 the tables had so expanded that they were then issued as a separate publication entitled *Current Tables, Atlantic Coast*. A companion volume, *Current Tables, Pacific Coast*, was also issued that year. In 1930 the predictions for the Atlantic coast were extended to include the times and velocities of maximum current.

In the preparation of these tables, all available observations were used. In some cases, however, the observations were insufficient for obtaining final results, and as further information becomes available it will be included in subsequent editions. All persons using these tables are invited to send information or suggestions for increasing their usefulness to the Director, National Ocean Survey, Rockville, Md. 20852, U.S.A. The data for lightship stations are based on observations obtained through the cooperation of the U.S. Coast Guard. By cooperative arrangements, full predictions for Bay of Fundy Entrance (Grand Manan Channel) were furnished by the Canadian Hydrographic Service.

Daily predicted times of slack water and predicted times and velocities of maximum current (flood and ebb) are presented in table 1 for a number of reference stations. Similar predictions for many other locations may be obtained by applying the correction factors listed in table 2 to the predictions of the appropriate reference station. The velocity of a current at times between slack water and maximum current may be approximated by the use of table 3. The duration of weak current near the time of slack water may be computed by the use of table 4.

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Delaware Bay Entrance	58
Galveston Bay Entrance, Tex.	124
Hell Gate, East River, N.Y.	46
 Key West, Fla.	106
Miami Harbor Entrance, Fla.	100
Mobile Bay Entrance, Ala.	118
Pollock Rip Channel	28
Portsmouth Harbor Entrance, N.H.	10
 St. Johns River Entrance, Fla.	94
Savannah River Entrance, Ga.	88
Tampa Bay Entrance Fla.	112
The Narrows, New York Harbor, N.Y.	52
The Race, Long Island Sound	34
Throgs Neck, Long Island Sound	40
Vieques Passage, Puerto Rico	130

TABLE 1.—DAILY CURRENT PREDICTIONS
EXPLANATION OF TABLE

This table gives the predicted times of slack water and the predicted times and velocities of maximum current—flood and ebb—for each day of the year at a number of stations on the Atlantic coast of North America. The times are given in hours and minutes and the velocities in knots.

Time.—The kind of time used for the predictions at each reference station is indicated by the time meridian at the bottom of each page.

Slack water and maximum current.—The columns headed "Slack water" contain the predicted times at which there is no current; or, in other words, the times at which the current has stopped setting in a given direction and is about to begin to set in the opposite direction. Offshore, where the current is rotary, slack water denotes the time of minimum current. Beginning with the slack water before flood the current increases in velocity until the strength or maximum velocity of the flood current is reached; it then decreases until the following slack water or slack before ebb. The ebb current now begins, increases to a maximum velocity, and then decreases to the next slack. The predicted times and velocities of maximum current are given in the columns headed "Maximum Current." Flood velocities are marked with an "*F*," the ebb velocities with an "*E*." An entry in the "Slack Water" column will be *slack, flood begins* if the maximum current which follows it is marked "*F*." Otherwise the entry will be *slack, ebb begins*.

Directions of set.—As the terms flood and ebb do not in all cases clearly indicate the direction of the current, the approximate directions toward which the currents flow are given at the top of each page to distinguish the two streams.

Number of slacks and strengths.—There are usually four slacks and four maximums each day. When a vacancy occurs in any day, the slack or maximum that seems to be missing will be found to occur soon after midnight as the first slack or maximum of the following day. At some stations where the diurnal inequality is large, there may be on certain days a continuous flood or ebb current with varying velocity throughout half the day giving only two slacks and two maximums on that particular day.

Current and tide.—It is important to notice that the predicted slacks and strengths given in this table refer to the horizontal motion of the water and not to the vertical rise and fall of the tide. The relation of current to tide is not constant, but varies from place to place, and the time of slack water does not generally coincide with the time of high or low water, nor does the time of maximum velocity of the current usually coincide with the time of most rapid change in the vertical height of the tide. At stations located on a tidal river or bay the time of slack water may differ from 1 to 3 hours from the time of high or low water. The times of high and low waters are given in the tide tables published by the National Ocean Survey.

Variations from predictions.—In using this table it should be borne in mind that actual times of slack or maximum occasionally differ from the predicted times by as much as half an hour and in rare instances the difference may be as much as an hour. Comparisons of predicted with observed times of slack water indicate that more than 90 percent of the slack waters occurred within half an hour of the predicted times. To make sure, therefore, of getting the full advantage of a favorable current or slack water, the navigator should reach the entrance or strait at least half an hour before the predicted time of the desired condition of current. Currents are frequently disturbed by wind or variations in river discharge. On days when the current is affected by such disturbing influences the times and velocities will differ from those given in the table, but local knowledge will enable one to make proper allowance for these effects.

Typical current curves.—The variations in the tidal current from day to day and from place to place are illustrated on the opposite page by the current curves for representative ports along the Atlantic and Gulf Coasts of the United States. Flood current is represented by the solid line curve above the zero velocity (slack water) line and the ebb current by the broken line curve below the slack water line. The curves show clearly that the currents along the Atlantic coast are semi-daily (two floods and two ebbs in a day) in character with their principal variations following changes in the Moon's distance and phase. In the Gulf of Mexico, however, the currents are daily in character. As the dominant factor is the change in the Moon's declination the currents in the Gulf tend to become semi-daily when the Moon is near the equator. By reference to the curves it will be noted that with this daily type of current there are times when the current may be erratic (marked with an asterisk), or one flood or ebb current of the day may be quite weak. Therefore in using the predictions of the current it is essential to carefully note the velocities as well as the times.

BAY OF FUNDY ENTRANCE (Grand Manan Channel), 1983

9

F-Flood, Dir. 032° True E-Ebb, Dir. 212° True

NOVEMBER										DECEMBER									
	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Day	h.m.	h.m.	knots	h.m.	h.m.	knots	h.m.	h.m.	knots
Day	Water	Current	Water	Current	Water	Current	Water	Current	Water	Day	h.m.	h.m.	knots	h.m.	h.m.	knots	h.m.	h.m.	knots
1	0225	0535	2.1F	16	0225	0535	1.5F	1	0250	0600	2.4F	16	0220	0525	1.8F				
Tu	0855	1205	2.3E	W	0855	1210	1.6E	Th	0915	1230	2.7E	F	0835	1205	2.1E				
	1510	1810	1.9F		1515	1805	1.3F		1540	1835	2.2F		1510	1800	1.7F				
	2110				2105				2140				2110						
2	0025	0225	2.5E	17	0025	0225	1.7E	2	0050	0250	2.5E	17	0020	0220	1.8E				
W	0330	0635	2.5F	Th	0315	0625	1.8F	F	0345	0655	2.6F	Sa	0315	0615	2.0F				
	0950	1300	2.7E		0935	1255	2.1E		1005	1320	2.9E		0925	1250	2.4E				
	1610	1905	2.4F		1600	1850	1.7F		1630	1925	2.5F		1600	1855	2.1F				
	2205				2150				2235				2200						
3	0120	0120	2.8E	18	0105	0105	2.0E	3	0140	0140	2.6E	18	0110	0110	2.1E				
Th	0420	0725	2.9F	F	0400	0705	2.2F	Sa	0435	0740	2.7F	Su	0405	0705	2.3F				
	1035	1350	3.1E		1015	1335	2.5E		1050	1405	3.1E		1010	1335	2.7E				
	1655	1955	2.7F		1640	1930	2.2F		1715	2010	2.6F		1645	1940	2.4F				
	2255				2235				2320				2250						
4	0205	0205	3.1E	19	0145	0145	2.4E	4	0225	0225	2.7E	19	0200	0200	2.4E				
F	0505	0810	3.1F	Sa	0440	0745	2.6F	Su	0520	0825	2.7F	M	0455	0755	2.6F				
	1120	1430	3.4E		1050	1410	2.9E		1130	1450	3.2E		1055	1420	3.0E				
	1740	2035	3.0F		1715	2010	2.6F		1755	2055	2.7F		1730	2025	2.7F				
	2340				2315								2335						
5	0250	0250	3.2E	20	0225	0225	2.6E	5	0005	0310	2.7E	20	0245	0245	2.6E				
Sa	0545	0850	3.3F	Su	0520	0820	2.9F	M	0605	0900	2.7F	Tu	0540	0840	2.8F				
	1155	1510	3.5E		1125	1445	3.2E		1205	1530	3.1E		1140	1505	3.2E				
	1820	2115	3.1F		1755	2050	2.9F		1835	2130	2.7F		1815	2110	3.0F				
	2355																		
6	0020	0020	3.1E	21	0300	0300	2.8E	6	0045	0350	2.6E	21	0020	0330	2.8E				
Su	0625	0925	3.2F	M	0600	0900	3.1F	Tu	0645	0940	2.6F	W	0630	0925	2.9F				
	1230	1550	3.5E		1200	1525	3.4E		1240	1605	3.0E		1225	1550	3.3E				
	1900	2150	3.0F		1835	2125	3.1F		1915	2210	2.6F		1900	2155	3.1F				
	2355																		
7	0100	0405	3.0E	22	0035	0340	2.9E	7	0120	0430	2.4E	22	0105	0415	2.9E				
M	0705	1000	3.0F	Tu	0640	0940	3.2F	W	0725	1015	2.4F	Th	0715	1010	3.0F				
	1305	1625	3.3E		1240	1600	3.4E		1315	1645	2.8E		1310	1635	3.3E				
	1935	2225	2.9F		1915	2210	3.2F		1950	2245	2.4F		1945	2240	3.2F				
	2355																		
8	0135	0445	2.7E	23	0115	0425	2.9E	8	0200	0510	2.1E	23	0155	0505	2.9E				
Tu	0740	1035	2.8F	W	0720	1020	3.1F	Th	0800	1050	2.1F	F	0805	1055	2.9F				
	1340	1700	3.0E		1320	1645	3.4E		1350	1720	2.5E		1355	1720	3.2E				
	2010	2300	2.6F		1955	2250	3.1F		2030	2320	2.2F		2030	2330	3.1F				
	2355																		
9	0215	0520	2.3E	24	0200	0505	2.8E	9	0235	0545	1.9E	24	0240	0555	2.8E				
W	0815	1110	2.4F	Th	0810	1105	2.9F	F	0845	1130	1.9F	Sa	0855	1145	2.7F				
	1410	1740	2.6E		1405	1730	3.2E		1425	1800	2.2E		1445	1810	3.0E				
	2050	2340	2.2F		2040	2335	2.9F		2110				2120						
	2355																		
10	0250	0600	1.9E	25	0245	0555	2.5E	10	0000	0200	2.0F	25	0015	0305	3.0F				
Th	0855	1145	2.0F	F	0900	1150	2.6F	Sa	0315	0630	1.7E	Su	0330	0645	2.7E				
	1440	1815	2.2E		1450	1820	2.9E		0925	1210	1.6F		0950	1235	2.5F				
	2130				2130				1500	1840	1.9E		1540	1905	2.8E				
	2355								2150				2210						
11	0015	0015	1.9F	26	0030	0030	2.7F	11	0040	0040	1.8F	26	0110	0110	2.7F				
F	0330	0645	1.5E	Sa	0340	0655	2.3E	Su	0400	0715	1.5E	M	0425	0745	2.5E				
	0940	1225	1.5F		0955	1245	2.3F		1015	1255	1.4F		1045	1335	2.2F				
	1515	1900	1.8E		1545	1920	2.5E		1545	1925	1.7E		1635	2005	2.5E				
	2215				2230				2235				2305						
12	0100	0100	1.5F	27	0125	0125	2.4F	12	0125	0125	1.6F	27	0205	0205	2.5F				
Sa	0420	0740	1.1E	Su	0445	0800	2.1E	M	0445	0810	1.4E	Tu	0525	0845	2.4E				
	1030	1310	1.1F		1100	1350	1.9F		1110	1345	1.2F		1150	1435	2.0F				
	1600	1955	1.4E		1650	2025	2.3E		1640	2020	1.5E		1740	2105	2.3E				
	2310				2335				2325										
13	0155	0155	1.2F	28	0230	0230	2.2F	13	0220	0220	1.5F	28	0005	0305	2.3F				
Su	0530	0855	0.9E	M	0555	0915	2.0E	Tu	0545	0910	1.4E	W	0625	0945	2.3E				
	1145	1410	0.8F		1215	1500	1.7F		1215	1445	1.1F		1255	1540	1.8F				
	1705	2110	1.2E		1810	2140	2.1E		1745	2125	1.4E		1850	2210	2.1E				
	2355																		
14	0015	0310	1.1F	29	0040	0345	2.1F	14	0025	0320	1.5F	29	0105	0410	2.1F				
M	0655	1015	1.0E	Tu	0710	1025	2.1E	W	0645	1015	1.5E	Th	0730	1050	2.3E				
	1310	1535	0.7F		1330	1620	1.7F		1320	1555	1.2F		1400	1655	1.8F				
	1835	2230	1.2E		1930	2250	2.2E		1900	2230	1.4E		2005	2315	2.0E				
	2355				2040	2355	2.3E		2005	2330	1.6E		2110						
15	0125	0430	1.2F	30	0150	0455	2.2F	15	0125	0425	1.6F	30	0210	0515	2.0F				
Tu	0805	1120	1.3E	W	0815	1130	2.4E	Th	0740	1110	1.7E	F	0830	1150	2.4E				
	1425	1705	0.9F		1440	1735	1.9F		1420	1705	1.4F		1505	1800	1.9F				
	2000	2330	1.4E		2040	2355	2.3E		2005	2330	1.6E		2110						
	2355												31	0020	020	2.0E			
													Sa	0315	0620	2.1F			
				</td															

PORTSMOUTH HARBOR ENTRANCE (off Wood I.), N.H., 1983

F-Flood, Dir. 355° True E-Ebb, Dir. 195° True

JANUARY

FEBRUARY

	Slack Water Time	Maximum Current Time	Vel.												
Day	h.m.	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots			
1	0139	0424	2.2E	16	0203	0435	1.5E	1	0309	0552	2.2E	16	0243	0534	1.8E
Sa	0800	1017	1.8F	Su	0822	1023	1.2F	Tu	0933	1143	1.6F	W	0921	1127	1.2F
	1352	1654	2.6E		1400	1658	1.9E		1520	1815	2.4E		1434	1756	2.0E
	2046	2253	1.6F		2103	2253	1.0F		2206				2146	2352	1.3F
2	0234	0517	2.1E	17	0240	0518	1.5E	2	0014	014	1.6F	17	0314	0619	1.8E
Su	0855	1110	1.7F	M	0904	1106	1.2F	W	0401	0643	2.1E	Th	1005	1210	1.2F
	1444	1745	2.5E		1430	1741	1.9E		1028	1232	1.4F		1501	1839	1.9E
	2138	2346	1.6F		2142	2338	1.1F		1612	1905	2.2E		2225		
3	0329	0611	2.1E	18	0316	0602	1.6E	3	0103	0103	1.4F	18	0036	0347	1.3F
M	0951	1201	1.6F	Tu	0948	1149	1.1F	Th	0454	0737	1.9E	F	0347	0705	1.8E
	1538	1838	2.4E		1456	1822	1.9E		1125	1323	1.2F		1052	1257	1.2F
	2231				2222				1706	1957	2.0E		1535	1924	1.8E
4	0039	0039	1.5F	19	0021	0021	1.1F	4	0153	0153	1.3F	19	0123	0123	1.3F
Tu	0426	0706	2.0E	W	0352	0648	1.6E	F	0548	0830	1.8E	Sa	0427	0754	1.8E
	1050	1254	1.4F		1034	1235	1.1F		1225	1414	1.0F		1144	1348	1.1F
	1634	1932	2.2E		1523	1908	1.8E		1802	2049	1.8E		1620	2015	1.8E
	2326				2303								2356		
5	0132	0132	1.4F	20	0106	0106	1.2F	5	0044	0242	1.1F	20	0214	0214	1.3F
W	0523	0803	1.8E	Th	0429	0733	1.6E	Sa	0643	0926	1.7E	Su	0518	0847	1.8E
	1151	1348	1.2F		1123	1324	1.1F		1326	1506	0.8F		1242	1440	1.0F
	1732	2027	2.1E		1558	1955	1.8E		1901	2144	1.6E		1718	2106	1.7E
6	0022	0227	1.3F	21	0153	0153	1.2F	6	0140	0335	1.0F	21	0051	0305	1.3F
Th	0621	0902	1.7E	F	0513	0824	1.6E	Su	0739	1031	1.6E	M	0623	0942	1.8E
	1253	1445	1.0F		1217	1415	1.0F		1428	1725	0.6F		1344	1537	1.0F
	1832	2122	1.9E		1644	2044	1.7E		2001	2241	1.4E		1839	2206	1.7E
7	0118	0319	1.1F	22	0034	0243	1.2F	7	0236	0427	0.9F	22	0151	0402	1.3F
F	0719	1008	1.7E	Sa	0605	0916	1.6E	M	0834	1147	1.5E	Tu	0735	1041	1.8E
	1356	1544	0.8F		1315	1508	1.0F		1528	1800	0.6F		1446	1636	1.0F
	1932	2221	1.7E		1743	2135	1.7E		2100	2339	1.3E		2007	2305	1.7E
8	0213	0417	1.0F	23	0125	0336	1.2F	8	0330	0520	0.8F	23	0253	0502	1.3F
Sa	0815	1124	1.7E	Su	0705	1011	1.7E	Tu	0926	1308	1.6E	W	0844	1143	1.9E
	1458	1744	0.7F		1414	1603	1.0F		1623	2019	0.7F		1546	1737	1.1F
	2032	2323	1.6E		1901	2232	1.7E		2155				2120		
9	0308	0612	1.0F	24	0219	0431	1.3F	9	0043	0043	1.3E	24	0006	0006	1.7E
Su	0908	1246	1.7E	M	0808	1110	1.8E	W	0422	0614	0.8F	Th	0354	0601	1.4F
	1556	1947	0.7F		1512	1701	1.0F		1016	1357	1.6E		0948	1242	2.1E
	2129				2023	2328	1.7E		1713	2105	0.7F		1642	1837	1.2F
	2222								2247				2224		
10	0023	0023	1.5E	25	0315	0528	1.4F	10	0134	0134	1.3E	25	0106	0106	1.9E
M	0359	0657	1.0F	Tu	0909	1207	2.0E	Th	0510	0704	0.9F	F	0451	0702	1.5F
	0959	1341	1.7E		1609	1800	1.1F		1102	1420	1.7E		1046	1341	2.3E
	1650	2040	0.8F		2134				1757	2150	0.8F		1735	1938	1.3F
	2222								2334				2322		
11	0115	0115	1.5E	26	0027	0027	1.8E	11	0212	0212	1.4E	26	0206	0206	2.0E
Tu	0448	0758	1.0F	W	0411	0623	1.5F	F	0555	0751	1.0F	Sa	0546	0759	1.6F
	1046	1420	1.8E		1007	1305	2.1E		1145	1445	1.8E		1141	1439	2.4E
	1739	2129	0.8F		1703	1859	1.2F		1838	2026	0.8F		1826	2035	1.5F
	2312				2238										
12	0200	0200	1.4E	27	0124	0124	1.9E	12	0018	0253	1.5E	27	0016	0300	2.2E
W	0534	0734	1.0F	Th	0506	0721	1.6F	Sa	0638	0834	1.0F	Su	0639	0851	1.6F
	1129	1443	1.8E		1102	1400	2.3E		1226	1519	1.9E		1233	1529	2.5E
	1823	2057	0.8F		1755	1956	1.4F		1917	2106	0.9F		1915	2127	1.6F
	2359				2336										
13	0236	0236	1.4E	28	0220	0220	2.0E	13	0058	0333	1.6E	28	0107	0352	2.2E
Th	0617	0816	1.0F	F	0600	0816	1.7F	Su	0719	0917	1.1F	M	0731	0944	1.7F
	1211	1510	1.9E		1156	1455	2.5E		1303	1556	1.9E		1323	1618	2.5E
	1905	2051	0.8F		1846	2052	1.5F		1955	2147	1.1F		2003	2216	1.7F
14	0042	0314	1.5E	29	0031	0315	2.1E	14	0136	0412	1.6E				
F	0700	0858	1.1F	Sa	0653	0909	1.8F	M	0800	0959	1.2F				
	1249	1542	1.9E		1248	1546	2.6E		1337	1634	2.0E				
	1945	2131	0.9F		1936	2143	1.6F		2032	2228	1.2F				
15	0124	0355	1.5E	30	0125	0408	2.2E	15	0211	0453	1.7E				
Sa	0741	0940	1.1F	Su	0746	1002	1.8F	Tu	0840	1042	1.2F				
	1326	1619	1.9E		1339	1637	2.6E		1407	1713	2.0E				
	2025	2212	1.0F		2026	2236	1.6F		2108	2309	1.3F				
	31	0217	0501		2115	2325	2.2E								
	M	0839	1052												

Time meridian 75° W. 0000 is midnight. 1200 is noon.

PORtSMOUTH HARBOR ENTRANCE (off Wood I.), N.H., 1983

11

F-Flood, Dir. 355° True E-Ebb, Dir. 195° True

MARCH

APRIL

Time meridian 75° W. 0000 is midnight, 1200 is noon.

BOSTON HARBOR (Deer Island Light), MASSACHUSETTS, 1983

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

JANUARY												FEBRUARY													
	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	
1		0309	1.3E	16	0000	0416	1.1E		1	0102	0509	1.4E	16	0047	0348	1.1E									
Sa	0606	0839	1.4F	Su	0628	0927	1.1F	Tu	0735	1042	1.3F	W	0724	0942	1.3F										
	1153	1536	1.4E		1208	1627	1.2E		1321	1734	1.4E		1302	1556	1.2E										
	1838	2125	1.4F		1852	2148	1.2F		2000	2315	1.3F		1941	2201	1.4F										
2	0027	0420	1.3E	17	0036	0446	1.0E	2	0154	0608	1.3E	17	0126	0417	1.2E										
Su	0659	0934	1.3F	M	0709	0930	1.2F	W	0830	1142	1.2F	Th	0808	1021	1.3F										
	1245	1648	1.4E		1247	1606	1.1E		1416	1836	1.3E		1344	1629	1.2E										
	1930	2228	1.3F		1932	2153	1.2F		2054				2024	2242	1.4F										
3	0120	0532	1.2E	18	0115	0418	1.0E	3		0012	1.2F	18	0209	0456	1.2E										
M	0755	1045	1.2F	Tu	0751	1005	1.2F	Th	0248	0709	1.3E	F	0855	1106	1.3F										
	1340	1800	1.3E		1328	1626	1.1E		0928	1244	1.1F		1429	1712	1.1E										
	2026	2337	1.2F		2014	2229	1.2F		1513	1937	1.2E		2110	2328	1.4F										
4	0216	0637	1.2E	19	0156	0447	1.0E	4		0112	1.2F	19	0255	0542	1.2E										
Tu	0852	1205	1.1F	W	0838	1048	1.2F	F	0343	0809	1.3E	Sa	0946	1154	1.2F										
	1437	1905	1.2E		1412	1703	1.1E		1027	1346	1.0F		1519	1801	1.1E										
	2122				2059	2313	1.2F		1613	2038	1.2E		2202												
5		0043	1.1F	20	0241	0528	1.1E	5		0212	1.1F	20		0017	1.3F										
W	0314	0739	1.2E	Th	0927	1135	1.2F	Sa	0441	0909	1.3E	Su	0345	0633	1.2E										
	0953	1313	1.0F		1500	1747	1.1E		1127	1446	1.0F		1040	1246	1.2F										
	1537	2007	1.2E		2147				1715	2137	1.1E		1613	1857	1.0E										
6		0146	1.1F	21	0000	1.3F		6	0311	1.0F	21		0110	1.3F											
Th	0413	0839	1.2E	F	0329	0618	1.1E	Su	0541	1006	1.3E	M	0440	0737	1.1E										
	1056	1417	1.0F		1018	1226	1.2E		1228	1545	1.0F		1138	1342	1.1F										
	1640	2107	1.2E		1551	1838	1.0E		1820	2233	1.2E		1712	2004	1.0E										
7		0247	1.1F	22		0051	1.3F	7	0044	0408	1.0F	22		0207	1.2F										
F	0514	0938	1.3E	Sa	0421	0714	1.1E	M	0640	1101	1.3E	Tu	0538	0853	1.1E										
	1158	1518	1.0F		1111	1320	1.1F		1325	1641	1.0F		1236	1445	1.1F										
	1743	2205	1.2E		1646	1937	1.0E		1932	2327	1.2E		1814	2228	1.0E										
8	0020	0344	1.1F	23		0145	1.3F	8	0140	0502	1.1F	23	0055	0310	1.2F										
Sa	0615	1034	1.4E	Su	0515	0818	1.1E	Tu	0738	1153	1.4E	W	0639	1100	1.2E										
	1258	1615	1.1F		1207	1417	1.1F		1419	1734	1.1F		1333	1613	1.1F										
	1850	2300	1.3E		1744	2043	1.0E		2043				1918	2336	1.1E										
9	0116	0439	1.1F	24	0025	0242	1.3F	9		0018	1.2E	24	0153	0430	1.2F										
Su	0715	1127	1.4E	M	0611	0930	1.2E	W	0231	0552	1.1F	Th	0740	1201	1.3E										
	1353	1709	1.1F		1301	1519	1.2F		0830	1242	1.4E		1430	1741	1.2F										
	1956	2352	1.3E		1842	2158	1.1E		1507	1822	1.1F		2018												
10	0209	0530	1.2F	25	0120	0342	1.3F	10		0106	1.2E	25		0031	1.3E										
M	0810	1218	1.5E	Tu	0707	1052	1.3E	Th	0319	0659	1.1F	F	0251	0559	1.3F										
	1444	1759	1.2F		1358	1631	1.2F		0914	1329	1.4E		0839	1255	1.5E										
	2053				1941	2330	1.2E		1550	1907	1.2F		1524	1839	1.3F										
11		0042	1.3E	26	0216	0447	1.3F	11		0152	1.2E	26		0124	1.4E										
Tu	0258	0617	1.2F	W	0804	1204	1.4E	F	0402	0723	1.2F	Sa	0347	0659	1.4F										
	0857	1306	1.5E		1451	1746	1.3F		0954	1412	1.4E		0935	1346	1.5E										
	1530	1846	1.2F		2038				1630	1949	1.2F		1617	1932	1.5F										
12		0129	1.3E	27		0036	1.3E	12	0234	1.2E	27		0214	1.5E											
W	0341	0703	1.2F	Th	0310	0556	1.4F	Sa	0444	0804	1.2F	Su	0439	0753	1.4F										
	0938	1351	1.5E		0859	1259	1.5E		1031	1452	1.3E		1029	1435	1.6E										
	1613	1930	1.2F		1544	1846	1.4F		1709	2028	1.2F		1707	2022	1.5F										
	2212				2133				2300				2301												
13		0214	1.3E	28		0130	1.3E	13	0314	1.2E	28		0304	1.5E											
Th	0425	0745	1.2F	Sa	0402	0659	1.4F	Su	0524	0841	1.2F	M	0531	0844	1.5F										
	1017	1435	1.4E		0952	1352	1.5E		1108	1528	1.3E		1120	1525	1.6E										
	1654	2012	1.2F		1636	1941	1.5F		1746	2102	1.3F		1757	2111	1.5F										
	2248				2227				2334				2351												
14		0257	1.2E	29		0223	1.4E	14	0348	1.1E															
F	0507	0826	1.2F	Sa	0456	0756	1.5F		M	0603	0909	1.2F													
	1054	1516	1.3E		1045	1445	1.5E		1144	1550	1.2E														
	1734	2051	1.2F		1727	2034	1.5F		1823	2123	1.3F														
	2323				2319																				
15		0338	1.1E	30		0316	1.4E	15	0010	0354	1.1E														
Sa	0547	0902	1.2F	Su	0549	0850	1.5F	Tu	0642	0912	1.2F														
	1131	1555	1.2E		1137	1538	1.5E		1222	1533	1.2E														
	1812	2126	1.2F		1818	2126	1.5F		1901	2127	1.3F														
		31	0010		0411	1.4E																			
		M	0641		0946	1.4F			</td																

BOSTON HARBOR (Deer Island Light), MASSACHUSETTS, 1983

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

MARCH

APRIL

	Slack Water Time	Maximum Current	Slack Water Time	Maximum Current	Slack Water Time	Maximum Current	Slack Water Time	Maximum Current
	Day h.m.	Time h.m. knots	Day h.m.	Time h.m. knots	Day h.m.	Time h.m. knots	Day h.m.	Time h.m. knots
1	Tu 0622	0354 1.5E	16 W 0617	0313 1.2E	1 F 0740	0514 1.5E	16 0034	0333 1.3E
	0933	1.5F	0853 1.3F		1051 1.3F	Sa 0718	0934 1.4F	
	1211	1615 1.5E	1157 1506 1.2E		1328 1739 1.3E		1257 1546 1.2E	
	1845	2159 1.5F	1831 2101 1.4F		1958 2309 1.3F		1930 2152 1.5F	
2	W 0713	0040 1.5E	17 Th 0658	0020 0324 1.3E	2 Sa 0830	0149 0608 1.4E	17 0117	0412 1.3E
	1024	1.4F	0918 1.3F		1142 1.2F	Su 0806	1019 1.3F	
	1301	1709 1.4E	1237 1531 1.2E		1418 1836 1.2E		1343 1628 1.1E	
	1934	2248 1.4F	1911 2134 1.5F		2048 2359 1.2F		2020 2237 1.4F	
3	Th 0805	0129 0540 1.4E	18 F 0740	0059 0352 1.3E	3 Su 0922	0237 0706 1.3E	18 0204	0457 1.2E
	1117	1.3F	0957 1.4F		1237 1.1F	M 0858	1106 1.2F	
	1352	1806 1.3E	1319 1604 1.2E		1510 1935 1.1E		1433 1717 1.0E	
	2026	2340 1.3F	1955 2216 1.5F		2140		2114 2325 1.3F	
4	F 0859	0219 0638 1.3E	19 Sa 0828	0141 0430 1.3E	4 M 0328	0055 0804 1.1F	19 0255	0551 1.1E
	1212	1.2F	1040 1.3F		1018 1335 1.0F	Tu 0952	1158 1.1F	
	1446	1906 1.2E	1403 1645 1.1E		1605 2034 1.0E		1529 1817 0.9E	
	2118		2042 2300 1.4F		2235		2212	
5	Sa 0310	0035 0737 1.2F	20 Su 0919	0226 0515 1.2E	5 Tu 0422	0155 0902 1.0F	20 0020	0020 1.1F
	0737	1.3E	1127 1.2F		1113 1434 0.9F	W 0351	0659 1.1E	
	0954	1311 1.1F	1452 1733 1.1E		1703 2131 1.0E	1050 1256	1256 1.0F	
	1542	2007 1.1E	2135 2349 1.3F		2331		1630 2104 0.9E	
6	Su 0405	0134 0837 1.1F	21 M 1013	0316 0607 1.2E	6 W 0518	0255 0958 0.9F	21 0120	0120 1.0F
	0837	1.2E	1219 1.2F		1210 1532 0.9F	Th 0452	0933 1.1E	
	1051	1411 1.0F	1547 1830 1.0E		1801 2226 1.0E	1151 1454	1454 0.9F	
	1641	2106 1.1E	2231			1734 2207	2207 1.0E	
7	M 0502	0234 0935 1.0F	22 Tu 0411	0041 0710 1.2F	7 Th 0615	0029 0352 0.9F	22 0018	0325 0.9F
	0935	1.2E	0710 1.1E		1051 1.2E	F 0557	1035 1.2E	
	1151	1511 0.9F	1111 1315 1.1F		1304 1626 1.0F		1251 1614 1.0F	
	1743	2204 1.1E	1647 1941 0.9E		1858 2318 1.1E		1839 2306 1.2E	
8	Tu 0600	0009 1031 1.0F	23 W 0511	0333 0139 1.0F	8 F 0710	0124 0447 1.0F	23 0119	0440 1.0F
	1031	1.2E	0941 1.1E		1141 1.2E	Sa 0701	1131 1.3E	
	1250	1609 0.9F	1211 1420 1.0F		1355 1716 1.0F		1350 1714 1.1F	
	1847	2259 1.1E	1752 2224 1.0E		1950		1940	
9	W 0658	0107 1125 1.0F	24 Th 0615	0034 0245 1.0F	9 Sa 0216	0007 0536 1.1E	24 0000	0000 1.3E
	1125	1.3E	1051 1.2E		0801 1228 1.2E	Su 0218	0539 1.1F	
	1344	1703 1.0F	1311 1625 1.0F		1441 1803 1.1F	0802 1225	1225 1.4E	
	1951	2351 1.1E	1857 2323 1.1E		2036		1444 1808 1.3F	
10	Th 0753	0200 1215 1.0F	25 F 0719	0136 0448 1.1F	10 Su 0302	0052 0622 1.2E	25 M 0313	0051 1.4E
	1215	1.3E	1148 1.3E		0848 1311 1.2E	0633 1314	1314 1.5E	
	1435	1753 1.1F	1410 1730 1.2F		1524 1845 1.2F	0900 1536	1536 1.4F	
	2043		1959		2118		2130	
11	F 0250	0040 0611 1.2E	26 Sa 0234	0017 0553 1.3E	11 M 0347	0134 0704 1.2E	26 Tu 0405	0141 1.5E
	0611	1.1F	0553 1.2F		0931 1351 1.2E	0723 0953	0723 1.3F	
	0842	1301 1.3E	0820 1241 1.4E		1604 1925 1.3F	1403 1624	1403 1.5E	
	1520	1838 1.2F	1505 1826 1.3F		2157		1945 2220	
12	Sa 0337	0125 0656 1.2E	27 Su 0330	0109 0648 1.4E	12 Tu 0428	0211 0742 1.3E	27 W 0453	0228 1.6E
	0656	1.1F	0648 1.3F		1012 1422 1.2E	0811 1043	0811 1.4F	
	0925	1344 1.3E	0918 1332 1.5E		1644 1957 1.4F	1450 1711	1450 1.5E	
	1600	1921 1.2F	1557 1917 1.4F		2235		2031 2306	
13	Su 0418	0207 0737 1.2E	28 M 0422	0158 0740 1.5E	13 W 0509	0238 0813 1.3E	28 Th 0541	0315 1.6E
	0737	1.2F	0740 1.4F		1052 1427 1.2E	0857 1131	0857 1.4F	
	1004	1424 1.3E	1011 1420 1.6E		1723 2016 1.4F	1537 1758	1537 1.5E	
	1639	1959 1.3F	1646 2005 1.5F		2313		2115 2351	
14	M 0458	0245 0814 1.2E	29 Tu 0512	0247 0828 1.6E	14 Th 0550	0240 0826 1.3E	29 F 0629	0402 1.5E
	0814	1.2F	0828 1.5F		1132 1440 1.2E	0943 1218	0943 1.4F	
	1042	1458 1.3E	1102 1508 1.6E		1803 2034 1.5F	1625 1843	1625 1.4E	
	1717	2033 1.3F	1734 2052 1.5F		2353		2159 2351	
15	Tu 0538	0316 0845 1.2E	30 W 0602	0334 0916 1.6E	15 F 0632	0301 0856 1.3E	30 Sa 0716	0036 1.5E
	0845	1.3F	0916 1.5F		1214 1509 1.2E	1028 1304	1028 1.3F	
	1119	1509 1.2E	1151 1556 1.5E		1846 2110 1.5F	1716 1930	1716 1.2E	
	1753	2053 1.4F	1821 2137 1.5F				2242 1.3F	
	2342							
		31 0016	0423 1.6E					
		Th 0650	1003 1.4F					
		1240	1645 1.4E					
		1909	2222 1.4F					

Time meridian 75° W. 0000 is midnight. 1200 is noon.
At times of slack water before maximum ebb, the velocity actually averages 0.3 knot in a direction of 184° true.

BOSTON HARBOR (Deer Island Light), MASSACHUSETTS, 1983

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

MAY												JUNE												
	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	h.m.	knots												
Su	0120	0541	1.4E	16	0057	0402	1.3E	1	0221	0655	1.1E	16	0226	0647	1.2E	Th	0917	1221	1.1F	1927	1.1E	2142	2242	2242
	0803	1116	1.2F	M	0747	1002	1.3F	W	0910	1221	1.0F	F	0324	0755	1.2E									
	1350	1808	1.1E		1327	1621	1.1E		1455	1925	1.0E		1013	1332	1.1F									
	2019	2326	1.2F		2002	2219	1.3F		2129				1601	2029	1.1E									
M	0206	0634	1.3E	17	0146	0452	1.2E	2	0018	0108	1.0F	17	0048	0048	1.1F	Sa	0424	0857	1.2E	2129	1.2E	2343	2343	2343
	0852	1205	1.1F	Tu	0839	1051	1.2F	Th	0309	0745	1.1E	F	0324	0755	1.2E									
	1439	1904	1.0E		1420	1717	1.0E		0959	1308	1.0F		1013	1332	1.1F									
	2109				2059	2311	1.2F		1543	2015	1.0E		1601	2029	1.1E									
Tu	0016	1.1F		18	0239	0553	1.1E	3	0109	0109	1.0F	18	0201	0201	1.0F	Sa	0424	0857	1.2E	2129	1.2E	2343	2343	2343
	0253	0730	1.2E	W	0934	1147	1.1F	F	0358	0836	1.0E	Sa	0424	0857	1.2E									
	0943	1258	1.0F		1516	1939	1.0E		1048	1357	1.0F		1111	1435	1.1F									
	1529	2000	1.0E		2158				1632	2105	1.0E		1701	2129	1.2E									
W	0113	1.0F		19	0007	0007	1.1F	4	0210	0210	1.0F	19	0305	0305	1.0F	Su	0526	0955	1.2E	2226	1.3E	2226	2226	2226
	0344	0826	1.1E	Th	0337	0810	1.1E	Sa	0450	0927	1.0E	F	0526	0955	1.2E									
	1037	1354	1.0F		1032	1304	1.0F		1137	1447	1.1F		1209	1535	1.1F									
	1622	2055	1.0E		1616	2048	1.0E		1723	2155	1.0E		1800	2226	1.3E									
Th	0212	0.9F		20	0157	0.9F		5	0002	0306	1.0F	20	0043	0404	1.0F	M	0628	1051	1.2E	2320	1.4E	2320	2320	2320
	0437	0920	1.1E	F	0438	0917	1.1E	Su	0542	1014	1.0E	M	0628	1051	1.2E									
	1129	1449	1.0F		1132	1453	1.0F		1226	1535	1.1F		1306	1631	1.1F									
	1716	2148	1.0E		1718	2149	1.1E		1813	2242	1.1E		1859	2320	1.4E									
F	0309	0.9F		21	0001	0322	1.0F	6	0054	0358	1.1F	21	0141	0500	1.1F	Tu	0728	1145	1.3E	1724	1.2F	1724	1724	1724
	0531	1012	1.1E	Sa	0541	1016	1.2E	M	0634	1059	1.0E	F	0728	1145	1.3E									
	1220	1542	1.0F		1231	1557	1.1F		1313	1619	1.2F		1400	1724	1.2F									
	1809	2240	1.0E		1820	2246	1.2E		1903	2325	1.1E		1954											
Sa	0043	0404	1.0F	22	0102	0425	1.0F	7	0144	0446	1.1F	22	0012	0012	1.4E	W	0235	0553	1.1F	2047	2047	2047	2047	2047
	0625	1102	1.1E	Su	0644	1112	1.3E	Tu	0725	1139	1.1E	H	0235	0553	1.1F									
	1310	1633	1.1F		1329	1654	1.1F		1401	1700	1.3F		0826	1237	1.3E									
	1901	2328	1.1E		1919	2341	1.3E		1951				1451	1814	1.2F									
Su	0135	0454	1.0F	23	0200	0521	1.1F	8	0005	0032	1.2E	23	0102	0102	1.5E	Th	0327	0643	1.2F	2135	2135	2135	2135	2135
	0718	1149	1.1E	M	0745	1205	1.3E	W	0233	0530	1.2F	F	0327	0643	1.2F									
	1358	1719	1.2F		1422	1747	1.2F		0816	1210	1.1E		0919	1326	1.3E									
	1949				2016				1449	1738	1.3F		1540	1903	1.2F									
M	0013	0013	1.2E	24	0255	0032	1.4E	9	0036	0032	1.3E	24	0151	0151	1.5E	Sa	0414	0732	1.2F	2220	1.2F	2220	2220	2220
	0223	0541	1.1F	Tu	0255	0614	1.2F	Th	0321	0612	1.3F	F	0414	0732	1.2F									
	0807	1231	1.2E		0842	1256	1.4E		0905	1235	1.2E		1008	1414	1.3E									
	1442	1802	1.2F		1513	1837	1.3F		1537	1816	1.4F		1628	1949	1.2F									
Tu	0055	1.2E		25	0122	0257	1.5E	10	0106	0122	1.3E	25	0238	0238	1.5E	Sa	0500	0818	1.2F	2303	1.2F	2303	2303	2303
	0310	0624	1.2F	W	0346	0704	1.3F	F	0409	0651	1.3F	M	0500	0818	1.2F									
	0854	1309	1.2E		0935	1345	1.4E		0953	1314	1.2E		1052	1501	1.3E									
	1527	1841	1.3F		1602	1924	1.3F		1624	1858	1.4F		1712	2034	1.2F									
Tu	0215	0215		26	0210	0210	1.5E	11	0142	0142	1.4E	26	0324	0324	1.4E	Sa	0454	0902	1.2F	2345	1.2F	2345	2345	2345
	0439	0735	1.3F	F	0521	0838	1.3F	Su	0547	0816	1.4F	M	0628	0946	1.2F									
	1023	1348	1.2E		1111	1520	1.4E		1131	1444	1.2E		1216	1633	1.2E									
	1653	1935	1.4F		1734	2054	1.3F		1802	2029	1.4F		1841	2158	1.1F									
F	0209	0209	1.3E	27	0343	0343	1.5E	13	0312	0312	1.4E	27	0026	0452	1.3E	Sa	0710	1027	1.1F	2236	1.1F	2236	2236	2236</td

BOSTON HARBOR (Deer Island Light), MASSACHUSETTS, 1983

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

JULY

AUGUST

	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.				
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	h.m.	knots				
1 F	0235	0650	1.0E	16 Sa	0040	0733	1.1F	1 M	0011	0624	1.1E	16 Tu	0218	0908	1.1F	
	0921	1149	1.1F		0309	1312	1.2E		0335	1017	1.2F		0447	1119	1.2E	
	1505	1921	1.0E		0950	1542	1.2F		1233	1601	1.3F		1443	1712	1.1F	
	2145				2006	2223	1.2E		1855	2249	1.1E		2138	2358	1.3E	
2 Sa	0002	0002	1.1F	17 Su	0143	0408	1.1F	2 Tu	0101	0425	1.2F	17 W	0317	0550	1.0F	
	0322	0637	1.0E		0834	1048	1.2E		0714	1106	1.1E		1006	1216	1.2E	
	1008	1229	1.1F		1412	1640	1.2F		1323	1651	1.3F		1539	1811	1.1F	
	1552	1909	1.0E		2106	2322	1.3E		1950	2340	1.2E		2234		1.3E	
3 Su	0050	0050	1.1F	18 M	0243	0509	1.1F	3 W	0153	0518	1.2F	18 Th	0056	0654	1.0F	
	0411	0717	1.0E		0933	1145	1.2E		0811	1158	1.0E		1101	1311	1.2E	
	1054	1315	1.2F		1510	1738	1.1F		1416	1744	1.3F		1635	1909	1.1F	
	1640	1953	1.0E		2203	2258	1.3E		2049	2154	1.2E		2327		1.4E	
4 M	0140	0140	1.1F	19 Tu	0022	0611	1.1F	4 Th	0035	0614	0249	19 F	0150	0801	0508	
	0502	0806	1.0E		1029	1241	1.2E		0913	1251	1.1E		1154	1407	1.2E	
	1142	1405	1.2F		1606	1836	1.1F		1511	1838	1.3F		1727		1.1F	
	1730	2045	1.1E		2258		1.4E		2154		1.2E		2003			
5 Tu	0016	0234	1.1F	20 W	0120	0713	1.1F	5 F	0129	0710	0347	20 Sa	0019	0241	0558	
	0554	0901	1.0E		1124	1337	1.2E		1021	1347	1.1E		1244	1457	1.1F	
	1232	1456	1.3F		1700	1933	1.1F		1608	1933	1.3F		1817		1.1F	
	1821	2142	1.1E		2351	2025	1.4E		2303	2028	1.3E		2052			
6 W	0108	0329	1.2F	21 Th	0214	0812	1.1F	6 Sa	0222	1429	0450	21 Su	0107	0329	0646	
	0647	0959	1.1E		1216	1429	1.2E		1138	1440	1.2E		0646	0935	1.2E	
	1323	1549	1.3F		1751	2025	1.1F		1708	2028	1.4F		1331	1543	1.1F	
	1912	2237	1.2E										2135			
7 Th	0159	0424	1.2F	22 F	0041	0306	1.4E	7 Su	0015	0317	0558	22 M	0153	0412	0731	
	0740	1056	1.1E		0622	0905	1.1F		1254	1536	1.3F		1011	1628	1.2F	
	1415	1642	1.4F		1306	1519	1.3E		1809	2114	1.2E		1416	1947	1.2E	
	2003	2335	1.3E		1840	2114	1.1F		1809	2123	1.4F		1628		1.1F	
8 F	0250	0520	1.3F	23 Sa	0130	0352	1.4E	8 M	0118	0409	0703	23 Tu	0236	0452	0812	
	0833	1154	1.2E		0710	0952	1.1F		0958	1607	1.4F		1046	1710	1.2F	
	1507	1735	1.4F		1355	1607	1.3E		1355	1630	1.3E		1459	2028	1.2E	
	2055				1928	2158	1.1F		1915	2217	1.4F		2253			
9 Sa	0029	0029	1.4E	24 Su	0217	0439	1.4E	9 Tu	0216	0500	0802	24 W	0317	0531	0851	
	0341	0617	1.3F		0756	1033	1.2F		1051	1651	1.4E		1121	1750	1.2E	
	0927	1253	1.2E		1440	1651	1.2E		1451	2240	1.4E		1539	2105	1.1F	
	1559	1829	1.4F		2012	2240	1.1F		2018	2310	1.4F		2105			
10 Su	0123	0123	1.4E	25 M	0302	0520	1.4E	10 W	0311	0552	0858	25 Th	0354	0610	0925	
	0432	0713	1.4F		0839	1112	1.2F		0858	1144	1.4F		1157	1830	1.2F	
	1019	1352	1.2E		1525	1735	1.2E		1546	1818	1.4E		1614		1.1E	
	1650	1923	1.4F		2055	2320	1.1F		2118	2320	1.4F		2132		1.1F	
11 M	0218	0218	1.4E	26 Tu	0345	0601	1.3E	11 Th	0004	0644	0954	26 F	0019	0648	0936	
	0523	0808	1.4F		0921	1150	1.2F		1237	1911	1.4F		1233	1911	1.2F	
	1111	1453	1.3E		1607	1818	1.2E		1643	2218	1.4E		1624		1.1E	
	1742	2018	1.4F		2134	2114	1.1F		2218	2259	1.3F		2134		1.2F	
12 Tu	0316	0316	1.4E	27 W	0000	0641	0425	12 F	0058	0737	1050	27 Sa	0049	0728	0950	
	0616	0907	1.4F		0958	1228	1.1F		1329	2006	1.4F		0353	1312	1.3F	
	1204	1557	1.3E		1648	1859	1.1F		1741	2318	1.4E		1614	2128	1.1E	
	1837	2117	1.3F		2207	2207	1.1F		1941	2200	1.3F		1954	2208	1.2F	
13 W	0022	0419	1.4E	28 Th	0039	0721	0502	13 Sa	0152	0830	1147	28 Su	0130	0809	1027	
	0708	1007	1.3F		1029	1306	1.1F		1423	1841	1.3E		1354	2039	1.2E	
	1257	1701	1.3E		1724	1941	1.1E		2102				1646	2250	1.2F	
	1931	2224	1.3F		2212	2212	1.1F									
14 Th	0116	0526	1.3E	29 F	0119	0802	0503	14 Su	0018	0248	0708	29 M	0214	0853	1111	
	0800	1109	1.3F		1030	1347	1.2F		0924	1246	1.2F		0459	1438	1.3F	
	1351	1804	1.2E		1710	1710	1.0E		1518	1941	1.3E		1728	2128	1.2E	
	2027	2335	1.2F		2026	2242	1.1F		2200				2337		1.2F	
15 F	0211	0631	1.3E	30 Sa	0202	0845	0505	15 M	0118	0347	0809	30 Tu	0302	0941	1159	
	0855	1211	1.2F		1104	1429	1.2F		1020	1344	1.2F		0544	1526	1817	
	1446	1906	1.2E		1728	2111	1.1E		1614	2040	1.3E		1159		1.2E	
	2124				2323	2111	1.2F		2219							
													2311			
														0027	1.2F	
													W	0353	0637	1.0E
													1034	1618	1249	1.3F
													1618	1913	1913	1.2E

Time meridian 75° W. 0000 is midnight. 1200 is noon.
At times of slack water before maximum ebb, the velocity actually averages 0.3 knot in a direction of 184° true.

BOSTON HARBOR (Deer Island Light), MASSACHUSETTS, 1983

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

SEPTEMBER												OCTOBER					
	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time		Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time		Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time		Slack Water Time	
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	
1 Th	0121	1.2F	16	0029	0347	1.0F		1 Sa	0154	1.1F	16	0050	0410	1.1F			
	0448	0736	1.0E	F	0630	1036	1.2E	Sa	0524	0841	1.0E	Su	0651	1059	1.2E		
	1129	1343	1.3F		1247	1608	1.0F		1206	1418	1.1F		1310	1631	1.0F		
	1712	2016	1.2E		1840	2302	1.3E		1747	2206	1.2E		1900	2322	1.3E		
2 F	0008	0218	1.2F	17	0122	0441	1.1F	2 Su	0041	0313	1.1F	17	0139	0459	1.1F		
	0546	0845	1.0E	Sa	0740	1128	1.2E	M	0627	1046	1.1E	M	0744	1148	1.2E		
	1227	1441	1.3F		1340	1701	1.1F		1305	1535	1.1F		1400	1719	1.1F		
	1810	2131	1.2E		1936	2353	1.4E		1848	2311	1.3E		1951				
3 Sa	0103	0321	1.2F	18	0213	0531	1.1F	3 M	0139	0449	1.2F	18		0009	1.3E		
	0646	1016	1.1E	Su	0833	1218	1.2E	Tu	0727	1142	1.2E	Tu	0224	0545	1.2F		
	1323	1543	1.3F		1430	1750	1.1F		1402	1710	1.2F		0827	1234	1.3E		
	1908	2306	1.3E		2026				1948				1446	1804	1.2F	2036	
4 Su	0159	0438	1.2F	19	0040	1.4E		4 Tu		0005	1.4E	19		0053	1.3E		
	0745	1153	1.2E	M	0300	0617	1.2F		0232	0548	1.3F	W	0307	0627	1.3F		
	1420	1654	1.3F		0909	1305	1.3E		0824	1235	1.4E		0904	1316	1.3E		
	2006				1518	1836	1.1F		1458	1810	1.3F		1529	1846	1.2F		
5 M	0015	0015	1.4E	20	0125	1.3E		5 W		0056	1.5E	20		0133	1.3E		
	0253	0556	1.3F	Tu	0341	0701	1.2F		0325	0640	1.4F	Th	0346	0706	1.3F		
	0843	1248	1.3E		0942	1349	1.3E		0918	1326	1.5E		0940	1355	1.3E		
	1516	1812	1.3F		1600	1918	1.2F		1551	1904	1.4F		1609	1924	1.2F		
6 Tu	0110	0110	1.5E	21	0207	1.3E		6 Th		0146	1.5E	21		0209	1.2E		
	0655	0655	1.4F	W	0421	0741	1.2F		0415	0730	1.5F	F	0424	0739	1.3F		
	0938	1342	1.4E		1015	1429	1.2E		1009	1414	1.5E		1016	1426	1.2E		
	1610	1914	1.4F		1641	1958	1.2F		1642	1954	1.4F		1649	1955	1.3F		
7 W	0203	0203	1.5E	22	0245	1.2E		7 F		0236	1.5E	22		0224	1.1E		
	0438	0748	1.5F	Th	0459	0817	1.3F		0504	0818	1.5F	Sa	0502	0757	1.4F		
	1031	1433	1.5E		1049	1506	1.2E		1059	1504	1.6E		1052	1429	1.2E		
	1702	2009	1.4F		1720	2032	1.2F		1733	2044	1.4F		1730	2007	1.3F		
8 Th	0254	0254	1.5E	23	0316	1.2E		8 Sa		0326	1.5E	23		0220	1.1E		
	0529	0839	1.5F	F	0537	0845	1.3F		0553	0906	1.5F	Su	0541	0811	1.4F		
	1122	1525	1.5E		1124	1531	1.2E		1148	1555	1.5E		1130	1439	1.2E		
	1756	2104	1.4F		1800	2048	1.2F		1824	2134	1.4F		1811	2032	1.3F		
9 F	0347	0347	1.5E	24	0302	1.1E		9 Su		0012	0419	1.4E	24	0245	1.1E		
	0619	0930	1.5F	Sa	0614	0845	1.3F		0642	0954	1.4F	M	0623	0845	1.4F		
	1213	1619	1.5E		1201	1514	1.2E		1236	1649	1.5E		1210	1508	1.3E		
	1849	2157	1.4F		1840	2101	1.2F		1917	2226	1.3F		1856	2110	1.3F		
10 Sa	0036	0443	1.4E	25	0018	0315	1.1E	10 M	0104	0516	1.3E	25	0033	0319	1.1E		
	0710	1023	1.4F	Su	0654	0914	1.3F		0733	1046	1.3F	Tu	0708	0927	1.4F		
	1304	1715	1.4E		1240	1537	1.2E		1326	1746	1.4E		1252	1545	1.2E		
	1941	2253	1.3F		1923	2137	1.2F		2009	2322	1.2F		1942	2153	1.3F		
11 Su	0129	0541	1.3E	26	0100	0346	1.1E	11 Tu		0156	0615	1.2E	26	0119	0401	1.1E	
	0801	1118	1.3F	M	0737	0955	1.4F		0827	1142	1.2F	W	0757	1012	1.3F		
	1355	1813	1.4E		1321	1611	1.2E		1417	1845	1.3E		1339	1630	1.2E		
	2037	2351	1.2F		2009	2220	1.2F		2103				2033	2241	1.2F		
12 M	0224	0642	1.2E	27	0144	0426	1.1E	12 W		0020	1.1F	27	0208	0450	1.0E		
	0857	1215	1.2F	Tu	0822	1039	1.3F		0252	0715	1.1E	Th	0850	1101	1.2F		
	1448	1913	1.3E		1406	1655	1.2E		0921	1242	1.1F		1429	1723	1.1E		
	2132				2059	2307	1.2F		1511	1944	1.3E		2128	2333	1.1F		
13 Tu	0051	0051	1.1F	28	0232	0513	1.0E	13 Th		0121	1.0F	28	0303	0548	1.0E		
	0321	0742	1.2E	W	0913	1128	1.3F		0350	0814	1.1E	F	0948	1154	1.1F		
	0951	1315	1.1F		1455	1745	1.2E		1019	1343	1.0F		1525	1826	1.1E		
	1544	2013	1.3E		2150	2358	1.2F		1607	2042	1.2E		2225				
14 W	0151	0151	1.0F	29	0326	0607	1.0E	14 F		0220	1.0F	29	0030	0100			
	0421	0842	1.1E	Th	1008	1220	1.2F		0450	0911	1.1E	Sa	0403	0701	0.9E		
	1050	1414	1.1F		1549	1844	1.1E		1119	1442	1.0F		1048	1254	1.0F		
	1642	2111	1.3E		2248				1706	2138	1.2E		1625	2056	1.1E		
15 Th	0250	0250	1.0F	30	0053	0712	1.0E	15 Sa		0317	1.0F	30	0139	0100			
	0524	0940	1.1E	F	0423	0712	1.0E		0551	1007	1.1E	Su	0506	0935	1.0E		
	1149	1512	1.0F		1107	1316	1.2F		1216	1538	1.0F		1149	1406	1.0F		
	1741	2208	1.3E		1646	1955	1.1E		1804	2232	1.3E		1729	2202	1.2E		
					2344							31	0022	0339	1.1F		
												M	0608	1035	1.2E		
													1249	1605	1.1F		
													1831	2258	1.3E		

Time meridian 75° W. 0000 is midnight. 1200 is noon.

At times of slack water before maximum ebb, the velocity actually averages 0.3 knot in a direction of 184° true.

BOSTON HARBOR (Deer Island Light), MASSACHUSETTS, 1983

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

NOVEMBER										DECEMBER									
	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack			Water	Current	Water	Current	Water	Current	Water	Current
Day	Time	Time	Vel.	Day	Time	Vel.	Day	Time	Day	h.m.	h.m.	Time	Vel.	Day	Time	Vel.	Day	h.m.	h.m.
	h.m.	h.m.	knots		h.m.	h.m.		h.m.											
1	0119	0440	1.2F	16	0144	0507	1.2F		1	0153	0518	1.3F		16	0148	0504		0015	1.1E
Tu	0708	1128	1.3E	W	0739	1158	1.2E		Th	0746	1204	1.4E	F	0739	1200	1.2E		0232	0542
	1347	1706	1.2F	1410	1728	1.2F			1426	1745	1.2F		1419	1730	1.2F		0824	1234	
	1931	2351	1.4E		1956				2013				2002				1504	1809	
2	0212	0534	1.3F	17	0017	1.2E			2	0027	0027	1.4E	17				0015	1.1E	
W	0805	1219	1.4E	Th	0228	0549	1.3F		F	0245	0608	1.3F	Sa	0232	0542		0232	0542	
	1441	1759	1.3F		0822	1239	1.3E			0839	1253	1.5E		0824	1234	1.3E		0908	1258
		2028			1454	1810	1.2F			1518	1835	1.3F		1504	1809	1.3F		2049	
3		0041	1.5E	18	0056	1.2E			3	0116	0116	1.4E	18				0041	1.2E	
Th	0304	0625	1.4F	F	0309	0627	1.3F		Sa	0334	0655	1.4F	Su	0318	0613		0613	1.4F	
	0858	1309	1.5E		0902	1316	1.3E			0929	1341	1.6E		0908	1258			1550	1843
	1533	1850	1.4F		1537	1847	1.3F			1607	1923	1.3F		1534	1.3F			2134	
4		0130	1.5E	19	0126	1.2E			4	0204	0204	1.4E	19				0059	1.2E	
F	0353	0712	1.5F	Sa	0350	0658	1.4F		Su	0421	0741	1.4F	M	0402	0642		0402	0642	
	0948	1357	1.6E		0941	1341	1.3E			1016	1428	1.6E		0953	1320	1.4E		1636	1913
	1623	1938	1.4F		1619	1918	1.3F			1653	2009	1.3F		1636	1913	1.4F		2220	
5		0219	1.5E	20	0131	1.2E			5	0252	0252	1.4E	20				0132	1.2E	
Sa	0441	0758	1.5F	Su	0431	0716	1.4F		M	0509	0826	1.4F	Tu	0449	0720		0449	0720	
	1036	1445	1.6E		1021	1347	1.3E			1101	1516	1.5E		1037	1356	1.4E		1721	1950
	1712	2026	1.4F		1701	1937	1.4F			1740	2056	1.3F		1721	1950	1.4F		2306	
6		0307	1.4E	21	0151	1.2E			6	0341	0341	1.3E	21				0211	1.2E	
Su	0529	0844	1.5F	M	0513	0742	1.5F		Tu	0556	0910	1.3F	W	0537	0802		0537	0802	
	1123	1534	1.5E		1102	1413	1.3E			1146	1604	1.4E		1123	1436	1.4E		1809	2031
	1801	2113	1.4F		1746	2007	1.4F			1828	2142	1.2F		1809	2031	1.4F		2353	
7		0358	1.4E	22	0224	1.2E			7	0017	0430	1.2E	22				0255	1.2E	
M	0618	0929	1.4F	Tu	0558	0821	1.5F		W	0642	0955	1.2F	Th	0627	0847		0627	0847	
	1210	1625	1.5E		1144	1448	1.3E			1230	1654	1.4E		1210	1521	1.3E		1859	2118
	1850	2202	1.3F		1830	2048	1.3F			1915	2228	1.2F		1859	2118	1.3F			
8	0039	0452	1.3E	23	0011	0302	1.1E		8	0103	0521	1.2E	23	0042	0344		0344	1.1E	
Tu	0708	1017	1.3F	W	0645	0903	1.4F		Th	0731	1040	1.1F	F	0718	0934		0718	0934	
	1257	1719	1.4E		1229	1528	1.3E			1316	1745	1.3E		1300	1611	1.2E		1950	2207
	1941	2254	1.2F		1919	2132	1.3F			2003	2317	1.1F		1950	2207	1.2F			
9	0129	0548	1.2E	24	0058	0347	1.1E		9	0150	0614	1.1E	24	0134	0441		0441	1.1E	
W	0759	1109	1.1F	Th	0736	0950	1.3F		F	0821	1129	1.0F	Sa	0812	1026		0812	1026	
	1346	1815	1.3E		1317	1615	1.2E			1403	1838	1.2E		1353	1712	1.2E		2044	2301
	2033	2349	1.1F		2010	2221	1.2F			2052				2044	2301	1.1F			
10	0221	0646	1.1E	25	0150	0438	1.0E		10	0008	0008	1.0F	25	0229	0647		0647	1.0E	
Th	0851	1207	1.0F	F	0830	1040	1.2F		Sa	0238	0707	1.0E	Su	0910	1123		0910	1123	
	1437	1913	1.2E		1409	1711	1.1E			0912	1224	1.0F		1450	1917	1.1E		2140	
		2128			2107	2313	1.1F			1453	1931	1.1E		2140					
11		0047	1.0F	26	0245	0541	0.9E		11	0101	0101	1.0F	26				0014	1.1F	
F	0315	0742	1.0E	Sa	0929	1135	1.1F		Su	0329	0801	1.0E	M	0327	0757		0327	0757	
	0948	1307	1.0F		1506	1823	1.1E			1007	1321	0.9F		1011	1316	1.0F		1550	2026
	1531	2009	1.2E		2203					1544	2025	1.1E		1550	2026	1.1E		2240	
12		0145	1.0F	27	0013	0218	1.0F		12	0154	0154	1.0F	27				0200	1.0F	
Sa	0411	0838	1.0E	Su	0345	0817	1.0E		M	0420	0853	1.0E	Tu	0427	0859		0427	0859	
	1043	1406	0.9F		1030	1239	1.0F			1059	1417	0.9F		1113	1434	1.0F		1653	2126
	1626	2104	1.2E		1608	2045	1.1E			1638	2117	1.0E		1653	2126	1.1E		2339	
	2318				2302					2323				2339					
13		0240	1.0F	28	0218	0218	1.0F		13	0246	0246	1.0F	28				0305	1.1F	
Su	0506	0933	1.1E	M	0447	0919	1.1E		Th	0511	0944	1.0E	W	0527	0957		0527	0957	
	1140	1502	0.9F		1132	1449	1.0F			1151	1510	1.0F		1215	1537	1.0F			
	1722	2157	1.2E		1711	2146	1.2E			1731	2206	1.0E		1756	2224	1.2E		1756	2224
14	0010	0333	1.0F	29	0002	0326	1.1F		14	0013	0335	1.1F	29	0038	0404		0404	1.1F	
M	0601	1024	1.1E	Tu	0549	1017	1.2E		W	0602	1033	1.1E	Th	0628	1053		0628	1053	
	1233	1555	1.0F		1233	1555	1.0F			1242	1600	1.0F		1314	1635	1.1F			
	1818	2247	1.2E		1814	2243	1.2E			1824	2253	1.1E		1859	2319	1.3E			
15	0059	0421	1.1F	30	0059	0425	1.2F		15	0101	0421	1.2F	30	0133	0459		0459	1.2F	
Tu	0653	1113	1.2E	W	0649	1112	1.3E		Th	0651	1118	1.2E	F	0726	1147		0726	1147	
	1323	1643	1.1F		1331	1652	1.1F			1331	1646	1.1F		1410	1729	1.2F		1959	
	1909	2335	1.2E		1915	2336	1.3E			1914	2336	1.1E		1959					
													31				0011	1.3E	
													Sa	0227	0550		0550	1.2F	
													0821	1237		1237	1.5E		
													1502	1820		1820	1.2F		
													2054						

Time meridian 75° W. 0000 is midnight. 1200 is noon.
At times of slack water before maximum ebb, the velocity actually averages 0.3 knot in a direction of 184° true.

CAPE COD CANAL (RR. Bridge), MASSACHUSETTS, 1983

F-Flood, Dir. 070° True E-Ebb, Dir. 250° True

JANUARY												FEBRUARY					
	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time		Slack Water Time	Maximum Current Time		Slack Water Time	Maximum Current Time		Day	h.m.	h.m.	knots		
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots		
Sa	0419	0118	4.8E	16	0137	4.1E		1	0240	4.8E	16	0230	4.3E				
	0718	4.6F		Su	0438	0733	3.9F	Tu	0545	0844	4.6F	W	0526	0822	4.1F		
	1029	1337	5.1E		1049	1349	4.5E		1158	1459	5.1E		1140	1447	4.5E		
	1646	1952	4.9F		1700	2003	4.2F		1811	2117	4.8F		1747	2048	4.3F		
	2322				2335												
Su	0511	0209	4.7E	17	0216	4.1E		2	0043	0329	4.7E	17	0015	0309	4.3E		
	0807	4.5F		M	0515	0810	3.9F	W	0635	0935	4.4F	Th	0603	0901	4.1F		
	1120	1427	5.1E		1126	1431	4.4E		1251	1549	4.8E		1218	1528	4.4E		
	1737	2045	4.9F		1737	2039	4.2F		1901	2207	4.6F		1826	2125	4.2F		
M	0015	0300	4.7E	18	0012	0258	4.1E	3	0133	0420	4.5E	18	0051	0352	4.2E		
	0604	0859	4.4F	Tu	0553	0847	3.9F	Th	0727	1029	4.2F	F	0644	0942	4.1F		
	1214	1519	5.0E		1204	1512	4.4E		1347	1643	4.6E		1301	1613	4.3E		
	1830	2138	4.7F		1815	2116	4.1F		1954	2259	4.3F		1908	2208	4.1F		
Tu	0109	0354	4.6E	19	0050	0341	4.0E	4	0225	0511	4.3E	19	0132	0439	4.1E		
	0659	0956	4.3F	W	0633	0928	3.8F	F	0823	1122	4.0F	Sa	0730	1030	4.0F		
	1311	1613	4.8E		1244	1555	4.3E		1447	1737	4.3E		1351	1703	4.1E		
	1926	2233	4.6F		1856	2158	4.0F		2049	2353	4.0F		1956	2255	3.9F		
W	0205	0449	4.4E	20	0131	0426	4.0E	5	0320	0607	4.1E	20	0219	0530	4.1E		
	0757	1055	4.1F	Th	0717	1013	3.8F	Sa	0922	1226	3.8F	Su	0823	1121	3.9F		
	1411	1709	4.6E		1329	1642	4.1E		1550	1835	4.0E		1451	1758	4.0E		
	2023	2333	4.3F		1940	2239	3.9F		2148				2051	2350	3.8F		
Th	0302	0547	4.3E	21	0214	0512	3.9E	6	0054	037F	3.7F	21	0314	0625	4.0E		
	0857	1159	3.9F	F	0805	1102	3.7F	Su	0417	0706	4.0E	M	0923	1226	3.8F		
	1515	1809	4.4E		1421	1733	4.0E		1023	1335	3.7F		1600	1857	3.9E		
	2123				2029	2330	3.9F		1655	1936	3.8E		2154	2250			
F	0035	0035	4.1F	22	0303	0603	3.9E	7	0201	036F	3.6F	22	0052	037F			
	0400	0644	4.2E	Sa	0858	1153	3.7F	M	0515	0804	3.9E	Tu	0417	0725	4.1E		
	1000	1305	3.8F		1521	1828	4.0E		1126	1449	3.7F		1030	1335	3.9F		
	1621	1909	4.2E		2124				1759	2035	3.7E		1713	2001	3.9E		
Sa	0140	0140	4.0F	23	0025	0025	3.8F	8	0308	035F	3.5F	23	0201	037F			
	0457	0743	4.1E	Su	0357	0658	4.0E	Tu	0611	0901	4.0E	W	0523	0828	4.3E		
	1102	1418	3.8F		0957	1255	3.7F		1224	1552	3.8F		1138	1445	4.1F		
	1725	2009	4.0E		1626	1926	3.9E		1857	2137	3.7E		1821	2105	4.1E		
Su	0242	0242	3.9F	24	0124	0124	3.8F	9	0048	0406	3.6F	24	0009	0308	3.9F		
	0551	0842	4.1E	M	0454	0756	4.1E	W	0703	0954	4.1E	Th	0627	0931	4.5E		
	1201	1521	3.9F		1059	1400	3.9F		1317	1641	3.9F		1242	1553	4.3F		
	1826	2108	4.0E		1734	2027	4.0E		1949	2227	3.8E		1922	2206	4.3E		
M	0022	0343	3.8F	25	0226	0226	3.9F	10	0138	0451	3.7F	25	0112	0412	4.1F		
	0643	0934	4.2E	Tu	0551	0855	4.3E	Th	0750	1043	4.2E	F	0726	1028	4.7E		
	1254	1619	4.0F		1201	1505	4.1F		1404	1728	4.0F		1341	1654	4.6F		
	1921	2203	4.0E		1838	2127	4.1E		2035	2313	3.9E		2018	2301	4.5E		
Tu	0115	0432	3.8F	26	0028	0327	4.0F	11	0223	0532	3.8F	26	0208	0510	4.4F		
	0730	1023	4.3E	W	0648	0950	4.5E	F	0834	1129	4.3E	Sa	0821	1123	5.0E		
	1343	1706	4.1F		1301	1609	4.3F		1446	1805	4.1F		1435	1746	4.8F		
	2011	2248	4.0E		1938	2222	4.3E		2116	2354	4.1E		2109	2354	4.7E		
W	0202	0513	3.9F	27	0126	0427	4.2F	12	0303	0607	3.9F	27	0300	0602	4.6F		
	0815	1106	4.3E	Th	0742	1047	4.8E	Sa	0914	1208	4.4E	Su	0912	1213	5.1E		
	1427	1747	4.1F		1357	1706	4.6F		1524	1837	4.2F		1526	1836	4.9F		
	2057	2336	4.0E		2033	2317	4.5E		2155				2157				
Th	0244	0548	3.9F	28	0222	0522	4.4F	13	0033	042E	4.2E	28	0042	049E			
	0856	1149	4.4E	F	0835	1138	5.0E	Su	0340	0640	4.0F	M	0349	0651	4.7F		
	1508	1824	4.2F		1450	1800	4.8F		0952	1248	4.5E		1002	1303	5.2E		
	2139				2125				1601	1906	4.3F		1614	1922	5.0F		
F	0018	0018	4.1E	29	0011	0411	4.7E	14	0112	042E	4.2E						
	0324	0627	3.9F	Sa	0314	0613	4.5F	M	0415	0714	4.1F						
	0935	1231	4.5E		0926	1229	5.1E		1028	1327	4.6E						
	1546	1857	4.2F		1541	1850	4.9F		1636	1939	4.3F						
Sa	0058	041E		30	0101	0408		15	0150	043E							
	0402	0700	3.9F	Su	0405	0704	4.6F	Tu	0450	0747	4.1F						
	1013	1310	4.5E		1016	1320	5.2E		1104	1406	4.6E						
	1623	1928	4.2F		1632	1939	5.0F		1711	2011	4.3F						
	2257				2305				2340								
	31				0151	048E											
	M	0455	0755		4.7F												
		1107	1409		5.2E												
		1721	2029		4.9F												
		2354															

Time meridian 75° W. 0000 is midnight. 1200 is noon.

CAPE COD CANAL (RR. Bridge), MASSACHUSETTS, 1983

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F-Flood, Dir. 070° True E-Ebb, Dir. 250° True

MARCH

APRIL

Slack Water Time	Maximum Current Time Vel.									
Day	h.m.	Day	h.m.	Day	h.m.	Day	h.m.			
1	0129	4.9E	16	0122	4.5E	1	0234	4.8E		
Tu	0436	4.7F	W	0423	4.3F	F	0541	4.5F		
1051	1349	5.1E		1040	1339	4.6E	1208	1459		
				1643	1942	4.4F	1805	2103		
	2328			2307				2348		
2	0215	4.9E	17	0200	4.5E	2	0023	0317		
W	0522	4.7F	Th	0458	0756	Sa	0625	0929		
1140	1437	5.0E		1117	1418	4.6E	1257	1544		
				1720	2019	4.4F	1850	2145		
	1747	4.7F		2341				2117		
3	0013	0303	4.8E	18	0240	4.5E	3	0107	0404	
Th	0608	0909	4.5F	F	0535	0835	Su	0712	1015	
1229	1523	4.8E		1156	1500	4.5E	1349	1633		
				1759	2056	4.3F	1938	2232		
	1834	2135	4.5F					1914		
4	0058	0349	4.6E	19	0017	0323	4.4E	4	0156	0455
F	0656	0957	4.3F	Sa	0617	0918	M	0804	1108	
1321	1613	4.5E		1240	1545	4.4E	1447	1727		
				1842	2139	4.1F	2032	2327		
	1922	2223	4.1F					2014		
5	0146	0437	4.3E	20	0057	0410	4.3E	5	0252	0550
Sa	0746	1049	4.0F	Su	0703	1005	4.2F	Tu	0901	1209
1417	1705	4.1E		1332	1636	4.2E		1549	1826	
				1931	2227	3.9F		2133		
	2013	2311	3.8F						2122	
6	0238	0530	4.1E	21	0146	0500	4.2E	6	0028	0228
Su	0841	1145	3.8F	M	0757	1100	4.1F	W	0354	0647
1518	1801	3.8E		1434	1735	4.0E		1004	1319	
				2028	2324	3.8F		1652	1927	
	2109							2239		
7	0009	3.5F	22	0244	0559	4.1E	7	0141	3.1F	
M	0334	0625	3.9E	Tu	0900	1204	4.0F	Th	0457	0748
0942	1253	3.6F		1545	1835	3.9E		1107	1433	
				2134				1751	2026	
	1623	1900	3.6E					2341		
	2212								2342	
8	0114	3.3F	23	0029	0229	3.6F	8	0248	0248	
Tu	0435	0725	3.8E	W	0352	0702	4.2E	F	0557	0846
1046	1408	3.5F		1009	1317	4.0F		1205	1530	
				1658	1942	3.9E		1843	2121	
	1728	2001	3.5E		2246				3.7E	
	2317								1845	
9	0228	3.2F	24	0141	0141	3.6F	9	0035	0345	
W	0536	0826	3.8E	Th	0504	0807	4.3E	Sa	0649	0940
1149	1521	3.6F		1119	1432	4.1F		1256	1615	
				1806	2049	4.1E		1929	2210	
	1827	2102	3.6E		2356				3.9E	
10	0018	0333	3.4F	25	0255	0255	3.8F	10	0122	0431
Th	0632	0924	3.9E	F	0611	0911	4.5E	Su	0736	1025
1245	1615	3.8F		1226	1543	4.3F		1341	1654	
				1906	2149	4.3E		2011	2253	
	1919	2156	3.7E					4.2E		
11	0110	0424	3.6F	26	0058	0402	4.1F	11	0203	0506
F	0723	1015	4.1E	Sa	0712	1009	4.7E	M	0819	1110
1334	1658	3.9F		1325	1640	4.6F		1422	1729	
				1959	2244	4.5E		2049	2333	
	2006	2244	3.9E					4.4E		
12	0156	0507	3.7F	27	0153	0457	4.4F	12	0241	0543
Sa	0808	1100	4.3E	Su	0807	1104	4.9E	Tu	0859	1152
1417	1733	4.1F		1418	1733	4.7F		1500	1803	
				2048	2336	4.8E		2124		
	2047	2326	4.1E						2150	
13	0236	0542	3.9F	28	0243	0549	4.6F	13	0014	0014
Su	0849	1142	4.4E	M	0858	1155	5.0E	W	0317	0618
1456	1808	4.2F		1508	1818	4.8F		0937	1232	
				2134				1537	1836	
	2124							4.4F		
14	0005	4.3E	29	0021	0021	4.9E	14	0053	0053	
M	0313	0614	4.1F	Tu	0330	0634	4.7F	Th	0354	0654
0927	1222	4.6E		0947	1241	5.1E		1016	1313	
				1554	1901	4.8F		1615	1912	
	1533	1837	4.3F		2217				2233	
	2200								2230	
15	0045	4.4E	30	0107	0107	4.9E	15	0131	0131	
Tu	0348	0647	4.2F	W	0415	0719	4.7F	F	0431	0733
1004	1301	4.6E		1034	1327	5.0E		1056	1354	
				1638	1941	4.7F		1654	1949	
	1608	1909	4.4F		2259				4.4F	
	2234								2350	
			31		0150	4.9E				
			Th	0458	0802	4.7F				
				1121	1413	4.8E				
				1722	2022	4.5F				
				2341						

Time meridian 75° W. 0000 is midnight. 1200 is noon.

CAPE COD CANAL (RR. Bridge), MASSACHUSETTS, 1983

F-Flood, Dir. 070° True E-Ebb, Dir. 250° True

MAY										JUNE									
	Slack Water Time	Maximum Current Vel.																	
Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m.	Day	h.m. knots	Day	h.m. knots	Day	h.m.	Day	h.m. knots					
Su	0248	4.5E	16	0237	4.8E	1	0048	0354	4.2E	16	0058	0407	4.8E						
	0558	4.2F	M	0539	4.6F	W	0700	1002	3.9F	Th	0715	1023	4.6F						
	1234	4.1E		1217	4.4E		1346	1627	3.7E		1359	1645	4.4E						
	1820	3.8F		1807	2100	4.2F		1925	2216	3.4F		1948	2242	4.1F					
M	0033	0335	4.3E	17	0015	0328	4.7E	2	0136	0443	4.0E	17	0200	0505	4.6E				
	0642	0946	4.0F	Tu	0632	0938	4.5F	Th	0748	1052	3.8F	F	0815	1124	4.4F				
	1323	1605	3.9E		1314	1604	4.3E		1437	1717	3.7E		1458	1743	4.3E				
	1906	2157	3.6F		1902	2154	4.0F		2017	2309	3.3F		2051	2348	4.0F				
Tu	0119	0423	4.1E	18	0110	0423	4.6E	3	0231	0534	3.9E	18	0305	0604	4.5E				
	0730	1033	3.8F	W	0729	1036	4.4F	F	0840	1147	3.7F	Sa	0917	1228	4.3F				
	1417	1656	3.7E		1415	1702	4.2E		1529	1810	3.6E		1558	1843	4.3E				
	1957	2249	3.3F		2003	2255	3.9F		2113				2155						
W	0212	0514	3.9E	19	0213	0522	4.5E	4	0329	0006	3.3F	19	0412	0056	3.9F				
	0823	1130	3.6F	Th	0831	1141	4.3F	Sa	0935	0629	3.8E	Su	0707	0707	4.4E				
	1514	1750	3.5E		1520	1804	4.1E		1240	1622	3.7F		1020	1334	4.2F				
	2055	2348	3.2F		2110				1905	2210	3.7E		1656	1943	4.3E				
Th	0312	0610	3.8E	20	0004	0004	3.8F	5	0104	0104	3.3F	20	0207	0207	4.0F				
	0921	1230	3.5F	F	0322	0625	4.4E	Su	0428	0725	3.9E	M	0517	0806	4.3E				
	1613	1848	3.5E		0937	1250	4.2F		1030	1335	3.7F		1121	1439	4.2F				
	2157				1624	1907	4.1E		1713	1957	3.8E		1752	2039	4.3E				
F	0051	3.1F		21	0116	0116	3.8F	6	0201	0201	3.5F	21	0311	0311	4.1F				
	0415	0708	3.8E	Sa	0431	0728	4.4E	M	0525	0818	4.0E	Tu	0619	0905	4.3E				
	1021	1334	3.6F		1043	1400	4.3F		1123	1429	3.8F		1220	1534	4.2F				
	1709	1947	3.6E		1724	2009	4.2E		1800	2049	4.0E		1844	2133	4.4E				
Sa	0157	3.3F		22	0228	0228	4.0F	7	0255	0255	3.7F	22	0052	0406	4.2F				
	0515	0806	3.8E	Su	0537	0831	4.4E	Tu	0618	0911	4.1E	W	0716	1001	4.3E				
	1119	1433	3.7F		1146	1504	4.3F		1214	1518	3.9F		1313	1627	4.1F				
	1800	2042	3.8E		1820	2108	4.4E		1845	2137	4.2E		1932	2224	4.5E				
Su	0255	3.5F		23	0021	0331	4.1F	8	0044	0346	3.9F	23	0142	0501	4.3F				
	0609	0858	4.0E	M	0638	0930	4.5E	W	0709	0958	4.2E	Th	0809	1050	4.3E				
	1211	1524	3.8F		1244	1559	4.4F		1303	1606	4.1F		1402	1713	4.1F				
	1847	2131	4.0E		1911	2159	4.5E		1928	2225	4.4E		2017	2310	4.5E				
M	0041	0343	3.7F	24	0115	0426	4.3F	9	0130	0432	4.2F	24	0229	0544	4.3F				
	0659	0950	4.2E	Tu	0734	1022	4.5E	Th	0757	1048	4.4E	F	0857	1139	4.2E				
	1259	1609	4.0F		1336	1648	4.4F		1350	1648	4.2F		1448	1754	4.0F				
	1930	2216	4.2E		1958	2248	4.6E		2010	2309	4.6E		2100	2354	4.5E				
Tu	0125	0425	4.0F	25	0203	0516	4.4F	10	0216	0520	4.4F	25	0312	0625	4.3F				
	0744	1035	4.3E	W	0826	1112	4.6E	F	0845	1135	4.5E	Sa	0943	1221	4.2E				
	1343	1648	4.2F		1424	1733	4.4F		1437	1736	4.3F		1530	1833	4.0F				
	2009	2300	4.4E		2042	2334	4.7E		2053	2355	4.8E		2141						
W	0206	0507	4.2F	26	0249	0601	4.5F	11	0301	0607	4.6F	26	0037	0456					
	0828	1120	4.5E	Th	0914	1159	4.5E	Sa	0933	1223	4.6E	Su	0353	0705	4.3F				
	1425	1727	4.3F		1509	1814	4.3F		1523	1820	4.4F		1026	1305	4.1E				
	2047	2341	4.6E		2124				2136				1610	1909	3.9F				
Th	0246	0546	4.4F	27	0017	0017	4.7E	12	0041	0041	4.9E	27	0118	0456					
	0910	1203	4.6E	F	0331	0642	4.5F	Su	0348	0653	4.7F	M	0432	0742	4.2F				
	1506	1804	4.4F		1000	1243	4.4E		1022	1311	4.6E		1108	1346	4.1E				
	2124				1551	1851	4.2F		1611	1908	4.4F		1649	1944	3.8F				
F	0022	4.7E		28	0100	0100	4.7E	13	0130	0130	4.9E	28	0159	0446					
	0326	0627	4.5F	Sa	0412	0719	4.4F	M	0436	0741	4.7F	Tu	0511	0817	4.2F				
	0953	1247	4.6E		1044	1326	4.3E		1113	1402	4.6E		1149	1428	4.0E				
	1547	1845	4.4F		1632	1927	4.1F		1701	1957	4.4F		1728	2021	3.8F				
Sa	0105	4.8E		29	0141	0141	4.6E	14	0218	0218	4.9E	29	0240	0446					
	0408	0711	4.6F	Su	0453	0800	4.3F	Tu	0526	0832	4.7F	W	0551	0853	4.1F				
	1038	1333	4.6E		1128	1409	4.2E		1206	1453	4.5E		1230	1512	3.9E				
	1631	1926	4.4F		1712	2008	3.9F		1753	2048	4.3F		1809	2100	3.7F				
Su	0151	4.8E		30	0222	0222	4.5E	15	0001	0312	4.9E	30	0020	0325	4.3E				
	0452	0756	4.6F	M	0533	0837	4.2F	W	0619	0926	4.7F	Th	0631	0936	4.0F				
	1125	1419	4.5E		1212	1453	4.0E		1301	1548	4.5E		1312	1555	3.9E				
	1717	2013	4.3F		1753	2046	3.7F		1849	2144	4.2F		1852	2145	3.6F				
	2326			31	0003	0307	4.3E												
				Tu	0616	0919	4.0F												
					1258	1538	3.9E												
					1837	2129	3.6F												

Time meridian 75° W. 0000 is midnight. 1200 is noon.

CAPE COD CANAL (RR. Bridge), MASSACHUSETTS, 1983

25

F-Flood, Dir. 070° True E-Ebb, Dir. 250° True

JULY

AUGUST

	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.			
Day	h.m.	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	h.m.			
1	0103	0410	4.1E	16	0142	0442	4.7E	1	0203	0514	4.0E	16	0324	0610	4.1E
F	0715	1017	3.9F	Sa	0754	1102	4.5F	M	0809	1111	3.8F	Tu	0923	1229	3.9F
1357	1642	3.8E		1430	1717	4.4E		1441	1740	3.9E		1550	1840	4.1E	
	1939	2229	3.6F		2026	2325	4.1F		2036	2332	3.7F		2157		
2	0151	0459	4.0E	17	0244	0540	4.5E	2	0258	0607	3.9E	17		0108	3.8F
Sa	0801	1104	3.8F	Su	0852	1159	4.3F	Tu	0901	1200	3.7F	W	0430	0711	3.9E
1443	1731	3.8E		1527	1813	4.3E		1532	1835	3.9E		1025	1338	3.7F	
	2028	2318	3.5F		2127				2132				1649	1939	4.0E
													2300		
3	0244	0550	4.0E	18	0030	0400		3	0029	037F		18		0222	3.8F
Su	0850	1153	3.8F	M	0349	0640	4.3E	W	0401	0700	3.9E	Th	0535	0812	3.8E
1532	1822	3.8E		0953	1303	4.1F		0957	1257	3.7F		1129	1445	3.6F	
	2121			1625	1912	4.2E		1626	1930	4.0E		1747	2038	4.0E	
				2229				2231							
4	0015	3.5F		19	0139	3.9F		4	0131	3.8F		19	0001	0327	3.8F
M	0340	0642	3.9E	Tu	0454	0740	4.1E	Th	0506	0800	3.9E	F	0635	0913	3.8E
0943	1245	3.7F		1054	1408	3.9F		1057	1358	3.7F		1228	1546	3.6F	
	1622	1913	3.9E		1721	2010	4.2E		1723	2027	4.1E		1842	2134	4.1E
	2216			2330				2332							
5	0110	3.6F		20	0248	4.0F		5	0236	3.9F		20	0057	0424	3.9F
Tu	0440	0737	3.9E	W	0558	0839	4.0E	F	0610	0858	4.0E	Sa	0729	1007	3.8E
1037	1340	3.8F		1155	1510	3.9F		1158	1458	3.9F		1321	1636	3.7F	
	1712	2007	4.0E		2108	2408	4.2E		2120	2420	4.4E		1932	2225	4.2E
	2311														
6	0209	3.7F		21	0028	0349	4.0F	6	0032	0337	4.2F	21	0146	0513	4.1F
W	0539	0833	4.0E	Th	0657	0937	4.0E	Sa	0710	0956	4.2E	Su	0817	1056	3.9E
1133	1433	3.8F		1251	1605	3.8F		1258	1557	4.0F		1407	1717	3.8F	
	1802	2100	4.2E		1907	2200	4.3E		1914	2219	4.6E		2017	2311	4.3E
7	0006	0307	3.9F	22	0121	0443	4.1F	7	0129	0438	4.4F	22	0230	0550	4.1F
Th	0636	0927	4.1E	F	0751	1031	4.0E	Su	0806	1051	4.4E	M	0859	1139	4.1E
1227	1528	4.0F		1342	1654	3.8F		1354	1654	4.3F		1448	1754	3.9F	
	1851	2151	4.4E		1954	2249	4.3E		2007	2313	4.9E		2058	2353	4.4E
8	0058	0403	4.2F	23	0209	0532	4.1F	8	0222	0532	4.7F	23	0309	0621	4.2F
F	0731	1019	4.3E	Sa	0839	1117	4.0E	M	0858	1144	4.6E	Tu	0939	1217	4.2E
1320	1619	4.1F		1428	1739	3.9F		1447	1745	4.4F		1525	1827	4.0F	
	1939	2241	4.6E		2039	2333	4.4E		2059				2137		
9	0150	0455	4.4F	24	0252	0609	4.2F	9	0004	5.0E		24		0031	4.5E
Sa	0824	1110	4.4E	Su	0924	1200	4.1E	Tu	0314	0621	4.9F	W	0346	0654	4.2F
1412	1712	4.3F		1510	1814	3.9F		0949	1234	4.8E		1015	1256	4.2E	
	2027	2332	4.8E		2120				1538	1837	4.6F		1601	1900	4.0F
	2150								2150				2214		
10	0240	0546	4.6F	25	0015	0456	4.5E	10	0055	5.2E		25		0110	4.5E
Su	0916	1202	4.6E	M	0333	0648	4.2F	W	0405	0713	5.0F	Th	0421	0726	4.3F
1503	1802	4.4F		1005	1241	4.1E		1038	1325	4.8E		1050	1334	4.3E	
	2115			1549	1847	3.9F		1628	1928	4.7F		1635	1932	4.1F	
	2204			2159				2240				2250			
11	0023	5.0E		26	0056	4.5E		11	0144	5.2E		26		0149	4.5E
M	0330	0637	4.8F	Tu	0411	0719	4.2F	Th	0455	0802	5.0F	F	0456	0756	4.3F
1006	1253	4.6E		1044	1322	4.1E		1126	1414	4.9E		1124	1412	4.3E	
	1554	1851	4.5F		1626	1923	3.9F		1718	2017	4.7F		1710	2007	4.1F
	2204			2237				2332				2326			
12	0112	5.1E		27	0136	4.5E		12	0234	5.1E		27		0228	4.5E
Tu	0421	0727	4.9F	W	0448	0752	4.2F	F	0545	0850	4.9F	Sa	0531	0831	4.2F
1057	1344	4.7E		1122	1402	4.1E		1215	1503	4.8E		1158	1452	4.2E	
	1645	1942	4.5F		1703	1959	3.9F		1808	2108	4.6F		1746	2044	4.1F
	2255			2315				2332				2326			
13	0203	5.1E		28	0215	4.4E		13	0025	0325	5.0E	28	0003	0309	4.4E
W	0512	0818	4.9F	Th	0525	0827	4.2F	Sa	0635	0941	4.7F	Su	0609	0906	4.1F
1149	1435	4.7E		1159	1443	4.1E		1305	1554	4.7E		1233	1533	4.2E	
	1737	2035	4.5F		1740	2034	3.9F		1901	2201	4.4F		1825	2123	4.0F
	2348			2353				2332				2326			
14	0254	5.0E		29	0257	4.4E		14	0121	0418	4.7E	29	0044	0354	4.2E
Th	0604	0911	4.8F	F	0602	0903	4.1F	Su	0728	1033	4.4F	M	0649	0947	4.0F
1241	1528	4.6E		1236	1522	4.1E		1358	1646	4.5E		1311	1618	4.1E	
	1831	2129	4.4F		1819	2115	3.8F		1956	2258	4.2F		1909	2208	3.9F
	2226	2226	4.3F		1901	2154	3.8F		2054	2359	4.0F		1958	2258	3.8F
				31	0115	0425	4.2E					31	0227	0533	3.9E
				Su	0723	1021	3.9F					W	0826	1123	3.7F
				1356	1652	3.9E						1447	1800	4.0E	
				1946	2239	3.7F						2055	2357	3.8F	

Time meridian 75° W. 0000 is midnight. 1200 is noon.

CAPE COD CANAL (RR. Bridge), MASSACHUSETTS. 1983

F-Flood, Dir. 070° True E-Ebb, Dir. 250° True

SEPTEMBER										OCTOBER									
Slack Water Time	Maximum Current Time																		
Day	h.m.																		
1 Th	0332	0632	3.8E	16	0151	3.6F		1 Sa	0042	0712	3.8E	16	0220	0535	0810	0220	3.6F		
	0925	1222	3.6F	F	0509	0744	3.6E		0426	1013	1309	3.6F	1127	1439	1534	1127	3.3F		
	1547	1857	4.0E		1100	1413	3.3F		1013	1630	1938	4.2E	1740	2030	2123	1740	3.9E		
	2159				1716	2007	3.9E		1630	2246	2330		2349			2349			
2 F	0106	0443	3.8F	17	0302	0845	3.7F	2	0157	0534	0817	4.0F	17	0321	0627	0905	0321	3.7F	
	0733	1031	3.8E	Sa	0609	1202	3.6E		0157	1123	1421	3.7F	M	0918	1221	1534	0918	3.7E	
	1328	1652	3.6F		1518	2105	3.4F		1123	1738	2041	4.4E		1307	1834	2123	1307	3.5F	
	2306	2001	4.1E		1814				1738	2352				1307	1921	2212	1307	4.0E	
3 Sa	0212	0551	3.9F	18	0027	0358	3.8F	3	0305	0635	0918	4.2F	18	0040	0712	0953	0040	3.9F	
	0836	1138	4.0E	Su	0702	0940	3.8E		0305	1226	1527	4.0F	Tu	1307	1616	1921	1307	4.0E	
	1435	1756	3.8F		1255	1611	3.6F		1226	1841	2140	4.6E		1307	1921	2212	1307	3.7F	
	2100	2105	4.4E		1905	2158	4.1E		1841	2326				1307	1921	2212	1307	4.2E	
4 Su	0011	0052	4.2F	19	0117	0441	4.0F	4	0053	0729	1015	4.5F	19	0125	0754	1038	0125	4.1F	
	0652	0937	4.2E	M	0748	1027	3.9E		0053	1323	1624	4.3F		1348	1657	2004	1348	4.2E	
	1540	1856	4.0F		1340	1654	3.8F		1323	1937	2235	4.9E		2235	2554	2253	2235	4.4E	
	2158		4.6E		1952	2243	4.3E		1937	2326				2235	2554	2253	2235	4.4E	
5 M	0111	0748	4.5F	20	0201	0520	4.1F	5	0147	0818	1107	4.7F	20	0206	0831	1117	0206	4.2F	
	1034	1338	4.4E	Tu	0829	1110	4.1E		0147	1414	1717	4.6F		1117	1426	1729	1117	4.3E	
	1640	1952	4.3F		1421	1729	3.9F		1414	2029	2326	5.0E		1426	1729	2044	1426	4.1F	
	2254		4.9E		2033	2326	4.4E		2029	2326				2326	2554	2334	2326	4.5E	
6 Tu	0206	0839	4.7F	21	0240	0553	4.2F	6	0238	0905	1154	4.8F	21	0243	0907	1154	0243	4.3F	
	1126	1431	4.7E	W	0907	1148	4.3E		0238	1502	1805	4.8F		1154	1502	1802	1154	4.5E	
	1733	2044	4.5F		1457	1800	4.1F		1502	2119				1802	2122	2212	1802	4.3F	
	2345		5.1E		2112				2119					2122			2122		
7 W	0257	0928	4.9F	22	0005	0623	4.5E	7	0016	0326	0631	5.1E	22	0014	0320	0621	0014	4.5E	
	1215	1520	4.9E	Th	0316	0942	4.3F		0016	0949	1240	5.0E		0631	0941	1234	0631	4.3F	
	1821	2135	4.7F		1227	1532	4.4E		0016	1548	1853	4.8F		1240	1537	1837	1240	4.6E	
					1832	2149	4.2F		1548	2208				1853	2159	2238	1853	4.4F	
8 Th	0034	0346	5.2E	23	0043	0351	4.6E	8	0102	0412	0714	5.1E	23	0054	0356	0654	0054	4.6E	
	0653	1014	5.0F	F	0275	1016	4.3F		0102	1032	1325	5.0E		0714	1014	1311	0714	4.6E	
	1303	1608	5.0E		1304	1606	4.4E		1032	1633	1937	4.8F		1325	1613	1912	1325	4.4F	
	1910	2225	4.8F		1905	2225	4.3F		1633	2257				1937	2238	2238	1937	4.4F	
9 F	0123	0434	5.2E	24	0122	0426	4.6E	9	0149	0458	0757	4.9E	24	0134	0433	0729	0134	4.5E	
	0739	1100	4.9F	Sa	0725	1048	4.3F		0149	1116	1411	4.9E		0757	1048	1352	0757	4.3F	
	1349	1656	5.0E		1342	1640	4.4E		1116	1718	2021	4.7F		1411	1650	1951	1411	4.6E	
	1958	2314	4.8F		1938	2300	4.3F		1718	2346				2021	2318	2318	2021	4.4F	
10 Sa	0212	0522	5.1E	25	0200	0501	4.5E	10	0234	0543	0843	4.7E	25	0216	0513	0809	0216	4.4E	
	0824	1146	4.8F	Su	0758	1121	4.3F		0234	1200	1457	4.7E		0843	1124	1435	0843	4.2F	
	1437	2046	4.9E		1421	1716	4.4E		1200	1804	2109	4.4F		1457	1732	2034	1457	4.5E	
			4.7F		2016	2338	4.3F		1804	2346				2109	2318	2318	2109	4.4F	
11 Su	0005	0610	4.9E	26	0240	0539	4.4E	11	0037	0630	0926	4.1F	26	0003	0556	0852	0003	4.3E	
	0909	1233	4.6F	M	0835	1155	4.2F		0037	1246	1544	4.5E		0926	1205	1519	0926	4.1F	
	1526	1832	4.7E		1500	1755	4.3E		1246	1853	2157	4.2F		1544	1818	2123	1544	4.4E	
	2135		4.5F		2055	2338	4.2F		1853	2157				2157	2318	2318	2157	4.3F	
12 M	0059	0659	4.6E	27	0020	0619	4.3F	12	0131	0720	1015	4.1E	27	0055	0645	0939	0055	4.1E	
	1000	1322	4.3F	Tu	0916	1233	4.0F		0131	1337	1634	4.2E		0720	1253	1610	0720	3.9F	
	1614	1924	4.5E		1545	1839	4.2E		1337	1946	2253	3.9F		1634	1911	2217	1634	4.3E	
	2228		4.2F		2140	2140	4.1F		1946	2253				2253	2554	2217	2217	4.2F	
13 Tu	0156	0752	4.3E	28	0109	0706	4.1E	13	0230	0817	1111	3.8E	28	0154	0742	1036	0154	4.0E	
	1052	1415	3.9F	W	1001	1318	3.9F		0230	1434	1730	4.0E		1111	1351	1711	1111	3.7F	
	1708	2020	4.2E		1363	1930	4.1E		1434	2044	2357	3.7F		1730	2011	2318	1730	4.2E	
	2327		3.9F		2233	2233	4.0F		2044	2357				2357	2554	2318	2318	4.1F	
14 W	0258	0851	3.9E	29	0207	0800	3.9E	14	0333	0919	1215	3.6E	29	0301	0848	1143	0301	3.9E	
	0642	1150	3.6F	Th	1055	1413	3.7F		0333	1536	1829	3.8E		1215	1459	1812	1215	3.6F	
	1259	1512	4.0E		1730	2029	4.1E		1536	2148	2251			1829	2118	2227	1829	4.2E	
	1905	2121			2334	2334	3.9F		2148	2251				2251	2554	2227	2227	4.3E	
15 Th	0036	0403	3.7F	30	0314	0903	3.8E	15	0108	0436	0710	3.6F	30	0029	0515	0757	0029	4.0F	
	0642	0954	3.7E	F	1158	1519	3.6F		0108	1025	1330	3.2F		0710	0958	1253	0710	3.9E	
	1259	1614	3.4F		1833	2136	4.1E		1025	1640	1931	3.8E		1330	1612	1916	1330	3.6F	
	1905	2226	3.9E		2136				1640	2251				1931	2227	2333	1931	4.3E	

Time meridian 75° W., 0000 is midnight, 1200 is noon.

CAPE COD CANAL (RR. Bridge), MASSACHUSETTS, 1983

27

F-Flood, Dir. 070° True E-Ebb, Dir. 250° True

NOVEMBER												DECEMBER					
	Slack Water Time	Maximum Current Time	Vel.		Slack Water time	Maximum Current Time	Vel.		Slack Water Time	Maximum Current Time	Vel.		Slack Water Time	Maximum Current Time	Vel.		
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots		
1	0249	4.3F		16	0311	3.8F		1	0012	0326	4.4F	16	0305	3.8F			
Tu	0613	0858	4.3E	W	0631	0914	3.9E	Th	0642	0930	4.5E	F	0630	0920	4.1E		
	1210	1514	4.1F		1227	1531	3.7F		1246	1555	4.3F		1229	1531	3.8F		
	1825	2121	4.6E		1845	2131	4.1E		1906	2156	4.6E		1855	2143	4.1E		
2	0034	0347	4.6F	17	0044	0356	3.9F	2	0108	0419	4.4F	17	0047	0350	3.9F		
W	0706	0953	4.6E	Th	0714	0959	4.2E	F	0731	1022	4.7E	Sa	0713	1006	4.3E		
	1305	1612	4.4F		1311	1616	3.9F		1337	1648	4.5F		1316	1619	4.0F		
	1922	2216	4.8E		1930	2219	4.2E		2000	2248	4.6E		1943	2231	4.2E		
3	0128	0441	4.6F	18	0127	0435	4.1F	3	0159	0508	4.4F	18	0134	0435	4.1F		
Th	0755	1044	4.8E	F	0753	1044	4.3E	Sa	0817	1113	4.8E	Su	0755	1051	4.5E		
	1356	1703	4.6F		1351	1654	4.1F		1425	1736	4.6F		1400	1703	4.3F		
	2015	2307	4.9E		2013	2303	4.4E		2051	2336	4.6E		2030	2317	4.4E		
4	0218	0526	4.7F	19	0209	0510	4.2F	4	0247	0553	4.4F	19	0219	0516	4.2F		
F	0841	1133	4.9E	Sa	0831	1123	4.5E	Su	0901	1155	4.8E	M	0836	1137	4.7E		
	1443	1751	4.7F		1430	1733	4.3F		1510	1821	4.6F		1444	1748	4.5F		
	2105	2355	4.9E		2055	2346	4.5E		2139				2115				
5	0306	0610	4.7F	20	0248	0547	4.3F	5	0023	0023	4.5E	20	0003	0003	4.5E		
Sa	0924	1218	5.0E	Su	0907	1204	4.6E	M	0331	0634	4.3F	Tu	0304	0602	4.3F		
	1528	1835	4.7F		1509	1810	4.4F		0943	1240	4.8E		0917	1221	4.8E		
	2153				2136				1554	1904	4.5F		1528	1833	4.6F		
6	0041	0481		21	0027	0456		6	0108	0446		21	0049	0456			
Su	0350	0652	4.6F	M	0328	0626	4.3F	Tu	0414	0712	4.2F	W	0349	0645	4.3F		
	1006	1301	4.9E		0943	1245	4.7E		1024	1321	4.7E		0959	1307	4.9E		
	1612	1918	4.7F		1548	1851	4.5F		1636	1945	4.4F		1613	1919	4.7F		
	2240				2218				2311				2202				
7	0127	047E		22	0110	0456		7	0152	043E		22	0137	0456			
M.	0434	0733	4.4F	Tu	0409	0707	4.3F	W	0455	0753	4.0F	Th	0436	0729	4.4F		
	1048	1345	4.8E		1020	1328	4.7E		1105	1405	4.6E		1044	1356	4.9E		
	1655	2001	4.6F		1630	1932	4.6F		1718	2024	4.3F		1700	2007	4.7F		
	2328				2303				2355				2338				
8	0213	045E		23	0155	045E		8	0235	0235	4.1E	23	0226	0226	4.5E		
Tu	0518	0814	4.2F	W	0452	0746	4.2F	Th	0537	0831	3.9F	F	0525	0819	4.3F		
	1130	1428	4.6E		1101	1413	4.7E		1147	1450	4.4E		1132	1444	4.9E		
	1739	2045	4.4F		1714	2018	4.5F		1800	2104	4.1F		1750	2056	4.7F		
	2351																
9	0016	0259	4.2E	24	0243	044E		9	0041	0319	4.0E	24	0030	0317	4.5E		
W	0602	0859	3.9F	Th	0539	0835	4.2F	F	0621	0912	3.7F	Sa	0617	0912	4.2F		
	1214	1514	4.4E		1146	1500	4.6E		1231	1535	4.3E		1225	1535	4.8E		
	1825	2128	4.1F		1803	2109	4.5F		1844	2151	4.0F		1843	2148	4.6F		
10	0106	0348	4.0E	25	0044	0336	4.3E	10	0128	0407	3.8E	25	0125	0413	4.4E		
Th	0650	0942	3.7F	F	0631	0924	4.0F	Sa	0708	1001	3.5F	Su	0713	1007	4.1F		
	1301	1603	4.2E		1237	1555	4.6E		1319	1623	4.1E		1323	1632	4.7E		
	1914	2220	3.9F		1857	2202	4.4F		1931	2236	3.8F		1940	2247	4.5F		
11	0200	0439	3.7E	26	0142	0429	4.1E	11	0218	0458	3.7E	26	0222	0508	4.3E		
F	0742	1033	3.4F	Sa	0728	1022	3.9F	Su	0759	1050	3.4F	M	0813	1108	4.0F		
	1355	1656	4.0E		1337	1649	4.5E		1412	1715	3.9E		1427	1730	4.5E		
	2007	2315	3.7F		1956	2305	4.3F		2022	2327	3.7F		2040	2348	4.3F		
12	0258	0532	3.6E	27	0245	0530	4.1E	12	0310	0550	3.6E	27	0322	0609	4.3E		
Sa	0840	1131	3.2F	Su	0832	1127	3.8F	M	0854	1147	3.3F	Tu	0916	1215	4.0F		
	1455	1753	3.8E		1444	1753	4.4E		1510	1808	3.8E		1535	1832	4.4E		
	2105				2100				2116				2143				
13	0017	036F		28	0011	042F		13	0023	0023	3.6F	28	0054	042F			
Su	0356	0633	3.5E	M	0349	0633	4.1E	Tu	0403	0644	3.7E	W	0422	0709	4.3E		
	0942	1237	3.1F		0940	1236	3.8F		0951	1245	3.3F		1022	1325	4.0F		
	1558	1851	3.8E		1555	1855	4.4E		1610	1905	3.8E		1643	1934	4.3E		
	2205				2207				2211				2247				
14	0123	036F		29	0119	042F		14	0118	036F		29	0200	041F			
M.	0452	0730	3.6E	Tu	0451	0736	4.2E	W	0455	0738	3.7E	Th	0520	0809	4.3E		
	1043	1346	3.2F		1047	1348	3.9F		1047	1344	3.4F		1125	1433	4.0F		
	1659	1948	3.8E		1703	1959	4.4E		1708	1959	3.8E		1749	2036	4.3E		
	2303				2312				2306				2350				
15	0222	037F		30	0226	043F		15	0213	0213	3.7F	30	0301	041F			
Tu	0544	0823	3.7E	W	0549	0835	4.4E	Th	0544	0829	3.9E	F	0616	0908	4.4E		
	1138	1442	3.4F		1149	1456	4.1F		1140	1439	3.6F		1224	1539	4.2F		
	1754	2042	3.9E		1807	2058	4.5E		1803	2052	4.0E		1850	2134	4.3E		
	2356								2358								
													31	0048	0402	4.1F	
													Sa	0708	0959	4.5E	
													1319	1638	4.3F		
													1946	2229	4.3E		

Time meridian 75° W. 0000 is midnight. 1200 is noon.

POLLOCK RIP CHANNEL, MASSACHUSETTS, 1983

F-Flood, Dir. 035° True E-Ebb, Dir. 225° True

JANUARY										FEBRUARY										
	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.		
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	knots	
1	Sa	0402	0053	0712	1.9E	16	0435	0129	1.7E	Tu	0534	0225	0516	0209	1.9E	W	0516	0824	2.0F	
		1021	1307	2.0E		1050	1333	1.8E		1155	0852	1443	1140	1.9E			1421	1.9E		
		1618	1944	2.4F		1641	2010	2.2F		1752	0534	2121	1727	2.3F			2042	2.2F		
		2308		2326																
2	Su	0456	0145	0805	1.9E	17	M	0512	0203	1.7E	W	0627	0034	0946	0247	1.9E	Th	0553	0901	2.0F
		1115	1400	2.0E		1129	0824	1.8F		1251	0946	1537	1222	1.9E			1502	1.9E		
		1712	2039	2.3F		1718	0859	2.1F		1846	1140	2216	1807	2.2F			2119	2.1F		
3	M	0552	0002	0905	1.9E	18	Tu	0550	0242	1.8E	Th	0721	0127	1046	0049	1.9E		0633	0938	2.0F
		1212	1457	1.9E		1211	0859	1.8F		1348	1046	1633	1307	1.8E			1547	1.8E		
		1808	2137	2.3F		1757	1254	2.1F		1943	1149	2118	1851	2.0F			2202	2.0F		
4	Tu	0650	0057	1007	1.8E	19	W	0630	0045	1.8E	F	0817	0221	0507	0133	1.8E		0717	1026	1.9F
		1311	1557	1.8E		1254	0936	1.8F		1449	0817	1736	1358	1.6E			1636	1.7E		
		1907	2241	2.2F		1839	1533	2.1F		2042	1149	2158	1939	2.0F			2251	1.9F		
5	W	0750	0155	1113	1.8F	20	Th	0712	0128	1.8E	Sa	0318	0017	0607	0222	1.7E		0807	1119	1.8F
		1413	1659	1.7E		1342	1019	1.8F		0916	0607	1252	1454	1.6E			1730	1.6E		
		2008	2344	2.1F		1620	0936	1.7E		1551	0916	1946	2034	2.0F			2344	1.7F		
6	Th	0851	0253	1222	1.8F	21	F	0759	0213	1.7E	Su	0415	0120	0711	0316	1.6E		0903	1220	1.8F
		1518	1805	1.6E		1433	1106	1.8F		1017	0415	1354	1557	1.5E			1829	1.5E		
		2112				2108	1709	1.7E		1654	0711	1946	2136	1.4E						
7	F	0953	0051	0352	2.0F	22	Sa	0848	0302	1.7E	M	0513	0221	0812	0048	1.6F		0652	1066	1.6E
		1622	1914	1.6E		1528	1158	1.7F		1116	0513	1457	1006	1.5E			1329	1.7F		
		2216				2108	1804	1.6E		1755	0916	2052	1702	1.4E			1934	1.4E		
8	Sa	1054	0153	0747	2.0F	23	W	0942	0023	1.8F	Tu	0608	0321	0909	0157	1.5F		0518	0758	1.5E
		1725	2021	1.5E		1257	0630	1.6E		1211	0608	1550	1111	2.0F			1444	1.8F		
		2319				1626	0942	1.7F		1850	1211	2149	1807	1.5E			2044	1.4E		
9	Su	0546	0254	0851	1.9F	24	M	0447	0122	1.7F	W	0700	0044	1002	0313	1.6F		0620	0904	1.6E
		1151	1528	1.7E		1038	0727	1.6E		1302	0700	1639	1216	2.1F			0904	1.6E		
		1824	2122	2.1F		1726	1358	1.8F		1941	1038	2238	1908	2.0F			2149	1.5E		
10	M	0639	0017	0942	1.9F	25	Tu	0542	0222	1.7F	Th	0747	0133	0459	0056	1.7F		0719	1008	1.7E
		1243	1617	2.1F		1136	0824	1.7E		1347	0747	1722	1317	2.2F			1653	2.1F		
		1918	2215	1.6E		2100	1503	1.9F		2025	1136	2319	2005	1.6E			2249	1.7E		
11	Tu	0727	0111	1029	1.9F	26	W	0638	0008	1.7F	Th	0830	0217	0542	0155	1.9F		0814	1104	1.9E
		1330	1706	2.2F		1233	0922	1.7E		1428	0830	1127	1413	2.2F			1748	2.3F		
		2007	2305	1.6E		1923	1603	2.0F		2106	1233	2356	2057	1.7E			2342	1.8E		
12	W	0812	0159	1112	1.7E	27	Th	0732	0108	1.7F	Sa	0909	0257	0621	0248	1.5F		0907	1157	2.0E
		1414	1751	2.2F		1329	0722	1.8E		1505	0909	1839	1506	2.2F			1837	2.4F		
		2051	2344	1.6E		2018	1659	2.1F		2144	1090	2144	2146	2.1F						
13	Th	0854	0242	1150	1.9F	28	Sa	0825	0205	1.8F	W	0333	0257	0654	0248	1.5F		0338	0700	2.1F
		1453	1830	2.2F		1423	1112	1.9E		0947	0333	1234	0957	1.8E			1248	2.1E		
		2133				2111	1754	2.3F		1541	1234	1910	1556	2.2F			1925	2.4F		
14	F	0934	0023	0644	1.6E	29	Sa	0918	0259	1.9F	M	0407	0101	0645	0248	1.5F		0441	0753	1.9F
		1530	1905	1.8F		1516	1205	2.0E		1024	0407	1307	1024	1.9F			1307	1.9E		
		2211				1845	1845	2.4F		1615	0724	1939	1615	2.2F						
15	Sa	0359	0056	0719	1.6E	30	W	0708	0045	1.9E	Tu	0441	0134	0654	0248	1.5F		0753	1097	2.1F
		1012	1259	1.8E		1010	1259	2.1E		1102	0441	1344	1102	1.9E			1344	1.9E		
		1606	1938	2.2F		1608	1938	2.4F		1650	0753	2011	1650	2.2F			1925	2.4F		
		2249				2253	2253	2.4F		2331	1201	2331	2234	2.2F						
						31	M	0443	0135	1.9E										
								0800	1102	1350										
								1102	1350	2.1E										
								1700	2029	2.4F										
								2343												

Time meridian 75° W. 0000 is midnight. 1200 is noon.

POLLOCK RIP CHANNEL, MASSACHUSETTS, 1983

29

F-Flood, Dir. 035° True E-Ebb, Dir. 225° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time Vel.											
Day	h.m.	h.m. knots											
1	0119	2.0E	16	0100	1.9E	1	0226	1.9E	16	0141	2.0E		
Tu	0425	2.2F	W	0408	2.1F	F	0532	2.2F	Sa	0447	0800		
1047	1336	2.1E	1033	1315	2.0E	1207	1449	1.8E	1130	1409	2.0E		
1645	2011	2.4F	1621	1936	2.2F	1759	2121	2.0F	1714	2020	2.0F		
	2320		2257						2343				
2	0205	2.0E	17	0135	2.0E	2	0025	0309	1.8E	17	0226		
W	0512	2.2F	Th	0442	0754	Sa	0618	0946	2.1F	Su	0530		
1137	1424	2.0E	1112	1352	2.0E	1257	1538	1.7E	1218	1456	1.9E		
1734	2059	2.3F	1658	2009	2.2F	1848	2210	1.8F	1802	2105	1.9F		
	2334												
3	0007	0252	1.9E	18	0214	2.0E	3	0114	0356	1.6E	18	0031	
Th	0600	0924	2.1F	F	0518	0827	Su	0706	1040	1.9F	M	0618	
1229	1515	1.9E	1153	1436	2.0E	1351	1631	1.5E	1313	1547	1.7E		
1823	2147	2.1F	1738	2046	2.1F	1940	2303	1.6F	1856	2200	1.7F		
4	0056	0341	1.8E	19	0014	0255	1.9E	4	0206	0447	1.5E	19	0126
F	0649	1015	2.0F	Sa	0558	0908	2.1F	M	0759	1139	1.8F	Tu	0714
1322	1606	1.7E	1239	1517	1.9E	1447	1727	1.4E	1414	1647	1.6E		
1915	2241	1.9F	1823	2131	2.0F	2038			1958	2307	1.6F		
5	0147	0432	1.7E	20	0058	0340	1.9E	5	0009	0009	1.6F	20	0229
Sa	0741	1114	1.9F	Su	0643	0957	2.0F	Tu	0303	0546	1.4E	W	0818
1419	1701	1.6E	1331	1608	1.7E	0856	1240	1.8F	1520	1752	1.5E		
2011	2342	1.8F	1913	2219	1.8F	1546	1831	1.3E	2108				
						2138							
6	0242	0527	1.6E	21	0149	0431	1.7E	6	0112	0112	1.5F	21	0023
Su	0837	1216	1.9F	M	0735	1052	1.9F	W	0401	0649	1.4E	Th	0338
1520	1804	1.4E	1430	1705	1.6E	0955	1340	1.8F	0929	1307	1.8F		
2111			2011	2316	1.6F	1644	1932	1.4E	1628	1905	1.4E		
						2238			2221				
7	0043	0043	1.7F	22	0248	0529	1.6E	7	0209	0209	1.6F	22	0149
M	0339	0628	1.5E	Tu	0836	1156	1.8F	Th	0459	0750	1.4E	F	0447
0937	1321	1.8F	1536	1808	1.4E	1053	1437	1.9F	1041	1425	1.9F		
1621	1910	1.3E	2118			1739	2034	1.4E	1733	2021	1.5E		
2213						2334			2330				
8	0147	1.6F	23	0029	0029	1.5F	8	0306	0306	1.7F	23	0259	
Tu	0438	0733	1.4E	W	0353	0632	1.5E	F	0554	0847	1.5E	Sa	0553
1037	1420	1.9F	0943	1315	1.8F	1147	1528	2.0F	1149	1532	2.1F		
1721	2015	1.4E	1644	1916	1.4E	1828	2123	1.6E	1833	2127	1.6E		
2315			2231										
9	0248	1.6F	24	0153	0153	1.5F	9	0025	0354	1.8F	24	0031	
W	0535	0832	1.5E	Th	0501	0743	1.5E	Sa	0643	0936	1.6E	Su	0654
1135	1518	2.0F	1055	1435	1.8F	1236	1613	2.1F	1251	1628	2.2F		
1817	2112	1.4E	1751	2031	1.4E	1914	2208	1.7E	1928	2224	1.8E		
2342													
10	0012	0339	1.7F	25	0310	0310	1.6F	10	0109	0437	1.9F	25	0126
Th	0629	0930	1.5E	F	0607	0853	1.6E	Su	0729	1017	1.7E	M	0749
1228	1607	2.0F	1203	1545	2.0F	1320	1654	2.1F	1346	1719	2.3F		
1908	2205	1.5E	1852	2139	1.6E	1955	2243	1.8E	2017	2311	1.9E		
11	0102	0430	1.8F	26	0046	0414	1.8F	11	0149	0512	2.0F	26	0215
F	0717	1014	1.6E	Sa	0707	0957	1.7E	M	0810	1056	1.8E	Tu	0840
1315	1652	2.1F	1305	1644	2.2F	1401	1729	2.2F	1437	1806	2.3F		
1953	2249	1.6E	1948	2237	1.7E	2034	2319	1.9E	2103	2357	1.9E		
12	0146	0511	1.9F	27	0143	0510	2.0F	12	0225	0547	2.1F	27	0300
Sa	0802	1056	1.7E	Su	0803	1056	1.9E	Tu	0849	1131	1.9E	W	0928
1357	1731	2.2F	1402	1735	2.3F	1438	1800	2.2F	1524	1851	2.2F		
2033	2324	1.7E	2039	2330	1.9E	2110	2352	1.9E	2147				
13	0226	0551	2.0F	28	0233	0559	2.1F	13	0259	0616	2.1F	28	0038
Su	0842	1131	1.8E	M	0854	1147	2.0E	W	0927	1206	1.9E	Th	0342
1435	1808	2.2F	1453	1824	2.4F	1515	1831	2.2F	1014	1304	1.9E		
2111	2357	1.8E	2126			2146			1608	1931	2.1F		
									2229				
14	0301	0622	2.0F	29	0016	0016	2.0E	14	0025	0647	2.2F	29	0116
M	0920	1205	1.9E	Tu	0320	0646	2.2F	Th	0333	1245	2.0E	F	0424
1511	1837	2.2F	0943	1236	2.0E	1006	1245	2.0E	1100	1345	1.8E		
2146			1541	1908	2.3F	1552	1904	2.1F	1652	2013	2.0F		
			2211			2222			2312				
15	0029	1.9E	30	0100	0100	2.0E	15	0104	0104	2.0E	30	0157	
Tu	0335	0652	2.0F	W	0405	0729	2.3F	F	0409	0721	2.2F	Sa	0505
0957	1238	2.0E	1031	1320	2.0E	1046	1326	2.0E	1146	1428	1.7E		
1546	1905	2.2F	1627	1951	2.3F	1631	1939	2.1F	1736	2055	1.8F		
2221			2255			2301			2356				
			2339										

Time meridian 75° W. 0000 is midnight. 1200 is noon.

POLLOCK RIP CHANNEL, MASSACHUSETTS, 1983

F-Flood, Dir. 035° True E-Ebb, Dir. 225° True

MAY										JUNE											
Day	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	
1	0239	1.7E		16	0204	2.0E		1	0101	0340	1.6E		16	0056	0338	1.8E					
Su	0548	2.0F		M	0509	2.2F		W	0650	1023	1.9F		Th	0649	1019	2.1F					
	1233	1.6E			1202	1438	1.8E		1342	1619	1.5E			1344	1622	1.7E					
	1822	1.7F			1747	2050	1.8F		1931	2247	1.6F			1936	2251	1.7F					
2	0043	0325	1.6E	17	0011	0255	1.9E	2	0151	0431	1.5E		17	0159	0441	1.7E					
M	0634	1009	2.0F	Tu	0602	0924	2.1F	Th	0739	1113	1.9F		F	0753	1126	2.1F					
	1323	1.6E			1259	1533	1.7E		1431	1710	1.5E			1445	1727	1.7E					
	1911	2231	1.6F		1845	2150	1.7F		2022	2342	1.6F			2040							
3	0133	0412	1.5E	18	0110	0352	1.8E	3	0244	0522	1.5E		18	0005	0005	1.7F					
Tu	0723	1100	1.9F	W	0700	1025	2.0F	F	0830	1205	1.9F		Sa	0305	0548	1.6E					
	1415	1654	1.4E		1400	1636	1.6E		1521	1800	1.5E			0859	1237	2.0F					
	2005	2330	1.5F		1949	2301	1.6F		2114					1546	1834	1.7E					
4	0227	0506	1.5E	19	0214	0454	1.6E	4	0036	0036	1.6F		19	0114	0114	1.8F					
W	0817	1158	1.8F	Th	0806	1139	2.0F	Sa	0338	0617	1.5E		Su	0411	0659	1.6E					
	1509	1749	1.4E		1505	1743	1.5E		0923	1257	1.9F			1006	1344	2.0F					
	2101				2057				1611	1852	1.6E			1647	1943	1.7E					
5	0029	0229	1.5F	20	0017	0017	1.6F	5	0127	0127	1.7F		20	0220	0220	1.9F					
Th	0323	0603	1.4E	F	0323	0605	1.6E	Su	0431	0709	1.5E		M	0516	0809	1.6E					
	0913	1255	1.8F		0915	1255	2.0F		1016	1349	1.9F			1111	1449	2.0F					
	1603	1848	1.4E		1610	1854	1.5E		1700	1943	1.6E			1744	2044	1.7E					
	2158				2206				2254					2347							
6	0127	0127	1.6F	21	0137	0137	1.7F	6	0220	0220	1.8F		21	0321	0321	2.1F					
F	0420	0703	1.4E	Sa	0431	0718	1.6E	M	0523	0802	1.6E		Tu	0617	0915	1.6E					
	1009	1350	1.9F		1025	1408	2.0F		1107	1435	1.9F			1212	1544	2.0F					
	1656	1943	1.5E		1712	2005	1.6E		1747	2031	1.7E			1839	2139	1.8E					
	2252				2312				2341												
7	0222	0222	1.7F	22	0244	0244	1.8F	7	0305	0305	1.8F		22	0042	0416	2.2F					
Sa	0514	0759	1.5E	Su	0536	0827	1.6E	Tu	0613	0851	1.6E		W	0714	1011	1.7E					
	1103	1441	1.9F		1132	1510	2.1F		1156	1520	1.9F			1309	1638	2.0F					
	1745	2034	1.6E		1810	2106	1.7E		1832	2114	1.8E			1929	2232	1.8E					
	2341																				
8	0309	0309	1.8F	23	0011	0343	2.0F	8	0026	0349	1.9F		23	0132	0505	2.2F					
Su	0605	0850	1.6E	M	0637	0934	1.7E	W	0700	0938	1.7E		Th	0807	1106	1.7E					
	1153	1528	2.0F		1233	1607	2.1F		1244	1605	1.9F			1400	1727	2.0F					
	1831	2118	1.7E		1904	2202	1.8E		1915	2158	1.8E			2017	2315	1.8E					
9	0027	0352	1.9F	24	0105	0437	2.2F	9	0108	0430	2.0F		24	0218	0554	2.2F					
M	0652	0936	1.7E	Tu	0733	1027	1.8E	Th	0746	1023	1.7E		F	0855	1149	1.6E					
	1239	1610	2.0F		1328	1700	2.1F		1330	1645	1.9F			1447	1812	1.9F					
	1914	2159	1.8E		1953	2253	1.9E		1958	2241	1.9E			2101	2357	1.8E					
10	0108	0433	2.0F	25	0154	0526	2.2F	10	0150	0510	2.1F		25	0301	0638	2.2F					
Tu	0736	1017	1.7E	W	0824	1118	1.8E	F	0832	1109	1.8E		Sa	0940	1232	1.6E					
	1322	1646	2.1F		1419	1747	2.1F		1415	1725	1.9F			1531	1853	1.8F					
	1954	2237	1.9E		2040	2336	1.9E		2041	2324	2.0E			2143							
11	0146	0506	2.1F	26	0239	0611	2.3F	11	0233	0552	2.2F		26	0036	0719	2.2F					
W	0817	1058	1.8E	Th	0912	1204	1.8E	Sa	0918	1154	1.8E		Su	0340	0719	2.2F					
	1403	1722	2.1F		1506	1833	2.0F		1502	1812	1.9F			1022	1310	1.6E					
	2033	2315	1.9E		2123				2125					1611	1934	1.8F					
														2223							
12	0224	0542	2.1F	27	0017	0017	1.8E	12	0009	0009	2.0E		27	0112	0112	1.7E					
Th	0859	1137	1.9E	F	0321	0654	2.2F	Su	0317	0638	2.3F		M	0419	0754	2.1F					
	1444	1756	2.0F		0958	1247	1.7E		1006	1241	1.9E			1103	1346	1.6E					
	2111	2353	2.0E		1549	1914	1.9F		1550	1854	1.9F			1650	2013	1.7F					
					2205				2211					2304							
13	0301	0617	2.2F	28	0056	0056	1.8E	13	0056	0056	2.0E		28	0149	0833	2.1F					
F	0940	1218	1.9E	Sa	0401	0735	2.2F	M	0404	0726	2.3F		Tu	0457	0833	2.1F					
	1525	1833	2.0F		1042	1328	1.7E		1056	1332	1.9E			1143	1423	1.6E					
	2151				1631	1953	1.8F		1641	1945	1.9F			1730	2048	1.7F					
					2247				2302					2346							
14	0034	0239	2.0E	29	0134	0134	1.7E	14	0147	0147	2.0E		29	0230	0230	1.7E					
Sa	0340	0656	2.3F	Su	0441	0816	2.1F	Tu	0455	0816	2.3F		W	0536	0909	2.1F					
	1024	1303	1.9E		1125	1407	1.6E		1149	1425	1.8E			1224	1502	1.6E					
	1608	1914	2.0F		1713	2034	1.7F		1735	2042	1.8F			1811	2124	1.7F					
	2233				2329				2356												
15	0117	020E	3.0E	30	0214	0214	1.7E	15	0239	0239	1.9E		30	0030	0311	1.7E					
Su	0423	0740	2.3F	M	0522	0855	2.1F	W	0550	0914	2.2F		Th	0618	0947	2.0F					
	1111	1348	1.9E		1209	1448	1.6E		1245	1522	1.8E			1307	1543	1.6E					
	1655	1957	1.9F		1756	2114	1.6F		1834	2143	1.8F			1854	2206	1.7F					
	2319				31	0013	0255	1.6E													
					Tu	0604	0940	2.0F		1255	1531	1.5E			1842	2200	1.6F				

Time meridian 75° W. 0000 is midnight. 1200 is noon.

POLLOCK RIP CHANNEL, MASSACHUSETTS, 1983

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F-Flood, Dir. 035° True E-Ebb, Dir. 225° True

JULY

AUGUST

	Slack Water Time Day	Maximum Current Time h.m.	Slack Water Time Day	Maximum Current Time h.m.	Slack Water Time Day	Maximum Current Time h.m.	Slack Water Time Day	Maximum Current Time h.m.
1	0116 0356	1.7E	16 0140	0425 1.8E	1 0215	0452 1.7E	16 0021	1.9F
F	0702 1029	2.0F	Sa 0735	1107 2.1F	M 0756	1111 1.9F	Tu 0323	0612 1.5E
	1352 1628	1.6E	1420	1704 1.7E	1442	1720 1.7E	0917	1251 1.8F
	1940 2251	1.7F	2016	2342 1.9F	2029	2340 1.8F	1548	1841 1.6E
							2149	
2	0205 0441	1.6E	17 0243	0530 1.7E	2 0307	0543 1.6E	17 0128	1.9F
Sa	0749 1114	2.0F	Su 0838	1212 2.0F	Tu 0847	1202 1.8F	W 0428	0721 1.5E
	1438 1717	1.7E	1519	1807 1.7E	1531	1809 1.7E	1022	1356 1.8F
	2028 2342	1.7F	2118		2119		1648	1949 1.5E
							2251	
3	0256 0533	1.6E	18 0048	0636 1.9F	3 0403	0638 1.5E	18 0230	2.0F
Su	0838 1200	1.9F	M 0348	0943 1.6E	W 0942	1257 1.7F	Th 0531	0828 1.4E
	1526 1804	1.7E	1618	1914 1.7E	1623	1902 1.6E	1126	1457 1.8F
	2116		2220		2213		1746	2048 1.6E
							2349	
4	0031 0348	1.7F	19 0155	0746 2.0F	4 0501	0734 1.5E	19 0329	2.1F
M	0624 0929	1.6E	Tu 0453	1047 1.5E	1041	1352 1.6F	F 0630	0928 1.5E
	1251 1853	1.8F	1423	1.9F	1717	1957 1.6E	1225	1553 1.8F
	1614 2206	1.7E	2015	1.7E	2309		1841	2145 1.6E
5	0122 0442	1.7F	20 0256	0556 2.0F	5 0559	0234 1.8F	20 0043	0422 2.1F
Tu	0715 1022	1.5E	W 0851	1150 1.5E	1140	1454 1.6F	Sa 0723	1021 1.6E
	1343 1943	1.8F	1522	1.9F	1811	2052 1.7E	1317	1644 1.9F
	2256		2115	1.7E			1930	2230 1.7E
6	0218 0535	1.8F	21 0017	0354 2.1F	6 0656	0332 1.9F	21 0131	0507 2.2F
W	0808 0935	1.5E	Th 0654	0952 1.6E	Sa 0656	0931 1.5E	Su 0809	1106 1.6E
	1115 1434	1.8F	1248	1617 1.9F	1239	1555 1.7F	1403	1727 1.9F
	1752 2032	1.7E	1905	2208 1.7E	1905	2148 1.8E	2015	2315 1.7E
	2345							
7	0307 0627	1.9F	22 0109	0445 2.2F	7 0751	0100 2.1F	22 0214	0550 2.2F
Th	0901 1208	1.6E	F 1045	1341 1.6E	Su 1336	1651 1.8F	M 0851	1145 1.7E
	1522 1840	1.8F	1708	1.9F	1958	2243 1.9E	1444	1808 1.9F
	2123 2210	1.8E	1954	2255 1.7E			2056	2351 1.8E
8	0033 0719	0356 0955	2.0F 1.6E	23 0156 0835	0534 1131	2.2F 1.6E	8 0154 0843	0525 1121
F	1301 1928	1616 2210	1.8F 1.8E	1428 2039	1751 2338	1.9F 1.7E	M 1430 2050	0929 2336
							2.0E	1220 2135
								1.7E 2135
9	0122 0810	0447 1044	2.1F 1.7E	24 0239 0919	0617 1210	2.2F 1.6E	9 0247 0934	0615 1214
Sa	1352 1305	1705 1616	1.8F 1.8F	1510 1428	1833 1751	1.8F 1.9F	Tu 1522 1430	0929 1744
	2016 2301	2.0E 1.9E	2120	2338	1.7E	2141	1958 2050	1220 2135
								1.7E 2135
10	0211 0900	0535 1137	2.2F 1.8E	25 M 0318	0016 0656	2.1E 2.2F	10 W 0339	0029 0706
Su	1444 1754	1.9F 1.7F	Tu 0731	0959	1.7E 1.6E	Th 1024	1027 1305	2.1E 1.9E
	2105 2351	2.0E 2.0E	1247	1548	1.8F	1613	1928 2.1F	1041 1628
			1510	1910	1.8F	2233		1321 1944
								2.0F 2249
11	0300 0950	0623 1228	2.3F 1.8E	26 Tu 0355	0049 0731	2.1E 2.2F	11 Th 0431	0120 0757
M	1535 1845	1.9F 1.9F	0355	0731	1.8E 2.2F	12 F 0523	0214 0848	2.1E 2.3F
	2155		1037	1320	1.7E	1205	1214 1448	0438 1153
			1624	1945	1.8F	1613	1928 2.1F	1041 1429
			2239			1704		1321 1944
						2020		1.8E 2.0F
12	0042 0351	0447 0715	2.0E 2.3F	27 W 0431	0124 0803	2.1E 2.2F	12 F 0523	0214 0848
Tu	1041 1319	1.9E 1.9E	0431	0803	1.8E 2.2F	1205	1214 1448	0438 1153
	1628 1938	1.9F 1.9F	1114	1354	1.7E	1613	1928 2.1F	1041 1429
	2247		1701	2016	1.8F	1756	2114 2.1F	1321 1944
			2318			2326		1.8E 2.0F
13	0135 0444	2.0E 0810	2.8 2.3F	28 Th 0508	0201 0836	1.8E 2.1F	13 Sa 0617	0021 0943
W	1133 2033	1.9E 1.9F	0508	0836	2.1F	1257	1540 1.9E	0438 1153
	1722 2342		1151	1429	1.7E	1850	2212 2.0F	1041 1429
			1737	2050	1.8F	1850	2212 2.0F	1321 1944
			2358					1.8E 2.0F
14	0228 0538	2.0E 0905	2.0E 2.3F	29 F 0546	0238 0909	1.8E 2.1F	14 Su 0714	0119 1044
Th	1227 1508	1.9E 1.9E	0546	0909	2.1F	1352	1636 1.8E	0438 1153
	1817 2131	1.9F 1.9F	1231	1508	1.8E	1352	1636 1.8E	1041 1429
			1816	2125	1.8F	1947	2314 2.0F	1321 1944
			2358					1.8E 2.0F
15	0040 0635	0325 1006	1.9E 2.2F	30 Sa 0626	0041 0944	1.8E 2.1F	14 Su 0814	0220 1145
F	1323 1603	1.8E 1.8E	0626	0944	2.1F	1449	1737 1.7E	0438 1153
	1916 2235	1.9F 1.9F	1312	1547	1.8E	1449	1737 1.7E	1041 1429
			1857	2206	1.8F	2046		1321 1944
			31 Su 0710	0126 1026	1.7E 2.0F			1.8E 2.0F
				1355	1632 1.7E			
				1941	2251 1.8F			

31 0232 0508 1.6E
W 0812 1121 1.7F
1452 1732 1.6E
2038 2355 1.8F

Time meridian 75° W. 0000 is midnight. 1200 is noon.

THE RACE, LONG ISLAND SOUND, 1983

F-Flood, Dir. 295° True E-Ebb, Dir. 100° True

THE RACE, LONG ISLAND SOUND, 1983

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F-Flood, Dir. 295° True E-Ebb, Dir. 100° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time Vel.						
Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m. knots	Day	h.m. knots
1	0037	0357 4.6E	16	0013 0338 3.5E	1	0142 0508 3.9E	16	0103 0424 3.8E
Tu	0708	0957 4.0F	W	0645 0932 3.0F	F	0827 1107 3.0F	Sa	0745 1035 3.1F
	1300	1619 4.4E		1232 1554 3.3E		1412 1731 3.2E		1336 1646 3.2E
	1930	2219 4.0F		1856 2147 3.1F		2038 2323 2.9F		1950 2251 3.2F
2	0125	0446 4.4E	17	0049 0412 3.5E	2	0228 0559 3.5E	17	0150 0514 3.7E
W	0800	1045 3.6F	Th	0723 1013 3.0F	Sa	0919 1156 2.6F	Su	0835 1124 3.0F
	1349	1709 4.0E		1311 1627 3.2E		1501 1822 2.8E		1427 1737 3.0E
	2019	2308 3.6F		1931 2228 3.1F		2129		2043 2344 3.0F
3	0214	0536 4.0E	18	0128 0445 3.5E	3	0012 0012 2.5F	18	0243 0611 3.5E
Th	0854	1136 3.2F	F	0805 1056 2.9F	Su	0317 0650 3.1E	M	0932 1220 2.8F
	1439	1802 3.6E		1353 1703 3.0E		1015 1247 2.2F		1524 1841 2.9E
	2109	2356 3.2F		2011 2311 3.0F		1554 1916 2.4E		2144
4	0304	0631 3.7E	19	0211 0530 3.4E	4	0104 022F 2.2F	19	0041 0041 2.9F
F	0951	1229 2.8F	Sa	0853 1143 2.7F	M	0409 0746 2.8E	Tu	0344 0716 3.4E
	1532	1854 3.1E		1441 1746 2.9E		1114 1348 2.0F		1036 1321 2.7F
	2203			2059		1652 2017 2.2E		1628 1950 2.9E
5	0047	2.8F	20	0003 2.9F	5	0203 0203 1.9F	20	0145 0145 2.8F
Sa	0356	0727 3.3E	Su	0301 0621 3.3E	Tu	0506 0844 2.6E	W	0450 0826 3.4E
	1051	1326 2.3F		0948 1238 2.6F		1214 1455 1.9F		1143 1426 2.8F
	1629	1950 2.7E		1536 1847 2.7E		1753 2116 2.2E		1734 2059 3.1E
6	0146	2.4F	21	0058 2.8F	6	0032 0310 1.8F	21	0008 0252 2.8F
Su	0451	0823 3.0E	M	0359 0729 3.2E	W	0606 0942 2.6E	Th	0559 0932 3.5E
	1153	1435 2.1F		1052 1335 2.5F		1311 1601 1.9F		1249 1533 2.9F
	1730	2051 2.4E		1639 1958 2.7E		1852 2213 2.3E		1840 2204 3.4E
	2301							
7	0004	0250 2.1F	22	0159 2.7F	7	0131 0418 1.9F	22	0117 0404 3.0F
M	0550	0921 2.8E	Tu	0504 0842 3.2E	Th	0705 1037 2.7E	F	0706 1033 3.7E
	1255	1548 2.0F		1201 1441 2.5F		1403 1656 2.1F		1350 1640 3.2F
	1833	2151 2.3E		1747 2113 2.8E		1946 2305 2.5E		1942 2303 3.8E
8	0106	0358 2.0F	23	0014 0304 2.8F	8	0223 0509 2.1F	23	0219 0510 3.3F
Tu	0649	1020 2.8E	W	0613 0948 3.4E	F	0758 1126 2.9E	Sa	0809 1132 3.9E
	1353	1649 2.0F		1308 1549 2.7F		1449 1739 2.3F		1446 1739 3.5F
	1934	2248 2.4E		1854 2218 3.1E		2032 2351 2.8E		2038 2358 4.1E
9	0204	0503 2.1F	24	0125 0412 3.0F	9	0309 0554 2.4F	24	0316 0609 3.5F
W	0745	1114 2.9E	Th	0720 1052 3.7E	Sa	0846 1211 3.1E	Su	0906 1224 4.1E
	1444	1741 2.2F		1410 1654 3.1F		1530 1816 2.6F		1537 1830 3.7F
	2027	2339 2.5E		1958 2319 3.5E		2113		2130
10	0255	0554 2.3F	25	0229 0519 3.3F	10	0033 0350 3.1E	25	0051 0051 4.4E
Th	0836	1203 3.1E	F	0823 1151 4.1E	Su	0633 0930 2.6F	M	0408 0702 3.7F
	1530	1826 2.4F		1506 1755 3.5F		1254 1850 2.8F		0958 1315 4.2E
	2113			2056		1608 2151		1625 1920 3.8F
11	0026	2.8E	26	0017 4.0E	11	0115 0429 3.4E	26	0138 0457 4.5E
F	0341	0633 2.4F	Sa	0327 0617 3.7F	M	0711 1011 2.8F	Tu	0747 1047 3.7F
	0921	1248 3.3E		0921 1243 4.4E		1334 1642 3.4E		1402 1711 4.1E
	1610	1901 2.6F		1558 1849 3.8F		1925 2228 3.0F		2003 2303 3.8F
	2153			2150		2151		2303
12	0109	3.0E	27	0109 4.4E	12	0153 0506 3.6E	27	0224 0545 4.5E
Sa	0422	0710 2.6F	Su	0421 0712 3.9F	Tu	0747 1050 3.0F	W	0545 0834 3.6F
	1002	1327 3.4E		1014 1333 4.5E		1411 1716 3.4E		1133 1447 3.9E
	1647	1934 2.7F		1647 1938 4.0F		2002 2304 3.2F		1755 2046 3.6F
	2230			2239		2304		2347
13	0149	3.2E	28	0159 4.6E	13	0231 0542 3.7E	28	0310 0439 4.3E
Su	0500	0742 2.8F	M	0512 0804 4.0F	W	0824 1129 3.2F	Th	0631 0916 3.4F
	1041	1406 3.5E		1104 1422 4.5E		1447 1749 3.4E		1218 1530 3.6E
	1721	2003 2.9F		1733 2024 4.1F		2039 2341 3.3F		1839 2124 3.4F
	2305			2327		2341		
14	0226	3.3E	29	0248 4.7E	14	0307 0620 3.8E	29	0029 0356 4.0E
M	0535	0815 2.9F	Tu	0601 0849 4.0F	Th	0905 1209 3.2F	F	0716 0957 3.1F
	1118	1443 3.5E		1152 1510 4.4E		1522 1825 3.4E		1301 1616 3.3E
	1753	2035 3.0F		1819 2110 4.0F		1825 2210 3.3F		1922 2205 3.0F
	2339							
15	0303	3.4E	30	0012 0334 4.5E	15	0020 0700 3.9E	30	0111 0439 3.7E
Tu	0610	0854 3.0F	W	0650 0935 3.8F	F	0948 1325 3.2F	Sa	0801 1039 2.8F
	1155	1518 3.4E		1239 1557 4.1E		1603 1904 3.3E		1346 1705 2.9E
	1824	2112 3.1F		1904 2153 3.7F		2204 2341 3.3F		2008 2248 2.7F
			31	0057 0420 4.3E				
			Th	0738 1021 3.4F				
				1325 1642 3.7E				
				1950 2236 3.4F				

Time meridian 75° W. 0000 is midnight. 1200 is noon.

THE RACE, LONG ISLAND SOUND, 1983

F-Flood, Dir. 295° True E-Ebb, Dir. 100° True

MAY												JUNE														
	Slack Water Time	Maximum Current Time	Vel.	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots											
Day	h.m.	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots		
Su	0154	0528	3.3E	M	0135	0504	4.0E	W	0252	0633	2.7E	Th	0319	0647	3.9E	Su	0012	3.3F	M	0849	1124	2.5F	Tu	0821	1110	3.3F
	1432	1753	2.6E		1416	1733	3.3E		0950	1226	2.2F		1002	1250	3.4F		0235	1600	Tu	2057	2337	2.3F		2033	2327	3.2F
	2057	2337	2.3F		2033	2327	3.2F		1537	1904	2.3E		1600	1922	3.7E		2235		M	0939	1215	2.2F		0919	1205	3.2F
									2211				1701	2025	3.7E				Tu	1521	1844	2.3E		1514	1834	3.2E
M	0239	0616	3.0E	Tu	0231	0602	3.8E	Th	0342	0043	1.9F	F	0422	0748	3.1F	Su	0118	3.1F	W	0939	1215	2.2F		0919	1205	3.2F
	1521	1844	2.3E		1514	1834	3.2E		1039	1317	2.1F		1103	1353	3.3F		0748	3.7E		1218	1532	2.3F		2138		
	2151								1627	1957	2.3E		1701	2025	3.7E		2342		Tu	0025	2.0F		W	0329	0707	2.7E
									2308				1802	2124	3.8E					1032	1306	2.0F		0332	0706	3.7E
Tu	0025	2.0F		W	0029	3.1F		F	0436	0138	1.8F	Sa	0526	0849	3.0F	Su	0227	3.0F	M	0329	0707	2.7E		0919	1205	3.2F
	1032	1306			1021	1306	3.1F		1129	1408	2.1F		1204	1458	3.3F		0849	3.6E		1615	1939	2.2E		1939	2248	
	1615	1939	2.2E		1616	1939	3.3E		1718	2048	2.4E		1802	2124	3.8E				W	2251			Tu	0122	1.8F	
	2251								1809	2141	2.6E		1901	2224	3.9E					0122	1.8F			0423	0804	2.5E
W	0122	1.8F		Th	0132	2.9F		Sa	0532	0232	1.9F	Su	0631	0950	3.0F	Tu	0335	3.0F	M	0423	0804	2.5E		0437	0810	3.6E
	1128	1402	1.9F		1125	1411	3.1F		1219	1459	2.2F		1303	1601	3.3F		0631	0950		1711	2037	2.2E		1720	2044	3.4E
	1711	2037	2.2E		1720	2044	3.4E		1809	2141	2.6E		1901	2224	3.9E				Tu	2352			W	0235		
	2352								1857	2230	2.9E		1956	2319	4.0E					0235				0521	0901	2.5E
Th	0221	1.8F		F	0241	2.9F		Su	0058	0327	2.0F	M	0148	0441	3.0F	Tu	0245	0540	W	0619	0956	2.6E		0545	0913	3.6E
	1223	1501	2.0F		1228	1517	3.1F		0628	0959	2.6E		0733	1047	3.4E		0441	0733		1806	2133	2.3E		1823	2145	3.6E
	1806	2133	2.3E						1306	1550	2.4F		1400	1700	3.3F		0441	0733		2352			Tu	0521	0901	2.5E
									1857	2230	2.9E		1956	2319	4.0E					0521	0901	2.5E		0521	0901	2.5E
F	0051	0322	1.8F	Tu	0104	0352	3.0F	Th	0148	0421	2.2F	F	0245	0540	3.0F	Su	0619	0956	W	0619	0956	2.6E		0650	1013	3.7E
	1314	1555	2.1F		1328	1621	3.3F		0721	1050	2.7E		0830	1141	3.4E		0441	0733		1858	2224	2.6E		1923	2244	3.9E
	1858	2224	2.6E						1352	1639	2.6F		1453	1753	3.2F		0441	0733		2352			Tu	0721	1050	2.7E
									1944	2316	3.2E		2048							W	0715	1045	2.7E	Tu	0752	1110	3.7E
Sa	0143	0418	2.0F	Tu	0205	0457	3.2F	Th	0235	0509	2.5F	F	0337	0631	3.0F	Su	0010	4.0E	W	0715	1045	2.7E	0752	1110	3.7E	
	1400	1644	2.3F		1423	1719	3.4F		0813	1134	2.9E		0923	1230	3.3E		0010	4.0E		1945	2313	2.9E	2018	2339	4.1E	
	1945	2313	2.9E						1435	1725	2.9F		1543	1842	3.2F		2135			2352			Tu	0235	0509	2.5F
									2030				2135							W	0231	0508	2.3F	Tu	0302	0554	3.3F
Su	0231	0508	2.3F	M	0302	0554	3.3F	Th	0320	0002	3.6E	F	0426	0720	3.0F	Su	0059	4.0E	W	0805	1132	2.9E	0849	1203	3.7E	
	1443	1725	2.6F		1515	1814	3.5F		0902	1222	3.1E		1012	1321	3.2E		0059	4.0E		2029	2358	3.2E	2109			
	2029	2358	3.2E						1519	1811	3.2F		1630	1925	3.0F		2219			2115			Tu	0231	0508	2.3F
									2115				2201							W	0314	0551	2.6E	Tu	0354	0648	3.4F
M	0314	0551	2.6E	Tu	0031	0031	4.3E	Th	0404	0048	3.9E	F	0511	0803	2.9F	Su	0144	3.9E	W	0852	1217	3.1E	0941	1252	3.7E	
	1522	1807	2.9F		0941	1252	3.7E		0949	1308	3.3E		1056	1406	3.1E		0144	3.9E		2110	2556	3.5F	1603	1901	3.5F	
	2110	2556	3.5F						1603	1901	3.5F		1649	1944	3.6F		2300			2156			Tu	0221	0521	2.5E
									1649	1944	3.6F		1757	2034	3.7F		2339			2240				0441	0733	2.5E
Tu	0441	0715	3.1F	W	0528	0818	3.2F	Th	0535	0820	3.5F	F	0634	0917	2.7E	Su	0309	3.6E	W	0441	0715	3.1F		0733	1047	3.4E
	1019	1337	3.3E		1114	1426	3.4E		1125	1440	3.6E		1217	1531	2.8E		0309	3.6E		1637	1928	3.3F		1733	2022	3.2F
	1637	1928	3.3F		1733	2022	3.2F		1737	2034	3.7F		1837	2116	2.6F		0309	3.6E		2231			Tu	0441	0715	3.1F
	2231								1737				1837							W	0514	0759	3.3F	Tu	0612	0858	3.0F
W	0514	0759	3.3F	Tu	0612	0858	3.0F	Th	0623	0909	3.6F	F	0712	0951	2.6F	Su	0337	3.0F	W	1102	1418	3.4E	1157	1509	3.2E	
	1102	1418	3.4E		1157	1509	3.2E		1216	1530	3.7E		1256	1613	2.7E		0337	3.0F		1716	2011	3.5F	1816	2100	3.0F	
	1716	2011	3.5F						1829	2125	3.7F		1917	2153	2.4F		0337	3.0F</								

THE RACE, LONG ISLAND SOUND, 1983

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F-Flood, Dir. 295° True E-Ebb, Dir. 100° True

JULY

AUGUST

	Slack Water Time	Maximum Current Time	Vel.	Day	Slack Water Time	Maximum Current Time	Vel.	Day	Slack Water Time	Maximum Current Time	Vel.	Day			
	Day h.m.	h.m.	knots		Day h.m.	h.m.	knots		Day h.m.	h.m.	knots				
1	F 0304	0008 0639	2.1F 2.6E	16	Sa 0401	0057 0726	3.2F 3.8E	1	M 0405	0110 0725	2.1F 2.4E	16	0000 0540	0248 0857	2.5F 2.9E
	0950	1234	2.3F		1037	1327	3.4F		1032	1332	2.5F		1212 1506	1506 2.7F	
	1543	1913	2.4E		1636	1959	3.8E		1634	2003	2.8E		1806 2133	2133 3.4E	
	2221				2320				2325						
2	Sa 0353	0056 0727	2.0F 2.5E	17	Su 0504	0205 0824	3.0F 3.5E	2	Tu 0501	0203 0818	2.1F 2.4E	17	0103 W 0645	0359 0958	2.4F 2.8E
	1035	1323	2.3F		1138	1431	3.2F		1125	1425	2.5F		1313 1615	1615 2.6F	
	1631	2002	2.5E		1736	2100	3.7E		1729	2104	2.9E		1905 2231	2231 3.3E	
3	Su 0446	0149 0816	2.0F 2.4E	18	M 0607	0025 0923	2.8F 3.3E	3	W 0602	0024 0924	2.2F 2.5E	18	0202 Th 0747	0503 1057	2.4F 2.7E
	1122	1412	2.4F		1238	1536	3.0F		1222	1520	2.7F		1411 1712	1712 2.5F	
	1720	2055	2.7E		1835	2159	3.7E		1826	2203	3.2E		2001 2325	2325 3.3E	
4	M 0542	0010 0913	2.1F 2.5E	19	Tu 0710	0127 1025	2.7F 3.1E	4	Th 0703	0123 1025	2.4F 2.7E	19	0256 F 0842	0554 1151	2.5F 2.8E
	1212	1504	2.5F		1336	1638	2.9F		1321	1617	2.9F		1504 1807	1807 2.6F	
	1811	2146	2.9E		1932	2256	3.7E		1925	2300	3.5E		2051		
5	Tu 0104	0337 1004	2.2F 2.6E	20	W 0810	0226 1118	2.7F 3.0E	5	F 0803	0220 1122	2.7F 3.0E	20	0016 Sa 0343	0643 1236	3.4E 2.6F
	1302	1555	2.7F		1432	1735	2.9F		1421	1716	3.2F		0930 1551	1236 1849	2.9E 2.6F
	1902	2237	3.2E		2025	2350	3.7E		2022	2355	3.9E		2136		
6	W 0157	0433 1057	2.5F 2.8E	21	Th 0905	0319 1211	2.7F 3.0E	6	Sa 0900	0314 1220	3.1F 3.4E	21	0059 Su 0426	0724 1321	3.4E 3.0E
	1353	1648	2.9F		1524	1824	2.8F		1518	1812	3.6F		1011 1634	1321 1926	3.0E 2.6F
	1954	2328	3.6E		2114				2118						
7	Th 0248	0526 1151	2.8F 3.0E	22	F 0407	0037 0704	3.7E 2.7F	7	Su 0406	0049 0650	4.3E 3.5F	22	0141 M 0505	0757 1048	3.5E 2.7F
	1445	1739	3.2F		0953	1300	2.9E		0955	1312	3.8E		1402 1713	1402 1959	3.0E 2.7F
	2046				1611	1909	2.8F		1614	1907	3.9F		2254		
8	F 0338	0019 0617	3.9E 3.1F	23	Sa 0451	0124 0747	3.6E 2.7F	8	M 0456	0140 0741	4.6E 3.9F	23	0220 Tu 0540	0824 1123	3.5E 2.7F
	0922	1239	3.3E		1036	1346	2.9E		1048	1405	4.2E		1123 1441	1441 2031	3.1E 2.7F
	1536	1832	3.5F		1655	1947	2.7F		1708	2000	4.1F		1750 2330	2330 2254	
	2137				2239				2306						
9	Sa 0427	0109 0709	4.2E 3.4F	24	Su 0532	0207 0824	3.6E 2.7F	9	Tu 0546	0232 0834	4.8E 4.1F	24	0257 W 0613	0853 1157	3.4E 2.8F
	1015	1330	3.6E		1116	1427	2.9E		1139	1458	4.4E		1518 1825	1518 2104	3.1E 2.7F
	1628	1924	3.8F		1736	2021	2.6F		1802	2054	4.2F				
	2229				2317				2359						
10	Su 0158	0516 0801	4.5E 3.7F	25	M 0609	0247 0851	3.5E 2.7F	10	W 0636	0324 0925	4.8E 4.2F	25	0006 Th 0645	0334 0925	3.3E 2.8F
	1106	1424	3.8E		1153	1508	2.9E		1231	1550	4.5E		1231 1900	1554 2141	3.1E 2.7F
	1722	2015	3.9F		1815	2056	2.6F		1857	2147	4.1F				
	2321				2354				2359						
11	M 0249	0605 0851	4.6E 3.9F	26	Tu 0645	0325 0925	3.4E 2.6F	11	Th 0726	0052 0413	4.7E 4.1F	26	0042 F 0715	0408 1001	3.1E 2.8F
	1158	1515	4.0E		1228	1547	2.8E		1323	1642	4.5E		1305 1936	1629 2220	3.0E 2.6F
	1816	2108	4.0F		1852	2132	2.5F		1953	2239	3.9F				
12	Tu 0014	0341 0656	4.7E 4.0F	27	W 0719	0031 0958	3.2E 2.6F	12	F 0818	0145 0507	4.4E 3.9F	27	0119 Sa 0748	0441 1042	3.0E 2.7F
	1251	1607	4.1E		1304	1626	2.8E		1415	1736	4.3E		1341 2015	1702 2301	3.0E 2.5F
	1912	2203	3.9F		1930	2208	2.5F		2051	2336	3.6F				
13	W 0108	0435 0748	4.6E 3.9F	28	Th 0753	0109 1035	3.1E 2.6F	13	Sa 0912	0240 1202	4.0E 3.6F	28	0159 Su 0823	0514 1123	2.8E 2.7F
	1345	1704	4.1E		1341	1704	2.7E		1510	1834	4.0E		1420 2059	1736 2346	2.9E 2.4F
	2011	2259	3.8F		2009	2249	2.4F		2151						
14	Th 0204	0530 0843	4.4E 3.8F	29	F 0827	0148 1114	2.9E 2.5F	14	Su 0337	0035 0657	3.2F 3.6E	29	0242 M 0905	0549 1206	2.6E 2.6F
	1440	1802	4.0E		1419	1743	2.7E		1009	1258	3.3F		1505 2150	1823 2255	2.9E
	2112	2357	3.5F		2050	2334	2.3F		1606	1930	3.7E				
15	F 0301	0625 0939	4.1E 3.6F	30	Sa 0904	0229 1157	2.7E 2.5F	15	M 0437	0139 0758	2.8F 3.2E	30	0038 Tu 0332	0338 0636	2.3F 2.5E
	1537	1900	3.9E		1500	1826	2.7E		1110	1402	2.9F		0953 1655	1257 2027	2.5F 3.0E
	2215				2137				1705	2031	3.5E		1556 2352	1924 2248	
					2228								31 W 0430	0133 0742	2.2F 2.4E
					31 Su 0315	0021 0634	2.2F 2.6E						1050 1655	1352 2027	2.5F 3.0E
					0945	1243	2.5F								
					1545	1909	2.7E								
					2228										

Time meridian 75° W. 0000 is midnight. 1200 is noon.

THE RACE, LONG ISLAND SOUND, 1983

F-Flood, Dir. 295° True E-Ebb, Dir. 100° True

SEPTEMBER										OCTOBER									
	Slack Water Time	Maximum Current Vel.	Slack Water Time	Maximum Current Vel.		Slack Water Time	Maximum Current Vel.		Slack Water Time	Maximum Current Vel.		Slack Water Time	Maximum Current Vel.		Slack Water Time	Maximum Current Vel.		Slack Water Time	Maximum Current Vel.
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	Day	h.m.	h.m.	knots	
1 Th	0232	2.3F		16	0132	0432	2.2F		1	0034	0314	2.6F	16	0146	0447	2.2F			
	0533	2.5E	F	0718	1031	2.5E		Sa	0621	0949	2.9E	Su	0733	1049	2.6E				
	1155	2.6F		1347	1650	2.2F			1251	1540	2.9F		1410	1702	2.2F				
	1758	2.3E		1930	2256	3.0E			1846	2218	3.5E		1946	2311	2.9E				
2 F	0056	2.5F		17	0225	0525	2.3F		2	0136	0418	2.9F	17	0233	0532	2.4F			
	0639	2.7E	Sa	0812	1122	2.7E		Su	0725	1050	3.4E	M	0819	1139	2.9E				
	1302	2.9F		1440	1739	2.4F			1356	1644	3.2F		1456	1745	2.4F				
	1903	2.3E		2022	2345	3.2E			1950	2318	3.9E		2033	2354	3.1E				
3 Sa	0157	2.8F		18	0312	0611	2.5F		3	0233	0519	3.4F	18	0315	0607	2.6F			
	0742	3.2E	Su	0858	1211	2.9E		M	0823	1145	3.9E	Tu	0900	1220	3.2E				
	1406	3.2F		1526	1824	2.5F			1456	1745	3.6F		1538	1824	2.6F				
	2005	2.3E		2108					2049				2117						
4 Su	0253	3.2F		19	0031	3.3E		4	0013	0013	4.2E	19	0039	0039	3.2E				
	0841	3.6E	M	0353	0650	2.6F		Tu	0325	0614	3.8F	W	0352	0639	2.8F				
	1506	3.6F		0939	1252	3.1E			0918	1239	4.4E		0937	1259	3.4E				
	2103			1608	1859	2.6F			1550	1840	3.9F		1616	1858	2.8F				
5 M	0030	4.3E		20	0112	3.4E		5	0104	0104	4.5E	20	0118	0118	3.3E				
	0346	3.7F	Tu	0431	0721	2.8F		W	0415	0705	4.1F	Th	0427	0711	2.9F				
	0936	4.1E		1015	1333	3.2E			1009	1330	4.7E		1013	1338	3.6E				
	1602	4.0F		1647	1931	2.8F			1642	1931	4.1F		1653	1931	2.9F				
6 Tu	2227			2149					2235				2235						
	0123	4.6E		21	0149	3.4E		6	0153	0153	4.6E	21	0155	0155	3.3E				
	0436	4.0F	W	0506	0750	2.9F		Th	0503	0753	4.2F	F	0500	0744	3.1F				
	1028	4.5E		1049	1409	3.3E			1057	1419	4.8E		1048	1414	3.7E				
7 W	1655	4.2F		1723	2003	2.8F			1733	2021	4.1F		1728	2009	3.0F				
	2251			2304					2325				2312						
	0212	4.8E		22	0228	3.4E		7	0242	0242	4.5E	22	0231	0231	3.3E				
	0525	4.2F	Th	0538	0818	2.9F		F	0550	0840	4.2F	Sa	0532	0820	3.1F				
8 Th	1119	4.7E		1123	1447	3.4E			1145	1508	4.8E		1123	1449	3.7E				
	1748	4.3F		1757	2037	2.9F			1822	2110	4.0F		1804	2046	3.1F				
	2342			2340								2350							
	0302	4.8E		23	0303	3.3E		8	0013	0331	4.3E	23	0305	0305	3.2E				
9 F	0613	4.3F	F	0609	0853	3.0F		Sa	0637	0925	4.0F	Su	0606	0859	3.2F				
	1208	4.7E		1156	1521	3.4E			1232	1554	4.6E		1159	1526	3.7E				
	1840	4.2F		1831	2112	2.9F			1912	2157	3.7F		1841	2127	3.0F				
	0033	4.6E		24	0016	0337	3.2E	9	0102	0417	3.9E	24	0030	0340	3.1E				
10 Sa	0702	4.2F	Sa	0639	0930	3.0F		Su	0725	1014	3.6F	M	0642	0942	3.1F				
	1258	4.6E		1230	1553	3.4E			1319	1645	4.2E		1239	1603	3.6E				
	1933	3.9F		1906	2153	2.8F			2004	2245	3.3F		1922	2210	3.0F				
	0124	4.2E		25	0053	0406	3.0E	10	0151	0508	3.5E	25	0112	0419	3.0E				
11 Su	0752	3.9F	Su	0712	1007	2.9F		M	0815	1102	3.2F	Tu	0724	1026	3.0F				
	1348	4.3E		1307	1630	3.3E			1407	1736	3.8E		1322	1642	3.5E				
	2027	3.5F		1946	2235	2.7F			2057	2336	2.9F		2009	2301	2.8F				
	0216	3.8E		26	0133	0439	2.9E	11	0243	0602	3.0E	26	0200	0504	2.8E				
12 M	0844	3.5F	M	0749	1050	2.8F		Tu	0910	1153	2.7F	W	0813	1115	2.9F				
	1439	3.9E		1347	1705	3.2E			1458	1831	3.3E		1412	1738	3.4E				
	2125			2030	2320	2.6F			2155				2102	2352	2.7F				
	0005	3.0F		27	0217	0520	2.7E	12	W	0338	0658	2.6E	27	0254	0605	2.7E			
13 Tu	0310	3.3E		0833	1137	2.7F			1009	1250	2.3F		1510	1841	3.3E				
	0940	3.0F		1433	1754	3.1E			1553	1929	3.0E		2202						
	1533	3.6E		2122					2255										
	2226																		
14 W	0106	2.6F		28	0011	2.5F		13	Th	0135	2.1F		28	0050	2.6F				
	0409	2.9E	W	0309	0612	2.6E			0437	0759	2.4E		F	0354	0715	2.7E			
	1040	2.6F		0926	1231	2.6F			1113	1353	2.0F		1018	1313	2.7F				
	1631	3.2E		1528	1853	3.0E			1652	2027	2.8E		1614	1950	3.2E				
15 Th	2001			2221					2356				2307						
	0217	2.3F		29	0106	2.4F		14	F	0540	0859	2.3E		Sa	0459	0826	2.9E		
	0511	2.6E	Th	0409	0723	2.5E			1218	1502	1.9F		1131	1417	2.7F				
	1144	2.3F		1029	1330	2.5F			1753	2127	2.7E		1723	2057	3.3E				
16 Th	1432			1631	2007	3.0E			2327										
	1731	3.0E																	
	2201	3.0E		1738	2115	3.2E			1852	2220	2.8E		1831	2201	3.5E				
	0329	2.2F		30	0209	2.4F		15	0054	0351	2.1F		30	0013	0256	2.8F			
17 M	0615	2.5E	F	0514	0840	2.6E			0639	0956	2.4E		Su	0605	0930	3.2E			
	1248	2.2F		1140	1433	2.6F			1317	1609	2.0F		1242	1526	2.9F				
	1833	2.2F							1852	2220	2.8E		1831	2201	3.5E				
	2201	3.0E		1738	2115	3.2E						31	0115	0402	3.1F				
18 M	0615	2.5E											0707	1031	3.6E				
	1248	2.2F											1346	1633	3.2F				
	1833	2.2F											1935	2259	3.8E				
	2201	3.0E																	

TIME meridian 75° W. 0000 is midnight. 1200 is noon.

THE RACE, LONG ISLAND SOUND, 1983

39

F-Flood, Dir. 295° True E-Ebb, Dir. 100° True

NOVEMBER										DECEMBER									
	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Time	Vel.	Day	Water	Current	Water	Current	Water	Vel.	
Day	Water	Current	Water	Current	Water	Current	Water	Current	Water	Time	Vel.	Day	Water	Current	Water	Current	Water	Vel.	
	h.m.	h.m. knots	h.m.	h.m. knots	h.m.	h.m. knots	h.m.	h.m. knots	h.m.	h.m.	h.m. knots	Day	h.m.	h.m. knots	h.m.	h.m. knots	h.m.	h.m. knots	
1	0212	0503 3.5F	16	0230 0513 2.5F	1	0244 0539 3.6F	16	0223 0510 2.7F											
Tu	0805	1129 4.1E	W	0816 1143 3.2E	Th	0840 1203 4.3E	F	0815 1147 3.4E											
	1444	1735 3.5F	1503	1742 2.5F		1525 1816 3.4F		1509 1745 2.6F											
	2034	2354 4.1E	2039			2113													
2	0305	0557 3.8F	17	0001 3.0E	2	0027 3.8E	17	0007 2.9E											
W	0859	1222 4.4E	Th	0309 0554 2.8F	F	0335 0630 3.7F	Sa	0305 0555 2.9F											
	1538	1829 3.7F	0856	1226 3.4E		0930 1255 4.5E		0859 1233 3.7E											
	2128		1543	1822 2.7F		1616 1909 3.5F		1552 1830 2.8F											
			2122			2204													
3	0045	4.2E	18	0043 3.1E	3	0116 3.8E	18	0050 3.1E											
Th	0354	0646 3.9F	F	0346 0630 3.0F	Sa	0424 0717 3.6F	Su	0348 0640 3.2F											
	0949	1311 4.7E	0935	1304 3.7E		1017 1340 4.4E		0943 1316 3.9E											
	1629	1918 3.9F	1622	1859 2.9F		1704 1955 3.4F		1634 1915 3.1F											
	2219		2204			2252													
4	0133	4.2E	19	0124 3.2E	4	0203 3.7E	19	0134 3.2E											
F	0442	0735 4.0F	Sa	0422 0710 3.1F	Su	0510 0802 3.5F	M	0431 0725 3.4F											
	1036	1400 4.7E	1014	1345 3.8E		1102 1427 4.3E		1028 1359 4.1E											
	1718	2005 3.8F	1700	1941 3.1F		1751 2038 3.3F		1717 2001 3.3F											
	2308		2245			2338													
5	0222	4.1E	20	0203 3.2E	5	0249 3.5E	20	0220 3.4E											
Sa	0528	0818 3.9F	Su	0459 0751 3.3F	M	0555 0845 3.3F	Tu	0516 0810 3.6F											
	1122	1447 4.6E	1053	1421 3.9E		1145 1512 4.1E		1114 1443 4.3E											
	1806	2052 3.7F	1739	2021 3.2F		1835 2121 3.1F		1801 2046 3.5F											
	2355		2327																
6	0308	3.9E	21	0240 3.2E	6	0022 0335 3.2E	21	0305 3.5E											
Su	0614	0904 3.6F	H	0537 0833 3.3F	Tu	0640 0926 3.0F	W	0603 0859 3.6F											
	1207	1533 4.3E	1134	1504 4.0E		1227 1555 3.8E		1202 1530 4.3E											
	1853	2137 3.4F	1820	2105 3.2F		1919 2159 2.9F		1847 2135 3.6F											
7	0041	0356 3.5E	22	0010 0321 3.2E	7	0105 0419 3.0E	22	0040 0354 3.6E											
M	0701	0947 3.3F	Tu	0620 0918 3.4F	W	0725 1007 2.7F	Th	0655 0949 3.6F											
	1251	1619 4.0E	1218	1545 4.0E		1309 1642 3.5E		1253 1619 4.3E											
	1941	2223 3.1F	1904	2152 3.2F		2003 2240 2.6F		1936 2224 3.6F											
8	0127	0445 3.2E	23	0056 0408 3.2E	8	0149 0507 2.7E	23	0132 0448 3.6E											
Tu	0749	1033 2.9F	W	0707 1007 3.3F	Th	0812 1050 2.4F	F	0750 1044 3.5F											
	1336	1708 3.6E	1306	1632 3.9E		1351 1727 3.1E		1346 1715 4.1E											
	2030	2309 2.7F	1952	2239 3.2F		2047 2323 2.4F		2029 2317 3.5F											
9	0216	0533 2.8E	24	0146 0458 3.1E	9	0234 0556 2.5E	24	0226 0546 3.6E											
W	0840	1120 2.5F	Th	0801 1058 3.2F	F	0902 1136 2.2F	Sa	0851 1139 3.4F											
	1424	1759 3.2E	1358	1727 3.7E		1437 1816 2.9E		1444 1812 3.9E											
	2122	2357 2.4F	2046	2336 3.1F		2134		2125											
10	0306	0629 2.5E	25	0241 0559 3.1E	10	0012 2.3F	25	0013 3.4F											
Th	0936	1210 2.1F	F	0901 1153 3.0F	Sa	0321 0646 2.4E	Su	0323 0647 3.6E											
	1514	1853 2.9E	1457	1828 3.6E		0956 1226 2.0F		0955 1240 3.2F											
	2216		2145			1526 1906 2.6E		1545 1913 3.7E											
						2222		2225											
11	0051	2.1F	26	0031 3.0F	11	0100 2.1F	26	0114 3.3F											
F	0401	0723 2.3E	Sa	0341 0704 3.1E	Su	0411 0738 2.3E	M	0423 0748 3.6E											
	1037	1306 1.9F	1009	1257 2.9F		1053 1319 1.8F		1103 1344 3.0F											
	1609	1948 2.6E	1600	1933 3.5E		1619 1958 2.5E		1649 2016 3.6E											
	2312		2247			2313		2326											
12	0150	2.0F	27	0134 3.0F	12	0151 2.1F	27	0217 3.3F											
Sa	0457	0822 2.3E	Su	0443 0808 3.3E	M	0502 0831 2.4E	Tu	0525 0851 3.7E											
	1139	1408 1.8F	1120	1402 2.8F		1150 1416 1.8F		1211 1454 2.9F											
	1707	2042 2.6E	1707	2038 3.5E		1715 2052 2.4E		1754 2117 3.5E											
	2351																		
13	0007	0251 2.0F	28	0238 3.1F	13	0003 0242 2.2F	28	0028 0322 3.2F											
Su	0553	0916 2.4E	M	0547 0912 3.5E	Tu	0553 0924 2.6E	W	0626 0952 3.8E											
	1238	1514 1.8F	1229	1512 2.9F		1245 1512 1.9F		1315 1605 2.9F											
	1805	2139 2.6E	1814	2139 3.5E		1811 2144 2.5E		1859 2216 3.4E											
14	0059	0346 2.1F	29	0052 0343 3.2F	14	0052 0333 2.3F	29	0128 0425 3.3F											
M	0645	1009 2.6E	Tu	0648 1013 3.8E	W	0642 1015 2.8E	Th	0725 1050 4.0E											
	1331	1609 2.0F	1332	1620 3.1F		1337 1605 2.1F		1416 1709 3.0F											
	1901	2228 2.7E	1918	2239 3.7E		1906 2233 2.6E		2001 2313 3.4E											
15	0146	0433 2.3F	30	0150 0443 3.4F	15	0139 0424 2.5F	30	0225 0526 3.3F											
Tu	0733	1100 2.9E	W	0746 1110 4.1E	Th	0729 1103 3.1E	F	0821 1145 4.1E											
	1419	1659 2.2F	1431	1721 3.3F		1424 1657 2.3F		1512 1806 3.1F											
	1952	2315 2.8E	2018	2334 3.8E		1958 2321 2.7E		2058											
								31	0009 3.4E										
								Sa	0318 0617 3.3F										
								0913	1236 4.1E										
								1603	1857 3.1F										
								2151											

TIME meridian 75° W. 0000 is midnight. 1200 is noon.

HELL GATE (off Mill Rock), EAST RIVER, NEW YORK, 1983

F-Flood, Dir. 050° True E-Ebb, Dir. 230° True

JANUARY												FEBRUARY													
	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum															
Day	Water	Time	Current	Water	Time	Current	Water	Time	Current	Water	Time	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	knots		
1		0141	5.1E	16	0144	4.7E	1	0018	0314	5.0E	16		0235	4.8E											
Sa	0509	0806	3.9F	Su	0516	0809	3.4F	Tu	0644	0942	3.8F	W	0600	0858	3.6F										
1112	1411	5.2E		1114	1405	4.8E		1247	1542	5.0E	1207	1457	4.8E												
1747	2039	3.7F		1744	2032	3.3F		1915	2211	3.6F	1822	2116	3.4F												
2341		2333																							
2		0235	5.0E	17	0223	4.7E	2	0111	0408	4.9E	17	0022	0316	4.8E											
Su	0605	0903	3.8F	M	0554	0848	3.4F	W	0739	1037	3.6F	Th	0639	0939	3.5F										
1207	1506	5.1E		1153	1446	4.8E		1340	1636	4.7E		1248	1539	4.7E											
1842	2135	3.6F		1822	2109	3.2F		2008	2305	3.4F		1900	2159	3.4F											
3	0036	0330	4.9E	18	0011	0302	4.7E	3	0204	0502	4.7E	18	0103	0358	4.8E										
M	0703	1001	3.6F	Tu	0632	0927	3.3F	Th	0836	1134	3.4F	F	0722	1024	3.4F										
1304	1601	4.9E		1232	1527	4.7E		1434	1730	4.5E		1332	1625	4.6E											
1939	2233	3.5F		1900	2148	3.2F		2103				1942	2244	3.3F											
4	0132	0427	4.8E	19	0051	0345	4.6E	4	0001	3.2F		19	0149	0447	4.7E										
Tu	0803	1059	3.4F	W	0713	1008	3.2F	F	0259	0558	4.4E	Sa	0811	1112	3.2F										
1402	1700	4.7E		1314	1609	4.6E		0934	1233	3.1F		1421	1712	4.5E											
2038	2333	3.3F		1940	2231	3.1F		1530	1826	4.3E		2031	2335	3.2F											
5	0230	0528	4.6E	20	0133	0430	4.6E	5	0101	3.0F		20	0242	0540	4.6E										
W	0906	1204	3.3F	Th	0758	1055	3.1F	Sa	0355	0657	4.3E	Su	0909	1207	3.1F										
1501	1801	4.5E		1359	1654	4.5E		1033	1334	3.0F		1518	1806	4.4E											
2138				2024	2319	3.0F		1626	1927	4.1E		2129													
6		0036	3.2F	21	0219	0519	4.5E	6	0200	2.9F		21		0034	3.1F										
Th	0329	0635	4.5E	F	0848	1144	3.1F	Su	0451	0801	4.2E	M	0344	0639	4.5E										
1009	1308	3.1F		1450	1745	4.5E		1131	1436	2.9F		1015	1312	3.0F											
1601	1908	4.4E		2113				1722	2028	4.0E		1622	1909	4.3E											
2237								2352				2236													
7		0139	3.1F	22	0008	3.0F		7	0259	2.9F		22		0138	3.1F										
F	0428	0740	4.4E	Sa	0312	0613	4.5E	M	0546	0902	4.1E	Tu	0451	0744	4.5E										
1110	1411	3.1F		0945	1239	3.0F		1226	1531	2.9F		1126	1417	3.1F											
1659	2014	4.3E		1545	1838	4.4E		1815	2125	4.0E		1729	2014	4.3E											
2334				2208								2346													
8		0239	3.1F		0105	3.0F		8	0044	0350	3.0F	23		0249	3.2F										
Sa	0524	0845	4.4E	Su	0410	0708	4.5E	Tu	0638	0957	4.2E	W	0600	0852	4.6E										
1207	1510	3.1F		1048	1339	3.0F		1316	1618	3.0F		1234	1531	3.2F											
1754	2111	4.3E		1646	1937	4.4E		1905	2213	4.1E		1836	2121	4.5E											
9	0027	0330	3.1F	24	0204	3.1F		9	0131	0435	3.1F	24	0054	0357	3.4F										
Su	0617	0941	4.4E	M	0512	0809	4.6E	W	0726	1038	4.3E	Th	0706	1000	4.7E										
1300	1559	3.1F		1152	1442	3.1F		1401	1701	3.1F		1337	1635	3.4F											
1845	2200	4.3E		1749	2039	4.5E		1951	2254	4.3E		1937	2229	4.7E											
10	0116	0419	3.2F	25	0011	0308	3.3F	10	0214	0517	3.2F	25	0156	0501	3.7F										
M	0706	1026	4.5E	Tu	0615	0912	4.7E	Th	0811	1117	4.5E	F	0807	1104	4.9E										
1347	1645	3.2F		1255	1547	3.3F		1443	1742	3.2F		1435	1736	3.7F											
1933	2245	4.4E		1851	2140	4.6E		2033	2330	4.4E		2035	2330	4.9E											
11	0201	0504	3.2F	26	0112	0409	3.5F	11	0255	0556	3.4F	26	0254	0600	3.9F										
Tu	0752	1107	4.6E	W	0717	1014	4.9E	F	0853	1152	4.6E	Sa	0903	1202	5.1F										
1431	1730	3.2F		1355	1647	3.4F		1523	1819	3.3F		1528	1828	3.9F											
2016	2322	4.5E		1950	2241	4.8E		2114				2128													
12	0243	0543	3.3F	27	0211	0510	3.7F	12	0005	4.5E		27		0026	5.1E										
W	0835	1140	4.7E	Th	0816	1114	5.1E	Sa	0333	0631	3.5F	Su	0348	0653	4.0F										
1512	1807	3.3F		1452	1745	3.6F		0934	1228	4.7E		0957	1256	5.1E											
2058	2356	4.5E		2047	2340	4.9E		1600	1854	3.4F		1619	1919	4.0F											
13	0323	0620	3.4F	28	0308	0608	3.8F	13	0043	4.7E		28		0119	5.2E										
Th	0916	1217	4.7E	F	0913	1212	5.2E	Su	0410	0709	3.5F	M	0440	0743	4.1F										
1551	1844	3.3F		1546	1840	3.8F		1013	1305	4.8E		1048	1345	5.2E											
2138				2141				1636	1927	3.5F		1708	2006	4.0F											
14	0031	4.6E	29	0036	5.1E		14	0119	4.8E		2230		2309												
F	0401	0657	3.4F	Sa	0402	0703	3.9F	M	0447	0743	3.6F														
0956	1253	4.8E		1008	1307	5.2E		1051	1339	4.8E															
1629	1919	3.3F		1639	1934	3.8F		1712	2002	3.5F															
2217				2234				2307																	
15	0107	4.7E	30	0130	5.1E		15	0156	4.8E																
Sa	0439	0733	3.4F	Su	0456	0757	4.0F	Tu	0523	0821	3.6F														
1035	1328	4.8E		1101	1400	5.2E		1129	1418	4.8E															
1707	1956	3.3F		1730	2025	3.8F		1747	2039	3.5F															
2255				2327				2344					</td												

HELL GATE (off Mill Rock), EAST RIVER, NEW YORK, 1983

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F-Flood, Dir. 050° True E-Ebb, Dir. 230° True

MARCH

APRIL

	Slack Water Time	Maximum Current	Slack Water Time	Maximum Current	Slack Water Time	Maximum Current	Slack Water Time	Maximum Current					
Day	h.m.	Time	Vel.	Day	h.m.	Time	Vel.	Day	h.m.	Time	Vel.		
1 Tu	0207	5.2E	16	0128	4.9E	F	0018	0310	4.8E	16	0225	5.0E	
	0530	0.832	4.0F	0453	0752	0640	0940	1026	3.6F	Sa	0551	0850	
	1137	1431	5.1E	1104	1351	1247	1532	1617	4.6E		1203	1449	
	1756	2055	3.9F	1712	2010	1858	2158	2244	3.5F		1804	2108	
	2357			2317									
2 W	0254	5.1E	17	0209	5.0E	2	0104	0351	4.6E	17	0018	0314	
	0620	0.921	3.9F	0530	0832	Sa	0727	1026	3.4F	Su	0639	0939	
	1226	1519	4.9E	1143	1432	1334	1617	1703	4.1E		1251	1536	
	1844	2143	3.7F	1748	2047	1945	2244	2335	3.0F		1852	2159	
				2356									
3 Th	0046	0342	4.9E	18	0250	4.9E	3	0152	0437	4.3E	18	0110	0404
	0710	1011	3.7F	F	0611	0913	Su	0817	1114	3.1F	M	0733	1031
	1315	1607	4.7E	1224	1513	1423	1703	1754	4.1E		1345	1631	
	1933	2231	3.5F	1827	2132	2036	2335				1949	2256	
4 F	0135	0430	4.6E	19	0038	0335	4	0243	0528	4.1E	19	0209	0501
	0801	1102	3.4F	Sa	0655	0958	M	0910	1206	2.9F	Tu	0835	1132
	1405	1653	4.4E	1309	1559	1515	1754	1848	3.9E		1447	1728	
	2023	2321	3.3F	1910	2217	2130					2056		
5 Sa	0226	0516	4.4E	20	0127	0424	5	0031	0031	2.8F	20	0001	3.2F
	0855	1154	3.1F	Su	0746	1049	Tu	0338	0620	3.9E	W	0315	0604
	1457	1742	4.1E	1400	1646	1106	1306	1405	2.7F		0945	1242	
	2117			2002	2309	1610	1848	1947	3.7E		1555	1836	
						2228					2210		
6 Su	0016	3.0F	21	0222	0517	6	0132	0132	2.7F	21	0113	3.2F	
	0320	0610	4.1E	M	0845	1146	W	0434	0719	3.8E	Th	0426	0715
	0951	1252	2.9F	1500	1745	1103	1405	1405	2.7F		1057	1356	
	1552	1835	3.9E	2104		1706	1848	1947	3.7E		1703	1949	
	2213					2325					2324		
7 M	0117	2.9F	22	0010	3.2F	7	0229	0229	2.8F	22	0229	3.2F	
	0416	0708	4.0E	Tu	0327	0619	Th	0530	0819	3.9E	F	0536	0830
	1049	1351	2.8F	0954	1252	1158	1501	1550	2.8F		1203	1507	
	1648	1936	3.8E	1607	1848	1759	2045	2137	4.1E		1808	2104	
	2310			2332									
8 Tu	0216	2.8F	23	0121	3.1F	8	0017	0324	2.9F	23	0031	0338	
	0513	0811	3.9E	W	0438	0726	F	0623	0915	4.0E	Sa	0640	0941
	1146	1452	2.8F	1108	1405	1247	1550	1550	3.0F		1304	1610	
	1743	2039	3.8E	1716	1958	1847	2137	2137	4.1E		1907	2211	
				2332									
9 W	0005	0312	2.9F	24	0237	3.2F	9	0105	0409	3.1F	24	0130	0438
	0608	0912	4.0E	Th	0549	0839	Sa	0711	1003	4.2E	Su	0738	1042
	1238	1543	2.9F	1217	1518	1331	1631	1631	3.2F		1357	1703	
	1835	2134	3.9E	1824	2111	1932	2221	2221	4.3E		2000	2308	
10 Th	0056	0403	3.0F	25	0041	0349	10	0148	0451	3.3F	25	0224	0531
	0658	1000	4.1E	F	0655	0952	Su	0755	1044	4.4E	M	0830	1132
	1326	1632	3.0F	1320	1623	1412	1710	1710	3.3F		1447	1753	
	1923	2219	4.1E	1925	2219	2013	2302	2302	4.5E		2050	2353	
11 F	0141	0448	3.2F	26	0143	0451	11	0229	0530	3.5F	26	0314	0618
	0745	1045	4.3E	Sa	0755	1055	M	0837	1124	4.6E	Tu	0919	1217
	1409	1710	3.2F	1416	1722	1451	1749	1749	3.5F		1533	1838	
	2006	2258	4.3E	2020	2319	2053	2341	2341	4.7E		2136		
						2311					2221		
12 Sa	0223	0527	3.4F	27	0239	0547	12	0308	0608	3.7F	27	0040	5.1E
	0828	1122	4.5E	Su	0850	1149	Tu	0918	1202	4.8E	W	0400	0703
	1449	1749	3.3F	1508	1811	1528	1824	1824	3.6F		1004	1300	
	2047	2336	4.5E	2111		2131					1618	1921	
											2221		
13 Su	0302	0605	3.5F	28	0014	5.1E	13	0021	0647	3.8F	28	0122	5.1E
	0909	1159	4.6E	M	0331	0637	Th	0347	0647	3.8F	Th	0445	0747
	1527	1823	3.5F	0941	1239	0957	1241	1241	4.9E		1049	1341	
	2125			1556	1900	1604	1902	1902	3.7F		1701	2002	
				2200		2210					2304		
14 M	0014	4.7E	29	0101	5.1E	14	0101	0101	5.0E	29	0203	5.0E	
	0339	0640	3.6F	Tu	0420	0726	F	0427	0726	3.8F	F	0529	0828
	0948	1237	4.8E	1029	1323	1037	1321	1321	4.9E		1132	1421	
	1602	1858	3.6F	1643	1945	1641	1941	1941	3.8F		1744	2043	
	2203			2247		2250					2348		
15 Tu	0050	4.8E	30	0146	5.1E	15	0142	0142	5.1E	30	0239	4.8E	
	0416	0716	3.7F	W	0507	0811	F	0507	0807	3.8F	Sa	0613	0911
	1026	1312	4.8E	1115	1409	1119	1404	1404	4.9E		1215	1500	
	1637	1933	3.6F	1728	2028	1721	2023	2023	3.7F		1827	2126	
	2239			2333		2332							
				31	0227	5.0E							
				Th	0554	0854							
				1201	1450	1211							
				1813	2114	1814							

Time meridian 75° W. 0000 is midnight. 1200 is noon.

HELL GATE (off Mill Rock), EAST RIVER, NEW YORK, 1983

F-Flood, Dir. 050° True E-Ebb, Dir. 230° True

MAY												JUNE					
	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots
Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots									
1	0032	0322 4.6E	16	0003 0258 5.0E	1	0128 0416 4.4E	16	0148 0440 4.7E									
Su	0657	0952 3.3F	M	0631 0927 3.5F	W	0800 1049 2.9F	Th	0821 1115 3.3F									
	1300	1543 4.3E		1236 1522 4.7E		1356 1637 4.2E		1420 1710 4.6E									
	1912	2210 3.2F		1845 2148 3.5F		2015 2306 2.9F		2047 2345 3.3F									
2	0117	0404 4.4E	17	0058 0351 4.8E	2	0216 0503 4.2E	17	0251 0544 4.6E									
M	0744	1036 3.1F	Tu	0728 1024 3.4F	Th	0848 1138 2.8F	F	0924 1221 3.3F									
	1346	1627 4.1E		1333 1617 4.5E		1444 1726 4.1E		1522 1816 4.5E									
	2000	2256 3.0F		1946 2246 3.4F		2106 2357 2.8F		2153									
3	0205	0450 4.2E	18	0158 0450 4.6E	3	0306 0554 4.2E	18										
Tu	0834	1126 2.9F	W	0831 1125 3.2F	F	0938 1227 2.8F	Sa	0354 0652 4.5E									
	1435	1712 4.0E		1435 1718 4.4E		1534 1817 4.1E		1026 1327 3.2F									
	2052	2347 2.8F		2054 2354 3.2F		2158		1624 1927 4.5E									
4	0256	0541 4.0E	19	0304 0554 4.5E	4	0358 0645 4.1E	Sa	0457 0801 4.4E									
W	0927	1220 2.7F	Th	0938 1233 3.1F		1029 1317 2.8F		1126 1430 3.3F									
	1528	1805 3.9E		1540 1829 4.3E		1625 1909 4.1E		1724 2035 4.5E									
	2147			2205		2251		2359									
5	0043	2.7F	20	0107 3.2F	5	0144 2.9F	20										
Th	0351	0635 4.0E	F	0412 0707 4.4E	Su	0451 0738 4.2E	M	0556 0904 4.4E									
	1022	1316 2.7F		1045 1345 3.2F		1118 1410 2.9F		1222 1527 3.4F									
	1621	1900 3.9E		1645 1941 4.4E		1715 2002 4.3E		1820 2136 4.6E									
	2243			2314		2343											
6	0140	2.8F	21	0217 3.3F	6	0235 3.0F	21	0055 0359 3.4F									
F	0446	0730 4.0E	Sa	0518 0817 4.4E	M	0543 0830 4.3E	Tu	0650 0959 4.5E									
	1115	1411 2.8F		1148 1452 3.3F		1206 1459 3.1F		1314 1618 3.4F									
	1714	1955 4.0E		1747 2053 4.5E		1804 2053 4.5E		1912 2227 4.7E									
7	0233	2.9F	22	0018 0324 3.4F	7	0033 0327 3.2F	22	0146 0450 3.4F									
Sa	0539	0823 4.1E	Su	0619 0925 4.5E	Tu	0633 0921 4.5E	W	0740 1051 4.5E									
	1205	1502 2.9F		1245 1550 3.5F		1252 1547 3.2F		1402 1707 3.5F									
	1803	2049 4.1E		1844 2154 4.7E		1852 2146 4.7E		2000 2314 4.7E									
8	0026	0325 3.0F	23	0115 0419 3.5F	8	0122 0415 3.3F	23	0234 0535 3.5F									
Su	0629	0915 4.2E	M	0715 1022 4.6E	W	0722 1010 4.6E	Th	0827 1130 4.6E									
	1251	1547 3.1F		1337 1641 3.6F		1338 1635 3.4F		1447 1751 3.5F									
	1849	2138 4.4E		1936 2248 4.8E		1940 2234 4.9E		2045 2355 4.8E									
9	0112	0410 3.2F	24	0207 0510 3.6F	9	0210 0504 3.5F	24	0318 0618 3.5F									
M	0715	1000 4.4E	Tu	0806 1111 4.7E	Th	0810 1058 4.8E	F	0911 1209 4.6E									
	1333	1629 3.3F		1425 1730 3.7F		1423 1722 3.6F		1530 1831 3.5F									
	1933	2223 4.6E		2025 2335 4.9E		2028 2323 5.0E		2128									
10	0156	0454 3.4F	25	0255 0558 3.7F	10	0258 0552 3.6F	25										
Tu	0800	1045 4.6E	W	0853 1156 4.8E	F	0858 1146 4.9E	Sa	0400 0657 3.5F									
	1414	1710 3.5F		1510 1815 3.7F		1510 1809 3.7F		0953 1248 4.6E									
	2016	2306 4.8E		2110		2116		1611 1909 3.5F									
	2210																
11	0238	0533 3.6F	26	0018 5.0E	11	0012 5.1E	26	0108 4.8E									
W	0843	1130 4.8E	Th	0340 0641 3.7F	Sa	0346 0641 3.7F	Su	0441 0735 3.4F									
	1454	1753 3.6F		0937 1233 4.8E		0946 1235 4.9E		1034 1324 4.6E									
	2058	2351 5.0E		1554 1857 3.7F		1558 1858 3.8F		1651 1950 3.5F									
	2154			2154		2206		2251									
12	0321	0616 3.7F	27	0057 4.9E	12	0103 5.2E	27	0146 4.7E									
Th	0926	1213 4.9E	F	0423 0722 3.6F	Su	0436 0730 3.7F	M	0521 0813 3.4F									
	1535	1834 3.7F		1020 1314 4.7E		1036 1325 4.9E		1114 1402 4.6E									
	2141			1636 1936 3.6F		1649 1950 3.8F		1731 2029 3.4F									
	2236			2318		2257		2332									
13	0036	5.1E	28	0134 4.9E	13	0154 5.1E	28	0223 4.7E									
F	0405	0659 3.8F	Sa	0505 0801 3.5F	M	0528 0821 3.7F	Tu	0601 0852 3.3F									
	1010	1256 4.9E		1102 1350 4.6E		1128 1418 4.9E		1155 1440 4.5E									
	1617	1917 3.8F		1717 2015 3.5F		1742 2041 3.7F		1812 2107 3.3F									
	2225			2318		2351											
14	0120	5.1E	29	0213 4.8E	14	0247 5.1E	29	0013 0302 4.6E									
Sa	0450	0746 3.7F	Su	0548 0842 3.4F	Tu	0623 0916 3.6F	W	0642 0932 3.2F									
	1056	1343 4.9E		1144 1428 4.5E		1223 1511 4.8E		1236 1521 4.4E									
	1702	2004 3.8F		1759 2057 3.4F		1840 2140 3.6F		1853 2148 3.2F									
	2312																
15	0209	5.1E	30	0000 0251 4.6E	15	0048 0343 4.9E	30	0056 0345 4.5E									
Su	0539	0834 3.7F	M	0630 0922 3.2F	W	0721 1014 3.4F	Th	0723 1014 3.1F									
	1144	1430 4.8E		1226 1509 4.4E		1320 1608 4.7E		1319 1602 4.4E									
	1751	2053 3.7F		1842 2136 3.2F		1941 2240 3.5F		1936 2233 3.1F									
	31	0043 4.5E	Tu	0714 1004 3.1F													
	1310	1552 4.3E		1310 1552 3.1F													
	1927	2221 3.1F															

Time meridian 75° W. 0000 is midnight. 1200 is noon.

HELL GATE (off Mill Rock), EAST RIVER, NEW YORK, 1983

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F-Flood, Dir. 050° True E-Ebb, Dir. 230° True

JULY

AUGUST

Slack Water Time	Maximum Current Time Vel.										
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots
1 F	0140	0428	4.4E	16	0234	0528	4.6E	1	0238	0522	4.3E
	0806	1056	3.0F	Sa	0900	1201	3.4F	M	0845	1149	3.1F
	1402	1648	4.3E		1502	1757	4.5E		1458	1747	4.4E
	2021	2315	3.0F		2130				2113		
2 Sa	0226	0515	4.3E	17	0033	0033	3.3F	2	0016	0016	3.1F
	0851	1142	2.9F	Su	0334	0629	4.4E	Tu	0329	0613	4.3E
	1449	1737	4.3E		0959	1302	3.3F		0935	1240	3.1F
	2110				1601	1903	4.4E		1551	1843	4.4E
					2233				2211		
3 Su	0006	3.0F		18	0138	0138	3.2F	3	0113	0113	3.1F
	0315	0602	4.3E	M	0434	0736	4.3E	W	0425	0712	4.3E
	0938	1233	2.9F		1058	1405	3.2F		1031	1337	3.2F
	1538	1826	4.3E		1700	2010	4.4E		1650	1940	4.4E
	2202				2333				2313		
4 M	0057	3.0F		19	0239	0239	3.2F	4	0211	0211	3.1F
	0406	0652	4.3E	Tu	0532	0840	4.2E	Th	0525	0807	4.3E
	1027	1321	3.0F		1154	1505	3.2F		1131	1436	3.3F
	1629	1919	4.4E		1756	2113	4.4E		1751	2041	4.5E
	2257										
5 Tu	0152	3.0F		20	0029	0334	3.2F	5	0016	0312	3.2F
	0747	0747	4.3E	W	0626	0937	4.2E	F	0625	0909	4.4E
	1118	1414	3.1F		1247	1556	3.3F		1233	1538	3.4F
	1723	2014	4.5E		1849	2206	4.4E		1851	2140	4.7E
	2352										
6 W	0245	3.1F		21	0121	0425	3.2F	6	0117	0413	3.4F
	0555	0842	4.4E	Th	0717	1024	4.3E	Sa	0724	1008	4.6E
	1210	1509	3.2F		1336	1645	3.3F		1333	1639	3.6F
	1817	2110	4.6E		1938	2252	4.5E		1950	2242	4.8E
	2206										
7 Th	0047	0341	3.3F	22	0208	0511	3.3F	7	0215	0513	3.6F
	0649	0937	4.5E	F	0804	1107	4.3E	Su	0821	1107	4.8E
	1303	1602	3.4F		1421	1730	3.4F		1431	1736	3.8F
	1911	2206	4.8E		2024	2333	4.5E		2048	2339	5.0E
	2206										
8 F	0142	0438	3.4F	23	0252	0552	3.3F	8	0310	0609	3.8F
	0743	1028	4.7E	Sa	0848	1146	4.4E	M	0916	1204	4.9E
	1356	1655	3.6F		1503	1809	3.5F		1527	1831	4.0F
	2005	2300	5.0E		2107				2143		
	2205										
9 Sa	0236	0529	3.6F	24	0009	0009	4.6E	9	0036	0036	5.1E
	0836	1124	4.8E	Su	0333	0633	3.4F	Tu	0403	0702	3.9F
	1449	1749	3.8F		0929	1222	4.5E		1009	1300	5.0E
	2059	2353	5.1E		1544	1846	3.5F		1621	1927	4.0F
	2148								2237		
10 Su	0329	0622	3.7F	25	0044	0444	4.6E	10	0129	0129	5.1E
	0929	1217	4.9E	M	0412	0710	3.4F	W	0456	0756	3.9F
	1542	1844	3.9F		1009	1257	4.5E		1102	1353	5.1E
	2153				1622	1923	3.5F		1716	2021	4.0F
	2228								2330		
11 M	0047	0427	5.1E	26	0119	0119	4.7E	11	0221	0221	5.1E
	0421	0715	3.8F	Tu	0450	0745	3.4F	Th	0548	0847	3.9F
	1022	1312	5.0E		1048	1333	4.6E		1155	1447	5.0E
	1636	1939	3.9F		1700	1959	3.5F		1810	2114	4.0F
	2247				2308				2330		
12 Tu	0142	0427	5.1E	27	0156	0156	4.7E	12	0024	0313	4.9E
	0515	0809	3.8F	W	0528	0821	3.4F	F	0640	0942	3.8F
	1116	1405	5.0E		1127	1412	4.6E		1248	1539	4.9E
	1731	2032	3.9F		1738	2037	3.5F		1905	2209	3.8F
	2342				2347						
13 W	0237	0527	5.1E	28	0233	0233	4.7E	13	0118	0407	4.7E
	0609	0903	3.7F	Th	0605	0858	3.4F	Sa	0733	1036	3.7F
	1210	1501	4.9E		1206	1451	4.6E		1342	1636	4.7E
	1828	2129	3.8F		1816	2116	3.4F		2002	2306	3.6F
	2201										
14 Th	0038	0332	4.9E	29	0027	0312	4.6E	14	0214	0502	4.5E
	0704	1001	3.6F	F	0642	0935	3.3F	Su	0828	1132	3.5F
	1306	1556	4.8E		1245	1530	4.5E		1438	1731	4.5E
	1927	2227	3.6F		1855	2155	3.3F		2100		
	2201										
15 F	0135	0427	4.8E	30	0108	0355	4.5E	15	0006	0006	3.4F
	0801	1059	3.5F	Sa	0720	1017	3.2F	M	0311	0603	4.3E
	1403	1656	4.7E		1326	1613	4.5E		0925	1232	3.3F
	2028	2329	3.5F		1936	2236	3.3F		1536	1834	4.3E
	2201								2033	2342	3.2F
31 Su	0151	0437	4.4E	31	0151	0437	4.4E		0259	0542	4.2E
	0800	1059	3.1F		1059	1059			0851	1203	3.2F
	1409	1700	4.4E		1700	1700			1522	1810	4.4E
	2022	2325	3.2F		2325	2325			2134		

Time meridian 75° W. 0000 is midnight. 1200 is noon.

THE NARROWS, NEW YORK HARBOR, NEW YORK, 1983

F-Flood, Dir. 340° True E-Ebb, Dir. 160° True

JANUARY

FEBRUARY

	Slack Water Time	Maximum Current Time Vel.	Slack Water Time	Maximum Current Time Vel.	Slack Water Time	Maximum Current Time Vel.	Slack Water Time	Maximum Current Time Vel.
Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m. knots	Day	h.m. knots
1	0152	2.3E	16	0206	1.8E	1	0007	0316
Sa	0509	2.4F	Su	0528	1.8F	Tu	0646	0924
1112	1429	2.6E	1118	1438	2.1E	1232	1545	2.4E
1807	2028	1.8F	1821	2032	1.4F	1922	2201	1.9F
	2330		2336					
2	0243	2.3E	17	0247	1.8E	2	0100	0409
Su	0604	0850	M	0609	0846	W	0745	1020
1204	1519	2.6E	1159	1515	2.0E	1320	1634	2.2E
1859	2127	1.8F	1901	2117	1.4F	2015	2253	1.9F
3	0026	0336	2.2E	18	0019	0326	3	0154
M	0703	0945	2.1F	Tu	0653	0933	Th	0846
1256	1609	2.4E	1239	1552	2.0E	1409	1725	2.0E
1953	2227	1.8F	1942	2201	1.4F	2109	2347	1.8F
4	0123	0431	2.1E	19	0104	0409	4	0249
Tu	0807	1044	1.9F	W	0744	1020	F	0947
1347	1703	2.2E	1320	1633	1.9E	1500	1824	1.8E
2049	2325	1.8F	2025	2250	1.5F	2203		
5	0220	0531	1.9E	20	0151	0457	5	0043
W	0911	1144	1.7F	Th	0841	1107	Sa	0348
1440	1802	2.1E	1404	1720	1.8E	1048	1309	1.2F
2143			2109	2335	1.5F	1555	1923	1.7E
						2256		
6	0023	1.8F	21	0241	0552	6	0142	1.6F
Th	0320	0637	1.9E	F	0940	1156	Su	0449
1014	1242	1.5F	1451	1813	1.7E	1147	1424	1.1F
1535	1900	2.0E	2154			1654	2020	1.7E
	2237					2350		2306
7	0121	1.7F	22	0024	1.6F	7	0253	1.6F
F	0422	0742	1.8E	Sa	0337	0657	M	0548
1115	1345	1.4F	1039	1250	1.3F	1245	1537	1.1F
1632	1958	1.9E	1544	1911	1.7E	1752	2112	1.6E
	2329		2242					
8	0227	1.7F	23	0117	1.7F	8	0042	0357
Sa	0524	0839	1.9E	Su	0436	0756	Tu	0641
1214	1502	1.3F	1138	1345	1.2F	1340	1632	1.1F
1729	2049	1.9E	1643	2008	1.8E	1846	2157	1.6E
	2333							
9	0020	0330	1.8F	24	0213	1.8F	9	0134
Su	0620	0931	1.9E	M	0536	0854	W	0728
1312	1606	1.2F	1238	1446	1.2F	1430	1717	1.2F
1823	2138	1.8E	1743	2101	1.9E	1935	2246	1.7E
10	0111	0423	1.8F	25	0028	0314	10	0222
M	0710	1020	1.9E	Tu	0634	0947	Th	0811
1406	1655	1.3F	1335	1547	1.4F	1514	1759	1.3F
1912	2223	1.8E	1841	2154	2.0E	2020	2333	1.7E
11	0159	0510	1.9F	26	0124	0413	11	0307
Tu	0755	1109	2.0E	W	0728	1041	F	0852
1455	1740	1.3F	1430	1648	1.5F	1555	1828	1.4F
1958	2310	1.8E	1936	2251	2.1E	2103		
12	0245	0545	1.9F	27	0220	0508	12	0021
W	0837	1156	2.0E	Th	0820	1137	Sa	0349
1540	1815	1.3F	1520	1740	1.7F	0932	1254	2.1E
2042	2359	1.7E	2030	2347	2.2E	1634	1853	1.5F
						2145		2201
13	0328	0618	1.9F	28	0313	0559	13	0104
Th	0918	1238	2.0E	F	0912	1229	Su	0429
1622	1846	1.3F	1608	1831	1.9F	1012	1333	2.1E
2125			2124			1710	1925	1.5F
						2227		2253
14	0042	1.7E	29	0043	2.4E	14	0145	1.9E
F	0409	0646	1.9F	Sa	0406	0649	M	0508
0958	1320	2.1E	1003	1321	2.6E	1051	1410	2.1E
1702	1915	1.4F	1655	1918	2.0F	1746	2002	1.6F
	2208		2218			2309		
15	0127	1.8E	30	0137	2.4E	15	0223	1.9E
Sa	0448	0722	1.9F	Su	0457	0738	Tu	0548
1038	1359	2.1E	1053	1410	2.6E	1130	1446	2.1E
1741	1951	1.4F	1742	2010	2.0F	1822	2045	1.6F
	2252		2313			2351		
	31	0228	2.4E					
	M	0550	0831	2.3F				
		1143	1457	2.6E				
		1831	2104	2.0F				

THE NARROWS, NEW YORK HARBOR, NEW YORK, 1983

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F-Flood, Dir. 340° True E-Ebb, Dir. 160° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time Vel.						
Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m. knots	Day	h.m. knots
1	Tu 0535	0209 2.5E	16 W 0527	0159 2.1E	1 F 0700	0007 2.3E	16 Sa 0639	0300 2.3E
	1118	0809 2.2F		0753 1.8F		0923 1.6F		0900 1.6F
	1434	1434 2.5E		1101 1416 2.1E		1222 1533 2.0E		1158 1505 2.0E
	1802	2036 2.1F		1742 2012 1.8F		1904 2143 1.9F		1824 2120 2.0F
	2344	2324						
2	W 0627	0257 2.4E	17 Th 0609	0239 2.1E	2 Sa 0755	0055 2.1E	17 Su 0733	0033 0345 2.2E
	0900	0900 2.0F		0836 1.7F		1014 1.4F		0952 1.5F
	1205	1517 2.4E		1141 1453 2.1E		1307 1618 1.8E		1247 1550 1.9E
	1849	2129 2.0F		1816 2057 1.8F		1956 2234 1.7F		1916 2215 1.9F
3	Th 0722	0035 0345 2.3E	18 F 0656	0008 0318 2.1E	3 Su 0852	0143 0456 1.8E	18 M 0832	0124 0436 2.1E
	0951	1.7F		0925 1.6F		1105 1.2F		1047 1.4F
	1251	1603 2.2E		1222 1530 2.0E		1355 1709 1.6E		1339 1646 1.8E
	1939	2220 1.9F		1855 2145 1.8F		2052 2323 1.6F		2019 2308 1.9F
4	F 0820	0125 0434 2.1E	19 Sa 0750	0054 0401 2.0E	4 M 0949	0233 0554 1.7E	19 Tu 0933	0219 0537 2.0E
	1045	1.5F		1014 1.5F		1158 1.1F		1142 1.4F
	1338	1651 1.9E		1307 1609 1.9E		1448 1810 1.4E		1437 1755 1.7E
	2033	2311 1.8F		1942 2236 1.8F		2149		2128
5	Sa 0920	0216 0528 1.8E	20 Su 0850	0144 0453 1.9E	5 Tu 0327	0014 1.4F	20 W 0319	0006 0436 1.8F
	1136	1.3F		1105 1.4F		0654 1.6E		0645 1.9E
	1427	1746 1.7E		1355 1702 1.7E		1045 1252 1.0F		1032 1241 1.4F
	2128	2040 2329 1.8F				1546 1912 1.4E		1542 1906 1.7E
6	Su 0931	0002 0631 1.6F	21 M 0952	0239 0556 1.8E	6 W 0425	0111 1.3F	21 Th 0423	0107 0748 2.0E
	0631	1.7E		1159 1.3F		0755 1.6E		1128 1345 1.4F
	1019	1232 1.1F		1451 1811 1.7E		1139 1404 1.0F		1650 2011 1.9E
	1520	1846 1.5E		2143		1649 2010 1.4E		2340
7	M 0409	0055 0733 1.6E	22 Tu 0340	0026 0705 1.8E	7 Th 0523	0214 0846 1.7E	22 F 0527	0214 0846 2.1E
	0733	1.6E		0705 1.8E		0846 1.7E		1223 1501 1.6F
	1117	1333 1.0F		1052 1256 1.3F		1230 1517 1.1F		1316 1607 1.8F
	1619	1947 1.5E		1555 1921 1.7E		1748 2101 1.5E		1755 2109 2.0E
8	Tu 0509	0201 0831 1.4F	23 W 0445	0123 0809 1.8F	8 Th 0523	0036 0330 1.4F	23 Sa 0625	0042 0331 1.8F
	0831	1.6E		0809 1.9E		0933 1.8E		0938 2.2E
	1214	1500 1.0F		1152 1401 1.3F		1318 1612 1.3F		1316 1607 1.8F
	1721	2041 1.5E		1703 2024 1.8E		1840 2150 1.7E		1853 2203 2.2E
9	W 0605	0013 0921 1.4F	24 Th 0549	0229 0905 1.8F	9 Sa 0704	0128 0422 1.5F	24 Su 0718	0141 0434 1.9F
	0921	1.7E		0905 2.1E		1016 1.9E		1029 2.3E
	1308	1602 1.1F		1249 1512 1.4F		1403 1655 1.5F		1406 1700 2.0F
	1819	2132 1.6E		1808 2125 2.0E		1927 2236 1.8E		1946 2258 2.3E
10	Th 0655	0106 1008 1.5F	25 F 0648	0055 1000 1.9F	10 Su 0747	0216 0501 1.6F	25 M 0807	0236 0524 2.0F
	1008	1.8E		1000 2.2E		1101 1.9E		1120 2.3E
	1357	1651 1.2F		1343 1623 1.7F		1444 1723 1.6F		1453 1745 2.2F
	1910	2219 1.6E		1907 2219 2.2E		2009 2323 1.9E		2035 2351 2.4E
11	F 0740	0157 1055 1.6F	26 Sa 0742	0155 1052 2.1F	11 M 0828	0302 0536 1.7F	26 Tu 0853	0327 0608 2.0F
	1055	1.9E		1052 2.3E		1143 2.0E		1209 2.3E
	1442	1730 1.4F		1433 1718 1.9F		1522 1752 1.8F		1538 1824 2.2F
	1955	2308 1.7E		2001 2316 2.3E		2051		2123
12	Sa 0822	0243 1138 1.7F	27 Su 0831	0250 1146 2.2F	12 Tu 0345	0009 2.1E	27 W 0416	0040 0647 2.4E
	1138	2.0E		1146 2.4E		0609 1.8F		0938 1255 2.2E
	1522	1759 1.5F		1520 1801 2.1F		0909 1226 2.1E		1621 1901 2.2F
	2038	2353 1.8E		2053		1557 1825 1.9F		2209
13	Su 0902	0327 1221 1.8F	28 M 0342	0009 0624 2.4E	13 W 0426	0052 0647 2.2E	28 Th 0503	0128 0727 2.4E
	1221	2.0E		0624 2.2F		0949 1307 2.1E		1023 1341 2.2E
	1600	1824 1.6F		0919 1235 2.4E		1631 1902 2.0F		1703 1940 2.1F
	2119	1604 1844 2.2F		1844 2.2F		2214		2255
14	M 0408	0036 0636 2.0E	29 Tu 0431	0101 0705 2.5E	14 Th 0507	0133 0726 2.2E	29 F 0550	0212 0809 2.3E
	0636	1.8F		0705 2.1F		1347 1721 1.7F		1.6F
	0942	1302 2.1E		1006 1321 2.4E		1030 1444 2.1E		1108 1422 2.0E
	1635	1857 1.7F		1648 1925 2.2F		1705 1944 2.1F		1746 2023 2.0F
	2200	2232				2258		2340
15	Tu 0447	0120 0712 2.0E	30 W 0519	0149 0748 2.5E	15 F 0551	0217 0811 2.3E	30 Sa 0638	0255 0854 2.2E
	0712	1.8F		0748 2.0F		1173 1426 2.1E		1.4F
	1021	1339 2.1E		1051 1407 2.4E		1113 1448 2.2E		1153 1505 1.9E
	1709	1933 1.8F		1732 2009 2.1F		1742 2031 2.0F		1831 2109 1.8F
	2242	2320				2344		
			31 Th 0608	0235 0834 2.4E				
				0834 1.8F				
				1137 1448 2.2E				
				1816 2055 2.0F				

THE NARROWS, NEW YORK HARBOR, NEW YORK, 1983

F-Flood, Dir. 340° True E-Ebb, Dir. 160° True

MAY

JUNE

	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time
Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m. knots	Day	h.m. knots
1 Su	0025 0730	0338 2.0E 0945 1.3F	16 M	0015 0329 2.3E 0716 0933 1.5F	1 W	0125 0444 1.8E 0844 1055 1.2F	16 Th	0143 0458 2.3E 0847 1113 1.7F
2 M	0111 0824	0427 1.9E 1036 1.2F	17 Tu	0107 0420 2.2E 0814 1030 1.5F	2 Th	0211 0534 1.7E 0933 1144 1.2F	17 F	0237 0558 2.2E 0942 1212 1.7F
3 Tu	0158 0918	0515 1.7E 1127 1.1F	18 W	0201 0519 2.1E 0912 1128 1.5F	3 F	0300 0630 1.7E 1020 1229 1.3F	18 Sa	0032 0700 1.7F 0334 0700 2.1E
4 W	0248 1011	0614 1.6E 1219 1.1F	19 Th	0259 0623 2.1E 1009 1227 1.6F	4 Sa	0045 0045 1.3F 0352 0724 1.7E	19 Su	0138 0757 1.6F 0433 0757 2.1E
5 Th	0341 1101	0713 1.6E 1312 1.1F	20 F	0050 0400 1.7F 0400 0726 2.1E	5 Su	0138 0445 1.3F 0812 1150 1.8E	20 M	0007 0531 1.5F 0250 0531 0849 2.1E
6 F	0437 1149	0805 1.7E 1411 1.2F	21 Sa	0501 0824 2.1E 1156 1440 1.7F	6 M	0020 0538 1.3F 0538 0858 1.8E	21 Tu	0106 0625 1.5F 0357 0625 0941 2.0E
7 Sa	0002 0532	0223 1.3F 0854 1.8E	22 Su	0026 0312 1.6F 0600 0915 2.2E	7 Tu	0113 0330 1.3F 0628 0941 1.9E	22 W	0202 0715 1.5F 0452 0715 1026 2.0E
8 Su	0055 0622	0325 1.4F 0938 1.9E	23 M	0125 0419 1.7F 0653 1006 2.2E	8 W	0205 0424 1.4F 0715 1028 1.9E	23 Th	0255 0802 1.5F 0539 0802 1114 1.9E
9 M	0146 0708	0416 1.5F 1021 1.9E	24 Tu	0220 0511 1.7F 0741 1052 2.1E	9 Th	0254 0510 1.5F 0801 1111 2.0E	24 F	0000 0342 2.1E 0618 0342 0847 1.4F
10 Tu	0234 0752	0458 1.6F 1104 2.0E	25 W	0312 0552 1.7F 0827 1140 2.1E	10 F	0342 0556 1.6F 0847 1202 2.0E	25 Sa	0046 0427 2.1E 0653 0427 0931 1.4F
11 W	0320 0834	0539 1.6F 1150 2.0E	26 Th	0021 0633 2.3E 0400 0911 1.6F	11 Sa	0048 0428 2.4E 0641 0936 1.7F	26 Su	0129 0510 2.1E 0726 0510 1016 1.3F
12 Th	0404 0917	0620 1.7F 1233 2.0E	27 F	0107 0708 2.2E 0446 0956 1.5F	12 Su	0136 0515 2.5E 0728 1027 1.7F	27 M	0210 0553 2.1E 0805 0553 1101 1.3F
13 F	0448 1001	0620 1.7F 1318 2.1E	28 Sa	0151 0745 2.2E 0531 1315 1.4F	13 M	0225 0604 2.5E 0819 0915 1.7F	28 Tu	0250 0636 2.1E 0848 0636 1147 1.3F
14 Sa	0533 1048	0156 2.4E 0749 1.6F	29 Su	0234 0828 2.1E 0617 1126 1.3F	14 Tu	0313 0656 2.5E 0915 1015 1.7F	29 W	0012 0721 0935 2.0E 0329 0721 1233 1.3F
15 Su	0622 1138	0241 2.4E 0838 1.6F	30 M	0313 0916 2.0E 0704 1213 1.2F	15 W	0050 0751 2.4E 0404 1015 1.7F	30 Th	0054 0806 1.9E 0411 1020 1320 1.3F
			31 Tu	0041 0358 1.9E 0754 1008 1.2F				
				1300 1608 1.5E				
				1941 2217 1.5F				

THE NARROWS, NEW YORK HARBOR, NEW YORK, 1983

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F-Flood, Dir. 340° True E-Ebb, Dir. 160° True

JULY												AUGUST											
	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum		Water Time	Current Time										
Day	Water Time	Current Time	Water Time	Current Time	Water Time	Current Time	Water Time	Current Time	Water Time	Current Time	Day	Water Time	Current Time	Water Time	Current Time	Water Time	Current Time	Water Time	Current Time	Water Time	Current Time	Water Time	Current Time
	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	
1	0137	0456 1.8E	16	0213	0531 2.2E	1	0231	0550 1.7E	16	0043 1.3F													
F	0852	1107 1.3F	Sa	0913	1150 1.9F	M	0934	1205 1.6F	Tu	0332 0658 1.8E													
	1408	1716 1.5E		1450	1803 2.0E		1513	1832 1.6E		1032 1314 1.7F													
	2058	2321 1.4F		2144			2218			1623 1944 1.8E													
										2322													
2	0222	0544 1.7E	17	0011	1.7F	2	0027	1.2F	17	0152 1.2F													
Sa	0937	1152 1.4F	Su	0306	0630 2.0E	Tu	0320	0647 1.7E	W	0431 0757 1.7E													
	1458	1813 1.5E		1007	1246 1.8F		1020	1254 1.6F		1126 1426 1.6F													
	2155			1551 1909 1.9E			1610	1933 1.7E		1724 2043 1.8E													
				2245			2315																
3	0010	1.3F	18	0112	1.5F	3	0118	1.2F	18	0021 0310 1.1F													
Su	0309	0637 1.7E	M	0403	0730 2.0E	W	0416	0743 1.7E	Th	0531 0850 1.7E													
	1021	1240 1.5F		1100 1348 1.8F			1109	1347 1.7F		1221 1531 1.6F													
	1552	1913 1.6E		1653 2012 1.9E			1709	2028 1.8E		1820 2134 1.8E													
	2250			2346																			
4	0059	1.3F	19	0221	1.3F	4	0013	0217 1.2F	19	0117 0411 1.2F													
M	0401	0730 1.7E	Tu	0501	0822 1.9E	Th	0515	0836 1.8E	F	0627 0941 1.7E													
	1104	1327 1.5F		1153 1455 1.8F			1201	1445 1.8F		1314 1629 1.7F													
	1648	2006 1.7E		1753 2107 1.9E			1807	2122 2.0E		1910 2221 1.9E													
5	0152	1.2F	20	0045	0336 1.3F	5	0109	0318 1.3F	20	0208 0500 1.3F													
Tu	0455	0819 1.8E	W	0558	0915 1.9E	F	0614	0931 1.9E	Sa	0718 1029 1.7E													
	1149	1422 1.7F		1246 1600 1.8F			1257	1546 2.0F		1404 1714 1.8F													
	1743	2058 1.8E		1847 2159 2.0E			1902	2213 2.1E		1954 2308 1.9E													
6	0042	0249 1.2F	21	0142	0434 1.3F	6	0204	0420 1.4F	21	0255 0543 1.4F													
W	0549	0908 1.8E	Th	0651	1003 1.8E	Sa	0709	1024 2.0E	Su	0804 1116 1.7E													
	1235	1517 1.8F		1337 1649 1.9F			1353	1642 2.2F		1451 1749 1.8F													
	1835	2146 2.0E		1936 2248 2.0E			1954	2307 2.3E		2035 2353 2.0E													
7	0136	0347 1.3F	22	0234	0523 1.3F	7	0255	0513 1.6F	22	0337 0618 1.4F													
Th	0641	0954 1.9E	F	0739	1051 1.8E	Su	0803	1117 2.2E	M	0847 1201 1.8E													
	1323	1610 2.0F		1426 1732 1.9F			1447	1734 2.3F		1534 1818 1.8F													
	1926	2239 2.1E		2020 2335 2.0E			2045			2115													
8	0229	0442 1.4F	23	0322	0602 1.3F	8	0002	2.4E	23	0035 2.0E													
F	0732	1045 2.0E	Sa	0825	1139 1.8E	M	0343	0604 1.8F	Tu	0415 0643 1.5F													
	1413	1702 2.2F		1512 1809 1.9F			0857	1215 2.3E		0929 1247 1.8E													
	2015	2331 2.3E		2102			1540	1824 2.4F		1615 1848 1.8F													
							2136			2154													
9	0319	0533 1.6F	24	0022	2.0E	9	0054	2.5E	24	0116 2.1E													
Sa	0823	1138 2.1E	Su	0405	0637 1.4F	Tu	0429	0653 2.0F	W	0452 0709 1.5F													
	1503	1751 2.4F		0909	1227 1.8E		0951	1309 2.4E		1011 1328 1.9E													
	2105			1555 1836 1.9F			1632	1913 2.4F		1655 1921 1.8F													
				2143			2226			2234													
10	0024	2.4E	25	0103	2.0E	10	0144	2.6E	25	0154 2.1E													
Su	0406	0620 1.7F	M	0445	0706 1.4F	W	0516	0742 2.0F	Th	0528 0746 1.6F													
	0914	1231 2.2E		0953 1313 1.8E			1045	1403 2.5E		1052 1409 1.9E													
	1553	1838 2.4F		1636 1910 1.8F			1725	2002 2.3F		1735 2000 1.7F													
	2155			2223			2317			2313													
11	0117	2.5E	26	0144	2.1E	11	0232	2.6E	26	0231 2.1E													
M	0453	0710 1.8F	Tu	0525	0738 1.4F	Th	0603	0834 2.1F	F	0604 0826 1.6F													
	1008	1326 2.3E		1037 1353 1.8E			1140	1452 2.5E		1134 1447 1.9E													
	1644	1927 2.4F		1716 1946 1.8F			1819	2057 2.2F		1816 2045 1.6F													
	2247			2303						2352													
12	0206	2.6E	27	0225	2.1E	12	0007	0319 2.5E	27	0306 2.0E													
Tu	0541	0801 1.8F	W	0604	0815 1.4F	F	0653	0929 2.0F	Sa	0640 0909 1.6F													
	1103	1418 2.3E		1121 1434 1.8E			1234	1544 2.3E		1217 1526 1.9E													
	1738	2020 2.3F		1757 2029 1.7F			1917	2152 2.0F		1901 2130 1.5F													
	2338			2343																			
13	0255	2.6E	28	0300	2.0E	13	0056	0409 2.3E	28	0032 0339 1.9E													
W	0631	0856 1.9F	Th	0644	0858 1.4F	Sa	0746	1027 2.0F	Su	0717 0956 1.6F													
	1159	1511 2.3E		1204 1513 1.8E			1328	1637 2.2E		1301 1605 1.8E													
	1835	2116 2.2F		1841 2114 1.6F			2018	2249 1.8F		1953 2218 1.4F													
14	0030	0343 2.5E	29	0023	0337 2.0E	14	0145	0500 2.1E	29	0113 0418 1.8E													
Th	0724	0953 1.9F	F	0724	0945 1.4F	Su	0841	1119 1.9F	M	0800 1043 1.6F													
	1255	1604 2.2E		1248 1552 1.7E			1423	1736 2.0E		1348 1656 1.7E													
	1936	2215 2.0F		1930 2201 1.5F			2121	2347 1.5F		2050 2307 1.3F													
15	0121	0436 2.3E	30	0104	0416 1.9E	15	0237	0557 1.9E	30	0157 0503 1.7E				</td									

DELAWARE BAY ENTRANCE, 1983

F-Flood, Dir. 305° True E-Ebb, Dir. 140° True

JANUARY												FEBRUARY													
Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Water	Time	Current	Water	Time	Current	Water	Time	Current	Water	Time	Current		
Day	Water	Time	Current	Day	Water	Time	Current	Day	Water	Day	Water	Time	Time	Vel.	Time	Vel.	Time	Time	Vel.	Time	Time	Vel.			
	h.m.	h.m.	knots		h.m.	h.m.	knots		h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.		
1		0127	1.8E	16		0137	1.6E	1	0007	0306	1.8E	16		0231	1.8E										
Sa	0442	0746	2.0F	Su	0451	0752	1.7F	Tu	0628	0922	1.8F	W	0545	0850	1.7F										
1056	1403	2.0E	1056	1401	1.8E		1230	1535	1.9E		1143	1451	1.9E												
1733	2020	1.7F	1731	2018	1.5F		1902	2152	1.8F		1809	2112	1.7F												
2321		2315																							
2		0222	1.8E	17		0215	1.6E	2	0102	0401	1.8E	17	0008	0312	1.8E										
Su	0539	0841	1.9F	M	0528	0833	1.7F	W	0725	1017	1.7F	Th	0628	0931	1.7F										
1151	1458	1.9E	1133	1442	1.8E		1323	1630	1.9E		1224	1534	1.8E												
1829	2116	1.7F	1807	2101	1.5F		1955	2246	1.8F		1849	2155	1.7F												
3	0020	0320	1.7E	18		0258	1.6E	3	0158	0459	1.7E	18	0054	0401	1.8E										
M	0640	0940	1.8F	Tu	0610	0915	1.6F	Th	0824	1111	1.6F	F	0716	1020	1.6F										
1249	1557	1.9E	1213	1525	1.8E		1418	1725	1.8E		1310	1623	1.8E												
1927	2214	1.6F	1846	2142	1.6F		2049	2343	1.7F		1935	2246	1.7F												
4	0122	0423	1.7E	19	0040	0343	1.6E	4	0256	0600	1.7E	19	0145	0453	1.8E										
Tu	0745	1039	1.7F	W	0656	1002	1.6F	F	0925	1209	1.5F	Sa	0812	1113	1.5F										
1349	1656	1.8E	1257	1608	1.8E		1515	1821	1.7E		1402	1714	1.7E												
2026	2315	1.6F	1930	2233	1.6F		2144				2027	2339	1.7F												
5	0226	0527	1.6E	20	0129	0434	1.6E	5	0038	0338	1.7F	20	0242	0550	1.7E										
W	0851	1143	1.6F	Th	0748	1053	1.5F	Sa	0354	0657	1.7E	Su	0914	1209	1.4F										
1451	1759	1.8E	1346	1658	1.7E		1025	1306	1.5F		1500	1813	1.6E												
2126		2017	2321	1.6F			1612	1919	1.6E		2126														
6		0018	1.7F	21	0222	0527	1.6E	6	0134	0344	1.7F	21		0038	1.7F										
Th	0330	0635	1.7E	F	0845	1146	1.5F	Su	0451	0758	1.7E	M	0344	0651	1.7E										
0957	1245	1.6F	1439	1751	1.7E		1124	1407	1.5F		1022	1312	1.4F												
1552	1900	1.7E	2109				1710	2014	1.6E		1605	1913	1.6E												
2224							2333				2231														
7		0117	1.7F	22		0016	1.6F	7	0229	0545	1.7F	22		0140	1.7F										
F	0432	0740	1.7E	Sa	0318	0624	1.6E	M	0545	0856	1.7E	Tu	0450	0756	1.7E										
1059	1345	1.6F	0947	1243	1.5F		1219	1502	1.5F		1131	1417	1.4F												
1652	1959	1.8E	1536	1846	1.7E		1805	2111	1.6E		1714	2020	1.6E												
2319		2205									2339														
8		0216	1.8F	23		0111	1.7F	8	0025	0324	1.7F	23		0245	1.7F										
Sa	0529	0839	1.8E	Su	0418	0724	1.7E	Tu	0637	0947	1.8E	W	0556	0904	1.7E										
1158	1444	1.6F	1050	1341	1.5F		1311	1552	1.5F		1238	1521	1.5F												
1748	2059	1.8E	1636	1945	1.7E		1856	2158	1.6E		1822	2124	1.6E												
9	0011	0309	1.9F	24		0210	1.7F	9	0114	0412	1.7F	24	0045	0346	1.8F										
Su	0622	0934	1.9E	M	0518	0823	1.7E	W	0724	1034	1.8E	Th	0700	1006	1.8E										
1252	1537	1.6F	1153	1442	1.5F		1359	1641	1.5F		1339	1625	1.6F												
1839	2146	1.8E	1736	2041	1.7E		1944	2245	1.6E		1926	2229	1.7E												
10	0100	0359	1.9F	25	0000	0305	1.8F	10	0200	0456	1.8F	25	0147	0448	1.9F										
M	0711	1022	1.9E	Tu	0617	0924	1.8E	F	0808	1117	1.8E	W	0759	1107	1.9E										
1341	1626	1.6F	1254	1539	1.5F		1442	1724	1.5F		1435	1720	1.7F												
1927	2231	1.7E	1836	2140	1.7E		2027	2325	1.6E		2025	2326	1.8E												
11	0145	0444	1.9F	26	0058	0403	1.9F	11	0242	0539	1.7F	26	0245	0542	2.0F										
Tu	0755	1105	1.9E	W	0714	1020	1.9E	F	0848	1154	1.8E	Sa	0854	1201	2.0E										
1427	1707	1.6F	1352	1635	1.6F		1521	1802	1.5F		1527	1815	1.8F												
2011	2314	1.7E	1934	2237	1.8E		2106				2119														
12	0226	0523	1.9F	27	0154	0457	2.0F	12	0003	0351	1.6E	27		0021	1.9E										
W	0836	1144	1.9E	Th	0810	1116	2.0E	Sa	0320	0615	1.7F	Su	0339	0636	2.0F										
1508	1750	1.5F	1446	1730	1.7F		0924	1228	1.8E		0945	1250	2.1E												
2051	2349	1.7E	2031	2332	1.8E		1557	1840	1.6F		1615	1903	1.9F												
13	0305	0600	1.8F	28	0249	0551	2.0F	13	0040	0356	1.6E	28		0112	2.0E										
Th	0913	1217	1.8E	F	0903	1210	2.0E	Su	0356	0651	1.7F	M	0430	0726	2.0F										
1547	1826	1.5F	1539	1823	1.7F		0958	1301	1.8E		1033	1339	2.1E												
2128		2126					1630	1915	1.6F		1701	1952	1.9F												
14		0025	1.6E	29		0026	1.9E	14	0115	0433	1.7E	2216		0225	2.259										
F	0341	0639	1.8F	Sa	0343	0644	2.0F	14	0115	0430	1.7E	2251													
0948	1251	1.8E	0955	1301	2.1E		1031	1336	1.8E		1081	1952	1.9F												
1623	1904	1.5F	1630	1917	1.8F		1701	1953	1.6F																
2203		2219																							
15		0100	1.6E	30		0120	1.9E	15	0152	0438	1.7E	2328													
Sa	0416	0715	1.7F	Su	0438	0737	2.0F	Tu	0506	0807	1.7F														
1022	1326	1.8E	1047	1353	2.1E	</																			

DELAWARE BAY ENTRANCE, 1983

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F-Flood, Dir. 305° True E-Ebb, Dir. 140° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.			
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	Day	h.m.	h.m.	Day	h.m.	h.m.			
1	0200	2.0E		16	0127	1.9E	1	0004	0306	1.9E	16	0221	2.0E		
Tu	0521	0812	1.9F	W	0444	0740	1.8F	F	0634	0919	1.7F	Sa	0543	0840	1.7F
1120	1424	2.0E		1037	1343	1.9E		1221	1521	1.8E	1130	1437	1.8E		
1746	2037	1.9F		1659	2000	1.8F		1840	2138	1.8F	1744	2059	1.9F		
2347				2259						2359					
2	0248	2.0E		17	0205	1.9E	2	0048	0251	1.8E	17	0310	2.0E		
W	0610	0900	1.9F	Th	0521	0821	1.7F	Sa	0721	1004	1.5F	Su	0632	0929	1.6F
1206	1509	1.9E		1114	1422	1.9E		1306	1607	1.6E	1219	1526	1.7E		
1832	2126	1.9F		1733	2041	1.9F		1926	2224	1.7F	1833	2149	1.8F		
2339															
3	0035	0335	1.9E	18	0248	1.9E	3	0134	0438	1.7E	18	0051	0401	1.9E	
Th	0701	0949	1.7F	F	0603	0902	1.7F	Su	0812	1055	1.4F	M	0730	1026	1.5F
1253	1555	1.8E		1155	1503	1.9E		1356	1657	1.5E	1317	1623	1.6E		
1918	2213	1.8F		1813	2125	1.9F		2016	2316	1.6F	1933	2246	1.7F		
4	0124	0426	1.8E	19	0023	0333	1.9E	4	0225	0532	1.6E	19	0151	0503	1.8E
F	0753	1037	1.6F	Sa	0651	0950	1.6F	M	0906	1148	1.3F	Tu	0836	1128	1.4F
1342	1644	1.7E		1241	1550	1.8E		1451	1750	1.4E	1424	1728	1.5E		
2008	2303	1.7F		1900	2213	1.8F		2112			2045	2353	1.6F		
5	0216	0518	1.7E	20	0114	0424	1.8E	5	0009	0009	1.5F	20	0300	0612	1.7E
Sa	0848	1131	1.5F	Su	0746	1043	1.5F	Tu	0321	0628	1.6E	W	0949	1238	1.4F
1435	1737	1.6E		1334	1644	1.7E		1004	1247	1.3F	1540	1842	1.4E		
2100	2356	1.7F		1954	2310	1.7F		1551	1848	1.4E	2204				
2213															
6	0310	0613	1.6E	21	0212	0523	1.7E	6	0107	0107	1.5F	21	0105	0105	1.5F
Su	0946	1227	1.4F	M	0850	1144	1.4F	W	0419	0727	1.6E	Th	0415	0725	1.7E
1531	1832	1.5E		1436	1745	1.6E		1102	1345	1.3F	1101	1349	1.4F		
2156				2059				1652	1951	1.4E	1658	2000	1.5E		
2313											2322				
7	0053	1.6F		22	0012	1.6F		7	0207	0207	1.5F	22	0217	0217	1.6F
M	0407	0714	1.6E	Tu	0318	0627	1.7E	Th	0516	0826	1.6E	F	0527	0838	1.7E
1045	1326	1.3F		1002	1251	1.3F		1157	1442	1.4F	1207	1459	1.6F		
1630	1933	1.5E		1547	1852	1.5E		1750	2049	1.4E	1807	2111	1.6E		
2253				2212											
8	0150	0426	1.6F	23	0119	1.6F		8	0010	0302	1.5F	23	0032	0324	1.7F
Tu	0504	0813	1.6E	W	0430	0738	1.6E	F	0610	0919	1.7E	Sa	0633	0943	1.8E
1143	1424	1.4F		1116	1401	1.4F		1247	1534	1.5F	1306	1600	1.8F		
1729	2033	1.5E		1703	2004	1.5E		1842	2144	1.5E	1909	2215	1.8E		
2350				2328											
9	0245	0545	1.6F	24	0230	0230	1.6F	9	0102	0353	1.6F	24	0133	0422	1.8F
W	0559	0910	1.6E	Th	0541	0849	1.7E	Sa	0659	1006	1.7E	Su	0731	1040	1.9E
1237	1521	1.4F		1224	1511	1.5F		1332	1621	1.6F	1357	1651	1.9F		
1824	2124	1.5E		1815	2118	1.6E		1929	2229	1.6E	2002	2310	2.0E		
10	0043	0337	1.6F	25	0039	0337	1.7F	10	0149	0438	1.6F	25	0227	0517	1.9F
Th	0650	0959	1.7E	F	0648	0958	1.8E	Su	0744	1048	1.8E	M	0823	1130	2.0E
1326	1612	1.5F		1325	1612	1.6F		1412	1702	1.7F	1444	1740	2.0F		
1915	2216	1.5E		1919	2225	1.7E		2009	2309	1.7E	2050	2359	2.1E		
11	0132	0426	1.7F	26	0142	0438	1.8F	11	0231	0519	1.7F	26	0317	0604	1.9F
F	0736	1045	1.8E	Sa	0748	1057	1.9E	M	0823	1125	1.8E	Tu	0909	1213	2.0E
1411	1654	1.5F		1419	1710	1.8F		1448	1739	1.8F	1528	1823	2.1F		
2000	2300	1.6E		2016	2322	1.9E		2046	2346	1.8E	2134				
2154															
12	0217	0509	1.7F	27	0239	0533	1.9F	12	0309	0559	1.7F	27	0040	0211	2.1E
Sa	0818	1126	1.8E	Su	0841	1148	2.0E	Tu	0859	1201	1.9E	W	0402	0649	1.9F
1450	1736	1.6F		1508	1759	1.9F		1520	1817	1.9F	0952	1254	1.9E		
2040	2339	1.7E		2107				2121			1608	1904	2.1F		
2215											2215				
13	0257	0549	1.7F	28	0012	0012	2.0E	13	0022	0637	1.8F	28	0121	0728	1.8F
Su	0856	1159	1.8E	M	0330	0624	2.0F	W	0345	0934	1.9E	Th	0445	1032	1.9E
1525	1812	1.7F		0930	1235	2.1E		1552	1854	1.9F	1646	1942	2.0F		
2116				1554	1846	2.0F		2155			2254				
2154															
14	0015	0426	1.7E	29	0059	0059	2.1E	14	0101	0101	2.0E	29	0526	0526	2.0E
M	0334	0626	1.7F	Tu	0418	0707	2.0F	Th	0421	0714	1.8F	F	0526	0808	1.7F
0931	1233	1.9E		1014	1316	2.0E		1009	1312	1.9E	1110	1409	1.7E		
1557	1848	1.7F		1636	1929	2.0F		1624	1931	2.0F	1724	2024	1.9F		
2150				2239				2232			2332				
2224															
31				0224	0224	2.0E		2313							
Th	0549	0834	1.8F		1139	1438	1.9E								
				1758	2053	1.9F									

Time meridian 75° W. 0000 is midnight. 1200 is noon.

DELAWARE BAY ENTRANCE, 1983

F-Flood, Dir. 305° True E-Ebb, Dir. 140° True

DELAWARE BAY ENTRANCE, 1983

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F-Flood, Dir. 305° True E-Ebb, Dir. 140° True

JULY

AUGUST

	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.				
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	h.m.	knots				
1	0114	0430	1.8E	16	0212	0521	1.9E	1	0210	0524	1.8E	16	0043	1.4F		
F	0800	1055	1.5F	Sa	0852	1148	1.8F	M	0846	1155	1.7F	Tu	0341	0647	1.7E	
	1359	1654	1.4E		1503	1803	1.7E		1502	1803	1.6E		1011	1312	1.8F	
	2009	2309	1.5F		2125				2123				1631	1937	1.7E	
2	0203	0517	1.8E	17	0012	0016	1.6F	2	0303	0016	1.4F	17	0142	0142	1.4F	
Sa	0847	1144	1.6F	Su	0313	0625	1.8E	Tu	0303	0619	1.7E	W	0441	0749	1.6E	
	1452	1749	1.5E		0950	1248	1.8F		0936	1248	1.8F		1107	1408	1.8F	
	2107				1605	1909	1.7E		1557	1859	1.6E		1728	2039	1.7E	
3		0002	1.4F	18	0113	0113	1.5F	3		0113	1.4F	18	0003	0241	1.4F	
Su	0255	0610	1.7E	M	0415	0726	1.8E	W	0400	0712	1.7E	Th	0540	0846	1.6E	
	0935	1236	1.7F		1046	1345	1.9F		1030	1341	1.8F		1201	1503	1.8F	
	1546	1844	1.5E		1704	2014	1.8E		1654	1958	1.7E		1821	2134	1.8E	
	2207				2334				2328							
4		0057	1.4F	19	0213	0211	1.5F	4	0459	0809	1.7E	19	0058	0334	1.4F	
M	0348	0700	1.7E	Tu	0515	0823	1.8E	Th	0459	0809	1.7E	F	0635	0941	1.6E	
	1024	1329	1.7F		1140	1442	1.9F		1125	1438	1.9F		1252	1552	1.8F	
	1639	1939	1.6E		1800	2111	1.9E		1750	2057	1.8E		1910	2225	1.8E	
5		0153	1.4F	20	0032	0312	1.5F	5	0029	0310	1.4F	20	0148	0428	1.4F	
Tu	0443	0753	1.7E	W	0611	0921	1.7E	F	0600	0907	1.7E	Sa	0727	1029	1.6E	
	1112	1420	1.8F		1231	1533	2.0F		1221	1533	1.9F		1339	1641	1.8F	
	1731	2032	1.7E		1851	2204	1.9E		1846	2153	1.9E		1955	2306	1.9E	
6	0002	0246	1.4F	21	0126	0403	1.5F	6	0127	0405	1.4F	21	0233	0513	1.5F	
W	0536	0844	1.7E	Th	0704	1012	1.7E	Sa	0700	1004	1.7E	Su	0813	1114	1.6E	
	1201	1511	1.9F		1320	1621	2.0F		1317	1629	2.0F		1423	1722	1.8F	
	1821	2126	1.8E		1938	2250	1.9E		1941	2248	2.0E		2035	2345	1.9E	
7	0056	0337	1.5F	22	0215	0454	1.5F	7	0223	0503	1.5F	22	0314	0552	1.5F	
Th	0629	0933	1.7E	F	0753	1053	1.6E	Su	0759	1059	1.7E	M	0855	1151	1.6E	
	1248	1558	2.0F		1405	1704	1.9F		1412	1722	2.0F		1503	1801	1.8F	
	1910	2215	1.9E		2022	2335	1.9E		2033	2341	2.0E		2112			
8	0148	0428	1.5F	23	0300	0539	1.5F	8	0315	0557	1.6F	23	0020	0200	1.9E	
F	0721	1024	1.7E	Sa	0838	1136	1.6E	M	0856	1156	1.8E	Tu	0351	0631	1.5F	
	1336	1647	2.0F		1447	1745	1.9F		1508	1815	2.0F		0933	1227	1.6E	
	1958	2304	2.0E		2101				2125				1541	1838	1.8F	
9	0238	0519	1.6F	24	0010	0010	1.9E	9	0034	0034	2.1E	24	0052	0052	1.9E	
Sa	0812	1114	1.8E	Su	0341	0618	1.5F	Tu	0406	0649	1.7F	W	0424	0706	1.6F	
	1424	1736	2.1F		0919	1215	1.5E		0951	1249	1.8E		1009	1302	1.6E	
	2046	2353	2.1E		1525	1824	1.8F		1603	1907	2.0F		1616	1913	1.7F	
10	0328	0610	1.6F	25	0045	0045	1.9E	10	0124	0214	2.1E	25	0125	0125	1.9E	
Su	0905	1205	1.8E	M	0419	0654	1.4F	W	0456	0742	1.8F	Th	0455	0742	1.6F	
	1515	1826	2.0F		0957	1251	1.5E		1046	1345	1.8E		1043	1339	1.6E	
	2135				1602	1902	1.7F		1659	1958	2.0F		1651	1951	1.7F	
11	0044	0244	2.1E	26	0120	0120	1.9E	11	0215	0215	2.1E	26	0158	0158	1.9E	
M	0418	0701	1.6F	Tu	0454	0733	1.5F	Th	0545	0834	1.8F	F	0526	0819	1.7F	
	0959	1258	1.7E		1034	1326	1.5E		1142	1437	1.8E		1119	1416	1.6E	
	1608	1919	2.0F		1638	1939	1.7F		1756	2053	1.9F		1727	2029	1.7F	
	2226				2244				2357				2324			
12	0136	0227	2.1E	27	0152	0152	1.9E	12	0306	0306	2.1E	27	0236	0236	1.9E	
Tu	0509	0755	1.7F	W	0528	0811	1.5F	F	0636	0927	1.9F	Sa	0558	0858	1.7F	
	1055	1353	1.7E		1112	1405	1.5E		1238	1535	1.8E		1158	1457	1.7E	
	1705	2012	1.9F		1715	2018	1.7F		1854	2148	1.8F		1808	2112	1.6F	
	2318				2319											
13	0227	0227	2.1E	28	0229	0229	1.9E	13	0050	0401	2.0E	28	0001	0313	1.9E	
W	0603	0850	1.7F	Th	0602	0850	1.5F	Sa	0727	1023	1.9F	Su	0634	0938	1.8F	
	1154	1450	1.7E		1151	1447	1.5E		1335	1633	1.7E		1240	1542	1.7E	
	1805	2107	1.8F		1756	2101	1.6F		1955	2242	1.6F		1854	2157	1.6F	
	2356															
14	0013	0325	2.0E	29	0310	0310	1.9E	14	0145	0455	1.9E	29	0044	0358	1.9E	
Th	0658	0948	1.7F	F	0638	0933	1.6F	Su	0821	1118	1.9F	M	0715	1027	1.8F	
	1256	1551	1.6E		1233	1530	1.5E		1434	1733	1.7E		1328	1631	1.7E	
	1910	2207	1.7F		1840	2145	1.6F		2058	2340	1.5F		1946	2244	1.5F	
15	0111	0423	1.9E	30	0037	0351	1.9E	15	0242	0551	1.8E	30	0131	0449	1.8E	
F	0754	1047	1.7F	Sa	0717	1018	1.6F	M	0916	1215	1.8F	Tu	0802	1116	1.8F	
	1359	1656	1.6E		1319	1617	1.6E		1533	1836	1.7E		1421	1727	1.6E	
	2017	2309	1.6F		1930	2230	1.5F		2201				2046	2341	1.4F	
					31	0121	0436	1.8E					31	0225	0540	1.7E
					Su	0800	1103	1.7F					W	0856	1209	1.7F
						1409	1708	1.6E						1520	1824	1.6E
						2024	2321	1.5F						2152		

Time meridian 75° W. 0000 is midnight. 1200 is noon.

DELAWARE BAY ENTRANCE, 1983

F-Flood, Dir. 305° True E-Ebb, Dir. 140° True

SEPTEMBER

OCTOBER

	Slack Water Time	Maximum Current Time	Vel.												
Day	h.m.	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots			
1 Th	0041 0326	0041 0641	1.3F 1.6E	16 F	0209 0507	0209 0813	1.3F 1.5E	1 Sa	0124 0418	0124 0726	1.3F 1.5E	16 Su	0229 0533	0229 0836	1.4F 1.5E
	0955	1310	1.7F	1130	1430	1.7F		1046	1353	1.7F	1152	1447	1.6F		
	1622	1929	1.6E	1747	2059	1.7E		1709	2016	1.7E	1800	2110	1.7E		
	2301							2352							
2 F	0144 0433	0144 0743	1.3F 1.6E	17 Sa	0025 0606	0025 0909	1.3F 1.5E	2 Su	0234 0533	0234 0838	1.4F 1.6E	17 M	0037 0626	0037 0927	1.5F 1.6E
	1059	1412	1.8F	1224	1521	1.7F		1158	1502	1.8F	1244	1536	1.7F		
	1727	2033	1.7E	1838	2150	1.8E		1815	2124	1.8E	1848	2159	1.8E		
3 Sa	0009 0542	0009 0849	1.3F 1.6E	18 Su	0116 0659	0116 1000	1.4F 1.5E	3 M	0055 0642	0055 0944	1.5F 1.7E	18 Tu	0122 0713	0122 1014	1.6F 1.7E
	1205	1515	1.8F	1313	1609	1.8F		1303	1603	1.9F	1330	1625	1.7F		
	1829	2136	1.8E	1924	2235	1.8E		1915	2222	1.9E	1931	2238	1.9E		
4 Su	0111 0648	0111 0953	1.4F 1.6E	19 M	0201 0746	0201 1045	1.5F 1.6E	4 Tu	0151 0742	0151 1045	1.7F 1.8E	19 W	0202 0755	0202 1054	1.7F 1.7E
	1308	1614	1.9F	1359	1654	1.8F		1402	1700	2.0F	1412	1704	1.8F		
	1928	2235	1.9E	2006	2314	1.9E		2010	2317	2.1E	2010	2313	1.9E		
5 M	0208 0751	0208 1051	1.6F 1.7E	20 Tu	0241 0828	0241 1126	1.6F 1.6E	5 W	0241 0837	0241 1139	1.9F 2.0E	20 Th	0238 0833	0238 1130	1.8F 1.8E
	1407	1710	2.0F	1440	1733	1.8F		1456	1751	2.0F	1450	1742	1.8F		
	2022	2330	2.1E	2043	2349	1.9E		2059			2045	2349	1.9E		
6 Tu	0300 0848	0300 1147	1.7F 1.8E	21 W	0317 0905	0317 1202	1.7F 1.7E	6 Th	0004 0328	0004 0619	2.1E 2.0F	21 M	0311 0907	0311 1206	1.8F 1.9E
	1503	1803	2.0F	1517	1811	1.8F		0927	1228	2.0E	1526	1817	1.8F		
	2114			2117				1546	1837	2.0F	2117				
7 W	0022 0349	0022 0637	2.1E 1.9F	22 Th	0021 0349	0021 0636	1.9E 1.7F	7 F	0051 0412	0051 0704	2.1E 2.1F	22 Sa	0022 0341	0022 0637	1.9E 1.9F
	0941	1240	1.9E	0939	1235	1.7E		1014	1315	2.0E	0941	1242	1.9E		
	1557	1855	2.0F	1552	1847	1.8F		1634	1923	2.0F	1600	1853	1.8F		
	2202			2148				2229			2149				
8 Th	0110 0436	0110 0724	2.2E 1.9F	23 F	0055 0419	0055 0710	1.9E 1.8F	8 Sa	0135 0455	0135 0749	2.1E 2.0F	23 Su	0055 0411	0055 0714	1.9E 1.9F
	1033	1331	1.9E	1012	1310	1.8E		1100	1400	2.0E	1015	1319	1.9E		
	1649	1944	2.0F	1625	1923	1.8F		1722	2009	1.8F	1636	1932	1.7F		
	2250			2219				2312			2224				
9 F	0156 0522	0156 0812	2.1E 2.0F	24 Sa	0126 0448	0126 0747	2.0E 1.8F	9 Su	0215 0538	0215 0834	2.0E 2.0F	24 M	0130 0444	0130 0755	1.9E 1.9F
	1123	1421	1.9E	1046	1347	1.8E		1145	1443	1.9E	1053	1358	1.9E		
	1741	2031	1.9F	1701	1958	1.7F		1810	2056	1.7F	1716	2013	1.7F		
	2336			2253				2356			2302				
10 Sa	0243 0608	0243 0903	2.1E 2.0F	25 Su	0203 0519	0203 0824	1.9E 1.8F	10 M	0301 0622	0301 0920	1.9E 1.9F	25 Tu	0211 0522	0211 0836	1.9E 1.9F
	1213	1512	1.9E	1123	1424	1.8E		1232	1532	1.8E	1136	1443	1.9E		
	1833	2122	1.8F	1739	2041	1.7F		1900	2141	1.5F	1801	2100	1.6F		
				2329							2346				
11 Su	0024 0656	0024 0952	2.0E 1.9F	26 M	0240 0555	0240 0905	1.9E 1.8F	11 Tu	0042 0709	0042 1006	1.7E 1.8F	26 W	0257 0607	0257 0925	1.8E 1.8F
	1305	1604	1.8E	1205	1510	1.8E		1322	1623	1.7E	1225	1534	1.8E		
	1928	2213	1.6F	1824	2124	1.6F		1954	2233	1.4F	1855	2151	1.4F		
12 M	0114 0746	0114 1043	1.8E 1.8F	27 Tu	0011 0637	0011 0951	1.8E 1.8F	12 W	0133 0800	0133 1058	1.6E 1.7F	27 Th	0038 0701	0038 1017	1.7E 1.7F
	1359	1659	1.7E	1253	1557	1.7E		1415	1719	1.6E	1322	1629	1.7E		
	2027	2308	1.5F	1916	2216	1.5F		2051	2331	1.3F	1959	2252	1.3F		
13 Tu	0207 0839	0207 1136	1.7E 1.8F	28 W	0100 0726	0100 1043	1.7E 1.8F	13 Th	0229 0856	0229 1156	1.5E 1.6F	28 F	0140 0806	0140 1122	1.5E 1.6F
	1456	1758	1.6E	1347	1656	1.7E		1512	1816	1.5E	1428	1737	1.6E		
	2128			2017	2311	1.3F		2152			2111				
14 W	0007 0305	0007 0611	1.3F 1.6E	29 Th	0157 0825	0157 1143	1.6E 1.7F	14 F	0029 0331	0029 0633	1.2F 1.4E	29 Sa	0000 0253	0000 0600	1.3F 1.5E
	0935	1235	1.7F	1450	1757	1.6E		0956	1252	1.5F	0921	1231	1.6F		
	1554	1859	1.6E	2127				1611	1919	1.5E	1541	1850	1.6E		
	2230							2251			2226				
15 Th	0106 0406	0106 0712	1.3F 1.5E	30 F	0016 0303	0016 0617	1.3F 1.5E	15 Sa	0130 0433	0130 0735	1.3F 1.4E	30 Su	0111 0412	0111 0716	1.3F 1.5E
	1033	1331	1.7F	0932	1246	1.6F		1056	1353	1.6F	1039	1341	1.6F		
	1652	2000	1.6E	1559	1905	1.6E		1707	2018	1.6E	1654	2001	1.7E		
	2330			2242				2347			2335				
											31 M	0220 0526	0220 0830	1.5F 1.6E	
											1152	1449	1.7F		
											1800	2110	1.8E		

DELAWARE BAY ENTRANCE, 1983

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F-Flood, Dir. 305° True E-Ebb, Dir. 140° True

NOVEMBER										DECEMBER									
	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time		Slack Water Time	maximum Current Time		Slack Water Time	Maximum Current Time		Slack Water Time	Maximum Current Time		Slack Water Time	Maximum Current Time			
Day	h.m.	h.m. knots	Day	h.m. knots		Day	h.m. knots		Day	h.m. knots		Day	h.m. knots		Day	h.m. knots			
1	0036	0324 1.7F	16	0038 0327 1.7F		1	0106 0403 2.0F		16	0033 0331 1.8F									
Tu	0632	0937 1.8E	W	0635 0936 1.7E		Th	0712 1020 2.0E		F	0639 0942 1.8E									
	1256	1550 1.8F		1257 1546 1.7F			1339 1629 1.8F			1306 1554 1.6F									
	1900	2209 2.0E		1851 2155 1.8E			1933 2240 2.0E			1852 2155 1.8E									
2	0130	0422 1.9F	17	0119 0412 1.8F		2	0155 0451 2.0F		17	0114 0414 1.9F									
W	0730	1035 1.9E	Th	0718 1019 1.8E		F	0803 1110 2.1E		Sa	0722 1025 1.9E									
	1352	1646 1.9F		1341 1629 1.7F			1430 1716 1.9F			1351 1637 1.6F									
	1953	2300 2.1E		1932 2235 1.9E			2021 2325 2.0E			1935 2238 1.8E									
3	0219	0513 2.0F	18	0157 0451 1.9F		3	0240 0538 2.1F		18	0154 0457 1.9F									
Th	0821	1126 2.1E	F	0758 1057 1.9E		Sa	0849 1155 2.1E		Su	0804 1107 1.9E									
	1444	1735 2.0F		1421 1710 1.7F			1517 1803 1.8F			1434 1720 1.7F									
	2041	2349 2.1E		2010 2312 1.9E			2105			2016 2319 1.8E									
4	0305	0558 2.1F	19	0231 0529 1.9F		4	0006 0619 1.9E		19	0233 0538 2.0F									
F	0909	1213 2.1E	Sa	0835 1138 1.9E		Su	0323 0619 2.0F		M	0845 1149 2.0E									
	1532	1820 1.9F		1459 1749 1.7F			0932 1238 2.0E			1516 1804 1.7F									
	2126			2046 2348 1.9E			1601 1844 1.7F			2058									
5		0031 2.1E	20	0304 0607 2.0F		5	0047 0700 2.0F		20	0002 0622 2.0F									
Sa	0347	0641 2.1F	Su	0911 1213 2.0E		M	0403 1012 1.9E		Tu	0313 0927 1.234 2.0E									
	0953	1256 2.1E		1537 1828 1.7F			1643 1924 1.6F			1600 1849 1.7F									
	1618	1903 1.9F		2121			2226			2142									
6		0110 2.0E	21	0025 0645 1.9E		6	0125 0739 1.9F		21	0045 0708 2.0F									
Su	0428	0725 2.0F	M	0338 0645 2.0F		Tu	0442 1051 1.8E		W	0357 1012 1319 2.0E									
	1036	1339 2.0E		0949 1254 2.0E			1724 2005 1.5F			1646 1938 1.6F									
	1702	1946 1.7F		1616 1909 1.7F			2305			2229									
	2248			2159															
7		0149 1.9E	22	0106 1.9E		7	0204 0521 1.8F		22	0134 0445 1.8E									
M	0508	0808 1.9F	Tu	0415 0725 2.0F		W	0281 1130 1.434 1.8E		Th	0445 1806 2047 1.4F									
	1117	1417 1.9E		1029 1337 2.0E			1806			1737 2027 1.6F									
	1746	2029 1.6F		1658 1952 1.6F			2346			2322									
	2329			2241															
8		0231 1.7E	23	0149 1.8E		8	0243 0603 1.7F		23	0228 0540 0850 1.8F									
Tu	0550	0847 1.8F	W	0458 0812 1.9F		Th	0901 1211 1516 1.7E		F	0540 1155 1503 1.9E									
	1200	1503 1.8E		1115 1423 1.9E			1849	2132 1.4F		Sa	0642 1155 1503 1.9E								
	1832	2112 1.5F		1746 2043 1.6F			2330			1833 2122 1.6F									
9	0012	0312 1.6E	24	0240 1.7E		9	0031 0648 1.8F		24	0021 0642 0948 1.7F									
W	0634	0935 1.7F	Th	0548 0903 1.8F			1256 1601 1.6E			24	0325 1254 1601 1.8E								
	1245	1548 1.7E		1207 1516 1.8E			1936	2220 1.4F		Sa	0642 1224 1934 2224 1.6F								
	1921	2203 1.4F		1842 2135 1.5F															
10	0100	0401 1.5E	25	0027 0335 1.6E		10	0120 0739 1.5F		25	0127 0751 1051 1.7E									
Th	0723	1024 1.6F	F	0647 1002 1.7F		Sa	1039 1345 1.6E		Su	1051 1358 1706 1.8E									
	1334	1639 1.6E		1306 1617 1.7E			1652 1935 1.6E			2038 2329 1.6F									
	2014	2255 1.3F		1947 2238 1.4F			2312	1.4F											
11	0154	0455 1.4E	26	0133 0439 1.5E		11	0215 0836 1.5F		26	0237 0904 1157 1.6F									
F	0818	1115 1.5F	Sa	0757 1105 1.6F		M	0312 1132 1.5F		M	0904 1506 1813 1.7E									
	1428	1734 1.5E		1413 1722 1.7E			1437 1747 1.6E			2143									
	2110	2350 1.3F		2057 2345 1.4F			2118												
12	0254	0554 1.4E	27	0247 0550 1.5E		12	0006 0612 1.4E		27	0035 0650 1.7E									
Sa	0917	1213 1.5F	Su	0915 1215 1.6F		M	0312 1227 1.5F		Tu	0347 1015 1305 1.6F									
	1525	1832 1.5E		1525 1834 1.6E			1636 1935 1.7E			1613 1921 1.8E									
	2207			2207			2211			2246									
13		0049 1.3F	28	0055 0403 1.5F		13	0101 0408 1.5F		28	0140 0453 0801 1.8E									
Su	0355	0654 1.4E	M	0706 1325 1.6E		Tu	0708 1032 1.5F		W	0453 1123 1412 1.6F									
	1018	1313 1.5F		1031 1325 1.6F			1323	1.5F		1717 2023 2345									
	1622	1929 1.6E		1636 1944 1.7E			1626	1935 1.7E		2345									
	2302			2313			2301												
14		0145 1.4F	29	0203 1.6F		14	0154 0502 1.6F		29	0240 0555 0904 1.9E									
M	0454	0753 1.5E	Tu	0513 0820 1.7E		W	0801 1127 1417 1.5F		Th	0555 1224 1511 1.7F									
	1115	1408 1.5F		1140 1432 1.7F			1417 1718 2023 1.7E			1224 1816 2126 1.8E									
	1716	2023 1.7E		1741 2049 1.8E			2039	2349		1816 2126 1.8E									
	2352																		
15		0239 1.5F	30	0012 0304 1.8F		15	0242 0552 1.7F		30	0040 0651 1000 2.0E									
Tu	0547	0849 1.6E	W	0616 0923 1.9E		Th	0854 1219 1507 1.6F		F	0651 1321 1606 1.7F									
	1208	1459 1.6F		1243 1534 1.8F			1507	1.6F		1412 1700 2000 1.7F									
	1806	2112 1.8E		1840 2147 1.9E			1807	2111 1.7E		1910 2219 1.9E									
										31	0130 0428 2.0F								
										Sa	0742 1051 2.0E								
										1412	1700 2304 1.8E								

Time meridian 75° W. 0000 is midnight. 1200 is noon.

CHESAPEAKE BAY ENTRANCE, VIRGINIA, 1983

F-Flood, Dir. 305° True E-Ebb, Dir. 125° True

JANUARY

FEBRUARY

	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time	Slack Water Time	Maximum Current Time
Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m. knots	Day	h.m. knots
1	0002	0355 2.0E	16	0404 1.4E	1	0147 0529 1.9E	16	0103 0453 1.5E
Sa	0717	1015 1.7F	Su	0729 1014 1.0F	Tu	0850 1138 1.3F	W	0823 1058 1.0F
	1332	1648 1.7E		1320 1646 1.2E		1440 1804 1.6E		1345 1719 1.3E
	2006	2227 1.0F		2007 2216 0.6F		2124 2355 1.0F		2040 2311 0.9F
2	0056	0449 1.9E	17	0033 0438 1.4E	2	0243 0623 1.7E	17	0146 0532 1.4E
Su	0811	1107 1.6F	M	0807 1049 1.0F	W	0945 1226 1.1F	Th	0904 1135 0.9F
	1422	1741 1.6E		1351 1721 1.2E		1522 1856 1.5E		1416 1756 1.3E
	2100	2322 0.9F		2043 2253 0.6F		2217		2121 2354 0.9F
3	0153	0545 1.8E	18	0113 0515 1.4E	3	0049 1.0F	18	0235 0619 1.3E
M	0907	1200 1.4F	Tu	0847 1126 1.0F	Th	0341 0721 1.4E	F	0951 1216 0.8F
	1512	1836 1.5E		1422 1759 1.1E		1043 1317 0.9F		1450 1837 1.3E
	2156			2121 2334 0.7F		1604 1949 1.4E		2208
4	0019	0.9F	19	0158 0559 1.3E	4	0150 0.9F	19	0046 0.9F
Tu	0254	0645 1.6E	W	0931 1207 0.9F	F	0444 0822 1.3E	Sa	0332 0714 1.2E
	1007	1255 1.2F		1456 1836 1.1E		1147 1411 0.7F		1046 1305 0.7F
	1602	1932 1.5E		2204		1648 2045 1.3E		1531 1928 1.3E
5	0121	0.8F	20	0023 0.7F	5	0013 0252 0.8F	20	0141 0.9F
W	0400	0747 1.5E	Th	0249 0645 1.2E	Sa	0553 0927 1.1E	Su	0438 0818 1.1E
	1110	1351 1.0F		1020 1251 0.8F		1256 1507 0.5F		1149 1402 0.6F
	1652	2029 1.4E		1533 1921 1.1E		1734 2141 1.2E		1619 2031 1.3E
6	0225	0.8F	21	0116 0.7F	6	0114 0357 0.7F	21	0006 0250 0.9F
Th	0511	0854 1.3E	F	0348 0741 1.2E	Su	0705 1036 1.0E	M	0555 0931 1.1E
	1217	1452 0.8F		1115 1340 0.7F		1406 1609 0.4F		1300 1506 0.5F
	1742	2127 1.4E		1615 2009 1.2E		1825 2242 1.2E		1719 2139 1.4E
7	0055	0333 0.8F	22	0213 0.8F	7	0214 0503 0.7F	22	0112 0359 1.0F
F	0626	1002 1.2E	Sa	0457 0848 1.1E	M	0813 1136 1.0E	Tu	0715 1048 1.1E
	1326	1554 0.7F		1217 1435 0.6F		1512 1714 0.3F		1411 1619 0.5F
	1833	2225 1.4E		1704 2108 1.3E		1921 2339 1.3E		1830 2248 1.5E
8	0153	0436 0.8F	23	0042 0317 0.8F	8	0309 0602 0.8F	23	0218 0511 1.1F
Sa	0737	1105 1.2E	Su	0614 0956 1.1E	Tu	0912 1231 1.0E	W	0830 1153 1.2E
	1433	1652 0.6F		1323 1536 0.6F		1606 1809 0.4F		1515 1726 0.6F
	1922	2320 1.4E		1759 2209 1.4E		2016		1945 2356 1.6E
9	0247	0537 0.9F	24	0141 0426 1.0F	9	0028 1.3E	24	0320 0617 1.3F
Su	0842	1206 1.2E	M	0732 1105 1.2E	W	0358 0651 0.9F	Th	0934 1254 1.4E
	1533	1746 0.5F		1428 1642 0.6F		1002 1320 1.1E		1612 1830 0.8F
	2008			1900 2310 1.5E		1650 1851 0.4F		2056
10	0008	1.4E	25	0239 0529 1.2F	10	0115 1.4E	25	0056 1.8E
M	0336	0627 0.9F	Tu	0844 1209 1.3E	Th	0441 0736 0.9F	F	0418 0715 1.5F
	0938	1257 1.2E		1530 1743 0.7F		1043 1403 1.2E		1029 1347 1.6E
	1625	1834 0.5F		2003		1727 1936 0.5F		1702 1929 1.0F
11	0053	1.4E	26	0009 1.7E	11	0157 1.4E	26	0151 2.0E
Tu	0420	0716 1.0F	W	0335 0631 1.4F	F	0520 0811 1.0F	Sa	0512 0808 1.5F
	1026	1345 1.2E		0948 1309 1.4E		1120 1440 1.2E		1118 1436 1.7E
	1710	1915 0.5F		1626 1843 0.8F		1800 2011 0.6F		1749 2020 1.1F
	2132			2105		2231		2259
12	0138	1.4E	27	0108 1.8E	12	0234 1.5E	27	0242 2.0E
W	0501	0755 1.0F	Th	0429 0729 1.5F	Sa	0557 0844 1.0F	Su	0603 0855 1.6F
	1108	1424 1.2E		1045 1402 1.6E		1152 1515 1.2E		1203 1520 1.8E
	1750	1954 0.5F		1718 1939 0.9F		1831 2045 0.6F		1834 2109 1.2F
	2209			2205		2309		2353
13	0217	1.5E	28	0201 2.0E	13	0310 1.5E	28	0333 2.0E
Th	0540	0832 1.0F	F	0522 0820 1.6F	Su	0633 0916 1.1F	M	0653 0942 1.5F
	1145	1503 1.2E		1137 1453 1.7E		1222 1545 1.3E		1245 1605 1.8E
	1825	2030 0.5F		1808 2032 1.0F		1901 2120 0.7F		1918 2155 1.3F
	2245			2302		2345		
14	0253	1.5E	29	0254 2.1E	14	0343 1.5E		
F	0616	0905 1.1F	Sa	0614 0911 1.7F	M	0708 0948 1.1F		
	1218	1540 1.2E		1226 1542 1.7E		1249 1617 1.3E		
	1859	2105 0.6F		1856 2124 1.1F		1932 2152 0.8F		
	2320			2358				
15	0329	1.5E	30	0345 2.1E	15	0023 0418 1.5E		
Sa	0653	0939 1.1F	Su	0706 1001 1.6F	Tu	0744 1021 1.0F		
	1250	1615 1.2E		1312 1631 1.7E		1317 1647 1.3E		
	1933	2140 0.6F		1944 2214 1.1F		2005 2230 0.8F		
	2356							
			31	0052 0437 2.0E				
			M	0758 1049 1.5F				
				1357 1718 1.7E				
				2033 2304 1.1F				

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 * Current weak and variable.

CHESAPEAKE BAY ENTRANCE, VIRGINIA, 1983

65

F-Flood, Dir. 305° True E-Ebb, Dir. 125° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.
Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots
1	0045	0422 2.0E	16	0011	0355 1.6E	1	0206	0534 1.5E	16	0130	0459 1.5E
Tu	0742	1024 1.4F	W	0721	0954 1.0F	F	0858	1118 0.8F	Sa	0826	1044 0.8F
	1324	1650 1.8E		1238	1613 1.4E		1350	1741 1.5E		1307	1700 1.6E
	2003	2243 1.3F		1929	2205 1.1F		2102	2346 1.1F		2025	2315 1.3F
2	0135	0510 1.8E	17	0052	0433 1.5E	2	0252	0623 1.3E	17	0222	0548 1.4E
W	0831	1109 1.2F	Th	0800	1027 1.0F	Sa	0948	1159 0.6F	Su	0917	1129 0.7F
	1401	1733 1.7E		1307	1646 1.4E		1422	1826 1.3E		1348	1746 1.5E
	2050	2329 1.2F		2006	2247 1.1F		2151			2117	
3	0226	0601 1.6E	18	0137	0514 1.5E	3	0032	09F 0.9F	18	0008	1.3F
Th	0922	1151 1.0F	F	0842	1106 0.9F	Su	0341	0714 1.1E	M	0319	0648 1.3E
	1437	1819 1.5E		1338	1722 1.4E		1045	1246 0.4F		1017	1224 0.6F
	2138			2048	2332 1.1F		1456	1915 1.2E		1436	1843 1.5E
							2246			2217	
4	0016	1.1F	19	0226	0603 1.3E	4	0126	0.8F	19	0110	1.2F
F	0317	0650 1.4E	Sa	0931	1151 0.8F	M	0435	0814 1.0E	Tu	0424	0757 1.2E
	1016	1237 0.7F		1414	1808 1.4E		1149	1337 0.3F		1125	1327 0.5F
	1513	1905 1.4E		2138			1538	2015 1.1E		1535	1954 1.4E
	2231						2348			2325	
5	0111	0.9F	20	0023	1.1F	5	0225	0.7F	20	0218	1.1F
Sa	0413	0748 1.2E	Su	0323	0656 1.2E	Tu	0537	0919 0.9E	W	0535	0908 1.2E
	1115	1327 0.5F		1027	1238 0.7F		1440	*		1237	1439 0.5F
	1550	1959 1.2E		1457	1859 1.4E		2120	1.0E		1650	2110 1.4E
	2329			2235							
6	0208	0.8F	21	0122	1.1F	6	0053	0331 0.6F	21	0037	0329 1.1F
Su	0514	0852 1.0E	M	0428	0803 1.1E	W	0643	1026 0.9E	Th	0646	1019 1.2E
	1223	1420 0.4F		1133	1338 0.5F		1551	*		1344	1555 0.6F
	1632	2100 1.1E		1549	2003 1.4E		2226	1.1E		1817	2226 1.4E
	2341										
7	0032	0311 0.7F	22	0232	1.0F	7	0156	0439 0.6F	22	0148	0441 1.1F
M	0623	0958 0.9E	Tu	0544	0918 1.1E	Th	0745	1122 1.0E	F	0751	1120 1.4E
	1336	1524 0.3F		1247	1447 0.5F		1458	1655 0.3F		1443	1706 0.7F
	1726	2203 1.1E		1655	2120 1.4E		1905	2323 1.1E		1940	2333 1.6E
8	0137	0420 0.6F	23	0052	0343 1.0F	8	0252	0536 0.7F	23	0254	0544 1.1F
Tu	0733	1105 0.9E	W	0702	1033 1.1E	F	0837	1209 1.1E	Sa	0847	1215 1.5E
	1444	1636 0.3F		1359	1603 0.5F		1539	1750 0.5F		1534	1806 0.9F
	1833	2308 1.1E		1817	2235 1.5E		2011			2051	
9	0237	0527 0.7F	24	0203	0457 1.1F	9	0018	1.2E	24	0031	1.7E
W	0834	1202 1.0E	Th	0814	1140 1.3E	Sa	0340	0621 0.8F	Su	0353	0638 1.1F
	1538	1737 0.3F		1502	1717 0.6F		0920	1254 1.2E		0936	1304 1.6E
	1942			1940	2343 1.6E		1614	1834 0.6F		1620	1903 1.1F
							2105			2153	
10	0002	1.2E	25	0308	0602 1.2F	10	0059	1.4E	25	0126	1.7E
Th	0329	0621 0.8F	F	0914	1238 1.5E	Su	0423	0700 0.9F	M	0447	0729 1.1F
	0925	1249 1.1E		1555	1820 0.8F		0957	1329 1.3E		1019	1347 1.7E
	1620	1825 0.4F		2054			1646	1912 0.8F		1703	1948 1.3F
	2041						2152			2247	
11	0049	1.3E	26	0044	1.8E	11	0142	1.5E	26	0215	1.8E
F	0415	0704 0.9F	Sa	0406	0700 1.3F	M	0503	0739 0.9F	Tu	0536	0810 1.1F
	1008	1331 1.2E		1006	1327 1.6E		1030	1402 1.4E		1057	1430 1.8E
	1655	1907 0.5F		1642	1917 1.0F		1717	1950 0.9F		1745	2035 1.3F
	2131			2158			2235			2336	
12	0132	1.4E	27	0140	1.9E	12	0220	1.5E	27	0302	1.7E
Sa	0455	0739 0.9F	Su	0500	0749 1.4F	Tu	0541	0811 1.0F	W	0622	0850 1.0F
	1044	1408 1.2E		1052	1414 1.7E		1100	1435 1.5E		1132	1511 1.7E
	1726	1945 0.7F		1727	2007 1.2F		1749	2026 1.1F		1825	2116 1.3F
	2215			2254			2317				
13	0210	1.5E	28	0229	1.9E	13	0255	1.6E	28	0021	0345 1.6E
Su	0533	0814 1.0F	M	0550	0835 1.4F	W	0619	0846 1.0F	Th	0707	0930 0.9F
	1116	1441 1.3E		1133	1457 1.8E		1129	1507 1.5E		1204	1548 1.7E
	1756	2021 0.8F		1809	2053 1.3F		1822	2104 1.2F		1906	2156 1.3F
	2254			2346			2359				
14	0246	1.5E	29	0317	1.9E	14	0336	1.6E	29	0105	0428 1.5E
M	0609	0849 1.0F	Tu	0638	0918 1.3F	Th	0658	0925 1.0F	F	0751	1006 0.8F
	1144	1512 1.4E		1211	1538 1.8E		1159	1540 1.6E		1235	1628 1.6E
	1826	2055 0.9F		1851	2136 1.4F		1858	2145 1.3F		1947	2237 1.2F
	2333										
15	0322	1.6E	30	0034	0404 1.8E	15	0043	0414 1.6E	30	0146	0512 1.3E
Tu	0644	0918 1.0F	W	0724	0959 1.1F	F	0740	1001 0.9F	Sa	0835	1045 0.6F
	1211	1542 1.4E		1245	1619 1.7E		1232	1617 1.6E		1305	1706 1.5E
	1856	2128 1.0F		1934	2220 1.3F		1939	2228 1.3F		2030	2318 1.1F
			31	0121	0449 1.7E						
			Th	0811	1038 1.0F						
				1318	1659 1.6E						
				2017	2303 1.2F						

Time meridian 75° W. 0000 is midnight. 1200 is noon.
 * Current weak and variable.

CHESAPEAKE BAY ENTRANCE, VIRGINIA, 1983

F-Flood, Dir. 305° True E-Ebb, Dir. 125° True

MAY												JUNE											
	Slack	Maximum	Water	Slack	Maximum	Water	Slack	Maximum	Water	Slack	Maximum	Water	Time	Time	Current	Time	Time	Current	Time	Time	Current	Time	Time
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	Day	h.m.	h.m.	Day	h.m.	h.m.	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	Day	h.m.	h.m.	
Su	1	0228	0557	1.2E	16	0219	0541	1.4E		1	0016	0.9F	16	0045	0.4F	1.3F							
	2	0923	1125	0.5F	M	0907	1118	0.7F		W	0325	0704	1.0E	Th	0400	0727	1.4E						
	3	1337	1747	1.3E		1333	1735	1.7E			1036	1228	0.4F		1051	1308	0.7F						
	4	2117				2104					1429	1856	1.1E		1537	1933	1.5E						
M	5	0000	0.9F		17	0000	0.4F			2	0106	0.8F		17	0147	0.2F							
	6	0311	0646	1.1E	Tu	0316	0642	1.3E		Th	0409	0756	1.0E	F	0455	0826	1.4E						
	7	1015	1211	0.4F		1007	1214	0.6F			1129	1321	0.4F		1152	1415	0.8F						
	8	1413	1836	1.2E		1429	1836	1.6E			1524	1953	1.1E		1652	2044	1.5E						
	9	2208				2205					2322												
Tu	10	0049	0.8F		18	0101	1.3F			3	0157	0.7F		18	0005	0248	1.0F						
	11	0359	0741	1.0E	W	0417	0745	1.3E		F	0456	0849	1.0E	Sa	0551	0927	1.4E						
	12	1114	1258	0.3F		1112	1319	0.6F			1222	1420	0.4F		1253	1524	0.8F						
	13	1457	1933	1.1E		1535	1946	1.5E			1629	2054	1.0E		1810	2151	1.4E						
	14	2305				2312																	
W	15	0144	0.7F		19	0203	1.1F			4	0020	0252	0.7F		19	0113	0352	0.9F					
	16	0452	0838	0.9E	Th	0520	0851	1.3E		Sa	0545	0940	1.0E	Su	0644	1025	1.5E						
	17	1217	1402	0.3F		1219	1430	0.6F			1311	1520	0.5F		1350	1629	0.9F						
	18	1554	2038	1.0E		1653	2100	1.4E			1741	2153	1.1E		1925	2258	1.4E						
	19	0007	0242	0.6F	20	0022	0312	1.1F		5	0118	0349	0.7F		20	0220	0453	0.8F					
Th	20	0549	0940	0.9E	F	0623	0956	1.3E		Su	0634	1031	1.1E	M	0735	1120	1.5E						
	21	1317	1505	0.3F		1322	1543	0.7F			1356	1615	0.6F		1444	1729	1.0F						
	22	1707	2141	1.0E		1817	2209	1.4E			1852	2251	1.1E		2033	2358	1.4E						
F	23	0109	0345	0.6F		21	0132	0418	1.0F		6	0213	0440	0.7F		21	0322	0546	0.7F				
	24	0646	1035	1.0E	Sa	0721	1055	1.4E		M	0720	1114	1.2E	Tu	0821	1209	1.5E						
	25	1407	1608	0.4F		1419	1652	0.8F			1439	1708	0.8F		1533	1825	1.1F						
	26	1824	2242	1.1E		1936	2317	1.5E			1957	2342	1.2E		2132								
Sa	27	0206	0441	0.7F	22	0238	0520	1.0F		7	0305	0529	0.7F		22	0051	1.4E						
	28	0738	1124	1.1E	Su	0814	1150	1.5E		Tu	0804	1158	1.4E	F	0418	0635	0.7F						
	29	1450	1705	0.5F		1510	1753	1.0F			1520	1759	1.0F		0904	1254	1.6E						
	30	1933	2336	1.2E		2045					2057				1619	1915	1.1F						
Su	31	0258	0530	0.7F	23	0018	0518	1.5E		8	0034	0354	1.3E		23	0142	0227	1.3E					
	32	0822	1206	1.2E	M	0338	0613	0.9F		W	0354	0615	0.8F	Th	0508	0722	0.6F						
	33	1527	1752	0.7F		0900	1238	1.6E			0847	1241	1.5E		0943	1339	1.6E						
	34	2033				1557	1844	1.1F			1601	1848	1.2F		1702	1958	1.1F						
	35	2144									2152				2312								
M	36	0021	0211	1.3E	24	0109	0109	1.6E		9	0122	0122	1.4E		24	0227	0227	1.3E					
	37	0345	0615	0.8F	Tu	0432	0702	0.9F		Th	0442	0700	0.8F	F	0552	0800	0.6F						
	38	0902	1244	1.3E		0942	1323	1.7E			0929	1325	1.6E		1019	1421	1.5E						
	39	1603	1835	0.9F		1640	1932	1.2F			1644	1936	1.3F		1743	2039	1.1F						
	40	2125				2237					2244				2353								
Tu	41	0107	0151	1.4E	25	0158	0244	1.5E		10	0210	0210	1.5E		25	0310	0310	1.3E					
	42	0429	0657	0.9F	W	0521	0745	0.8F		F	0529	0747	0.8F	Sa	0633	0838	0.5F						
	43	0938	1320	1.4E		1019	1404	1.7E			1012	1408	1.8E		1054	1500	1.5E						
	44	1638	1919	1.1F		1722	2016	1.3F			1728	2023	1.5F		1823	2114	1.1F						
	45	2213				2325					2336												
W	46	0151	0511	1.5E	26	0244	0244	1.5E		11	0256	0256	1.5E		26	0031	0349	1.2E					
	47	0737	0737	0.9F	Th	0607	0826	0.8F		Sa	0617	0835	0.9F	Su	0712	0916	0.5F						
	48	1013	1359	1.6E		1053	1445	1.6E			1057	1451	1.8E		1128	1538	1.5E						
	49	1714	2000	1.2F		1803	2056	1.3F			1815	2112	1.6F		1902	2152	1.1F						
Th	50	2300																					
	51	0232	0553	1.5E	27	0008	0328	1.4E		12	0027	0347	1.6E		27	0106	0427	1.2E					
	52	0818	0818	0.9F	F	0650	0902	0.7F		Su	0706	0923	0.9F	M	0750	0952	0.5F						
	53	1048	1433	1.6E		1125	1523	1.6E			1144	1540	1.9E		1203	1615	1.4E						
F	54	1752	2041	1.4F		1843	2135	1.2F			1904	2201	1.6F		1941	2228	1.0F						
	55	2347																					
	56	0313	0637	1.6E	28	0048	0409	1.3E		13	0119	0437	1.5E		28	0140	0507	1.1E					
	57	0855	0855	0.9F	Sa	0732	0940	0.6F		M	0758	1013	0.8F	Tu	0829	1031	0.5F						
Sa	58	1124	1514	1.7E		1156	1600	1.5E			1234	1631	1.8E		1241	1656	1.3E						
	59	1833	2126	1.5F		1923	2211	1.1F			1957	2254	1.6F		2022	2306	1.0F						
	60	2035	0401	1.5E	29	0127	0449	1.2E		14	0211	0531	1.5E		29	0214	0544	1.1E					
	61	0722	0942	0.9F	Su	0814	1018	0.5F		Tu	0852	1106	0.8F	W	0909	1112	0.5F						
Su	62	1203	1555	1.7E		1228	1637	1.4E			1329	1729	1.8E		1321	1735	1.3E						

CHESAPEAKE BAY ENTRANCE, VIRGINIA, 1983

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F-Flood, Dir. 305° True E-Ebb, Dir. 125° True

JULY AUGUST

	Slack Water Time	Maximum Current Time Vel.						
Day	h.m.	h.m. knots	Day	h.m. knots	Day	h.m. knots	Day	h.m. knots
1		0029 0.8F	16	0121 1.1F	1	0117 0.7F	16	0029 0.244 0.6F
F	0325	0708 1.0E	Sa	0421 0756 1.5E	M	0352 0749 1.2E	Tu	0512 0917 1.3E
	1037	1242 0.5F		1119 1351 0.9F		1121 1350 0.7F		1246 1530 0.8F
	1457	1909 1.1E		1640 2021 1.4E		1631 2025 1.1E		1842 2211 1.1E
	2241			2344		2353		
2		0114 0.8F	17	0219 0.9F	2	0210 0.6F	17	0141 0.348 0.4F
Sa	0405	0755 1.1E	Su	0511 0855 1.4E	Tu	0435 0843 1.2E	W	0605 1017 1.3E
	1125	1336 0.5F		1219 1457 0.9F		1215 1449 0.8F		1348 1642 0.8F
	1556	2005 1.1E		1753 2128 1.3E		1742 2128 1.1E		1951 2314 1.1E
	2334							
3		0201 0.7F	18	0052 0319 0.7F	3	0055 0307 0.6F	18	0249 0452 0.4F
Su	0446	0842 1.1E	M	0601 0954 1.4E	W	0526 0939 1.3E	Th	0702 1116 1.3E
	1214	1429 0.6F		1319 1601 0.9F		1312 1555 0.9F		1447 1743 0.8F
	1702	2104 1.1E		1907 2236 1.2E		1857 2235 1.1E		2053
4	0032	0256 0.7F	19	0200 0420 0.6F	4	0159 0408 0.6F	19	0012 1.1E
M	0532	0933 1.2E	Tu	0652 1051 1.4E	Th	0625 1039 1.4E	F	0347 0550 0.4F
	1303	1530 0.7F		1417 1708 0.9F		1410 1658 1.1F		0759 1211 1.3E
	1813	2205 1.1E		2015 2337 1.2E		2010 2340 1.2E		1539 1834 0.9F
								2145
5		0131 0350 0.6F	20	0306 0521 0.5F	5	0301 0512 0.6F	20	0103 1.1E
Tu	0619	1025 1.3E	W	0741 1142 1.4E	F	0728 1140 1.6E	Sa	0433 0639 0.4F
	1352	1627 0.8F		1511 1805 1.0F		1507 1759 1.2F		0852 1300 1.4E
	1924	2305 1.2E		2116		2116		1625 1919 0.9F
								2228
6	0228	0444 0.6F	21	0034 1.2E	6	0039 1.3E	21	0144 1.2E
W	0710	1116 1.4E	Th	0403 0612 0.5F	Sa	0357 0609 0.7F	Su	0511 0721 0.5F
	1441	1727 1.0F		0829 1234 1.4E		0832 1238 1.7E		0939 1341 1.4E
	2031			1600 1857 1.0F		1602 1859 1.4F		1707 1956 1.0F
				2209		2214		2305
7		0005 1.2E	22	0125 1.2E	7	0135 1.5E	22	0223 1.2E
Th	0324	0538 0.7F	F	0453 0700 0.5F	Su	0449 0709 0.8F	M	0545 0758 0.6F
	0801	1205 1.6E		0914 1319 1.5E		0933 1334 1.9E		1021 1421 1.5E
	1531	1821 1.2F		1645 1942 1.0F		1655 1952 1.6F		1745 2031 1.0F
	2132			2254		2308		2338
8		0058 1.3E	23	0208 1.2E	8	0224 1.6E	23	0258 1.2E
F	0417	0631 0.7F	Sa	0635 0741 0.5F	M	0539 0803 1.0F	Tu	0616 0833 0.7F
	0854	1256 1.7E		0955 1400 1.5E		1033 1426 2.0E		1059 1458 1.5E
	1620	1915 1.4F		1726 2019 1.0F		1748 2043 1.6F		1821 2102 1.0F
	2230			2333		2357		
9		0151 1.5E	24	0250 1.2E	9	0313 1.7E	24	0007 0331 1.3E
Sa	0508	0723 0.8F	Su	0613 0819 0.5F	Tu	0627 0855 1.1F	W	0647 0905 0.7F
	0947	1347 1.8E		1034 1443 1.5E		1130 1518 2.1E		1135 1533 1.5E
	1710	2008 1.5F		1805 2056 1.0F		1839 2133 1.6F		1856 2134 1.0F
	2324							
10		0242 1.5E	25	0008 0325 1.2E	10	0044 0402 1.8E	25	0034 0401 1.3E
Su	0558	0816 0.9F	M	0647 0856 0.5F	W	0715 0947 1.2F	Th	0717 0940 0.8F
	1040	1437 1.9E		1111 1518 1.5E		1226 1610 2.0E		1212 1605 1.5E
	1800	2057 1.6F		1843 2131 1.0F		1931 2221 1.6F		1932 2207 1.0F
11	0015	0331 1.6E	26	0040 0401 1.2E	11	0129 0449 1.8E	26	0059 0432 1.3E
M	0648	0909 0.9F	Tu	0721 0929 0.6F	Th	0804 1039 1.2F	F	0749 1015 0.8F
	1134	1530 2.0E		1148 1555 1.4E		1322 1703 1.9E		1249 1642 1.4E
	1852	2149 1.7F		1920 2203 1.0F		2024 2310 1.4F		2009 2241 0.9F
12	0105	0421 1.6E	27	0110 0435 1.2E	12	0213 0538 1.7E	27	0126 0501 1.3E
Tu	0739	1001 1.0F	W	0755 1006 0.6F	F	0865 1130 1.2F	Sa	0823 1052 0.9F
	1230	1621 2.0E		1225 1630 1.4E		1419 1758 1.8E		1330 1719 1.4E
	1945	2240 1.6F		1957 2236 1.0F		2119 2358 1.2F		2048 2316 0.9F
13	0155	0514 1.6E	28	0139 0511 1.2E	13	0256 0628 1.6E	28	0154 0536 1.3E
W	0831	1055 1.0F	Th	0830 1044 0.6F	Sa	0947 1224 1.1F	Su	0901 1133 0.9F
	1327	1718 1.9E		1305 1706 1.4E		1518 1855 1.6E		1415 1800 1.3E
	2040	2333 1.5F		2036 2315 0.9F		2218		2133 2355 0.8F
14	0243	0605 1.6E	29	0209 0544 1.2E	14	0049 1.0F	29	0226 0614 1.2E
Th	0925	1151 1.0F	F	0907 1125 0.7F	Su	0339 0721 1.5E	M	0945 1220 0.9F
	1427	1816 1.7E		1347 1748 1.3E		1043 1321 1.0F		1507 1849 1.2E
	2138			2118 2350 0.9F		1621 1957 1.4E		2224
						2321		
15		0026 1.3F	30	0240 0621 1.1E	15	0143 0.7F	30	0042 0.7F
F	0332	0701 1.6E	Sa	0947 1206 0.7F	M	0424 0818 1.4E	Tu	0303 0701 1.2E
	1021	1250 0.9F		1434 1829 1.2E		1143 1425 0.9F		1037 1316 0.9F
	1531	1917 1.6E		2204		1730 2102 1.2E		1608 1946 1.1E
	2239							2323
			31	0033 0.8F			31	0133 0.6F
			Su	0314 0702 1.1E			W	0348 0758 1.3E
				1031 1255 0.7F				1136 1419 0.9F
				1528 1922 1.1E				1720 2100 1.0E
			2255					

Time meridian 75° W. 0000 is midnight. 1200 is noon.

* Current weak and variable.

SAVANNAH RIVER ENTRANCE (between jetties), GEORGIA, 1983

F-Flood, Dir. 260° True E-Ebb, Dir. 080° True

JANUARY

FEBRUARY

Slack Water Time	Maximum Current Time Vel.							
Day	h.m.	Day	h.m.	Day	h.m.	Day	h.m.	
1 Sa	0434	0121	2.9E	16 Su	0132	2.2E	1 Tu	0248
	0711	0711	2.4F		0711	1.6F		0837
	1021	1355	3.3E		1009	1359		1147
	1723	1943	2.0F		1732	1939		1517
	2246				2225			1842
2 Su	0529	0214	2.9E	17 M	0214	2.2E	2 Th	0017
	0803	0803	2.3F		0528	0752		0342
	1114	1447	3.2E		1041	1438		0926
	1816	2037	1.9F		1810	2020		1.8F
	2342				2301			1933
3 M	0625	0310	2.8E	18 Tu	0256	2.1E	3 Th	0110
	0857	0857	2.1F		0610	0837		0436
	1206	1541	3.1E		1115	1519		1017
	1909	2131	1.8F		1848	2105		1323
					2341			2245
4 Tu	0039	0403	2.7E	19 W	0341	2.1E	4 F	0204
	0724	0949	1.9F		0656	0919		0529
	1300	1634	2.9E		1153	1602		1108
	2004	2223	1.7F		1929	2148		1414
					2148			2338
5 W	0138	0502	2.6E	20 Th	0024	0427	5 Sa	0300
	0826	1045	1.6F		0745	1006		0628
	1355	1730	2.7E		1235	1648		1.0F
	2059	2321	1.6F		2013	2237		1846
					2348			2214
6 Th	0239	0602	2.5E	21 F	0113	0518	6 Su	0029
	0929	1141	1.4F		0838	1057		1.3F
	1452	1826	2.5E		1323	1738		0725
	2155				2101	2327		1104
					2309			1257
7 F	0339	0015	1.5F	22 Sa	0208	0612	7 M	0125
	0659	0659	2.4E		0936	1152		1.2F
	1032	1240	1.2F		1416	1833		0823
	1549	1922	2.4E		2153	2.2E		2.2E
	2250							1204
8 Sa	0111	0111	1.4F	23 Su	0022	0224	8 Tu	0003
	0438	0800	2.3E		0309	0709		0219
	1134	1337	1.0F		1037	1249		1.2F
	1647	2018	2.3E		1517	1928		1259
	2343				2248			1452
9 Su	0204	0204	1.3F	24 M	0117	0117	9 W	0054
	0534	0857	2.3E		0415	0807		0311
	1233	1435	0.9F		1139	1349		1.2F
	1742	2111	2.2E		1624	2026		1009
					2344			1348
10 M	0034	0258	1.3F	25 Tu	0216	1.8F	10 Th	0044
	0625	0950	2.4E		0521	0908		0359
	1326	1527	0.9F		1239	1449		1054
	1833	2200	2.2E		1734	2126		1432
					2126			1631
11 Tu	0121	0344	1.4F	26 W	0041	0314	11 F	0225
	0711	1036	2.4E		0626	1006		0444
	1414	1614	0.9F		1336	1549		1.4F
	1920	2247	2.2E		1842	2222		1512
					2222			1713
12 W	0206	0428	1.4F	27 Th	0138	0413	12 Sa	0307
	0753	1119	2.4E		0726	1059		0526
	1458	1700	1.0F		1430	1646		1.5F
	2003	2330	2.2E		1945	2318		1216
					2318			1549
13 Th	0248	0510	1.5F	28 Su	0233	0509	13 M	0030
	0831	1200	2.5E		0823	1154		0608
	1539	1739	1.1F		1522	1742		1.5F
	2041				2044			1255
					2139			1625
14 F	0011	0011	2.2E	29 Tu	0013	3.0E	14 W	0108
	0328	0551	1.5F		0327	0601		2.3E
	0906	1241	2.5E		0917	1245		0426
	1617	1819	1.1F		1613	1835		0649
	2117				2139			1333
15 Sa	0051	0051	2.2E	30 Su	0105	3.0E	15 M	0148
	0408	0630	1.6F		0420	0654		2.3E
	0938	1320	2.5E		1008	1336		0505
	1655	1858	1.2F		1703	1926		0728
	2151				2233			1018
					2325			1411
					2325			1736
								1955
								1.6F
								2238
								2215

Time meridian 75° W. 0000 is midnight. 1200 is noon.

SAVANNAH RIVER ENTRANCE (between jetties), GEORGIA, 1983

89

F-Flood, Dir. 260° True E-Ebb, Dir. 080° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.			
Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots			
1	0137	3.1E	16	0122	2.5E	1	0249	2.8E	16	0224	2.8E			
Tu	0457	2.1F	W	0442	0703	1.7F	F	0616	0830	1.6F	0549	0809		
	1037	3.2E		0953	1340	2.6E		1132	1505	2.6E	1048	1440		
	1725	1.9F		1701	1925	1.8F		1825	2048	1.8F	1753	2028		
	2303			2215							2319			
2	0227	3.0E	17	0203	2.6E	2	0000	0335	2.6E	17	0311	2.8E		
W	0548	2.0F	Th	0523	0746	1.7F	Sa	0705	0914	1.4F	0639	0858		
	1122	3.0E		1028	1421	2.6E		1211	1551	2.3E	1135	1529		
	1812	2.0F		1739	2008	1.9F		1912	2134	1.6F	1843	2118		
	2350			2253										
3	0316	2.9E	18	0246	2.6E	3	0042	0424	2.4E	18	0009	0405		
Th	0640	1.7F	F	0607	0829	1.7F	Su	0758	1000	1.2F	M	0733		
	1205	1.53E		1107	1504	2.5E		1252	1639	2.1E		1228		
	1900	2.1F		1820	2053	1.9F		2003	2221	1.4F		1939		
	2336										2213	1.9F		
4	0036	0404	2.7E	19	0332	2.6E	4	0126	0515	2.2E	19	0105	0501	
F	0733	0945	1.5F	Sa	0656	0917	1.6F	M	0853	1048	1.0F	Tu	0833	
	1248	1.62E		1149	1550	2.4E		1337	1733	1.9E		1328	1724	
	1949	2.1F		1906	2140	1.9F		2057	2310	1.2F		2041	2312	
	2310											1.7F		
5	0124	0458	2.4E	20	0024	0423	2.5E	5	0215	0609	2.1E	20	0208	
Sa	0829	1.2F	Su	0749	1008	1.5F	Tu	0951	1144	0.8F	W	0935		
	1332	1.7E		1238	1641	2.3E		1433	1830	1.8E		1439	1828	
	2040	1.4F		1958	2231	1.8F		2155				2147		
6	0214	0551	2.2E	21	0118	0518	2.5E	6	0005	1.1F	21	0013	1.6F	
Su	0927	1.12E	M	0848	1103	1.4F	W	0311	0707	2.0E	Th	0318	0706	
	1421	1.8E		1334	1740	2.3E		1049	1239	0.8F		1038	1251	
	2136	1.2F		2056	2327	1.7F		1538	1927	1.8E		1555	1933	
	2350							2255						
7	0309	0649	2.1E	22	0220	0618	2.4E	7	0100	1.0F	22	0117	1.6F	
M	1029	1218	0.8F	Tu	0952	1202	1.3F	Th	0412	0803	2.0E	F	0429	
	1517	1.9E		1439	1841	2.2E		1144	1338	0.8F		1139	1354	
	2233			2201				1645	2026	1.8E		1707	2036	
	2307							2351				2359		
8	0044	1.1F	23	0030	0330	1.7F	8	0158	0158	1.0F	23	0220	1.6F	
Tu	0407	0746	2.0E	W	0330	0722	2.5E	F	0511	0854	2.1E	Sa	0536	
	1129	1.31E		1057	1306	1.3F		1233	1433	0.9F		1235	1455	
	1621	2.0E		1556	1947	2.3E		1745	2117	2.0E		1812	2136	
	2330			2307										
9	0141	1.0F	24	0133	0133	1.7F	9	0044	0251	1.1F	24	0059	0321	
W	0505	0842	2.1E	Th	0444	0826	2.6E	Sa	0604	0943	2.2E	Su	0637	
	1225	1.41E		1159	1411	1.4F		1318	1524	1.1F		1327	1552	
	1725	1.9E		1713	2051	2.5E		1835	2206	2.1E		1908	2231	
	2101											2.8E		
10	0025	0236	1.1F	25	0011	0239	1.7F	10	0131	0342	1.2F	25	0155	
Th	0600	0934	2.2E	F	0554	0927	2.8E	Su	0651	1028	2.3E	M	0730	
	1315	1.51E		1257	1514	1.5F		1358	1609	1.3F		1415	1643	
	1822	2.0E		1823	2152	2.7E		1919	2251	2.3E		2000	2320	
	2152													
11	0115	0327	1.2F	26	0112	0340	1.8F	11	0215	0427	1.4F	26	0246	
F	0649	1022	2.3E	Sa	0656	1024	2.9E	M	0733	1113	2.5E	Tu	0819	
	1359	1.60E		1350	1612	1.7F		1436	1651	1.5F		1501	1729	
	1911	2.2E		1923	2247	2.9E		1958	2335	2.5E		2046	2311	
	2237			2018	2339	3.0E								
12	0201	0415	1.3F	27	0208	0438	1.9F	12	0257	0513	1.5F	27	0009	
Sa	0733	1107	2.4E	Su	0752	1115	3.0E	Tu	0812	1152	2.5E	W	0335	
	1438	1.64E		1440	1704	1.9F		1513	1736	1.7F		0903	1223	
	1953	2.32E		1923	2247	2.9E		2035				1544	1814	
	2322			2018	2339	3.0E						2130		
	2107							2113						
13	0243	0500	1.4F	28	0301	0529	2.0F	13	0015	0555	2.6E	28	0054	
Su	0811	1146	2.5E	M	0842	1204	3.1E	W	0338	1232	1.6F	Th	0421	
	1515	1.72E		1527	1755	2.0F		0849	1550	1.9F		0944	1309	
	2031			2107				1550	1817	1.9F		1627	1855	
	2107							2113				2210		
14	0003	2.4E	29	0030	0330	3.1E	14	0056	0556	2.7E	29	0137	2.9E	
M	0323	0541	1.5F	Tu	0351	0616	2.0F	Th	0419	0639	1.7F	F	0507	
	0846	1226	2.6E		0929	1251	3.1E		0926	1314	2.6E		1023	1353
	1551	1.80E		1612	1839	2.1F		1628	1900	2.0F		1709	1936	
	2105			2153				2152				2248		
15	0044	2.5E	30	0115	0115	3.1E	15	0139	0139	2.8E	30	0221	2.7E	
Tu	0403	0624	1.6F	W	0440	0701	1.9F	F	0503	0722	1.8F	Sa	0553	
	0919	1304	2.6E		1012	1335	3.0E		1006	1355	2.6E		1100	1436
	1626	1846	1.7F		1656	1924	2.0F		1709	1943	2.0F		1753	2018
	2139			2237				2234				2325		
	2319													
	31	0201	3.0E											
	Th	0528	0747											
		1053	1421											
		1740	2007											
		1.9F												

MOBILE BAY ENTRANCE, ALABAMA, 1983

F-Flood, Dir. 025° True E-Ebb, Dir. 190° True

JANUARY

FEBRUARY

	Slack Water Time Day h.m.	Maximum Current Time Vel. h.m. knots						
1 Sa	1220 1845	0552 3.1E 1845 2.9F	16 Su	0028 0616 2.1E 1230 1901 1.9F	1 Tu	0143 0707 1.4E 1403 2031 1.0F	16 W	0151 0720 0.9E 1402 2019 0.6F
2 Su	0051 1314	0643 2.8E 1933 2.5F	17 M	0106 0657 1.9E 1308 1930 1.7F	2 W	0221 0700 0.8E 1401 2018 0.3F	17 Th	0246 0733 0.4E 2006 *
3 M	0142 1401	0724 2.3E 2017 1.9F	18 Tu	0141 0732 1.6E 1342 1950 1.4F	3 Th	0554 * 0.3F 1734 1332 0.4E 2314	18 F	0308 0848 * 2126 0.4E
4 Tu	0225 1432	0759 1.7E 2046 1.3F	19 W	0211 0755 1.3E 1409 2000 1.0F	4 F	0545 1232 0.7F 1738 2329 1.0E	19 Sa	0258 0939 0.7F 1538 2223 1.0E
5 W	0252 1417	0808 1.0E 1945 0.6F	20 Th	0233 0816 0.8E 1417 1913 0.5F	5 Sa	0547 1241 1.2F 1816	20 Su	0406 1028 1.3F 1641 2312 1.6E
6 Th	0213 1157 2109	0654 0.5E 1621 0.4F	21 F	0150 0642 0.3E 1624 *	6 Su	0012 0621 1.4E 1310 1901 1.5F	21 M	0505 1128 1.8F 1745
7 F	0251 0840 1949	0251 0.4E 1453 0.8F	22 Sa	0602 0109 0.4E 1821 1240 0.6F	7 M	0055 0703 1.7E 1348 1949 1.7F	22 Tu	0606 0012 2.1E 1850 1228 2.1F
8 Sa	0125 0744 1959	0125 1.0E 1437 1.2F	23 Su	0601 0031 1.0E 1838 1236 1.2F	8 Tu	0136 0748 1.9E 1442 2039 1.8F	23 W	0709 0104 2.4E 1957 1340 2.4F
9 Su	0756 2028	0138 1.5E 1450 1.6F	24 M	0640 0057 1.6E 1920 1311 1.8F	9 W	0227 0837 2.0E 1531 2129 1.9F	24 Th	0815 0201 2.6E 2102 1446 2.5F
10 M	0215 0825 2103	0215 1.9E 1519 1.8F	25 Tu	0730 0135 2.2E 2012 1359 2.3F	10 Th	0313 0927 2.1E 1623 2218 1.9F	25 F	0921 0257 2.6E 2207 1556 2.4F
11 Tu	0244 0900 2143	0244 2.1E 1548 2.0F	26 W	0826 0221 2.6E 2109 1459 2.6F	11 F	0358 1017 2.1E 1715 2304 1.8F	26 Sa	1028 0355 2.4E 2309 1710 2.2F
12 W	0328 0940 2224	0328 2.2E 1631 2.1F	27 Th	0926 0313 2.9E 2207 1600 2.8F	12 Sa	0439 1104 2.0E 1757 2348 1.8F	27 Su	1137 0448 2.1E 1813 1813 1.8F
13 Th	0408 1023 2306	0408 2.3E 1707 2.1F	28 F	1027 0405 3.0E 2305 1702 2.9F	13 Su	0522 1149 1.9E 1839 1.6F	28 M	0011 0530 1.5E 1252 1935 1.2F
14 F	0451 1106 2348	0451 2.3E 1749 2.1F	29 Sa	1128 0500 2.9E 1759 1759 2.7F	14 M	0029 0557 1.6E 1231 1915 1.4F		
15 Sa	0533 1149	0533 2.2E 1826 2.0F	30 Su	0002 0549 2.5E 1226 1900 2.3F	15 Tu	0109 0640 1.3E 1314 1938 1.1F		
			31 M	0055 0630 2.0E 1320 1945 1.7F				

Time meridian 90° W. 0000 is midnight. 1200 is noon.

If three consecutive entries are marked (F) the middle one is not a true maximum but an intermediate value to show the current pattern.

* Current weak and variable.

MOBILE BAY ENTRANCE, ALABAMA, 1983

119

F-Flood, Dir. 025° True E-Ebb, Dir. 190° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.				
Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots	Day	h.m.	h.m. knots				
1 Tu	0116 1449	0613 2112	0.9E 0.7F	16 W	0223 1747	0700 2340	0.4E 0.4F	1 F	0001 1300	0720 1851	1.3F 1.5E	16 Sa	0621 1831	1.7F 2.0E	
2 W	0244 1048 2045	0600 1048 1559	0.3E * 0.3E	17 Th	0904 2233	1636	0.5E	2 Sa	0111 1356	0804 1954	1.5F 1.7E	17 Su	0048 1320	0715 1936	2.1F 2.2E
3 Th	0907 1331	1917	0.4F 0.7E	18 F	1209	0612	0.7F 0.9E	3 Su	0211 1454	0839 2057	1.6F 1.8E	18 M	0154 1425	0813 2043	2.3F 2.4E
4 F	0151 1453	0922 2053	0.9F 1.1E	19 Sa	0049 1332	0730	1.2F 1.4E	4 M	0309 1556	0933 2206	1.7F 1.8E	19 Tu	0259 1533	0914 2147	2.4F 2.4E
5 Sa	0314 1558	1006 2202	1.2F 1.4E	20 Su	0211 1444	0839	1.6F 1.8E	5 Tu	0408 1702	1024 2306	1.6F 1.7E	20 W	0404 1643	1017 2253	2.3F 2.2E
6 Su	0413 1659	1054 2305	1.4F 1.6E	21 M	0321 1556	0940	2.0F 2.1E	6 W	0508 1813	1128	1.5F	21 Th	0507 1753	1123 2353	2.0F 1.9E
7 M	0509 1801	1140	1.5F	22 Tu	0429 1710	1044	2.2F 2.3E	7 Th	0609 1923	0013 1238	1.6E 1.3F	22 F	0608 1904	1225	1.6F
8 Tu	0606 1905	0001 1243	1.7E 1.6F	23 W	0537 1824	1154	2.2F	8 F	0709 2031	0110 1406	1.5E 1.2F	23 Sa	0706 2020	0044 1354	1.5E 1.0F
9 W	0704 2009	0059 1352	1.8E 1.6F	24 Th	0646 1938	0035	2.3E 2.2F	9 Sa	0810 2138	0204 1542	1.3E 1.0F	24 Su	0802 2205	0125 1624	0.9E 0.5F
10 Th	0803 2109	0153 1505	1.8E 1.5F	25 F	0755 2050	0135	2.2E 1.9F	10 Su	0918 2256	0254 1719	1.1E 0.7F	25 M	0112 0743 1348	0.3E * 0.3E	1801
11 F	0902 2205	0243 1614	1.8E 1.5F	26 Sa	0907 2202	0232	1.9E 1.6F	11 M	1139	0348 1948	0.7E 0.5F	26 Tu	0938 2055	0536 1502	0.4F 0.9E
12 Sa	1000 2258	0339 1717	1.7E 1.4F	27 Su	1030 2322	0327	1.5E 1.1F	12 Tu	0101 1749	0437 1329 2312	0.3E 0.3E 0.4F	27 W	1025 2210	0511 1600	1.0F 1.4E
13 Su	1057 2350	0422 1812	1.5E 1.2F	28 M	1315	0415	0.9E 0.7F	13 W	0833 2043	1512	0.7E	28 Th	1108 2305	0531 1648	1.4F 1.8E
14 M	1201	0457 1857	1.2E 1.0F	29 Tu	0123 1840	0436 0811 1407 2324	0.3E * 0.4E 0.4F	14 Th	1016 2225	0349 1622	0.8F 1.2E	29 F	1152 2356	0606 1737	1.7F 2.0E
15 Tu	0050 1341	0559 2025	0.8E 0.7F	30 W	0236 1037 2214	0611 1620	0.3F 0.4F 0.8E	15 F	1119 2340	0520 1724	1.3F 1.6E	30 Sa	1237	0641 1826	1.9F 2.1E
				31 Th	1200	0637	0.9F 1.2E								

Time meridian 90° W. 0000 is midnight. 1200 IS noon.

If three consecutive entries are marked (F) the middle one is not a true maximum but an intermediate value to show the current pattern.

* Current weak and variable.

MOBILE BAY ENTRANCE, ALABAMA, 1983

F-Flood, Dir. 025° True E-Ebb, Dir. 190° True

MAY												JUNE											
	Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.			Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		Slack Water Time	Maximum Current Time Vel.		
Day	h.m.	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots
1 Su	0045 1324	0721 1921	2.0F 2.1E	16 M	0047 1318	0712 1927	2.7F 2.7E	1 W	0203 1441	0819 2043	1.8F 1.9E	16 Th	0233 1459	0846 2048	2.1F 2.0E								
2 M	0136 1415	0758 2016	1.9F 2.0E	17 Tu	0147 1417	0803 2027	2.7F 2.6E	2 Th	0246 1526	0848 2126	1.6F 1.6E	17 F	0309 1532	0915 2106	1.4F 1.2E								
3 Tu	0228 1511	0844 2117	1.8F 1.9E	18 W	0245 1516	0900 2121	2.4F 2.3E	3 F	0325 1605	0903 2207	1.3F 1.2E	18 Sa	0310 1514	0842 2027	0.8F 0.6E								
4 W	0322 1610	0930 2217	1.6F 1.7E	19 Th	0340 1613	0949 2212	2.0F 1.9E	4 Sa	0353 1634	0910 2236	0.9F 0.8E	19 Su	0125 1028 2144	0541 1554	0.5F 0.4E								
5 Th	0414 1711	1016 2306	1.4F 1.5E	20 F	0426 1704	1021 2248	1.5F 1.3E	5 Su	0400 1542	0812 2212	0.5F 0.3E	20 M	0836 2025	0353 1408	0.8F 1.0E								
6 F	0503 1813	1051	1.1F	21 Sa	0452 1739	1025 2249	0.8F 0.7E	6 M	0243 1030 1958	0645 1441	0.3F 0.4E	21 Tu	0840 2036	0326 1421	1.3F 1.6E								
7 Sa	0547 1920	0003 1109	1.2E 0.8F	22 Su	0405 2032	0748 2032	0.3F *	7 Tu	0847 1952	0413 1423	0.5F 0.9E	22 W	0906 2105	0336 1450	1.7F 2.0E								
8 Su	0623 2100	0052 1039	0.8E 0.4F	23 M	0928 2050	0527 1435	0.5F 0.7E	8 W	0843 2027	0253 1438	1.0F 1.5E	23 Th	0940 2140	0356 1527	2.0F 2.3E								
9 M		0112 0828 1409 2142	0.4E *	24 Tu	0925 2110	0429 1456	1.0F 1.3E	9 Th	0911 2112	0313 1518	1.6F 2.0E	24 F	1018 2218	0428 1602	2.2F 2.4E								
10 Tu		0102 0513 1429	*	25 W	0952 2145	0430 1533	1.4F 1.8E	10 F	0951 2202	0351 1556	2.1F 2.5E	25 Sa	1057 2259	0500 1643	2.3F 2.4E								
11 W		0314 0913 2056	0.7E	26 Th	1026 2223	0445 1608	1.8F 2.1E	11 Sa	1039 2257	0434 1639	2.6F 2.8E	26 Su	1139 2342	0542 1724	2.3F 2.4E								
12 Th		0351 0951 2154	1.7E	27 F	1103 2303	0514 1651	2.1F 2.3E	12 Su	1131 2353	0529 1733	2.8F 3.0E	27 M	1221	0620 1808	2.2F 2.3E								
13 F		0438 1036 2250	2.1E	28 Sa	1142 2346	0545 1732	2.2F 2.4E	13 M	1225	0618 1827	3.0F 3.0E	28 Tu	0025 1302	0655 1853	2.1F 2.2E								
14 Sa		0526 1126 2348	2.5E	29 Su	1224	0621 1815	2.2F 2.3E	14 Tu	0050 1320	0711 1920	2.9F 2.8E	29 W	0106 1342	0730 1937	1.9F 2.0E								
15 Su		0615 1221	2.7E	30 M	0030 1309	0700 1903	2.1F 2.2E	15 W	0145 1412	0800 2009	2.6F 2.4E	30 Th	0144 1419	0748 2012	1.7F 1.7E								
				31 Tu	0117 1355	0735 1954	2.0F 2.1E																

Time meridian 90° W. 0000 is midnight. 1200 IS noon.
 If three consecutive entries are marked (F) the middle one is not a true maximum but an intermediate value to show the current pattern.
 * Current weak and variable.

MOBILE BAY ENTRANCE, ALABAMA, 1983

121

F-Flood, Dir. 025° True E-Ebb, Dir. 190° True

JULY										AUGUST										
	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Day	h.m.	Day	h.m.	Day	h.m.	Day	h.m.
1 F 1449	0217 2038	0808 1.4F 1.3E	16 Sa 2319	0215 1408	0748 1845	0.6F 0.4E	1 M 1713	0333 1221	* 0.4E 0.5F	16 Tu 1747	0532 1133	1.5E								
2 Sa 1504	0241 2048	0815 1.0F 0.8E	17 Su 1937	0807 1937	0334 1352	0.4F 0.4E	2 Tu 1731	0547 2353	1200 0.9E 1.1F	17 W 1836	0626 0036	1.6F 1.8E								
3 Su 1354	0240 1939	0731 0.6F 0.3E	18 M 1905	0703 1905	0157 1254	0.8F 1.0E	3 W 1813	0611 1229	1.5E	18 Th 1926	0721 0120	1.8F 2.0E								
4 M 0937	0100 1409	0536 0.4F 0.4E	19 Tu 1929	0725 1929	0206 1315	1.3F 1.6E	4 Th 1905	0655 1312	0042 1.6F 2.0E	19 F 2018	0816 0214	1.8F 2.0E								
5 Tu 0750	0253 1342	0750 0.6F 1.0E	20 W 2004	0801 2004	0222 1350	1.7F 2.0E	5 F 2002	0748 1358	0131 2.1F 2.4E	20 Sa 2111	0910 0314	1.8F 2.0E								
6 W 0745	0147 1349	0745 1.1F 1.6E	21 Th 2045	0842 2045	0251 1427	1.9F 2.2E	6 Sa 2102	0846 1447	0232 2.5F 2.7E	21 Su 2203	1003 0411	1.8F 2.0E								
7 Th 0815	0208 1418	0815 1.7F 2.1E	22 F 2128	0926 2128	0331 1508	2.1F 2.3E	7 Su 2204	0945 1540	0336 2.7F 2.9E	22 M 2252	1053 0506	1.8F 1.9E								
8 F 0857	0251 1501	0857 2.2F 2.6E	23 Sa 2212	1011 2212	0417 1554	2.1F 2.3E	8 M 2307	1045 1638	0438 2.7F 2.8E	23 Tu 2340	1139 0554	1.6F 1.7E								
9 Sa 0948	034F 1550	0948 2.6F 2.9E	24 Su 2257	1055 2257	0458 1635	2.1F 2.3E	9 Tu 1143	1143 1727	0542 2.6F 2.5E	24 W 1223	1223 0637	1.5F 1.5E								
10 Su 1041	0437 1642	0437 2.9F 3.1E	25 M 2340	1139 2340	0546 1716	2.1F 2.2E	10 W 1239	0008 1815	0636 2.2F 2.0E	25 Th 1307	0026 0712	1.2F 1.1E								
11 M 1137	0533 1732	0533 3.0F 3.0E	26 Tu 1221	0623 1759	0623 1759	2.0F 2.0E	11 Th 1333	0109 1845	0739 1.6F 1.3E	26 F 1358	0115 0800	0.9F 0.7E								
12 Tu 1231	0628 1826	0628 2.8F 2.7E	27 W 1300	0022 1840	0658 1840	1.8F 1.8E	12 F 1425	0210 1857	0842 1.0F 0.6E	27 Sa 1525	0224 0912	0.5F 0.3E								
13 W 1323	0055 1909	0719 2.5F 2.3E	28 Th 1336	0059 1909	0727 1909	1.5F 1.5E	13 Sa 2348	0931 1703	* * 0.3F	28 Su	1838	*								
14 Th 1408	0145 1939	0800 2.0F 1.7E	29 F 1408	0133 1947	0748 1947	1.2F 1.1E	14 Su 1613	0334 2321	0930 0.5E 0.8F	29 M 1406	0824 2040	0.5E 0.7F								
15 F 1440	0222 1951	0834 1.3F 1.0E	30 Sa 1433	0201 1951	0749 1951	0.8F 0.7E	15 M 1659	0437 2345	1038 1.1E 1.3F	30 Tu 1525	0251 2143	0.933 1.0E 1.2F								
			31 Su	0208 1813	0642 1813	0.4F *				31 W 1629	0401 2240	1036 1.5E 1.7F								

Time meridian 90° W. 0000 is midnight. 1200 IS noon.
 If three consecutive entries are marked (F) the middle one is not a true maximum but an intermediate value to show the current pattern.
 * Current weak and variable.

GALVESTON BAY ENTRANCE (between jetties), TEXAS, 1983

F-Flood, Dir. 300° True E-Ebb, Dir. 100° True

JANUARY										FEBRUARY																
Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Day	Water	Day	Water	Day	Water	Day	Water							
Water	Current	Water	Current	Water	Current	Water	Current	Water	Current	Water	Current	h.m.	Time	h.m.	Time	h.m.	Time	h.m.	Time							
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots							
1 Sa	0239 1456	1013 1827	3.9E 2.9F	16 Su	0242 1506	1018 1823	2.8E 1.9F	1 Tu	0340 0707	0102 1203	0.3E 2.1E	16 W	0213 0700	0010 1123	0.3E 1.6E	1 Tu	0346 0704	0546 1208	0.4F 1.0E	16 Sa	0229 0700	0529 1123	0.3F 1.6E			
2 Su	0312 1551	1107 1918	3.4E 2.5F	17 M	0308 1544	1049 1901	2.5E 1.7F	2 W	0525 0838	0139 1312	0.7E 1.2E	17 Th	0341 0820	0031 1218	0.6E 1.0E	2 W	0525 0838	0546 1208	0.4F 1.0E	17 Sa	0213 0700	0529 1123	0.3F 1.6E			
3 M	0251 1647	1201 2004	2.7E 2.0F	18 Tu	0310 1623	1118 1941	2.1E 1.4F	3 Th	0644 1143	0225 1449	1.1E 0.5E	18 F	0512 1026	0046 1354	0.9E 0.4E	3 Th	0644 1143	0833 2025	0.5F 0.4F	18 Sa	0213 0700	0529 1123	0.3F 1.6E			
4 Tu	0145 0705 1317 1744	0455 0.3E 1.9E 2.0F	19 W	0125 1707	1144 2018	1.6E 1.1F	4 F	0746	0317 1021	1.5E 0.8F	19 Sa	0628 1602	0129 0924	1.3E 1.0F	4 F	0746	1021 1822	*	19 M	0828 1602	0346 1209	2.2E 2.1F				
5 W	0119 0845 1445 1843	0455 0.8E 1.1E 1.1F	20 Th	0029 .0819	0321 1312	0.4E 0.9E	5 Sa	0840 1752	0414 1947	1.9E 0.3E	20 Su	0733 1743	0233 1053	1.7E 1.5F	5 Sa	0840 1752	1254 2156	1.3F *	20 M	0828 1602	0346 1209	2.2E 2.1F				
6 Th	0059 0853 1345 1947	0500 0.4F 0.5E 0.7F	21 F	0336 0821	0.8E 0950	6 Su	0929 1846	0501 2049	2.2E 0.4E	21 M	0832 1839	-0346 1839	2.2E	6 Su	0929 1846	1343 2245	1.8F *	21 W	0928 1932	0455 2208	2.7E 0.5E					
7 F	0034 0926 1647 2100	0525 1.0F 0.3E 0.4F	22 Sa	0408 0839	1.4E 1112	7 M	1014 1931	0555 1418	2.4E 2.1F	22 Tu	0928 1932	0455 1932	2.7E	7 M	1014 1931	2124 2342	0.4E *	22 W	1023 2024	0555 2228	2.7E 0.4E					
8 Sa	0021 1003 1838	0552 1.6F 0.3E	23 Su	0448 0912	1.9E 1221	8 Tu	1058 2014	0638 1452	2.7E 2.2F	8 W	1023 2024	0555 2024	3.2E	8 W	1058 2014	2211 2242	0.4E 0.3E	8 M	1023 2024	0928 1932	1312 2208					
9 Su	1040 1429 1949	0626 2.0F 0.3E	24 M	0529 0952	2.6E 1323	9 W	1140 1942	0025 1327	*	9 Th	1115	0652 1443	3.6E 3.0F	9 W	1140 1942	0718 1515	2.9E 2.3F	9 M	1115	1115 2240	3.6E *					
10 M	0006 0658 1118 2047	*	25 Tu	0615 1037	3.2E 1413	10 Th	0759 1220	0111 1536	*	10 Sa	1220 2322	0059 1524	*	10 F	0759 1220	0745 1524	3.7E 2.9F	10 W	1206 2231	0059 2231	*					
11 Tu	0041 0735 1156	*	26 W	0702 1125	3.7E 1501	11 F	0834 1258	0149 1605	*	11 Sa	1258 2339	0059 1601	*	11 F	0834 1258	0314 1256	3.7E 2.6F	11 M	1258 2339	0151 1601	0.4F 2.2E					
12 W	0120 0807 1234	*	27 Th	0748 1215	4.0E 1548	12 Sa	0338 1335	0229 1634	0.3F 2.0F	12 Tu	1335 2319	0245 2108	0.7F 0.4E	12 W	0338 1335	0909 1634	0.30E 2.0F	12 M	1335 2319	0431 2108	0926 2241					
13 Th	0021 0152 0845 1312	*	28 F	0201 1306	4.1E 1631	13 Su	0425 1410	0304 0944	0.3F 2.8E	13 Tu	1410 2326	0046 1738	0.9F 1.6F	13 W	0425 1410	0543 2049	0345 2309	13 M	1410 2326	0834 2049	3.7E 0.7E					
14 F	0018 1350	0920 1708	3.1E 2.3F	29 Sa	0100 0217	*	14 M	0511 1444	0342 1738	0.3F 1.6F	14 Tu	1444 2341	0245 *	0.7F	14 W	0511 2341	1014 *	0.7F	14 M	0511 2341	1014 *	2.7E				
15 Sa	0149 1428	0949 1743	3.0E 2.1F	30 Su	0048 0324	*	15 Tu	0600 1519	0428 1810	0.3F 1.2F	15 Tu	1519 2201	0245 2241	0.7F	15 W	0048 1519	0909 2108	0.30E 0.4E	15 M	0048 1519	0909 2108	0.30E 0.4E	15 F	0048 1519	1048 2241	0.30E 0.4E
			31 M	0036 0429	*																					
				0555 1535	1106 1833	2.9E 1.9F																				
				2326																						

Time meridian 90° W. 0000 is midnight. 1200 is noon.

* Current weak and variable.

If three consecutive entries are marked (E) the middle one is not a true maximum but an intermediate value to show the current pattern.

GALVESTON BAY ENTRANCE (between jetties), TEXAS, 1983

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F-Flood, Dir. 300° True E-Ebb, Dir. 100° True

MARCH

APRIL

	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.				
Day	h.m.	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	h.m.	h.m.	knots				
1 Tu	0151	0445	1.0F	16	0120	0440	1.0F	1	0330	0646	1.7F	16	0244	0639	2.2F	
	0657	1109	2.0E	W	0701	1052	1.5E	F	1250	2341	2.1E	Sa	1350	2237	2.7E	
	1517	1737	1.1F		1508	1715	0.6F									
	2021	2338	1.1E		1859	2243	1.2E									
2 W	0300	0548	1.1F	17	0205	0538	1.2F	2	0432	0756	1.6F	17	0346	0746	2.2F	
	0824	1203	1.2E	Th	0819	1146	0.9E	Sa	1508			Su	1524	2322	2.8E	
	1610	1810	0.6F		1736	*										
	2000				2250	1.5E										
3 Th	0013	1.4E		18	0259	0639	1.3F	3	0542	0017	2.0E	18	0459	0900	2.3F	
	0414	0657	1.1F	F	1025	1303	0.4E	Su	1604	0912	1.6F	M	1615			
	1039	1321	0.5E		1538	*										
		1844	*		2313	1.8E										
4 F	0053	1.6E		19	0406	0756	1.5F	4	0654	0142	1.9E	19	0618	0033	2.7E	
	0529	0815	1.1F	Sa	1456	2348	2.1E	M	1645	1107	1.7F	Tu	1015	1015	2.4F	
	1423	1737	0.3E		1914	*										
5 Sa	0147	1.7E		20	0524	0912	1.7F	5	0802	0313	1.8E	20	0733	0239	2.5E	
	0641	0956	1.3F	Su	1634			Tu	1719	1218	1.8F	W	1120	2.4F		
	1635	1910	0.5E						2009	2009	0.8E	1720	2025	0.8E		
		1957	0.4E						2157	2157	0.7E		2142	0.8E		
6 Su	0256	1.8E		21	0058	0646	2.3E	6	0902	0433	1.9E	21	0841	0415	2.5E	
	0748	1220	1.6F	M	1035	1725	2.0F	W	1745	1251	1.8F	Th	1215	2.4F		
	1726	1959	0.6E						2033	2033	0.8E	1729	2021	0.8E		
		2111	0.6E						2308	2308	0.4E		2307	0.3E		
7 M	0415	2.0E		22	0301	0905	2.4E	7	0954	0542	2.1E	22	0941	0530	2.4E	
	0848	1309	1.8F	Tu	1156	1809	2.4F	Th	1803	1316	1.8F	F	1252	2.1F		
	1807	2035	0.6E						2047	2047	0.7E		1727	2015	0.9E	
		2226	0.5E										2306			
8 Tu	0521	2.2E		23	0433	0906	2.7E	8	0000	*		23	0016	0016	0.3F	
	0942	1346	2.0F	W	1251	1846	2.6F	F	0633	0633	2.2E	Sa	0129	0129	2.3E	
	1843	2104	0.6E		2119	2305	0.6E		1041	1339	1.7F		1036	1327	1.8F	
		2323	0.3E						1812	2052	0.7E		1719	2004	1.1E	
9 W	0615	2.4E		24	0542	1005	3.0E	9	0211	0054	0.3F	24	0335	0116	0.9F	
	1031	1415	2.0F	Th	1335	1907	2.6F	Sa	0720	0720	2.2E	Su	0743	0743	2.0E	
	1916	2132	0.5E		2124	2124	0.5E		1123	1406	1.6F		1127	1356	1.4F	
									1814	2044	0.7E		1704	2019	1.5E	
10 Th	0014	*		25	0005	0645	*	10	0331	0135	0.7F	25	0518	0210	1.4F	
	0703	2.6E		F	0645	1100	3.1E	Su	0802	0802	2.1E	M	0837	0837	1.6E	
	1116	1436	2.0F		1412	1912	2.5F		1204	1432	1.4F		1217	1423	1.0F	
	1942	2154	0.4E		2117	2117	0.5E		1805	2044	0.9E		1643	2037	2.0E	
11 F	0100	*		26	0108	0231	0.4F	11	0440	0221	1.0F	26	0016	0305	1.8F	
	0745	2.7E		Sa	0742	0742	3.0E	M	0844	0844	1.9E	Tu	0650	0937	1.1E	
	1157	1459	1.9F		1150	1444	2.2F		1244	1458	1.1F		1309	1452	0.6F	
	2000	2157	0.3E		1908	2111	0.7E		1740	2059	1.2E		1628	2104	2.3E	
	2358				2345				2350							
12 Sa	0143	0.4F		27	0205	0403	0.9F	12	0110	0305	1.3F	27	.0054	0355	2.1F	
	0310	0821	2.7E	Su	0836	0836	2.7E	Tu	0549	0927	1.6E	W	0820	1043	0.7E	
	1235	1523	1.8F		1516	1516	1.8F		1328	1527	0.7F		1519		*	
	2007	2145	0.3E		1856	2126	1.0E		1721	2114	1.5E		2127	2127	2.5E	
13 Su	0004	0224	0.6F	28	0017	0526	1.3F	13	0037	0353	1.6F	28	0133	0449	2.2F	
	0407	0856	2.6E	M	0526	0926	2.3E	W	0703	1017	1.2E	Th	1000	1203	0.3E	
	1311	1549	1.6F		1326	1545	1.3F		1422	1549	0.3F		1541		*	
	2006	2158	0.4E		1835	2146	1.4E		1705	2129	1.9E		2156	2156	2.6E	
14 M	0018	0307	0.8F	29	0059	0648	1.5F	14	0111	0443	1.8F	29	0216	0539	2.2F	
	0502	0933	2.3E	Tu	1020	1178	1.7E	Th	0833	1106	0.7E	F	1208	2217	2.6E	
	1347	1617	1.3F		1414	1612	0.8F		1608	*						
	1947	2214	0.6E		1814	2212	1.7E		2139	2139	2.2E					
15 Tu	0043	0353	0.9F	30	0145	0820	1.7F	15	0153	0538	2.0F	30	0302	0633	2.1F	
	0558	1008	1.9E	W	1118	1118	1.1E	F	1037	1231	0.3E	Sa	1354	2243	2.5E	
	1425	1646	1.0F		1511	1641	0.4F			1356	0.3E					
	1917	2228	0.9E		1800	2238	2.0E		2159	2159	2.5E					
				31	0236	1014	0545									
					1226	1014	1.7F									
					1709	1014	*									
					2306	1014	2.1E									

Time meridian 90° W. 0000 is midnight. 1200 is noon.

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GALVESTON BAY ENTRANCE (between jetties), TEXAS, 1983

F-Flood, Dir. 300° True E-Ebb, Dir. 100° True

MAY										JUNE									
Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Slack	Maximum	Day	Water	Day	Water	Day	Water	Day	Water
Day	Time	Current	Time	Vel.	Day	Time	Current	Time	Vel.	Day	Time	Day	Time	Day	Time	Day	Time	Day	Time
1 Su	0355 1451	0731 2313	2.0F 2.3E		16 M	0340 1516	0737 2325	2.8F 3.2E		1 W	0522 1529	0900	1.9F	16 Th	0046 0537 1445	0904 1805 2011	2.6E 2.2F 0.7E 0.5E		
2 M	0457 1533	0839	1.9F		17 Tu	0447 1552	0841	2.7F		2 Th.	0105 0946 1533	0105 0946 1905 2052	1.9E 1.7F 0.8E 0.7E	17 F	0215 0947 1424	0947 1756 2150	1.9E 1.8F 1.0E *		
3 Tu	0604 1606	0000 0956	2.0E 1.8F		18 W	0557 1608	0043 0946	2.8E 2.5F		3 F	0241 1029 1527	0241 1029 1913 2215	1.6E 1.5F 0.9E 0.4E	18 Sa	0350 1028 1405 2137	1028 1751 2321	1.3E 1.3F 1.4E 0.5F		
4 W	0711 1628	0212 1055 1936 2129	1.8E 1.8F 0.9E 0.8E		19 Th	0706 1604	0226 1041 1915 2150	2.4E 2.2F 0.9E 0.5E		4 Sa	0404 1104 1515	0404 1104 1854 2326	1.3E 1.3F 1.0E *	19 Su	0219 0838 1342 2204	0526 1103 1808	0.8E 0.9F 2.0E		
5 Th	0811 1640	0340 1136 1952 2240	1.7E 1.7F 0.9E 0.4E		20 F	0810 1554	0357 1124 1913 2310	2.0E 1.9F 1.1E *		5 Su	0521 1140 1448 2226	0521 1140 1830 2226	1.0E 1.0F 1.3E 2.2E	20 M	0041 0457 0940 1327	0716 1137 1831	1.1F 0.4E 0.6F 2.5E		
6 F	0906 1643	0456 1211 2002 2340	1.7E 1.6F 0.9E *		21 Sa	0910 1542	0520 1159 1902 2233	1.6E 1.5F 1.4E 2.233		6 M	0022 0317 1003 1419 2240	0022 0630 1003 1839 2240	0.7F 0.8E 0.7F 1.7E 2.2E	21 Tu	0150 0653 1047 1324 2317	0901 1212 1324 1900	1.7F 0.3E 0.3F 2.8E 2317		
7 Sa	0955 1639 2301	0559 1240 1943	1.6E 1.4F 1.0E		22 Su	0306 1006 1523	0027 1006 2259	0.7F 1.3E 1.9E		7 Tu	0118 0739 1107 1405 2303	0118 0739 1242 1405 2303	1.3F 0.6E 0.4F 2.2E 2355	22 W	0239 1021 1245 1935	*	2.2F 1021 1245 1935	3.1E	
8 Su	0226 1042 1622 2311	0037 0654 1309 1938	0.5F 1.5E 1.2F 1.2E		23 M	0511 1101 1503 2331	0130 1303 1934 2331	1.3F 0.9E 0.8F 2.3E		8 W	0207 0654	0207 0654	1.9F 0.4E	23 Th	0322 1128 1312 2007	1128 1312	2.4F *	3.2E	
9 M	0409 1129 1556 2329	0129 0744 1336 1950	1.0F 1.3E 0.9F 1.6E		24 Tu	0650 1158 1454	0224 10913 2003	1.8F 0.6E 2.7E		9 Th	0256 1112 1327 1955	0256 1112 1327 1955	2.4F 0.3E *	24 F	0033 1243 1302 2042	1243 1302	2.5F *	3.2E	
10 Tu	0538 1221 1539 2353	0212 1405 0.5F 2.0E	1.4F 1.1E 0.5F 2.0E		25 W	0007 1042 1358 2027	0313 1042 1358 2027	2.2F 0.4E *		10 F	0012 1026	0344 2024	2.8F 3.5E	25 Sa	0112 1200	0439 2111	2.5F 3.1E		
11 W	0705	0301 0936 1433 2029	1.9F 0.8E *		26 Th	0044 1001	0402 1224 1421 2056	2.4F 0.3E *		11 Sa	0056 1225	0438 2103	3.1F 3.8E	26 Su	0152 1300	0519 2146	2.4F 3.0E		
12 Th	0024 0838	0350 1042 1448 2045	2.3F 0.5E *		27 F	0122 1142	0445 2125	2.5F 3.0E		12 Su	0145 1340	0529 2151	3.2F 3.8E	27 M	0234 1351	0602 2221	2.3F 2.8E		
13 F	0102 1031	0441 2113	2.6F 3.1E		28 Sa	0202 1257	0533 2154	2.4F 2.9E		13 M	0239 1435	0624 2240	3.1F 3.6E	28 Tu	0316 1429	0642 2302	2.1F 2.6E		
14 Sa	0147 1306	0534 2145	2.8F 3.3E		29 Su	0245 1352	0619 2221	2.3F 2.7E		14 Tu	0336 1509	0721 2335	2.9F 3.2E	29 W	0400 1451	0726 2331	1.9F 2.2E		
15 Su	0240 1426	0635 2228	2.8F 3.3E		30 M	0333 1436	0711 2259	2.2F 2.5E		15 W	0436 1513	0813	2.6F	30 Th	0445 1443	0809	1.7F		
					31 Tu	0426 1509	0805 2342	2.0F 2.2E											

Time meridian 90° W. 0000 is midnight. 1200 is noon.

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GALVESTON BAY ENTRANCE (between jetties), TEXAS, 1983

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F-Flood, Dir. 300° True E-Ebb, Dir. 100° True

JULY												AUGUST											
	Slack	Maximum			Water	Time	Current	Water	Time	Current	Water	Time	Current										
Day	Water	Current	Day	h.m.	Time	Vel.	h.m.	Time	Vel.	h.m.	Time	Vel.	Day										
	Time	Time	Time	Vel.	Day	h.m.	Time	Time	Vel.	Day	h.m.	h.m.	knots	Day	h.m.	Time	Time	Vel.	Day	h.m.	Vel.	Day	
1	F	0012	0012	1.8E	16	0209	0209	1.2E	1	0309	0309	0.4E	16	0003	0003	1.5F							
	0532	0852	0852	1.5F	Sa	0611	0851	1.1F	M	0912	0912	*	Tu	0530	0730	0.3E							
	1416	1820	1820	0.6E		1210	1559	1.3E		1542	1542	1.3E		0926	0926	*							
		2021	2021	0.5E		2005	2150	0.5F	2012	2242	2242	0.8F		1629	1629	2.3E							
2	Sa	0142	0142	1.3E	17	0058	0352	0.5E	2	0739	0739	*	17	0106	0106	1.9F							
	0623	0930	0930	1.2F	Su	0715	0932	0.7F	Tu	0947	0947	*	W	0626	0831	0.4E							
	1350	1806	1806	0.8E		1145	1642	1.8E		1620	1620	1.8E		1015	1015	0.3E							
		2144	2144	*		2049	2341	1.0F	2048	2356	2356	1.5F		1727	1727	2.5E							
3	Su	0320	0320	0.8E	18	0650	*		3	0607	0900	0.4E	18	0155	0155	2.1F							
	0721	1012	1012	0.9F	M	1012	1012	0.3F		1022	1022	0.3E	Th	0711	0915	0.5E							
	1306	1712	1712	1.1E		1137	1714	2.3E		1703	1703	2.3E		1117	1117	0.3E							
		2129	2301	0.4F		2133			2130					1818	1818	2.7E							
4	M	0131	0457	0.5E	19	0117	0117	1.6F	4	0054	0054	2.1F	19	0230	0230	2.2F							
	0833	1047	1047	0.5F	Tu	0820	*		Th	0721	1002	0.4E	F	0753	0950	0.4E							
	1237	1730	1730	1.6E		1054	*			1057	1057	0.4E		1206	1206	*							
		2140				1758	1758	2.6E		1750	1750	2.9E		1902	1902	2.8E							
5	Tu	0009	0046	1.0F	20	0206	0206	2.0F	5	0149	0149	2.6F	20	0303	0303	2.2F							
	0656	1121	1121	0.3E	W	0745	0924	0.3E	F	0830	1835	3.4E	Sa	0834	1025	0.3E							
		1748	1748	2.1E		1137	1835	2.9E		2304				1255	1255	*							
	2205					2216			2215					1942	1942	2.9E							
6	W	0106	0637	1.7F	21	0249	0249	2.3F	6	0236	0236	3.0F	21	0004	0324	2.2F							
	0924	1150	1150	0.3E	Th	0840	1021	0.3E	Sa	0949	1924	3.8E	Su	0949	1054	*							
	*					1218	*		2353					1338	1338	*							
	1820	2238	2238	2.6E		1915	1915	3.0E						2023	2023	2.9E							
7	Th	0201	0813	2.3F	22	0324	0324	2.4F	7	0323	0323	3.1F	22	0044	0351	2.0F							
	1053	1211	1211	0.3E	F	1118	*		Su	1214	1214	*	M	1109	1109	*							
	1852	2318	2318	3.2E		1300	*			1238	1238	*		1415	1415	0.3F							
						1953	1953	3.1E		2016	2016	4.0E		1534	1534	2.9E							
8	F	0250	0950	2.8F	23	0021	0353	2.4F	8	0044	0407	3.0F	23	0122	0417	1.9F							
	1935	2033	2033	3.6E	Sa	1158	*		M	1226	1226	*	Tu	1057	1057	*							
						1338	*			1400	1400	0.3F		1456	1456	0.4F							
						2033	3.1E			1521	1521	3.9E		1624	1624	2.7E							
9	Sa	0003	1129	0339	24	0101	0424	2.4F	9	0134	0447	2.8F	24	0158	0449	1.7F							
	2016	2016	2016	4.0E	Su	1242	*		Tu	1144	1144	*	W	1058	1058	*							
						1415	*			1503	1503	0.4F		1539	1539	0.5F							
						2105	3.1E			2154	2154	3.6E		1713	1713	2.4E							
10	Su	0051	1308	0427	25	0141	0454	2.2F	10	0224	0527	2.3F	25	0234	0515	1.4F							
	2105	2105	2105	4.1E	M	1344	*		W	1151	1151	*	Th	1119	1119	*							
						1444	*			1612	1612	0.5F		1624	1624	0.5F							
						2142	3.0E			1748	1748	2.9E		1804	1804	2.0E							
11	M	0142	1434	0518	26	0219	0528	2.1F	11	0313	0605	1.8F	26	0311	0547	1.1F							
	2154	2154	2154	3.9E	Tu	1506	2215	2.7E	Th	1041	1220	0.3E	F	0906	1139	0.4E							
										1437	1724	0.6F		1405	1720	0.5F							
										1906	2346	2.1E		1904	2321	1.5E							
12	Tu	0234	1534	0604	27	0257	0603	1.9F	12	0404	0640	1.3F	27	0353	0619	0.7F							
	2248	2248	2248	3.5E	W	1505	2250	2.4E	F	1009	1255	0.8E	Sa	0832	1157	0.7E							
										1624	1840	0.6F		1514	1826	0.5F							
										2041	2336	2.2E		2020	2221	2.2E							
13	W	0327	1508	0650	28	0334	0641	1.6F	13	0055	0715	1.3E	28	0459	0649	0.9E							
	2345	2345	2345	2.9E	Th	1446	2318	2.0E	Sa	0459	0938	0.8F	Su	0459	0812	1.0E							
										1749	2003	0.8F		1632	1938	0.7F							
										2336	2221												
14	Th	0421	1311	0733	29	0413	0715	1.3F	14	0221	0715	0.5E	29	0149	0724	0.4E							
	1557	1837	1837	0.3E	F	1410	*		Su	0612	0755	0.3F	M	0724	1236	1.3E							
						1512	*			0922	1432	1.6E		1236	1749	1.0F							
						1648	*			1901	2139	1.0F		1749	2059	1.0F							
						1833	*																
15	F	0046	0515	2.1E	30	0000	0000	1.5E	15	0609	0837	*	31	0309	1339	1.6E							
	0814	1238	1538	1.6F	Sa	0456	0756	1.0F	M	0837	1532	2.0E	W	1858	2220	1.4F							
	2009	2009	2009	0.7E		1136	1430	0.4E		2003													
				*		1956	1956	*															
						2312	2312																

Time meridian 90° W. 0000 is midnight. 1200 is noon.

* Current weak and variable.

If three consecutive entries are marked (E) the middle one is not a true maximum but an intermediate value to show the current pattern.

GALVESTON BAY ENTRANCE (between jetties), TEXAS, 1983

F-Flood, Dir. 300° True E-Ebb, Dir. 100° True

SEPTEMBER										OCTOBER									
	Slack Water Time	Maximum Current Time	Vel.																
Day	h.m.	h.m.	knots	Day	h.m.	knots													
1 Th 2059	0604	1624	2.5E	16 F	0615	0123	2.0F	1 Sa	0611	0015	2.5F	16 Su	0531	0053	1.8F				
						0841	0.7E			0903	0.7E			0825	0.8E				
						1105	0.4E			1040	0.6E			1146	*				
						1756	2.4E			1713	2.8E			1821	2.0E				
2 F 2155	0658	0041	2.4F	17 Sa	0645	0152	2.0F	2 Su	0632	0100	2.5F	17 M	0537	0116	1.7F				
		1724	2.9E			0909	0.6E			0904	0.5E			0825	0.8E				
						1201	*			1145	*			1237	0.4F				
						1847	2.5E			1815	2.9E			1407	1.903	2.0E			
3 Sa 0749	0749	0132	2.7F	18 Su	0706	0216	2.0F	3 M	0635	0141	2.4F	18 Tu	0537	0143	1.5F				
		1006	0.4E			0928	0.5E			0846	0.5E			0820	0.9E				
		1142	0.3E			1246	*			1113	1.245			1124	1.323	0.7F			
		1827	3.3E			1929	2.6E			1404	1.910	2.9E		1531	1.947	1.9E			
4 Su	0215	2.8F	19	2338	0236	1.8F		4 Tu	0630	0213	2.1F	19 W	0525	0209	1.3F				
	1017	*	M	0720	0927	0.4E			0835	0.7E			0821	1.1E					
	1237	*		1145	1332	0.5F			1122	1.342	0.9F		1409	1.409	1.1F				
	1918	3.5E		1505	2005	2.5E			1543	2009	2.6E		1642	2028	1.7E				
5 M	0255	2.7F	20	0018	0303	1.7F		5 W	0614	0011	0245	20 Th	0502	0025	0236	1.0F			
	0954	*	Tu	0726	0922	0.5E			0854	1.1E			0836	1.4E					
	1332	0.4F		1158	1412	0.7F			1152	1439	1.4F		1203	1455	1.4F				
	1453	2011	3.5E		2042	2.4E			1712	2103	2.2E		1752	2114	1.4E				
6 Tu	0030	0333	2.5F	21 W	0055	0329	1.4F	6 Th	0100	0317	1.2F	21 F	0109	0302	0.6F				
	0954	*		0721	0930	0.6E			0551	0918	1.6E		0446	0852	1.7E				
	1423	0.8F		1215	1456	0.9F			1233	1532	1.7F		1228	1537	1.7F				
	1614	2100	3.2E		2122	2.1E			1841	2158	1.6E		1906	2200	1.0E				
7 W	0119	0408	2.0F	22 Th	0133	0355	1.2F	7 F	0151	0343	0.7F	22 Sa	0906	0323	*				
	0825	1011	0.5E		0659	0945	0.8E		0533	0939	2.0E		0906	2.0E					
	1218	1523	1.1F		1238	1542	1.0F		1319	1631	1.9F		1259	1627	1.9F				
	1731	2155	2.7E		2158	2157	1.7E		2020	2301	1.0E		2036	2257	0.6E				
8 Th	0208	0440	1.5F	23 F	0212	0424	0.8F	8 Sa	0255	0411	0.3F	23 Su	0922	0339	*				
	0801	1037	0.9E		0634	1005	1.0E		0517	1013	2.3E		1336	1715	2.3E				
	1319	1624	1.2F		1310	1630	1.1F		1410	1728	2.0F								
	1851	2247	2.0E		2240	1.3E			2219										
9 F	0258	0512	1.0F	24 Sa	0301	0451	0.4F	9 Su	0017	0432	0.4E	24 M	0108	0019	*				
	0733	1106	1.3E		0618	1012	1.3E			1043	1.4E			0934	0108	*			
	1426	1731	1.3F		1349	1719	1.2F			1829	2.0F			1422	1812	2.1F			
	2026	2355	1.2E		2019	2335	0.8E		1505										
10 Sa	0357	0541	0.5F	25 Su	0509	*		10 M	0105	1112	2.4E	25 Tu	0145	1005	2.7E				
	0715	1141	1.6E		1022	1.6E			1607	1937	1.9F		1518	1921	2.2F				
	1536	1836	1.4F		1437	1823	1.4F												
11 Su	0115	0.5E	26 M	0057	0357	0.3E		11 Tu	0253	1157	2.3E	26 W	0302	1046	2.8E				
	0614	*		0256	*				1716	2101	1.9F		1625	2029	2.3F				
	1224	1.8E		1042	1.9E														
	1650	1951	1.4F		1926	1.5F													
12 M	0209	0527	0.3E	27 Tu	0222	1114	2.1E	12 W	0344	1306	2.1E	27 Th	1741	1146	2.7E				
	0643	0.3E		1648	2042	1.7F			1828	2239	1.9F		1741	2144	2.4F				
	1314	2.0E																	
	1804	2125	1.5F																
13 Tu	0408	1427	2.0E	28 W	0359	1212	2.2E	13 Th	0423	1448	1.9E	28 F	0428	1333	2.5E				
	1915	2338	1.8F		1809	2205	2.0F			2353	1.9F			1856	2249	2.4F			
14 W	0500	0742	0.7E	29 Th	0451	1400	2.3E	14 F	0453	0747	0.9E	29 Sa	0454	0814	0.9E				
	0840	0.6E		1925	2320	2.3F			0940	0.7E			0914	0914	0.9E				
	1544	2.1E							1617	1.9E			1533	1533	2.4E				
	2020								2038				2005	2340	2.3F				
15 Th	0541	0040	2.0F	30 F	0535	1556	2.5E	15 Sa	0516	0030	1.9F	30 Su	0501	0804	0.8E				
	0812	0.7E		2032					0809	0.9E			1042	1042	0.4E				
	1003	0.6E							1051	0.4E			1655	1655	2.3E				
	1656	2.2E							1727	2.0E			2107						
	2118								2132				31 M	0457	0021	2.1F			
													0752	0752	0.9E				
													1150	1150	*				
													1809	1809	2.1E				
													2204						

Time meridian 90° W. 0000 is midnight. 1200 is noon.

* Current weak and variable.

If three consecutive entries are marked (E) the middle one is not a true maximum but an intermediate value to show the current pattern.

GALVESTON BAY ENTRANCE (between jetties), TEXAS, 1983

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F-Flood, Dir. 300° True E-Ebb, Dir. 100° True

NOVEMBER										DECEMBER									
	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.	Slack Water Time	Maximum Current Time	Vel.										
Day	h.m.	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	knots	Day	h.m.	h.m.	knots	Day	h.m.	knots
1	Tu 0447	0056	1.8F	16	0047	1.1F	1	0035	0.7F	16	0027	0.3F							
	0739	1.2E		W 0352	0721	1.4E	Th 0233	0709	2.5E	F 0145	0651	2.2E							
	1054	0.8F		1102	1313	1.0F	1108	1407	1.9F	1056	1355	1.8F							
	1511	1.9E		1617	1933	1.2E	1839	2051	0.5E	1852	2107	0.4E							
	2256	2309					2332												
2	W 0428	0125	1.4F	17	0113	0.8F	2	0107	0.4F	17	0054	*							
	0748	1.7E		Th 0328	0736	1.8E	F 0226	0738	2.9E	Sa 0125	0715	2.7E							
	1118	1353	1.4F	1121	1401	1.5F	1145	1457	2.4F	1125	1439	2.3F							
	1702	2014	1.5E	1744	2030	0.9E	2017	2225	0.3E	2020	2303	0.3E							
	2348																		
3	Th 0406	0152	1.0F	18	0000	0142	0.5F	3	0135	*	18	0116	*						
	0809	2.2E		F 0314	0752	2.1E	Sa 1224	0807	3.2E	Su 1200	0744	3.1E							
	1152	1448	1.9F	1145	1447	1.9F	1545	1545	2.6F	2208	1528	2.7F							
	1840	2112	1.0E	1906	2125	0.7E													
4	F 0354	0041	0.5F	19	0209	*	4	0001	*	19	0813	3.5E							
	0838	2.6E		Sa 1214	0812	2.5E	Su 1304	0157	*	M 1240	1617	3.0F							
	1230	1537	2.3F	1533	1533	2.3F	1629	0839	3.3E										
	2016	2226	0.6E	2035	2228	0.4E	2343	1629	2.7F										
5	Sa 0904	0249	*	20	0225	*	5	0914	3.3E	20	0850	3.7E							
	1312	2.9E		Su 1248	0830	2.8E	M 1346	1718	2.7F	Tu 1325	1706	3.1F							
	1632	2.5F		2228	1622	2.5F													
6	Su 0936	0042	0.3E	21	0853	3.1E	6	0056	0.9E	21	0135	0.8E							
	1356	1723	3.0E	M 1329	1715	2.7F	Tu 1430	1804	2.5F	W 1415	1758	3.0F							
7	M 1444	0027	0.9E	22	0104	0922	3.3E	7	0148	1016	22	0232	1013						
	1817	2.4F		Tu 1417	1806	2.7F	W 1518	1855	2.3F	Th 1508	1850	2.8F							
8	Tu 1538	0152	1.0E	23	0214	1003	3.4E	8	0230	1052	23	0312	1106						
	1921	2.2F		W 1512	1909	2.7F	Th 1609	1948	2.1F	F 1605	1942	2.5F							
9	W 1638	0242	1.0E	24	0303	1050	3.2E	9	0301	1133	24	0322	1208						
	2027	2.1F		Th 1615	2013	2.6F	F 1703	2037	1.9F	Sa 1703	2028	2.1F							
10	Th 1744	0320	1.1E	25	0339	1153	2.9E	10	0318	1238	25	0238	0556						
	2139	2.2E		F 1722	2113	2.5F	Sa 1800	2123	1.7F	Su 1800	2116	1.7F							
	1524	1.9F		1935	2253	1.9F	1953	2248	1.2F	1803	2116	1.7F							
11	F 1849	0349	1.3E	26	0356	1329	2.4E	11	0317	0647	26	0201	0537						
	2236	1.8F		Sa 1830	2207	2.2F	Su 1800	0832	0.7E	M 1420	1501	1.3E							
	1849	1.8F					1856	1420	1.5E	2206	2154	1.3F							
12	Sa 0912	0408	0.9E	27	0347	0704	0.8E	12	0307	0654	27	0135	0524						
	1524	0.8E		Su 0911	0704	0.7E	M 0952	0952	0.4E	Tu 0912	1050	0.4F							
	1950	2321	1.7E	1515	2042	2.0E	1547	1547	1.2E	1338	1652	0.7E							
	2321	1.7F		1935	2253	1.9F	1953	1953	1.2F	2011	2236	0.8F							
13	Su 1026	0416	0.7E	28	0332	0651	1.0E	13	0252	0645	28	0106	0537						
	1636	0.5E		M 1042	1042	*	Tu 1109	1109	*	W 0939	1224	1.1F							
	2045	2346	1.6E	1648	1648	1.5E	1710	1710	0.9E	1643	1907	0.4E							
	2346	1.6F		2037	2328	1.5F	2050	2323	0.9F	2120	2311	0.5F							
14	M 1132	0416	1.0E	29	0315	0639	1.4E	14	0225	0621	29	0053	0606						
	1743	*		Tu 1014	1202	0.6F	W 1017	1212	0.6F	Th 1016	1329	1.8F							
	2135	1.5E		1435	1806	1.2E	1532	1827	0.7E	1844	2046	0.3E							
	2135	2136		2136			2148	2353	0.6F	2346	2346	*							
15	Tu 0410	0018	1.4F	30	0252	0003	1.1F	15	0157	0628	30	0638	2.9E						
	0727	1.1E		1036	0648	1.9E	Th 1032	1306	1.3F	F 1055	1424	2.3F							
	1051	1224	0.5F	1307	1307	1.3F	1723	1939	0.5E	2013	2201	0.3E							
	1430	1839	1.3E	1655	1933	0.8E	2252												
	2222	2233																	
																31	0022	*	
																Sa 1135	0715	3.2E	
																1135	1506	2.6F	*
																2307			

Time meridian 90° W. 0000 is midnight. 1200 is noon.

* Current weak and variable.

If three consecutive entries are marked (E) the middle one is not a true maximum but an intermediate value to show the current pattern.

VIEQUES PASSAGE, PUERTO RICO, 1983

F-Flood, Dir. 250° True E-Ebb, Dir. 055° True

TABLE 2.—CURRENT DIFFERENCES AND OTHER
CONSTANTS AND ROTARY TIDAL CURRENTS

EXPLANATION OF TABLE

In this publication, reference stations are those for which daily predictions are listed in Table 1. Those stations appearing in Table 2 are called subordinate stations. The principal purpose of Table 2 is to present data that will enable one to determine the approximate times of minimum currents (slack waters) and the times and speeds of maximum currents at numerous subordinate stations on the Atlantic Coast of North America. By applying the specific corrections given in Table 2 to the predicted times and speeds of the current at the appropriate reference station, reasonable approximations of the current at the subordinate station may be compiled.

Locations and Depths

Because the latitude and longitude are listed according to the exactness recorded in the original survey records, the locations of the subordinate stations are presented in varying degrees of accuracy. Since a minute of latitude is nearly equivalent to a mile, a location given to the nearest minute may not indicate the exact position of the station. This should be remembered, especially in the case of a narrow stream, where the nearest minute of latitude or longitude may locate a station inland. In such cases, unless the description locates the station elsewhere, reference is made to the current in the center of the channel. In some instances, the charts may not present a convenient name for locating a station. In those cases, the position may be described by a bearing from some prominent place on the chart.

Although current measurements may have been recorded at various depths in the past, the data listed here for most of the subordinate stations are mean values determined to have been representative of the current at each location. For that reason, no specific current meter depths for those stations are given in Table 2. Beginning with the Boston Harbor tidal current survey in 1971, data for individual meter depths were published and subsequent new data may be presented in a similar manner.

Since most of the current data in Table 2 came from meters suspended from survey vessels or anchored buoys, the listed depths are those measured downward from the surface. Some later data have come from meters anchored at fixed depths from the bottom. Those meter positions were defined as depths below chart datum. Such defined depths in this and subsequent editions will be accompanied by the small letter "d".

Minimum Currents

The reader may note that at many locations the current may not diminish to a true slack water or zero speed stage. For that reason, the phrases, "minimum before flood" and "minimum before ebb" are used in Table 2 rather than "slack water" although either or both minimums may actually reach a zero speed value at some locations. Table 2 lists the average speeds and directions of the minimums.

Maximum Currents

Near the coast and in inland tidal waters, the current increases from minimum current (slack water) for a period of about 3 hours until the maximum speed or the strength of the current is reached. The speed then decreases for another period of about 3 hours when minimum current is again reached and the current begins a similar cycle in the opposite direction. The current that flows toward the coast or up a stream is known as the flood current; the op-

TABLE 2.—CURRENT DIFFERENCES AND OTHER CONSTRAINTS
AND ROTARY CURRENTS

posite flow is known as the ebb current. Table 2 lists the average speeds and directions of the maximum floods and maximum ebbs. The directions are given in degrees, true, reading clockwise from 000° at north to 359° and are the directions toward which the currents flow.

Time Differences and Speed Ratios

Table 2 contains mean time differences by which the reader can compile approximate times for the minimum and maximum current phases at the subordinate stations. Time differences for those phases should be applied to the corresponding phases at the reference station. It will be seen upon inspection that some subordinate stations exhibit either a double flood or a double ebb stage or both. Explanations of these stages can be found in the glossary located elsewhere in this publication. In those cases, a separate time difference is listed for each of the three flood (or ebb) phases and these should be applied only to the daily maximum flood (or ebb) phase at the reference station. The results obtained by the application of the time differences will be based upon the time meridian shown above the name of the subordinate station. Differences of time meridians between a subordinate station and its reference station have been accounted for and no further adjustment by the reader is needed. Summer or daylight saving time is not used in this publication.

The speed ratios are used to compile approximations of the daily current speeds at the subordinate stations and refer only to the maximum floods and ebbs. No attempt is made to predict the speeds of the minimum currents. Normally, these ratios should be applied to the corresponding maximum current phases at the reference station. As mentioned above, however, some subordinate stations may exhibit either a double flood or a double ebb or both. As with the time differences, separate ratios are listed for each of the three flood (or ebb phases) and should be applied only to the daily maximum flood (or ebb) speed at the reference station. It should be noted that although the speed of a given current phase at a subordinate station is obtained by reference to the corresponding phase at the reference station, the directions of the current at the two places may differ considerably. Table 2 lists the average directions of the various current phases at the subordinate stations.

Rotary Tidal Currents

The last page of Table 2 is a listing of data for those stations which exhibited rotary current patterns. Briefly, a rotary current can be described as one which flows continually with the direction of flow changing through all points of the compass during the tidal period. A more complete description can be found in the glossary located elsewhere in this publication. The average speeds and directions are listed in half-hour increments as referred to the predicted times of "minimum before flood" at the reference station in Table 1. The Moon, at times of new, full, or perigee may increase these speeds 15 to 20 percent above average; or 30 to 40 percent if perigee occurs at or near the time of new or full Moon. Conversely, the Moon at times of quadrature or apogee may decrease the speeds 15 to 20 percent or 30 to 40 percent if they occur together. Near average speeds may be expected when apogee occurs near or at new or full Moon, or when perigee occurs at or near quadrature. The directions of the currents are given in degrees, true reading clockwise from 000° at north to 359° and are the direction toward which the water is flowing.

Example of The Use of Table 2

Suppose we wish to calculate the times of the minimum currents and the times and speeds of the maximum currents on a particular morning at the location listed as Winthrop Head, 1.1 nautical miles east of. From Table 2 we learn that the reference station is Boston

TABLE 2.—CURRENT DIFFERENCES AND OTHER CONSTANTS
AND ROTARY CURRENTS

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Harbor whose morning currents are listed below. Currents for Winthrop Head can be approximated by using the Table 2 corrections as indicated.

	Minimum before flood h.m.	Maximum flood h.m.	kn		Minimum before ebb h.m.	Maximum ebb h.m.	kn
Boston Harbor	0052	0419	1.2		0645	1109	1.4
Table 2 corrections	-0112	+0019	×0.4 ratio		+0031	-0146	×0.3 ratio
Winthrop Head	2340*	0438	0.5		0716	0923	0.4

* this minimum current phase is seen to occur just before midnight of the previous day.

Table 2 states that the average speeds and directions of the minimums before flood and ebb are 0.3 knots at 103° and 0.2 knots at 297° ; respectively. The average directions of the maximum flood and maximum ebb are 205° and 019° ; respectively.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION				TIME DIFFERENCES				SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS						
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb	Minimum before Flood	Maximum Flood		Minimum before Ebb	Maximum Ebb					
					N	W	h. m.	h. m.						h. m.	h. m.			
	BAY OF FUNDY Time meridian, 60°W	ft										knots deg.	knots deg.	knots deg.	knots deg.			
1	Brazil Rock, 6 miles east of.....	43 22	65 18	-2 02	-2 00	-1 56	-2 00	0.4	0.4	0.0	--	1.0	275	0.0	--	1.0 050		
6	Cape Sable, 3 miles south of.....	43 20	65 38	-3 02	-2 10	-1 21	-2 10	1.0	0.8	0.0	--	2.2	275	0.0	--	2.0 095		
11	Cape Sable, 12 miles south of.....	43 11	65 37	-1 12	-1 00	-0 46	-1 00	0.7	0.7	0.0	--	1.7	285	0.0	--	1.6 090		
16	Blonde Rock, 5 miles south of.....	43 15	65 59	-1 02	-0 50	-0 36	-0 50	0.9	0.8	0.0	--	2.0	310	0.0	--	2.0 125		
21	Seal Island, 13 miles southwest of.....	43 16	66 15	-0 17	+0 10	+0 39	+0 10	1.1	0.7	0.0	--	2.6	325	0.0	--	1.6 140		
26	Cape Fourchu, 17 miles southwest of.....	43 34	66 24	+0 38	+0 45	+0 44	+0 45	0.5	0.5	0.0	--	1.2	355	0.0	--	1.2 145		
31	Cape Fourchu, 4 miles west of.....	43 47	66 15	-0 12	0 00	+0 09	0 00	0.9	0.7	0.0	--	2.0	000	0.0	--	1.7 175		
36	Lurcher Shoal, 6 miles east of.....	43 52	66 21	+0 08	+0 30	+0 39	+0 30	0.9	0.8	0.0	--	2.0	355	0.0	--	1.8 175		
41	Lurcher Shoal, 10 miles west of.....	43 46	66 42	+0 23	+0 30	-0 34	+0 30	0.6	0.7	0.0	--	1.4	000	0.0	--	1.6 160		
46	Lurcher Shoal, 10 miles northwest of.....	43 59	66 37	-0 02	+0 30	+0 49	+0 30	0.8	0.5	0.0	--	1.8	005	0.0	--	1.2 175		
51	Brier Island, 5 miles west of.....	44 13	66 30	+0 43	+0 50	+0 54	+0 50	1.2	1.0	0.0	--	2.7	005	0.0	--	2.5 185		
56	Brier Island, 15 miles west of.....	44 17	66 44	-0 42	-0 15	+0 14	-0 15	0.6	0.5	0.0	--	1.4	060	0.0	--	1.2 250		
61	Gannet Rock, 5 miles southeast of.....	44 29	66 41	+0 38	+0 30	+0 09	+0 30	1.1	1.6	0.0	--	2.6	040	0.0	--	3.9 230		
66	Boars Head, 10 miles northwest of.....	44 31	66 23	+0 48	+0 55	+0 59	+0 55	0.8	0.8	0.0	--	1.9	020	0.0	--	2.0 205		
71	Prim Point, 20 miles west of.....	44 44	66 15	+0 38	+0 45	+0 54	+0 45	0.7	0.6	0.0	--	1.6	040	0.0	--	1.4 235		
76	Cape Spencer, 14 miles south of.....	44 58	65 57	+0 51	+0 55	+0 57	+0 55	0.7	0.7	0.0	--	1.7	050	0.0	--	1.6 245		
81	BAY OF FUNDY ENTRANCE.....	44 45.2	66 55.9	Daily predictions								0.0	--	2.3	032	0.0	--	2.4 212
	MAINE COAST Time meridian, 75°W																	
86	Eastport, Friar Roads.....	44 54	66 59	0 00	0 00	0 00	0 00	1.2	1.2	0.0	--	3.0	210	0.0	--	3.0 040		
91	Western Passage, off Kendall Head.....	44 55.9	67 00.0	+0 27	+0 11	+0 13	+0 40	1.4	1.3	0.0	--	3.2	319	0.0	--	3.1 142		
96	Western Passage, off Frost Ledge.....	44 57.9	67 01.9	+0 33	+0 04	-0 16	+0 15	0.9	0.7	0.0	--	2.1	330	0.0	--	1.7 150		
101	Pond Point, 7.6 miles SSE of.....	44 20.1	67 30.2	+0 13	-0 20	-1 33	-0 05	0.2	0.5	0.0	--	0.5	015	0.0	--	1.2 215		
106	Moosabec Reach, east end.....	44 31.71	67 34.36	-2 45	-3 08	-3 13	-3 39	0.4	0.4	0.0	--	1.0	110	0.0	--	1.0 258		
111	Moosabec Reach, west end.....	44 31.25	67 39.00	-1 43	-1 43	-2 00	-1 44	0.4	0.5	0.0	--	1.0	092	0.0	--	1.2 253		
116	Bar Harbor, 1.2 miles east of <1>.....	44 23.0	68 10.0	--	+0 30	--	+0 48	0.1	0.3	0.0	--	0.2	328	0.0	--	0.7 148		
121	Casco Passage, east end, Blue Hill Bay.....	44 11.7	68 27.9	-1 49	-1 44	-1 02	-1 58	0.3	0.3	0.0	--	0.7	086	0.0	--	0.7 284		
126	Hat Island, SE of, Jericho Bay.....	44 08.0	68 29.7	-1 02	-0 35	-0 50	-1 20	0.4	0.5	0.0	--	0.9	318	0.0	--	1.3 124		
	on PORTSMOUTH HARBOR ENTRANCE, p.10																	
136	Isle Au Haut, 0.8 mi. east of Richs Pt..	44 05.0	68 35.0	-2 13	-1 47	-2 09	-1 47	1.2	0.8	0.0	--	1.4	336	0.0	--	1.5 139		
146	West Penobscot Bay, off Monroe Island...	44 04.5	69 00.6	-1 09	-1 24	-2 20	-1 12	0.2	0.3	0.0	--	0.3	006	0.0	--	0.6 159		
156	Muscongus Sound.....	43 56.5	69 26.9	Current weak and variable														
166	Damariscotta River, off Cavis Point....	43 52.5	69 35.0	-0 49	-0 44	-1 24	-1 18	0.5	0.6	0.0	--	0.6	350	0.0	--	1.0 215		
176	Sheepscot River, off Barter Island.....	43 54.0	69 41.5	-0 48	-1 02	-1 15	-0 33	0.7	0.6	0.0	--	0.8	005	0.0	--	1.1 200		
186	Lowe Point, NE of, Sasanoa River.....	43 51.1	69 43.3	-0 48	+0 09	-0 46	-0 27	1.4	1.0	0.0	--	1.7	327	0.0	--	1.8 152		
196	Lower Hell Gate, Knubble Bay <2>.....	43 52.6	69 43.8	-0 23	+0 37	-0 46	+0 06	2.5	1.9	0.0	--	3.0	290	0.0	--	3.5 155		
206	Upper Hell Gate, Sasanoa River.....	43 53.7	69 46.3	+3 31	+2 48	+1 20	+2 03	0.8	0.5	0.0	--	1.0	307	0.0	--	0.8 142		
	KENNEBEC RIVER																	
211	Hunniwell Point, northeast of.....	43 45.4	69 46.9	+0 05	+0 12	+0 05	+0 24	2.0	1.6	0.0	--	2.4	332	0.0	--	2.9 151		
216	Bald Head, 0.3 mile southwest of.....	43 48.1	69 47.6	+0 23	+0 28	-0 04	+0 23	1.3	1.3	0.0	--	1.6	321	0.0	--	2.3 153		

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS						
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	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.			
KENNEBEC RIVER Time meridian, 75°W																	
					PORTSMOUTH HARBOR ENTRANCE, p.10												
221	Bluff Head, west of.....	43 51.3	69 47.8	+0 33	+0 53	+0 26	+0 24	1.9	1.9	0.0	--	2.3	014	0.0	--	3.4	184
226	Fiddler Ledge, north of.....	43 52.8	69 47.8	+0 47	+1 12	+0 22	+0 48	1.6	1.4	0.0	--	1.9	267	0.0	--	2.6	113
231	Doubling Point, south of.....	43 52.8	69 48.4	+0 28	+0 49	+0 23	+0 53	2.2	1.7	0.0	--	2.6	300	0.0	--	3.0	127
236	Lincoln Ledge, east of.....	43 53.8	69 48.6	+0 32	+0 45	+0 23	+0 34	1.6	1.6	0.0	--	1.9	359	0.0	--	2.8	174
241	Bath, 0.2 mile south of bridge <3>.....	43 54.5	69 48.5	+0 29	+1 28	+0 43	+0 23	0.8	0.8	0.0	--	1.0	003	0.0	--	1.5	177
CASCO BAY																	
251	Broad Sound, west of Eagle Island.....	43 42.7	70 03.8	-1 16	-1 05	-1 27	-0 59	0.8	0.7	0.0	--	0.9	010	0.0	--	1.3	168
261	Hussey Sound, SW of Overset Island.....	15 43 40.27	70 10.52	-1 28	-1 18	-0 58	-1 30	0.9	0.6	0.0	--	1.1	316	0.3	189	1.2	153
	...do.....	25 43 40.27	70 10.52	-1 39	-1 19	-1 06	-1 32	0.9	0.6	0.0	--	1.1	318	0.3	211	1.1	155
	...do.....	40 43 40.27	70 10.52	-1 58	-1 16	-1 05	-1 32	0.9	0.5	0.1	228	1.1	314	0.3	200	1.0	154
271	Hussey Sound, SE of Pumpkin Nob.....	40 43 40.45	70 10.78	-2 21	-1 29	-1 32	-1 14	1.0	0.5	0.1	068	1.2	346	0.1	066	0.9	168
281	Hussey Sound, east of Crow Island.....	40 43 41.33	70 10.79	-2 18	-0 42	-0 55	-1 24	0.7	0.4	0.1	114	0.9	016	0.0	--	0.8	197
291	Portland Hbr. ent., SW of Cushing I.....	43 37.9	70 12.7	-1 43	-1 11	-1 20	-0 58	0.8	0.6	0.0	--	1.0	322	0.0	--	1.1	154
301	Diamond I. Ledge, midchannel SW. of.....	43 39.6	70 13.5	-1 26	-1 12	-1 11	-1 06	0.8	0.5	0.0	--	0.9	300	0.0	--	0.9	150
	Portland Breakwater Light																
311	0.3 mi. NW of <1> <4>.....	43 39.5	70 14.5	- - -	-0 47	- - -	-1 07	0.3	0.3	0.0	--	0.4		0.0	--	0.5	048
321	Grand Trunk Wharves, off ends <1>.....	43 39.5	70 14.7	- - -	-1 45	- - -	-1 50	0.5	0.2	0.0	--	0.6	250	0.0	--	0.4	040
331	Portland Bridge, center of draw.....	43 38.7	70 15.5	-1 06	-0 17	-0 38	-0 15	0.8	0.6	0.0	--	0.9	225	0.0	--	1.0	050
MAINE COAST-Continued																	
341	Cape Elizabeth.....	43 34	70 11	-1 35	-1 35	-1 35	-1 35	0.2	0.2	0.0	--	0.3	340	0.0	--	0.3	160
351	Cape Porpoise.....	43 22	70 24	-0 55	-0 55	-0 55	-0 55	0.2	0.2	0.0	--	0.3	035	0.0	--	0.3	215
361	Cape Neddick.....	43 10	70 35	-0 20	-0 20	-0 20	-0 20	0.3	0.3	0.0	--	0.4	025	0.0	--	0.4	205
371	York Harbor entrance, 3 miles south of..	43 08	70 33	-0 15	-0 15	-0 15	-0 15	0.3	0.3	0.0	--	0.4	025	0.0	--	0.4	205
PORTSMOUTH HARBOR																	
381	Kitts Rocks, 0.2 mile west of.....	43 03	70 42	0 00	0 00	0 00	0 00	0.7	0.9	0.0	--	0.8	325	0.0	--	1.6	175
391	Little Harbor entrance.....	43 03	70 43	-1 00	-1 00	-1 00	-1 00	0.6	0.6	0.0	--	0.7	310	0.0	--	1.1	130
401	PORTSMOUTH HARBOR ENT. (off Wood I.)....	43 03.8	70 42.3	Daily predictions				0.0	0.0	0.0	--	1.2	355	0.0	--	1.8	195
411	Fort Point.....	43 04	70 42	+0 05	+0 05	+0 05	+0 05	1.2	1.1	0.0	--	1.5	350	0.0	--	2.0	130
421	Salamander Point.....	43 05	70 43	+0 10	+0 10	+0 10	+0 10	1.1	0.7	0.0	--	1.3	260	0.0	--	1.3	085
431	Hick Rocks and Clarks Island, between...	43 05	70 43	-0 35	-0 50	-0 35	-0 50	0.8	0.4	0.0	--	0.9	335	0.0	--	0.8	195
441	Kittery Point Bridge.....	43 05	70 43	-1 10	-1 10	-1 10	-1 10	0.7	0.6	0.0	--	0.8	020	0.0	--	1.1	200
451	Jamaica Island, northeast of.....	43 05	70 43	-0 25	-0 25	-0 25	-0 25	0.8	0.7	0.0	--	1.0	315	0.0	--	1.0	135
461	Seavey Island, north of.....	43 05	70 44	+0 15	+0 15	+0 15	+0 15	1.2	1.0	0.0	--	1.4	260	0.0	--	1.8	080
471	Clarks I. and Seavey I., between <5>....	43 05	70 44					1.5		0.0	--	1.8	200	0.0	--		
481	Clarks Island, south of.....	43 04	70 44	+0 15	+0 15	+0 15	+0 15	1.7	1.7	0.0	--	2.1	260	0.0	--	3.1	080
491	Seavey Island, south of.....	43 04	70 44	+0 15	+0 15	+0 15	+0 15	2.5	2.1	0.0	--	3.0	260	0.0	--	3.8	090
501	Marvin Island and Goat Island, between..	43 04	70 44	-1 00	-1 00	-1 00	-1 00	1.0	0.4	0.0	--	1.2	160	0.0	--	0.8	340
511	Henderson Point, west of.....	43 05	70 44	+0 30	+0 30	+0 30	+0 30	2.2	1.3	0.0	--	2.6	340	0.0	--	2.3	170
521	Off Gangway Rock.....	43 05	70 45	+0 30	+0 30	+0 30	+0 30	1.7	1.7	0.0	--	2.1	280	0.0	--	3.0	110
531	Badgers Island, east of.....	43 05	70 45	+0 25	+0 25	+0 25	+0 25	0.9	0.2	0.0	--	1.1	240	0.0	--	0.4	050

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS			
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb		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.
PORTSMOUTH HARBOR Time meridian, 75°W													
541	Badgers Island, southwest of.....	43 05	70 45	+0 30	+0 30	+0 30	+0 30		2.7 2.0	0.0 --	3.3 330	0.0 --	3.7 125
PISCATAQUA RIVER and TRIBUTARIES													
546	NW of Nobles Island (RR. bridge).....	43 05	70 46	+0 35	+0 35	+0 35	+0 35	1.3 0.5	0.0 --	1.6 050	0.0 --	0.9 200	
551	Nobles Island, north of.....	43 06	70 46	+0 30	+0 30	+0 30	+0 30	3.0 2.4	0.0 --	3.6 305	0.0 --	4.4 140	
556	Frankfort Island, south of.....	43 07	70 48	+0 30	+0 30	+0 30	+0 30	2.2 1.6	0.0 --	2.6 310	0.0 --	2.9 130	
561	Little Bay entrance, Dover Point,.....	43 07	70 50	+0 35	+0 35	+0 35	+0 35	3.2 2.3	0.0 --	3.8 270	0.0 --	4.2 095	
566	Furber Strait.....	43 05	70 52	+0 40	+0 40	+0 40	+0 40	1.7 1.2	0.0 --	2.0 185	0.0 --	2.1 010	
MASSACHUSETTS COAST													
571	Gunboat Shoal.....	43 01	70 42	+0 05	+0 05	+0 05	+0 05	0.4 0.3	0.0 --	0.5 340	0.0 --	0.5 160	
576	Isles of Shoals Light, White Island.....	42 58	70 37	0 00	0 00	0 00	0 00	0.2 0.2	0.0 --	0.3 020	0.0 --	0.3 200	
on BOSTON HARBOR, p.16													
581	Merrimack River entrance.....	42 49.1	70 48.6	+1 04	+1 15	+1 13	-0 34	2.0 1.2	0.0 --	2.2 285	0.0 --	1.4 105	
586	Newburyport, Merrimack River.....	42 48.8	70 52.1	+1 28	+1 48	+1 47	+0 35	1.4 1.2	0.0 --	1.5 288	0.0 --	1.4 098	
591	Plum Island Sound entrance.....	42 42.3	70 47.3	+0 36	+0 50	+0 48	-0 07	1.5 1.2	0.0 --	1.6 316	0.0 --	1.5 184	
596	Annisquam Harbor Light.....	42 40.1	70 41.1	+0 42	+0 49	+0 58	+0 03	0.9 1.1	0.0 --	1.0 200	0.0 --	1.3 013	
601	Gloucester Harbor entrance.....	42 34.9	70 40.5	-0 28	+0 01	-0 29	-0 36	0.3 0.2	0.0 --	0.3 340	0.0 --	0.3 195	
606	Blynman Canal ent., Gloucester Harbor.....	42 36.6	70 40.4	-0 06	+0 05	-0 15	-0 39	2.7 2.8	0.0 --	3.0 310	0.0 --	3.3 130	
611	Marblehead Channel.....	42 30	70 49	+1 09	+1 09	+1 09	+1 09	0.4 0.3	0.0 --	0.4 285	0.0 --	0.4 105	
616	Ram Island, 0.2 n.mi. NNE of.....	10 42 28.75	70 51.68	See Rotary Tidal Currents, p.185									
621	Ram Island, 0.2 n.mi. southeast of.....	10 42 28.45	70 51.55	See Rotary Tidal Currents, p.185									
626	Great Pig Rocks, southeast of.....	10 42 27.53	70 50.70	See Rotary Tidal Currents, p.185									
631	Gallooupes Point, 0.4 n.mi. south of.....	10 42 27.24	70 53.70	See Rotary Tidal Currents, p.185									
636	Little Nahant, 0.9 n.mi. northeast of.....	10 42 26.85	70 54.84	See Rotary Tidal Currents, p.185									
641	Egg Rock, 0.2 n.mi. north of.....	10 42 26.25	70 53.93	See Rotary Tidal Currents, p.185									
646	Egg Rock, southwest of.....	10 42 25.85	70 54.20	See Rotary Tidal Currents, p.185									
651	Nahant, 1.8 n.mi. NE of East Point.....	10 42 26.00	70 52.02	+0 32	+0 49	+0 15	+1 00	0.6 0.6	0.0 --	0.7 252	0.1 291	0.7 144	
...do.....	...do.....	45 42 26.00	70 52.02	-0 21	+1 04	+1 14	-0 31	0.3 0.2	0.0 --	0.3 250	0.0 --	0.2 070	
...do.....	...do.....	80 42 26.00	70 52.02	-0 25	+1 04	+1 15	-0 31	0.2 0.1	0.1 329	0.2 238	0.0 --	0.2 077	
656	Nahant, 0.4 n.mi. east of East Point.....	15 42 25.23	70 53.63	+0 04	-0 41	+0 15	+0 22	0.4 0.5	0.2 118	0.5 205	0.0 --	0.6 045	
...do.....	...do.....	25 42 25.23	70 53.63	+0 03	-0 26	+0 08	+0 29	0.4 0.4	0.1 102	0.4 198	0.1 282	0.5 027	
661	Nahant, 1 n.mi. SE of East Point.....	45 42 23.83	70 51.17	+0 04	+1 04	+1 13	+0 14	0.3 0.2	0.0 --	0.3 253	0.0 --	0.3 074	
...do.....	...do.....	70 42 23.83	70 51.17	-0 22	-0 04	+0 19	-0 01	0.2 0.2	0.0 --	0.2 261	0.0 --	0.2 090	
666	Pea Island, 0.4 n.mi. southeast of.....	15 42 24.63	70 54.13	+0 53	+0 55	+0 42	-0 01	0.5 0.4	0.0 --	0.5 239	0.1 161	0.5 063	
...do.....	...do.....	25 42 24.63	70 54.13	+0 34	+0 34	+0 57	+0 29	0.4 0.3	0.0 --	0.5 224	0.0 --	0.4 048	
...do.....	...do.....	65 42 24.63	70 54.13	-0 37	-0 59	+0 14	-0 31	0.3 0.3	0.1 332	0.4 271	0.0 --	0.3 035	
671	Bass Point, 1.2 n.mi. southeast of.....	10 42 24.12	70 55.07	-0 22	+1 20	+0 58	-0 14	0.7 0.6	0.1 351	0.7 259	0.0 --	0.7 066	
...do.....	...do.....	45 42 24.12	70 55.07	-0 29	-0 10	+0 52	-0 29	0.3 0.2	0.0 --	0.4 251	0.0 --	0.3 086	
...do.....	...do.....	60 42 24.12	70 55.07	-0 29	-0 10	+0 31	-0 59	0.2 0.2	0.0 --	0.3 250	0.0 --	0.2 091	
676	Bass Point, 0.5 n.mi. SSW of.....	15 42 24.57	70 56.53	See Rotary Tidal Currents, p.185									
681	Bass Point, 0.7 n.mi. west of.....	10 42 25.13	70 57.25	See Rotary Tidal Currents, p.185									

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS				
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb		Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb	
	CAPE COD BAY Time meridian, 75°W	ft	° N	° W	h. m.	h. m.	h. m.	h. m.		knots deg.	knots deg.	knots deg.	knots deg.	
					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	- -	0.5 245	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
	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	0.9	0.9	0.0	- -	1.9 080	0.0 - -	1.6 225
1326	Miacomet Pond, 3.0 miles SSE of.....	41 11.4	70 05.8	+2 19	+2 03	+2 22	+2 16	0.6	0.8	0.0	- -	1.3 080	0.0 - -	1.4 280
1331	Tuckernuck Island, 4.2 miles SSW of.....	41 13.57	70 16.90	+4 08	+3 13	+2 17	+3 56	0.3	0.6	0.0	- -	0.5 090	0.0 - -	1.0 280
1336	Martha's Vineyard, 1.4 miles S of <1>...	41 19.50	70 39.90	- - -	-2 53	- - -	-2 47	0.1	0.1	0.0	- -	0.3 230	0.0 - -	0.3 095
	NANTUCKET SOUND ENTRANCE													
1341	Pollock Rip Channel, east end.....	41 33.9	69 55.4	-0 14	-0 39	-0 23	-0 38	1.0	1.1	0.0	- -	2.0 053	0.0 - -	1.8 212
1346	POLLOCK RIP CHANNEL (Butler Hole).....	41 33	69 59	Daily predictions See table 5.						0.0	- -	2.0 037	0.0 - -	1.8 226
1351	Great Round Shoal Channel.....	- - -	- - -											
	NANTUCKET SOUND													
1356	Monomoy Pt., channel 0.2 mile west of...	41 33.0	70 01.3	0 00	+0 39	+0 18	-0 23	0.8	1.2	0.0	- -	1.7 170	0.0 - -	2.0 346
1361	Chatham Roads.....	41 38.6	70 01.7	Current weak and variable										
1366	Stage Harbor, west of Morris Island.....	41 39.4	69 58.5	+3 07	+1 29	+2 24	+4 28	0.3	0.6	0.0	- -	0.5 335	0.0 - -	1.0 144
1371	Dennis Port, 2.2 miles south of.....	41 37.0	70 06.9	+1 28	+0 52	+0 27	+1 04	0.2	0.2	0.1	138	0.3 077	0.1 052	0.3 269
1376	Monomoy Point, 6 miles west of.....	41 33.5	70 09.0	+1 22	+1 52	+1 09	+1 22	0.2	0.3	0.1	194	0.5 090	0.1 256	0.5 275
1381	Handkerchief Lighted Whistle Buoy "H"...	41 29.3	70 04.0	+1 08	+1 10	+0 49	+0 59	0.6	0.8	0.0	- -	1.3 080	0.0 - -	1.3 251
1386	Halfmoon Shoal, 1.9 miles northeast of...	41 29.05	70 11.55	+1 42	+1 49	+1 24	+1 44	0.4	0.3	0.0	- -	0.8 110	0.0 - -	0.6 265
1391	Halfmoon Shoal, 3.5 miles east of.....	41 28.1	70 09.2	+1 13	+1 23	+1 06	+1 11	0.5	0.6	0.0	- -	1.1 088	0.0 - -	1.0 295
1396	Great Point, 0.5 mile west of.....	41 23.6	70 03.7	+0 25	+1 37	+1 13	+0 33	0.6	0.7	0.0	- -	1.1 029	0.0 - -	1.2 195
1401	Great Point, 3 miles west of.....	41 23.4	70 06.8	+1 15	+1 23	+0 51	+1 08	0.4	0.5	0.0	- -	0.8 066	0.0 - -	0.8 248
1406	Tuckernuck Shoal, off east end.....	41 24.3	70 10.4	+1 22	+1 34	+1 09	+1 10	0.5	0.5	0.3	000	0.9 113	0.3 186	0.9 287

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS			
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb
		ft	° '	° '	h. m.	h. m.	h. m.	h. m.			knots deg.	knots deg.	knots deg.	knots deg.
NANTUCKET SOUND Time meridian, 75°W														
			N	W	on POLLOCK RIP CHANNEL, p.28									
1411	Brant Point, 2 miles NNW of <1>.....	41 19.25	70 06.30	- - -	+1 43	- - -	+2 36	0.2	0.2	0.0	- -	0.3 090	0.0 - -	0.3 275
1416	Nantucket Harbor entrance channel.....	41 18.4	70 06.0	+3 22	+1 55	+2 44	+3 58	0.6	0.9	0.0	- -	1.2 171	0.0 - -	1.5 350
1421	Eel Pt., Nantucket I. 2.5 miles NE of...	41 19.3	70 10.2	+1 13	+1 12	+1 02	+1 15	0.3	0.2	0.0	- -	0.6 094	0.0 - -	0.4 284
1426	Muskeget I., channel 1 mile northeast of...	41 21.0	70 17.1	+1 29	+0 45	+0 57	+0 56	0.6	0.9	0.0	- -	1.1 108	0.0 - -	1.5 295
1431	Muskeget Rock, 1.3 miles southwest of...	41 19.2	70 23.6	+1 10	+0 23	+0 57	+0 18	0.6	0.6	0.0	- -	1.3 024	0.0 - -	1.0 192
1436	Muskeget Channel.....	41 20.9	70 25.2	+1 40	+0 38	+1 29	+1 02	1.9	1.9	0.0	- -	3.8 021	0.0 - -	3.3 200
1441	Wasque Point, 2.0 miles southwest of....	41 19.90	70 29.25	+1 30	+1 04	+1 11	+0 32	0.6	0.6	0.0	- -	1.3 075	0.0 - -	1.2 280
								+1 15	0.5					0.9 280
								+1 53	0.6					1.1 280
1446	Long Shoal-Norton Shoal, between.....	41 24.50	70 20.00	+1 31	+1 12	+1 26	+1 13	0.7	0.6	0.0	- -	1.4 100	0.0 - -	1.1 260
1451	Cape Page Lt., 1.7 miles SSE of.....	41 24.0	70 25.6	+0 58	-0 07	+0 49	+0 48	0.8	0.7	0.0	- -	1.6 025	0.0 - -	1.3 215
1456	Cross Rip Channel.....	41 26.9	70 17.5	+1 48	+1 48	+1 55	+1 59	0.6	0.5	0.0	- -	1.3 091	0.0 - -	0.9 272
1461	Cape Page Lt., 3.2 miles northeast of...	41 27.5	70 24.0	+2 42	+2 03	+2 33	+2 37	0.8	0.7	0.0	- -	1.6 095	0.0 - -	1.2 300
1466	Broken Ground-Horseshoe Shoal, between..	41 33.0	70 17.1	+1 46	+1 55	+1 15	+1 20	0.5	0.5	0.2	000	1.1 107	0.1 224	0.9 276
1471	Point Gammon, 1.2 miles south of.....	41 35.3	70 15.4	+1 15	+1 03	+1 06	+1 02	0.5	0.6	0.0	- -	1.1 105	0.0 - -	1.0 260
1476	Hyannis Harbor, entrance off breakwater.	41 37.4	70 17.5	Current weak and variable										
1481	Lewis Bay entrance channel.....	41 37.9	70 16.4	+2 46	+0 53	+2 44	+4 22	0.5	0.8	0.0	- -	0.9 004	0.0 - -	1.3 184
1486	Cotuit Bay entrance (Bluff Point).....	41 36.6	70 25.8	+2 44	+2 33	+2 51	+3 35	0.3	0.4	0.0	- -	0.5 035	0.0 - -	0.7 218
1491	Wreck Shoal-Eldridge Shoal, between....	41 32.0	70 25.7	+1 47	+1 32	+1 44	+1 45	0.8	0.8	0.0	- -	1.7 062	0.0 - -	1.4 245
1496	Hedge Fence Lighted Gong Buoy 22.....	41 28.3	70 29.0	+2 48	+2 34	+2 38	+2 44	0.7	0.7	0.0	- -	1.4 108	0.0 - -	1.2 268
1501	Cape Page Light, 1.4 miles west of.....	41 25.45	70 29.00	+2 13	+1 54	+1 26	+1 39	0.2	0.1	0.0	- -	0.3 095	0.0 - -	0.2 250
1506	Edgartown, Inner Harbor.....	41 23.4	70 30.5	+0 25	-1 04	+0 35	-0 20	0.6	0.6	0.0	- -	1.1 075	0.0 - -	1.1 270
								+0 38	+1 08	0.3 0.3				0.6 070
								+1 58	+1 52	0.4 0.4				0.8 075
1511	Katama Pt., 0.6 mi. NNW of, Katama B....	41 21.9	70 30.3	+0 12	-0 43	+0 20	-0 31	0.3	0.3	0.0	- -	0.6 325	0.0 - -	0.5 180
								+0 47	+1 12	0.2 0.1				0.3 325
								+1 46	+1 57	0.2 0.2				0.4 325
1516	East Chop-Squash Meadow, between.....	41 27.9	70 32.2	+2 07	+0 55	+1 43	+2 04	0.7	1.1	0.0	- -	1.4 131	0.0 - -	1.8 329
1521	East Chop, 1 mile north of.....	41 29.1	70 33.5	+2 40	+1 52	+2 17	+2 11	1.1	1.3	0.0	- -	2.2 116	0.0 - -	2.2 297
1526	Vineyard Haven.....	41 28.1	70 35.2	Current weak and variable										
1531	West Chop, 0.8 mile north of.....	41 29.6	70 35.7	+2 49	+1 58	+2 20	+2 35	1.6	1.8	0.0	- -	3.1 096	0.0 - -	3.0 282
1536	Hedge Fence-L'Hommedieu Shoal, between..	41 30.3	70 32.2	+2 27	+1 38	+2 01	+1 52	1.0	1.3	0.0	- -	2.1 106	0.0 - -	2.2 276
1541	Waquoit Bay entrance.....	41 32.9	70 31.8	+2 21	+2 14	+3 40	+4 01	0.8	0.8	0.0	- -	1.5 348	0.0 - -	1.4 203
1546	L'Hommedieu Shoal, north of west end....	41 31.6	70 34.6	+2 30	+2 03	+2 12	+2 11	1.2	1.4	0.0	- -	2.3 080	0.0 - -	2.3 268
1551	Nobska Point, 1.8 miles east of.....	41 31.1	70 37.1	+2 13	+1 45	+1 55	+1 49	1.2	1.0	0.0	- -	2.3 063	0.0 - -	1.7 240
VINEYARD SOUND														
1556	West Chop, 0.2 mile west of.....	41 29.0	70 36.6	+1 19	+1 34	+1 50	+1 16	1.3	0.8	0.0	- -	2.7 059	0.0 - -	1.4 241
1561	Nobska Point, 1 mile southeast of.....	41 30.1	70 38.6	+2 33	+2 15	+2 25	+2 19	1.3	1.4	0.0	- -	2.6 071	0.0 - -	2.4 259
1566	Norton Point, 0.5 mile north of.....	41 28.1	70 39.9	+1 55	+1 44	+2 01	+1 12	1.7	1.4	0.0	- -	3.4 050	0.0 - -	2.4 240
1571	Tarpaulin Cove, 1.5 miles east of.....	41 28.3	70 43.5	+2 49	+2 07	+2 12	+2 33	1.0	1.4	0.0	- -	1.9 055	0.0 - -	2.3 232
1576	Robinsons Hole, 1.2 miles southeast of..	41 26.1	70 46.8	+2 30	+1 51	+2 11	+2 02	1.0	1.2	0.0	- -	1.9 060	0.0 - -	2.1 240
1581	Gay Head, 3 miles northeast of.....	41 23.1	70 47.0	+2 25	+1 50	+1 42	+2 11	0.5	0.8	0.0	- -	0.9 081	0.0 - -	1.3 238
1586	Menemsha Bight <6>.....	41 21.3	70 46.3	+2 13	+1 24	+1 55	+1 17	0.6	0.7	0.0	- -	1.1 074	0.0 - -	1.2 255
1591	Gay Head, 3 miles north of.....	41 24.1	70 51.2	+2 13	+1 24	+1 55	+1 17	0.6	0.7	0.0	- -	1.1 074	0.0 - -	1.2 255

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS				
			DEPTH	Lat.	Long.	Min.	Flood	Min.	Flood	Ebb	Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb	
						before Flood	Flood	before Ebb							
	VINEYARD SOUND Time meridian, 75°W	ft	° ' N	° ' W		h. m.	h. m.	h. m.	h. m.						
1596	Gay Head, 1.5 miles northwest of.....	41 21.8	70 51.8	+1 30	+0 54	+1 42	+1 16		1.0	1.2	0.0 - -	2.0 012	0.0 - -	2.0 249	
1601	Cuttyhunk Island, 3.2 miles southwest of.....	41 23	71 00					See table 5.							
1606	Browns Ledge.....	41 19.8	71 05.9					See table 5.							
	VINEYARD SOUND-BUZZARDS BAY					on CAPE COD CANAL, p.22									
1611	Woods Hole South end.....	41 30.8	70 40.2	+0 29	+1 40	+1 17	+0 08	0.4 0.2	0.0 - -	1.5 135	0.0 - -	1.1 318			
1616	0.1 mile SW of Devil's Foot Island.....	41 31.2	70 41.1	+0 20	+1 41	+0 55	+0 31	0.9 0.8	0.0 - -	3.5 094	0.0 - -	3.6 276			
1621	North end.....	41 31.5	70 41.6	-0 29	+1 25	+1 09	-0 04	0.2 0.2	0.0 - -	0.8 160	0.0 - -	0.7 007			
1626	Robinsons Hole South end.....	41 26.7	70 48.2	+1 14	+1 42	+1 20	+1 01	0.2 0.2	0.0 - -	0.8 162	0.0 - -	1.0 339			
1631	Middle.....	41 27.0	70 48.4	+1 30	+2 00	+1 02	+0 47	0.7 0.6	0.0 - -	2.8 146	0.0 - -	2.9 316			
1636	North end.....	41 27.4	70 48.7	+1 54	+2 00	+0 52	+1 17	0.2 0.3	0.0 - -	1.0 161	0.0 - -	1.2 338			
1641	Quicks Hole South end.....	41 26.3	70 50.5	+2 18	+1 42	+1 17	+0 53	0.5 0.4	0.0 - -	1.9 140	0.0 - -	2.0 300			
1646	Middle.....	41 26.6	70 50.9	+2 21	+2 00	+1 26	+0 41	0.6 0.5	0.0 - -	2.5 167	0.0 - -	2.2 339			
1651	North end.....	41 27.1	70 51.0	+2 42	+2 06	+1 44	+0 23	0.5 0.6	0.0 - -	2.0 165	0.0 - -	2.6 002			
1656	Canapitsit Channel.....	41 25.4	70 54.5	+2 03	+2 27	+1 02	+0 26	0.6 0.4	0.0 - -	2.6 156	0.0 - -	1.7 312			
						on POLLOCK RIP CHANNEL, p.28									
1661	Westport River entrance.....	41 30.5	71 05.3	+0 09	-0 05	-0 26	-1 13	1.1 1.5	0.0 - -	2.2 290	0.0 - -	2.5 108			
	BUZZARDS BAY <7>														
1666	Gooseberry Neck, 2 miles SSE of.....	41 27	71 01			See table 5.									
1671	Ribbon Reef-Sow & Pigs Reef, between.....	41 25.3	70 58.2	-0 19	-1 31	-2 44	-1 54	0.4 0.7	0.0 - -	0.8 062	0.0 - -	1.2 237			
1676	Penikese Island, 0.8 mile northwest of.....	41 27.9	70 56.2	-1 37	-0 25	-0 55	-0 57	0.6 0.6	0.0 - -	1.2 050	0.0 - -	1.1 254			
1681	Penikese Island, 0.2 mile south of.....	41 26.6	70 55.5	-1 43	-0 15	-1 30	-2 39	0.4 0.5	0.0 - -	0.7 093	0.0 - -	0.9 287			
1686	Gull I. and Nashawena I., between.....	41 26.2	70 54.2	-2 15	-0 57	-2 01	-2 41	0.5 0.6	0.0 - -	0.9 091	0.0 - -	1.1 247			
1691	Weepecket Island, south of.....	41 30.4	70 44.3	-3 16	-1 07	-1 28	-2 27	0.4 0.4	0.0 - -	0.8 069	0.0 - -	0.6 255			
1696	Quamquisset Harbor entrance.....	41 32.4	70 39.8			Current weak and variable									
1701	West Falmouth Harbor entrance.....	41 36.5	70 39.3			Current weak and variable									
1706	Megansett Harbor.....	41 38.8	70 39.2			Current weak and variable									
1711	Abiels Ledge, 0.4 mile south of.....	41 41.1	70 40.4	+0 26	-0 36	-0 06	-0 23	0.4 0.6	0.0 - -	0.8 035	0.0 - -	1.0 216			
1716	Dumpling Rocks, 0.2 mile southeast of...	41 32.0	70 55.1	-1 43	-1 03	-1 32	-2 09	0.4 0.6	0.0 - -	0.8 066	0.0 - -	1.1 190			
1721	Apponaganset Bay.....	41 35	70 57			Current weak and variable									
1726	Clarks Cove.....	41 36	70 55			Current weak and variable									
1731	New Bedford Harbor and approaches.....	41 35.6	70 50.4			Current weak and variable									
1736	West Island and Long Island, between....	41 34.0	70 48.6	-0 43	-0 43	-1 28	-1 42	0.4 0.5	0.0 - -	0.7 079	0.0 - -	0.8 203			
1741	West Island, 1 mile southeast of.....	41 37.1	70 50.2			Current weak and variable									
1746	Nasketucket Bay.....	41 38	70 47			Current weak and variable									
1751	Mattapoisett Harbor.....	41 41	70 44			Current weak and variable									
1756	Sippican Harbor.....	41 44.0	70 43.0	-1 41	-0 31	-1 22	-1 23	0.3 0.4	0.0 - -	0.3 - -	0.0 - -	0.4 - -			
1761	Wareham River, off Long Beach Point.....														

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

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NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS	AVERAGE SPEEDS AND DIRECTIONS						
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb		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.			
BUZZARDS BAY <7> Time meridian, 75°W																
1766	Wareham River, off Barneys Point.....	41 44.7	70 42.4	-1 49	-0 27	-1 22	-1 31	0.4	0.4	0.0	- -	0.7 010	0.0 - -	0.6 185		
1771	Onset Bay, south of Onset Island.....	41 43.9	70 38.7	Current weak and variable				15	Daily predictions							
1776	Onset Bay, south of Wickets' Island.....	41 44.1	70 39.3	Current weak and variable						0.8 0.9	0.0 - -	3.3 065	0.0 - -	4.0 245		
CAPE COD CANAL																
1781	CAPE COD CANAL, railroad bridge.....	41 44.5	70 36.8	on POLLOCK RIP CHANNEL, p.28				41	0.0 - -	4.0 070	0.0 - -	4.5 250				
1786	Bourne Highway bridge.....	41 45	70 35	-0 03	-0 01	-0 03	-0 04			0.0 - -	3.3 065	0.0 - -	4.0 245			
1791	Bournedale.....	41 46	70 34	-0 07	-0 03	-0 09	-0 10	41	0.8 0.8	0.0 - -	3.4 030	0.0 - -	3.6 210			
1796	Sagamore Bridge.....	41 46	70 33	-0 09	-0 04	-0 11	-0 13			0.7 0.6	0.0 - -	2.8 095	0.0 - -	2.5 275		
1801	Cape Cod Canal, east end.....	41 46.5	70 30.0	-0 13	-0 06	-0 17	-0 19	15	0.6 0.6	0.0 - -	2.4 065	0.0 - -	2.6 245			
NARRAGANSETT BAY <8>																
1811	Sakonnet River (except Narrows).....	- - -	- - -	on POLLOCK RIP CHANNEL, p.28				41	0.0 - -	2.7 010	0.0 - -	2.7 190				
1821	Tiverton, Stone bridge, Sakonnet R. <9>.	41 37.5	71 13.0	Current weak and variable	-5 02	-2 26	-3 06			1.4 1.6	0.0 - -	0.6 010	0.0 - -	2.5 010		
1831	Tiverton, RR. bridge, Sakonnet R. <10>..	41 38.3	71 12.9	-2 58	-2 54	-2 26	-3 06	41	1.3	0.3	0.0 - -	2.3 000	0.0 - -	2.4 180		
1841	Brenton Point, 1.4 n.mi. southwest of...	7 41 25.9	71 22.6	-1 03	-0 38	-1 20	-1 04			0.2 0.4	0.0 - -	0.4 347	0.0 - -	0.6 170		
1851	Castle Hill, west of.....	7 41 27.8	71 22.2	-1 22	-3 00	-1 31	-1 31	10	0.5 0.8	0.0 - -	1.0 000	0.0 - -	1.4 210			
1861	Bull Point, east of.....	41 28.8	71 21.0	-1 10	-0 47	-1 10	-1 33			0.6 0.8	0.0 - -	1.2 001	0.0 - -	1.5 206		
1871	Mackerel Cove.....	41 28.5	71 22.8	Current weak and variable				41	0.0 - -	1.5 000						
1881	Newport Harbor, S and E of Goat Island..	41 29	71 20	-1 15						0.8						
1891	Rose Island, northeast of.....	41 30.2	71 20.0	-1 58	-1 29	-1 24	-1 38	41	0.4 0.6	0.0 - -	0.8 340	0.0 - -	1.1 166			
1901	Rose Island, west of.....	41 29.8	71 21.0	-0 42	-0 34	-1 20	-1 28			0.4 0.6	0.0 - -	0.7 001	0.0 - -	1.0 172		
1911	Gould Island, southeast of.....	7 41 31.5	71 20.2	-1 40	-1 28	-1 14	-1 16	41	0.3 0.4	0.0 - -	0.5 033	0.0 - -	0.7 217			
1921	Dyer Island-Carrs Point (between).....	41 34.5	71 17.8	-1 56	-1 13	-0 50	-1 37			0.4 0.4	0.0 - -	0.8 040	0.0 - -	0.6 236		
1931	Dyer Island, west of.....	7 41 35.2	71 18.5	-1 04	-0 46	-0 53	-1 34	41	0.4 0.6	0.0 - -	0.8 023	0.0 - -	1.0 216			
1941	Bristol Harbor.....	Current weak and variable				41	0.0 - -									
1951	Mount Hope Bridge.....	7 41 38.4	71 15.5	-1 22	-1 34	-1 08	-0 58			0.6 0.8	0.0 - -	1.1 047	0.0 - -	1.4 230		
1961	Mount Hope Bay.....	Current weak and variable				41	0.0 - -									
1971	Kickamuit R. (Narrows), Mt. Hope Bay....	41 41.9	71 14.7	-2 04	-3 34	-1 19	-0 48	0.7 1.0		0.0 - -	1.4 000	0.0 - -	1.7 191			
1981	Beavertail Point, 0.8 mile northwest of.	41 27.5	71 24.7	-0 11	-0 54	-1 31	-0 19	41	0.3 0.6	0.0 - -	0.5 003	0.0 - -	1.0 188			
1991	Dutch Island and Beaver Head, between...	41 29.8	71 24.2	-1 56	-1 32	-1 58	-1 47			0.5 0.6	0.0 - -	1.0 030	0.0 - -	1.0 233		
2001	Dutch Island, west of.....	7 41 30.3	71 24.6	-1 33	-1 49	-1 21	-1 16	41	0.7 0.7	0.0 - -	1.3 014	0.0 - -	1.2 206			
2011	Wickford Harbor.....	41 34	71 26	Current weak and variable						0.5	0.9 000	0.3 - -	0.3 - -			
2021	Prudence Island, west of.....	Current weak and variable				41	0.0 - -									
2031	Greenwich Bay entrance.....	40.0	71 23.6	Current weak and variable						0.3	- -	0.4 - -	0.4 - -			

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS					
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb		Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb		
	NARRAGANSETT BAY <8> Time meridian, 75°W	ft	° N	° W	h. m.	h. m.	h. m.	h. m.		knots deg.	knots deg.	knots deg.	knots deg.		
					on POLLOCK RIP CHANNEL, p.28										
2041	Patience Island, narrows east of.....	41 39.5	71 21.2	-2 41 -2 29 -2 44 -2 37	0.4	0.5	0.0	- -	0.7	354	0.0	- -	0.9 157		
2051	Patience I. and Warwick Neck, between...	41 39.8	71 22.4	-1 40 -1 21 -1 18 -1 13	0.3	0.5	0.0	- -	0.6	040	0.0	- -	0.8 224		
2061	Warren River entrance.....	41 42.7	71 17.8	Current weak and variable					0.0	- -	0.4	020	0.0	- -	0.3 200
2071	Warren, Warren River.....	41 43.7	71 17.3	-0 14 +0 11 -0 22 -1 05	0.5	0.5	0.0	- -	1.0	358	0.0	- -	0.9 171		
2081	Hog Island to Providence.....	- - -	- - -	Current weak and variable											
2091	India Point RR. Bridge, Seekonk R. <9>..	41 49.0	71 23.3	-1 48 -4 02 -1 31 -1 06	0.5	0.8	0.0	- -	1.0	020	0.0	- -	1.4 180		
					-2 30		0.2		0.4	020					
					-0 12		0.7		1.3	020					
					-2 24		0.1		0.2	030					
					-0 26		0.6		1.1	030					
2101	Cold Spring Pt., Seekonk River <10>.....	41 49.6	71 22.8	-1 48 -4 14 -1 31 -1 02	0.4	0.8	0.0	- -	0.8	030	0.0	- -	1.4 210		
	BLOCK ISLAND SOUND				on THE RACE, p.34										
2106	Point Judith Harbor of Refuge, south entrance.....	41 21.48	71 29.75	-2 23 -2 52 -2 26 -3 59	0.2	0.2	0.0	- -	0.6	329	0.0	- -	0.8 141		
					-2 41		0.1								
					-1 56		0.2								
2111	Harbor of Refuge, west entrance.....	41 22	71 31	See table 5.											
2116	Pond entrance.....	41 23	71 31	-3 23 -3 01 -3 16 -3 52	0.6	0.4	0.0	- -	1.8	351	0.0	- -	1.5 186		
2121	2.4 miles southwest of.....	41 19.87	71 30.65	-0 48 -0 01 +0 18 -0 24	0.2	0.2	0.0	- -	0.7	258	0.0	- -	0.6 090		
2126	4.5 miles southwest of.....	41 18	71 33	See table 5.											
2131	Block Island four miles north of.....	41 18	71 32	-0 30 +0 03 +0 35 +0 21	0.2	0.2	0.0	- -	0.8	285	0.0	- -	0.8 076		
2136	Sandy Point, 2.1 miles NNE of.....	15 41 15.85	71 34.00	+0 09 -0 53 -0 30 -0 43	0.4	0.5	0.0	- -	1.0	296	0.0	- -	1.7 066		
2141	Sandy Pt., 1.5 miles north of.....	7 41 15	71 34	-0 22 -0 30 -0 13 -0 50	0.6	0.5	0.0	- -	1.9	315	0.0	- -	2.1 063		
2146	Clay Head, 1.2 miles ENE of.....	15 41 13.35	71 31.85	-2 20 -1 32 -0 37 -0 55	0.2	0.1	0.5	220	0.7	298	0.0	- -	0.5 164		
2151	Old Harbor Pt., 0.5 mile southeast of	41 09	71 32	-0 10 -0 29 -0 34 +0 09	0.1	0.1	0.0	- -	0.2	336	0.0	- -	0.6 175		
2156	Lewis Pt., 1.0 mile southwest of.....	41 08.20	71 37.30	-1 37 -1 08 -0 34 -1 13	0.7	0.5	0.0	- -	1.9	298	0.0	- -	1.8 136		
2161	Lewis Pt., 1.5 miles west of.....	41 09	71 38	-1 31 -1 15 -0 44 -0 57	0.4	0.4	0.0	- -	1.4	318	0.0	- -	1.7 170		
2166	Great Salt Pond entrance.....	41 11.97	71 35.50	-4 18 -3 35 -3 34 -4 22	0.1	0.1	0.0	- -	0.3	165	0.0	- -	0.3 326		
2171	Great Salt Pond ent., 1 mile NW of...	7 41 12	71 36	-0 52 -0 58 -1 50 -0 32	0.1	0.1	0.0	- -	0.4	158	0.0	- -	0.4 035		
2176	Sandy Point, 0.4 mile west of <11>....	41 13.80	71 35.13	- - -1 24 - - -1 35	-	-	0.2	0.0	-	-	0.0	- -	0.7 011		
2181	Green Hill Point, 1.1 miles south of.....	41 20.90	71 35.77	-1 06 -0 47 -0 34 -0 55	0.2	0.1	0.0	- -	0.6	258	0.0	- -	0.4 070		
2186	Sandy Point, 4.1 miles northwest of.....	15 41 17.10	71 38.00	-0 04 +0 11 +0 22 +0 04	0.2	0.2	0.0	- -	0.7	270	0.0	- -	0.6 084		
2191	Grace Point, 2.0 miles northwest of.....	41 12	71 38	See table 5.											
2196	Quonochontaug Beach, 1.1 miles S of....	41 18.80	71 42.82	-0 52 +0 06 +0 37 -0 20	0.4	0.1	0.0	- -	1.1	248	0.0	- -	0.4 078		
2201	Quonochontaug Beach, 3.8 miles S of....	15 41 16.35	71 43.00	-0 05 -0 06 +0 29 +0 08	0.2	0.2	0.0	- -	0.7	243	0.0	- -	0.6 058		
2206	Lewis Point, 6.0 miles WNW of.....	15 41 11.60	71 44.20	+0 51 +0 40 +0 06 +0 35	0.2	0.3	0.0	- -	0.6	286	0.0	- -	1.2 097		
2211	Southwest Ledge.....	41 07	71 42	-0 33 -0 33 -0 10 -0 08	0.5	0.5	0.0	- -	1.5	321	0.0	- -	2.1 141		
2216	Southwest Ledge, 2.0 miles west of.....	15 41 06.80	71 43.00	+0 02 +0 10 +0 01 -0 41	0.5	0.5	0.0	- -	1.5	354	0.0	- -	1.9 168		
2221	Watch Hill Point, 2.2 miles east of.....	41 18.16	71 48.60	-0 37 -0 08 +0 35 -0 21	0.4	0.2	0.0	- -	1.2	260	0.0	- -	0.7 086		
2226	Watch Hill Point, 5.2 miles SSE of.....	15 41 13.20	71 49.00	+0 26 +0 18 +0 29 +0 12	0.4	0.3	0.0	- -	1.2	265	0.0	- -	1.2 064		
2231	Montauk Point, 5.4 miles NNE of.....	15 41 09.55	71 49.48	+0 25 -0 03 -0 47 +0 08	0.4	0.5	0.0	- -	1.1	279	0.0	- -	1.6 079		
2236	Montauk Point, 1.2 miles east of.....	41 04.50	71 49.80	-1 30 -1 09 -0 48 -1 53	1.0	0.8	0.0	- -	2.8	346	0.0	- -	2.8 162		
2241	Montauk Point, 1 mile northeast of.....	41 05	71 51	-2 02 -1 29 -1 10 -1 41	0.7	0.4	0.0	- -	2.4	356	0.0	- -	1.9 145		

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER	POSITION			TIME DIFFERENCES			SPEED RATIOS	AVERAGE SPEEDS AND DIRECTIONS							
			DEPTH	Lat.	Long.	Min. before Flood	Flood	Min. before Ebb		Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb				
							Flood	Ebb									
	BLOCK ISLAND SOUND Time meridian, 75°W		ft	° N	° W	h. m.	h. m.	h. m.	h. m.		knots deg.	knots deg.	knots deg.	knots deg.			
						on THE RACE, p.34											
2246	Wicopesset Island, 1.1 miles SSE of.....	41 16.50	71 54.80	-1 02	-0 10	+0 39	-0 07	0.5	0.2	0.0	- -	1.5	250	0.0	- -	0.8	073
2251	East Pt., Fishers I., 4.1 miles S of....	41 13.40	71 55.50	+0 42	+0 32	+0 09	+0 12	0.3	0.5	0.0	- -	0.9	236	0.0	- -	1.8	073
2256	Cerberus Shoal, 1.5 miles east of.....	41 10.45	71 55.17	-0 23	-0 15	-0 33	-0 52	0.4	0.5	0.0	- -	1.1	256	0.0	- -	1.8	092
2261	Shagwong Reef & Cerberus Shoal, between.	41 07.90	71 55.50	-0 38	-0 47	-0 35	-0 57	0.6	0.5	0.0	- -	1.9	241	0.0	- -	1.8	056
2266	Montauk Harbor entrance.....	41 04.78	71 56.35	-2 25	-2 47	-3 12	-4 49	0.4	0.2	0.0	- -	1.2	226	0.0	- -	0.6	033
						-2 32		0.1							0.2	024	
						-0 44		0.2							0.5	353	
2271	Mt. Prospect, 0.6 mile SSE of.....	41 14.75	71 59.80	-0 42	-0 06	0 00	-0 59	0.6	0.5	0.0	- -	1.7	275	0.0	- -	1.6	054
2276	Cerberus Shoal and Fishers I., between..	41 13	71 58	-0 57	-0 05	+0 11	-0 06	0.4	0.3	0.0	- -	1.3	264	0.0	- -	1.3	096
2281	Little Gull Island, 3.7 miles ESE of....	41 10.7	72 02.1														
						See table 5.											
2286	Gardiners Island, 3 miles northeast of..	41 07.9	72 02.0	-0 45	-0 56	-0 21	-0 26	0.3	0.2	0.0	- -	0.9	305	0.0	- -	1.0	138
2291	Eastern Plain Point, 1.2 miles N of....	41 07.12	72 04.85	-2 53	-1 51	-1 18	-2 23	0.3	0.2	0.0	- -	1.0	290	0.0	- -	0.8	110
2296	Eastern Plain Pt., 3.9 miles ENE of....	41 07.05	71 59.80	-0 09	-1 26	-0 32	-1 01	0.3	0.3	0.0	- -	1.0	246	0.0	- -	1.0	096
2301	Little Gull Island, 0.8 mile SSE of <51>	41 11.67	72 06.23	-2 18	-0 50	-0 33	-3 02	0.4	0.2	0.0	- -	1.3	331	0.0	- -	0.6	105
						-1 54		0.0							0.1	252	
						-0 32		0.2							0.6	174	
2306	Rocky Point, 2 miles WNW of.....	41 03.55	72 01.80	-1 30	-1 01	-0 59	-0 59	0.1	0.1	0.1	192	0.3	255	0.2	340	0.3	065
	GARDINERS BAY, etc.																
2311	Goff Point, 0.4 mile northwest of.....	41 01.49	72 03.75	-1 54	-2 25	-1 35	-2 31	0.4	0.5	0.0	- -	1.2	225	0.0	- -	1.6	010
2316	Acabonack Hbr. ent., 0.6 mile ESE of....	41 01.30	72 07.40	-1 42	-2 10	-1 15	-2 30	0.5	0.3	0.0	- -	1.4	345	0.0	- -	1.2	140
2321	Hog Creek Point, north of.....	41 04.10	72 09.70	-1 04	-0 49	-1 31	-1 52	0.1	0.1	0.0	- -	0.3	281	0.0	- -	0.3	067
2326	Ram Island, 2.2 miles east of.....	41 04.70	72 13.80	-0 27	-0 24	-0 24	-0 12	0.1	0.1	0.0	- -	0.2	250	0.0	- -	0.3	090
2331	Orient Point, 2.4 miles SSE of.....	41 07.50	72 12.30	+0 11	-1 34	+1 01	-0 31	0.1	0.1	0.0	- -	0.4	250	0.0	- -	0.3	025
2336	Gardiners Pt. Ruins, 1.1 miles N of....	41 09.50	72 08.83	-0 20	-0 17	-0 19	+0 04	0.4	0.5	0.0	- -	1.2	270	0.0	- -	1.8	066
2341	Gardiners Point & Plum Island, between..	41 09.33	72 09.52	-0 26	-0 31	-0 42	-0 30	0.5	0.5	0.0	- -	1.4	288	0.0	- -	1.6	100
2346	Ram Island, 1.4 miles NNE of.....	41 05.8	72 15.8	-0 07	-0 02	-0 03	+0 17	0.1	0.2	0.0	- -	0.4	240	0.0	- -	0.6	075
2351	Long Beach Pt., 0.7 mile southwest of..	41 06.25	72 18.40	+0 25	-0 11	+0 34	0 00	0.5	0.5	0.0	- -	1.3	307	0.0	- -	1.8	101
2356	Hay Beach Point, 0.3 mile NW of <52>...	41 06.65	72 70.43	+0 12	+0 20	+0 51	-0 51	0.5	0.3	0.0	- -	1.5	210	0.0	- -	1.2	025
						+0 38		0.2							0.6	025	
						+1 35		0.2							0.8	020	
2361	Jennings Point, 0.2 mile NNW of.....	41 04.48	72 22.95	+0 24	+0 09	+0 27	+0 03	0.6	0.4	0.0	- -	1.6	290	0.0	- -	1.5	055
2366	Cedar Point, 0.2 mile west of.....	41 02.38	72 16.07	-0 19	-0 16	+0 19	-0 41	0.6	0.5	0.0	- -	1.8	195	0.0	- -	1.6	005
2371	North Haven Peninsula, north of.....	41 02.47	72 19.25	+0 04	-0 30	+0 29	-0 34	0.8	0.6	0.0	- -	2.4	230	0.0	- -	2.1	035
2376	Paradise Point, 0.4 mile east of.....	41 02.88	72 22.57	+0 18	+0 03	+0 35	+0 06	0.5	0.4	0.0	- -	1.5	145	0.0	- -	1.5	345
2381	Little Peconic Bay entrance.....	41 01.58	72 23.08	+0 27	+0 01	+0 43	+0 21	0.6	0.4	0.0	- -	1.6	240	0.0	- -	1.5	015
2386	Robins Island, 0.5 mile south of.....	40 56.98	72 27.18	+0 24	-0 12	+0 46	+0 35	0.6	0.2	0.0	- -	1.7	245	0.0	- -	0.6	065
						-1 31		0.1							0.2	243	
						-0 07		0.2							0.5	234	
	FISHERS ISLAND SOUND																
2391	Edwards Pt. and Sandy Pt., between.....	41 19.90	71 53.88	-2 34	-3 17	-2 25	-3 41	0.4	0.3	0.0	- -	1.1	035	0.0	- -	1.0	227
2396	Napatree Point, 0.7 mile southwest of...	41 17.92	71 54.00	-0 56	-1 07	-0 57	-1 18	0.6	0.6	0.0	- -	1.7	284	0.0	- -	2.2	113
2401	Little Narragansett Bay entrance.....	41 20	71 53	-1 56	-1 59	-2 09	-2 35	0.4	0.3	0.0	- -	1.3	092	0.0	- -	1.3	268

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS				
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb	
		ft	° ° N W	° ° N W	h. m.	h. m.	h. m.	h. m.			knots deg.	knots deg.	knots deg.	knots deg.	
on THE RACE, p.34															
2406	Avondale, Pawcatuck River <51>.....	6	41 19.90	71 50.73	-1 56	-2 42	-2 17	-3 40	0.2	0.2	0.0 --	0.6 058	0.0 --	0.5 265	
								-1 08	0.0					0.1 243	
								+0 04	0.1					0.2 263	
2411	Ram Island Reef, south of.....	7	41 18.1	71 58.5	-0 52	-0 47	-0 41	-0 50	0.4	0.4	0.0 --	1.3 255	0.0 --	1.6 088	
2416	Noank <51>.....	4	41 19.12	71 59.30	-1 36	-3 16	-4 10	-4 30	0.2	0.1	0.0 --	0.5 340	0.0 --	0.3 173	
								-1 24	0.0					0.0 --	
								+0 19	0.1					0.5 162	
2421	Mystic, Highway Bridge, Mystic River....	6	41 21.25	71 58.18	-2 02	-2 50	-2 07	-3 39	0.2	0.1	0.0 --	0.5 039	0.0 --	0.4 231	
								-1 40	0.0					0.2 234	
								-0 20	0.1					0.3 232	
2426	Clay Point, 1.3 miles NNE of.....	15	41 17.88	71 58.53	-0 42	-0 49	-0 40	-1 15	0.5	0.5	0.0 --	1.4 264	0.0 --	1.9 035	
2431	North Hill Point, 1.1 miles NNW of.....		41 17.57	72 01.68	-1 05	-0 26	-0 18	-1 37	0.5	0.4	0.0 --	1.5 258	0.0 --	1.2 082	
LONG ISLAND SOUND															
The Race															
2436	Race Point, 0.4 mile southwest of....		41 14.70	72 02.60	-0 24	-0 35	-0 43	-0 44	0.9	1.0	0.0 --	2.6 288	0.0 --	3.5 135	
2441	THE RACE, near Valiant Rock.....		41 14.20	72 03.60			Daily predictions				0.0 --		2.9 295	0.0 --	3.5 100
2446	0.5 mile NE of Little Gull Island....		41 13	72 06	-0 30	-0 14	-0 11	-0 26	1.0	0.7	0.0 --	3.3 002	0.0 --	3.1 107	
2451	Little Gull I., 1.1 miles ENE of....		41 13.10	72 05.10	-0 07	-0 11	+0 01	-0 45	1.4	1.3	0.0 --	4.0 301	0.0 --	4.7 130	
2456	Great Gull Island, 0.7 mile WSW of....		41 11.67	72 08.02	-0 51	-0 33	-0 31	-1 42	0.9	0.9	0.0 --	2.6 299	0.0 --	3.2 133	
2461	Plum Gut.....		41 10.00	72 12.80	-1 22	-1 30	-1 01	-2 05	1.2	1.2	0.0 --	3.5 323	0.0 --	4.3 126	
2466	Eastern Point, 1.5 miles south of....		41 17.8	72 04.4	-1 57	-1 50	-1 03	-1 50	0.1	0.1	0.0 --	0.4 249	0.0 --	0.4 055	
2471	New London Harbor entrance.....		41 19.08	72 05.02	-1 22	-1 51	-2 12	-1 15	0.1	0.1	0.0 --	0.1 348	0.0 --	0.2 211	
Thames River															
2476	Winthrop Point.....		41 21.63	72 05.30	-1 17	-1 59	-0 54	-2 35	0.1	0.1	0.0 --	0.4 012	0.0 --	0.4 180	
								-1 08	0.0					0.2 186	
								+0 04	0.1					0.3 185	
2481	Off Smith Cove.....		5 41 23.98	72 05.18	-1 18	-2 20	-1 29	-1 54	0.2	0.1	0.0 --	0.7 019	0.0 --	0.5 199	
								-1 30	0.1					0.2 202	
								+0 13	0.2					0.6 198	
2486	Off Stoddard Hill.....		15 41 27.65	72 04.12	-1 17	-2 23	-0 40	-2 29	0.2	0.1	0.0 --	0.7 332	0.0 --	0.4 164	
								-1 11	0.0					0.2 165	
								+0 26	0.2					0.5 161	
2491	Lower Coal Dock.....		15 41 30.88	72 04.72	Current weak and variable										
2496	Goshen Point, 1.9 miles SSE of.....		15 41 16.00	72 06.30	-1 05	-1 00	-1 03	-1 49	0.4	0.5	0.0 --	1.2 285	0.0 --	1.6 062	
2501	Little Gull Island, 0.8 mile NNW of....		15 41 13.10	72 06.93	+0 17	-1 19	-2 29	-0 46	0.7	0.8	0.0 --	1.9 258	0.0 --	2.9 043	
2506	Bartlett Reef, 0.2 mile south of.....		41 16.2	72 07.7	-2 01	-0 50	-1 00	-1 31	0.3	0.3	0.0 --	1.4 255	0.0 --	1.3 090	
2511	Twotree Island Channel.....		11 41 17.87	72 08.47	-1 06	-1 27	-0 43	-1 42	0.4	0.4	0.0 --	1.2 267	0.0 --	1.6 099	
2516	Niantic (Railroad Bridge).....		5 41 19.40	72 10.62	-0 53	-1 03	-0 53	-0 40	0.6	0.2	0.0 --	1.6 352	0.0 --	0.8 178	
2521	Black Point, 0.8 mile south of.....		15 41 16.40	72 12.50	-0 50	-1 11	-0 25	-1 10	0.4	0.4	0.0 --	1.2 260	0.0 --	1.4 073	
2526	Black Point and Plum Island, between....		15 41 14.00	72 12.30	+0 25	+0 04	+0 29	+0 26	0.7	0.7	0.0 --	2.1 236	0.0 --	2.4 076	
2531	Plum Island, 0.8 mile NNW of.....		41 11.87	72 11.92	+0 04	-0 16	-1 13	-0 41	0.6	0.7	0.0 --	1.7 247	0.0 --	2.4 065	
2536	Branford Reef, 1.5 miles southwest of...		15 41 12.57	72 49.83	-0 13	-0 14	-0 09	-0 18	0.3	0.2	0.0 --	0.8 272	0.0 --	0.7 068	
2541	Branford Reef, 5.0 miles south of.....		15 41 08.65	72 49.67	-0 01	+0 09	+0 11	+0 03	0.2	0.2	0.0 --	0.7 260	0.0 --	0.8 074	
2546	Hatchett Point, 1.1 miles WSW of.....		41 16.35	72 16.92	-2 37	-1 11	-0 52	-2 37	0.4	0.3	0.0 --	1.3 240	0.0 --	1.2 045	

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER	POSITION				TIME DIFFERENCES				SPEED RATIOS	AVERAGE SPEEDS AND DIRECTIONS				
			DEPTH	Lat.	Long.		Min. before Flood	Flood	Min. before Ebb	Ebb		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.	
	LONG ISLAND SOUND Time meridian, 75°W						on THE RACE, p.34									
2551	Connecticut River Lynde Point, channel east of.....	41 16	72 20	+0 42	+0 50	+0 18	+0 29	0.3	0.2	0.0	- -	0.9	344	0.0	- -	0.7 161
2556	Saybrook Point, 0.2 mile northeast of	41 17.02	72 20.87	+0 35	+0 51	+0 47	+0 30	0.5	0.4	0.0	- -	1.5	355	0.0	- -	1.5 160
2561	Railroad drawbridge.....	41 19.00	72 20.77	+0 27	-0 26	+0 54	+1 06	0.4	0.3	0.0	- -	1.0	360	0.0	- -	1.0 198
2566	Eustasia Island, 0.6 mile ESE of.....	41 23.30	72 24.23	+1 53	+1 38	+1 23	+1 26	0.4	0.4	0.0	- -	1.1	290	0.0	- -	1.4 070
2571	Eddy Rock Shoal, west of.....	41 26.57	72 27.78	+1 41	+2 16	+2 01	+1 20	0.3	0.2	0.0	- -	0.8	350	0.0	- -	0.6 155
2576	Higginum Creek, 0.5 mile ESE of.....	41 30.02	72 32.62	+3 06	+2 52	+2 35	+3 01	0.3	0.3	0.0	- -	0.8	270	0.0	- -	1.0 080
2581	Wilcox Island Park, east of.....	41 34.33	72 38.88	+4 06	+3 36	+3 07	+3 35	0.3	0.3	0.0	- -	0.9	355	0.0	- -	1.0 160
2586	Rocky Hill.....	9 41 39.82	72 37.73	+4 41	+3 37	+3 21	+3 30	0.2	0.2	0.0	- -	0.6	335	0.0	- -	0.8 135
2591	Hartford Jetty <42>.....	9 41 45.07	72 39.02	+5 45	+4 39	+3 22	+4 29	0.0	0.2	0.0	- -	0.1	290	0.0	- -	0.7 095
2596	Saybrook Breakwater, 1.5 miles SE of....	41 14.78	72 19.05	-1 30	-1 11	-0 55	-1 57	0.7	0.6	0.0	- -	1.9	260	0.0	- -	2.0 070
2601	Mulford Point, 3.1 miles northwest of....	41 12.00	72 19.08	-0 06	-1 05	-0 05	-0 24	0.7	0.6	0.0	- -	1.9	269	0.0	- -	2.3 066
2606	Orient Point, 1 mile WNW of.....	41 10.02	72 15.11	-1 09	-2 02	-0 33	-1 15	0.5	0.9	0.0	- -	1.4	245	0.0	- -	3.1 055
2611	Rocky Point, 0.3 mile north of.....	15 41 08.63	72 21.42	-0 27	-1 02	-1 01	-0 28	0.6	0.6	0.0	- -	1.8	279	0.0	- -	2.1 041
2616	Cornfield Point, 3 miles south of.....	7 41 12.9	72 22.4	-0 56	-0 17	-0 03	-0 20	0.6	0.4	0.0	- -	2.0	256	0.0	- -	1.7 094
2621	Cornfield Point, 1.1 miles south of.....	15 41 14.65	72 23.40	-1 01	-1 34	-1 02	-2 03	0.5	0.5	0.0	- -	1.4	293	0.0	- -	1.6 108
2626	Kesley Point, 2.1 miles southeast of....	41 14.10	72 27.93	-0 35	-1 02	-0 54	-1 00	0.5	0.5	0.0	- -	1.5	260	0.0	- -	1.8 070
2631	Six Mile Reef, 1.5 miles north of.....	41 12.66	72 28.87	-0 17	-0 12	-0 23	-0 41	0.3	0.4	0.0	- -	1.0	290	0.0	- -	1.3 095
2636	Six Mile Reef, 2 miles east of.....	41 10.83	72 26.90	-0 36	-0 12	-0 07	-0 35	0.6	0.6	0.0	- -	1.6	235	0.0	- -	2.1 040
2641	Horton Point, 1.4 miles NNW of.....	41 06.30	72 27.40	+0 04	+0 08	-0 03	-0 18	0.5	0.6	0.0	- -	1.4	260	0.0	- -	2.0 040
2646	Kelsey Point, 1 mile south of.....	41 14	72 30	-1 32	-1 00	-1 03	-1 51	0.6	0.3	0.0	- -	2.0	249	0.0	- -	1.5 118
2651	Hammonasset Point, 1.2 miles SW of....	15 41 14.22	72 34.00	-0 59	-1 15	-0 44	-1 31	0.3	0.3	0.0	- -	1.0	287	0.0	- -	1.0 106
2656	Hammonasset Point, 5 miles south of....	15 41 09.80	72 34.17	-0 03	-0 03	-0 24	-0 06	0.5	0.4	0.0	- -	1.4	284	0.0	- -	1.5 090
2661	Mattituck Inlet, 1 mile northwest of....	15 41 01.68	72 34.22	-0 21	-0 15	-0 08	-0 26	0.3	0.3	0.0	- -	0.9	241	0.0	- -	1.0 053
2666	Sachem Head, 1 mile SSE of.....	41 13.65	72 42.30	-0 38	-0 36	-0 35	-0 02	0.4	0.3	0.0	- -	1.1	255	0.0	- -	1.0 065
2671	Sachem Head 6.2 miles south of.....	15 41 08.73	72 42.30	+0 29	+0 24	-0 12	-0 04	0.2	0.3	0.0	- -	0.6	260	0.0	- -	0.9 065
2676	Roanoke Point, 5.6 miles north of....	15 41 04.37	72 42.53	-0 02	-0 02	-0 15	-0 24	0.2	0.3	0.0	- -	0.7	255	0.0	- -	0.9 050
2681	Roanoke Point, 2.3 miles NNW of.....	41 00.92	72 42.97	-1 19	-0 22	-0 10	-0 29	0.3	0.2	0.0	- -	0.9	270	0.0	- -	0.7 070
2686	Sachem Head, 1 mile south of.....	41 14	72 43	-0 46	+0 03	-0 33	-0 38	0.3	0.3	0.0	- -	0.9	278	0.0	- -	1.2 084
2691	Herod Point, 2.8 miles north of.....	15 41 00.97	72 49.93	-0 29	-0 17	-0 27	-0 06	0.2	0.2	0.1	0.20	0.4	290	0.1 020	0.6 090	
2696	Herod Point, 6.5 miles north of.....	15 41 04.65	72 49.80	-0 27	+0 06	+0 12	-0 07	0.3	0.2	0.0	- -	0.9	254	0.0	- -	0.7 070
2701	New Haven Harbor entrance <12>.....	41 14	72 55	-1 11	-1 34	-0 37	-1 15	0.4	0.2	0.0	- -	1.4	319	0.0	- -	0.9 152
2706	City Point, 1.3 miles northeast of.....	41 17.83	72 54.42	+0 11	+0 30	+0 33	+0 08	0.1	0.1	0.0	- -	0.3	015	0.0	- -	0.4 215
2711	Oyster River Pt., 1.3 miles SSE of <1>....	41 12.87	72 58.00	- - -	- - -	-0 15	-0 47	0.1	0.1	0.0	- -	0.3	255	0.0	- -	0.3 060
2716	Pond Point, 4.2 miles SSE of.....	41 08.60	72 58.08	-0 20	+0 04	-0 04	-0 14	0.2	0.2	0.0	- -	0.6	265	0.0	- -	0.6 065
2721	Stratford Shoal, 6 miles east of.....	41 04.52	72 58.43	+0 01	-0 02	-0 07	-0 09	0.2	0.2	0.0	- -	0.6	265	0.0	- -	0.6 060
2726	Sound Beach, 2.2 miles north of.....	41 00.33	72 58.45	-0 03	-0 06	-0 15	-0 25	0.3	0.3	0.0	- -	0.9	270	0.0	- -	0.9 075
2731	Charles Island, 0.8 mile SSE of.....	41 10.77	73 02.63	-0 51	-0 36	-0 30	-0 54	0.1	0.1	0.0	- -	0.4	250	0.0	- -	0.4 070
2736	Housatonic River Milford Point, 0.2 mile west of.....	10 41 10.35	73 06.82	-0 06	+0 01	+0 15	-0 55	0.4	0.3	0.0	- -	1.2	330	0.0	- -	1.2 135
2741	Railroad drawbridge, above.....	5 41 12.53	73 06.67	+0 34	+0 13	+0 29	-0 55	0.4	0.4	0.0	- -	1.1	350	0.0	- -	1.3 185
2746	Fowler Island, 0.1 mile NNW of.....	5 41 14.40	73 06.23	+0 48	+0 10	+0 30	+0 48	0.4	0.3	0.0	- -	1.1	040	0.0	- -	1.1 270

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

No.	Place	Meter	Position		Time Differences				Speed Ratios Flood Ebb	Average Speeds and Directions						
			Depth	Lat.	Long.	Min.	Flood	Min.		Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb			
						before Flood	Flood	before Ebb								
			ft	° °'	° °'	h. m.	h. m.	h. m.	h. m.							
	N W															
	on THE RACE, p.34															
	LONG ISLAND SOUND Time meridian, 75°W															
	Housatonic River															
2751	Wooster Island, 0.1 mile southwest of	5	41 16.67	73 05.20	+1 19	+0 33	+0 20	+0 22	0.2	0.2	0.0	- -	0.6	020	0.0 - -	0.7 220
2756	Derby-Shelton Bridge, below <13>.....		41 18.73	73 04.78	- - -	- - -	- - -	-0 06	- -	0.1	0.0	- - -	0.0	- -	0.4 095	
2761	Point No Point, 2.1 miles south of.....	15	41 06.75	73 07.13	-0 30	-0 06	-0 08	-0 01	0.4	0.3	0.0	- -	1.3	251	0.0 - -	1.2 074
2766	Old Field Point, 1 mile east of.....	15	40 58.47	73 05.80	+3 26	+2 31	+2 25	+1 56	0.1	0.2	0.0	- -	0.2	105	0.0 - -	0.6 308
2771	Old Field Point, 2 miles northeast of.....	15	41 00.23	73 05.70	+0 33	+0 13	-0 11	+0 58	0.3	0.3	0.0	- -	0.2	110	0.0 - -	0.5 297
2776	Stratford Point, 4.3 miles south of.....	15	41 04.77	73 06.67	+0 12	+0 19	+0 05	+0 14	0.3	0.3	0.0	- -	1.0	266	0.0 - -	1.1 092
2781	Stratford Point, 6.1 miles south of.....	15	41 02.97	73 05.80	-0 18	+0 03	+0 16	+0 30	0.3	0.2	0.0	- -	0.5	236	0.0 - -	0.6 081
2786	Port Jefferson Harbor entrance.....		40 58	73 06	+0 11	+0 40	+0 32	+0 14	0.8	0.4	0.0	- -	1.0	254	0.0 - -	1.0 075
2791	Crane Neck Point, 0.5 mile northwest of.....		40 58	73 10	-0 45	-1 24	-1 38	-1 34	0.4	0.3	0.0	- -	1.3	256	0.0 - -	1.5 016
2796	Bridgeport Hbr. ent., btn. jetties <14>.	4	41 09	73 11	-0 10	-0 22	+0 05	+0 03	0.2	0.1	0.0	- -	0.7	340	0.0 - -	0.6 176
2801	Crane Neck Point, 3.4 miles WNW of.....	15	40 59.00	73 13.87	-0 12	+0 02	-0 25	+0 09	0.2	0.2	0.0	- -	0.5	261	0.0 - -	0.6 079
2806	Crane Neck Point, 3.7 miles WSW of.....	15	40 56.30	73 13.87	-1 32	-0 31	-0 24	-0 18	0.1	0.1	0.0	- -	0.4	066	0.0 - -	0.4 232
2811	Shoal Point, 6 miles south of.....	15	41 01.70	73 14.03	+0 22	+0 28	+0 42	+0 55	0.1	0.1	0.0	- -	0.4	232	0.0 - -	0.4 047
2816	Pine Creek Point, 2.3 miles SSE of.....	15	41 05.05	73 14.40	-0 20	+0 06	+0 21	+0 23	0.2	0.2	0.0	- -	0.7	272	0.0 - -	0.6 084
2821	Saugatuck River, 0.3 mi. NW of Bluff Pt.	15	41 06.27	73 21.92	-0 12	-0 41	+0 20	+0 10	0.2	0.1	0.0	- -	0.5	265	0.0 - -	0.4 080
2826	Saugatuck R., 0.5 mile above Bluff Pt....		41 06	73 23	Current weak and variable											
2831	Sheffield I. Tower, 1.1 miles SE of.....	15	41 01.97	73 24.33	+0 33	+0 39	+0 59	+0 33	0.3	0.2	0.0	- -	0.9	283	0.0 - -	0.8 081
2836	Sheffield I. Hbr., 0.5 mile southeast of.....	12	41 03.32	73 25.25	-2 41	-3 54	-3 36	-2 12	0.1	0.1	0.0	- -	0.2	229	0.0 - -	0.4 042
2841	Norwalk River, off Gregory Point.....	15	41 05.20	73 24.22	-0 12	-0 21	+0 29	+0 30	0.2	0.2	0.0	- -	0.6	322	0.0 - -	0.5 155
2846	Eaton's Neck Pt., 1.3 miles north of.....	15	40 58.60	73 23.77	+0 21	+0 21	+0 05	+0 21	0.5	0.4	0.0	- -	1.4	283	0.0 - -	1.4 075
2851	Eaton's Neck Pt., 1.8 miles west of.....		40 57	73 26	-1 09	-1 01	-0 28	-0 29	0.2	0.1	0.0	- -	0.5	199	0.0 - -	0.6 068
2856	Eaton's Neck Pt., 3 miles north of.....	15	41 00.38	73 23.80	+0 40	+0 30	+0 36	+0 17	0.2	0.3	0.0	- -	0.7	253	0.0 - -	0.9 046
2861	...do.....		40 00.38	73 23.80	+0 17	+0 13	+0 26	+0 28	0.2	0.2	0.0	- -	0.6	264	0.0 - -	0.6 078
2866	Huntington Bay, off East Fort Point.....	15	40 55.60	73 25.05	-0 06	+0 14	+0 14	+0 51	0.2	0.1	0.0	- -	0.6	188	0.0 - -	0.5 054
2871	Northport Bay entrance (in channel).....	15	40 54.53	73 24.45	-0 54	+0 10	+0 05	-0 16	0.1	0.1	0.0	- -	0.4	179	0.0 - -	0.3 007
2876	Northport Bay, south of Duck I. Bluff.....		40 55	73 23	+0 31	+0 54	+0 12	+0 30	0.1	0.1	0.0	- -	0.4	100	0.0 - -	0.4 267
2881	Long Neck Point, 0.6 mile south of.....	15	41 01.58	73 28.68	-1 20	-0 05	+1 14	+0 11	0.3	0.1	0.0	- -	0.8	252	0.0 - -	0.5 073
2886	Lloyd Point, 1.3 miles NNW of.....	15	40 57.95	73 29.70	-1 05	-0 08	+0 12	+0 09	0.3	0.1	0.0	- -	0.8	257	0.0 - -	0.5 080
2891	Shippian Point, 1.3 miles SSE of.....	15	40 59.90	73 31.00	+0 28	+0 07	+0 13	+0 16	0.3	0.3	0.0	- -	1.0	255	0.0 - -	0.9 055
2896	...do.....		40 59.98	73 31.03	+0 10	+0 11	+0 46	-0 10	0.2	0.2	0.0	- -	1.0	269	0.0 - -	0.7 053
2901	Oyster Bay															
2906	Rocky Point, 1 mile east of.....	15	40 55.15	73 30.03	+0 11	+0 20	+0 14	+0 42	0.2	0.2	0.0	- -	0.6	117	0.0 - -	0.5 306
2909	Harbor ent., south of Plum Point.....		40 54	73 31	-0 04	+0 07	+0 04	+0 04	0.2	0.2	0.0	- -	0.7	244	0.0 - -	0.7 054
2911	Harbor, west of Soper Point.....		40 53	73 32	+0 26	+0 28	+0 01	+0 26	0.2	0.1	0.0	- -	0.6	333	0.0 - -	0.4 140
2912	Cold Spring Harbor.....		40 53	73 29	Current weak and variable											
2913	Stamford Harbor entrance.....	12	41 00.88	73 32.20	-1 30	-1 17	-2 07	-0 22	0.1	0.2	0.0	- -	0.4	329	0.0 - -	0.8 071

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER	POSITION				TIME DIFFERENCES				SPEED RATIOS	AVERAGE SPEEDS AND DIRECTIONS					
			DEPTH	Lat.	Long.		Min. before Flood	Flood	Min. before Ebb	Ebb		Flood	Ebb	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.
on THE RACE, p.34																	
2916	Greenwich Point, 1.1 miles south of.....	15	40 59.02	73 34.02	+1 13	+1 03	+1 39	+1 13	0.2	0.2	0.0	- -	0.7	258	0.0	- -	0.8 073
	...do.....	55	40 59.02	73 34.02	+1 16	+0 56	+0 41	+1 15	0.2	0.1	0.0	- -	0.6	265	0.0	- -	0.4 069
2921	Greenwich Point, 2.5 miles south of.....	15	40 57.60	73 33.68	+0 39	+0 15	+0 47	+0 41	0.2	0.2	0.0	- -	0.7	242	0.0	- -	0.7 052
	...do.....	55	40 57.60	73 33.68	-1 15	+0 01	-0 37	-0 05	0.2	0.1	0.0	- -	0.5	256	0.0	- -	0.4 079
2926	Oak Neck Point, 0.6 mile north of.....	15	40 55.50	73 34.02	+2 43	+2 03	+2 15	+2 23	0.2	0.2	0.0	- -	0.5	260	0.0	- -	0.6 072
	...do.....	30	40 55.50	73 34.02	+0 46	+1 40	+1 31	+2 03	0.2	0.1	0.0	- -	0.5	300	0.0	- -	0.5 090
2931	Captain Hbr. Ent., 0.6 mile southwest of	15	40 59.65	73 35.67	+1 24	+1 49	+1 39	+2 12	0.2	0.2	0.0	- -	0.6	312	0.0	- -	0.7 118
	...do.....	30	40 59.65	73 35.67	+1 14	+1 19	+0 48	+2 10	0.2	0.2	0.0	- -	0.5	319	0.0	- -	0.7 142
2936	Cos Cob Harbor, off Goose Island.....	41 01		73 36	+0 13	-0 07	+0 04	-0 40	0.2	0.1	0.0	- -	0.5	013	0.0	- -	0.4 188
2941	Peningo Neck, 0.6 mi. off Parsonage Pt..	15	40 56.32	73 40.50	+1 01	+0 28	+1 06	+0 39	0.2	0.2	0.0	- -	0.7	226	0.0	- -	0.7 035
2946	Matinecock Point, 0.7 mile NNW of.....	15	40 54.80	73 38.40	+1 06	+0 32	+1 24	+0 48	0.2	0.2	0.0	- -	0.6	233	0.0	- -	0.6 046
	...do.....	40	40 54.80	73 38.40	+0 27	+0 12	+1 23	+0 32	0.2	0.1	0.0	- -	0.7	262	0.0	- -	0.5 053
2951	Matinecock Point, 1.7 miles northwest of	15	40 55.48	73 39.37	+1 12	+1 04	+0 57	+1 14	0.1	0.1	0.0	- -	0.4	234	0.0	- -	0.4 055
2956	Hempstead Harbor, 0.3 mile north of.....	15	40 51.72	73 40.47	Current weak and variable												0.1 331
2961	Hempstead Harbor, 0.5 mile east of.....	15	40 51.50	73 39.98	- -	+0 05	- -	-0 19	0.1	- -	0.0	- -	0.3	157	0.0	- -	
2966	Old Town Wharf, 0.5 mile north of.....	5	40 48.78	73 39.08	- -	-0 22	- -	- -	0.1	- -	0.0	- -	0.4	196	0.0	- -	
2971	Hempstead Harbor, off Glenwood Landing..	10	40 49.68	73 39.00	-0 46	-0 05	-0 07	-0 47	0.3	0.2	0.0	- -	0.9	138	0.0	- -	0.7 320
2976	Delancey Point, 1 mile southeast of.....	15	40 55.00	73 42.73	+0 37	+0 14	+1 04	+0 07	0.2	0.1	0.0	- -	0.5	244	0.0	- -	0.4 059
	...do.....	33	40 55.00	73 42.73	- -	+0 11	+0 59	-0 27	0.1	0.1	0.0	- -	0.4	239	0.0	- -	0.3 069
2981	Mamaroneck Harbor.....		40 56	73 43	Current weak and variable												
2986	Echo Bay entrance.....		40 54	73 46	Current weak and variable												
on THROGS NECK, p.40																	
2991	Davids Island, channel 0.1 mile east of.	40 53	73 46	Current weak and variable													0.2 234
2996	Huckleberry Island, 0.2 mile NW of.....	15	40 53.43	73 45.43	-3 15	-4 07	-3 42	-3 53	0.4	0.3	0.0	- -	0.2	069	0.0	- -	0.3 226
3001	Huckleberry Island, 0.6 mile SE of.....	15	40 52.80	73 44.75	-2 25	-0 24	-2 14	-2 37	0.6	0.4	0.0	- -	0.4	025	0.0	- -	0.4 246
3006	Execution Rocks, 0.4 mile southwest of..	15	40 52.40	73 44.00	-2 38	-3 03	-2 48	-2 51	1.0	0.5	0.0	- -	0.6	058	0.0	- -	0.3 307
3011	Manhasset Bay entrance.....	15	40 49.75	73 43.78	+2 58	+2 27	+2 27	+2 51	0.6	0.4	0.0	- -	0.4	115	0.0	- -	0.3 264
3016	Hart Island, 0.2 mile north of.....	15	40 51.82	73 46.27	-2 23	-3 55	-4 17	-3 23	0.3	0.3	0.0	- -	0.2	098	0.0	- -	0.1 283
						-0 48			0.2							0.2 283	
						-0 36			0.2								
3021	Hart Island, southeast of.....	15	40 50.62	73 45.77	-1 44	-0 07	-1 32	-0 18	0.9	0.5	0.0	- -	0.6	032	0.0	- -	0.4 216
3026	Hart Island and City Island, between....	15	40 51.37	73 46.73	-1 48	-2 51	-2 19	-2 40	0.4	0.3	0.0	- -	0.2	349	0.0	- -	0.2 143
						-2 39			0.3								
						-0 28			0.6							0.3 150	
3031	City Island Bridge.....	10	40 51.47	73 47.60	-2 59	-4 52	-4 27	-4 26	0.3	0.6	0.0	- -	0.2	352	0.0	- -	0.5 198
						-2 30			-2 04								
						-1 10			-0 40							0.2 196	
3036	Eastchester Bay, near Big Tom.....	5	40 50.20	73 47.72	-3 05	-3 51	-4 07	-3 27	0.5	0.5	0.0	- -	0.3	097	0.0	- -	0.4 294
3041	Hutchinson R., Pelham Highway Bridge....	5	40 51.70	73 49.00	+2 41	+2 37	+1 51	+2 00	1.4	0.6	0.0	- -	0.8	305	0.0	- -	0.4 078
3046	City Island, 0.6 mile southeast of.....	15	40 49.72	73 46.47	-1 17	-0 45	-2 59	-3 40	0.8	0.6	0.0	- -	0.5	038	0.0	- -	0.4 251
						-2 19			0.3							0.2 233	
						-0 15			0.7							0.5 233	

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES			SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS				
			Lat.	Long.	Min. before Flood	Min. before Flood	Min. before Ebb		Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb	
			ft	° ' N	° ' W	h. m.	h. m.	h. m.	knots deg.	knots deg.	knots deg.	knots deg.	
LONG ISLAND SOUND Time meridian, 75°W													
3051	Elm Point, 0.2 mile west of.....	15	40 48.92	73 46.02	-1 33	-3 16	-1 48	-0 26	0.3 0.7	0.0 - -	0.2 026	0.0 - -	0.6 213
3056	Throgs Neck, 0.4 mile south of.....	15	40 47.90	73 47.45	+0 36	+0 18	+0 20	+0 06	1.3 0.8	0.0 - -	0.8 090	0.0 - -	0.6 278
3061	THROGS NECK, 0.2 mile south of.....	15	40 48.12	73 47.48	Daily predictions				0.0 - -	0.6 090	0.0 - -	0.8 289	
EAST RIVER													
3066	Cryders Point, 0.4 mile NNW of.....	40 48.02	73 47.92	-0 29	-0 43	-0 30	-1 00	0.4 0.2	0.0 - -	1.3 110	0.0 - -	1.1 285	
3071	Old Ferry Point.....	40 48	73 50	-1 23	-0 37	-0 02	-0 38	0.5 0.3	0.0 - -	1.7 076	0.0 - -	1.5 240	
3076	Clason Point, 0.2 mile SSW of.....	40 48.04	73 51.07	-0 22	-0 46	0 00	-0 32	0.5 0.3	0.0 - -	1.8 070	0.0 - -	1.5 250	
3081	Flushing Creek entrance.....	40 45.9	73 50.7	Current weak and variable				0.0 - -	1.1 088	0.0 - -	1.3 261		
3086	Rikers I. chan., off La Guardia Field...	40 47	73 53	+0 04	-0 04	+0 04	-0 08	0.3 0.3	0.0 - -	1.7 108	0.0 - -	1.3 280	
3091	Bronx River (1 mile north of Hunts Pt.)	40 48.9	73 52.5	Current weak and variable				0.0 - -	2.5 066	0.0 - -	1.8 253		
3096	Hunts Point, southwest of.....	40 48	73 53	+0 01	-0 10	+0 01	-0 05	0.5 0.3	0.0 - -	1.5 045	0.0 - -	1.7 220	
3101	N. Brother I. & S. Brother I., between..	40 47.9	73 54.0	+0 10	+0 06	+0 20	-0 01	0.7 0.4	0.0 - -	3.4 040	0.0 - -	2.5 220	
3106	Port Morris, channel off of.....	40 47.94	73 54.36	-0 07	-0 32	+0 20	+0 03	0.4 0.4	0.0 - -	2.3 103	0.0 - -	0.6 288	
3111	Off Winthrop Ave., Astoria.....	40 47.2	73 55.0	+0 04	+0 02	-0 01	-0 11	1.0 0.5	0.0 - -	1.2 000	0.0 - -	1.0 180	
3116	Mill Rock, northeast of.....	40 46.9	73 56.2	-0 23	+0 05	-0 29	-0 32	0.7 0.1	0.0 - -	3.4 050	0.0 - -	4.6 230	
3121	Mill Rock, west of.....	40 46.8	73 56.5	-0 26	+0 08	-0 02	-0 17	0.4 0.2	0.0 - -	3.8 037	0.0 - -	4.7 215	
3126	HELL GATE (off Mill Rock).....	40 46.7	73 56.3	Daily predictions				0.0 - -	3.5 030	0.0 - -	3.6 011	0.0 - -	
Roosevelt Island													
3131	west of, off 75th Street.....	40 46	73 57	-0 02	-0 04	-0 08	+0 07	1.1 1.0	0.0 - -	2.7 020	0.0 - -	2.9 220	
3136	east of, off 36th Avenue.....	40 46	73 57	-0 08	-0 04	-0 08	-0 11	1.0 0.7	0.0 - -	3.0 058	0.0 - -	3.0 233	
3141	west of, off 67th Street.....	40 45.74	73 57.24	+0 13	-0 08	+0 06	+0 11	1.1 0.9	0.0 - -	2.9 046	0.0 - -	3.5 222	
3146	west of, off 63rd Street.....	40 45.58	73 57.27	-0 10	-0 08	0 00	+0 03	0.8 0.6	0.0 - -	2.9 028	0.0 - -	2.6 200	
3151	east of.....	40 45.49	73 57.08	0 00	-0 06	+0 02	+0 07	0.8 0.6	0.0 - -	1.5 000	0.0 - -	2.1 175	
3156	Manhattan, off 31st Street.....	40 44.38	73 58.17	+0 09	-0 11	-0 02	+0 36	0.4 0.5	0.0 - -	1.8 050	0.0 - -	1.9 179	
3161	Newtown Creek entrance.....	40 44	73 57	Current weak and variable				0.0 - -	2.0 180	0.0 - -	2.0 140	0.0 - -	
3166	Pier 67, off 19th Street.....	40 44	73 58	-0 08	+0 08	-0 08	+0 07	0.5 0.4	0.0 - -	2.0 189	0.0 - -	2.0 215	
3171	Williamsburg Bridge, 0.3 mile north of..	40 43.08	73 58.24	-0 05	+0 12	-0 01	+0 10	0.8 0.6	0.0 - -	1.7 197	0.0 - -	1.7 000	
3176	Corlears Hook, south of, midstream <15°.	40 42.5	73 58.6	-0 12	+0 01	-0 09	-0 01	0.9 0.7	0.0 - -	1.8 046	0.0 - -	1.8 220	
3181	Brooklyn Bridge, 0.1 mile southwest of..	40 42.2	74 00.0	-0 18	+0 08	-0 04	-0 07	0.9 0.8	0.0 - -	1.2 094	0.0 - -	1.7 269	
3186	Governors I., N of (SEE CAUTION NOTE)...	40 41.8	74 01.0	-0 16	+0 16	-0 20	+0 17	0.4 0.4	0.0 - -	2.1 116	0.0 - -	2.3 299	
3191	Buttermilk Channel.....	40 41.15	74 00.81	-0 12	-0 18	-0 06	+0 18	0.5 0.5	0.0 - -	1.8 050	0.0 - -	1.8 220	
HARLEM RIVER													
3196	East 105th Street.....	40 47	73 56	-0 20	+0 08	-0 02	-0 17	0.4 0.2	0.0 - -	1.2 035	0.0 - -	1.0 215	
3201	East 117th Street (midchannel) <16°.....	40 47.6	73 55.8	-1 16	+0 10	0 40	-0 13	0.4 -	0.0 - -	1.3 197	0.0 - -	1.3 330	
3206	Willis Ave. Bridge, 0.1 mile NW of.....	40 48.3	73 55.8	-0 30	0 00	-0 12	-0 13	0.4 0.3	0.0 - -	1.7 000	0.0 - -	1.4 000	
3211	Madison Ave. Bridge.....	40 48.8	73 56.1	-0 20	+0 18	-0 21	-0 14	0.5 0.4	0.0 - -	1.8 180	0.0 - -	1.8 215	
3216	Macombs Dam Bridge.....	40 49.7	73 56.1	-0 20	+0 14	-0 22	-0 11	0.5 0.3	0.0 - -	1.7 180	0.0 - -	1.7 220	
3221	High Bridge.....	40 50.5	73 55.9	-0 20	+0 08	-0 23	-0 08	0.6 0.4	0.0 - -	2.0 189	0.0 - -	2.0 015	
3226	West 207th Street Bridge.....	40 51.8	73 54.9	-0 22	+0 05	-0 22	-0 02	0.6 0.4	0.0 - -	2.0 215	0.0 - -	2.0 035	
3231	Broadway Bridge.....	40 52.4	73 54.7	-0 23	+0 08	-0 20	+0 04	0.6 0.5	0.0 - -	1.8 050	0.0 - -	1.8 220	

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NO.	PLACE	METER	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS				
			DEPTH	Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	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.
						on HELL GATE, p.46									
3236	Spuyten Duyvil Creek entrance.....		40 52.68	73 55.46		-0 10	+0 12	-0 10	+0 17	0.4	0.3	0.0 - -	1.4 100	0.0 - -	1.5 285
	LONG ISLAND, South Coast														
3241	Fire Island Lighted Whistle Bouy 2FI....		40 29	73 11		See table 5.									
3246	Fire Island Inlet, 22 miles S of <17>....		40 16	73 16		See table 5.									
3251	Shinnecock Canal, railroad bridge <18>....		40 53.2	72 30.1		-0 54	+0 35	+0 27	+0 37	0.5	0.3	0.0 - -	0.8 250	0.0 - -	1.5 180
3256	Ponquogue bridge, Shinnecock Bay.....		40 50.7	72 30.1		-0 06	-0 21	-0 30	-1 03	1.5	1.2	0.0 - -	2.5 350	0.0 - -	0.6 090
3261	Shinnecock Inlet.....		40 50.6	72 28.7		-0 03	-0 01	+0 29	-0 01	1.4	1.2	0.0 - -	2.4 082	0.0 - -	2.3 170
3266	Fire I. Inlet, 0.5 mi. S of Oak Beach....		40 37.78	73 18.40		-1 15	-0 49	-0 48	-1 05	1.8	1.3	0.0 - -	3.1 035	0.0 - -	2.4 244
3271	Jones Inlet.....		40 35.5	73 34.0		See table 5.									
3276	Long Beach, inside, between bridges.....		40 35.7	73 39.6		-0 54	+0 23	+0 32	0 00	0.3	0.3	0.0 - -	0.5 076	0.0 - -	0.6 277
3281	East Rockaway Inlet.....		40 35.4	73 45.3		-1 46	-1 35	-1 03	-1 38	1.3	1.2	0.0 - -	2.2 042	0.0 - -	2.3 227
3286	Ambrose Light.....		40 27	73 49		See table 5.									
3291	Sandy Hook App. Lighted Horn Bouy 2A....		40 27	73 55		See table 5.									
	JAMAICA BAY														
3296	Rockaway Inlet.....		40 33.7	73 56.1		-1 55	-2 20	-1 33	-2 11	1.1	1.3	0.0 - -	1.8 085	0.0 - -	2.7 244
3301	Barren Island, east of.....		40 35	73 53		-1 59	-2 28	-2 03	-2 19	0.7	0.9	0.0 - -	1.2 004	0.0 - -	1.7 192
3306	Canarsie (midchannel, off pier).....		40 37.6	73 53.0		-1 54	-1 38	-1 18	-2 06	0.3	0.4	0.0 - -	0.5 045	0.0 - -	0.7 222
3311	Beach Channel (bridge).....		40 35	73 49		-1 48	-1 13	-0 57	-1 25	1.1	1.0	0.0 - -	1.9 062	0.0 - -	2.0 225
3316	Grass Hassock Channel.....		40 36.6	73 47.1		-1 21	-1 02	-0 57	-0 54	0.6	0.5	0.0 - -	1.0 052	0.0 - -	1.0 228
	NEW YORK HARBOR ENTRANCE														
	Ambrose Channel														
3326	Entrance.....		40 30.4	73 58.4		-1 20	-1 30	-1 03	-0 38	1.0	1.2	0.0 - -	1.7 310	0.0 - -	2.3 110
3336	East of West Bank Light <19>.....		40 31.9	74 01.5		-0 04	-1 01	-0 53	+0 15	0.8	0.9	0.9 270	1.3 310	0.5 045	1.8 170
3346	Coney Island Lt., 1.6 miles SSW of.....		40 33.04	74 01.4		+0 01	-0 48	-0 24	+0 56	0.5	0.8	0.0 - -	0.8 330	0.0 - -	1.5 145
3356	Ambrose Channel, north end.....		40 33.8	74 01.6		+0 15	-0 10	-0 09	+0 42	0.8	0.9	0.0 - -	1.3 332	0.0 - -	1.9 176
3366	Coney Island, 0.2 mile west of.....		40 34.6	74 01.1		-0 49	-1 43	-0 57	-0 07	0.9	1.0	0.0 - -	1.5 329	0.0 - -	2.0 170
3376	Ft. Lafayette, channel east of.....		40 36.5	74 02.2		-2 13	-0 06	+0 04	-1 50	0.6	0.5	0.0 - -	1.1 343	0.0 - -	0.9 194
3386	THE NARROWS, midchannel.....		40 36.6	74 02.8		Daily predictions									
	NEW YORK HARBOR, Upper Bay														
3396	Tompkinsville.....		40 38.1	74 03.6		-0 29	+0 20	+0 08	+0 20	0.9	1.0	0.0 - -	1.6 004	0.0 - -	2.0 172
3406	Bay Bridge Channel.....		40 39.0	74 02.0		-0 27	-0 50	-0 42	-0 36	0.6	0.6	0.0 - -	1.0 039	0.0 - -	1.1 218
3416	Red Hook Channel.....		40 40.0	74 01.2		-1 03	-0 44	-0 08	-0 30	0.6	0.4	0.0 - -	1.0 353	0.0 - -	0.7 170
3426	Robbins Reef Light, east of.....		40 39.45	74 03.48		+0 16	+0 16	+0 02	+0 24	0.8	0.8	0.0 - -	1.3 016	0.0 - -	1.6 204
3436	Red Hook, 1 mile west of.....		40 40.5	74 02.5		+0 41	+1 06	+0 47	+0 52	0.8	1.2	0.0 - -	1.3 024	0.0 - -	2.3 206
3446	Statue of Liberty, east of.....		40 41.4	74 01.8		+0 57	+0 58	+0 56	+0 59	0.8	1.0	0.0 - -	1.4 031	0.0 - -	1.9 205

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION				TIME DIFFERENCES				SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS				
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb	Minimum before Flood	Maximum Flood		Minimum before Ebb	Maximum Ebb			
					N	W	h. m.	h. m.		h. m.			h. m.			
	HUDSON RIVER, Midchannel <20> Time meridian, 75°W	ft	° °	' '	on THE NARROWS, p. 52											
3456	The Battery, northwest of.....	40 43	74 02	+1 41	+1 26	+1 21	+1 46	0.9	1.2	0.0	--	1.5	015	0.0	--	2.3 194
3466	Desbrosses Street.....	40 43	74 01	+1 43	+1 30	+1 24	+1 52	0.9	1.2	0.0	--	1.5	010	0.0	--	2.3 --
3476	Chelsea Docks.....	40 45	74 01	+1 27	+1 42	+1 32	+1 38	1.0	1.0	0.0	--	1.7	018	0.0	--	2.0 187
3486	Forty-second Street.....	40 46	74 00	+1 51	+1 41	+1 34	+2 00	1.0	1.2	0.0	--	1.7	030	0.0	--	2.3 --
3496	Ninety-sixth Street.....	40 48	73 59	+1 57	+1 48	+1 42	+2 07	1.0	1.2	0.0	--	1.7	030	0.0	--	2.3 --
3506	Grants Tomb, 123d Street.....	40 49	73 58	+1 59	+1 53	+1 45	+2 10	0.9	1.2	0.0	--	1.6	025	0.0	--	2.3 --
3516	George Washington Bridge.....	40 51	73 57	+1 41	+1 55	+1 50	+2 08	0.9	1.1	0.0	--	1.6	020	0.0	--	2.2 200
3526	Spuytenduyvil.....	40 53	73 56	+2 11	+2 08	+1 57	+2 24	0.9	1.1	0.0	--	1.6	020	0.0	--	2.1 --
3536	Riverdale.....	40 54	73 55	+2 11	+2 07	+2 02	+2 32	0.8	1.0	0.0	--	1.4	015	0.0	--	2.0 200
3546	Dobbs Ferry.....	41 01	73 53	+2 30	+2 33	+2 24	+2 49	0.8	0.9	0.0	--	1.3	010	0.0	--	1.7 --
3556	Tarrytown.....	41 05	73 53	+2 37	+2 46	+2 40	+3 02	0.6	0.8	0.0	--	1.1	000	0.0	--	1.5 --
3566	Ossining.....	41 10	73 54	+2 50	+3 02	+3 05	+3 19	0.5	0.7	0.0	--	0.9	320	0.0	--	1.3 --
3576	Haverstraw.....	41 12	73 57	+2 55	+3 08	+3 13	+3 26	0.5	0.7	0.0	--	0.8	335	0.0	--	1.3 --
3586	Peekskill.....	41 17	73 57	+3 10	+3 24	+3 33	+3 42	0.5	0.6	0.0	--	0.8	000	0.0	--	1.2 --
3596	Bear Mountain Bridge.....	41 19	73 59	+3 16	+3 31	+3 39	+3 48	0.5	0.6	0.0	--	0.8	000	0.0	--	1.1 --
3606	Highland Falls.....	41 22	73 58	+3 24	+3 37	+3 44	+4 02	0.6	0.6	0.0	--	1.0	005	0.0	--	1.2 185
3616	West Point, off Duck Island.....	41 24	73 57	+3 32	+3 47	+3 51	+4 04	0.5	0.6	0.0	--	1.0	010	0.0	--	1.1 --
3626	Newburgh.....	41 30	74 00	+3 50	+4 06	+4 03	+4 21	0.5	0.6	0.0	--	0.9	005	0.0	--	1.1 --
3636	New Hamburg.....	41 35	73 57	+4 05	+4 20	+4 11	+4 33	0.6	0.6	0.0	--	1.0	005	0.0	--	1.1 --
3646	Poughkeepsie.....	41 42	73 57	+4 26	+4 37	+4 21	+4 49	0.6	0.6	0.0	--	1.1	005	0.0	--	1.2 --
3656	Hyde Park.....	41 47	73 57	+4 42	+4 48	+4 30	+5 00	0.7	0.7	0.0	--	1.2	005	0.0	--	1.3 --
3666	Kingston Point <21>.....	41 56	73 57	+5 09	+5 09	+5 44	+5 19	0.8	0.8	0.0	--	1.3	005	0.0	--	1.6 --
3676	Barrytown.....	42 00	73 56	+5 26	+5 21	+5 10	+5 26	0.8	0.9	0.0	--	1.4	010	0.0	--	1.7 --
3686	Saugerties.....	42 04	73 56	+5 43	+5 42	+5 29	+5 36	0.9	1.0	0.0	--	1.5	000	0.0	--	1.9 --
3696	Silver Point.....	42 09	73 54	+6 01	+6 14	+5 49	+5 50	0.9	1.0	0.0	--	1.5	030	0.0	--	2.0 --
3706	Catskill.....	42 13	73 51	+6 16	+6 37	+6 09	+6 06	0.9	1.0	0.0	--	1.6	355	0.0	--	2.0 --
3716	Hudson.....	42 15	73 48	+6 23	+6 45	+6 20	+6 15	0.9	1.0	0.0	--	1.6	030	0.0	--	2.0 --
3726	Coxsackie.....	42 21	73 47	+6 45	+6 57	+6 55	+6 44	0.9	0.9	0.0	--	1.6	350	0.0	--	1.8 --
3736	New Baltimore.....	42 27	73 47	+7 12	+7 04	+7 13	+7 09	0.8	0.8	0.0	--	1.3	355	0.0	--	1.5 --
3746	Castleton-on-Hudson.....	42 32	73 46	+7 35	+7 11	+7 12	+7 29	0.5	0.6	0.0	--	0.9	015	0.0	--	1.2 --
3756	Albany.....	42 39	73 45	+8 29	+7 32	+6 46	+7 47	0.2	0.4	0.0	--	0.3	020	0.0	--	0.8 --
3766	Troy (below the locks) <22>.....	42 44	73 42	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.7 190
	NEW YORK HARBOR, Lower Bay															
3776	False Hook Channel.....	40 28.4	74 00.0	-2 07	-1 36	-1 22	-1 28	1.1	0.7	0.0	--	1.8	320	0.0	--	1.4 135
3786	Sandy Hook, 1.7 miles ENE of north tip..	40 29.7	73 59.0	-1 48	-1 38	-1 06	-1 48	0.9	0.8	0.0	--	1.5	295	0.0	--	1.7 100
3796	Sandy Hook & South Channels, junction....	40 28.9	73 59.6	-1 28	-1 24	-1 13	-1 16	0.8	0.8	0.0	--	1.3	300	0.0	--	1.7 113
3806	Sandy Hook Chan., 0.4 mi. W of north tip	40 28.79	74 01.30	-1 51	-1 55	-1 30	-1 50	1.2	0.8	0.0	--	2.0	235	0.0	--	1.6 050
3816	Sandy Hook Pt., 2 mi. W of (channel)....	40 28.8	74 03.6	-1 45	-2 00	-1 50	-1 42	0.4	0.3	0.0	--	0.6	263	0.0	--	0.6 086
3826	Chapel Hill South Channel.....	40 29.90	74 02.8	-2 12	-2 30	-1 40	-2 08	0.4	0.3	0.0	--	0.7	255	0.0	--	0.6 075
3836	New Dorp Beach, 1.2 miles south of.....	40 32.4	74 05.8	-4 19	-3 36	-4 35	-4 16	0.2	0.2	0.0	--	0.4	225	0.0	--	0.5 030
3846	Old Orchard Shoal Lt., 1.2 mi. ENE of...	40 31.1	74 04.36	-2 19	-2 07	-1 23	-2 02	0.4	0.2	0.0	--	0.7	270	0.0	--	0.4 085
3856	New Dorp Beach, 1.8 miles SE of <23>....	40 32.9	74 03.7	- - -	- - -	- - -	- - -	0.3	0.3	- - -	- - -	0.5	045	- - -	- - -	0.5 225
3866	Midland Beach, 2.6 miles SE of <24>....	40 32.8	74 02.35	0 00	+0 07	0 00	+0 01	0.5	0.6	0.2	270	0.8	335	0.2 068	1.3 160	
3876	Coney Island Lt., 1.5 miles SSE of.....	40 33.1	74 00.3	-1 27	-1 56	-0 58	-0 53	0.6	0.6	0.0	--	1.1	310	0.0	--	1.3 125

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION				TIME DIFFERENCES				SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS				
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb	Minimum before Flood	Maximum Flood		Minimum before Ebb	Maximum Ebb			
					N	W	h. m.	h. m.					h. m.	h. m.		
		ft	on DELAWARE BAY ENTRANCE, p.58									knots deg.	knots deg.	knots deg.	knots deg.	
DELAWARE BAY and RIVER Time meridian, 75°W																
4206	Ben Davis Point, 0.8 mile southwest of..	39 16.9	75 18.2	+0 56	+0 59	+1 21	+1 00	0.7	0.4	0.0	- -	1.2	308	0.0	- -	0.8 122
4211	Cohansey River, 0.5 mile above entrance.	39 20.9	75 21.6	+1 29	+1 21	+1 39	+1 28	0.7	0.7	0.0	- -	1.2	074	0.0	- -	1.4 254
4216	Bridgeton (Broad Street Bridge) <1>....	39 25.6	75 14.2	- - -	+2 28	- - -	+2 31	0.1	0.2	0.0	- -	0.2	000	0.0	- -	0.3 180
4221	Arnold Point, channel abreast of.....	39 22.5	75 27.8	+2 25	+2 18	+2 03	+2 26	1.1	1.1	0.0	- -	2.0	336	0.0	- -	2.1 156
4226	Smyrna River entrance.....	39 21.9	75 30.8	+1 48	+1 42	+2 05	+2 07	0.7	0.8	0.0	- -	1.2	250	0.0	- -	1.5 070
4231	Stony Point, channel west of.....	39 27.1	75 33.8	+3 23	+2 50	+2 38	+3 06	0.8	1.0	0.0	- -	1.5	324	0.0	- -	1.9 151
4236	Appoquinimink River entrance.....	39 26.8	75 34.9	+2 33	+2 55	+2 22	+2 34	0.6	0.6	0.0	- -	1.0	231	0.0	- -	1.2 048
4241	Reedy Island (off end of pier).....	39 30.7	75 33.4	+3 01	+3 01	+2 54	+3 23	1.3	1.4	0.0	- -	2.4	027	0.0	- -	2.6 194
4246	Alloway Creek ent., 0.2 mile above.....	39 29.9	75 31.5	+2 21	+2 42	+2 19	+1 56	1.2	1.1	0.0	- -	2.1	129	0.0	- -	2.1 325
4251	New Bridge, Alloway Creek.....	39 31.6	75 27.1	+3 03	+3 57	+3 36	+3 36	0.7	0.7	0.0	- -	1.3	090	0.0	- -	1.4 270
4256	Reedy Point, 0.4 mile east of.....	39 33.53	75 33.13	+3 18	+3 02	+2 54	+4 00	1.0	1.2	0.0	- -	1.8	333	0.0	- -	2.3 166
4261	Reedy Point, 1.1 miles east of.....	39 33.58	75 32.47	+3 19	+3 11	+3 08	+3 36	1.0	0.9	0.0	- -	1.8	354	0.0	- -	1.7 179
4266	Salem River entrance.....	39 34.2	75 30.1	+3 46	+3 33	+3 37	+4 09	0.8	0.8	0.0	- -	1.5	062	0.0	- -	1.6 245
4271	Bulkhead Shoal Channel, off Del. City...	39 35.0	75 35.2	+3 16	+2 58	+3 03	+3 44	1.2	1.1	0.0	- -	2.1	308	0.0	- -	2.1 138
4276	Pea Patch Island, channel east of.....	39 36.0	75 33.9	+3 30	+3 13	+3 33	+4 09	1.3	1.2	0.0	- -	2.3	319	0.0	- -	2.3 148
4281	Penns Neck, 0.6 mile west of.....	39 37.05	75 34.92	+3 38	+3 38	+3 14	+3 31	0.9	0.9	0.0	- -	1.7	002	0.0	- -	1.7 167
4286	Penns Neck, 0.3 mile west of.....	39 37.07	75 34.58	+3 22	+3 07	+3 08	+3 37	1.0	0.9	0.0	- -	1.8	339	0.0	- -	1.7 152
4291	New Castle, channel abreast of.....	39 39.1	75 33.2	+4 04	+3 21	+3 34	+4 01	1.1	1.3	0.0	- -	1.9	051	0.0	- -	2.4 230
4296	Kelly Point, 0.2 mile northwest of.....	39 38.9	75 32.8	+3 43	+3 55	+3 24	+3 31	0.9	0.8	0.0	- -	1.6	049	0.0	- -	1.5 230
4301	Deepwater Point, channel northwest of...	39 42.1	75 30.6	+3 44	+3 54	+3 45	+3 55	1.7	1.4	0.0	- -	3.0	029	0.0	- -	2.6 215
4306	Christina River, 1 mile above entrance..	39 43	75 32	+3 16	+3 01	+2 58	+2 44	0.4	0.5	0.0	- -	0.7	300	0.0	- -	0.9 050
4311	Cherry Island Flats, channel east of...	39 44.3	75 29.1	+4 09	+4 08	+4 02	+3 57	0.9	0.7	0.0	- -	1.6	027	0.0	- -	1.4 207
4316	Oldsmans Point.....	39 45.9	75 28.4	+4 28	+3 42	+4 03	+4 40	0.9	0.8	0.0	- -	1.6	027	0.0	- -	1.5 210
4321	Marcus Hook.....	39 48.2	75 24.6	+4 58	+4 19	+4 02	+4 51	0.9	0.8	0.0	- -	1.7	061	0.0	- -	1.6 232
4326	Eddystone.....	39 50.8	75 20.5	+5 25	+4 41	+4 31	+4 55	0.9	1.2	0.0	- -	1.7	058	0.0	- -	2.2 242
4331	Essington Harbor.....	39 51.5	75 18.3	+4 09	+3 54	+4 04	+3 56	0.8	0.6	0.0	- -	1.4	096	0.0	- -	1.2 274
4336	Crab Point, 0.5 mile east of.....	39 50.8	75 17.0	+4 48	+4 44	+4 44	+4 58	1.2	1.0	0.0	- -	2.1	094	0.0	- -	1.9 268
4341	Hog Island, channel southeast of.....	39 52.0	75 12.9	+4 53	+4 53	+4 42	+4 52	1.1	1.2	0.0	- -	1.9	054	0.0	- -	2.2 231
4346	Schuylkill River entrance <1>.....	39 53.2	75 11.7	- - -	+3 20	- - -	+4 08	0.3	0.2	0.0	- -	0.5	356	0.0	- -	0.4 178
4351	Gloucester.....	39 53.4	75 08.1	+5 13	+5 02	+4 53	+5 00	1.2	1.1	0.0	- -	2.2	020	0.0	- -	2.0 210
4356	Greenwich Point, northeast of.....	39 54.5	75 07.6	+5 18	+4 53	+4 54	+5 01	0.9	0.8	0.0	- -	1.6	002	0.0	- -	1.6 188
4361	Camden Marine Terminals, E of Chan. <29>	39 56.4	75 08.2	+5 52	+5 13	+5 16	+5 07	0.7	0.6	0.0	- -	1.3	005	0.0	- -	1.1 174
4366	Fisher Point.....	39 58.9	75 04.2	+6 07	+5 46	+5 23	+5 06	0.8	0.9	0.0	- -	1.4	041	0.0	- -	1.7 223
4371	Torresdale, west of channel.....	40 02.4	74 59.4	+6 54	+5 56	+4 59	+5 46	0.5	0.8	0.0	- -	0.9	044	0.0	- -	1.6 223
4376	Rancocas Creek, off Delanco.....	40 02.6	74 57.6	+6 36	+6 25	+5 51	+6 08	0.6	0.5	0.0	- -	1.0	090	0.0	- -	0.9 272
4381	Bristol, south of.....	40 05.3	74 51.6	+6 55	+5 31	+4 57	+6 10	0.7	0.8	0.0	- -	1.3	024	0.0	- -	1.6 200
4386	Burlington Island, channel east of.....	40 05.7	74 50.2	+7 32	+5 46	+4 16	+6 46	0.5	0.9	0.0	- -	0.9	018	0.0	- -	1.8 204
4391	Whitehill <30>.....	40 08.2	74 44.2	- - -	- - -	+7 07	- -	0.7	0.0	- -	- - -	0.0	- -	- - -	- - -	1.4 233
DEL., MD. and VA. COAST																
4396	Indian River Inlet (bridge).....	38 37	75 04	- - -	+0 05	- - -	+0 10	1.0	1.1	0.0	- -	1.8	265	0.0	- -	2.1 085
4401	Fenwick Shoal Lighted Whistle Buoy 2....	38 25	74 46				See table 5.									
4406	Winter-Quarter Shoal Buoy 6WQS <31>....	37 55	74 56				See table 5.									

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TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER	POSITION			TIME DIFFERENCES			SPEED RATIOS	AVERAGE SPEEDS AND DIRECTIONS					
			DEPTH	Lat.	Long.	Min. before Flood	Min. Flood	before Ebb		Flood	Ebb	Minimum before Flood	Maximum Flood		
										ft	° '	° '	h. m.	h. m.	h. m.	h. m.
	DEL., MD. and VA. COAST Time meridian, 75°W			N	W	on	CHESAPEAKE BAY ENTRANCE, p. 64								
4411	Cape Charles, 70 miles east of.....		7	37 05	74 51		See table 5.								
4416	Smith Island Shoal, southeast of.....			37 05.3	75 43.5	-2 14	-2 12	-2 04	-2 05	0.3	0.3	0.0	--	0.3 298	0.0 -- 0.4 068
4421	Chesapeake Light, 4.4 miles northeast of.....			36 59	75 42		See table 5.								
4426	Cape Henry Light, 2.2 miles southeast of.....			36 53.9	75 58.7	-1 54	-1 18	-0 39	-1 41	1.0	0.6	0.0	--	1.0 346	0.0 -- 0.9 165
	CHESAPEAKE BAY														
4431	Cape Henry Light, 1 mile north of.....			36 56.4	76 00.5	+0 04	-0 25	-0 08	-0 25	1.1	1.3	0.0	--	1.1 280	0.0 -- 2.0 090
4436	Cape Henry Light, 1.8 miles north of....			36 57.4	76 00.1	-0 23	-0 11	+0 10	-0 17	1.2	1.0	0.0	--	1.2 292	0.0 -- 1.5 099
4441	CHESAPEAKE BAY ENTRANCE.....		7	36 58.8	76 00.4		Daily predictions					0.0	--	1.0 306	0.0 -- 1.5 126
4446	Cape Henry Light, 4.6 miles north of....			37 00.1	75 59.3	-1 05	-0 46	-0 10	-0 54	1.3	0.9	0.0	--	1.3 294	0.0 -- 1.3 104
4451	Cape Charles Light, 9.5 mi. WSW of.....			37 03.7	76 05.4	-0 12	+0 08	+0 32	-0 05	1.5	0.9	0.0	--	1.5 319	0.0 -- 1.4 126
4456	Cape Henry Light, 8.3 mi. northwest of..			37 02.2	76 06.6	-0 22	-0 12	+0 16	-0 05	1.0	0.7	0.0	--	1.0 329	0.0 -- 1.1 133
4461	Lynnhaven Roads.....			36 55.1	76 04.9	-0 58	-0 37	-0 14	-0 41	0.8	0.6	0.0	--	0.8 280	0.0 -- 0.9 070
4466	Lynnhaven Inlet bridge.....			36 54.4	76 05.6	-1 56	-2 05	-2 12	-3 01	0.6	0.9	0.0	--	0.6 180	0.0 -- 1.4 000
	Chesapeake Bay Bridge Tunnel														
4471	Chesapeake Beach, 1.5 miles north of.			36 56.69	76 07.33	-0 09	-0 07	-0 23	-0 31	0.8	0.6	0.0	--	0.8 305	0.0 -- 0.9 100
4476	Thimble Shoal Channel.....			36 58.33	76 06.67	-0 53	-0 46	-0 24	-0 39	1.4	0.9	0.0	--	1.4 310	0.0 -- 1.3 095
4481	Tail of the Horseshoe.....			36 59.57	76 06.20	-0 33	-0 25	-0 13	-0 59	0.9	0.7	0.0	--	0.9 300	0.0 -- 1.0 110
4486	Middle Ground, channel west of.....			37 03.00	76 05.00	-0 10	-0 20	-0 36	+0 04	1.6	0.9	0.0	--	1.6 335	0.0 -- 1.3 150
4491	Chesapeake Channel.....			37 02.50	76 04.33	-0 33	-0 17	+0 03	-0 12	1.8	1.0	0.0	--	1.8 335	0.0 -- 1.5 145
4496	Fisherman Island, 3.2 miles WSW of...			37 04.00	76 02.25	-1 00	-1 07	-0 46	-1 07	1.2	1.1	0.0	--	1.2 330	0.0 -- 1.6 135
4501	Fisherman Island, 1.4 miles WSW of...			37 04.78	76 00.25	-1 47	-0 57	-0 41	-1 33	1.8	0.7	0.0	--	1.8 330	0.0 -- 1.1 140
4506	Fisherman I., 1.8 miles south of.....			37 03.58	75 58.77	-1 04	-1 00	-0 27	-1 24	1.6	0.9	0.0	--	1.6 320	0.0 -- 1.4 120
4511	Fisherman I., 0.4 mile west of.....			37 05.57	75 59.33	-0 59	-1 03	-0 35	-1 13	2.0	1.3	0.0	--	2.0 005	0.0 -- 2.0 175
4516	Fisherman I., 1.1 miles northwest of.			37 06.50	76 00.00	-1 17	-0 35	-0 06	-0 50	1.8	1.1	0.0	--	1.8 355	0.0 -- 1.6 165
4521	Cape Charles, off Wise Point.....	5	37 06.88	75 58.30	-0 29	-0 18	+0 27	+0 49	0.7	0.1	0.0	--	0.7 305	0.0 -- 0.2 075	
	Little Creek														
4526	North of east jetty.....		10	36 56.05	76 10.60	-2 00	-2 02	-1 42	-1 59	0.9	0.7	0.0	--	0.9 280	0.0 -- 1.0 076
4531	0.5 mile north of west jetty.....		10	36 56.32	76 10.81	-1 37	-1 03	-0 42	-1 31	0.9	0.6	0.0	--	0.9 274	0.0 -- 0.9 108
4536	Old Plantation Flats Light, west of....			37 14.0	76 04.1	+0 53	+1 06	+1 26	+0 35	1.2	0.9	0.0	--	1.2 005	0.0 -- 1.3 175
4541	York Spit Channel.....		7	37 12.9	76 08.5	+0 55	+0 55	+0 55	+0 55	0.8	0.7	0.0	--	0.8 010	0.0 -- 1.1 195
4546	Wolf Trap Light, 0.5 mile west of....			37 23.4	76 11.9	+1 05	+1 05	+1 05	+1 05	1.0	0.8	0.0	--	1.0 015	0.0 -- 1.2 190
4551	Wolf Trap Light, 5.8 miles east of....			37 23.1	76 04.3	+1 45	+1 45	+1 45	+1 45	0.9	0.9	0.0	--	0.9 015	0.0 -- 1.3 175
4556	Stingray Point, 5.5 miles east of....			37 35.0	76 10.4	+1 50	+2 41	+2 52	+2 01	1.0	0.6	0.0	--	1.0 343	0.0 -- 0.9 179
4561	Stingray Point, 12.5 miles east of....			37 33.8	76 02.3	+1 40	+2 05	+1 40	+2 05	1.0	0.5	0.0	--	1.0 030	0.0 -- 0.8 175
4566	Smith Point, 4.5 miles east of....			37 52.9	76 08.6	+3 11	+3 14	+3 14	+3 15	0.7	0.5	0.0	--	0.7 352	0.0 -- 0.8 163
4571	Smith Point Light, 6 miles north of....			37 58.9	76 11.4	+3 50	+3 35	+3 50	+3 35	0.4	0.7	0.0	--	0.4 350	0.0 -- 1.0 135
4576	Point Lookin.....			38 06.6	76 13.1	+4 35	+4 15	+4 35	+4 15	0.4	0.3	0.0	--	0.4 010	0.0 -- 0.5 160
4581	Point No Point.....			38 09.1	76 14.0	+5 15	+5 10	+5 15	+5 10	0.4	0.4	0.0	--	0.4 355	0.0 -- 0.6 150
	on BALTIMORE HARBOR APPROACH, p. 70														
4586	Cedar Point, 3.2 miles east of.....			38 18.3	76 18.35	- - -	-2 49	- - -	-3 32	0.2	0.8	0.0	--	0.2 030	0.0 -- 0.6 175
4591	Cedar Point, 1.1 miles ENE of.....			38 18.27	76 21.10	-3 23	-2 50	-2 36	-3 42	0.5	0.8	0.0	--	0.4 010	0.0 -- 0.6 185
4596	Drum Point, 2.8 miles northeast of.....			38 20.18	76 21.95	- - -	-3 12	- - -	-2 42	0.2	0.5	0.0	--	0.2 335	0.0 -- 0.4 185

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER	POSITION		TIME DIFFERENCES				SPEED RATIOS	AVERAGE SPEEDS AND DIRECTIONS																		
			DEPTH	Lat.	Long.	Min. before Flood	Flood	Min. before Ebb		Flood	Ebb	Minimum before Flood	Maximum Flood															
on BALTIMORE HARBOR APPROACH, p. 70																												
CHESAPEAKE BAY Time meridian, 75°W																												
4601	Cove Point, 0.6 mile northeast of.....		38 23.45	76 22.19	-2 55	-3 04	-3 04	-2 51	0.9	1.0	0.0	--	0.7	330	0.0	--	0.8	155										
4606	Cove Point, 2.5 miles east of.....		38 23.2	76 19.8	-2 39	-2 48	-2 44	-2 45	0.6	0.8	0.0	--	0.5	310	0.0	--	0.6	155										
4611	Cove Point, 3.3 miles east of.....		38 23.65	76 18.95	-3 18	-3 41	-3 48	-3 20	0.5	0.6	0.0	--	0.4	320	0.0	--	0.5	160										
4616	Kenwood Beach, 1.5 miles northeast of...		38 31.1	76 28.9	-1 56	-2 41	-2 46	-2 37	0.2	0.4	0.0	--	0.2	340	0.0	--	0.3	160										
4621	James Island, 3.4 miles west of.....		38 31.5	76 25.2	-2 16	-2 39	-3 01	-2 02	0.5	0.4	0.0	--	0.4	005	0.0	--	0.3	175										
4626	James Island, 2.5 miles WNW of.....		38 32.0	76 23.6	-2 31	-2 42	-2 18	-2 36	0.5	0.6	0.0	--	0.4	000	0.0	--	0.5	175										
4631	Plum Point, 1.4 miles ESE of.....		38 36.75	76 28.65	-1 31	-1 37	-2 20	-2 04	0.2	0.7	0.0	--	0.2	000	0.0	--	0.6	155										
4636	Sharps Island, 3.3 miles WNW of.....		38 38.13	76 26.00	--	-1 30	--	-1 57	0.5	0.4	0.0	--	0.4	345	0.0	--	0.3	185										
4641	Holland Point, 1.6 miles east of.....		38 43.47	76 29.58	-1 05	-0 52	-1 20	-1 20	0.2	0.8	0.0	--	0.2	010	0.0	--	0.6	180										
4646	Holland Point, 6.2 miles east of.....		38 43.9	76 23.8	-2 02	-2 07	-1 31	-1 44	0.4	0.3	0.0	--	0.3	355	0.0	--	0.2	135										
4651	Holland Point, 4.7 miles ENE of.....		38 44.7	76 26.0	-0 50	-0 38	-1 05	-0 45	0.2	0.8	0.0	--	0.2	340	0.0	--	0.6	180										
4656	Kent Point, 4 miles southwest of.....		38 47.50	76 26.00	-1 03	-1 04	-1 11	-1 05	0.6	0.6	0.0	--	0.5	025	0.0	--	0.5	210										
4661	Kent Point, 1.3 miles south of.....		38 49.00	76 21.85	-3 27	-3 38	-3 53	-3 47	0.6	0.5	0.0	--	0.4	055	0.0	--	0.4	235										
4666	Horseshoe Point, 1.7 miles east of.....		38 50.30	76 27.20	-0 52	-0 39	-0 49	-1 10	0.6	0.6	0.0	--	0.5	005	0.0	--	0.5	200										
4671	Bloody Point Bar Light, 0.6 mi. NW of...		38 50.37	76 24.17	-0 08	-0 23	+0 02	-0 05	0.9	0.6	0.0	--	0.7	035	0.0	--	0.5	190										
4676	Thomas Pt. Shoal Lt., 1.8 mi. SW of.....		38 52.50	76 27.70	-2 24	-2 27	-1 43	-2 17	0.5	0.4	0.0	--	0.4	340	0.0	--	0.3	190										
4681	Thomas Pt. Shoal Lt., 0.4 mi. SE of.....		38 53.85	76 25.77	-0 14	-0 40	-1 06	-0 53	0.9	1.1	0.0	--	0.7	010	0.0	--	0.9	185										
4686	Tolly Point, 1.6 miles east of.....		38 56.07	76 25.02	-0 03	-0 19	-0 32	-0 24	0.6	0.9	0.0	--	0.5	355	0.0	--	0.7	190										
4691	Chesapeake Bay Bridge, main channel.....		38 59.50	76 23.10	+0 16	+0 08	-0 17	+0 13	0.9	1.1	0.0	--	0.7	025	0.0	--	0.9	230										
4696	BALTIMORE HBR. APP. (off Sandy Point)....		39 00.78	76 22.10	Daily predictions				0.0	0.0	0.0	--	0.8	025	0.0	--	0.8	189										
4701	Love Point, 1.3 miles ESE of.....		39 02.12	76 16.45	--	-0 39	-1 17	-0 57	0.3	0.4	0.0	--	0.3	170	0.0	--	0.3	345										
4706	Love Point, 2.8 miles NNE of.....		39 04.7	76 16.3	Current weak and variable				0.0	0.0	0.0	--	0.6	055	0.0	--	0.4	240										
4711	Love Point, 2.5 miles north of.....		39 04.78	76 18.73	-0 48	+0 19	+0 27	-0 07	0.8	0.5	0.0	--	0.6	055	0.0	--	0.7	175										
4716	Craighill Channel, NE of Mountain Pt....		39 04.88	76 23.67	+0 28	+0 40	+0 25	+0 34	0.8	0.9	0.0	--	0.6	350	0.0	--	0.5	170										
4721	Craighill Angle, right outside quarter..		39 07.70	76 23.27	+0 12	+0 27	+0 34	+0 23	0.6	0.6	0.0	--	0.5	345	0.0	--	0.2	160										
4726	Sevenfoot Knoll Light, 0.8 mi. NE of....		39 09.83	76 23.67	-0 07	+0 44	+0 44	+0 27	0.5	0.2	0.0	--	0.4	345	0.0	--	0.6	220										
4731	Swan Point, 2.1 miles west of.....		39 08.75	76 19.67	+1 16	+1 01	+1 05	+0 55	0.6	0.8	0.0	--	0.5	355	0.0	--	0.7	215										
4736	Swan Point, 1.6 miles northwest of.....		39 09.75	76 18.28	+0 53	+0 44	+0 38	+0 57	0.8	0.9	0.0	--	0.6	020	0.0	--	0.7	215										
4741	North Point, 2.5 miles northeast of.....		39 12.87	76 23.72	+1 25	+1 00	+0 53	+1 06	0.4	0.5	0.0	--	0.3	035	0.0	--	0.4	225										
4746	Pooles Island, 4 miles southwest of.....		39 13.60	76 19.88	+0 59	+0 48	+0 56	+1 12	0.6	0.8	0.0	--	0.5	025	0.0	--	0.6	210										
4751	Tolchester Beach, 0.4 mile WNW of.....		39 13.13	76 15.08	+1 52	+1 37	+1 28	+1 35	0.9	1.1	0.0	--	0.7	015	0.0	--	0.9	225										
4756	Pooles Island, 0.8 mile south of.....		39 15.7	76 16.4	+1 29	+1 24	+1 12	+1 20	0.9	1.2	0.0	--	0.7	060	0.0	--	1.0	255										
4761	Miller Island, 1.5 miles ENE of.....		39 16.5	76 19.9	+0 11	+0 15	+0 37	+0 25	0.6	0.3	0.0	--	0.5	000	0.0	--	0.2	185										
4766	Pooles Island, 1.4 miles east of.....		39 17.2	76 13.9	+1 48	+1 31	+1 26	+1 26	1.0	1.5	0.0	--	0.8	030	0.0	--	1.2	215										
4771	Robins Point, 0.7 mile ESE of.....		39 17.75	76 16.10	-0 03	-0 14	+0 37	-0 13	1.4	1.0	0.0	--	1.1	025	0.0	--	0.8	210										
4776	Worton Point, 1.1 miles northwest of....		39 19.9	76 12.0	+1 43	+1 43	+1 38	+1 32	1.4	1.5	0.0	--	1.1	040	0.0	--	1.2	245										
4781	Howell Point, 0.4 mile NNW of.....		39 22.6	76 06.9	+1 28	+1 24	+1 20	+1 18	1.1	1.1	0.0	--	0.9	080	0.0	--	0.9	245										
4786	Grove Point, 0.8 mile northwest of.....		39 24.0	76 03.1	+1 54	+1 58	+1 41	+1 39	1.0	1.0	0.0	--	0.8	060	0.0	--	0.8	235										
4791	Turkey Point, 1.4 miles WSW of.....		39 26.25	76 02.08	+1 27	+1 19	+1 24	+1 22	0.8	0.9	0.0	--	0.6	030	0.0	--	0.7	220										
4796	Spesutie Island, channel north of.....		39 28.83	76 04.90	+1 42	+1 20	+1 49	+1 40	0.8	0.6	0.0	--	0.6	285	0.0	--	0.5	100										
4801	Rocky Point, 0.5 mile west of.....		39 29.2	76 00.2	+2 15	+2 15	+2 15	+2 15	0.6	0.8	0.0	--	0.5	030	0.0	--	0.6	190										
4806	Red Point, 0.2 mile W of, Northeast R...		39 31.75	75 59.08	+1 42	+1 28	+1 57	+1 47	0.9	0.6	0.0	--	0.7	--	0.0	--	0.5	--										
4811	Havre de Grace, Susquehanna River.....		39 33.13	76 05.08	Current weak and variable				0.0	0.0	0.0	--	0.0	0.0	0.0	--	0.0	--										

Endnotes can be found at the end of Table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION			TIME DIFFERENCES			SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS			
			Lat.	Long.		Min. before Flood	Min. before Ebb	Flood			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.
MOBJACK BAY and PIANKATANK RIVER Time meridian, 75°W														
5176	New Point Comfort, 1.5 miles west of....	37 17.7	76 18.4	-2 59	-1 58	-2 03	-2 48	0.6	0.3	0.0	- -	0.6 320	0.0 - -	0.5 130
5181	Bland Point, Piankatank River.....	37 31.8	76 21.9	-0 30	-0 30	-0 30	-0 30	0.4	0.1	0.0	- -	0.4 300	0.0 - -	0.2 125
5186	Doctor Point, 0.4 mile west of.....	37 31.1	76 27.0	-0 28	-0 58	-1 17	-0 37	0.4	0.3	0.0	- -	0.4 311	0.0 - -	0.4 142
RAPPAHANNOCK RIVER														
5191	Mosquito Point, 0.9 mile SSE of.....	37 35.72	76 21.08	+0 56	+1 31	+1 38	+0 41	0.7	0.6	0.0	- -	0.7 265	0.0 - -	0.8 090
5196	Mosquito Point.....	37 35.8	76 21.5	+0 45	+0 45	+0 45	+0 45	0.6	0.4	0.0	- -	0.6 290	0.0 - -	0.6 115
5201	Orchard Point, 1.0 mile south of.....	37 37.97	76 27.45	+0 49	+1 35	+1 50	+0 52	0.5	0.4	0.0	- -	0.5 270	0.0 - -	0.6 085
5206	Millenbeck Wharf, Corrotoman River.....	37 39.9	76 29.0	- - -	- - -	- - -	- - -	- - -	- - -	0.0	- -	0.3 000	0.0 - -	0.3 186
5211	Towles Point.....	37 37.8	76 30.4	+1 06	+1 07	+2 10	+1 25	0.6	0.3	0.0	- -	0.6 274	0.0 - -	0.5 103
5216	Rogue Point, 0.8 mile WNW of.....	37 40.28	76 33.20	- - -	+1 44	- - -	+1 27	0.6	0.4	0.0	- -	0.6 000	0.0 - -	0.6 195
5221	Waterview, 1.3 miles NNE of.....	37 44.95	76 35.92	+1 41	+1 59	+2 46	+2 10	0.7	0.4	0.0	- -	0.7 340	0.0 - -	0.6 155
5226	Tarpley Point, 1.5 miles south of.....	37 46.15	76 39.12	+2 16	+2 37	+3 20	+2 39	0.7	0.5	0.0	- -	0.7 300	0.0 - -	0.7 105
5231	Jones Point, 1.4 miles NNW of.....	37 48.03	76 41.58	+2 04	+2 23	+3 19	+2 27	1.1	0.6	0.0	- -	1.1 315	0.0 - -	0.9 105
5236	Sharps, 1.2 miles south of.....	37 48.18	76 41.92	+2 19	+2 46	+3 52	+3 01	0.9	0.5	0.0	- -	0.9 290	0.0 - -	0.8 095
5241	Bowlers Rock, 0.2 mile north of.....	37 49.58	76 44.00	+2 27	+2 41	+3 37	+2 50	1.0	0.7	0.0	- -	1.0 315	0.0 - -	1.1 135
5246	Accaceek Point, 0.3 mile southwest of...	37 52.52	76 46.40	+2 40	+2 48	+3 27	+3 13	1.2	0.7	0.0	- -	1.2 335	0.0 - -	1.0 150
5251	Tappahannock Bridge, 1.8 miles SE of....	37 55.10	76 49.27	+3 08	+3 07	+3 56	+3 28	1.4	0.9	0.0	- -	1.4 315	0.0 - -	1.3 105
5256	Tappahannock Bridge.....	37 56.0	76 51.2	+3 40	+3 40	+3 40	+3 40	1.3	0.8	0.0	- -	1.3 315	0.0 - -	1.2 135
5261	Port Royal.....	38 10.5	77 11.4	+6 10	+6 10	+6 10	+6 10	0.7	0.5	0.0	- -	0.7 310	0.0 - -	0.7 130
POCOMOKE SOUND														
5266	Pocomoke Sound Approach.....	37 38.00	75 57.90	- - -	+1 12	- - -	+1 31	0.7	0.5	0.0	- -	0.7 009	0.0 - -	0.7 196
5271	Pungoteague Creek entrance.....	6 37 40.48	75 51.90	- - -	- - -	- - -	- - -	- - -	- - -	0.0	- -	0.3 094	0.0 - -	0.2 254
5276	Watts Island, 4 miles south of.....	7 37 43.2	75 54.0	+0 17	+0 01	+0 27	-0 04	0.6	0.4	0.0	- -	0.6 027	0.0 - -	0.6 247
5281	Watts Island, 2.2 miles east of.....	37 47.9	75 50.6	+0 44	+1 10	+1 40	+1 03	1.3	0.9	0.0	- -	1.3 027	0.0 - -	1.3 209
5286	Pocomoke R., 0.5 mile below Shelton....	37 58.3	75 38.7	+3 30	+3 00	+3 30	+3 00	1.1	0.6	0.0	- -	1.1 045	0.0 - -	0.9 170
TANGIER SOUND														
5291	Tangier Sound Light, 1.5 miles NE of....	37 48.5	75 57.4	+1 30	+2 02	+2 15	+1 39	1.2	0.7	0.0	- -	1.2 014	0.0 - -	1.1 220
5296	Jane's Island.....	38 00.0	75 54.5	+3 40	+3 25	+3 40	+3 25	0.9	0.6	0.0	- -	0.9 000	0.0 - -	0.9 210
5301	Kedges Straits, off Solomons Lump.....	38 03.1	76 00.8	+0 20	+0 32	+0 50	+0 09	0.9	0.8	0.0	- -	0.9 104	0.0 - -	1.2 280
5306	Manokin River entrance.....	38 05.5	75 53.6	- - -	+2 04	- - -	+2 32	0.6	0.4	0.0	- -	0.6 019	0.0 - -	0.6 182
5311	Deal Island, 0.9 mile west of.....	38 08.2	75 58.7	+3 08	+3 26	+3 33	+3 15	0.9	0.7	0.0	- -	0.9 354	0.0 - -	1.0 179
5316	Frog Point, 1.6 miles south of.....	38 12.6	75 57.3	+3 19	+3 00	+3 41	+3 31	1.0	0.7	0.0	- -	1.0 048	0.0 - -	1.1 240
	Wicomico River													
5321	Victor Point, 0.8 mile southwest of..	38 14.3	75 51.8	+3 10	+2 54	+3 49	+3 34	0.6	0.6	0.0	- -	0.6 034	0.0 - -	0.9 242
5326	Whitehaven.....	38 15.9	75 47.5	+2 56	+3 45	+4 02	+3 01	1.1	0.7	0.0	- -	1.1 089	0.0 - -	1.1 284
5331	Whitehaven, 2.5 miles above.....	4 38 17.8	75 45.5	+3 00	+3 13	+3 45	+2 55	1.0	0.7	0.0	- -	1.0 006	0.0 - -	1.1 188
5336	Salisbury, 2 miles below.....	4 38 20.4	75 38.3	+3 23	+3 31	+4 03	+3 28	0.6	0.5	0.0	- -	0.6 085	0.0 - -	0.8 258
5341	Sandy Point, Nanticoke River.....	38 14.8	75 55.7	+3 14	+3 36	+4 21	+3 39	1.2	0.7	0.0	- -	1.2 000	0.0 - -	1.1 182

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TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS, 1983

NO.	PLACE	METER DEPTH	POSITION		TIME DIFFERENCES				SPEED RATIOS Flood Ebb	AVERAGE SPEEDS AND DIRECTIONS				
			Lat.	Long.	Min. before Flood	Flood	Min. before Ebb	Ebb		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.	
on GALVESTON BAY ENTRANCE, p.124														
LOUISIANA COAST Time meridian, 90°W														
8961	Cat Island Pass, Terrebonne Bay.....	29 04.8	90 34.4	-2 45	-1 25	-2 40	-3 40	0.6	0.6	0.0	--	1.1 013	0.0 --	1.5 195
8971	Wine Island Pass.....	29 04.2	90 38.0	-4 46	-4 31	-5 13	-4 58	1.0	0.8	0.0	--	1.7 325	0.0 --	1.9 160
8981	Caillou Boca, Caillou Bay.....	29 03.5	90 48.5	-0 46	-0 09	+1 24	-0 46	0.8	0.3	0.0	--	1.3 095	0.0 --	0.7 264
8991	Calcasieu Pass.....	29 46.4	93 20.7	-0 18	-0 43	+2 12	-0 44	1.0	1.0	0.0	--	1.7 020	0.0 --	2.3 205
9001	Calcasieu Pass, 35 miles south of.....	29 10.15	93 19.23	Current weak and variable										
9011	Calcasieu Pass, 67 miles south of <49>..	28 39.80	93 19.95	--	--	--	--	--	--	--	--	--	--	--
TEXAS														
Sabine Pass														
9021	Texas Point, 1.7 miles SSE of.....	29 39.0	93 49.6	-0 14	-0 34	-0 15	-0 21	0.6	0.7	0.0	--	1.1 335	0.0 --	1.6 145
9031	Sabine, channel east of.....	29 43.3	93 51.7	-0 15	-0 02	-0 15	+0 04	0.9	0.7	0.0	--	1.6 335	0.0 --	1.7 140
9041	Port Arthur Canal entrance.....	29 45.6	93 54.1	+0 53	+1 34	+0 55	+1 12	0.5	0.6	0.0	--	0.9 310	0.0 --	1.3 110
9051	Mesquite Pt., La. Causeway bridge....	29 45.95	93 53.70	-0 21	-0 22	-0 20	-0 35	0.9	1.0	0.0	--	1.6 330	0.0 --	2.2 150
GALVESTON BAY														
9061	GALVESTON BAY ENT. (between jetties)....	29 20.8	94 42.3	Daily predictions				0.0	--	1.7	299	0.0 --	2.3 102	
9071	Bolivar Roads, 0.5 mi. N of Ft. Point....	29 20.8	94 46.1	+0 25	+0 26	+1 15	+0 14	1.0	0.8	0.0	--	1.7 287	0.0 --	1.8 111
9081	Quarantine Station, 0.3 mile S of <27>..	29 19.8	94 46.7	--	-1 21	--	-0 59	0.6	0.4	0.0	--	1.1 196	0.0 --	0.8 009
9091	Galveston Channel, west end <27>.....	29 18.6	94 49.2	--	+0 01	--	-0 17	1.0	0.6	0.0	--	1.7 272	0.0 --	1.5 103
9101	Galveston Causeway RR. bridge.....	29 17.80	94 53.13	-0 24	-0 32	--	+0 05	0.4	0.4	0.0	--	0.7 210	0.0 --	0.8 025
9111	Houston Channel, W of Port Bolivar.....	29 21.8	94 47.8	+0 18	+0 35	+1 18	+0 24	0.8	0.6	0.0	--	1.3 330	0.0 --	1.4 166
9121	Houston Ship Channel (Red Fish Bar)....	29 30.2	94 52.5	+3 11	+1 51	+0 12	+1 29	0.8	0.8	0.0	--	1.3 321	0.0 --	1.8 146
TEXAS COAST														
9131	Matagorda Channel (entrance jetty).....	28 25.3	96 19.4	-0 56	-0 28	-0 18	-1 14	1.2	0.8	0.0	--	2.0 317	0.0 --	1.9 142
9141	Aransas Pass.....	27 50.1	97 02.65	+0 34	+1 03	+0 50	-0 08	0.5	0.5	0.0	--	0.9 312	0.0 --	1.2 116
9151	Sabine Bank <54>.....	29 18.20	94 00.20	--	--	--	--	--	--	--	--	--	--	
9161	Heald Bank, 28 miles SSE of <54>.....	28 40.17	93 59.60	--	--	--	--	--	--	--	--	--	--	
PUERTO RICO														
Time meridian, 60°W														
9171	Punta Ostiones, 1.5 miles west of.....	18 05.2	67 13.6	-0 26	-0 52	-0 04	-0 35	1.7	1.3	0.0	--	1.0 187	0.0 --	0.9 001
9181	VIEQUES PASSAGE.....	18 11.3	65 37.1	Daily predictions				0.0	--	0.6	250	0.0 --	0.7 057	
9191	Vieques Sound.....	18 15.87	65 34.20	-0 44	-1 16	-1 28	-1 05	0.7	0.9	0.0	--	0.4 180	0.0 --	0.6 355
9201	Largo Shoals, west of.....	18 19	65 35	-0 52	-1 28	-1 33	-1 08	0.7	1.0	0.0	--	0.4 186	0.0 --	0.7 330
9211	Ramos Cay, 0.3 mile SE of <1>.....	18 18.6	65 36.4	--	-0 42	--	-0 44	0.3	0.1	0.0	--	0.2 120	0.0 --	0.1 284
9221	Palomino Island, 0.9 mile SW of <13>....	18 20.1	65 34.8	--	--	--	-0 48	--	0.7	--	--	--	0.5 307	
9231	Fajardo Harbor (channel).....	18 20	65 37	-1 13	-1 52	-2 27	-1 45	0.5	1.6	0.0	--	0.3 162	0.0 --	1.1 339
9241	Isla Marina, 0.2 mile west of <1> <13>..	18 20.50	65 37.38	--	--	--	-2 06	--	1.0	--	--	--	0.7 335	
9251	Coronala Laja, 0.4 mile NW of <1> <13>..	18 21.6	65 37.3	--	--	--	-1 33	--	0.4	--	--	--	0.3 000	
9261	Pasaje de San Juan <1> <13>.....	18 23.9	65 36.9	--	--	--	-1 15	--	1.7	--	--	--	1.2 310	
9271	Bahia de San Juan.....	18 27.23	66 06.6	Current weak and variable				--	--	--	--	--	--	--
9281	Bahia de San Juan entrance <50>.....	18 28.3	66 07.6	--	--	--	--	--	--	--	--	--	--	

Endnotes can be found at the end of Table 2.

- < 1> The times of minimum before flood and ebb are indefinite.
- < 2> Current speeds up to 9.0 knots have been observed in the vicinity of the Boilers.
- < 3> Current turns westward just before the end of the flood.
- < 4> Current tends to rotate counterclockwise, flood direction swinging from westward to southward.
- < 5> Observations indicate that current floods about 11 hours and ebbs about 1 1/2 hours. Minimum before flood occurs about 4 1/2 hours earlier, maximum flood about 1 hour later, minimum before ebb about 1/2 hour later, and maximum ebb about 1 1/2 hours earlier than corresponding predictions at Portsmouth Harbor Entrance. Average ebb speed is less than 0.5 knot.
- < 6> Current is variable; current speeds are usually less than 1 knot. Currents are strong in the entrance to Menemsha Pond.
- < 7> In the open waters of Buzzards Bay, except in the entrance and off Penikese Island and West Island (see table-2, no. 1080-1190), the current is too weak and variable to be predicted.
- < 8> The currents in Narragansett Bay have a pronounced irregularity which is evidenced at times during the month by a long period of approximate slack water preceding the flood, and at other times by a double flood of two distinct maximums of speed separated by a period of lesser speed. These peculiarities appear to be somewhat unstable, consequently, flood currents differing from those predicted should be expected. The ebb current is fairly regular and the predictions for maximum ebb will usually agree closely with the current encountered.
- < 9> At minimum flood, current sometimes ebbs for a short period.
- <10> At minimum flood, current frequently ebbs for a short period.
- <11> Flood is too weak to be predicted. Time difference gives mid-point of 4 hour stand of weak and variable current and time of maximum ebb.
- <12> Inside breakwaters, in channel, the current is only 0.4 knot.
- <13> Current seldom floods.
- <14> Near Tongue Point, Bridgeport Harbor, the current is weak and irregular.
- <15> The current on the Manhattan side of the channel is about 0.5 knot stronger, and on the Brooklyn side about 0.5 knot weaker, than at this station.
- <16> The ebb or northerly current is weak and variable. East of the channel the current flows southward practically all the time, but with changing speed, the maximum speed being about the same as in mid-channel and occurring about the same time. On the Manhattan side, just off the piers, the flood or southerly current is weak and variable but the ebb or northerly current has an average maximum speed of about 2 knots which occurs about the time of maximum ebb at Hell Gate.
- <17> Tidal current is weak, averaging about 0.1 knot at maximum.
- <18> For maximum southward current only, the gates of the lock being closed to prevent northward flow. Apply difference and ratio to maximum ebb at The Narrows.
- <19> Current is rotary, turning clockwise. Minimum current of 0.9 knot sets southwest about time of "Minimum before flood" at The Narrows. Minimum current of 0.5 knot sets northeast about 1 hour before "Minimum before ebb" at The Narrows.
- <20> The values for the Hudson River are for the summer months, when the freshwater discharge is a minimum.
- <21> In Roundout Creek entrance between lights, eddies on the flood make navigation difficult. Little difficulty will be experienced on the ebb.
- <22> Current does not flood.
- <23> Current is rotary, turning clockwise. It flows northwest at times of "Minimum before flood" at The Narrows; northeast 1 hour after maximum flood; southeast 1 1/2 hours after "Minimum before ebb"; and southwest 2 hours after maximum ebb.
- <24> Current is rotary, turning clockwise. Minimum current of 0.2 knot sets west about the time of "Minimum before flood" at The Narrows. Minimum current of 0.2 knot sets ENE about the time of "Minimum before ebb" at The Narrows.
- <25> In Sandy Hook Bay (except in southern extremity) the current is weak.
- <26> Tidal current is weak and rotary, averaging about 0.1 knot at maximum.
- <27> The times of minimum before flood and ebb are variable.
- <28> Current usually ebbs during period 3 hours before to 3 hours after maximum ebb. Flood is weak and variable.

- <29> To obtain speeds in midchannel use speed ratio 0.8.
 - <30> Flood is usually weak and of short duration. A weak ebb or flood current occurs about 6 hours after maximum flood at Delaware Bay Entrance.
 - <31> Tidal current is weak and rotary, averaging less than 0.1 knot.
 - <32> Current tends to rotate clockwise. At times for "Minimum before flood" there may be a weak current flowing southward while at times for "Minimum before ebb" there may be a weak current flowing northward.
 - <33> Just off southernmost point, current turns about 1 hour earlier than in midchannel.
 - <34> Current tends to rotate clockwise. At times for "Minimum before flood" there may be a weak current flowing WSW while at times for "Minimum before ebb" there may be a weak current flowing ENE.
 - <35> Do not use difference or ratio for lesser maximum ebb current as it is weak and variable.
 - <36> Current tends to rotate clockwise. At times for "Minimum before flood" there may be a weak current flowing southwest, while at times for "Minimum before ebb" there may be a weak current flowing north.
 - <37> Flood usually flows northward, however, direction is variable.
 - <38> The combination of currents from Stono River and North Edisto River in the vicinity of the Southern S.A.L. Ry. bridge produces eight changes a day in direction of flow instead of the usual four. Approximate times of the minimums are as follows: current turns south about 2h 50m before flood begins and 3h 00m before ebb begins at Charleston Harbor; current north about 1h 10m after flood begins and 20 minutes before ebb begins at Charleston Harbor. Caution is advised when running north with a fair current as a cross current from the old channel of the Stono River is encountered at the south approach to the bridge.
 - <39> Flood is variable, current sometimes changing to ebb for a short time during the flood period.
 - <40> Due to changes in the waterway average speed values given are probably too large.
 - <41> Flood usually occurs in a southerly direction and the ebb in a northeastwardly direction.
 - <42> Flood is weak and variable.
 - <43> Current tends to rotate clockwise. At times for "Minimum before flood" there may be a weak current flowing northward while at times for "Minimum before ebb" there may be a weak current flowing southeastward.
 - <44> For greater ebb only.
 - <45> Tidal current is rotary, turning clockwise, with an average speed of about 0.3 knot.
 - <46> The strength of flood is usually about 2 knots. The speed ratio for strength of ebb is 0.8, except for an ebb speed at Tampa Bay entrance less than 1 knot or marked with an asterisk. In this case take the ebb speed at Johns Pass to be about 1 knot.
 - <47> For greater ebb. Lesser ebb is almost equal to greater ebb.
 - <48> Currents are materially affected by winds.
 - <49> Current is weak and variable. Current is somewhat rotary turning clockwise.
 - <50> Current is normally weak and variable, but winds may cause heavy swells.
 - <51> Minimum ebb is extremely weak, possibly flooding for a short period.
 - <52> Every other ebb phase exhibits a double ebb pattern. For single ebb phases use time differences and speed ratios of the first ebb.
 - <53> Ebb is weak and variable.
 - <54> Current is somewhat rotary, speed seldom exceeds 0.3 knot.
 - <55> Flood is weak and variable with speeds less than or equal to 0.2 knot. Minimums are indefinite.
 - <56> Turbulence with hazardous current speeds of 6 to 7 knots have been reported near the bridges in the canal. Extreme caution should be exercised.
- CAUTION--During the first 2 hours of flood in channel north of Governors Island the current in Hudson River is still ebbing while during the first 1 1/2 hours of ebb in this channel the current in Hudson River is still flooding. (See Tidal Current Charts, New York Harbor.) At such times special care must be taken by large ships in navigating this channel.

ROTARY TIDAL CURRENTS

Station No.	Depth (ft.)	(Time: Hours after Minimum before Flood at Boston Harbor)																				knots degrees				
		0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0
393	10 265	0.03 266	0.22 265	0.23 268	0.24 270	0.23 268	0.26 282	0.25 303	0.27 319	0.32 327	0.33 333	0.32 340	0.31 357	0.28 025	0.29 067	0.28 068	0.27 070	0.27 074	0.28 073	0.27 080	0.27 076	0.26 079	0.27 073	0.23 073	0.21 051	0.21 051
395	10 210	0.30 261	0.40 258	0.45 247	0.43 248	0.46 247	0.48 262	0.50 280	0.53 280	0.51 304	0.52 340	0.50 345	0.51 009	0.51 044	0.52 049	0.49 061	0.52 068	0.50 070	0.49 074	0.52 079	0.46 082	0.43 081	0.40 090	0.40 081	0.36 123	
397	10 200	0.29 209	0.30 212	0.30 222	0.31 229	0.32 243	0.34 247	0.34 259	0.35 265	0.37 268	0.36 284	0.35 331	0.34 002	0.34 018	0.34 042	0.35 056	0.34 058	0.36 064	0.35 065	0.34 075	0.36 080	0.35 085	0.34 086	0.32 095	0.18 132	
399	10 138	0.50 140	0.49 220	0.52 243	0.55 284	0.56 260	0.57 252	0.54 241	0.53 250	0.55 244	0.54 240	0.55 228	0.52 211	0.50 160	0.52 078	0.50 062	0.49 081	0.51 093	0.51 085	0.50 093	0.51 091	0.51 087	0.49 095	0.50 116	0.49 130	
401	10 306	0.20 342	0.20 340	0.21 244	0.22 228	0.24 232	0.23 223	0.25 232	0.25 200	0.26 210	0.24 216	0.25 271	0.24 290	0.24 351	0.23 051	0.24 059	0.22 048	0.21 045	0.21 028	0.21 037	0.20 052	0.20 028	0.20 035	0.20 011		
403	10 221	0.42 223	0.44 214	0.43 221	0.45 213	0.46 211	0.46 215	0.47 219	0.48 219	0.48 227	0.49 235	0.46 230	0.48 221	0.48 254	0.50 019	0.50 015	0.49 009	0.48 035	0.47 052	0.47 053	0.47 055	0.47 070	0.45 135	0.42 193	0.41 206	
405	10 213	0.42 197	0.44 193	0.45 182	0.45 175	0.50 135	0.46 178	0.47 183	0.45 222	0.44 247	0.44 267	0.40 306	0.45 330	0.47 346	0.44 328	0.44 344	0.47 335	0.44 327	0.42 334	0.42 341	0.43 337	0.47 338	0.40 306	0.43 274	0.45 240	
417	15 191	0.11 292	0.26 295	0.51 304	0.53 303	0.52 312	0.50 308	0.54 319	0.47 313	0.50 331	0.46 354	0.45 358	0.46 010	0.45 030	0.48 046	0.51 059	0.57 089	0.62 108	0.66 109	0.67 122	0.64 121	0.62 119	0.51 132	0.40 129	0.25 134	
419	10 251	0.30 307	0.30 331	0.38 342	0.39 332	0.36 336	0.37 343	0.37 341	0.36 343	0.36 350	0.35 347	0.34 006	0.30 029	0.20 081	0.19 114	0.25 138	0.30 146	0.35 160	0.35 165	0.36 172	0.38 173	0.38 173	0.36 190	0.36 203	0.32 233	
461	10 267	0.34 264	0.39 261	0.41 261	0.42 259	0.35 251	0.35 235	0.37 230	0.39 220	0.38 209	0.35 199	0.35 197	0.32 146	0.32 087	0.36 069	0.40 070	0.41 071	0.35 046	0.31 030	0.32 018	0.31 024	0.27 046	0.07 024	0.20 269	0.25 272	
489	10 007	0.33 010	0.35 024	0.36 034	0.35 060	0.36 343	0.40 348	0.39 007	0.40 063	0.42 025	0.45 095	0.37 064	0.35 081	0.32 103	0.35 102	0.37 103	0.34 104	0.33 117	0.35 135	0.35 139	0.34 158	0.03 215	0.29 339	0.31 353	0.24 355	
*513	10 086	0.17 095	0.16 090	0.18 088	0.16 090	0.13 095	0.17 090	0.19 093	0.21 083	0.22 083	0.18 081	0.21 077	0.18 082	0.22 072	0.24 070	0.26 069	0.27 067	0.28 070	0.28 073	0.29 077	0.25 085	0.23 082	0.18 085	0.18 085		
565	10 217	0.22 199	0.27 209	0.29 199	0.09 052	0.40 061	0.44 074	0.45 077	0.44 066	0.44 047	0.44 032	0.48 025	0.50 029	0.51 041	0.47 061	0.42 077	0.39 082	0.37 076	0.37 071	0.37 070	0.36 070	0.32 064	0.30 069	0.23 070	0.10 085	
565	20 271	0.15 238	0.22 231	0.24 251	0.05 030	0.28 031	0.30 076	0.31 073	0.36 064	0.34 040	0.33 029	0.35 021	0.40 030	0.43 049	0.39 067	0.30 058	0.35 056	0.34 050	0.32 047	0.29 044	0.23 032	0.16 005	0.09 005			
617	10 246	0.20 232	0.23 282	0.27 351	0.45 019	0.41 025	0.40 024	0.35 009	0.28 355	0.32 343	0.34 338	0.35 339	0.33 345	0.29 007	0.29 013	0.32 008	0.33 002	0.33 0356	0.33 0356	0.32 0356	0.32 0336	0.30 0336	0.26 0331	0.26 0320	0.24 0305	
617	20 220	0.15 214	0.19 232	0.20 001	0.33 020	0.34 027	0.30 024	0.24 003	0.21 345	0.22 340	0.31 333	0.33 332	0.32 331	0.29 351	0.29 009	0.27 008	0.28 003	0.29 350	0.29 339	0.29 334	0.26 329	0.21 322	0.17 315	0.14 254	0.10 005	

* In Reserved Channel, the tidal current is weak, averaging less than 0.1 knot. During a 7-day observation period, the total current set was consistently eastward.

TABLE 3.—VELOCITY OF CURRENT AT ANY TIME

EXPLANATION

Though the predictions in this publication give only the slacks and maximum currents, the velocity of the current at any intermediate time can be obtained approximately by the use of this table. Directions for its use are given below the table.

Before using the table for a place listed in table 2, the predictions for the day in question should first be obtained by means of the differences and ratios given in table 2.

The examples below follow the numbered steps in the directions.

Example 1.—Find the velocity of the current in The Race at 6:00 on a day when the predictions which immediately precede and follow 6:00 are as follows:

(1)	Slack Water		Maximum (Flood)	
	Time	Velocity	Time	Velocity
	4:18		7:36	3.2 knots

Directions under the table indicate table A is to be used for this station.

(2) Interval between slack and maximum flood is $7:36 - 4:18 = 3^{\text{h}}18^{\text{m}}$. Column heading nearest to $3^{\text{h}}18^{\text{m}}$ is $3^{\text{h}}20^{\text{m}}$.

(3) Interval between slack and time desired is $6:00 - 4:18 = 1^{\text{h}}42^{\text{m}}$. Line labeled $1^{\text{h}}40^{\text{m}}$ is nearest to $1^{\text{h}}42^{\text{m}}$.

(4) Factor in column $3^{\text{h}}20^{\text{m}}$ and on line $1^{\text{h}}40^{\text{m}}$ is 0.7. The above flood velocity of 3.2 knots multiplied by 0.7 gives a flood velocity of 2.24 knots (or 2.2 knots, since one decimal is sufficient) for the time desired.

Example 2.—Find the velocity of the current in the Harlem River at Broadway Bridge at 16:30 on a day when the predictions (obtained using the difference and ratio in table 2) which immediately precede and follow 16:30 are as follows:

(1)	Maximum (Ebb)		Slack Water	
	Time	Velocity	Time	
	13:49	2.5 knots	17:25	

Directions under the table indicate table B is to be used, since this station in table 2 is referred to Hell Gate.

(2) Interval between slack and maximum ebb is $17:25 - 13:49 = 3^{\text{h}}36^{\text{m}}$. Hence, use column headed $3^{\text{h}}40^{\text{m}}$.

(3) Interval between slack and time desired is $17:25 - 16:30 = 0^{\text{h}}55^{\text{m}}$. Hence, use line labeled $1^{\text{h}}00^{\text{m}}$.

(4) Factor in column $3^{\text{h}}40^{\text{m}}$ and on line $1^{\text{h}}00^{\text{m}}$ is 0.5. The above ebb velocity of 2.5 knots multiplied by 0.5 gives an ebb velocity of 1.2 knots for the desired time.

When the interval between slack and maximum current is greater than $5^{\text{h}}40^{\text{m}}$, enter the table with one-half the interval between slack and maximum current and one-half the interval between slack and the desired time and use the factor thus found.

TABLE 3.—VELOCITY OF CURRENT AT ANY TIME

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

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

Use table A for all places except those listed below for table B.
Use table B for Cape Cod Canal, Hell Gate, Chesapeake and Delaware Canal and all stations in table 2 which are referred to them.

- From predictions find the time of slack water and the time and velocity of maximum current (flood or ebb), one of which is immediately before and the other after the time for which the velocity is desired.
- Find the interval of time between the above slack and maximum current, and enter the top of table A or B with the interval which most nearly agrees with this value.
- Find the interval of time between the above slack and the time desired, and enter the side of table A or B with the interval which most nearly agrees with this value.
- Find, in the table, the factor corresponding to the above two intervals, and multiply the maximum velocity by this factor. The result will be the approximate velocity at the time desired.

TABLE 4.—DURATION OF SLACK

The predicted times of slack water given in this publication indicate the instant of zero velocity, which is only momentary. There is a period each side of slack water, however, during which the current is so weak that for practical purposes it may be considered as negligible.

The following tables give, for various maximum currents, the approximate period of time during which weak currents not exceeding 0.1 to 0.5 knot will be encountered. This duration includes the last of the flood or ebb and the beginning of the following ebb or flood, that is, half of the duration will be before and half after the time of slack water.

Table A should be used for all places *except* those listed below for table B.

Table B should be used for Cape Cod Canal, Hell Gate, Chesapeake and Delaware Canal, and all stations in table 2 which are referred to them.

Duration of weak current near time of slack water

TABLE A

Maximum current <i>Knots</i>	Period with a velocity not more than—				
	0.1 knot <i>Minutes</i>	0.2 knot <i>Minutes</i>	0.3 knot <i>Minutes</i>	0.4 knot <i>Minutes</i>	0.5 knot <i>Minutes</i>
1.0	23	46	70	94	120
1.5	15	31	46	62	78
2.0	11	23	35	46	58
3.0	8	15	23	31	38
4.0	6	11	17	23	29
5.0	5	9	14	18	23
6.0	4	8	11	15	19
7.0	3	7	10	13	16
8.0	3	6	9	11	14
9.0	3	5	8	10	13
10.0	2	5	7	9	11

TABLE B

Maximum current <i>Knots</i>	Period with a velocity not more than—				
	0.1 knot <i>Minutes</i>	0.2 knot <i>Minutes</i>	0.3 knot <i>Minutes</i>	0.4 knot <i>Minutes</i>	0.5 knot <i>Minutes</i>
1.0	13	28	46	66	89
1.5	8	18	28	39	52
2.0	6	13	20	28	36
3.0	4	8	13	18	22
4.0	3	6	9	13	17
5.0	3	5	8	10	13

When there is a difference between the velocities of the maximum flood and ebb preceding and following the slack for which the duration is desired, it will be sufficiently accurate for practical purposes to find a separate duration for each maximum velocity and take the average of the two as the duration of the weak current.

TABLE 5.—ROTARY TIDAL CURRENTS

EXPLANATION

Offshore and in some of the wider indentations of the coast, the tidal current is quite different from that found in the more protected bays and rivers. In these inside waters the tidal current is of the reversing type. It sets in one direction for a period of about 6 hours after which it ceases to flow momentarily and then sets in the opposite direction during the following 6 hours. Offshore the current, not being confined to a definite channel, changes its direction continually and never comes to a slack, so that in a tidal cycle of about 12½ hours it will have set in all directions of the compass. This type of current is therefore called a *rotary current*.

A characteristic feature of the rotary current is the absence of slack water. Although the current generally varies from hour to hour, this variation from greatest current to least current and back again to greatest current does not give rise to a period of slack water. When the velocity of the rotary tidal current is least, it is known as the minimum current, and when it is greatest it is known as the maximum current. The minimum and maximum velocities of the rotary current are thus related to each other in the same way as slack and strength of current, a minimum velocity of the current following a maximum velocity by an interval of about 3 hours and being followed in turn by another maximum after a further interval of 3 hours.

In the following table there are given for a number of offshore stations the direction and average velocity of the rotary tidal current for each hour of the tidal cycle referred to predictions for a station in table 1. All times are eastern standard for the 75th meridian.

The velocities given in the table are average. The Moon at new, full, or perigee tends to increase the velocities 15 to 20 percent above average. When perigee occurs at or near the time of new or full Moon the velocities will be 30 to 40 percent above average. Quadrature and apogee tend to decrease the velocities below average by 15 to 20 percent. When apogee occurs at or near quadrature they will be 30 to 40 percent below average. The velocities will be about average when apogee occurs at or near the time of new or full Moon and also when perigee occurs at or near quadrature. (See table of astronomical data.)

The direction of the current is given in degrees, *true*, reading clockwise from 0° at north, and is the direction *toward* which the water is flowing.

The velocities and directions are for the tidal current only and do not include the effect of winds. When a wind is blowing, a wind-driven current will be set up which will be in addition to the tidal current, and the actual current encountered will be a combination of the wind-driven current and tidal current. See the chapters on "Wind-Driven Currents" and "The Combination of Currents."

As an example, in the following table the current at Nantucket Shoals is given for each hour after maximum flood at Pollock Rip Channel. Suppose it is desired to find the direction and velocity of the current at Nantucket Shoals at 3:15 p.m. (15:15) eastern standard time on a day when maximum flood at Pollock Rip Channel is predicted in table 1 to occur at 13:20 eastern standard time. The desired time is therefore about 2 hours after maximum flood at Pollock Rip Channel, and from the following table the tidal current at Nantucket Shoals at this time is setting 15° *true* with an average velocity of 0.8 knot. If this day is near the time of new Moon and about halfway between apogee and perigee, then the distance effect of the Moon will be nil and the phase effect alone will operate to increase the velocity by about 15 percent, to 0.9 knot. If a wind has been blowing, determine the direction and velocity of the wind-driven current from the chapter on "Wind-Driven Currents" and combine it with the above tidal current as explained in the chapter on "The Combination of Currents."

TABLE 5.—ROTARY TIDAL CURRENTS

Caution.—Velocities from $1\frac{1}{2}$ to 3 knots have been observed at most of the stations in this table. Near Diamond Shoal Light a velocity of 4 knots has been recorded.

At some offshore stations, such as near the entrance to Chesapeake Bay, the tidal current is directed alternately toward and away from the bay entrance with intervening periods of slack water, so that it is essentially a reversing current. For such places, differences for predicting are given in table 2.

TABLE 5.—ROTARY TIDAL CURRENTS

Georges Bank Lat. 41°50' N., long. 66°37' W.			Georges Bank Lat. 41°54' N., long. 67°08' W.			Georges Bank Lat. 41°48' N., long. 67°34' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
	Degrees	Knots		Degrees	Knots		Degrees	Knots
0	285	0.9	0	298	1.1	0	325	1.5
1	304	1.1	1	325	1.4	1	332	2.1
2	324	1.2	2	344	1.5	2	342	2.0
3	341	1.1	3	0	1.2	3	358	1.3
4	10	1.0	4	33	0.7	4	35	0.7
5	43	0.9	5	82	0.8	5	99	0.8
6	89	1.0	6	118	1.1	6	126	1.3
7	127	1.3	7	138	1.5	7	150	2.0
8	147	1.6	8	153	1.2	8	159	1.9
9	172	1.4	9	178	1.1	9	169	1.7
10	197	0.9	10	208	0.9	10	197	1.2
11	232	0.8	11	238	0.8	11	275	0.9
Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28		
Georges Bank Lat. 41°42' N., long. 67°37' W.			Georges Bank Lat. 41°41' N., long. 67°49' W.			Georges Bank Lat. 41°30' N., long. 68°07' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
	Degrees	Knots		Degrees	Knots		Degrees	Knots
0	316	1.1	0	318	1.6	0	312	1.5
1	341	1.3	1	320	1.8	1	338	1.7
2	356	1.0	2	325	1.4	2	346	1.5
3	16	0.8	3	330	0.8	3	14	1.1
4	43	0.6	4	67	0.3	4	59	0.9
5	92	0.8	5	111	0.9	5	99	0.9
6	122	1.0	6	117	1.5	6	123	1.3
7	146	1.1	7	126	1.7	7	144	1.7
8	170	1.1	8	144	1.7	8	160	1.6
9	195	1.0	9	160	1.1	9	187	1.3
10	215	1.0	10	242	0.8	10	244	1.0
11	272	0.9	11	292	1.2	11	274	1.1
Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28		
Georges Bank Lat. 41°29' N., long. 67°04' W.			Georges Bank Lat. 41°14' N., long. 67°38' W.			Georges Bank Lat. 41°13' N., long. 68°20' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
	Degrees	Knots		Degrees	Knots		Degrees	Knots
0	277	1.0	0	305	1.4	0	319	1.5
1	302	1.2	1	332	1.6	1	332	2.0
2	329	1.4	2	355	1.6	2	345	1.4
3	348	1.3	3	15	1.4	3	9	0.8
4	15	1.2	4	38	1.1	4	42	0.6
5	48	1.1	5	77	0.9	5	80	0.7
6	85	1.2	6	112	1.2	6	118	1.0
7	122	1.4	7	141	1.6	7	138	1.3
8	145	1.5	8	162	1.6	8	154	1.4
9	166	1.3	9	187	1.5	9	169	1.5
10	194	1.2	10	214	1.4	10	188	1.3
11	223	1.1	11	252	1.2	11	236	0.9
Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28		
Georges Bank Lat. 40°48' N., long. 67°40' W.			Georges Bank Lat. 40°49' N., long. 68°34' W.			Great South Channel, Georges Bank Lat. 40°31' N., long. 68°47' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
	Degrees	Knots		Degrees	Knots		Degrees	Knots
0	304	0.9	0	301	1.2	0	320	0.7
1	340	0.9	1	326	1.5	1	331	0.9
2	353	0.8	2	345	1.4	2	342	1.1
3	29	0.6	3	8	1.1	3	3	1.0
4	56	0.6	4	36	0.8	4	23	0.8
5	83	0.6	5	69	0.8	5	63	0.4
6	107	0.9	6	106	1.0	6	129	0.7
7	140	1.0	7	139	1.4	7	140	0.9
8	156	1.0	8	153	1.5	8	164	1.0
9	175	0.9	9	175	1.4	9	179	1.0
10	202	0.8	10	201	1.1	10	190	0.8
11	245	0.8	11	237	0.9	11	221	0.6
Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28			Hours after maximum flood at Pollock Rip Channel, see page 28		

TABLE 5.—ROTARY TIDAL CURRENTS

Nantucket Shoals Lat. 40°37' N., long. 69°37' W.			Great South Channel, Georges Bank Lat. 41°10' N., long. 68°56' W.			Davis Bank, Nantucket Shoals, 15 miles S.E. of Nantucket I. Lat. 41°07' N., long. 69°41' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots
0	323	0.6	0	318	0.5	0	15	1.5
1	355	0.7	1	349	0.7	1	28	2.1
2	15	0.8	2	352	1.1	2	32	2.4
3	38	0.8	3	356	1.0	3	35	2.1
4	55	0.8	4	359	0.7	4	37	1.1
5	85	0.7	5	18	0.4	5	128	0.4
6	125	0.6	6	108	0.4	6	197	1.2
7	162	0.7	7	157	0.7	7	204	1.9
8	192	0.8	8	165	1.0	8	205	2.2
9	212	0.8	9	173	1.0	9	206	2.2
10	232	0.8	10	180	0.8	10	213	1.6
11	257	0.7	11	204	0.6	11	307	0.7
Davis Bank, Nantucket Shoals (west), 15 miles S.E. of Nantucket I. Lat. 41°03' N., long. 69°47' W.			Davis Bank, Nantucket Shoals (middle), 17.5 miles S.E. of Nantucket I. Lat. 41°02' N., long. 69°43' W.			Davis Bank, Nantucket Shoals (east), 18.5 miles S.E. of Nantucket I. Lat. 41°02' N., long. 69°41' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots
0	346	0.9	0	23	0.8	0	30	0.6
1	28	1.2	1	27	1.5	1	36	1.3
2	47	1.3	2	28	1.9	2	38	1.5
3	73	1.1	3	29	1.8	3	50	1.4
4	103	0.8	4	46	1.1	4	80	1.1
5	132	0.9	5	115	0.4	5	105	0.8
6	182	0.8	6	191	1.2	6	178	0.6
7	215	1.2	7	202	1.9	7	230	1.3
8	240	1.1	8	215	1.7	8	235	1.7
9	251	0.9	9	225	1.5	9	238	1.4
10	267	0.7	10	233	0.9	10	241	1.0
11	302	0.7	11	270	0.2	11	265	0.3
Nantucket Island, 28 miles east of Lat. 41°20' N., long. 69°21' W.			Monomoy Point, 23 miles east of Lat. 41°35' N., long. 69°30' W.			Nauset Beach Light, 5 miles N.E. of Lat. 41°56' N., long. 69°54' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots
0	19	0.9	0	320	0.7	0	315	0.5
1	7	1.3	1	324	1.0	1	327	0.6
2	359	1.4	2	326	0.9	2	340	0.5
3	351	1.1	3	330	0.7	3	357	0.2
4	334	0.5	4	334	0.3	4	16	0.1
5	221	0.3	5	144	0.1	5	124	0.2
6	198	0.8	6	145	0.5	6	132	0.4
7	185	1.1	7	146	0.8	7	135	0.6
8	184	1.1	8	147	0.9	8	139	0.6
9	184	0.9	9	148	0.8	9	145	0.4
10	183	0.7	10	150	0.4	10	269	0.2
11	60	0.1	11	230	0.1	11	297	0.2
Great Round Shoal Channel entrance Nantucket Sound entrance. Lat. 41°26' N., long. 69°44' W.			Great Round Shoal Channel Buoy 9, 0.3 mile N.E. of Lat. 41°24' N., long. 69°55' W.			Great Round Shoal Channel, 4 miles N.E. of Great Pt., Nantucket Sound. Lat. 41°26' N., long. 69°59' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots
0	32	1.6	0	47	1.0	0	80	0.8
1	45	1.4	1	60	1.3	1	88	1.1
2	68	1.3	2	70	1.3	2	96	1.3
3	95	1.1	3	91	0.8	3	104	1.0
4	140	0.8	4	183	0.5	4	129	0.5
5	192	1.2	5	211	0.7	5	213	0.5
6	210	1.5	6	234	0.9	6	267	1.1
7	220	1.5	7	247	1.3	7	275	1.4
8	235	1.2	8	252	1.1	8	280	1.2
9	264	0.9	9	260	0.9	9	284	0.7
10	303	0.8	10	305	0.3	10	328	0.2
11	350	1.2	11	35	0.4	11	42	0.4

TABLE 5.—ROTARY TIDAL CURRENTS

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Cuttyhunk I., 3½ miles SW. of Lat. 41°23' N., long. 71°00' W.			Gooseberry Neck, 2 miles SSE. of Buzzards Bay entrance. Lat. 41°27' N., long. 71°01' W.			Browns Ledge, Massachusetts, Lat. 41°20' N., long. 71°06' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots	Hours after maximum flood at Pollock Rip Channel, see page 28	Degrees	Knots
0	356	0.4	0	52	0.6	0	330	0.3
1	15	0.3	1	65	0.4	1	12	0.3
2	80	0.2	2	108	0.2	2	28	0.3
3	123	0.3	3	168	0.3	3	104	0.4
4	146	0.5	4	210	0.4	4	118	0.4
5	158	0.5	5	223	0.5	5	123	0.4
6	173	0.4	6	232	0.5	6	168	0.3
7	208	0.3	7	249	0.3	7	205	0.2
8	267	0.2	8	274	0.2	8	201	0.3
9	306	0.3	9	321	0.2	9	270	0.3
10	322	0.3	10	16	0.3	10	282	0.4
11	335	0.4	11	38	0.5	11	318	0.5
Point Judith, Harbor of Refuge, Block Island Sound (west entrance). Lat. 41°22' N., long. 71°31' W.			Point Judith, 4.5 miles SW. of, Block Island Sound. Lat. 41°18' N., long. 71°33' W.			Grace Point, 2 miles NW. of, Block Island Sound. Lat. 41°12' N., long. 71°38' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at The Race, see page 34	Degrees	Knots	Hours after maximum flood at The Race, see page 34	Degrees	Knots	Hours after maximum flood at The Race, see page 34	Degrees	Knots
0	197	0.2	0	264	0.6	0	304	0.2
1	160	0.2	1	270	0.6	1	2	0.2
2	151	0.4	2	270	0.5	2	28	0.4
3	159	0.5	3	280	0.2	3	28	0.6
4	146	0.5	4	62	0.2	4	37	0.7
5	124	0.5	5	70	0.6	5	71	0.6
6	109	0.4	6	78	0.7	6	86	0.6
7	104	0.2	7	95	0.5	7	126	0.4
8	90	0.1	8	105	0.3	8	137	0.2
9	30	0.1	9	120	0.1	9	213	0.1
10	336	0.1	10	286	0.1	10	256	0.1
11	209	0.1	11	277	0.3	11	267	0.1
Little Gull I., 3.7 miles ESE. of, Block Island Sound. Lat. 41°11' N., long. 72°02' W.			Sandy Hook Approach Lighted Horn Buoy 2A, 0.2 mile W. of Lat. 40°27' N., long. 73°55' W.			Fenwick Shoal Lighted Whistle Buoy 2 off Delaware coast. Lat. 38°25' N., long. 74°46' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at The Race, see page 34	Degrees	Knots	Hours after maximum flood at The Narrows, N.Y. 11hr., see page 46	Degrees	Knots	Hours after maximum flood at Delaware Bay Entrance, see page 52	Degrees	Knots
0	271	0.8	0	313	0.4	0	342	0.2
1	284	0.5	1	325	0.3	1	349	0.2
2	320	0.2	2	356	0.2	2	357	0.1
3	68	0.2	3	55	0.3	3	43	0.1
4	77	0.7	4	94	0.3	4	110	0.1
5	95	1.1	5	118	0.4	5	135	0.2
6	118	1.6	6	136	0.6	6	150	0.3
7	128	1.2	7	147	0.5	7	165	0.3
8	150	0.6	8	177	0.2	8	185	0.2
9	171	0.2	9	256	0.2	9	226	0.1
10	221	0.4	10	290	0.3	10	282	0.1
11	228	0.7	11	298	0.4	11	318	0.2
*Frying Pan Shoals, off Cape Fear, Lat. 33°34' N., long. 77°49' W.			Cape Romain, 5 miles SE. of Lat. 32°57' N., long. 79°17' W.			Cape Romain, 6.9 miles SW. of Lat. 32°54' N., long. 79°26' W.		
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity
Hours after maximum flood at Charleston Harbor, see page 76	Degrees	Knots	Hours after maximum flood at Charleston Harbor, see page 76	Degrees	Knots	Hours after maximum flood at Charleston Harbor, see page 76	Degrees	Knots
0	335	0.3	0	6	0.2	0	317	0.3
1	10	0.2	1	38	0.2	1	350	0.2
2	50	0.2	2	55	0.3	2	19	0.2
3	90	0.3	3	67	0.3	3	71	0.3
4	110	0.3	4	93	0.3	4	115	0.3
5	128	0.3	5	114	0.3	5	111	0.3
6	150	0.3	6	167	0.2	6	132	0.2
7	188	0.2	7	212	0.2	7	160	0.2
8	235	0.2	8	242	0.3	8	216	0.2
9	268	0.3	9	244	0.4	9	251	0.2
10	290	0.3	10	262	0.3	10	266	0.3
11	303	0.3	11	292	0.3	11	303	0.3

*Current during June-August usually sets eastward, average velocity ½ knot.

TABLE 5.—ROTARY TIDAL CURRENTS

Capers Inlet, 1.9 miles east of Lat. 32°50' N., long. 79°40' W.			Capers Inlet, 3.6 miles SE. of Lat. 32°49' N., long. 79°38' W.			Charleston Entrance, 37 miles east of Lat. 32°42' N., long. 79°06' W.			
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	
0	Degrees	Knots	0	Degrees	Knots	0	Degrees	Knots	
1	12	0.1	1	302	0.2	1	328	0.3	
2	58	0.1	2	357	0.1	2	350	0.3	
3	52	0.2	3	34	0.1	3	20	0.2	
4	33	0.2	4	17	0.2	4	65	0.2	
5	67	0.1	5	89	0.2	5	95	0.3	
6	98	0.1	6	94	0.2	6	118	0.3	
7	129	0.1	7	112	0.2	7	140	0.3	
8	214	0.1	8	116	0.2	8	163	0.3	
9	222	0.2	9	189	0.1	9	195	0.2	
10	234	0.2	10	249	0.2	10	235	0.2	
11	246	0.1	11	268	0.2	11	268	0.2	
				282	0.2			295	0.3
Hours after maximum flood at Charleston Harbor, see page 76			Hours after maximum flood at Charleston Harbor, see page 76			Hours after maximum flood at Charleston Harbor, see page 76			
Charleston Lighted Whistle Buoy 2C, off Charleston Harbor entrance. Lat. 32°41' N., long. 79°43' W.			Folly Island, 2 miles east of Lat. 32°39' N., long. 79°52' W.			Folly Island, 3.5 miles east of Lat. 32°38' N., long. 79°50' W.			
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	
0	Degrees	Knots	0	Degrees	Knots	0	Degrees	Knots	
1	300	0.2	1	346	0.1	1	322	0.1	
2	332	0.2	2	24	0.2	2	47	0.2	
3	17	0.1	3	58	0.3	3	69	0.2	
4	55	0.2	4	76	0.3	4	86	0.2	
5	93	0.3	5	102	0.3	5	96	0.2	
6	117	0.3	6	121	0.2	6	115	0.2	
7	153	0.2	7	164	0.1	7	148	0.1	
8	207	0.2	8	222	0.2	8	215	0.1	
9	242	0.2	9	256	0.2	9	256	0.2	
10	260	0.3	10	256	0.3	10	260	0.2	
11	275	0.3	11	271	0.3	11	265	0.2	
			290	0.2		285	0.1		
Hours after maximum flood at Charleston Harbor, see page 76			Hours after maximum flood at Charleston Harbor, see page 76			Hours after maximum flood at Charleston Harbor, see page 76			
Martins Industry, 5 miles east of, off Port Royal Sound. Lat. 32°06' N., long. 80°28' W.			Savannah Light, 1.2 miles SE. of Lat. 31°57' N., long. 80°40' W.			Brunswick Lighted Whistle Buoy 2B, off St. Simons Sound. Lat. 31°00' N., long. 81°10' W.			
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	
0	Degrees	Knots	0	Degrees	Knots	0	Degrees	Knots	
1	282	0.4	1	296	0.3	1	308	0.3	
2	293	0.3	2	308	0.2	2	340	0.2	
3	320	0.1	3	326	0.1	3	42	0.1	
4	30	0.1	4	45	0.1	4	90	0.3	
5	75	0.3	5	90	0.2	5	111	0.4	
6	92	0.4	6	107	0.3	6	122	0.4	
7	102	0.5	7	114	0.3	7	130	0.3	
8	110	0.4	8	123	0.3	8	141	0.2	
9	140	0.2	9	145	0.2	9	220	0.1	
10	200	0.2	10	213	0.1	10	260	0.2	
11	250	0.3	11	267	0.2	11	289	0.4	
			283	0.3		297	0.4		
Hours after maximum flood at Charleston Harbor, see page 76			Hours after maximum flood at Savannah River Entrance, see page 82			Hours after maximum flood at Miami Har- bor Entrance, see page 94			
Miami Outer Bay Cut Entrance Lat. 25°46' N., long. 80°06' W.			Hours after maximum flood at Savannah River Entrance, see page 82			Hours after maximum flood at Miami Har- bor Entrance, see page 94			
Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	Time	Direction (true)	Velocity	
0	Degrees	Knots	0	Degrees	Knots	0	Degrees	Knots	
1	338	0.1	1	319	0.1	1	340	0.2	
2	319	0.1	2	352	0.1	2	42	0.1	
3	352	0.1	3	18	0.1	3	90	0.3	
4	36	0.1	4	36	0.1	4	111	0.4	
5	30	0.2	5	30	0.2	5	122	0.4	
6	25	0.1	6	25	0.1	6	130	0.3	
7	32	0.1	7	25	0.1	7	141	0.2	
8	25	0.1	8	26	0.1	8	220	0.1	
9	26	0.1	9	6	0.2	9	260	0.2	
10	6	0.2	10	355	0.1	10	289	0.4	
11	355	0.1				11	297	0.4	
Hours after maximum flood at Miami Har- bor Entrance, see page 94									

- Fire Island Inlet, N.Y., 22 miles south of:*
Tidal current is weak, averaging about 0.1 knot at strength.
- Fire Island Lighted Whistle Buoy 2 FI:*
Tidal current is weak, averaging about 0.2 knot at strength.
- Ambrose Light, New York Harbor entrance:*
Tidal current is weak, averaging about 0.2 knot at strength.
- Cape May, N.J., 72 miles east of:*
Tidal current is weak, averaging about 0.1 knot at strength.
- Five-Fathom Bank Northeast Lighted Whistle Buoy 2 FB:*
Tidal current is weak, averaging about 0.2 knot at strength.
- Winter-Quarter Shoal Lighted Whistle Buoy 6WQS, 9.2 miles SE. of, off Assateague I.:*
Tidal current is weak, averaging less than 0.1 knot.
- Cape Charles, 70 miles east of:*
Tidal current is weak, averaging about 0.2 knot at strength.
- Chesapeake Light, 4.4 miles NE. of, off Chesapeake Bay entrance, Va.:*
Tidal current is weak and variable.
- Cape Lookout Shoals Lighted Whistle Buoy 14:*
Tidal current is weak, averaging about 0.2 knot at strength. Current during June-August usually sets eastward, average velocity $\frac{1}{2}$ knot.
- Ocracoke Inlet, 3 $\frac{1}{4}$ miles SSE. of:*
Tidal current is weak, averaging about 0.1 knot at strength.
- Diamond Shoal Light, 3.9 miles SSW. of:*
Tidal current is weak, averaging less than 0.1 knot at strength. Current during June-August usually sets northeastward, average velocity $\frac{1}{4}$ knot.
- Frying Pan Shoals Light, 14.3 miles NW. of:*
Tidal current is weak, averaging about 0.2 knot at strength. Current during June-August usually sets eastward, average velocity $\frac{1}{2}$ knot.
- St. Johns Point, 5 miles east of, Fla.:*
Tidal current is weak, averaging about 0.2 knot at strength.
- Fowey Rocks Light, 1.5 miles SW. of:*
Tidal current is weak and variable.

THE GULF STREAM

The region where the Gulf of Mexico narrows to form the channel between Florida Keys and Cuba may be regarded as the head of the Gulf Stream. From this region the stream sets eastward and northward through the Straits of Florida, and after passing Little Bahama Bank it continues northward and then northeastward, following the general direction of the 100-fathom curve as far as Cape Hatteras. The flow in the Straits is frequently referred to as the Florida Current.

Shortly after emerging from the Straits of Florida, the stream is joined by the Antilles Current, which flows northwesterly along the open ocean side of the West Indies before uniting with the water which has passed through the straits. Beyond Cape Hatteras the combined current turns more and more eastward under the combined effects of the deflecting force of the Earth's rotation and the eastwardly trending coastline, until the region of the Grand Banks of Newfoundland is reached.

Eastward of the Grand Banks the whole surface is slowly driven eastward and northeastward by the prevailing westerly winds to the coastal waters of northwestern Europe. For distinction, this broad and variable wind-driven surface movement is sometimes referred to as the North Atlantic Drift or Gulf Stream Drift.

In general, the Gulf Stream as it issues into the sea through the Straits of Florida may be characterized as a swift, highly saline current of blue water whose upper stratum is composed of warm water.

On its western or inner side, the Gulf Stream is separated from the coastal waters by a zone of rapidly falling temperature, to which the term "cold wall" has been applied. It is most clearly marked north of Cape Hatteras but extends, more or less well defined, from the Straits to the Grand Banks.

Throughout the whole stretch of 400 miles in the Straits of Florida, the stream flows with considerable velocity. Abreast of Havana, the average surface velocity in the axis of the stream is about 2½ knots. As the cross-sectional area of the stream decreases, the velocity increases gradually, until abreast of Cape Florida it becomes about 3½ knots. From this point within the narrows of the straits, the velocity along the axis gradually decreases to about 2½ knots off Cape Hatteras, N.C. These values are for the axis of the stream where the current is a maximum, the velocity of the stream decreasing gradually from the axis as the edges of the stream are approached. The velocity of the stream, furthermore, is subject to fluctuations brought about by variations in winds and barometric pressure.

The following tables give the mean surface velocity of the Gulf Stream in two cross sections in the Straits of Florida:

Between Rebecca Shoal and Cuba		Between Fowey Rocks and Gun Cay	
Distance south of Rebecca Shoal	Mean surface velocity observed	Distance east of Fowey Rocks	Mean surface velocity observed
Nautical miles	Knots	Nautical miles	Knots
20	0.3	8	2.7
35	0.7	11½	3.5
50	2.2	15	3.2
68	2.2	22	2.7
86	0.8	29	2.1
		36	1.7

Crossing the Gulf Stream at Jupiter or Fowey Rocks, an average allowance of 2½ knots in a northerly direction should be made for the current.

Crossing the stream from Havana, a fair allowance for the average current between 100-fathom curves is 1.1 knots in an east-north-easterly direction.

From within the straits, the axis of the Gulf Stream runs approximately parallel with the 100-fathom curve as far as Cape Hatteras. Since this stretch of coast line sweeps northward in a sharper curve than does the 100-fathom line, the stream lies at varying distances from the shore. The lateral boundaries of the current within the straits are fairly well fixed, but when the stream flows into the sea the eastern boundary becomes somewhat vague. On the western side, the limits can be defined approximately since the waters of the stream differ in color, temperature, salinity, and flow from the inshore coastal waters. On the east, however, the Antilles Current combines with the Gulf Stream, so that its waters here merge gradually with the waters of the open Atlantic. Observations of the National Ocean Survey indicate that, in general, the average position of the inner edge of the Gulf Stream as far as Cape Hatteras lies inside the 50-fathom curve. The Gulf Stream, however, shifts somewhat with the seasons, and is considerably influenced by the winds which cause fluctuations in its position, direction, and velocity; consequently, any limits which are assigned refer to mean or average positions.

The approximate mean positions of the inner edge and axis (point where greatest velocity may be found) are indicated in the following table:

Approximate mean position of the Gulf Stream

Locality	Inner edge		Axis Nautical miles
	Nautical miles	Nautical miles	
North of Havana, Cuba.....			25
Southeast of Key West, Fla.....			45
East of Fowey Rocks, Fla.....			10
East of Miami Beach, Fla.....			15
East of Palm Beach, Fla.....			15
East of Jupiter Inlet, Fla.....			20
East of Cape Canaveral, Fla.....	10	45	
East of Daytona Beach, Fla.....	25	75	
East of Ormond Beach, Fla.....	25	75	
East of St. Augustine, Fla. (coast line).....	40	85	
East of Jacksonville, Fla. (coast line).....	55	90	
Southeast of Savannah, Ga. (coast line).....	65	95	
Southeast of Charleston, S.C. (coast line).....	55	90	
Southeast of Myrtle Beach, S.C.....	60	100	
Southeast of Cape Fear, N.C. (light).....	35	75	
Southeast of Cape Lookout, N.C. (light).....	20	50	
Southeast of Cape Hatteras, N.C.....	10	35	
Southeast of Virginia Beach Va.....	85	115	
Southeast of Atlantic City, N.J.....	120	-----	
Southeast of Sandy Hook, N.J.....	150	-----	

At the western end of the Straits of Florida the limits of the Gulf Stream are not well defined, and for this reason the location of the inner edge has been omitted for Havana, Cuba, and Key West, Fla., in the above table. Between Fowey Rocks and Jupiter Inlet the inner edge is deflected westward and lies very close to the shore line.

Along the Florida Reefs between Alligator Reef and Dry Tortugas the distance of the northerly edge of the Gulf Stream from the edge of the reefs gradually increases toward the west. Off Alligator Reef it is quite close inshore, while off Rebecca Shoal and Dry Tortugas it is possibly 15 to 20 miles south of the 100-fathom curve. Between the reefs and the northern edge of the Gulf Stream the currents are ordinarily tidal and are subject at all times to considerable modification by local winds and barometric conditions. This neutral zone varies in both length and breadth; it may extend along the reefs a greater or less distance than stated, and its width varies as the northern edge of the Gulf Stream approaches or recedes from the reefs.

The approximate position of the axis of the Gulf Stream for various regions is shown on the following National Ocean Survey Charts: No. 1002, Straits of Florida; No. 1007, South Carolina to Cuba; No. 1112, Cape Canaveral to Key West; No. 1113, Alligator Reef to Havana. Chart No. 1001 shows the axis and the position of the inner edge of the Gulf Stream from Cape Hatteras to Straits of Florida.

WIND-DRIVEN CURRENTS

A wind continuing for some time will produce a current the velocity of which depends on the velocity of the wind, and unless the current is deflected by some other cause, the deflective force of the earth's rotation will cause it to set to the right of the direction of the wind in the northern hemisphere and to the left in the southern hemisphere.

The current produced at off-shore locations by local winds of various strengths and directions has been investigated from observations made at 20 lightships (some of which have since been moved) from Portland, Maine, to St. Johns River, Fla. The observations were made hourly and varied in length from 1 to 2 years at most of the locations to 5½ years at Nantucket Shoals and 9 years at Diamond Shoal. The averages obtained are given below and may prove helpful in estimating the probable current that may result from various winds at the several locations.

Caution.—There were of course many departures from these averages of velocity and direction, for the wind-driven current often depends not only on the length of time the wind blows but also on factors other than the local wind at the time and place of the current. The mariner must not, therefore, assume that the given wind will always produce the indicated current.

It should be remembered, too, that the current which a vessel experiences at any time is the resultant of the combined actions of the tidal current, the wind-driven current, and any other currents such as the Gulf Stream or currents due to river discharge.

Velocity.—The table below shows the average velocity of the current due to winds of various strengths.

Wind velocity (miles per hour).....	10	20	30	40	50
<i>Average current velocity (knots) due to wind at following lightship stations:</i>					
Boston and Barnegat.....	0.1	0.1	0.2	0.3	0.3
Diamond Shoal and Cape Lookout Shoals.....	0.5	0.6	0.7	0.8	1.0
All other locations.....	0.2	0.3	0.4	0.5	0.6

Direction.—The position of the shore line with respect to the station influences considerably the direction of the currents due to certain winds. The following table shows for each station the average number of degrees by which the wind-driven current is deflected to the right or left (—) of the wind. Thus at Cape Lookout Shoals the table indicates that with a north wind the wind-driven current flows on the average 030° west of south, and with an east wind it flows 029° south of west.

Average deviation of current to right of wind direction

[A minus sign (-) indicates that the current sets to the left of the wind]

Wind from.....	N.	NNE.	NE.	ENE.	E.	ESE.	SE.	SSE.	S.	SSW.	SW.	WSW.	W.	WNW.	NW.	NNW.		
Old Lightship Stations	Lat.	Long.	°	°	°	°	°	°	°	°	°	°	°	°	°	°		
Portland.....	43 32	70 06	24	14	9	8	-2	-14	0	26	15	18	24	15	34	13	18	
Boston.....	42 20	70 45	-	-1	-	21	-	32	-	29	-	20	2	-	19	-	15	
Pollock Rip Slue.....	41 37	69 54	6	5	48	-38	30	-53	-24	-76	-25	167	70	59	36	63	20	19
Nantucket Shoals.....	40 37	69 37	44	46	28	24	9	16	12	3	25	0	6	18	30	39	41	48
Hen and Chickens.....	41 27	71 01	16	14	-7	-1	-14	3	-39	-36	25	55	35	30	20	16	16	8
Brenton Reef.....	41 26	71 23	34	25	22	19	25	1	-7	8	27	48	23	41	41	31	21	24
Fire Island.....	40 29	73 11	35	23	15	8	2	-17	31	55	40	41	31	14	-2	0	25	37
Ambrose Channel.....	40 27	73 49	36	40	21	11	18	72	27	112	82	70	63	46	37	22	23	21
Scotland.....	40 27	73 55	16	-12	-26	-36	-61	-36	-92	-150	90	33	77	44	15	30	27	13
Barnegat.....	39 46	73 56	6	5	-13	-9	-16	-7	33	54	55	30	14	8	0	-5	21	29
Northeast End.....	38 58	74 30	30	14	-3	-11	-20	-31	-42	-28	37	44	25	18	7	16	25	18
Overfalls.....	38 48	75 01	28	-6	-1	2	-40	-66	-78	-22	68	28	55	54	32	31	32	45
Winter-Quarter Shoal.....	37 55	74 56	18	-1	-5	-21	-27	-35	-19	31	23	20	4	14	9	8	28	27
Chesapeake.....	36 59	75 42	18	-2	-4	5	-6	23	73	71	57	38	27	26	22	18	15	22
Diamond Shoal.....	35 05	75 20	11	3	-3	36	65	88	74	52	40	22	7	-10	-13	-17	-25	-4
Cape Lookout Shoals.....	34 18	76 24	30	24	2	2	-29	-	21	80	54	31	32	21	2	18	5	-5
Frying Pan Shoals.....	33 34	77 49	34	34	18	6	2	9	48	55	48	38	26	14	-7	-12	-27	-6
Savannah.....	31 57	80 40	12	12	-9	-18	-23	-46	17	50	43	17	7	-8	-10	7	15	33
Brunswick.....	31 00	81 10	17	-2	-10	-28	-18	-21	37	29	23	2	6	-21	-21	-26	16	18
St. Johns.....	30 23	81 18	3	-12	-27	-47	-84	30	35	26	26	27	1	-16	-8	-17	6	8

THE COMBINATION OF CURRENTS

In determining from the current tables the velocity and direction of the current at any time, it is frequently necessary to combine the tidal current with the wind-driven current. The following methods indicate how the resultant of two or more currents may be easily determined.

Currents in the same direction.—When two or more currents set in the same direction it is a simple matter to combine them. The resultant current will have a velocity which is equal to the sum of all the currents and it will set in the same direction.

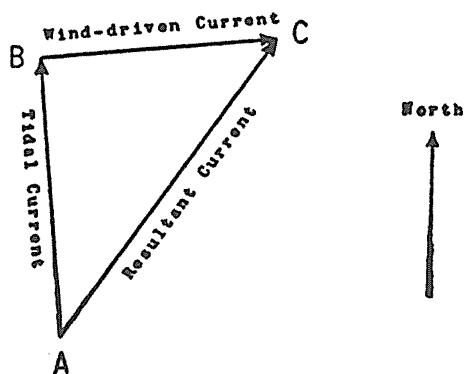
For example, a vessel is near the Nantucket Shoals station at a time when the tidal current is setting 120° with a velocity of 0.6 knot, and at the same time a wind of 40 miles per hour is blowing from west; what current will the vessel be subject to at that time? Since a wind of 40 miles from west will give rise to a current setting 120° with a velocity of 0.5 knot, the combined tidal and wind-driven currents will set in the same direction (120°) with a velocity of $0.6 + 0.5 = 1.1$ knots.

Currents in opposite directions.—The combination of currents setting in opposite directions is likewise a simple matter. The velocity of the resultant current is the difference between the opposite setting currents, and the direction of the resultant current is the same as that of the greater current.

As an example, let it be required to determine the velocity of the current at the Nantucket Shoals station when the tidal current is setting 205° with a velocity of 0.8 knot, and when a wind of 40 miles per hour is blowing from south. The current produced by a wind of 40 miles per hour from south would set 025° with a velocity of 0.5 knot. The tidal and wind-driven currents therefore set in opposite directions, the tidal current being the stronger. Hence the resultant current will set in the direction of the tidal current (205°) with a velocity of $0.8 - 0.5 = 0.3$ knot.

Currents in different directions.—The combination of two or more currents setting neither in the same nor in opposite direction, while not as simple as in the previous cases, is nevertheless not difficult, the best method being a graphic method. Taking the combination of two currents as the simplest case, we draw from a given point as origin, a line the direction of which is the direction of one of the currents to be combined and whose length represents the velocity of that current to some suitable scale; from the end of this line we draw another line the direction and length of which, to the same scale, represents the other of the currents to be combined; then a line joining the origin with the end of our second line gives the direction and velocity of the resultant current.

As an example, let us take Nantucket Shoals station at a time when the tidal current is 0.7 knot setting 355° and a wind of 50 miles per hour is blowing from west-southwest; the wind-driven current according to the preceding chapter would therefore be about 0.6 knot setting 085° .



Combination of tidal current and wind-driven current

Using a scale of 2 inches to the knot we draw from the point A in the diagram above, the line AB 1.4 inches in length directed 355° to represent the tidal current. From B we then draw the line BC 1.2 inches in length directed 085° to represent the wind current. The line AC represents the resultant current and on being measured is found to be about 1.8 inches in length directed 035° . Hence the resultant current sets 035° with a velocity of 0.2 knot.

The combination of three or more currents is made in the same way as above, the third current to be combined being drawn from the point C, the resultant current being given by joining the origin A with the end of the last line. For drawing the lines, a parallel rule and compass rose will be found convenient, or a protractor or polar coordinate paper may be used.

CURRENT DIAGRAMS

EXPLANATION

"Current diagram" is a graphic table that shows the velocities of the flood and ebb currents and the times of slack and strength over a considerable stretch of the channel of a tidal waterway. At definite intervals along the channel the velocities of the current are shown with reference to the times of turning of the current at some reference station. This makes it a simple matter to determine the approximate velocity of the current along the channel for any desired time.

In using the diagrams, the desired time should be converted to hours before or after the time of the *nearest* predicted slack water at the reference station.

Besides showing in compact form the velocities of the current and their changes through the flood and ebb cycles, the current diagram serves two other useful purposes. By its use the mariner can determine the most advantageous time to pass through the waterway in order to carry the most favorable current and also the velocity and direction of the current that will be encountered in the channel at any time.

Each diagram represents average durations and average velocities of flood and ebb. The durations and velocities of flood and ebb vary from day to day. Therefore predictions for the reference station at times will differ from average conditions and when precise results are desired the diagrams should be modified to represent conditions at such particular times. This can be done by changing the width of the shaded and unshaded portions of the diagram to agree in hours with the durations of flood and ebb, respectively, as given by the predictions for that time. The velocities in the shaded area should then be multiplied by the ratio of the predicted flood velocity to the average flood velocity (maximum flood velocity given opposite the name of the reference station on the diagram) and the velocities in the unshaded area by the ratio of the predicted ebb velocity to the average ebb velocity.

In a number of cases approximate results can be obtained by using the diagram as drawn and modifying the final result by the ratio of velocities as mentioned above. Thus if the diagram in a particular case gives a favorable flood velocity averaging about 1.0 knot and the ratio of the predicted flood velocity to the average flood velocity is 0.5 the approximate favorable current for the particular time would be $1.0 \times 0.5 = 0.5$ knot.

VINEYARD AND NANTUCKET SOUNDS

EXPLANATION OF CURRENT DIAGRAM

The current diagram on the opposite page represents average conditions of the surface currents along the middle of the channel from Gay Head to the east end of Pollock Rip Channel, the scale being too small to show details.

Easterly streams are designated "Flood" and westerly streams "Ebb." The small figures in the diagram denote the velocity of the current in knots and tenths. The times are referred to slack waters at Pollock Rip Channel (Butler Hole), daily predictions for which are given in Table 1 of these current tables.

The speed lines are directly related to the diagram. By transferring to the diagram the direction of the speed line which corresponds to the ship's speed, the diagram will show the general direction and velocity of the current encountered by the vessel in passing through the sounds or the most favorable time, with respect to currents, for leaving any place shown on the left margin.

To determine velocity and direction of current.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving edge of ruler to the point where the horizontal line representing place of departure intersects the vertical line representing the time of day in question. If the ruler's edge lies within the shaded portion of the diagram, a flood current will be encountered; if within the unshaded, an ebb current; and if along the boundary of both, slack water. The figures on the diagram along the edge of the rule will show the velocity of the current encountered at any place indicated on the left margin of the diagram.

Example.—A 12-knot vessel bound westward enters Pollock Rip Channel at 0700 of a given day, and it is desired to ascertain the velocity and direction of the current which will be encountered on its passage through the sounds. Assuming that on the given day ebb begins at Pollock Rip Channel at 0508 and flood begins at 1120, the time 0700 will be about 2 hours after ebb begins. With parallel rulers transfer to the diagram the 12-knot speed line "Westbound", placing edge of rule on the point where the vertical line "2 hours after ebb begins at Pollock Rip Channel" intersects the horizontal 47-mile line which is the starting point. It will be found that the edge of the ruler passes through the unshaded portion of the diagram, the velocities along the edge averaging about 1.4 knots. The vessel will therefore have a favorable ebb current averaging about 1.4 knots all the way to Gay Head. It will also be seen that the edge of the ruler crosses the horizontal 16-mile line (at East Chop) about halfway between the figures 1.6 and 2.2. Therefore, when passing the vicinity of East Chop she will have a favorable current of almost 2 knots.

To determine the time of a favorable current for passing through the sounds.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the rule over the diagram until its edge runs as nearly as possible through the general line of largest velocities of shaded portion if eastbound and unshaded portion if westbound, giving consideration only to that part of the diagram which lies between place of departure and destination. An average of the figures along the edge of the ruler will give the average strength of current. The time (before or after flood begins or ebb begins at Pollock Rip Channel) for leaving any place shown on the left margin will be indicated vertically above the point where the ruler cuts a line drawn horizontally through the name of the place in question.

Example.—A 12-knot vessel will leave Gay Head for Pollock Rip Channel on a day when flood begins at Pollock Rip Channel at 0454 and ebb begins at 1104. At what time should she get under way so as to carry the most favorable current all the way through the sounds?

Place parallel rulers along the 12-knot speed line "Eastbound." Transfer the direction to the shaded portion of the diagram and as near as possible to the axis so as to include the greatest possible number of larger current velocities. It will be found that the edge of the rule cuts the horizontal line at Gay Head at the point representing "3 hours after flood begins at Pollock Rip Channel", and that the average of the currents along the edge of rulers is about 0.8 knot in a favorable direction. For the given day flood begins at Pollock Rip Channel at 0454; hence, if the vessel leaves Gay Head 3 hours later, or about 0754, she will average a favorable current of almost 1 knot all the way.

ASTRONOMICAL DATA, 1983

January			February			March			April		
	d.	h m		d.	h m		d.	h m		d.	h m
E	5	22 ..	E	2	06 ..	E	1	16 ..	S	5	01 ..
○	6	04 00	○	4	19 17	○	6	13 16	○	5	08 38
S	13	06 ..	S	9	12 ..	S	8	18 ..	A	6	18 ..
A	14	05 ..	A	10	08 ..	A	9	23 ..	E	12	11 ..
●	14	05 08	●	13	00 32	●	14	17 43	●	13	07 58
E	20	17 ..	E	16	22 ..	E	16	04 ..	N	19	02 ..
○	22	05 33	○	20	17 32	○ ₁	21	04 39	○	20	08 58
N	27	05 ..	N	23	14 ..	○	22	02 25	P	21	08 ..
P	28	11 ..	P	25	22 ..	N	22	20 ..	E	25	11 ..
O	28	22 26	O	27	08 58	P	25	22 ..	O	27	06 31
						O	28	19 27			
						E	29	02 ..			
May			June			July			August		
	d.	h m		d.	h m		d.	h m		d.	h m
S	2	10 ..	A	1	08 ..	○	3	12 12	○	2	00 52
A	4	13 ..	○	3	21 07	E	3	14 ..	N	6	13 ..
○	5	03 43	E	6	05 ..	N	10	03 ..	P	8	19 ..
E	9	20 ..	●	11	04 37	●	10	12 18	●	8	19 18
●	12	19 25	N	12	17 ..	P	11	10 ..	E	12	13 ..
N	16	08 ..	P	13	06 ..	E	16	05 ..	○	15	12 47
P	16	16 ..	○	17	19 46	○	17	02 50	S	19	12 ..
○	19	14 17	E	18	23 ..	S	23	07 ..	A	22	09 ..
E	22	18 ..	○ ₂	21	23 09	O	24	23 27	O	23	14 59
O	26	18 48	O	25	08 32	A	26	07 ..	E	27	01 ..
S	29	18 ..	S	26	01 ..	E	30	20 ..	○	31	11 22
			A	28	23 ..						
September			October			November			December		
	d.	h m		d.	h m		d.	h m		d.	h m
N	2	21 ..	P	4	11 ..	P	1	03 ..	●	4	12 26
P	6	05 ..	E	6	08 ..	E	2	18 ..	S	6	19 ..
●	7	02 35	●	6	11 16	●	4	22 21	A	11	01 ..
E	8	22 ..	S	13	02 ..	S	9	10 ..	○	12	13 09
○	14	02 24	○	13	19 42	○	12	15 49	E	14	07 ..
S	15	18 ..	A	16	08 ..	A	13	03 ..	O	20	02 00
A	18	17 ..	E	20	13 ..	E	16	22 ..	N	21	00 ..
O	22	06 36	O	21	21 53	O	20	12 29	○ ₄	22	10 30
E	23	06 ..	N	27	10 ..	N	23	16 ..	P	22	18 ..
○ ₃	23	14 42	○	29	03 37	P	26	02 ..	○	26	18 52
○	29	20 05				○	27	10 50	E	27	06 ..
N	30	04 ..				E	30	01 ..			

LUNAR DATA:

- - new Moon
- - first quarter
- - full Moon
- - last quarter
- A - Moon in apogee
- P - Moon in perigee
- N - Moon farthest north of Equator
- E - Moon on Equator
- S - Moon farthest south of Equator

SOLAR DATA:

- ₁ - March equinox
- ₂ - June solstice
- ₃ - September equinox
- ₄ - December solstice

Greenwich mean time (GMT) or universal time (UT) is the mean solar time on the Greenwich meridian reckoned in days of 24 mean solar hours written as 00^h at midnight and 12^h at noon. To convert the above times to those of other standard time meridians, add 1 hour for each 15° of east longitude of the desired meridian and subtract 1 hour for each 15° of west longitude.

This table was compiled from data taken from the American Ephemeris and Nautical Almanac.

CURRENT DIAGRAM - NEW YORK HARBOR (via Ambrose Channel)													
DISTANCE MILES	Referred to predicted times of slack water at The Narrows												
	HOURS BEFORE FLOOD BEGINS AT THE NARROWS	HOURS AFTER FLOOD BEGINS AT THE NARROWS	HOURS BEFORE EBB BEGINS AT THE NARROWS	HOURS AFTER EBB BEGINS AT THE NARROWS	HOURS BEFORE FLOOD BEGINS AT THE NARROWS	HOURS AFTER FLOOD BEGINS AT THE NARROWS							
	3h	2h	1h	0h	1h	2h	3h	2h	1h	0h	1h	2h	3h
SPUYTEN DUYVIL													
26	2.1	1.5	1.0	1.1	1.6	1.1	0.0	1.5	2.1	1.5	0.0		
GEORGE WASHINGTON BRIDGE													
24	2.2	1.6	1.0	1.1	1.6	1.1	0.0	1.6	2.2	1.6	0.0		
GRANTS TOMB													
WEST 96th ST													
22	2.3	1.6	1.0	1.2	1.7	1.2	0.0	1.6	2.3	1.6	0.0		
W. 42nd ST., PIER 83													
18	2.3	1.6	1.0	1.1	1.6	1.1	0.0	1.6	2.3	1.6	0.0		
CHELSEA DOCKS													
16	2.3	1.6	1.0	1.1	1.5	1.1	0.0	1.6	2.3	1.6	0.0		
THE BATTERY													
14	2.4	1.7	1.0	1.1	1.6	1.1	0.0	1.7	2.4	1.7	0.0	1.1	
STATUE OF LIBERTY													
12	1.1	0.0	0.9	1.3	0.9	0.0	1.1	1.6	1.1	0.0	0.9	1.3	
ROBBINS REEF LT.													
10	1.4	0.0	1.2	1.7	1.2	0.0	1.4	2.0	1.4	0.0	1.2	1.7	
THE NARROWS													
8	1.3	0.0	1.0	1.4	1.0	0.0	1.3	1.8	1.3	0.0	1.0	1.4	
CONEY ISLAND													
6	1.1	0.0	0.7	1.0	0.7	0.0	1.1	1.6	1.1	0.0	0.7	1.0	
WEST BANK LT.													
4	1.1	0.0	1.1	1.5	1.1	0.0	1.1	1.6	1.1	0.0	1.1	1.5	
ROMER SHOAL LT.													
2	1.4	0.0	1.1	1.6	1.1	0.0	1.4	2.0	1.4	0.0	1.1	1.6	
AMBROSE CHANNEL ENTRANCE													
0	1.6	0.0	1.2	1.7	1.2	0.0	1.6	2.3	1.6	0.0	1.2	1.7	
	HOURS BEFORE FLOOD BEGINS AT THE NARROWS	HOURS AFTER FLOOD BEGINS AT THE NARROWS	HOURS BEFORE EBB BEGINS AT THE NARROWS	HOURS AFTER EBB BEGINS AT THE NARROWS	HOURS BEFORE FLOOD BEGINS AT THE NARROWS	HOURS AFTER FLOOD BEGINS AT THE NARROWS							
	3h	2h	1h	0h	1h	2h	3h	2h	1h	0h	1h	2h	3h

SPEED LINES

Northbound

KNOTS

Southbound

KNOTS

DELAWARE BAY AND RIVER
EXPLANATION OF CURRENT DIAGRAM

This current diagram represents only average conditions of the surface currents along the middle of the channel between Bristol and Delaware Bay Entrance, the scale being too small to show details.

Northerly streams are designated "Flood" and southerly streams "Ebb." The small figures in the diagram denote the velocity of the current in knots and tenths. The times are referred to slack waters at Delaware Bay Entrance, daily predictions for which are given in Table 1 of these current tables.

The speed lines are directly related to the diagram. By transferring to the diagram the direction of the speed line which corresponds to the ship's speed, the diagram will show the general direction and velocity of the current encountered by the vessel in passing up or down the bay and river or the most favorable time, with respect to currents, for leaving any place shown in the left margin.

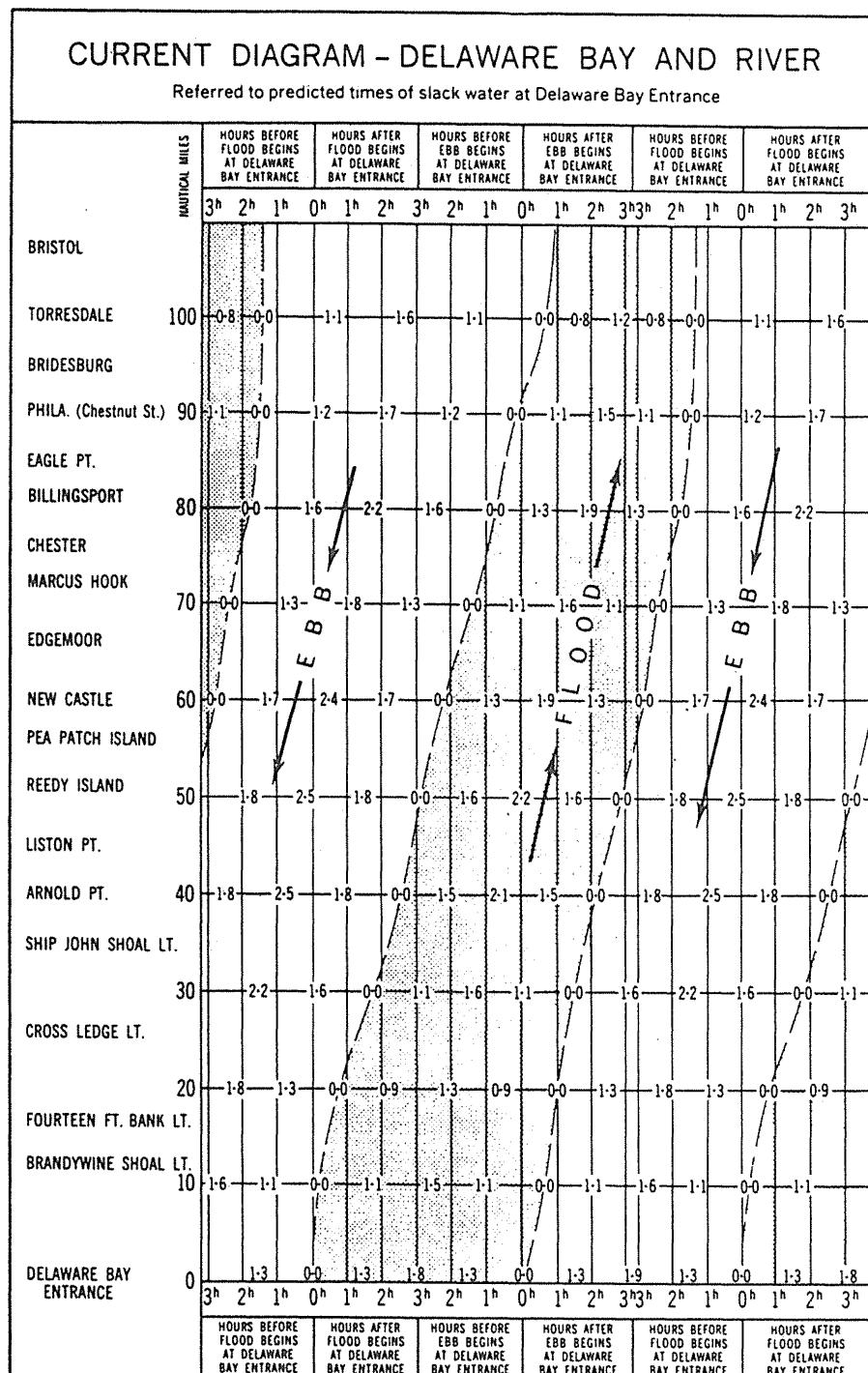
To determine velocity and direction of current.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to the normal speed of vessel, moving edge of ruler to the point where the horizontal line representing place of departure intersects the vertical line representing the time in question. If the ruler's edge lies within the shaded portion of the diagram, a flood current will be encountered; if within the unshaded, an ebb current, and if along the boundary of both, slack water. The figures in the diagram along the edge of the ruler will show the velocity of the current encountered at any place indicated in the left margin of the diagram.

Example.—A 15-knot vessel bound southward leaves Philadelphia (Chestnut Street) at 0330 of a given day and it is desired to ascertain the velocity and direction of the current which will be encountered between Philadelphia and Delaware Bay Entrance. Assuming that on the given day flood begins at Delaware Bay Entrance at 0436 and ebb begins at 1038, the time 0330 will be about 1 hour before flood begins. With parallel rulers transfer to the diagram the 15-knot speed line "Southbound" placing the edge of ruler on the intersection of the vertical line "1 hour before flood begins at Delaware Bay Entrance" and a horizontal line through Philadelphia (Chestnut Street) which is the starting point. It will be found that the edge of the ruler passes through an unshaded (ebb) portion with an average velocity of about 1.3 knots from Philadelphia to the vicinity of Arnold Point, and the rest of the way through a shaded (flood) portion with an average velocity of about 0.8 knot. The vessel will therefore have a favorable current averaging about 1.3 knots to the vicinity of Arnold Point and an unfavorable current averaging about 0.8 knot the rest of the way to Delaware Bay Entrance.

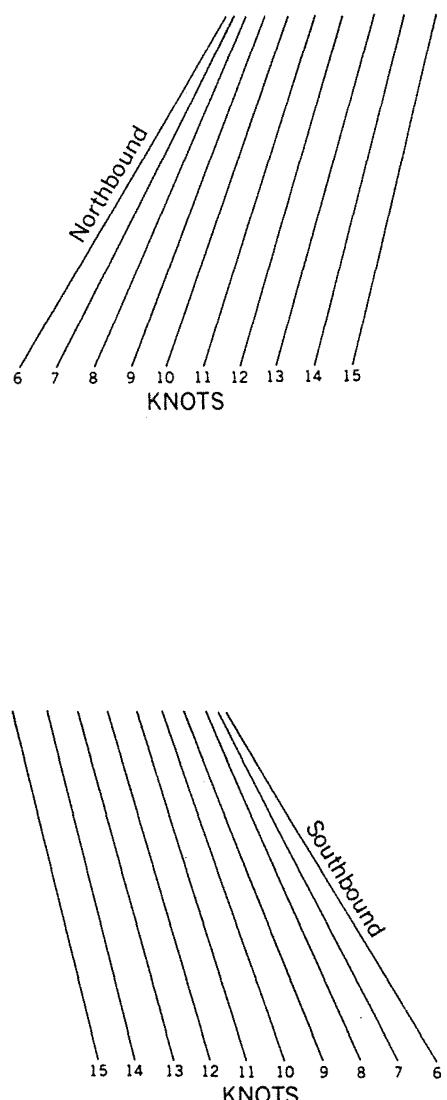
To determine the time of a favorable current for passing up or down the bay and river.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the ruler over the diagram until its edge runs as nearly as possible through the general line of largest velocities of shaded portion if northbound or unshaded portion if southbound giving consideration only to that part of diagram which lies between places of departure and destination. An average of the figures along edge of ruler will give the average velocity of current. The time (before or after flood begins or ebb begins at Delaware Bay Entrance) for leaving any place shown in the left margin will be indicated vertically above or below the point where the ruler cuts a line drawn horizontally through the place in question.

Example.—A 12-knot vessel will leave Delaware Bay Entrance on a day when flood begins at 0505 and ebb begins at 1112. At what time should she get under way so as to carry the most favorable current all the way to Philadelphia? With parallel rulers transfer the direction of 12-knot speed line "Northbound" to the shaded portion of diagram and as near as possible to the axis so as to include the greatest number of larger velocities. The edge of the ruler will cut the horizontal line at Delaware Bay Entrance near the vertical line "2 hours after flood begins at Delaware Bay Entrance" and the velocities along the ruler's edge will average about 1.7 knots. On the given day flood begins at Delaware Bay Entrance at 0505, hence, if the vessel leaves about 2 hours later, i.e., about 0700, she will have a favorable current averaging about 1.7 knots all the way.

Note.—It is readily seen by transferring southbound speed lines to this diagram that southbound vessels can carry a favorable current for about 50 miles only.



SPEED LINES



CHESAPEAKE BAY

EXPLANATION OF CURRENT DIAGRAM

This current diagram represents only average conditions of the surface currents along the middle of the channel from Cape Henry Light to Baltimore, the scale being too small to show details.

Northerly streams are designated "Flood" and southerly streams "Ebb." The small figures in the diagram denote the velocity of the current in knots and tenths. The times are referred to slack waters at Chesapeake Bay entrance, daily predictions for which are given in Table 1 of these current tables.

The speed lines are directly related to the diagram. By transferring to the diagram the direction of the speed line which corresponds to the ship's speed, the diagram will show the general direction and velocity of the current encountered by the vessel in passing up or down the bay or the most favorable time, with respect to currents, for leaving any place shown in the left margin.

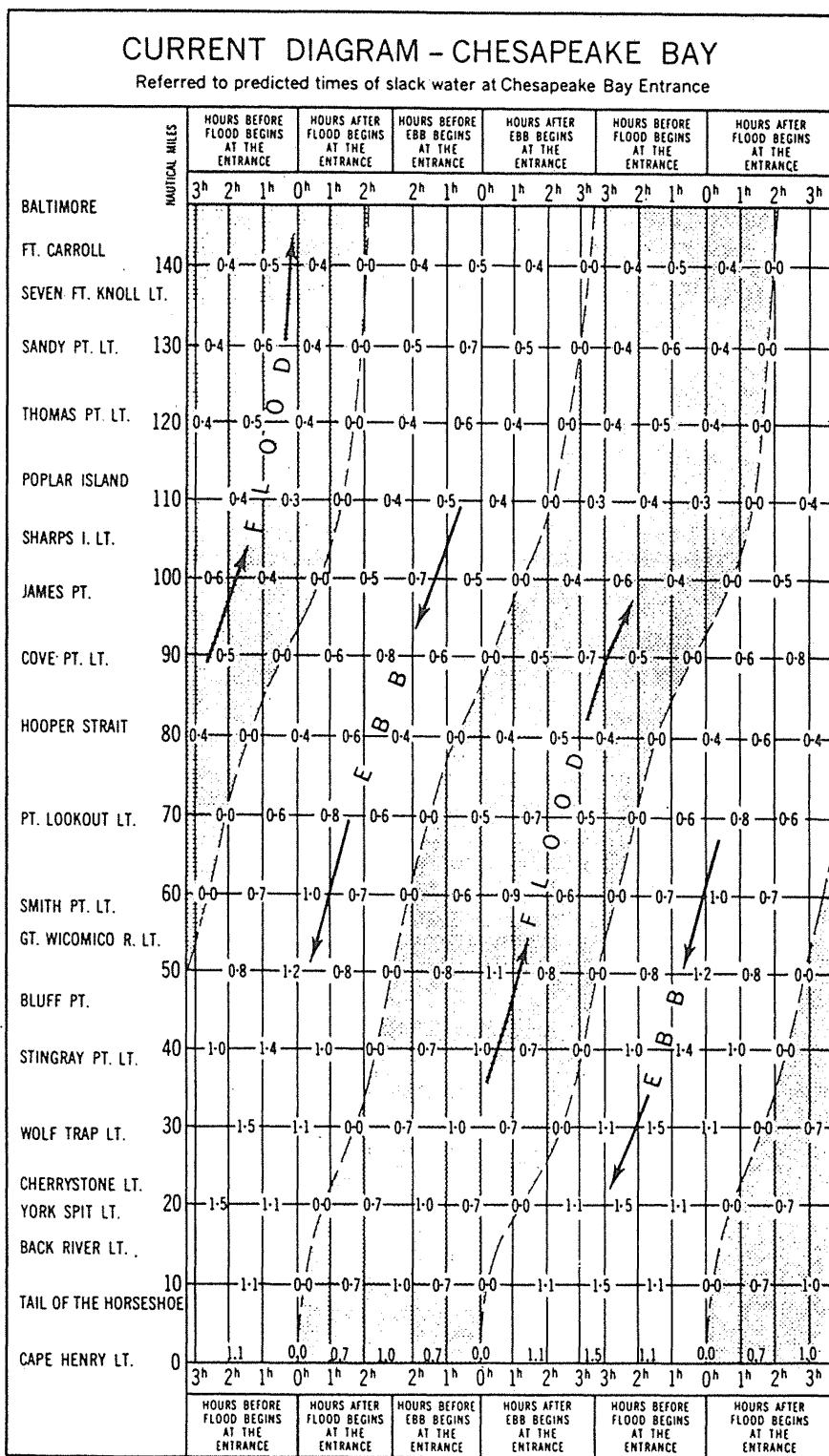
To determine velocity and direction of current.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to the normal speed of vessel, moving edge of ruler to the point where the horizontal line representing place of departure intersects the vertical line representing the time in question. If the ruler's edge lies within the shaded portion of the diagram, a flood current will be encountered; if within the unshaded, an ebb current, and if along the boundary of both, slack water. The figures in the diagram along the edge of the ruler will show the velocity of the current encountered at any place indicated in the left margin of the diagram.

Example.—A 12-knot vessel bound for Baltimore passes Cape Henry Light at 1430 of a given day, and it is desired to ascertain the velocity and direction of the current which will be encountered. Assuming that on the given day flood begins at Chesapeake Bay entrance at 1256 and ebb begins at 1803, the time 1430 will be about 1½ hours after flood begins. With parallel rulers transfer to diagram the 12-knot speed line "Northbound," placing edge of ruler so that it will cross the horizontal line opposite Cape Henry at a point "1½ hours after flood begins at the entrance." It will be found that the edge of the ruler passes through strength of current in the shaded portion of diagram averaging about 0.7 knot. The vessel will, therefore, have a favorable current averaging about 0.7 knot all the way to Baltimore.

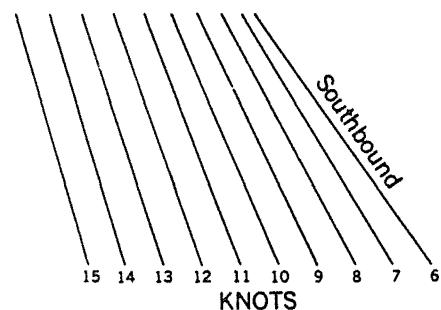
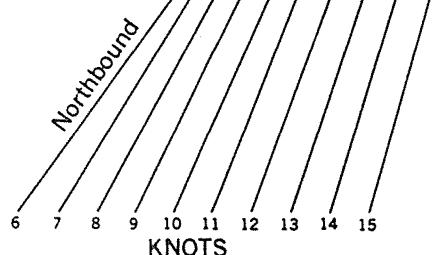
To determine the time of a favorable current for passing through the bay.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the ruler over the diagram until its edge runs approximately through the general line of greatest current of unshaded portion if southbound and shaded portion if northbound. An average of the figures along edge of ruler will give average strength of current. The time (before or after ebb or flood begins at the entrance) for leaving any place in the left margin of diagram will be found vertically above the point where the parallel ruler cuts the horizontal line opposite the place in question.

Example.—A 12-knot vessel in Baltimore Harbor desires to leave for Cape Henry Light on the afternoon of a day when flood begins at Chesapeake Bay entrance at 1148 and ebb begins at 1718. At what time should she get under way so as to carry the most favorable current?

Place parallel rulers along the 12-knot speed line "Southbound." Transfer this direction to the diagram and move it along so as to include the greatest possible number of larger current velocities in the unshaded portion of the diagram. The most favorable time for leaving Baltimore thus found is about 1 hour after flood begins at the entrance, or about 1248. There will be an unfavorable current of about 0.2 knot as far as Seven Foot Knoll Light; after passing this light there will be an average favorable current of about 0.3 knot as far as Cove Point Light; from Cove Point Light to Bluff Point a contrary current averaging about 0.3 knot will be encountered; from Bluff Point to Tail of the Horseshoe there will be an average favorable current of about 0.9 knot; and from Tail of the Horseshoe to Cape Henry an average contrary current of about 0.2 knot will again be encountered.



SPEED LINES



TIDE TABLES

Advance information relative to the rise and fall of the tide is given in annual tide tables. These tables include the predicted times and heights of high and low waters for every day in the year for a number of reference stations and differences for obtaining similar predictions for numerous other places.

Tide Tables, Central and Western Pacific Ocean and Indian Ocean.

Tide Tables, East Coast of North and South America (Including Greenland).

Tide Tables, Europe and West Coast of Africa (Including the Mediterranean Sea).

Tide Tables, West Coast of North and South America (Including the Hawaiian Islands).

TIDAL BENCH MARKS

To provide permanent points for the observed heights of the tide and the tidal datum planes determined therefrom, a system of bench marks is established at each tide station. The descriptions and elevations of these bench marks along our coast are compiled, published, and available for distribution. Requests for such bench mark data should specify the coastal locality for which the information is desired.

TIDAL CURRENT TABLES

Accompanying the rise and fall of the tide is a periodic horizontal flow of the water known as the tidal current. Advance information relative to these currents is made available in annual tidal current tables which include daily predictions of the times of slack water and the times and velocities of strength of flood and ebb currents for a number of waterways together with differences for obtaining predictions for numerous other places.

Tidal Current Tables, Atlantic Coast of North America.

Tidal Current Tables, Pacific Coast of North America and Asia.

TIDAL CURRENT CHARTS

Each publication consists of a set of 12 charts which depict, by means of arrows and figures, the direction and speed of the tidal current for each hour of the tidal cycle. The charts, which may be used for any year, present a comprehensive view of the tidal current movement in the respective waterways as a whole and also supply a means for readily determining for any time the direction and speed of the current at various localities throughout the water areas covered. The Narragansett Bay tidal current chart is to be used with the annual tide tables. The other charts require the annual tidal current tables.

Tidal Current Charts, Boston Harbor.

Tidal Current Charts, Charleston Harbor, S.C.

Tidal Current Charts, Delaware Bay and River.

Tidal Current Charts, Long Island Sound and Block Island Sound.

Tidal Current Charts, Narragansett Bay.

Tidal Current Charts, Narragansett Bay to Nantucket Sound.

Tidal Current Charts, New York Harbor.

Tidal Current Charts, Puget Sound, Northern Part.

Tidal Current Charts, Puget Sound, Southern Part.

Tidal Current Charts, San Francisco Bay.

Tidal Current Charts, Upper Chesapeake Bay.

Tidal Current Charts, Tampa Bay.

TIDAL CURRENT DIAGRAMS

The tidal current diagrams are a series of 12 monthly diagrams to be used with the tidal current charts to give the user a convenient method to determine the current flow on a particular day.

Tidal Current Diagrams for Long Island Sound and Block Island Sound.

Tidal Current Diagrams for Boston Harbor.

Tidal Current Diagrams for New York Harbor.

Tidal Current Diagrams for Upper Chesapeake Bay.

ANNUAL INEQUALITY—Seasonal variation in the water level or current, more or less periodic, due chiefly to meteorological causes.

APOGEAN TIDES OR TIDAL CURRENTS—

Tides of decreased range or currents of decreased speed occurring monthly as the result of the Moon being in apogee (farthest from the Earth).

AUTOMATIC TIDE GAGE—An instrument that automatically registers the rise and fall of the tide. In some instruments, the registration is accomplished by recording the heights at regular intervals in digital format, in others by a continuous graph in which the height, versus corresponding time of the tide, is recorded.

BENCH MARK (BM)—A fixed physical object or marks used as reference for a vertical datum. A *tidal bench mark* is one near a tide station to which the tide staff and tidal datums are referred. A *geodetic bench mark* identifies a surveyed point in the National Geodetic Vertical Network.

CHART DATUM—The tidal datum to which soundings on a chart are referred. It is usually taken to correspond to a low water elevation of the tide, and its depression below mean sea level is represented by the symbol Zo.

CURRENT—Generally, a horizontal movement of water. Currents may be classified as *tidal* and *nontidal*. Tidal currents are caused by gravitational interactions between the Sun, Moon, and Earth and are a part of the same general movement of the sea that is manifested in the vertical rise and fall, called *tide*. Nontidal currents include the permanent currents in the general circulatory systems of the sea as well as temporary currents arising from more pronounced meteorological variability.

CURRENT DIFFERENCE—Difference between the time of slack water (or minimum current) or strength of current in any locality and the time of the corresponding phase of the tidal current at a reference station, for which predictions are given in the *Tidal Current Tables*.

CURRENT ELLIPSE—A graphic representation of a rotary current in which the velocity of the current at different hours of the tidal cycle is represented by radius vectors and vectorial angles. A line joining the extremities of the radius vectors will form a curve roughly approximating an ellipse. The cycle is completed in one-half tidal day or in a whole tidal day according to whether the tidal current is of the semidiurnal or the diurnal type. A current of the mixed type will give a curve of two unequal loops each tidal day.

CURRENT METER—An instrument for measuring the speed and direction or just the speed of a current. The measurements are usually Eulerian since the meter is most often fixed or moored at a specific location.

DATUM (vertical)—For marine applications, a base elevation used as a reference from which to reckon heights or depths. It is called a *tidal datum* when defined by a certain phase of the tide. Tidal datums are local datums and should not be extended into areas which have differing topographic features without substantiating measurements. In order that they may be recovered when needed, such datums are referenced to fixed points known as *bench marks*.

DAYLIGHT SAVING TIME—A time used during the summer in some localities in which clocks are advanced 1 hour from the usual standard time.

DIURNAL—Having a period or cycle of approximately 1 tidal day. Thus, the tide is said to be diurnal when only one high water and one low water occur during a tidal day, and the tidal current is said to be diurnal when there is a single flood and single ebb period in the tidal day. A rotary current is diurnal if it changes its direction through all points of the compass once each tidal day.

DIURNAL INEQUALITY—The difference in height of the two high waters or of the two low waters of each day; also the difference in speed between the two flood tidal currents or the two ebb tidal currents of each day. The difference changes with the declination of the Moon and to a lesser extent with the declination of the Sun. In general, the inequality tends to increase with an increasing declination, either north or south, and to diminish as the Moon approaches the Equator. *Mean diurnal high water inequality* (DHQ) is one-half the average difference between the two high waters of each day observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). It is obtained by subtracting the mean of all high waters from the mean of the higher high waters. *Mean diurnal low water inequality* (DLQ) is one-half the average difference between the two low waters of each day observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). It is obtained by subtracting the mean of the lower low waters from the mean of all low waters. *Tropic high water inequality* (HWQ) is the average difference between the two high waters of the day at the times of the tropic tides. *Tropic low water inequality* (LWQ) is the average difference between the two low waters of the day at the times of the tropic tides. Mean and tropic inequalities as defined above are applicable only when the type of tide is either semidiurnal or mixed. Diurnal inequality is sometimes called *declinational inequality*.

GLOSSARY OF TERMS

DOUBLE EBB—An ebb tidal current where, after ebb begins, the speed increases to a maximum called *first ebb*; it then decreases, reaching a *minimum ebb* near the middle of the ebb period (and at some places it may actually run in a flood direction for a short period); it then again ebbs to a maximum speed called *second ebb* after which it decreases to slack water.

DOUBLE FLOOD—A flood tidal current where, after flood begins, the speed increases to a maximum called *first flood*; it then decreases, reaching a *minimum flood* near the middle of the flood period (and at some places it may actually run in an ebb direction for a short period); it then again floods to a maximum speed called *second flood* after which it decreases to slack water.

DOUBLE TIDE—A double-headed tide, that is, a high water consisting of two maxima of nearly the same height separated by a relatively small depression, or a low water consisting of two minima separated by a relatively small elevation. Sometimes, it is called an *agger*.

DURATION OF FLOOD AND DURATION OF EBB—*Duration of flood* is the interval of time in which a tidal current is flooding, and the *duration of ebb* is the interval in which it is ebbing. Together they cover, on an average, a period of 12.42 hours for a semidiurnal tidal current or a period of 24.84 hours for a diurnal current. In a normal semidiurnal tidal current, the duration of flood and duration of ebb will each be approximately equal to 6.21 hours, but the times may be modified greatly by the presence of a nontidal flow. In a river the duration of ebb is usually longer than the duration of flood because of the freshwater discharge, especially during the spring when snow and ice melt are the predominant influences.

DURATION OF RISE AND DURATION OF FALL—*Duration of rise* is the interval from low water to high water, and *duration of fall* is the interval from high water to low water. Together they cover, on an average, a period of 12.42 hours for a semidiurnal tide or a period of 24.84 hours for a diurnal tide. In a normal semidiurnal tide, the duration of rise and duration of fall will each be approximately equal to 6.21 hours, but in shallow waters and in rivers there is a tendency for a decrease in the duration of rise and a corresponding increase in the duration of fall.

EBB CURRENT—The movement of a tidal current away from shore or down a tidal river or estuary. In the mixed type of reversing tidal current, the terms *greater ebb* and *lesser ebb* are applied respectively to the ebb tidal currents of greater and lesser speed of each day. The terms *maximum ebb* and *minimum ebb* are applied to the maximum and minimum speeds of a current running continuously ebb, the speed alternately increasing and decreasing without

coming to a slack or reversing. The expression *maximum ebb* is also applicable to any ebb current at the time of greatest speed.

EQUATORIAL TIDAL CURRENTS—Tidal currents occurring semimonthly as a result of the Moon being over the Equator. At these times the tendency of the Moon to produce a diurnal inequality in the tidal current is at a minimum.

EQUATORIAL TIDES—Tides occurring semi-monthly as the result of the Moon being over the Equator. At these times the tendency of the Moon to produce a diurnal inequality in the tide is at a minimum.

FLOOD CURRENT—The movement of a tidal current toward the shore or up a tidal river or estuary. In the mixed type of reversing current, the terms *greater flood* and *lesser flood* are applied respectively to the flood currents of greater and lesser speed of each day. The terms *maximum flood* and *minimum flood* are applied to the maximum and minimum speeds of a flood current, the speed of which alternately increases and decreases without coming to a slack or reversing. The expression *maximum flood* is also applicable to any flood current at the time of greatest speed.

GREAT DIURNAL RANGE (Gt)—The difference in height between mean higher high water and mean lower low water. The expression may also be used in its contracted form, *diurnal range*.

GULF COAST LOW WATER DATUM—A chart datum. Specifically, the tidal datum designated for the coastal waters of the Gulf Coast of the United States. It is defined as *mean lower low water* when the type of tide is mixed and *mean low water* when the type of tide is diurnal.

HALF-TIDE LEVEL—See *mean tide level*.

HIGH WATER (HW)—The maximum height reached by a rising tide. The height may be due solely to the periodic tidal forces or it may have superimposed upon it the effects of prevailing meteorological conditions. Use of the synonymous term, *high tide*, is discouraged.

HIGHER HIGH WATER (HHW)—The higher of the two high waters of any tidal day.

HIGHER LOW WATER (HLW)—The higher of the two low waters of any tidal day.

HYDRAULIC CURRENT—A current in a channel caused by a difference in the surface level at the two ends. Such a current may be expected in a strait connecting two bodies of water in which the tides differ in time or range. The current in the East River, N.Y., connecting Long Island Sound and New York Harbor, is an example.

KNOT—A speed unit of 1 international nautical mile (1,852.0 meters or 6,076.11549 international feet) per hour.

LOW WATER (LW)—The minimum height reached by a falling tide. The height may be due solely to the periodic tidal forces or it may have superimposed upon it the effects of meteorological conditions. Use of the synonymous term, *low tide*, is discouraged.

LOWER HIGH WATER (LHW)—The lower of the two high waters of any tidal day.

LOWER LOW WATER (LLW)—The lower of the two low waters of any tidal day.

LUNAR DAY—The time of the rotation of the Earth with respect to the Moon, or the interval between two successive upper transits of the Moon over the meridian of a place. The mean lunar day is approximately 24.84 solar hours long, or 1.035 times as long as the mean solar day.

LUNAR INTERVAL—The difference in time between the transit of the Moon over the meridian of Greenwich and over a local meridian. The average value of this interval expressed in hours is $0.069 L$, in which L is the local longitude in degrees, positive for west longitude and negative for east longitude. The lunar interval equals the difference between the local and Greenwich interval of a tide or current phase.

LUNICURRENT INTERVAL—The interval between the Moon's transit (upper or lower) over the local or Greenwich meridian and a specified phase of the tidal current following the transit. Examples: *strength of flood interval* and *strength of ebb interval*, which may be abbreviated to *flood interval* and *ebb interval*, respectively. The interval is described as local or Greenwich according to whether the reference is to the Moon's transit over the local or Greenwich meridian. When not otherwise specified, the reference is assumed to be local.

LUNITIDAL INTERVAL—The interval between the Moon's transit (upper or lower) over the local or Greenwich meridian and the following high or low water. The average of all high water intervals for all phases of the Moon is known as *mean high water lunitidal interval* and is abbreviated to *high water interval (HWI)*. Similarly the *mean low water lunitidal interval* is abbreviated to *low water interval (LWI)*. The interval is described as local or Greenwich according to whether the reference is to the transit over the local or Greenwich meridian. When not otherwise specified, the reference is assumed to be local.

MEAN HIGH WATER (MHW)—A tidal datum. The average of all the high water heights observed over the National Tidal Datum Epoch. (See *High Water*.) For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN HIGHER HIGH WATER (MHHW)—A tidal datum. The average of the highest high water height of each tidal day observed over the

National Tidal Datum Epoch. For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN HIGHER HIGH WATER LINE (MHHWL)—The intersection of the land with the water surface at the elevation of mean higher high water.

MEAN LOW WATER (MLW)—A tidal datum. The average of all the low water heights observed over the National Tidal Datum Epoch. (See *Low Water*.) For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN LOW WATER SPRINGS (MLWS)—A tidal datum. Frequently abbreviated *spring low water*. The arithmetic mean of the low water heights occurring at the time of the spring tides observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch).

MEAN LOWER LOW WATER (MLLW)—A tidal datum. The average of the lowest low water height of each tidal day observed over the National Tidal Datum Epoch. For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent of a 19-year datum.

MEAN RANGE OF TIDE (Mn)—The difference in height between mean high water and mean low water.

MEAN RIVER LEVEL—A tidal datum. The average height of the surface of a tidal river at any point for all stages of the tide observed over a 19-year Metonic cycle (the National Tidal Datum Epoch), usually determined from hourly height readings. In rivers subject to occasional freshets the river level may undergo wide variations, and for practical purposes certain months of the year may be excluded in the determination of tidal datums. For charting purposes, tidal datums for rivers are usually based on observations during selected periods when the river is at or near low water stage.

MEAN SEA LEVEL (MSL)—A tidal datum. The arithmetic mean of hourly water elevations observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Shorter series are specified in the name; e.g., monthly mean sea level and yearly mean sea level.

MEAN TIDE LEVEL (MTL)—Also called half-tide level. A tidal datum midway between mean high water and mean low water.

MIXED TIDE—Type of tide with a large inequality in the high and/or low water heights, with two high waters and two low waters usually occurring each tidal day. In strictness, all tides are mixed but the name is usually applied to the tides intermediate to those predominantly semidiurnal and those predominantly diurnal.

GLOSSARY OF TERMS

NEAP TIDES OR TIDAL CURRENTS—Tides of decreased range or tidal currents of decreased speed occurring semimonthly as the result of the Moon being in quadrature. The *neap range* (*Np*) of the tide is the average semidiurnal range occurring at the time of neap tides and is most conveniently computed from the harmonic constants. It is smaller than the mean range where the type of tide is either semidiurnal or mixed and is of no practical significance where the type of tide is diurnal. The average height of the high waters of the neap tides is called *neap high water* or *high water neaps* (MHWN) and the average height of the corresponding low waters is called *neap low water* or *low water neaps* (MLWN).

PERIGEAN TIDES OR TIDAL CURRENTS—Tides of increased range or tidal currents of increased speed occurring monthly as the result of the Moon being in perigee or nearest the Earth. The *perigean range* (*Pn*) of tide is the average semidiurnal range occurring at the time of perigean tides and is most conveniently computed from the harmonic constants. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal.

RANGE OF TIDE—The difference in height between consecutive high and low waters. The *mean range* is the difference in height between mean high water and mean low water. Where the type of tide is diurnal the mean range is the same as the diurnal range. For other ranges, see great diurnal, spring, neap, perigean, apogean, and tropic tides.

REFERENCE STATION—A tide or current station for which independent daily predictions are given in the *Tide Tables* and *Tidal Current Tables*, and from which corresponding predictions are obtained for subordinate stations by means of differences and ratios.

REVERSING CURRENT—A tidal current which flows alternately in approximately opposite directions with a slack water at each reversal of direction. Currents of this type usually occur in rivers and straits where the direction of flow is more or less restricted to certain channels. When the movement is towards the shore or up a stream, the current is said to be flooding, and when in the opposite direction it is said to be ebbing. The combined flood and ebb movement including the slack water covers, on an average, 12.42 hours for the semidiurnal current. If unaffected by a nontidal flow, the flood and ebb movements will each last about 6 hours, but when combined with such a flow, the durations of flood and ebb may be quite unequal. During the flow in each direction the speed of the current will vary from zero at the time of slack water to a maximum about midway between the slacks.

ROTARY CURRENT—A tidal current that flows continually with the direction of flow changing

through all points of the compass during the tidal period. Rotary currents are usually found offshore where the direction of flow is not restricted by any barriers. The tendency for the rotation in direction has its origin in the Coriolis force and, unless modified by local conditions, the change is clockwise in the Northern Hemisphere and counterclockwise in the Southern. The speed of the current usually varies throughout the tidal cycle, passing through the two maxima in approximately opposite directions and the two minima with the direction of the current at approximately 90° from the direction at time of maximum speed.

SEMIDIURNAL—Having a period or cycle of approximately one-half of a tidal day. The predominating type of tide throughout the world is semidiurnal, with two high waters and two low waters each tidal day. The tidal current is said to be semidiurnal when there are two flood and two ebb periods each day.

SET (OF CURRENT)—The direction *towards* which the current flows.

SLACK WATER—The state of a tidal current when its speed is near zero, especially the moment when a reversing current changes direction and its speed is zero. The term is also applied to the entire period of low speed near the time of turning of the current when it is too weak to be of any practical importance in navigation. The relation of the time of slack water to the tidal phases varies in different localities. For standing tidal waves, slack water occurs near the times of high and low water, while for progressive tidal waves, slack water occurs midway between high and low water.

SPRING TIDES OR TIDAL CURRENTS—Tides of increased range or tidal currents of increased speed occurring semimonthly as the result of the Moon being new or full. The *spring range* (*Sg*) of tide is the average semidiurnal range occurring at the time of spring tides and is most conveniently computed from the harmonic constants. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal. The mean of the high waters of the spring tide is called *spring high water* or *mean high water springs* (MHWS), and the average height of the corresponding low waters is called *spring low water* or *mean low water springs* (MLWS).

STAND OF TIDE—Sometimes called a platform tide. An interval at high or low water when there is no sensible change in the height of the tide. The water level is stationary at high and low water for only an instant, but the change in level near these times is so slow that it is not usually perceptible. In general, the duration of the apparent stand will depend upon the range of tide, being longer for a small range than for a large range, but where there is a tendency for a double tide the stand may last for several hours even with a large range of tide.

STANDARD TIME—A kind of time based upon the transit of the Sun over a certain specified meridian, called the *time meridian*, and adopted for use over a considerable area. With a few exceptions, standard time is based upon some meridian which differs by a multiple of 15° from the meridian of Greenwich.

STRENGTH OF CURRENT—Phase of tidal current in which the speed is a maximum; also the speed at this time. Beginning with slack before flood in the period of a reversing tidal current (or minimum before flood in a rotary current), the speed gradually increases to flood strength and then diminishes to slack before ebb (or minimum before ebb in a rotary current), after which the current turns in direction, the speed increases to ebb strength and then diminishes to slack before flood completing the cycle. If it is assumed that the speed throughout the cycle varies as the ordinates of a cosine curve, it can be shown that the average speed for an entire flood or ebb period is equal to $2/\pi$ or 0.6366 of the speed of the corresponding strength of current.

SUBORDINATE CURRENT STATION—(1) A current station from which a relatively short series of observations is reduced by comparison with simultaneous observations from a control current station.

(2) A station listed in the *Tidal Current Tables* for which predictions are to be obtained by means of differences and ratios applied to the full predictions at a reference station.

SUBORDINATE TIDE STATION—(1) A tide station from which a relatively short series of observations is reduced by comparison with simultaneous observations from a tide station with a relatively long series of observations. (2) A station listed in the *Tide Tables* for which predictions are to be obtained by means of differences and ratios applied to the full predictions at a reference station.

TIDAL CURRENT TABLES—Tables which give daily predictions of the times and speeds of the tidal currents. These predictions are usually supplemented by current differences and constants through which additional predictions can be obtained for numerous other places.

TIDAL DIFFERENCE—Difference in time or height of a high or low water at a subordinate station and at a reference station for which predictions are given in the *Tide Tables*. The difference, when applied according to sign to the prediction at the reference station, gives the corresponding time or height for the subordinate station.

TIDE—The periodic rise and fall of the water resulting from gravitational interactions be-

tween the Sun, Moon, and Earth. The vertical component of the particulate motion of a tidal wave. Although the accompanying horizontal movement of the water is part of the same phenomenon, it is preferable to designate the motion as tidal current.

TIDE TABLES—Tables which give daily predictions of the times and heights of high and low waters. These predictions are usually supplemented by tidal differences and constants through which additional predictions can be obtained for numerous other places.

TIME MERIDIAN—A meridian used as a reference for time.

TROPIC CURRENTS—Tidal currents occurring semimonthly when the effect of the Moon's maximum declination is greatest. At these times the tendency of the Moon to produce a diurnal inequality in the current is at a maximum.

TROPIC RANGES—The *great tropic range* (G_c), or *tropic range*, is the difference in height between tropic higher high water and tropic lower low water. The *small tropic range* (S_c) is the difference in height between tropic lower high water and tropic higher low water. The *mean tropic range* (M_c) is the mean between the great tropic range and the small tropic range. The small tropic range and the mean tropic range are applicable only when the type of tide is semidiurnal or mixed. Tropic ranges are most conveniently computed from the harmonic constants.

TROPIC TIDES—Tides occurring semimonthly when the effect of the Moon's maximum declination is greatest. At these times there is a tendency for an increase in the diurnal range. The tidal datums pertaining to the tropic tides are designated as *tropic higher high water* ($TcHHW$), *tropic lower high water* ($TcLHW$), *tropic higher low water* ($TcHLW$), and *tropic lower low water* ($TcLLW$).

TYPE OF TIDE—A classification based on characteristic forms of a tide curve. Qualitatively, when the two high waters and two low waters of each tidal day are approximately equal in height, the tide is said to be *semidiurnal*; when there is a relatively large diurnal inequality in the high or low waters or both, it is said to be *mixed*; and when there is only one high water and one low water in each tidal day, it is said to be *diurnal*.

VANISHING TIDE—In a mixed tide with very large diurnal inequality, the lower high water (or higher low water) frequently becomes indistinct (or vanishes) at time of extreme declinations. During these periods the diurnal tide has such overriding dominance that the semi-diurnal tide, although still present, cannot be readily seen on the tide curve.

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